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**Nuclear Employment Planning
Volume III—Data Flow Diagrams**

Donald W. Doerfler
Lowry A. West
Debora R. Gleason
LB&M Associates
211 SW A Avenue
Lawton, OK 73501-4013

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Technical Report

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13. ABSTRACT (Maximum 200 words)			
<p>This report contains four volumes, Main Report (Volume I), Functional Description (Volume II), Data Flow Diagrams (Volume III), and Data Dictionary (Volume IV). The objective of this report is to define user planning requirements for tactical nuclear weapons employment. It identifies the nuclear planning employment functions at corps and division echelons, the interfaces among these functions and the interfaces between these functions and other command and control (C2) functions. It is intended that it be used as the basic requirements document for the automation of the nuclear employment planning process as part of the Army Tactical Command and Control System (ATCCS). The Functional Description (Volume II) of the report provides a menu of functions (processes) which, depending on the phase of nuclear employment must be performed to plan for the use of nuclear weapons at corps and division echelons. The processes have been decomposed to five levels of resolution. The Data Flow Diagrams (Volume III), depict the flow of process inputs and outputs, both among the planning processes themselves, as well as between the nuclear employment planning processes and organizational C2 nodes and entities performing other C2 processes. The Data Dictionary (Volume IV), provides a single place to find the full names and definitions of the data terms used in the Functional Description and Data Flow Diagrams. Mission Thread Diagrams found in Volume I (Main Report) supplement the Data Flow Diagrams in that they show the sequence of processes as they are performed in one phase of nuclear planning. Commander's guidance as it applies to nuclear employment planning is discussed separately in the Main Report and interwoven throughout the data flow diagrams, functional descriptions and the data dictionary. All of these elements make up this report and must be viewed together to get the overall picture of the Operational Nuclear Employment Planning Process. (140) E</p>			
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SUMMARY

GENERAL.

This is Volume III of a four volume set which describes the Operational Nuclear Employment Planning Process. This volume contains the Data Flow Diagrams discussed in Section 3 of Volume I (Main Report). The Data Flow Diagrams found in this volume are a network representation of the system, portraying it in terms of component pieces and the flow of information within the system. The Data Flow Diagrams show a flow of data within the system and not control of data. This volume along with Volume II (Functional Description) and Volume IV (Data Dictionary) describe the Operational Nuclear Employment Planning Process summarized in Volume I (Main Report).

This volume contains five sections to separate each major level of decomposition. Each divided section represents a complete level of decomposition for that top-level nuclear planning function as defined in this report.

Top Level Functions (1. thru 4.)

Acquire, Maintain, and Transmit Information (1.1 thru 1.3.2.1.2)

Assess Situation (2.1 thru 2.4.3.3)

Determine Concept of Nuclear Employment (3.1 thru 3.4.5.2.3)

Direct Nuclear Employment Operations (4.1 thru 4.4.3.3)

SYMBOLS.

The Data Flow diagrams found in this volume are represented by four basic icons. They are described in the following paragraphs.

External Entity.

The external entity represents either a source of data or the destination of data. It typically represents a person or place that acts as a source of information or a repository of information.



Process.

A process represents the transformation of information that occurs inside the system. The process is a data transformation agent in that it may change the form of the data, extract data, decompose data or synthesize data.



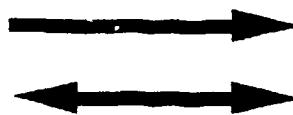
Data Store.

A Data Store represents a location for storage of data which is critical to the system. It may also be thought of as a data base. It is an internal part of the system.



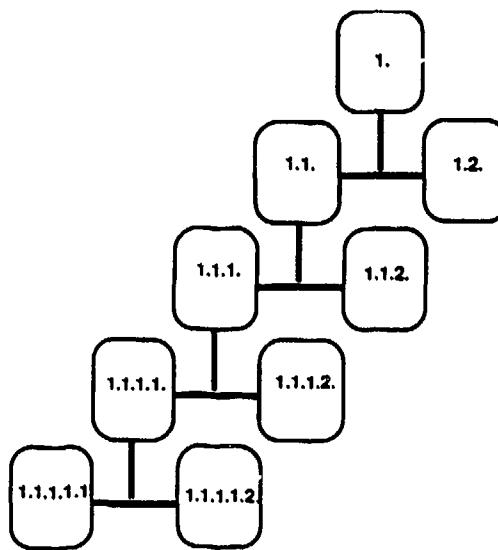
Information Flows.

These represent one-or two-way connections between external entities, stores and processes. The name of the data travelling on this path is usually given on top of the arrow.



NUMBERING.

Each process is given a number to represent a step in the overall system. In this project, the numbering scheme of each process proceeds from the top level down to, and includes a maximum of five levels of decomposition. An example of the numbering scheme used in these data flow diagrams is shown in the figure below.



EXAMPLE ENTRY.

This volume reflects the hierarchical structure of the data flow for the Operational Nuclear Employment Planning Process. The data flow diagram shown below illustrates two processes (1.1.1 and 1.1.2) which are a part of (1.1). Data enters the system from the Cdr/Staff and External HQs. Data is stored in the system in an

Information Base. Connections can be seen which exist for other parts of the system (process 2 and subprocesses 1.2 and 1.3).

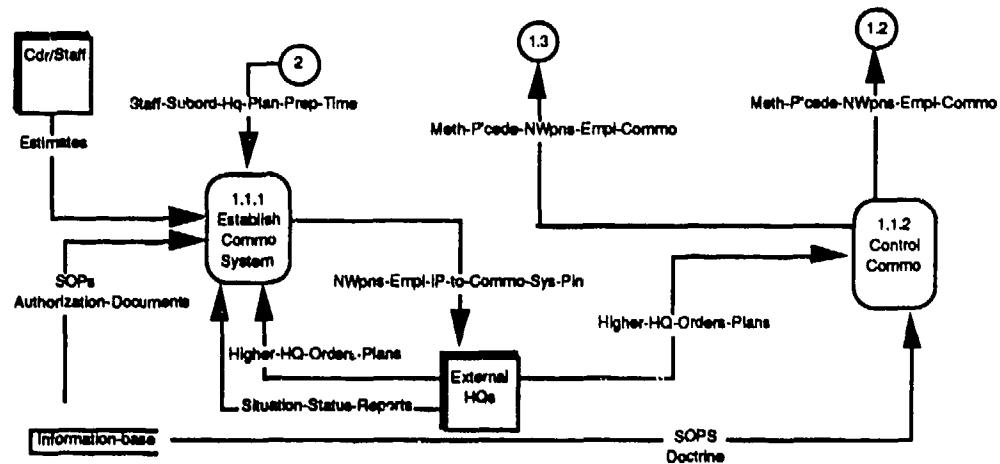
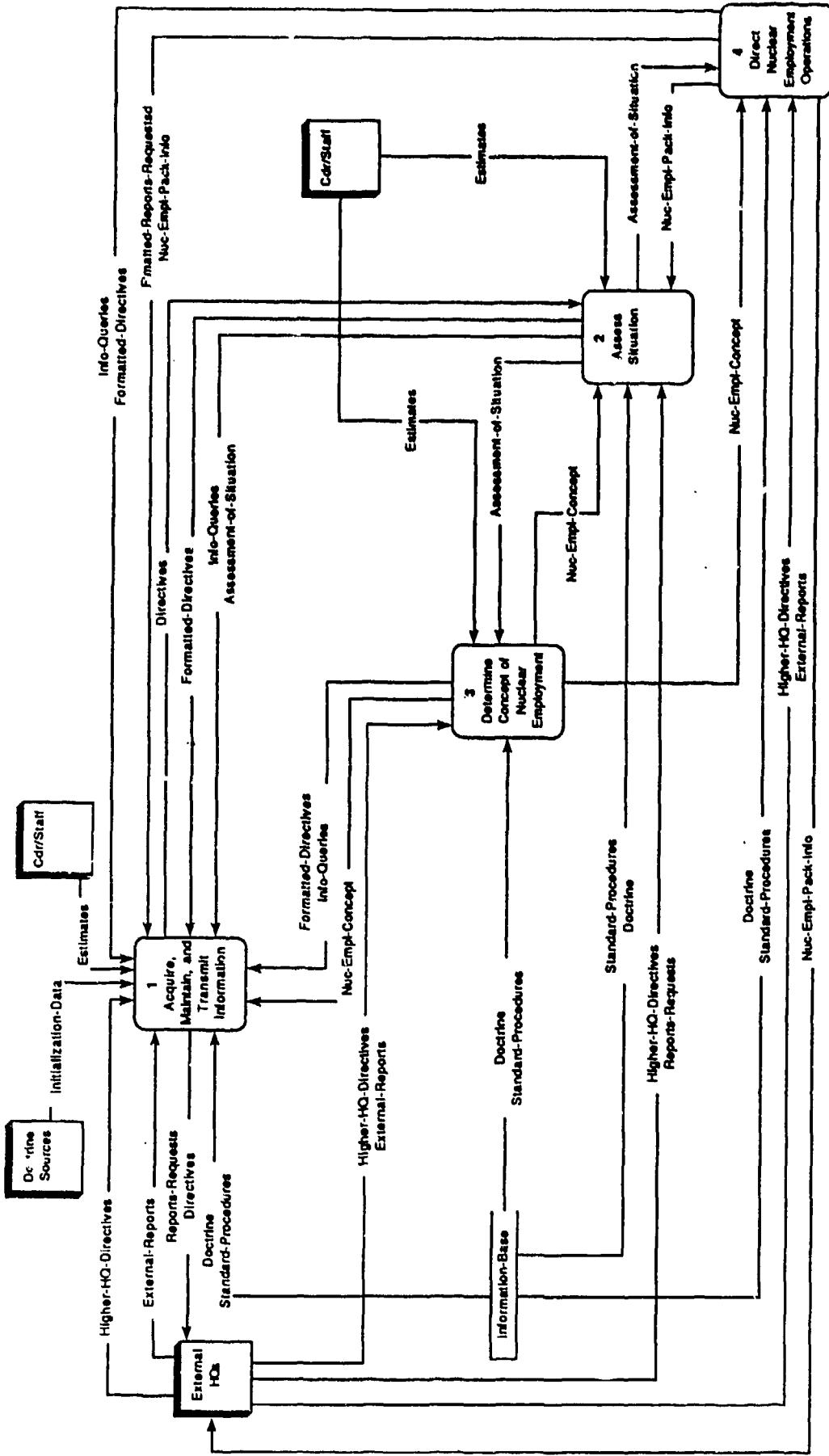


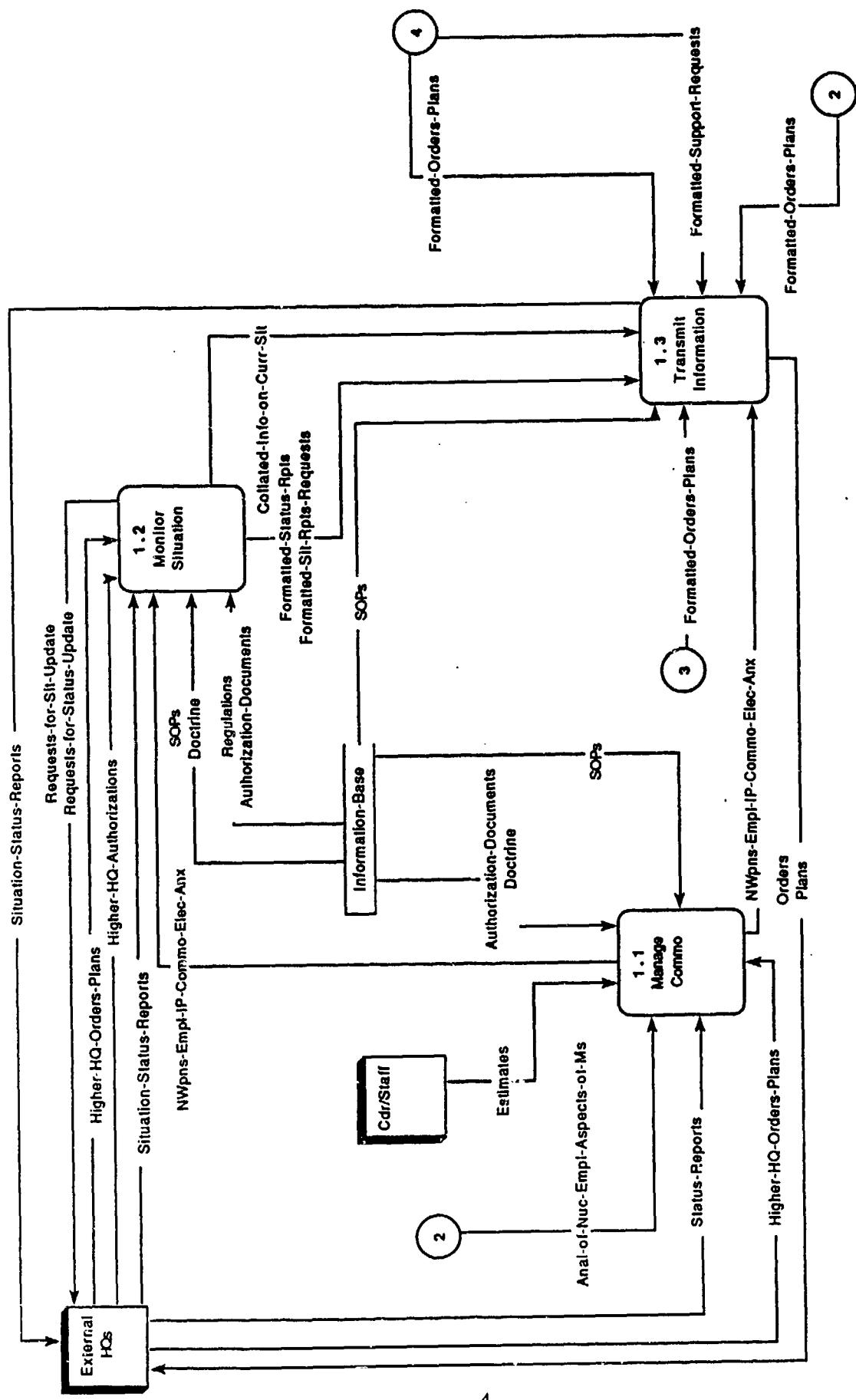
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**TOP LEVEL FUNCTIONS
(1 THROUGH 4)**

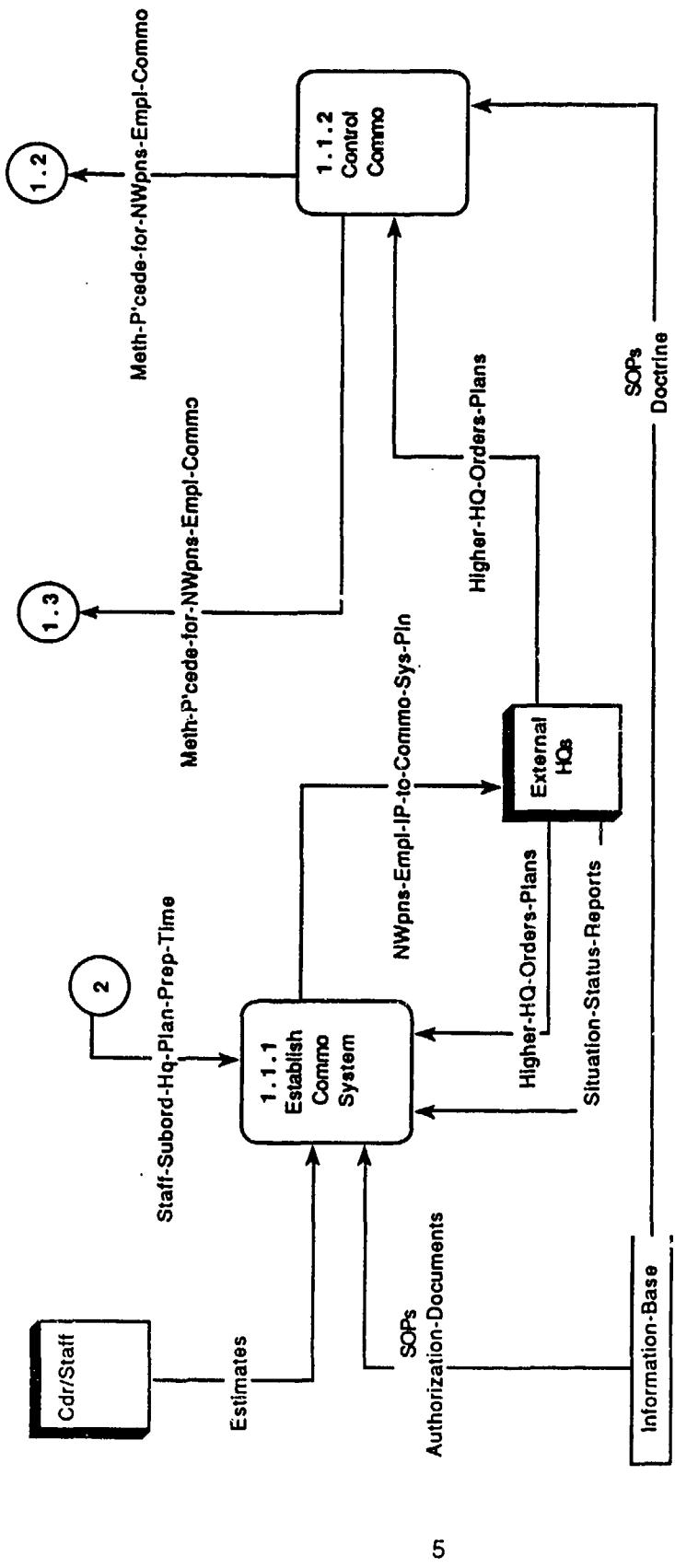


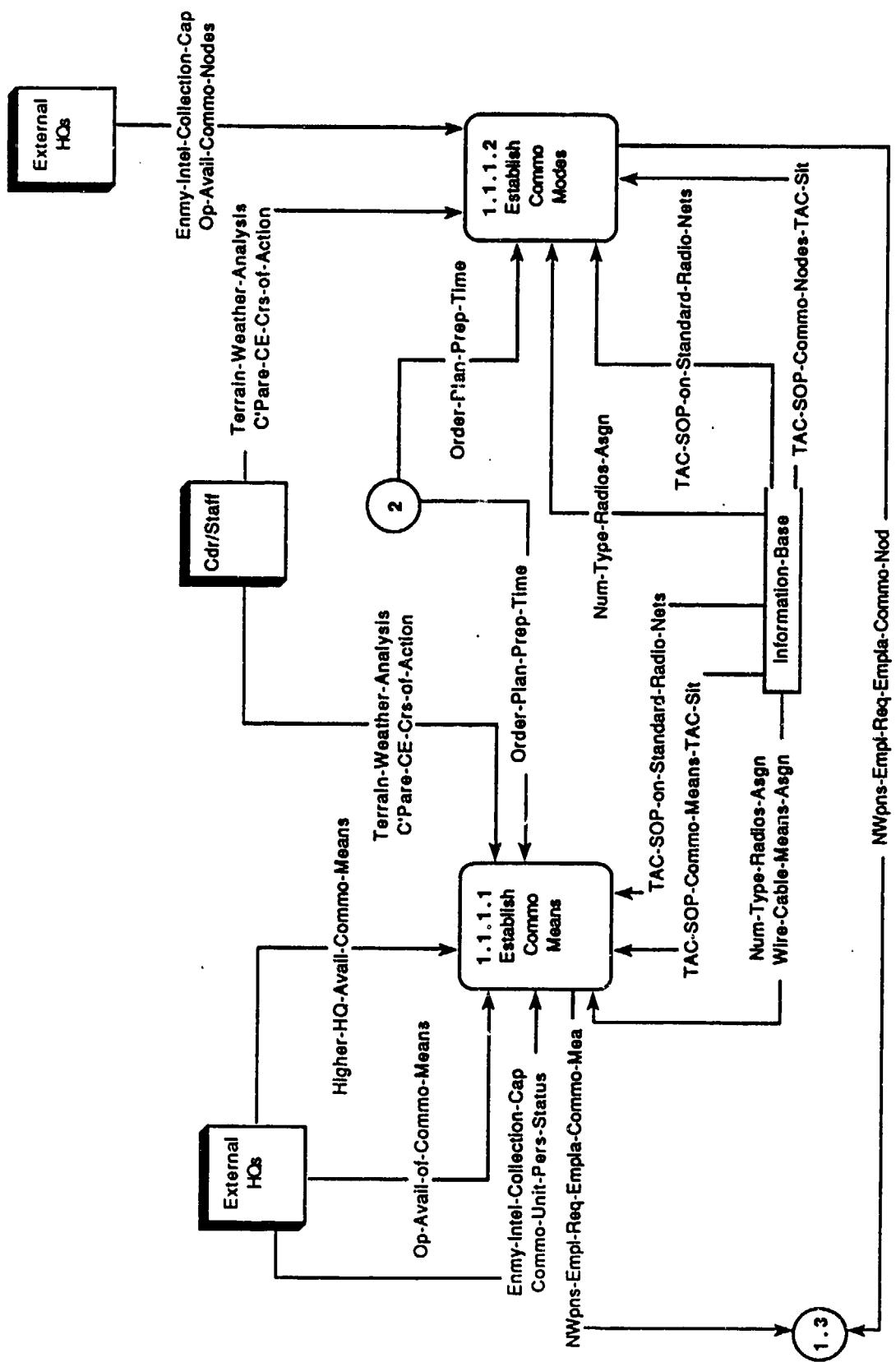
**ACQUIRE, MAINTAIN, AND TRANSMIT INFORMATION
(1.1 THROUGH 1.3.2.1.2)**

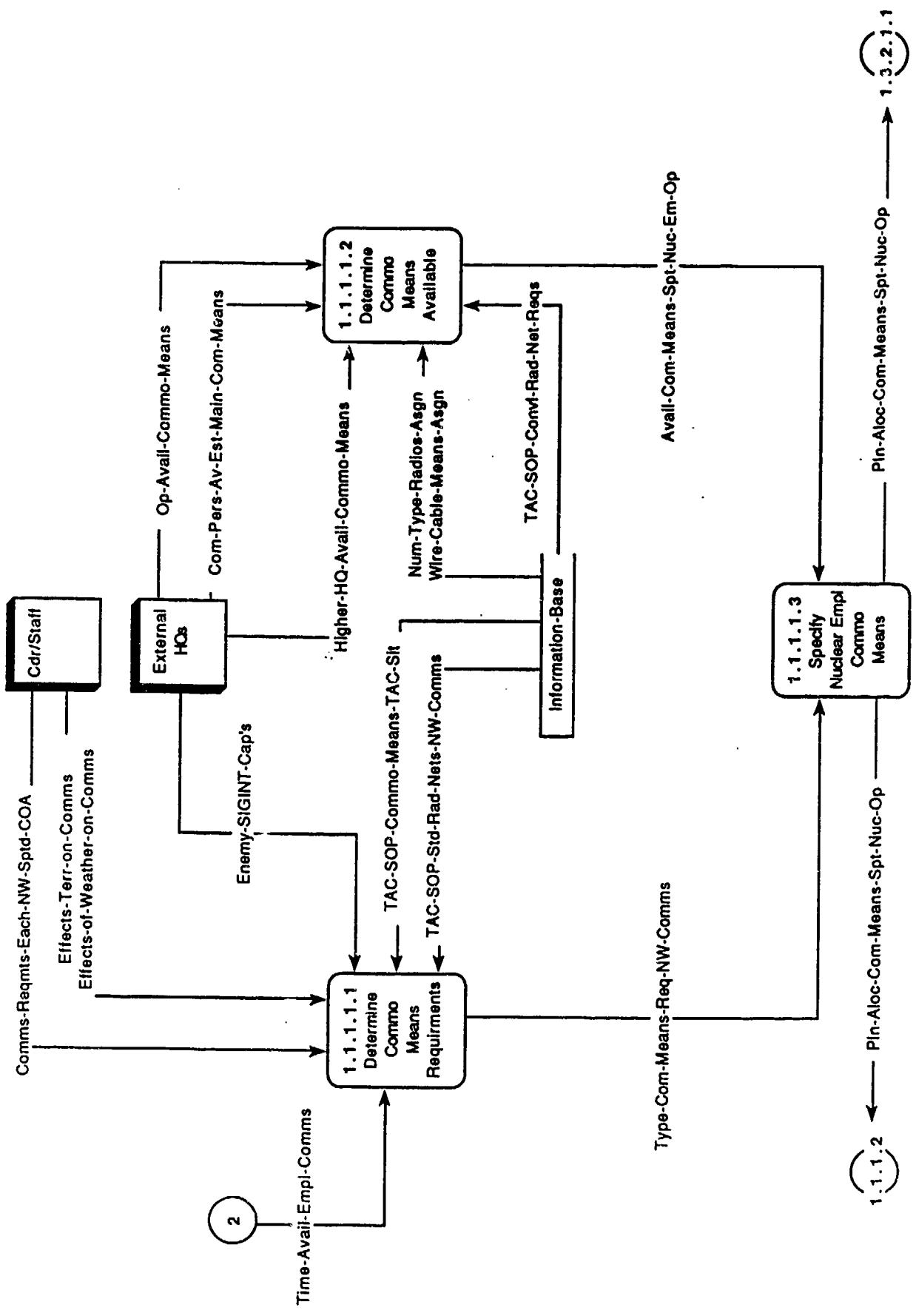


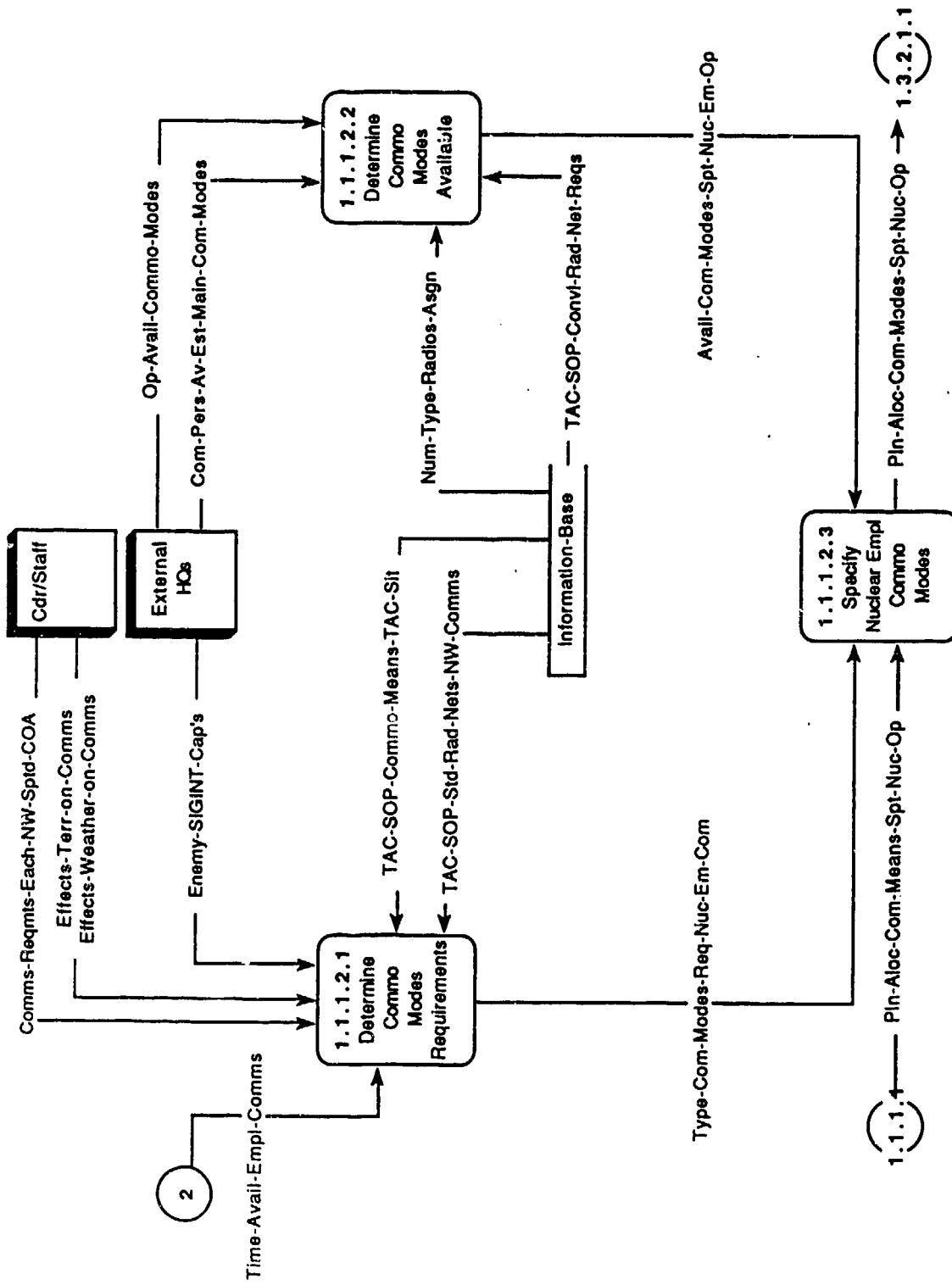
Acquire, Maintain, and Transmit Information #1

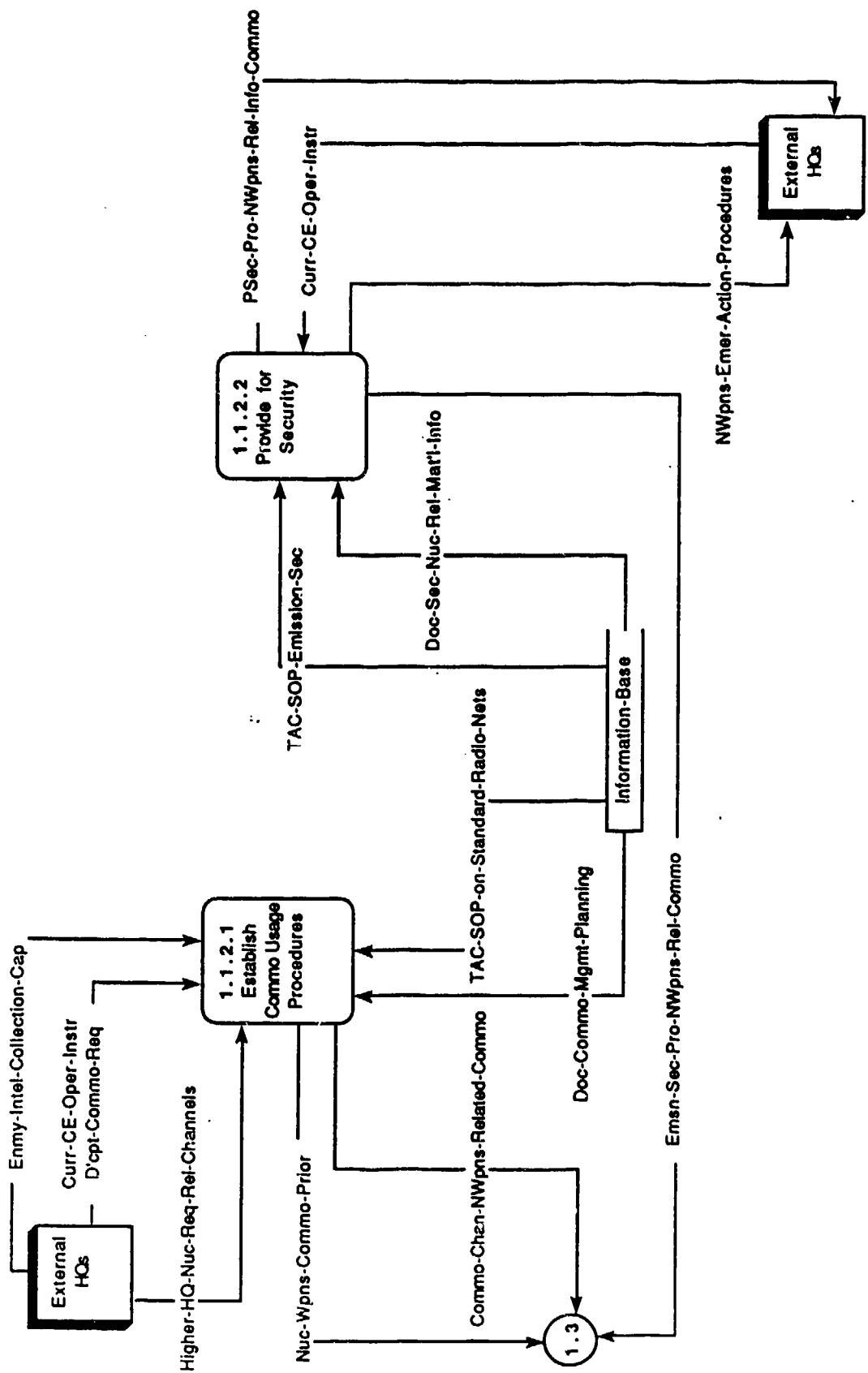
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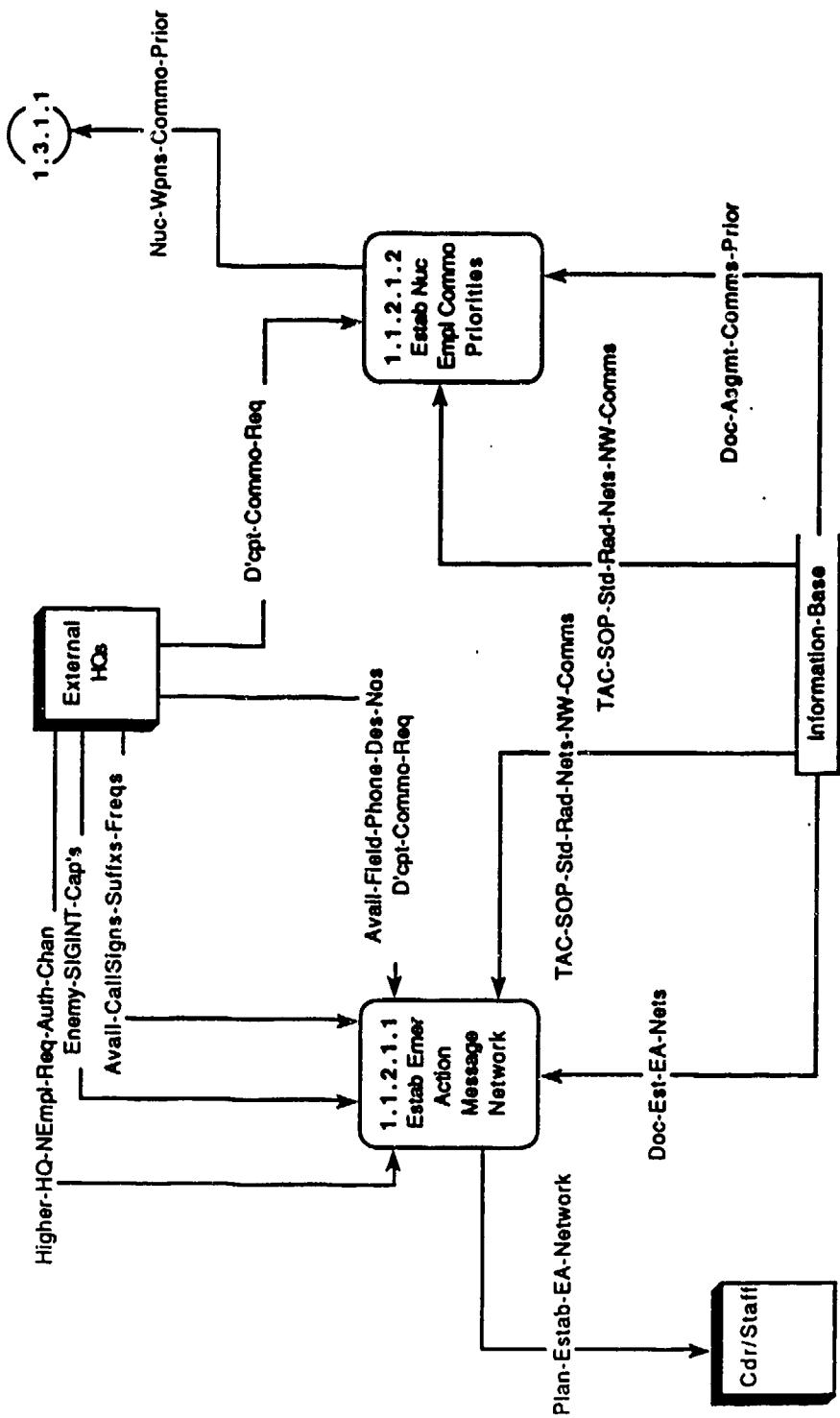


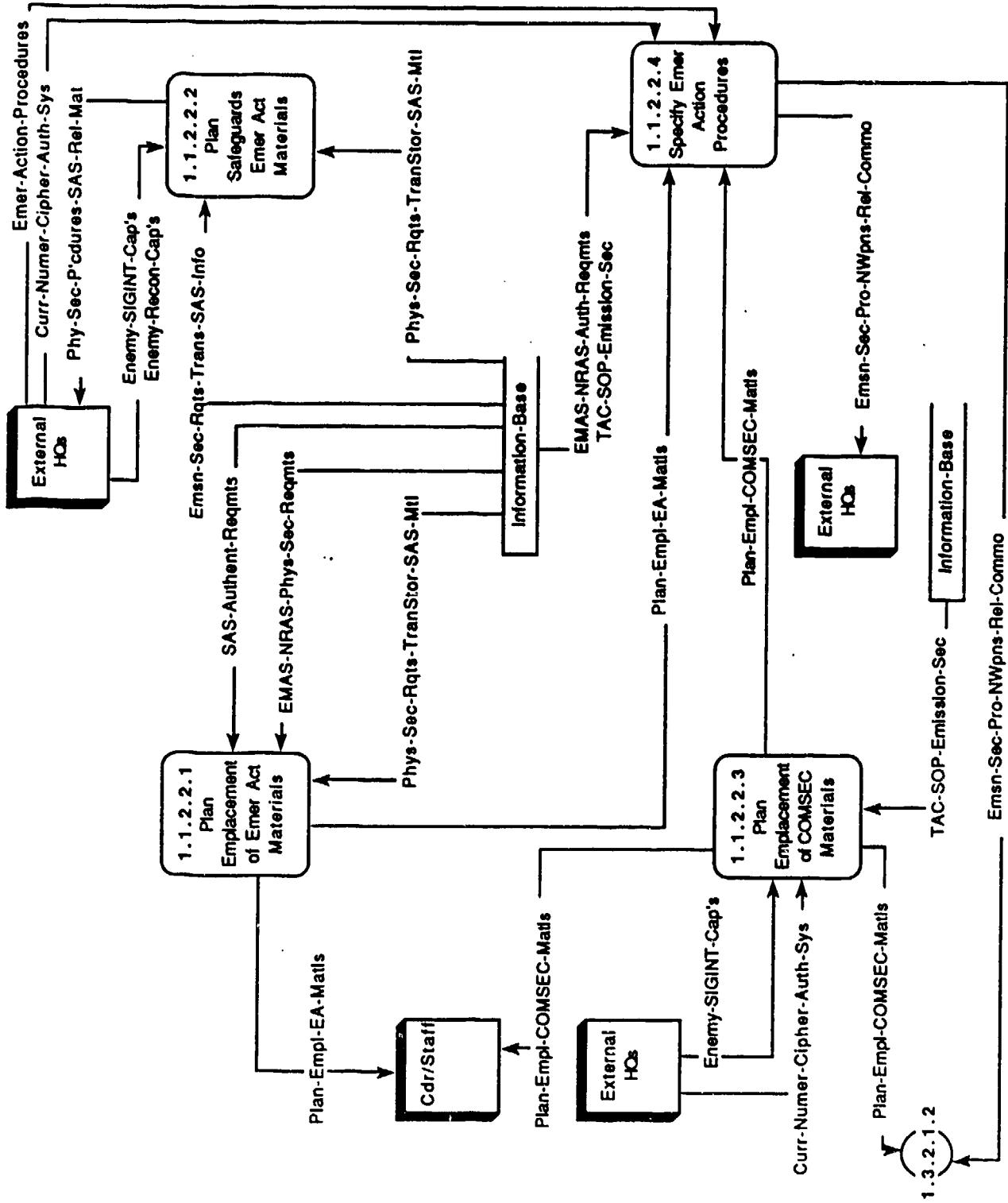




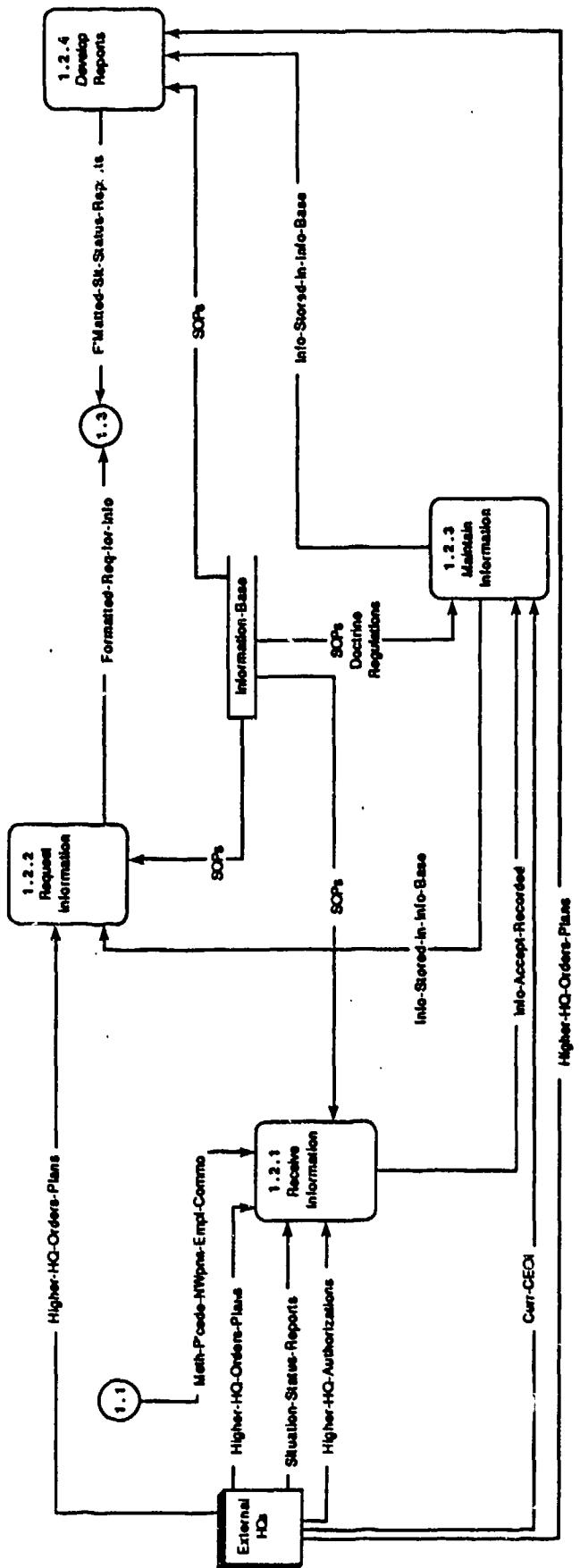


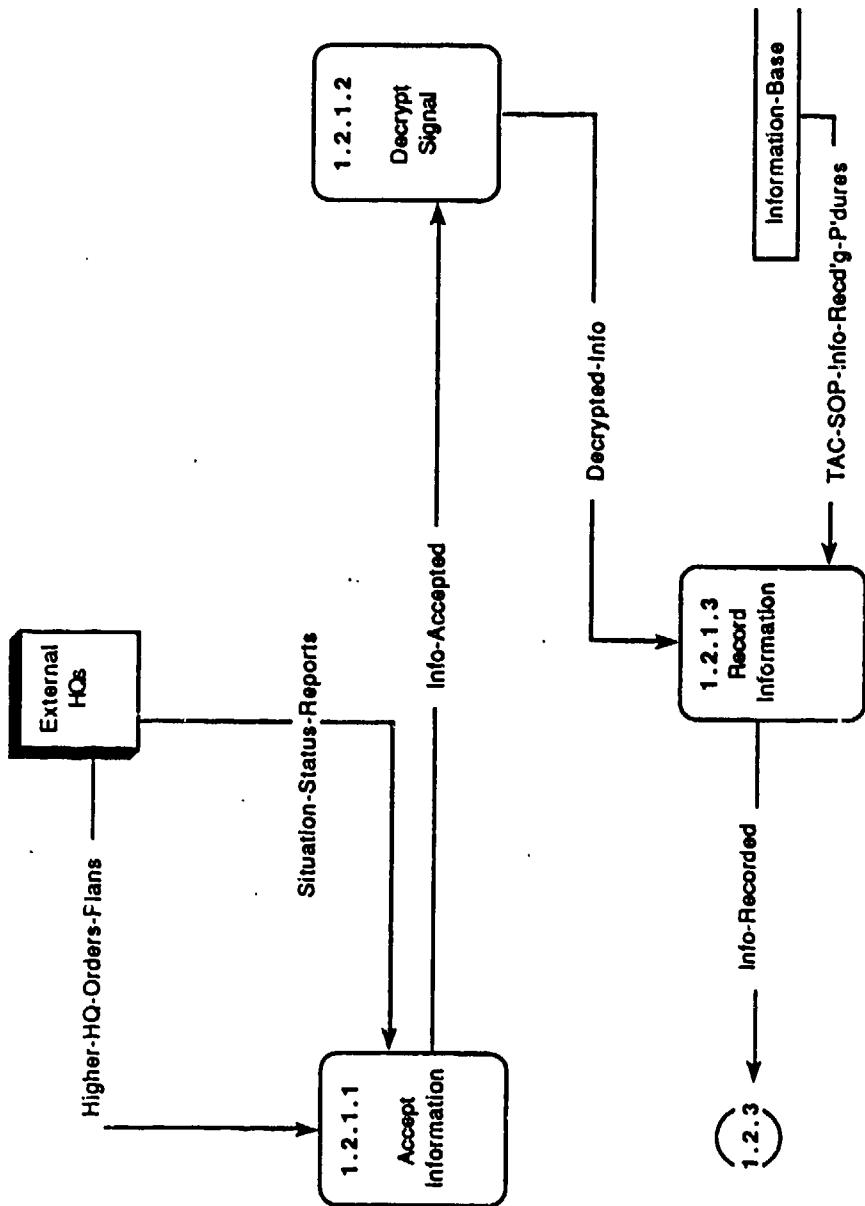


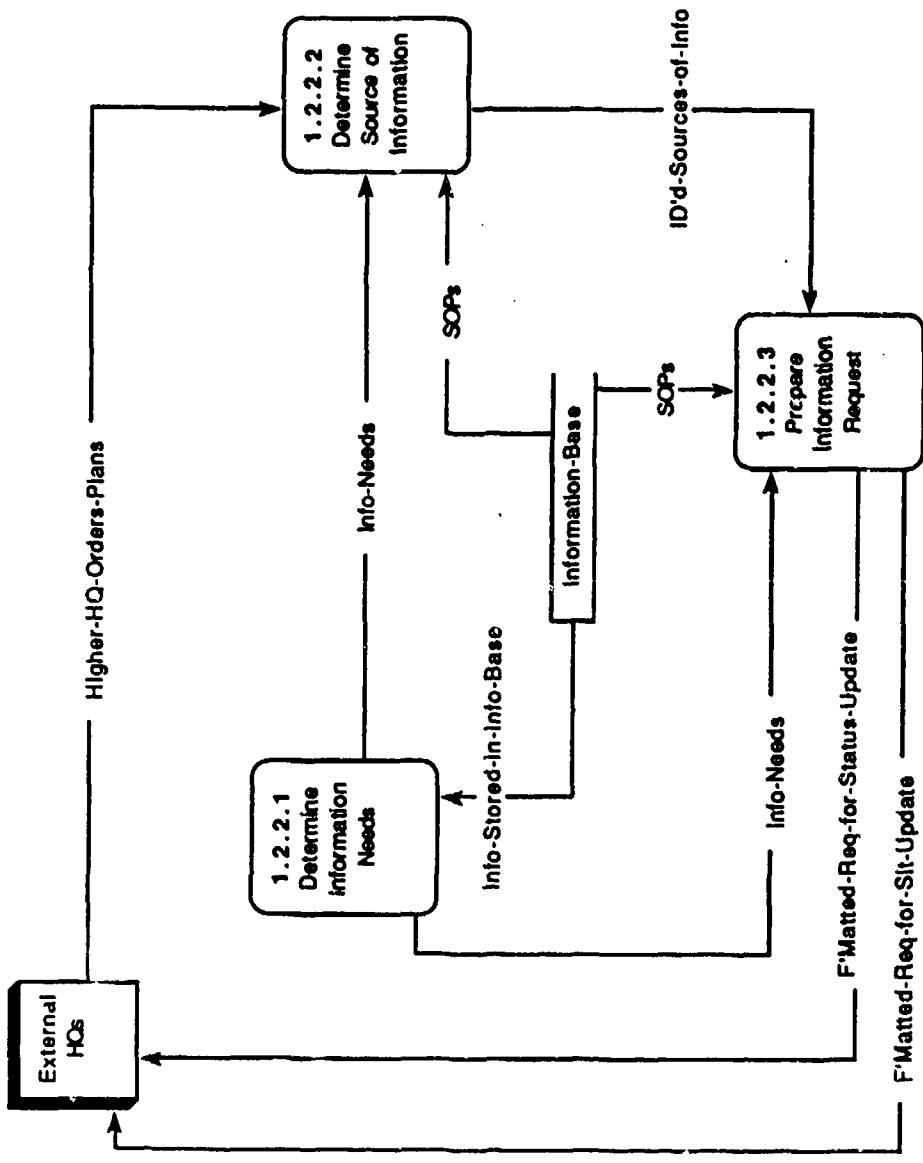




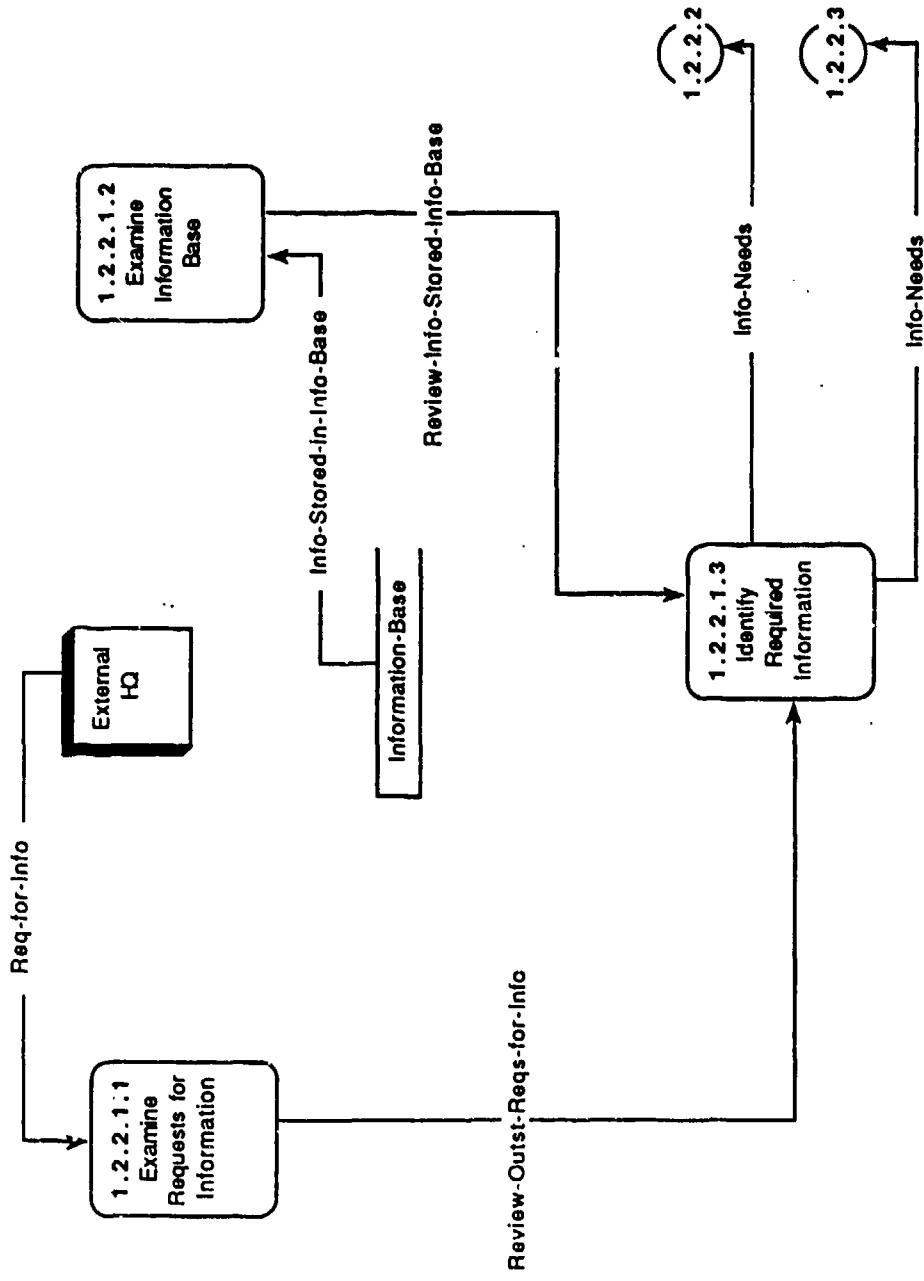
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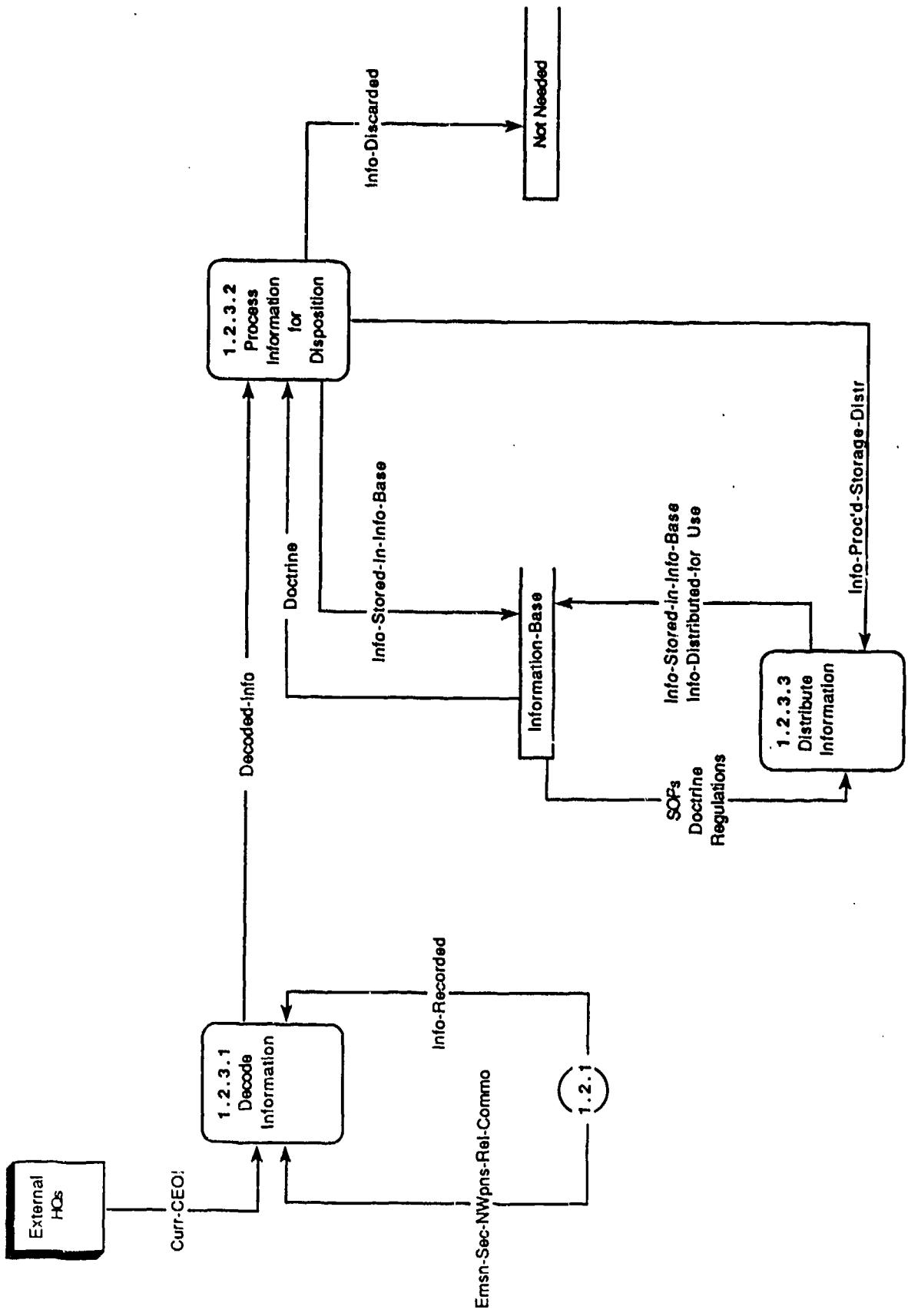


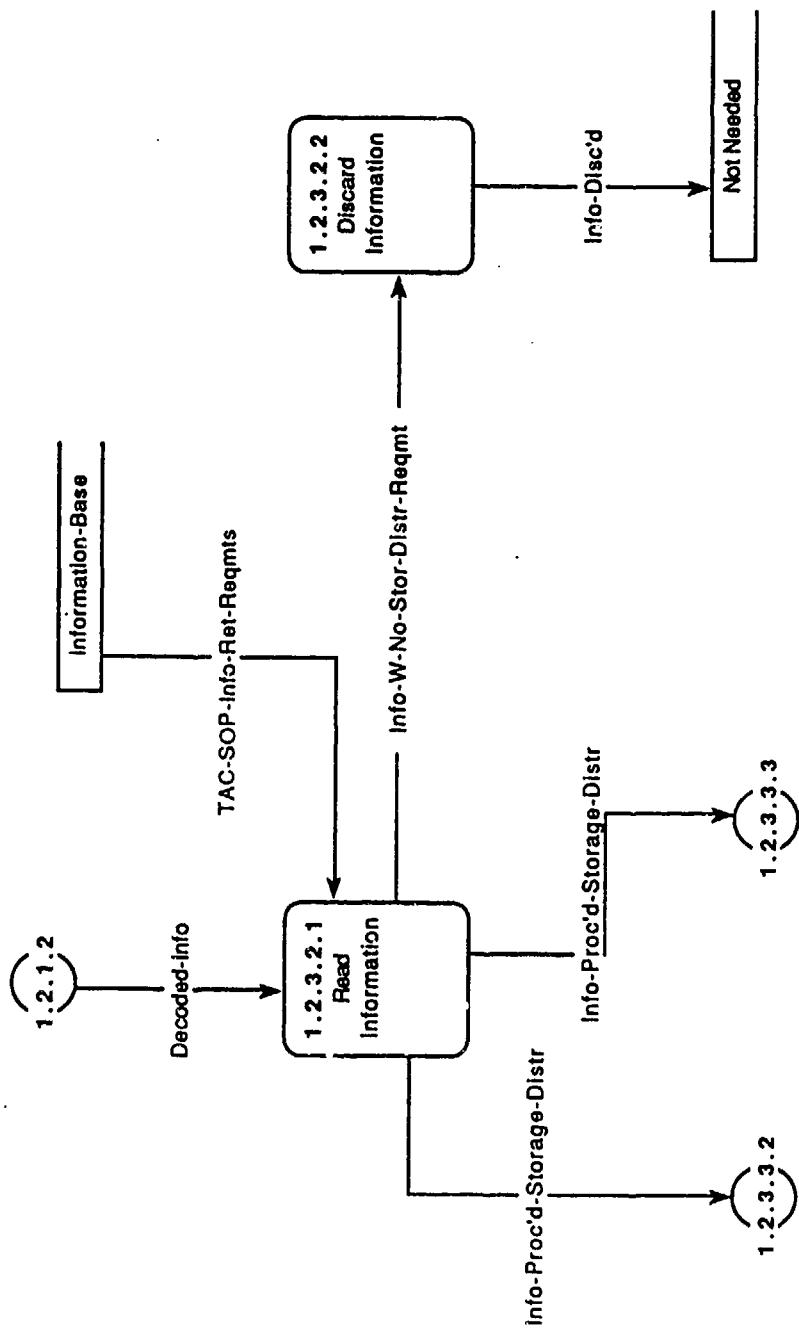


Request Information #1.2.2

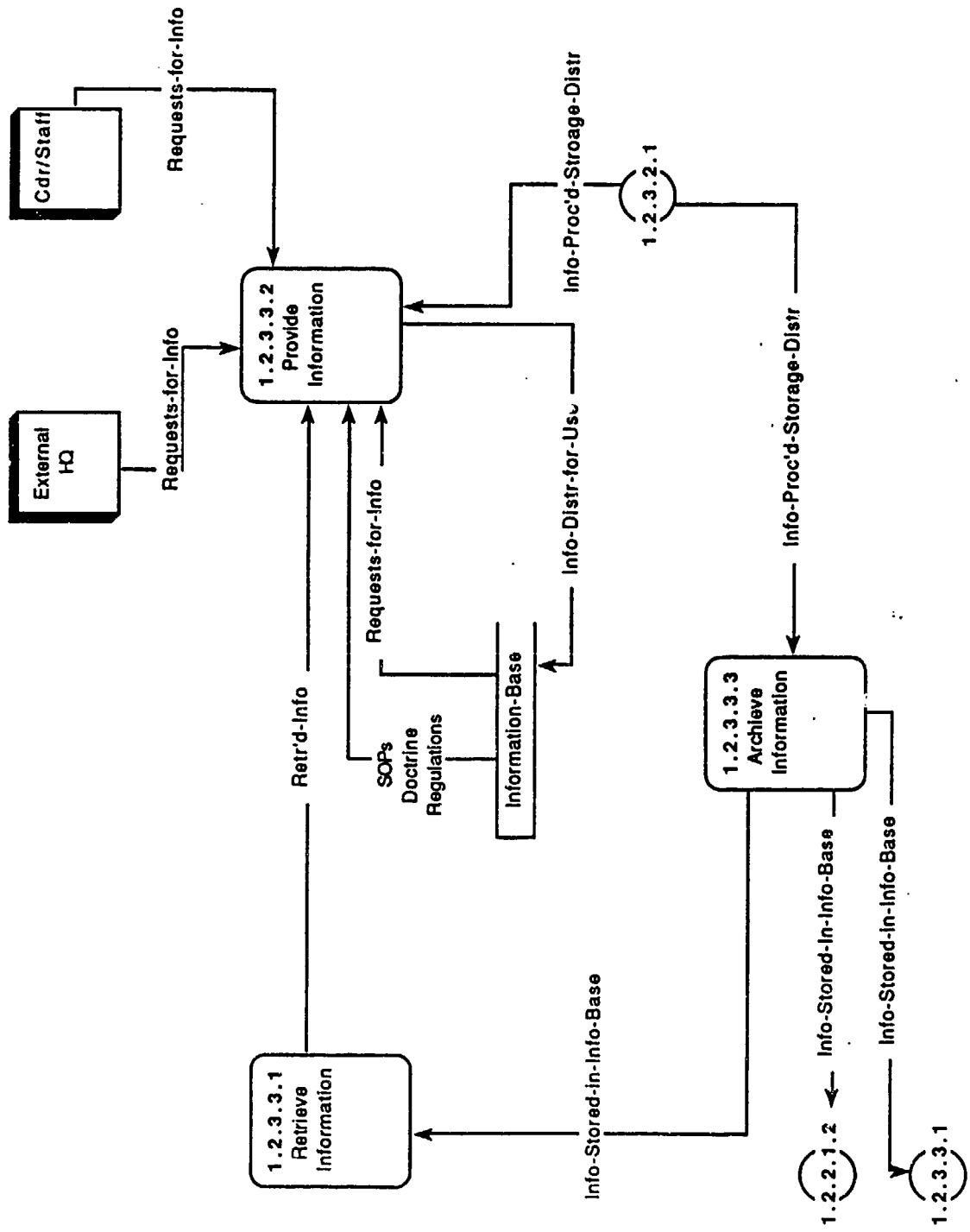


Determine Information Needs #1.2.2.1

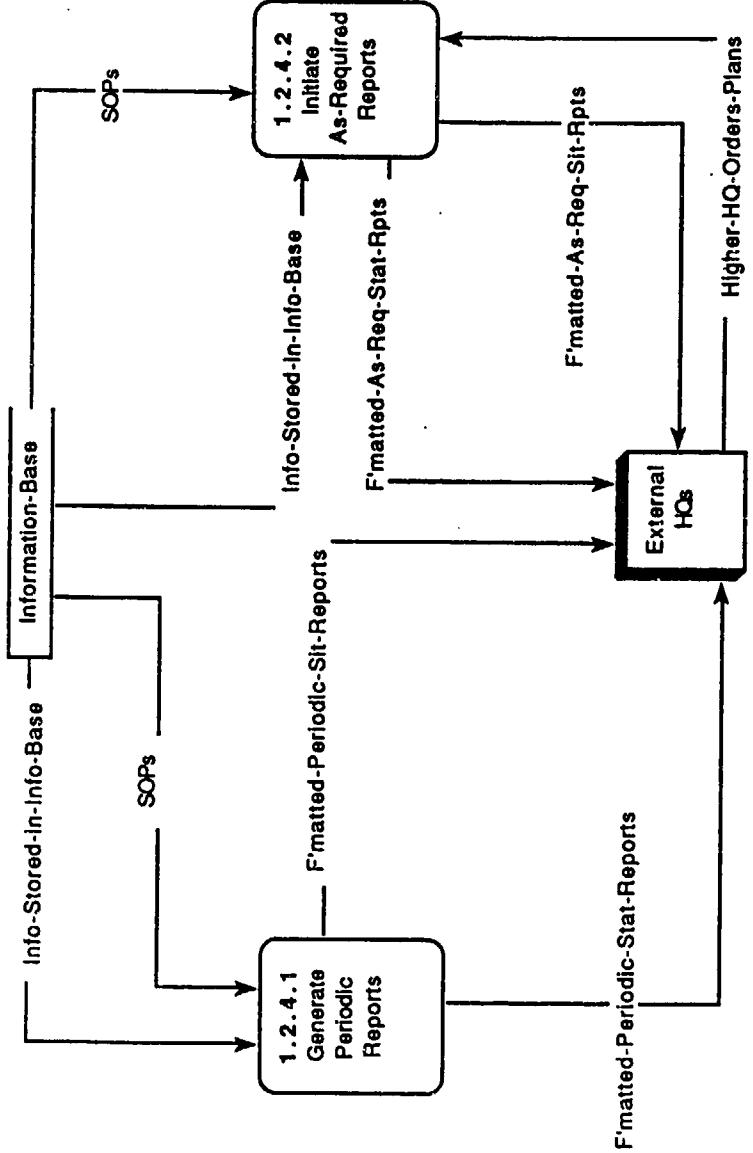


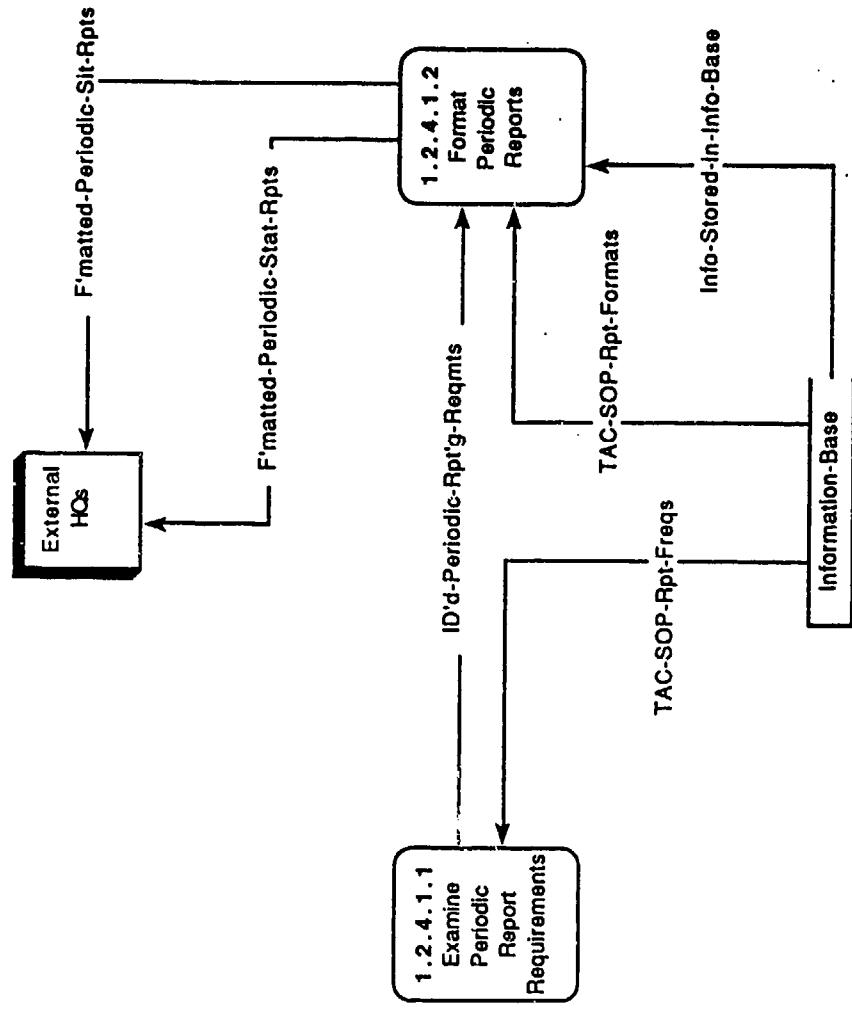


Process Information for Disposition #1.2.3.2

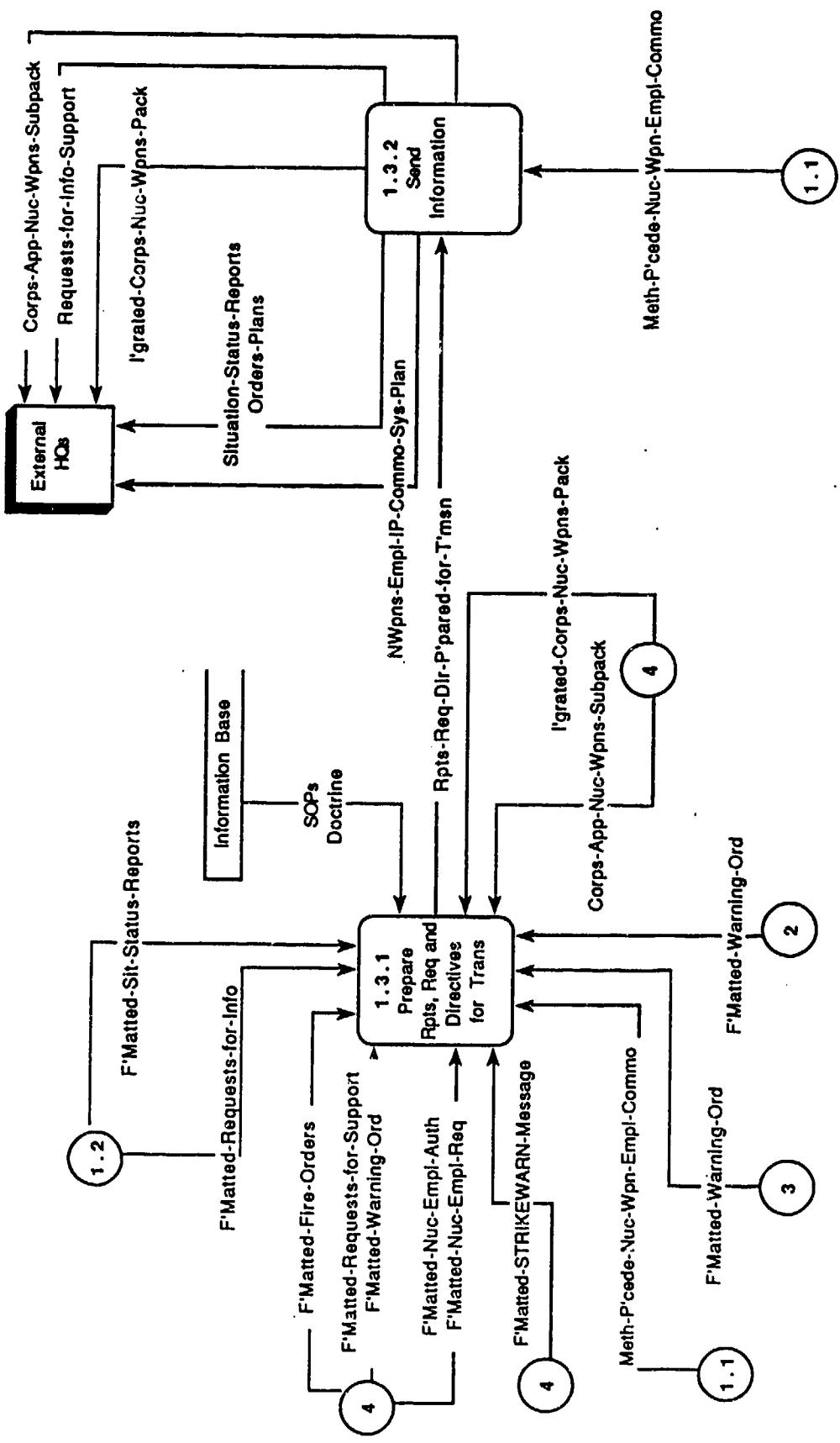


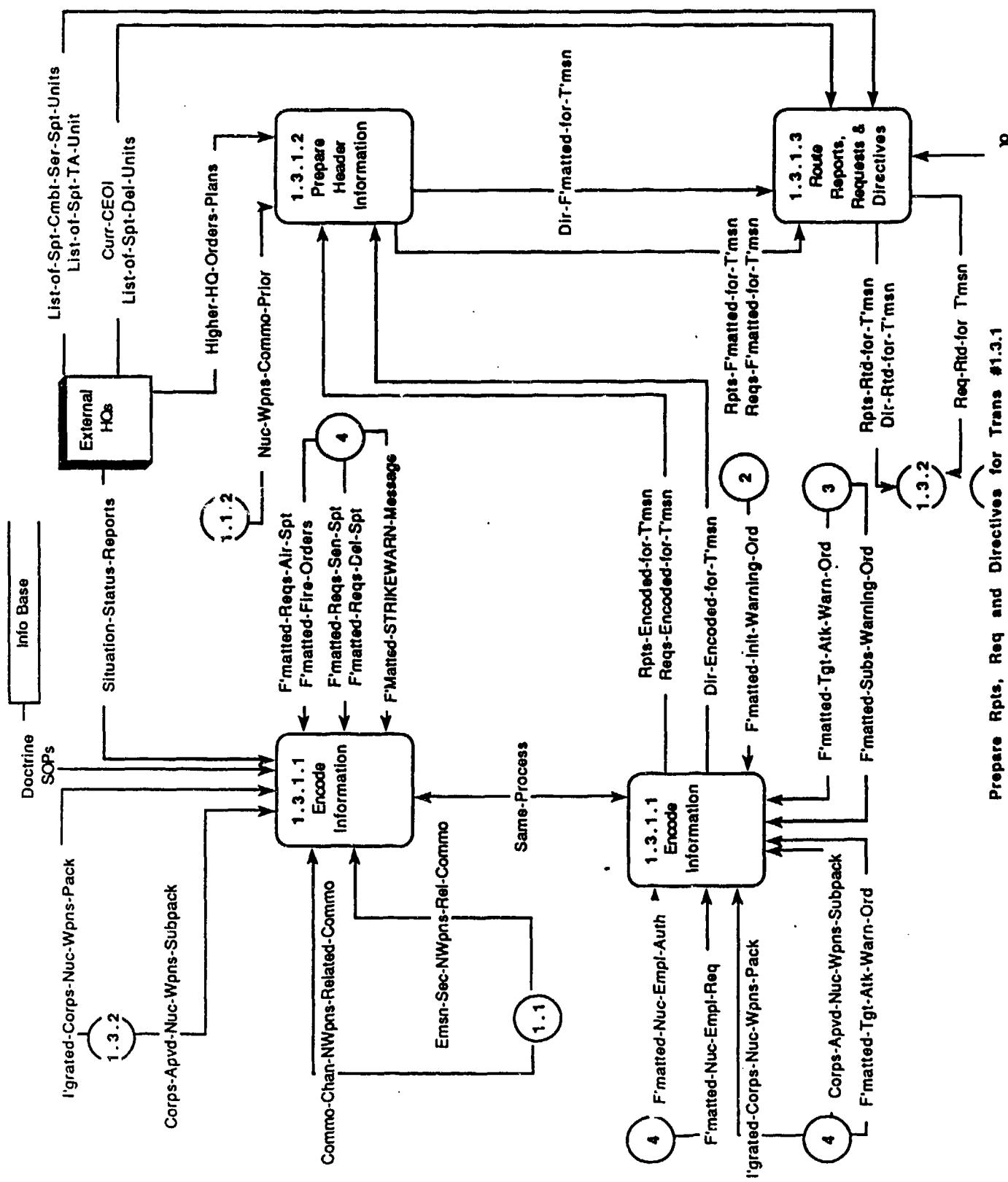
Distribute Information #1.2.3.3

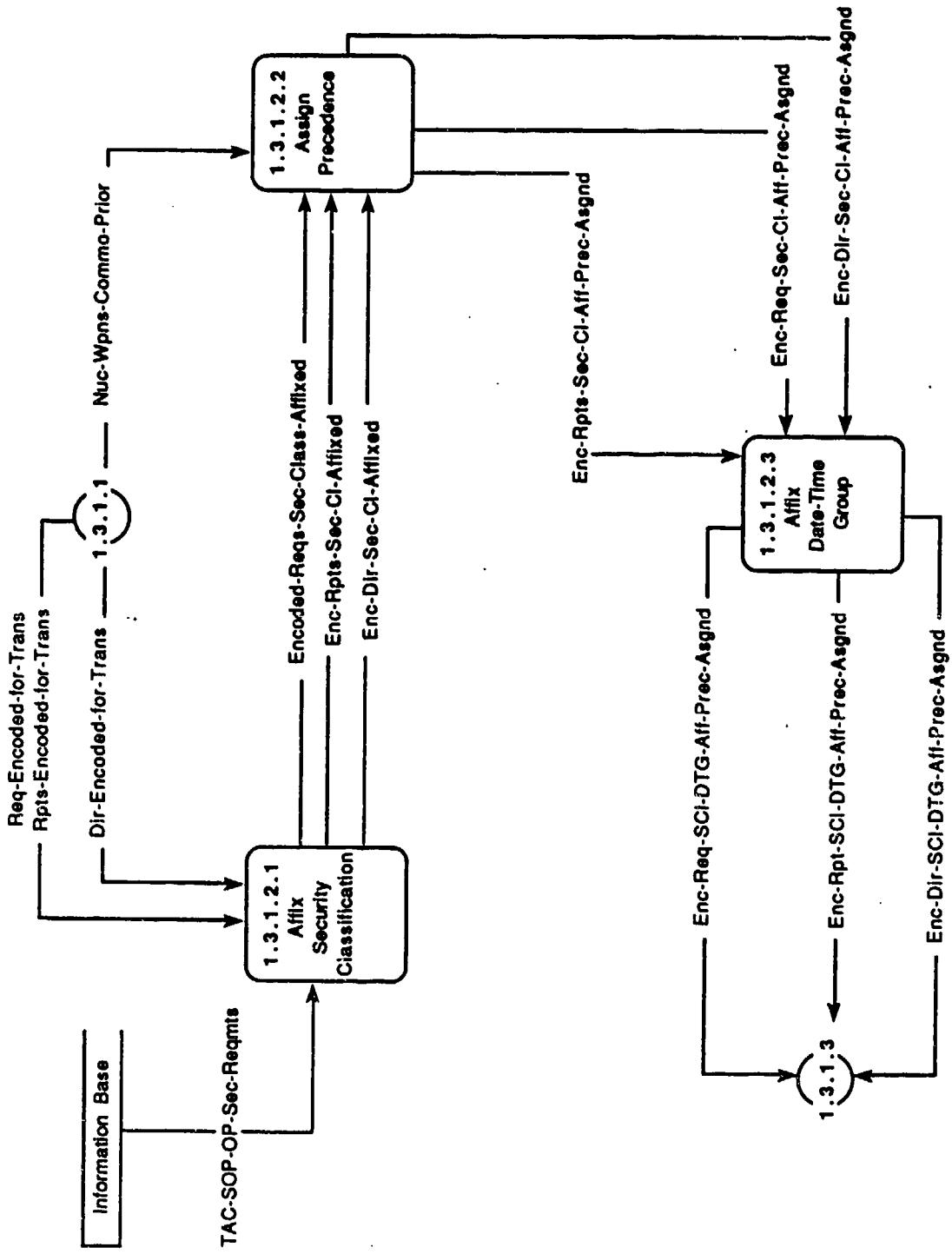


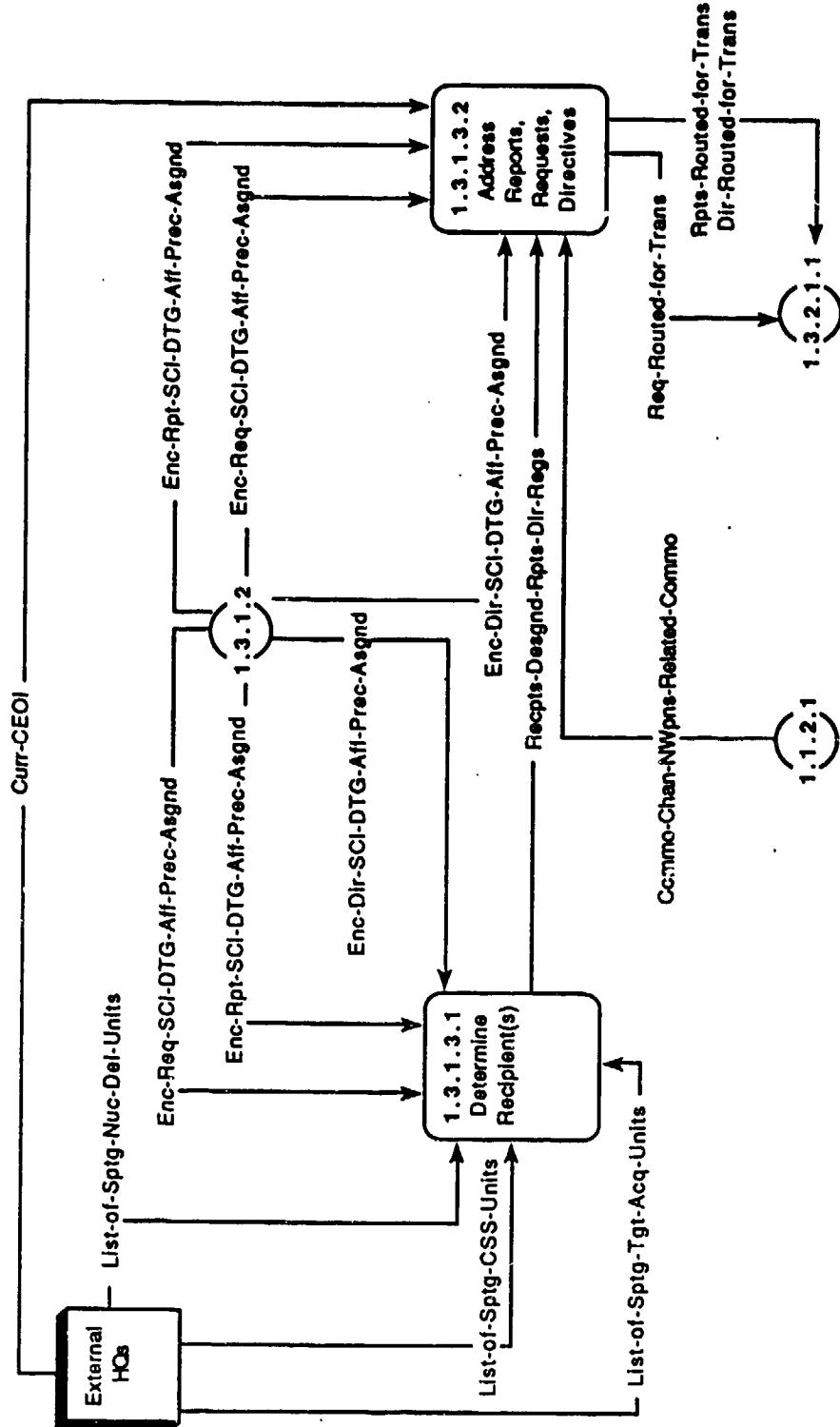


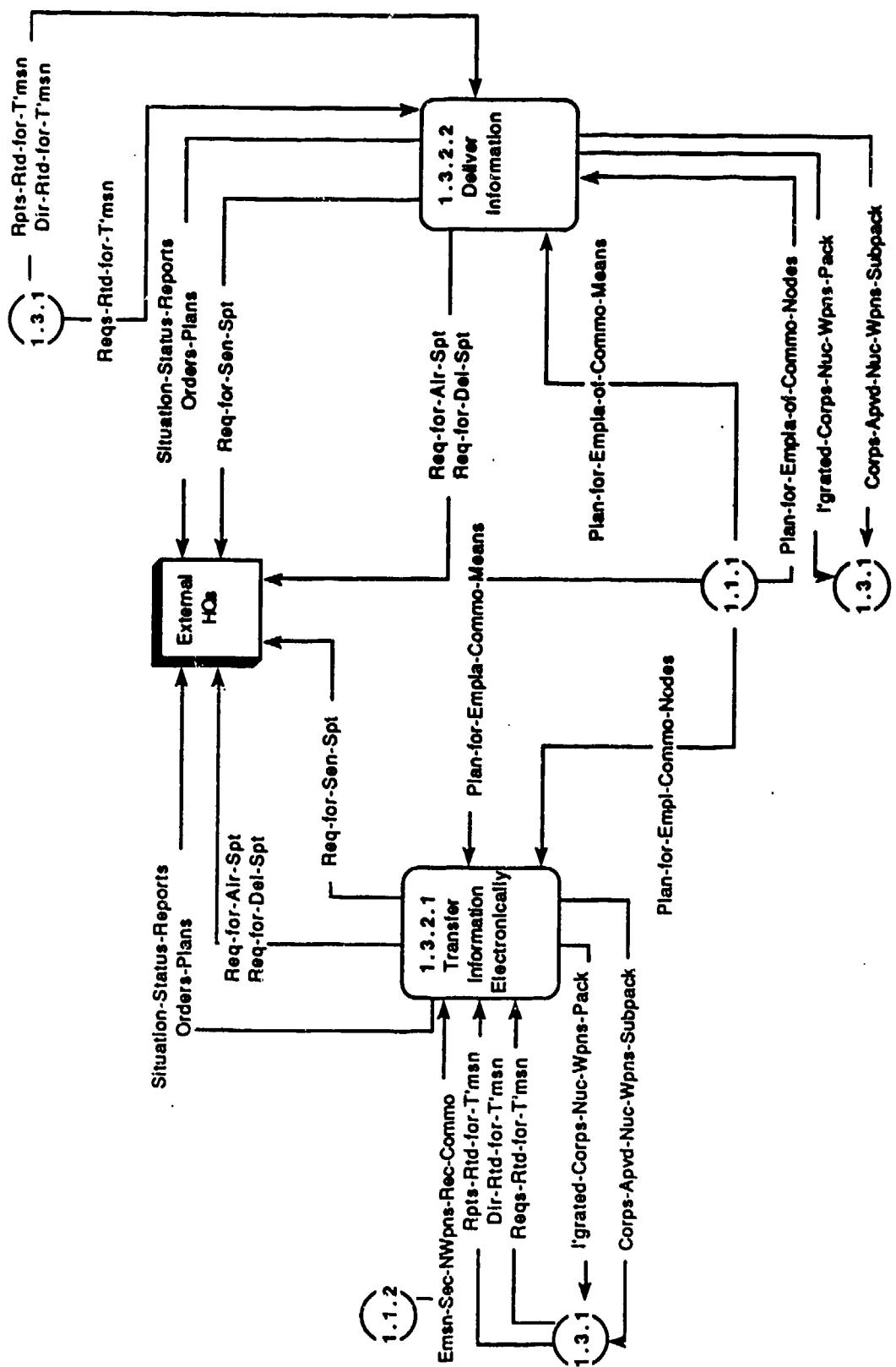
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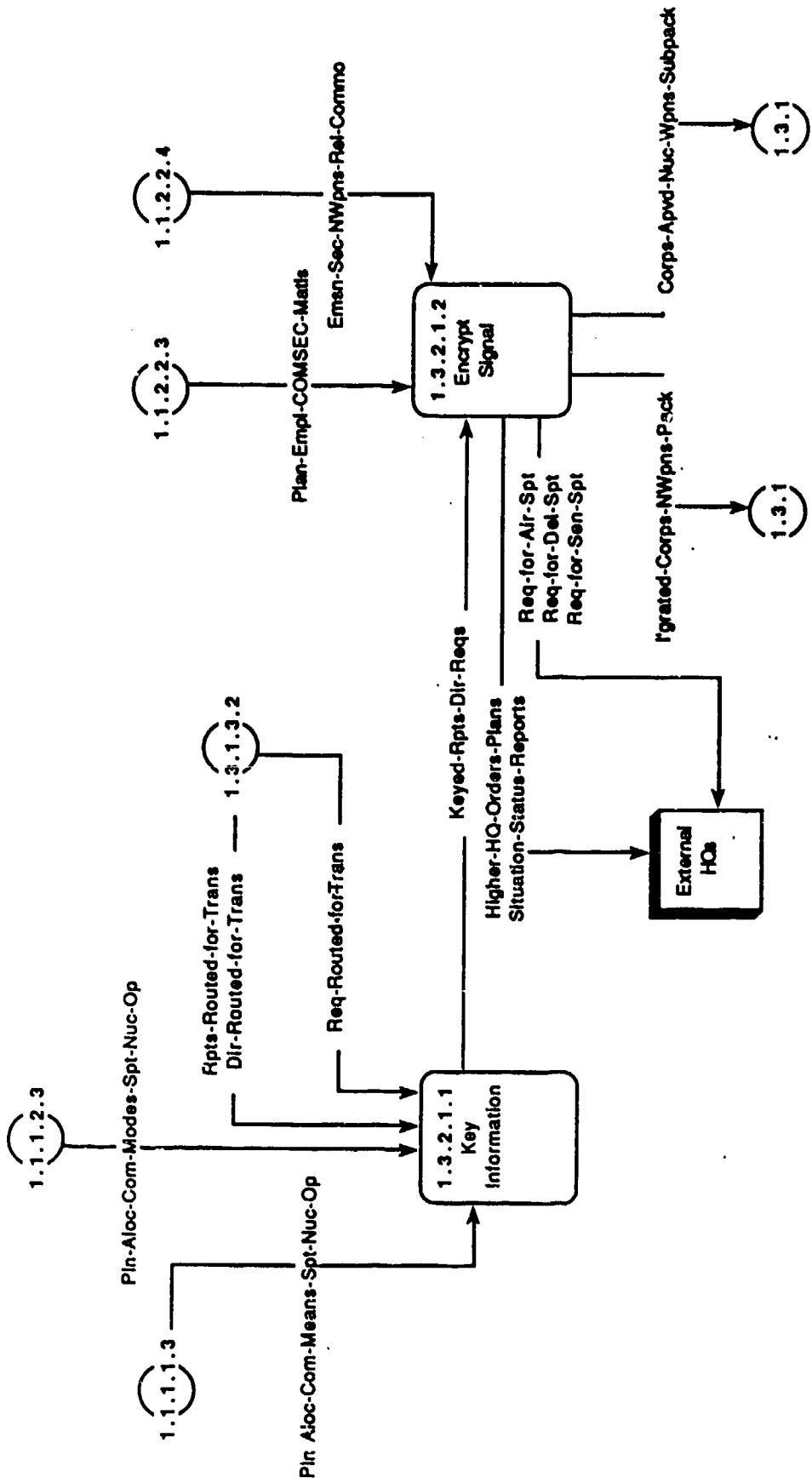




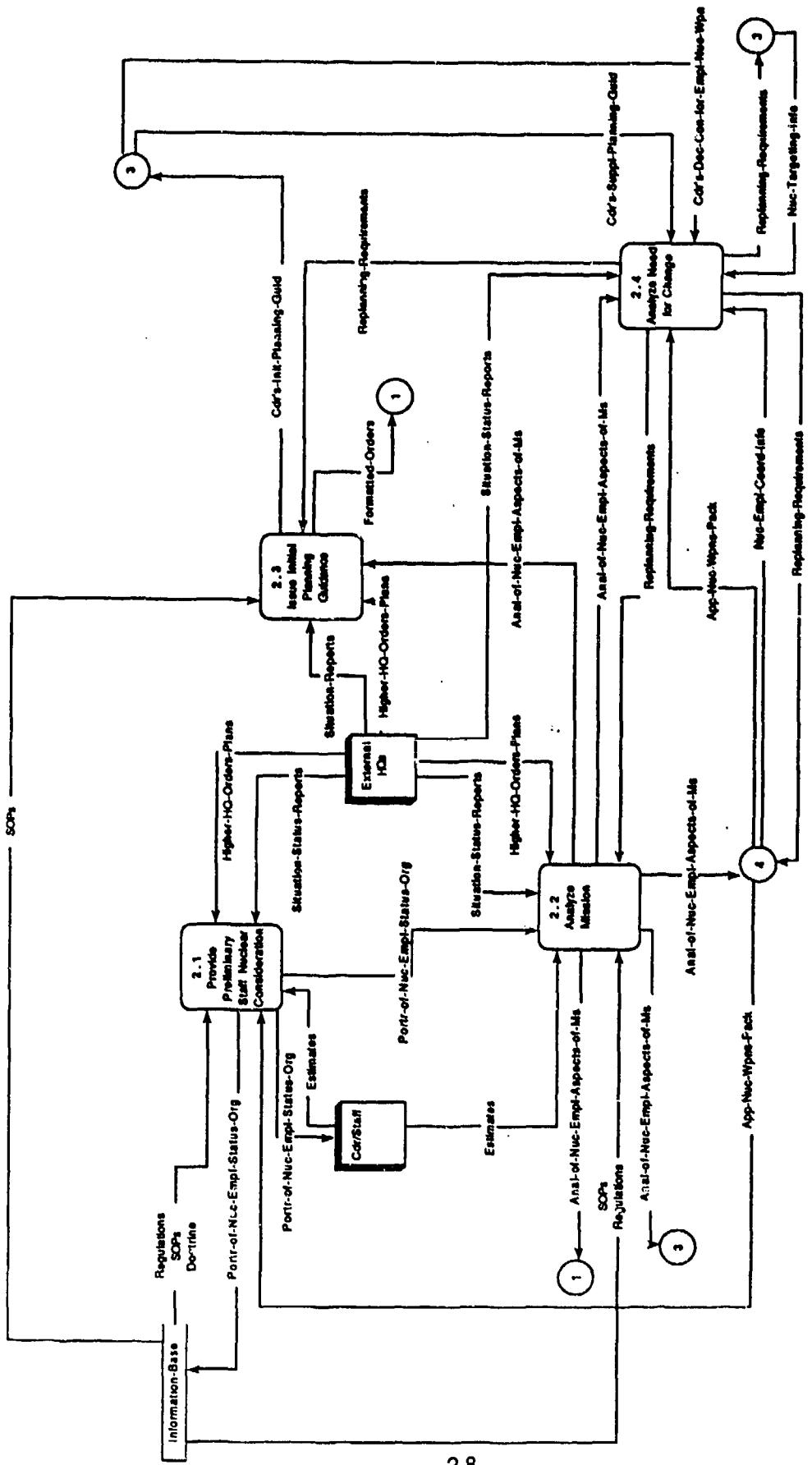


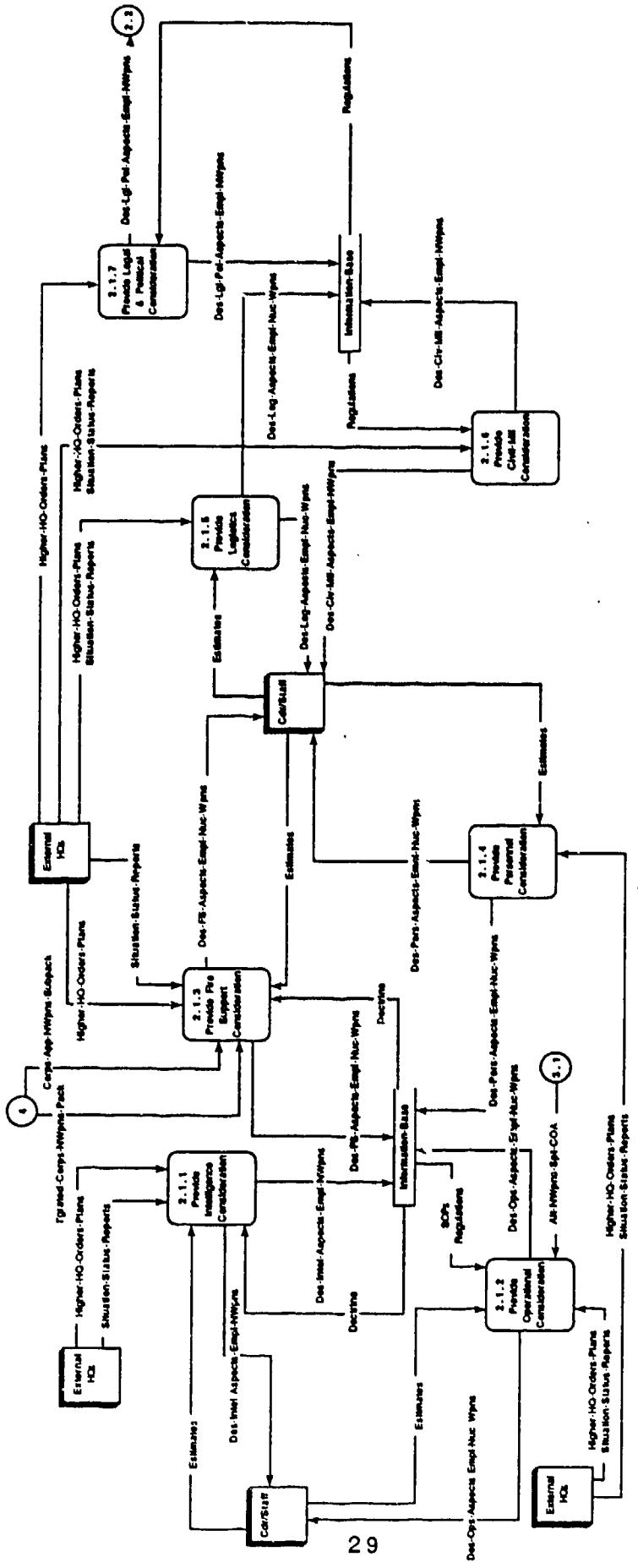


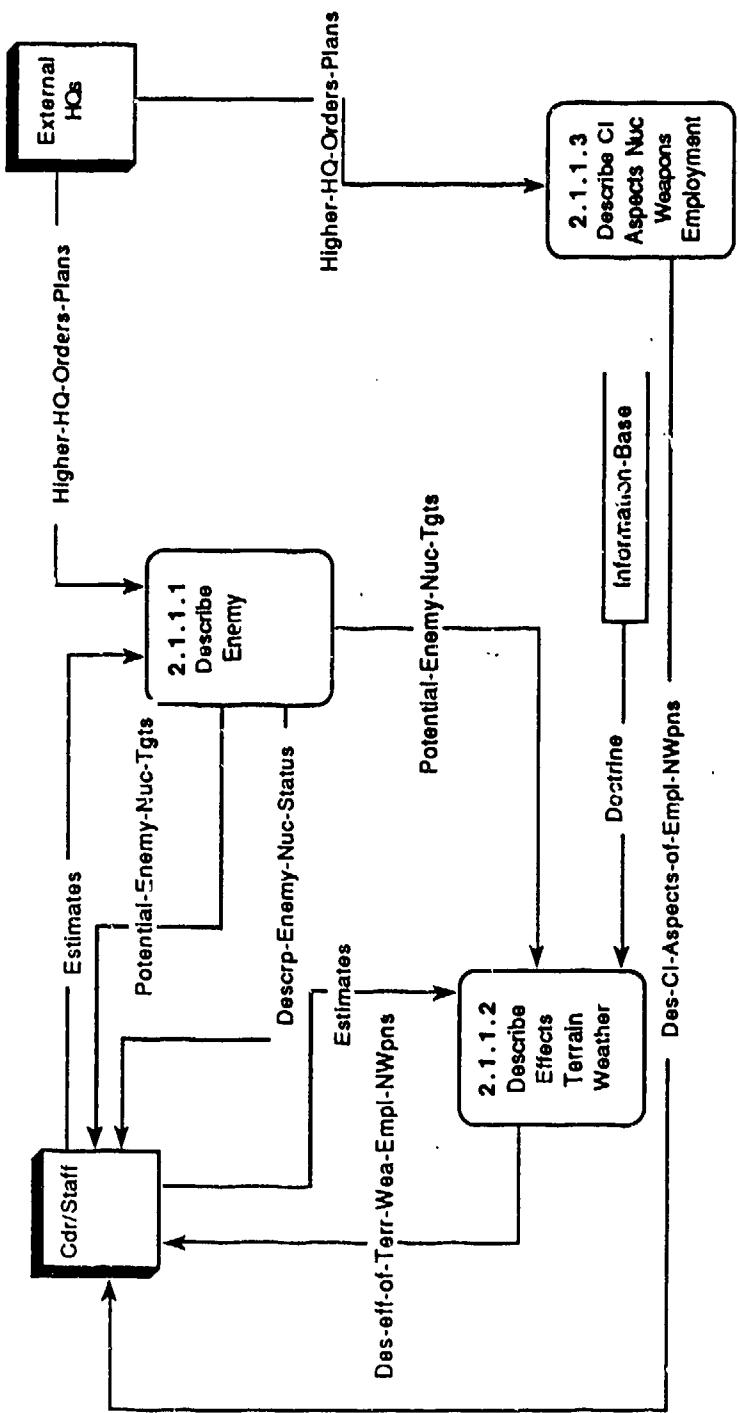
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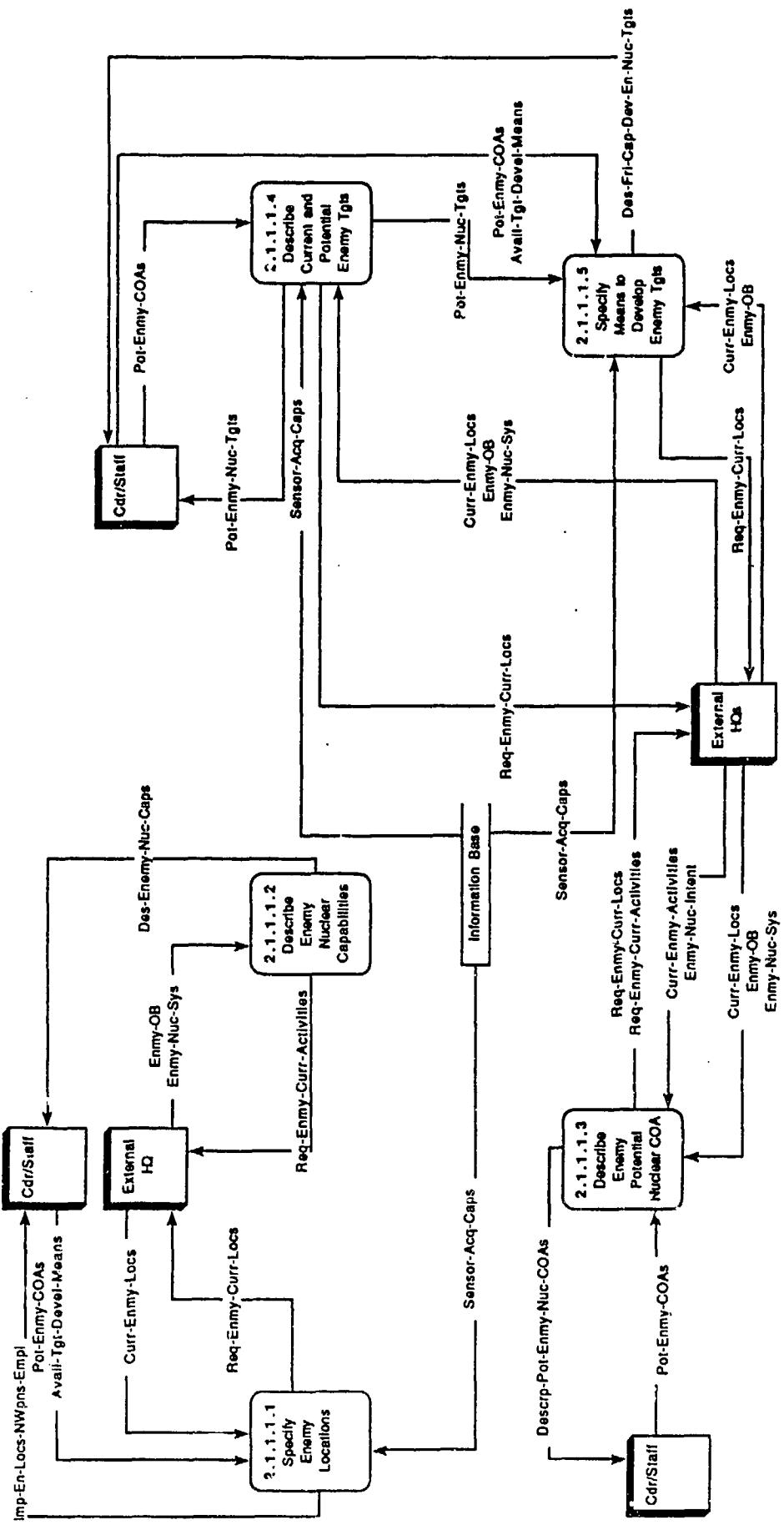


**ASSESS SITUATION
(2.1 THROUGH 2.4.3.3)**

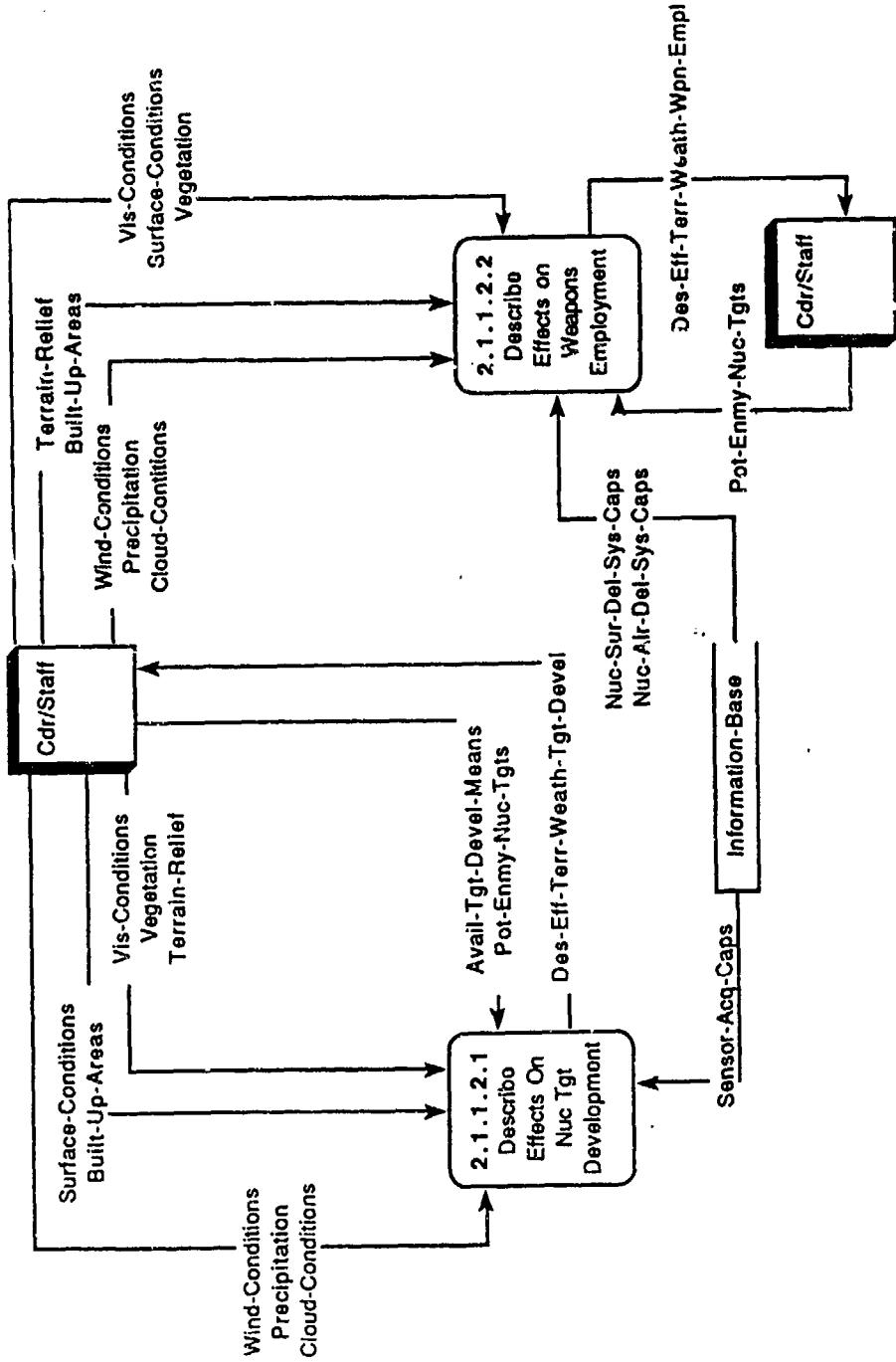


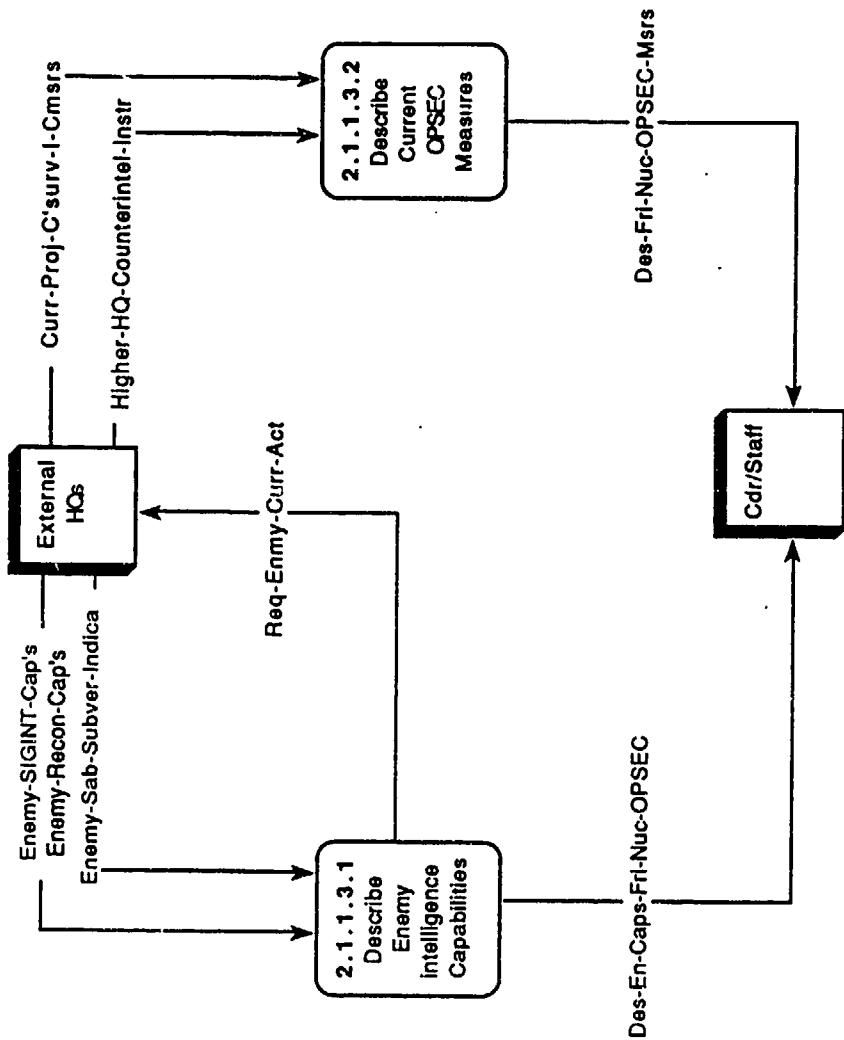




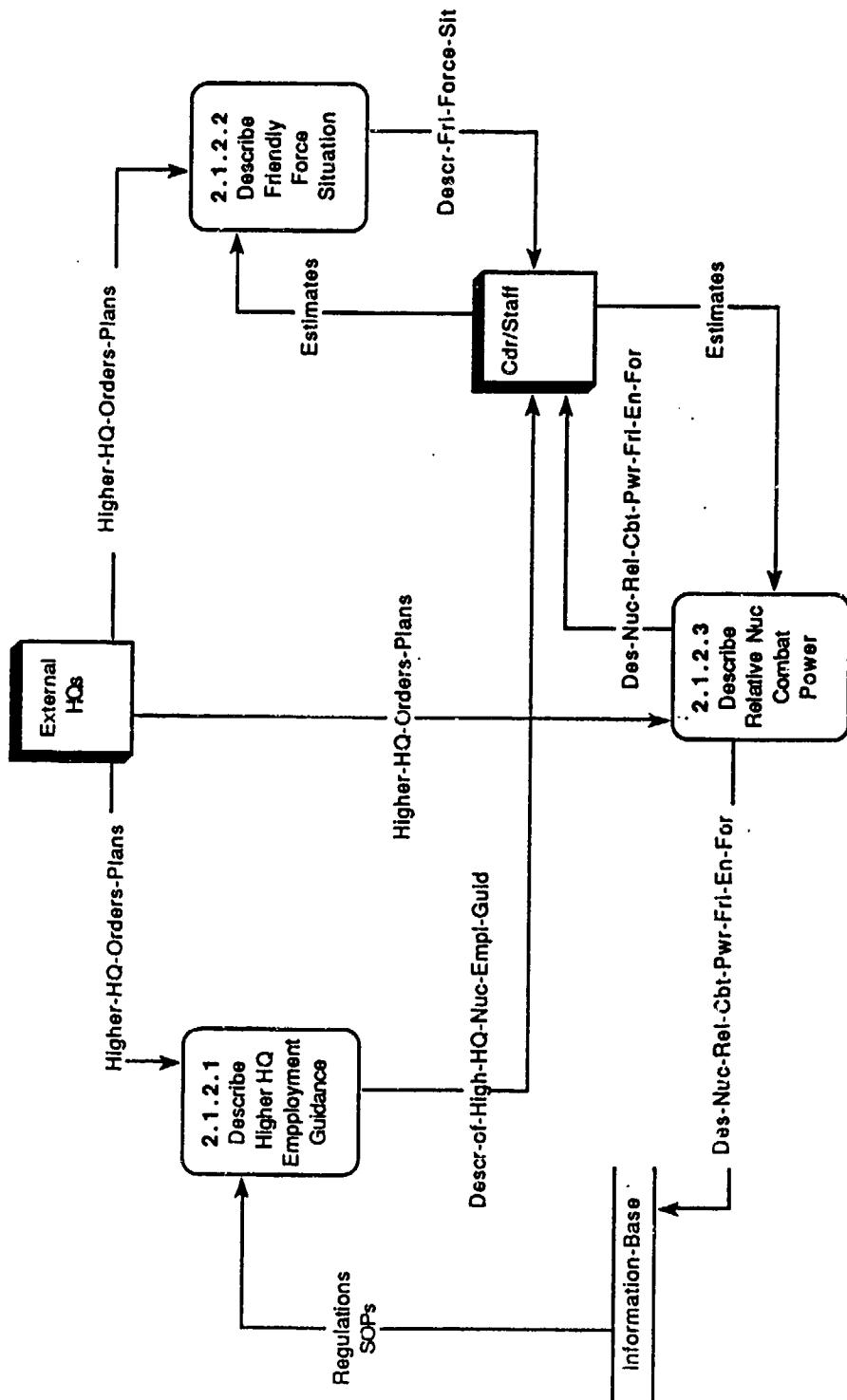


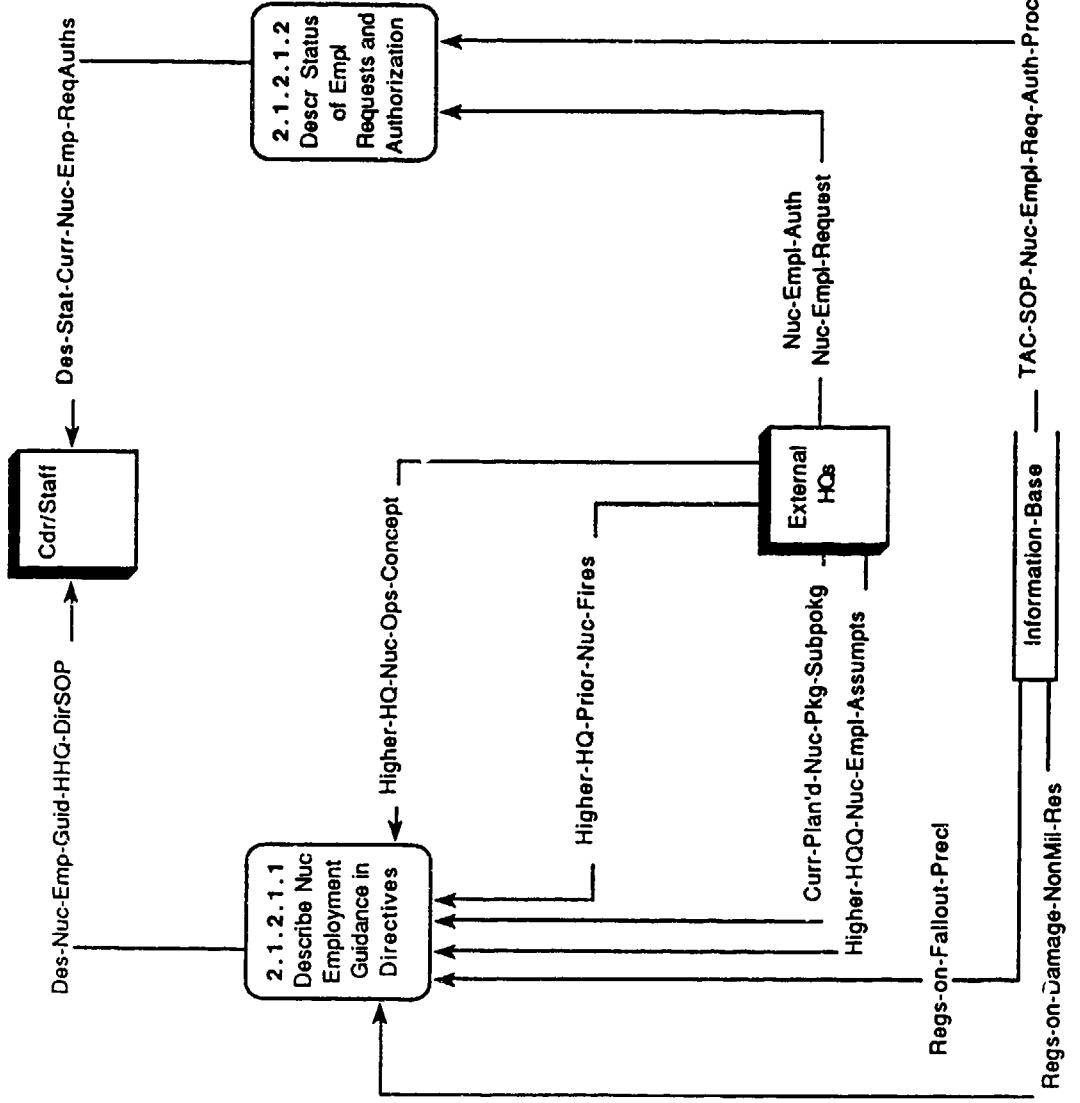
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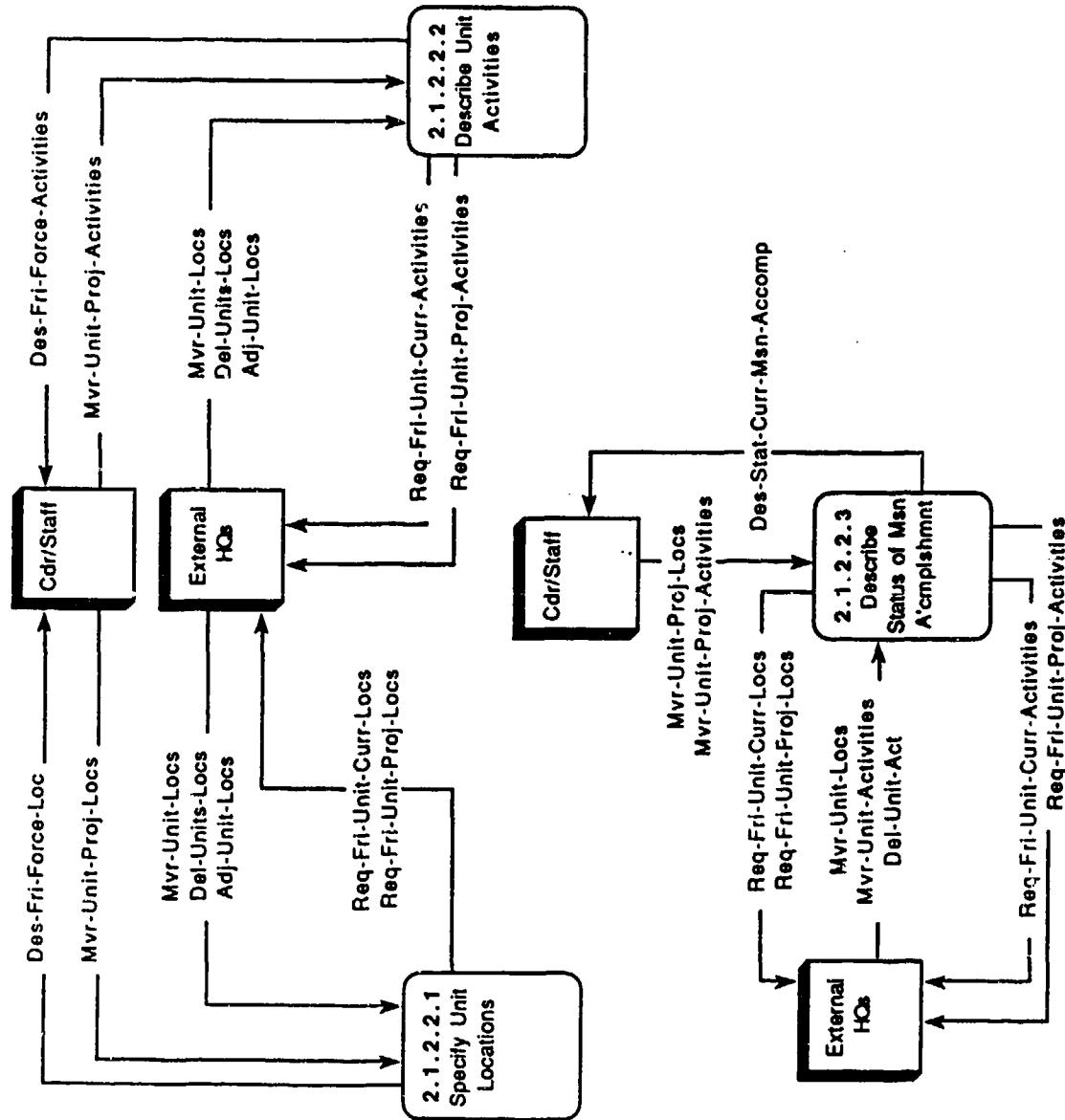




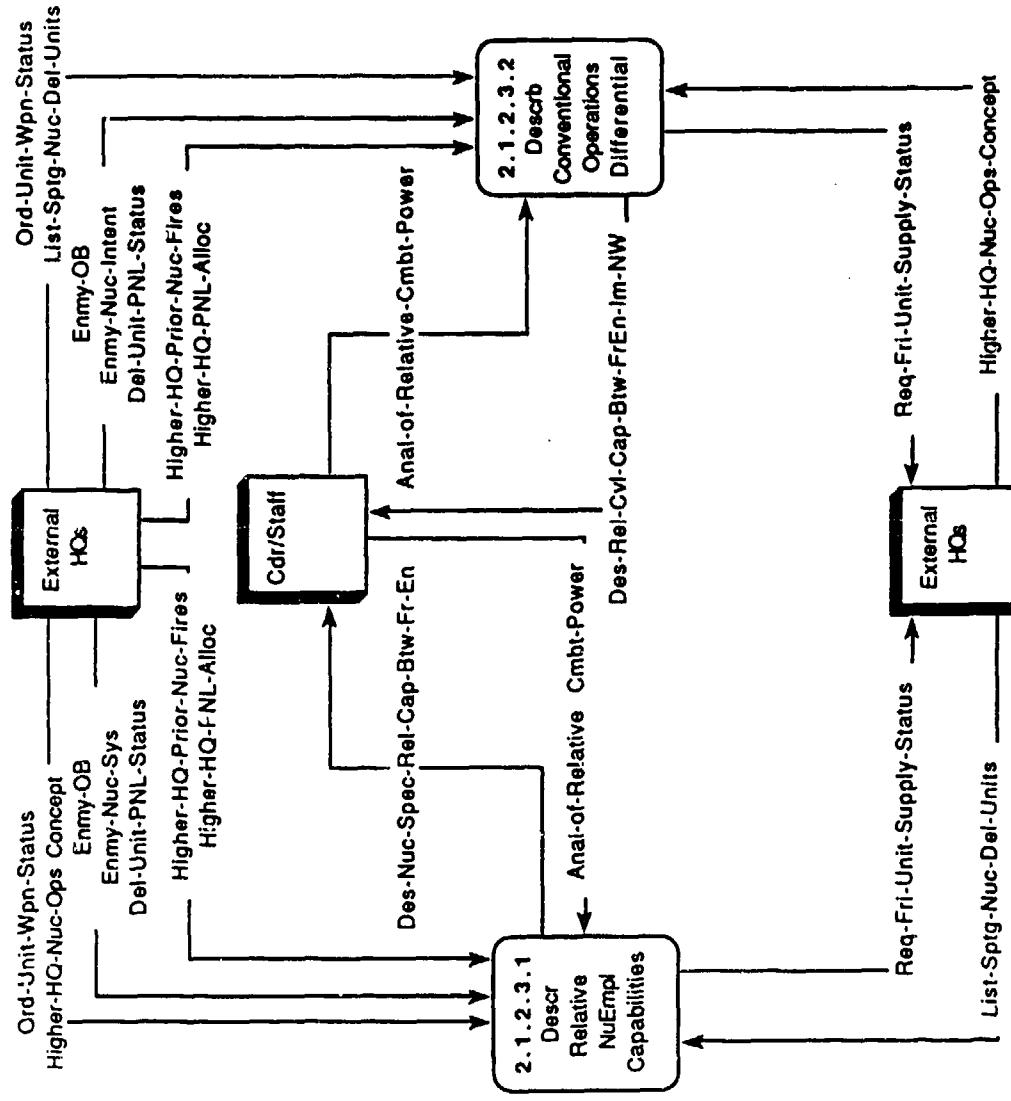
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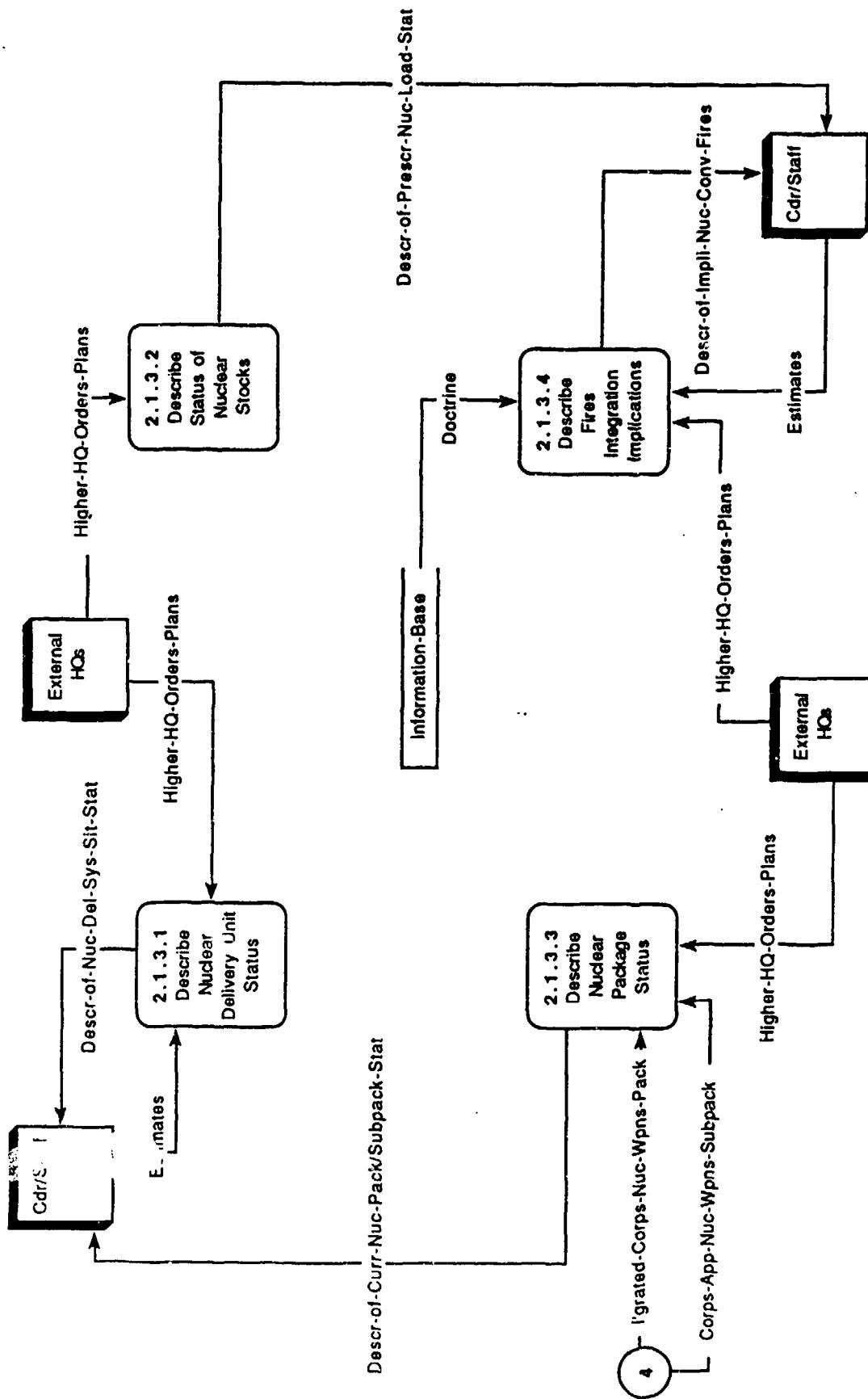


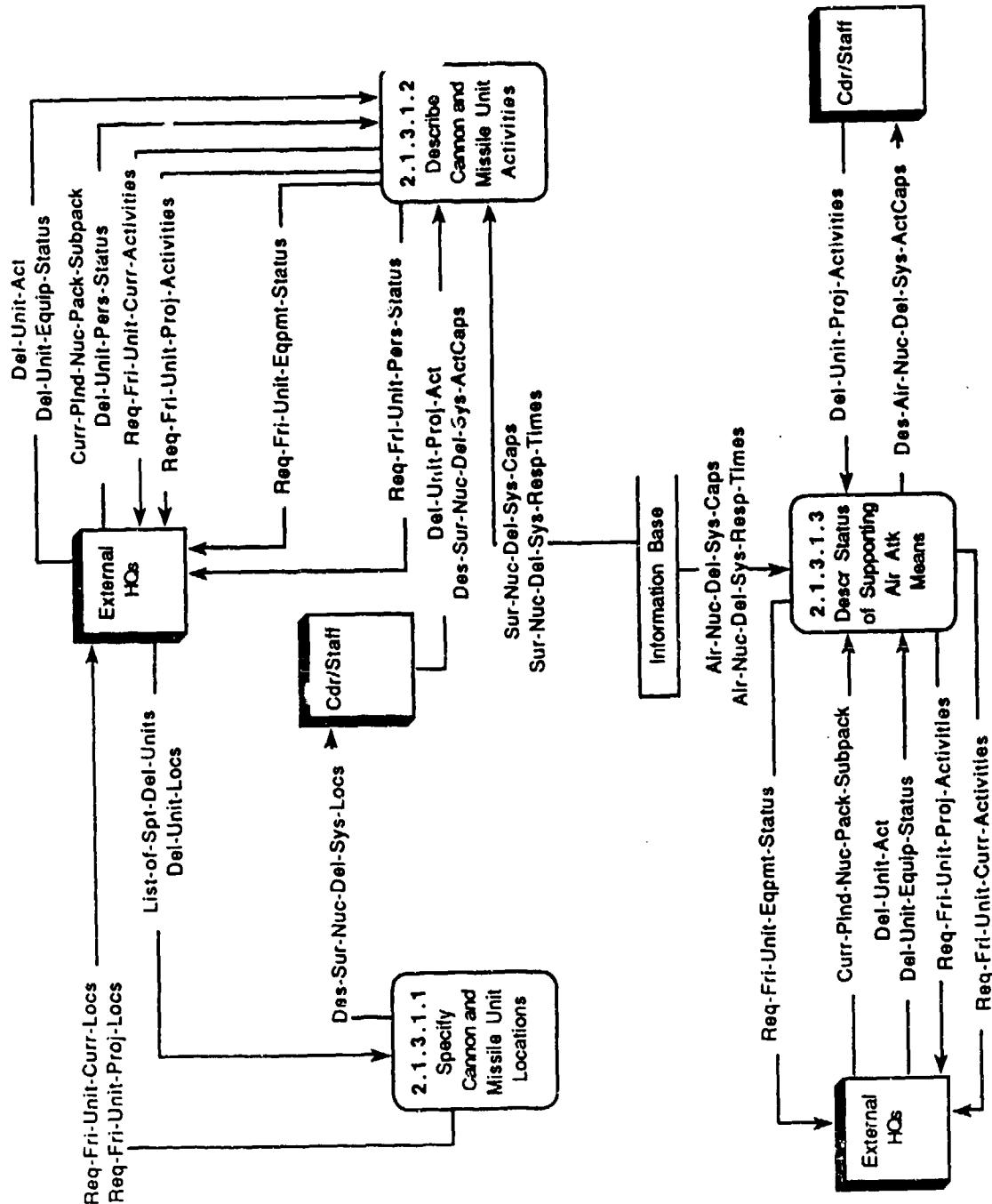


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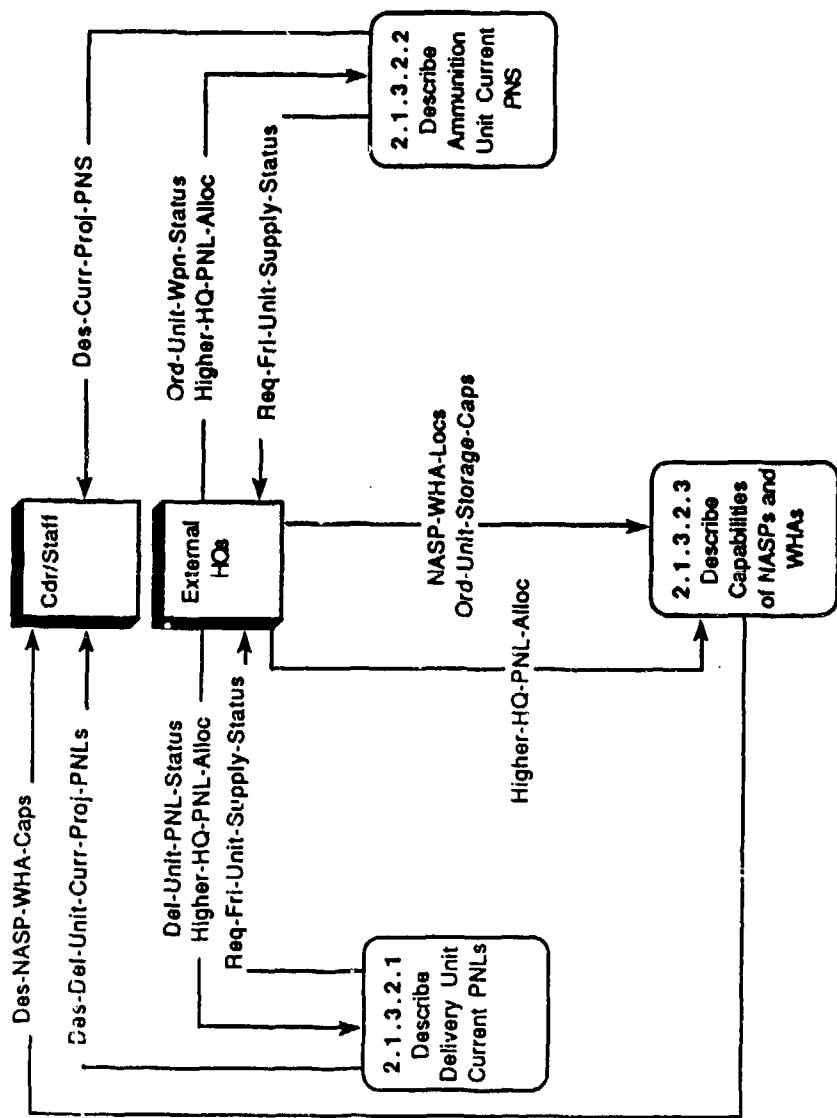


Describe Relative Nuc Combat Power #2.1.2.3

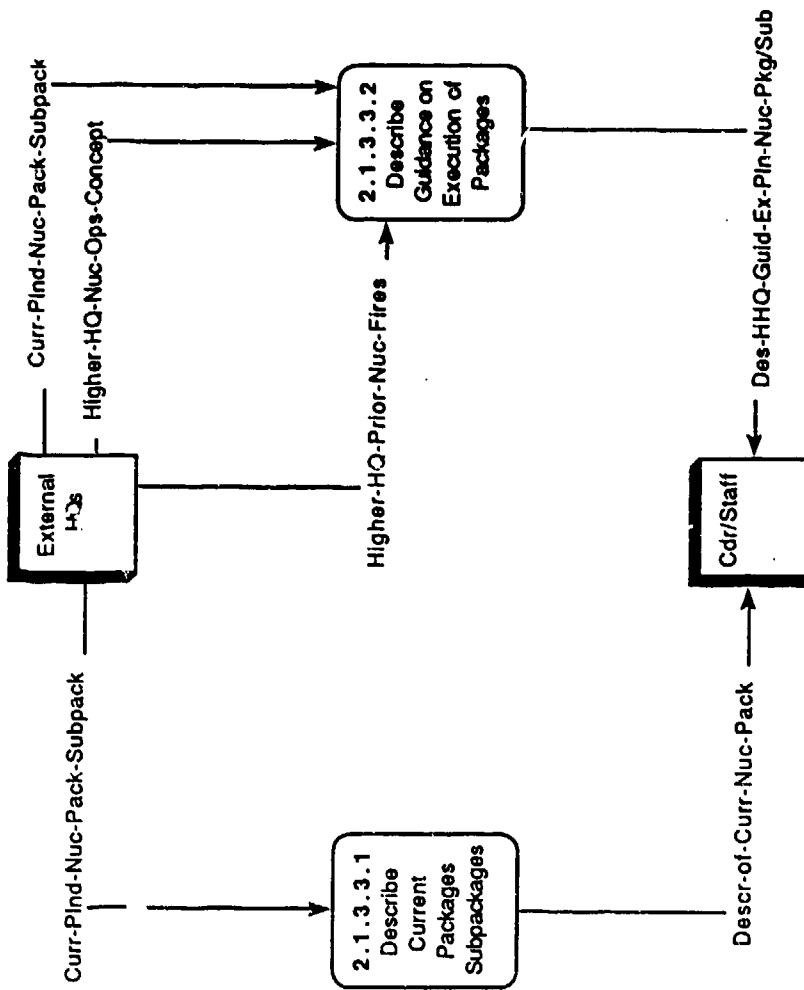




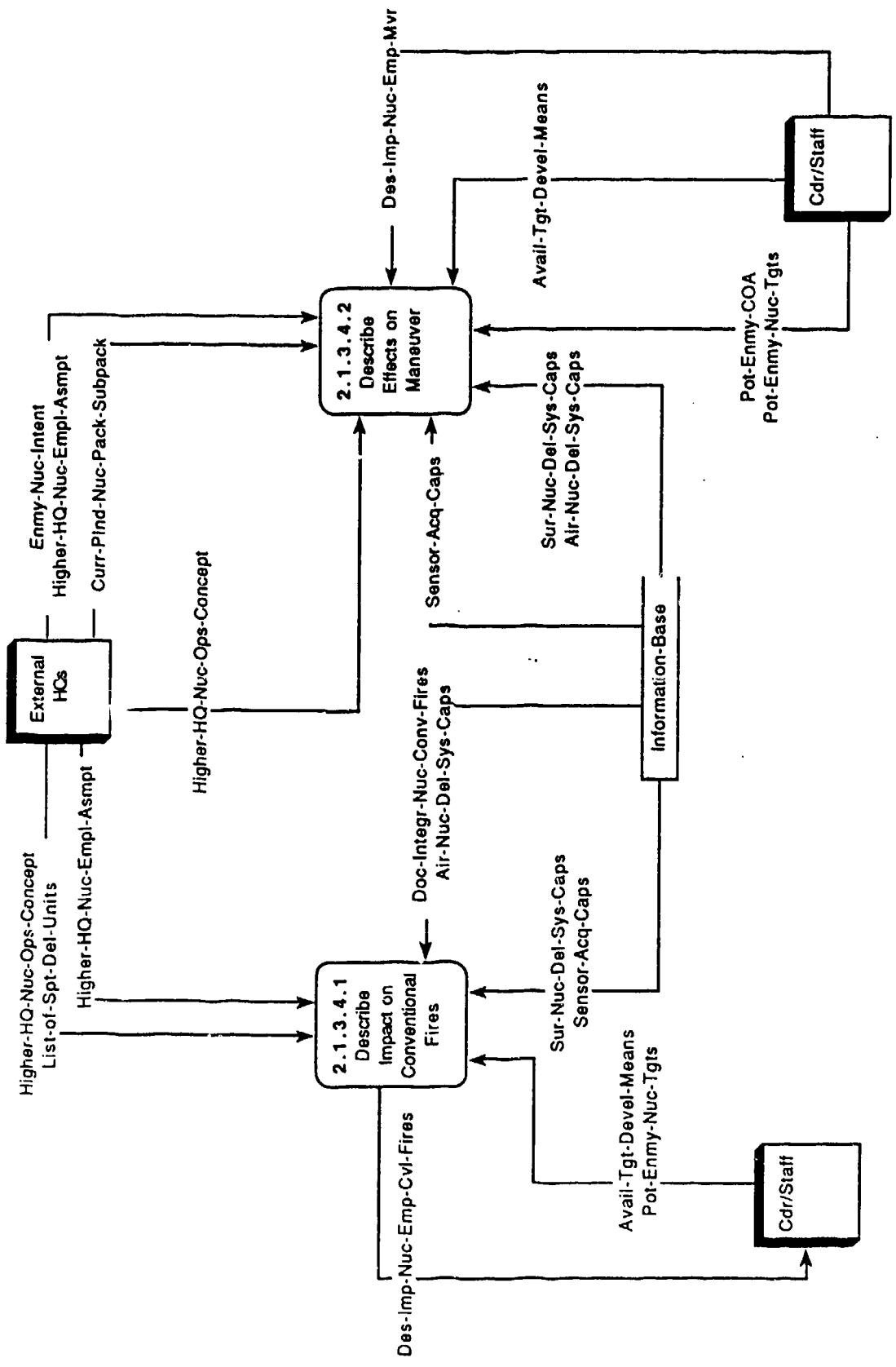
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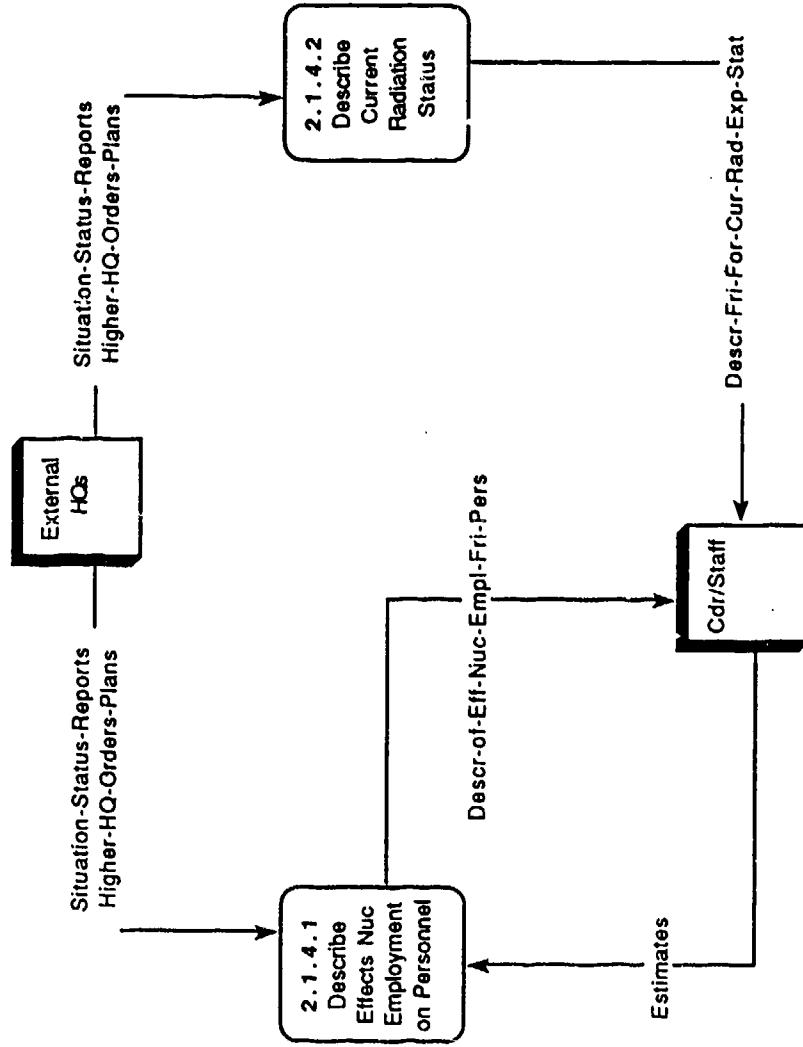


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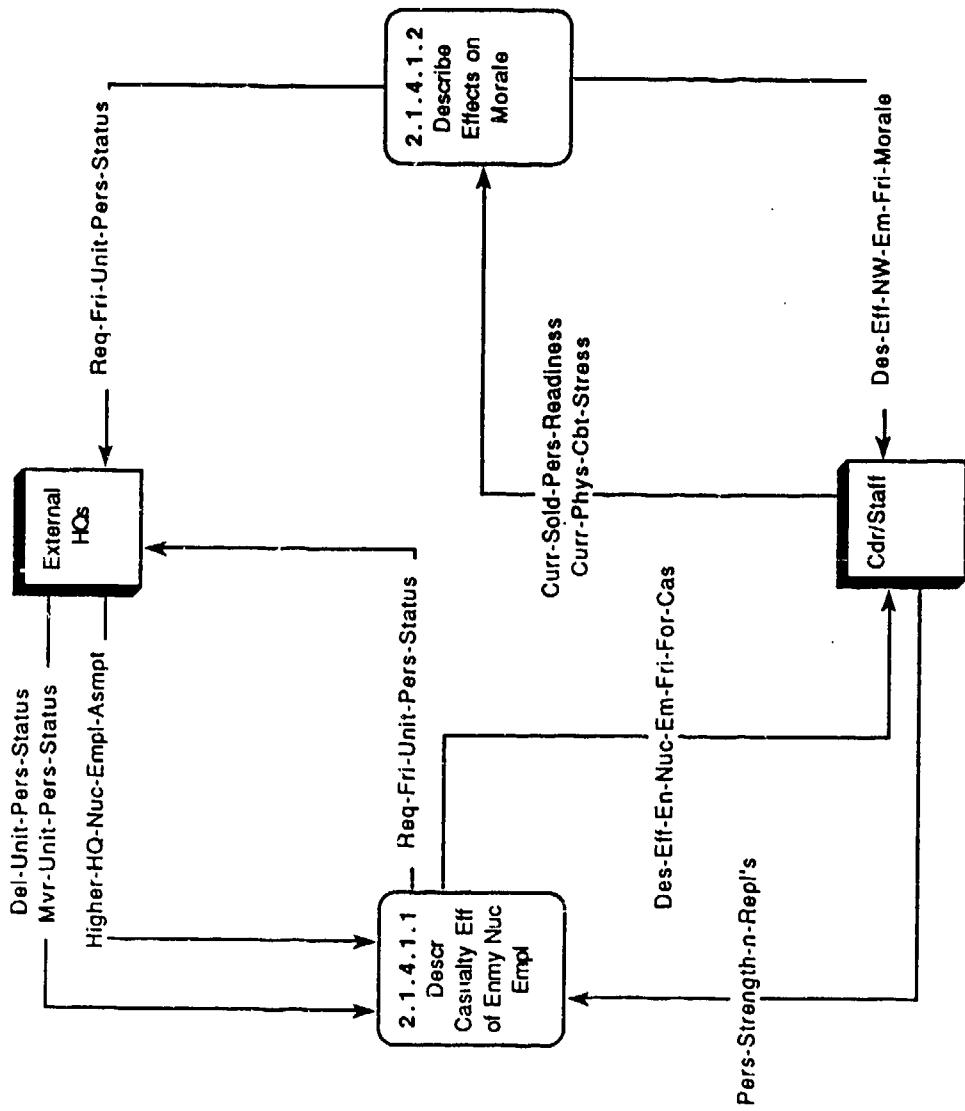


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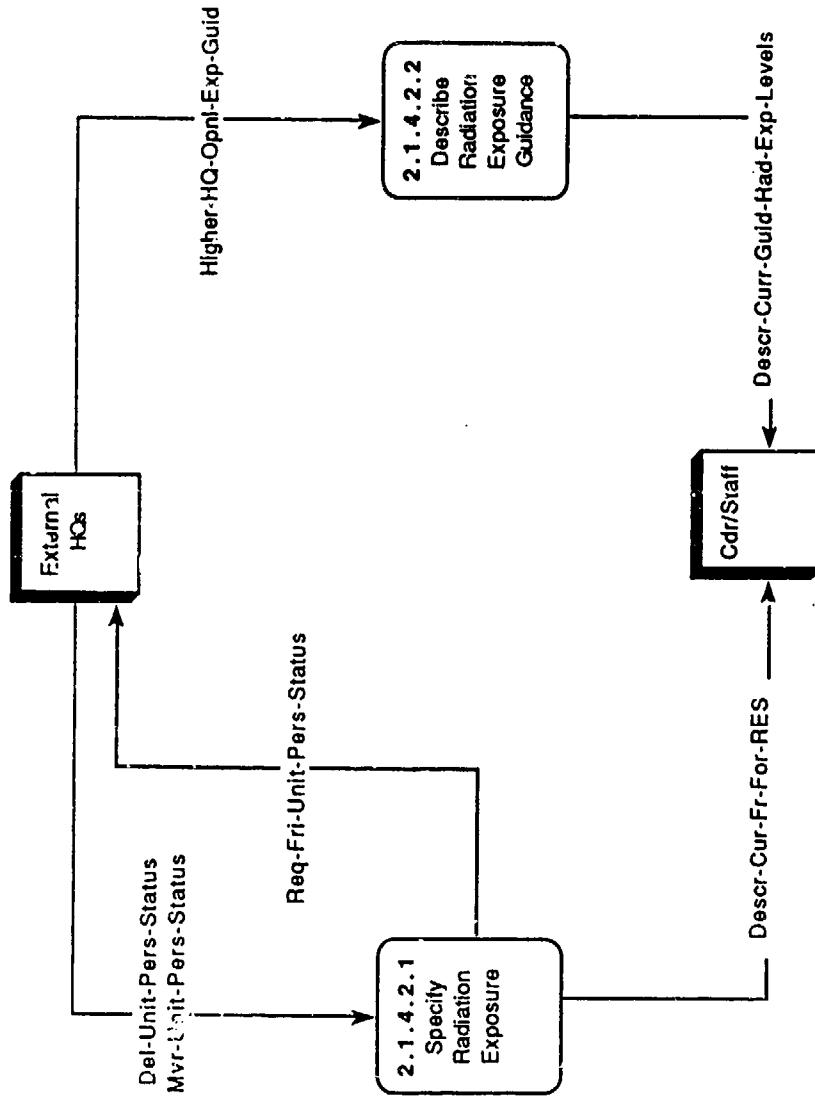




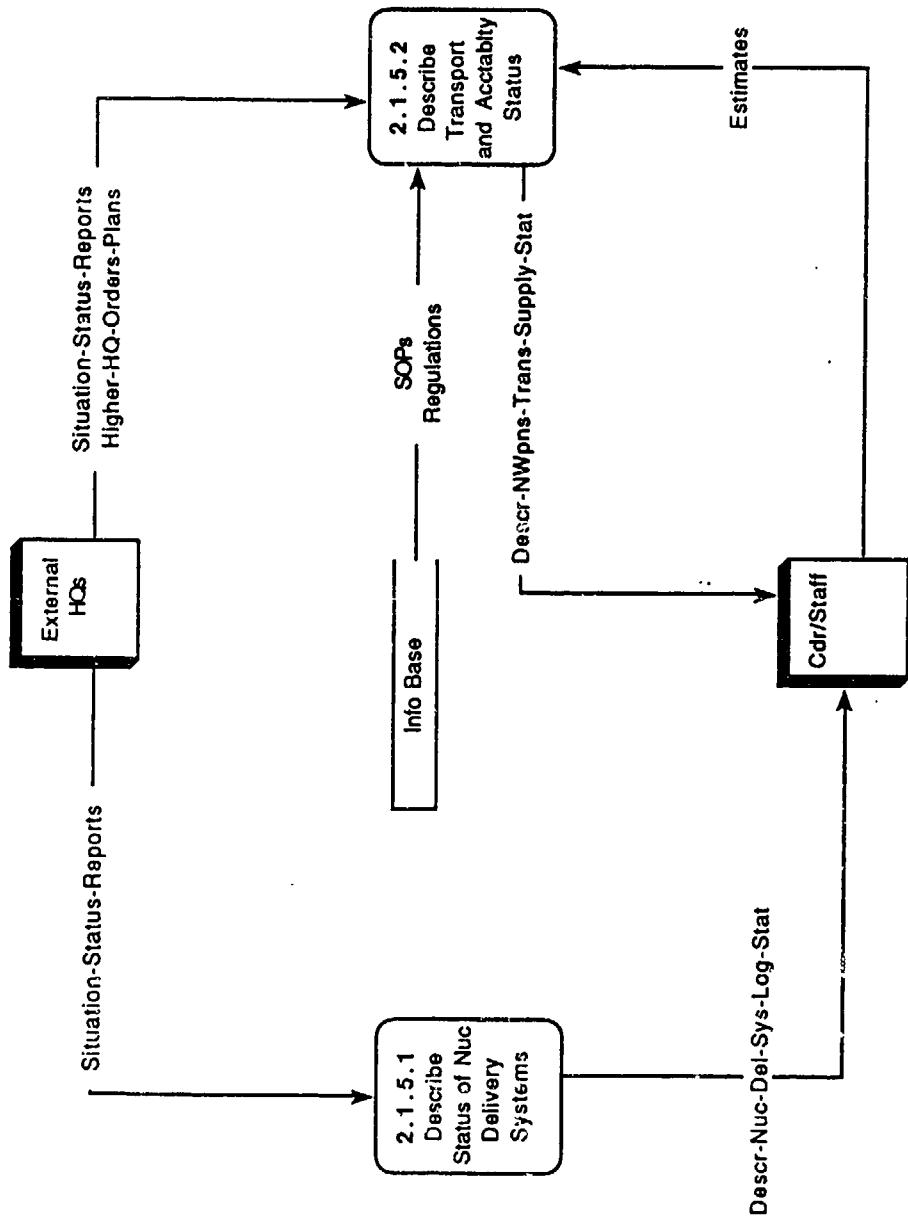
Provide Personnel Consideration #2.1.4

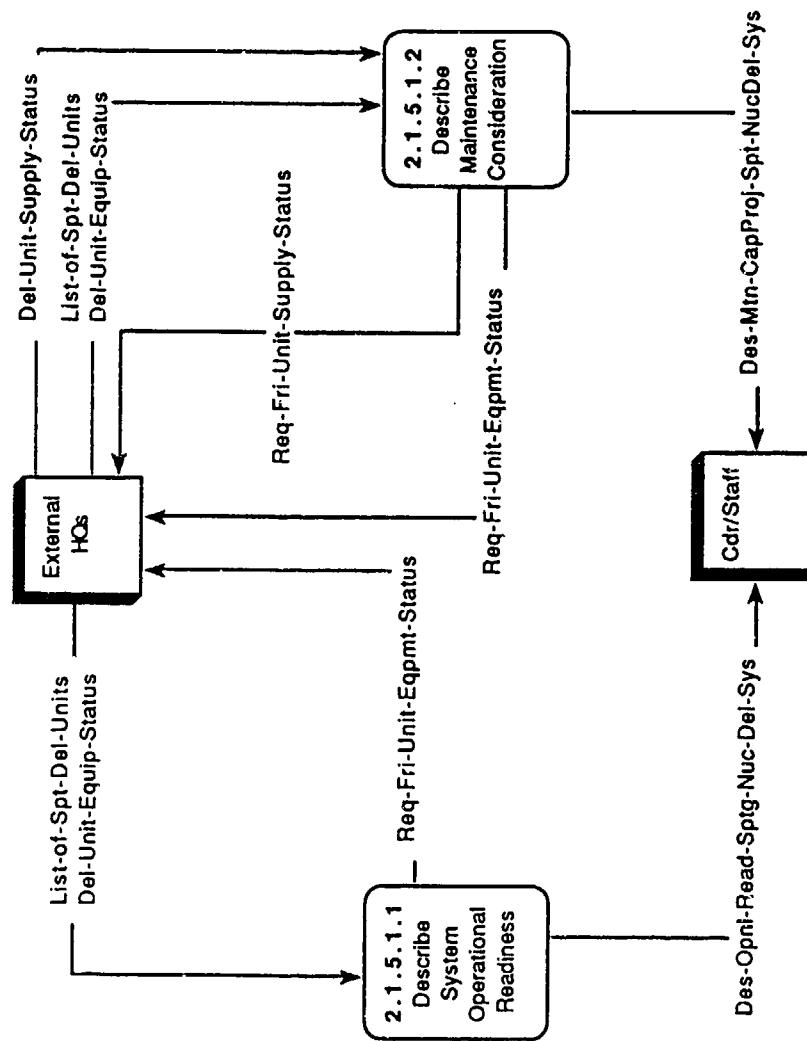


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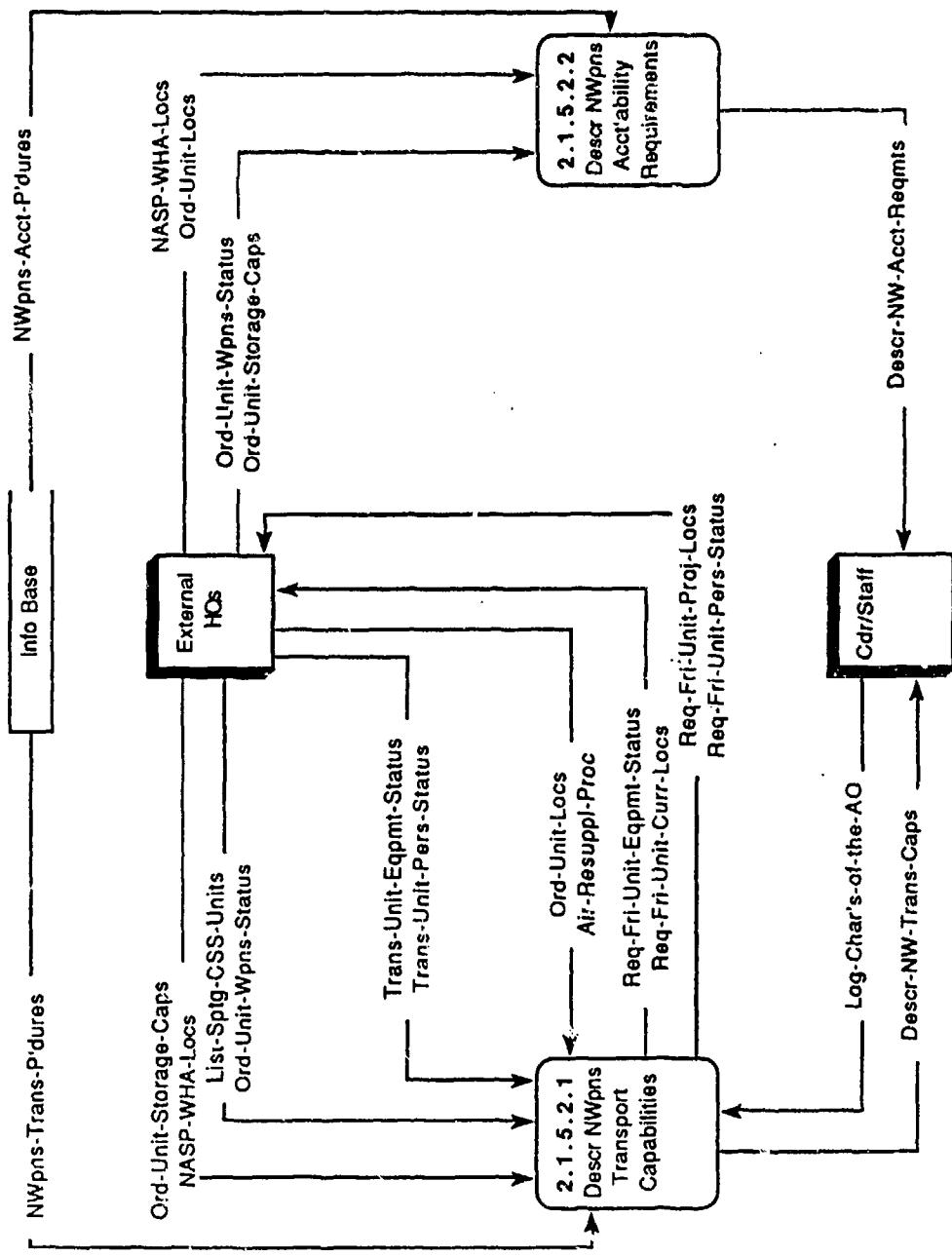


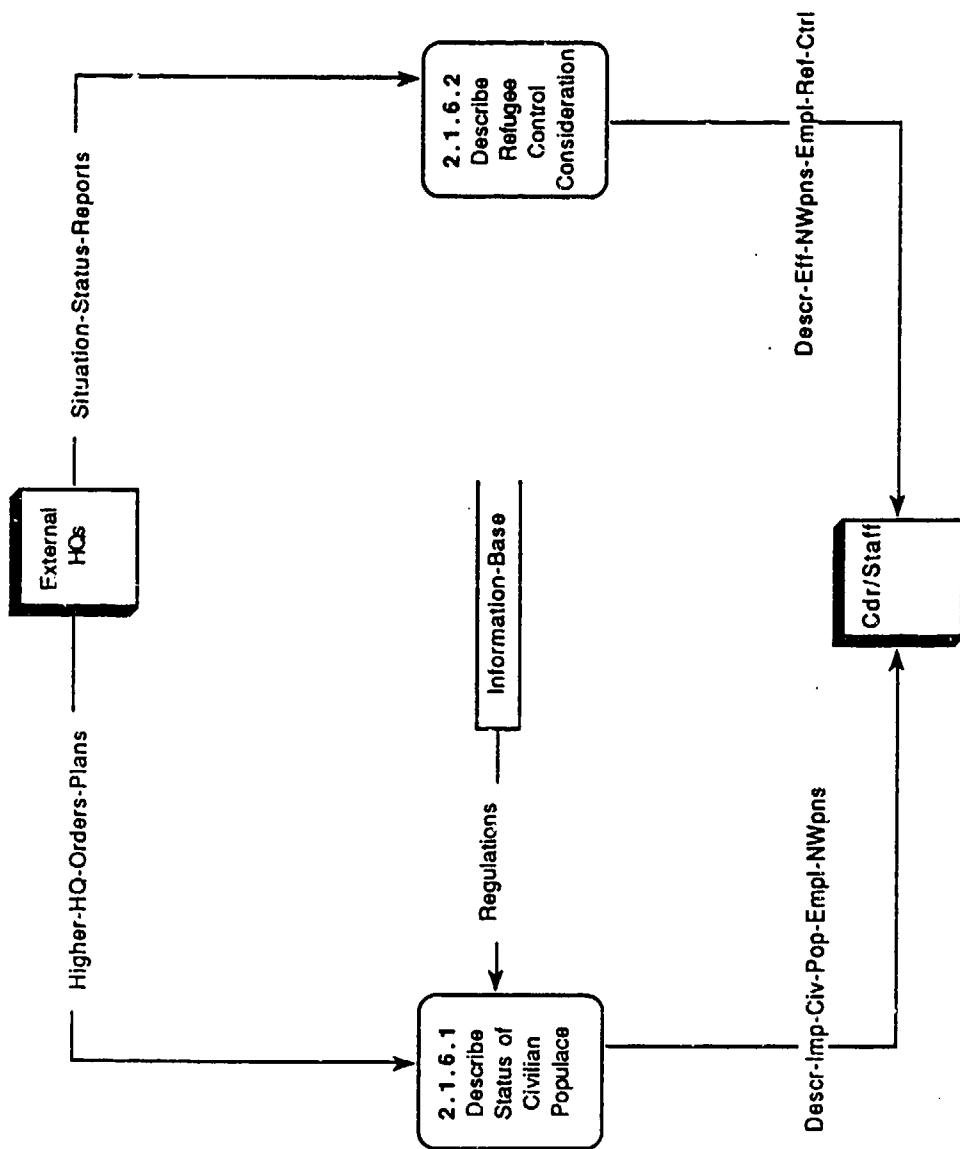
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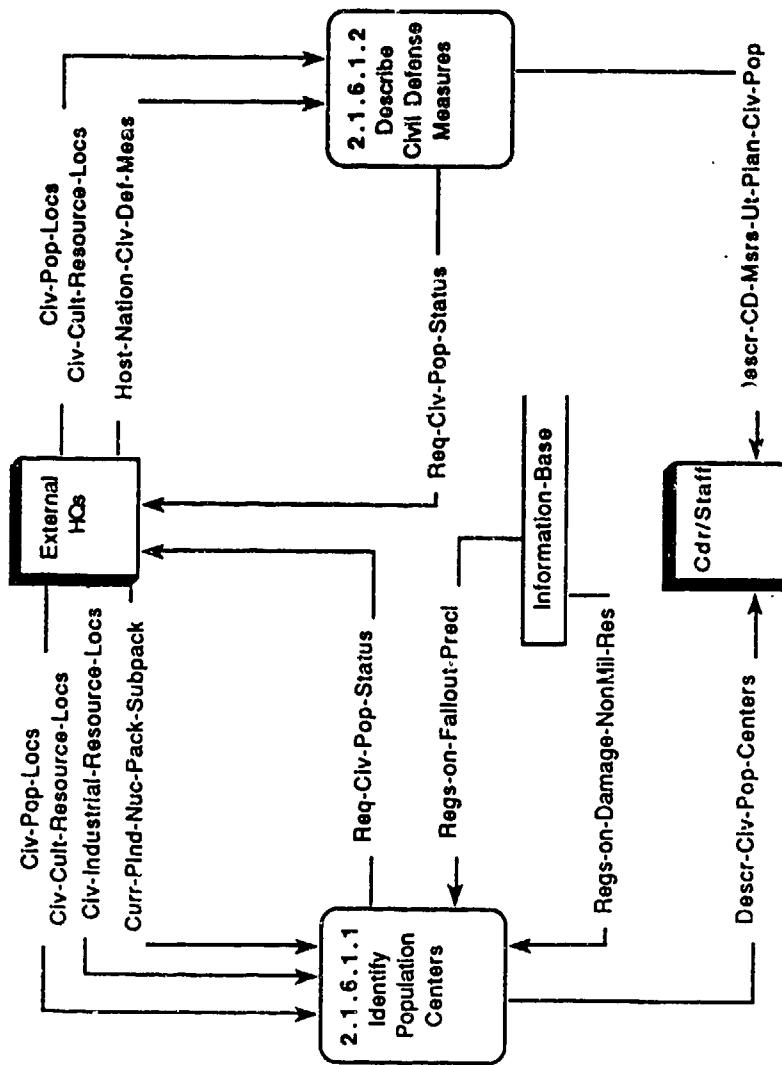
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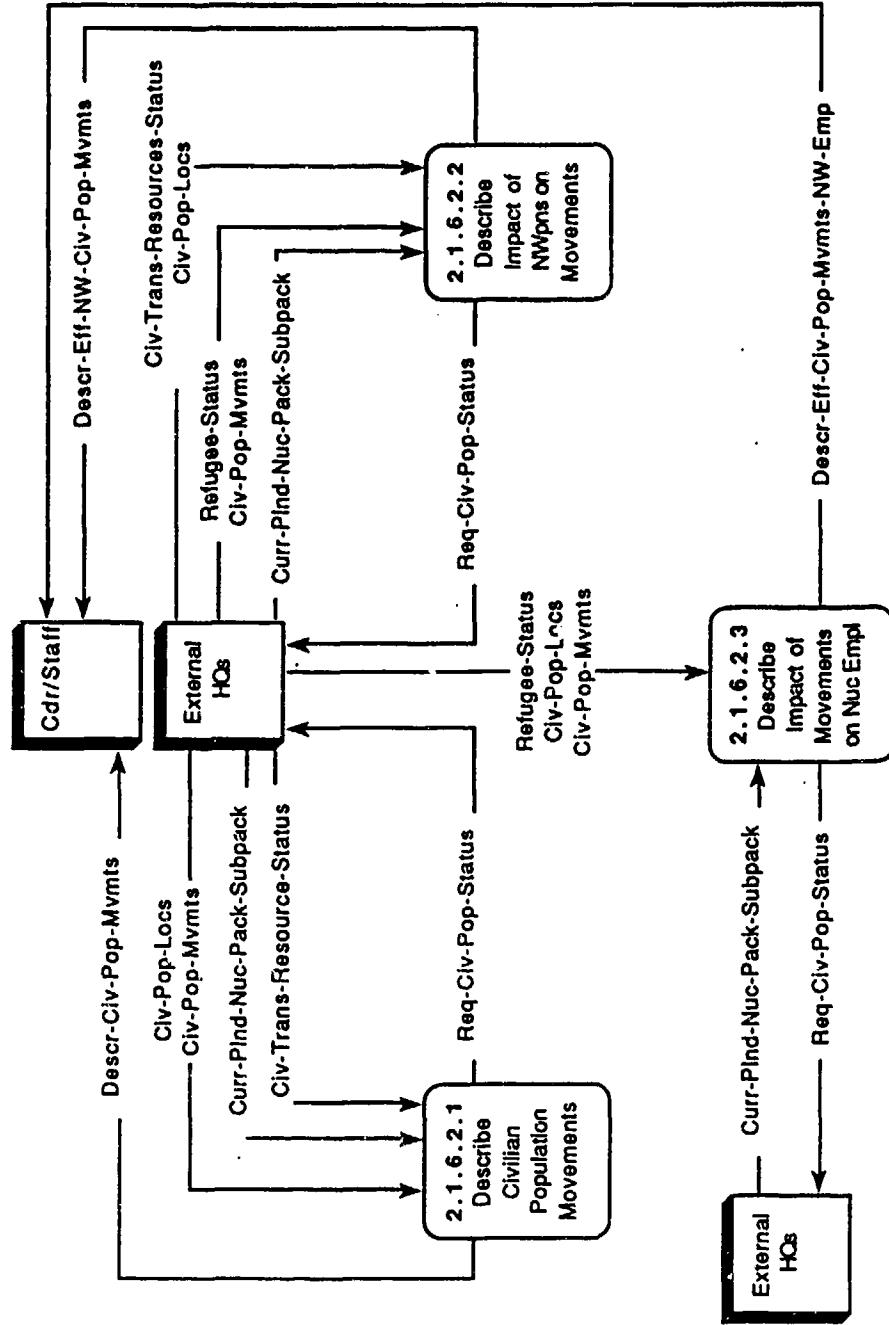


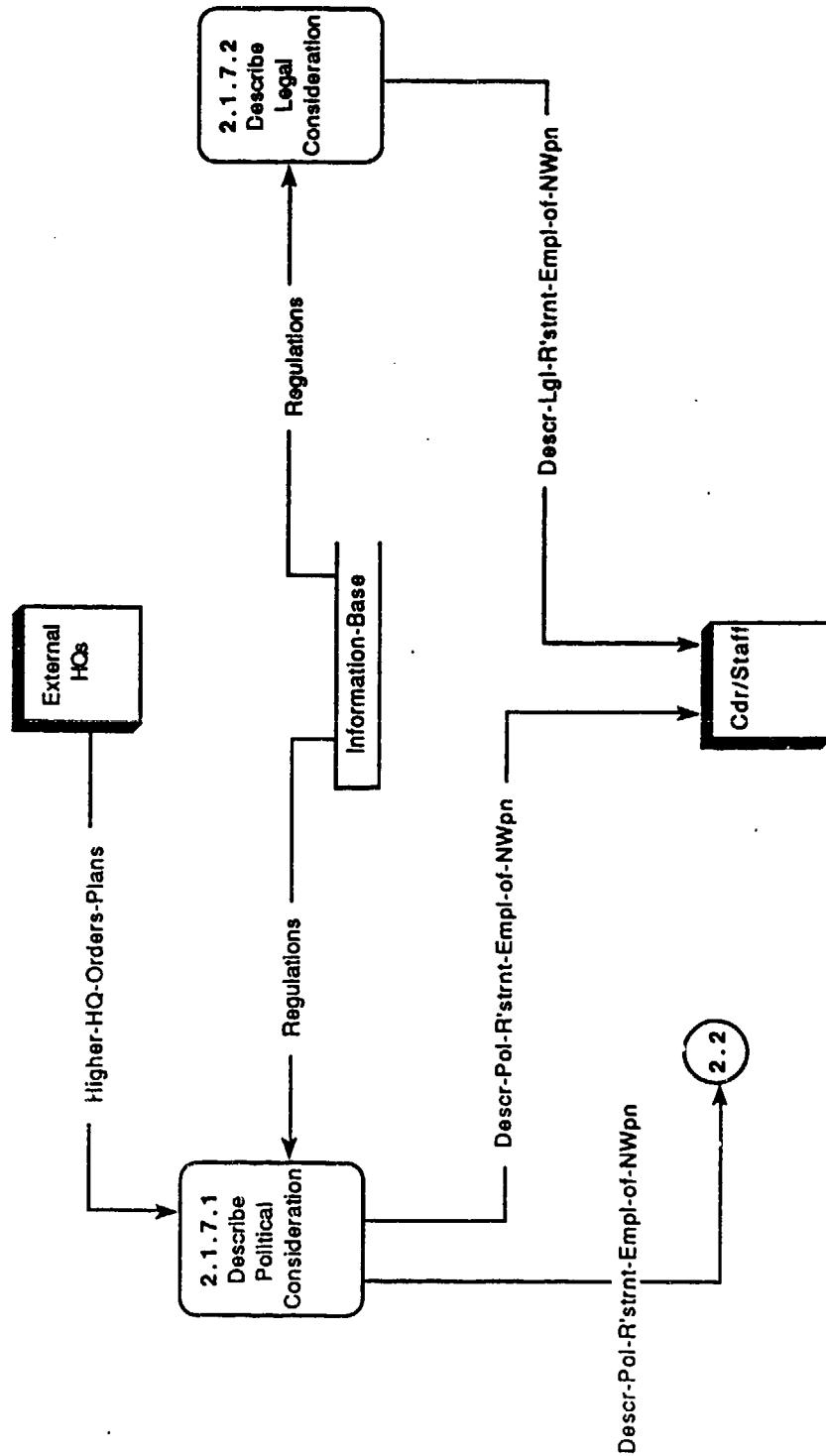


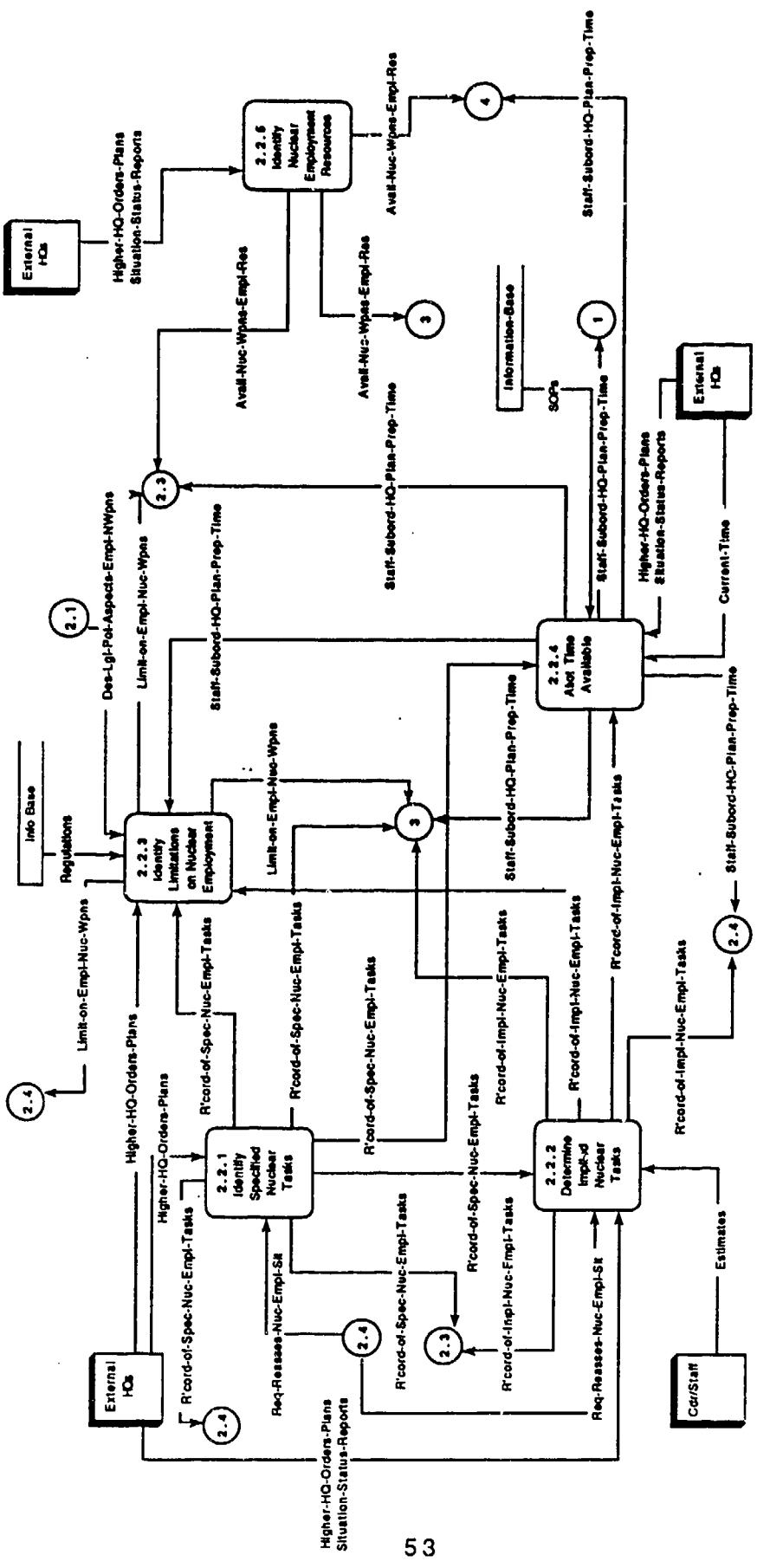
Provide Civil-Mil Consideration #2.1.6

Describe Status of Civilian Population #2.1.6.1

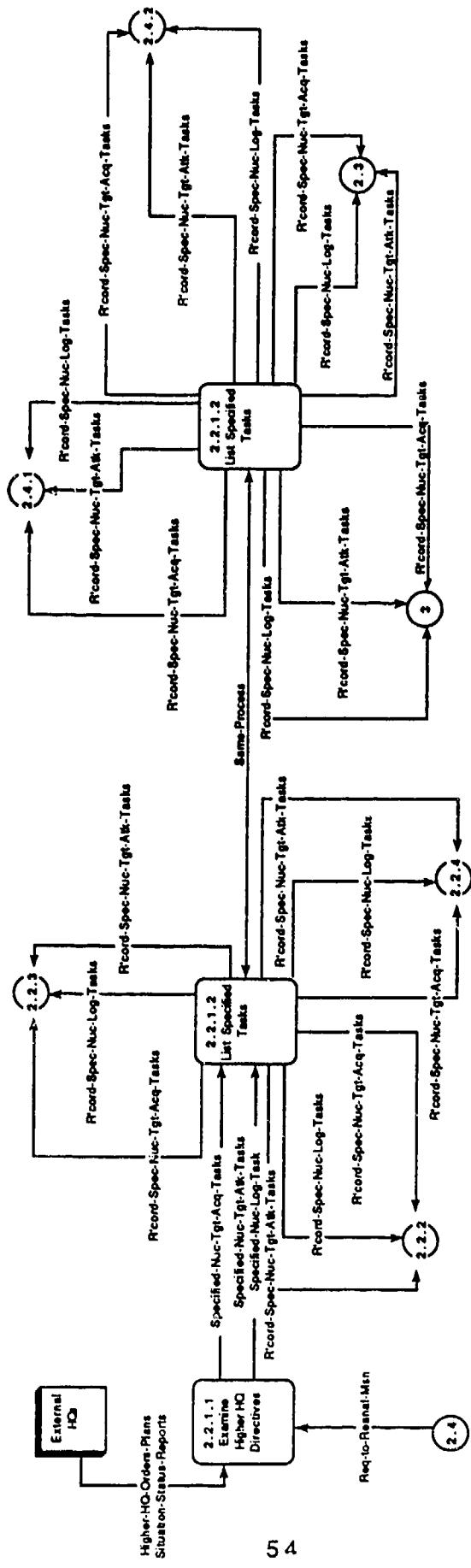


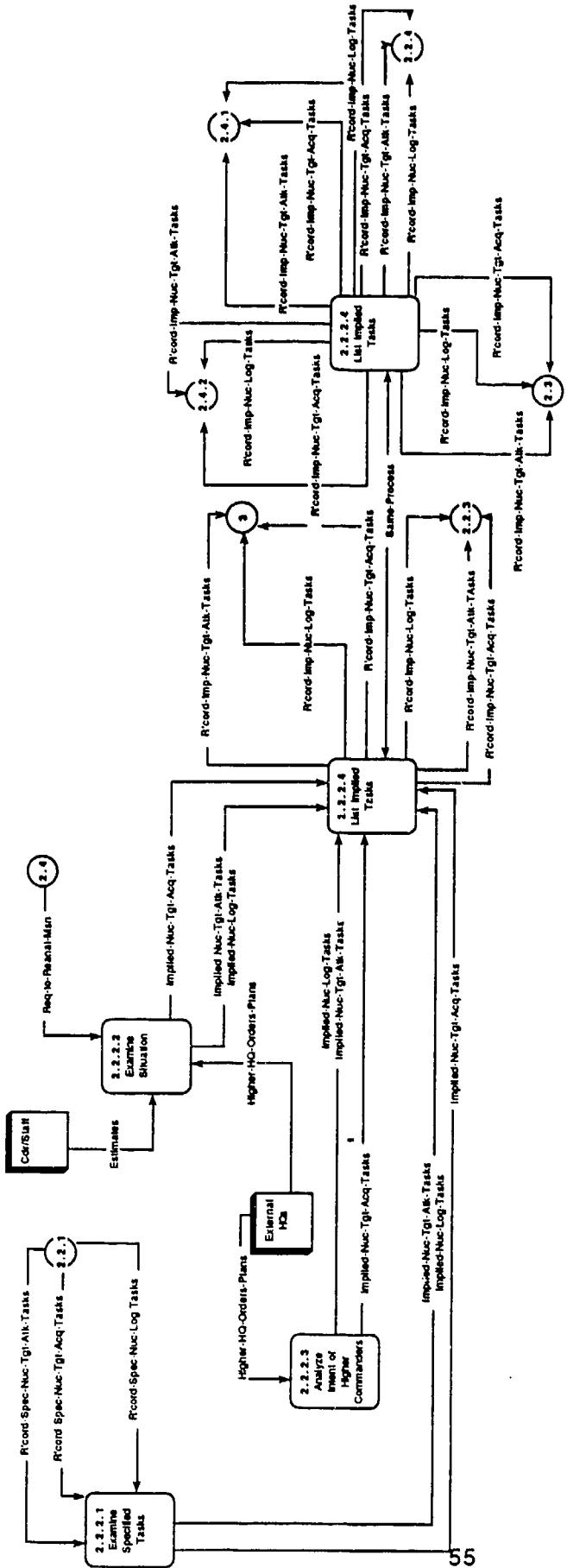


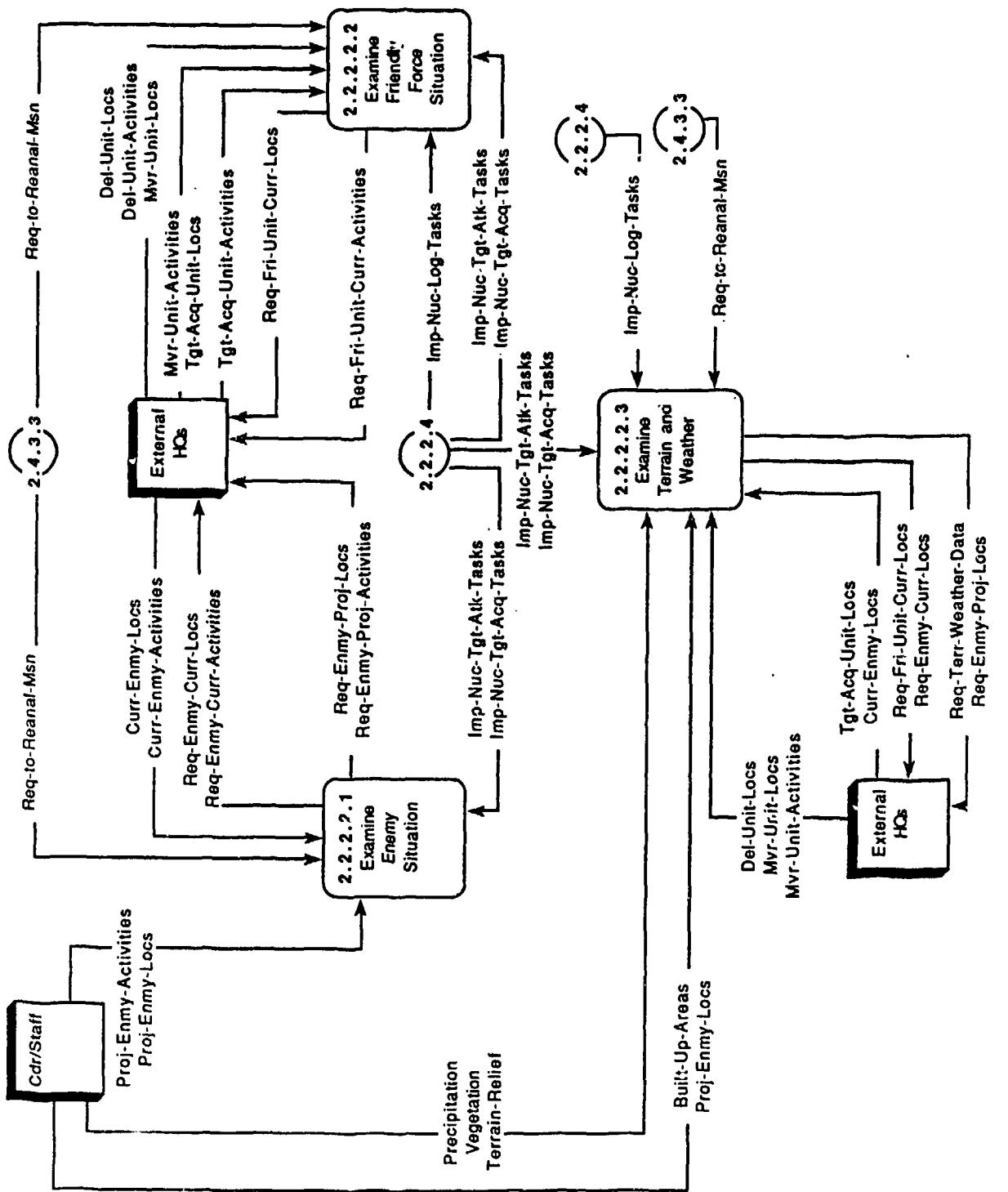




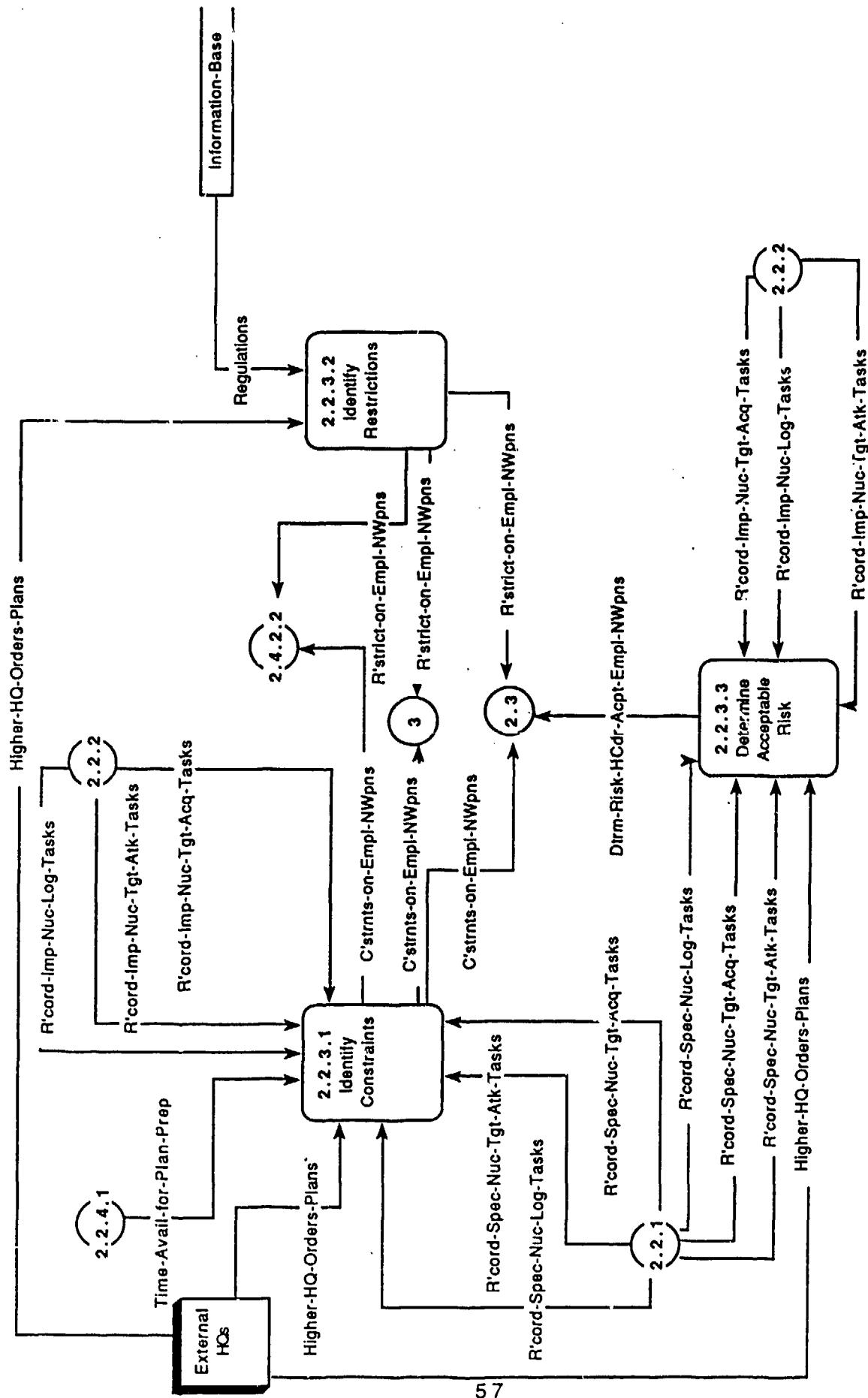
53

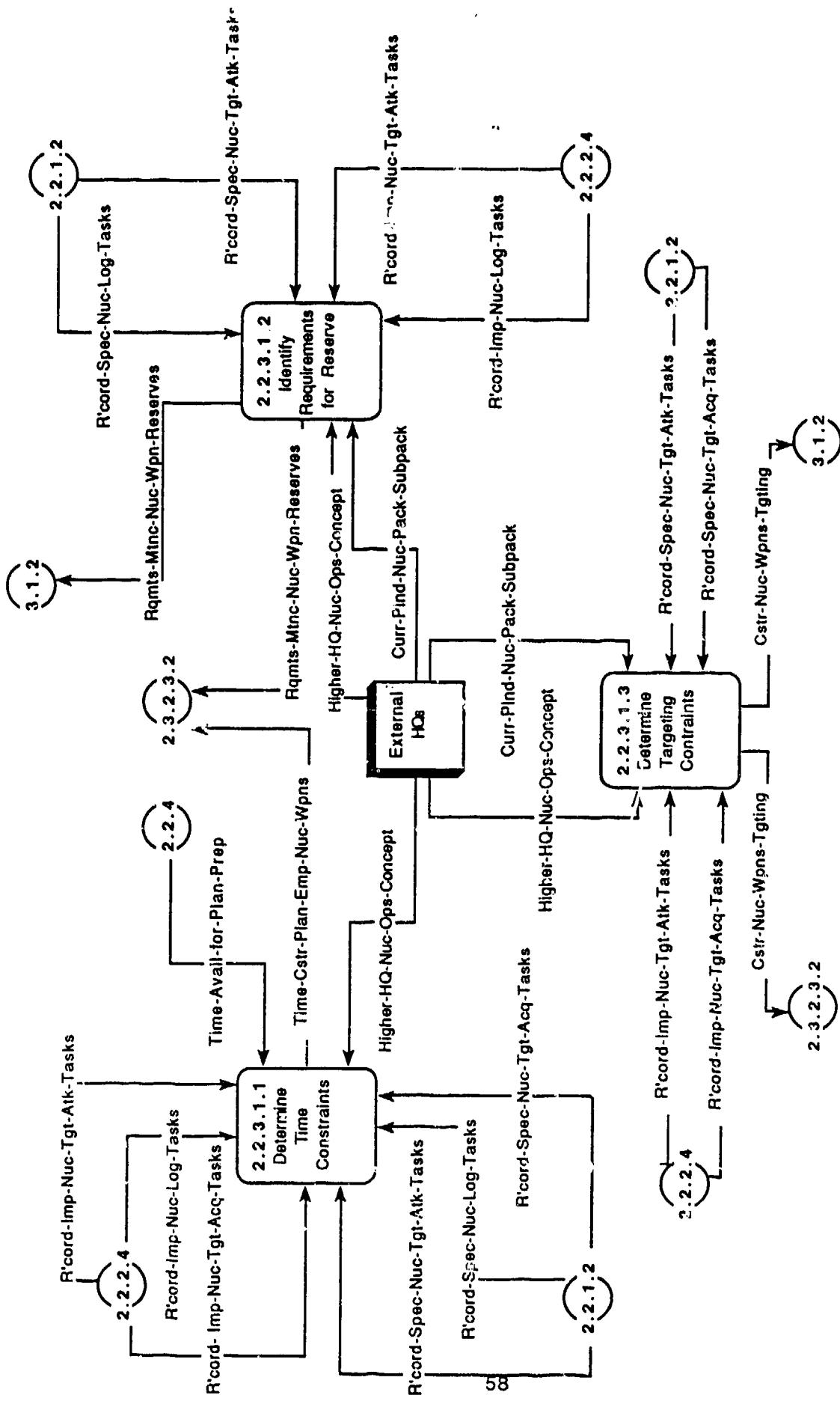




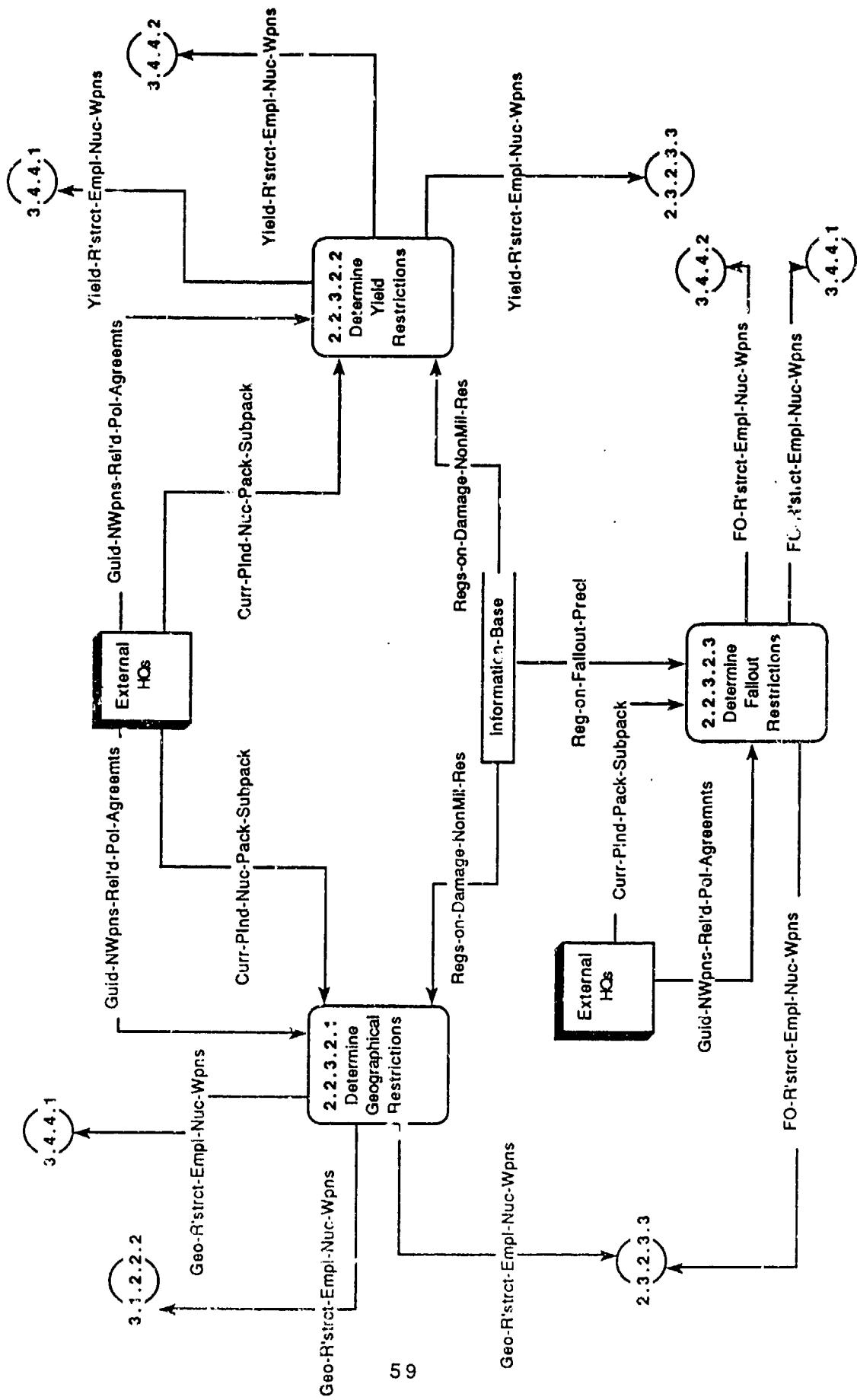


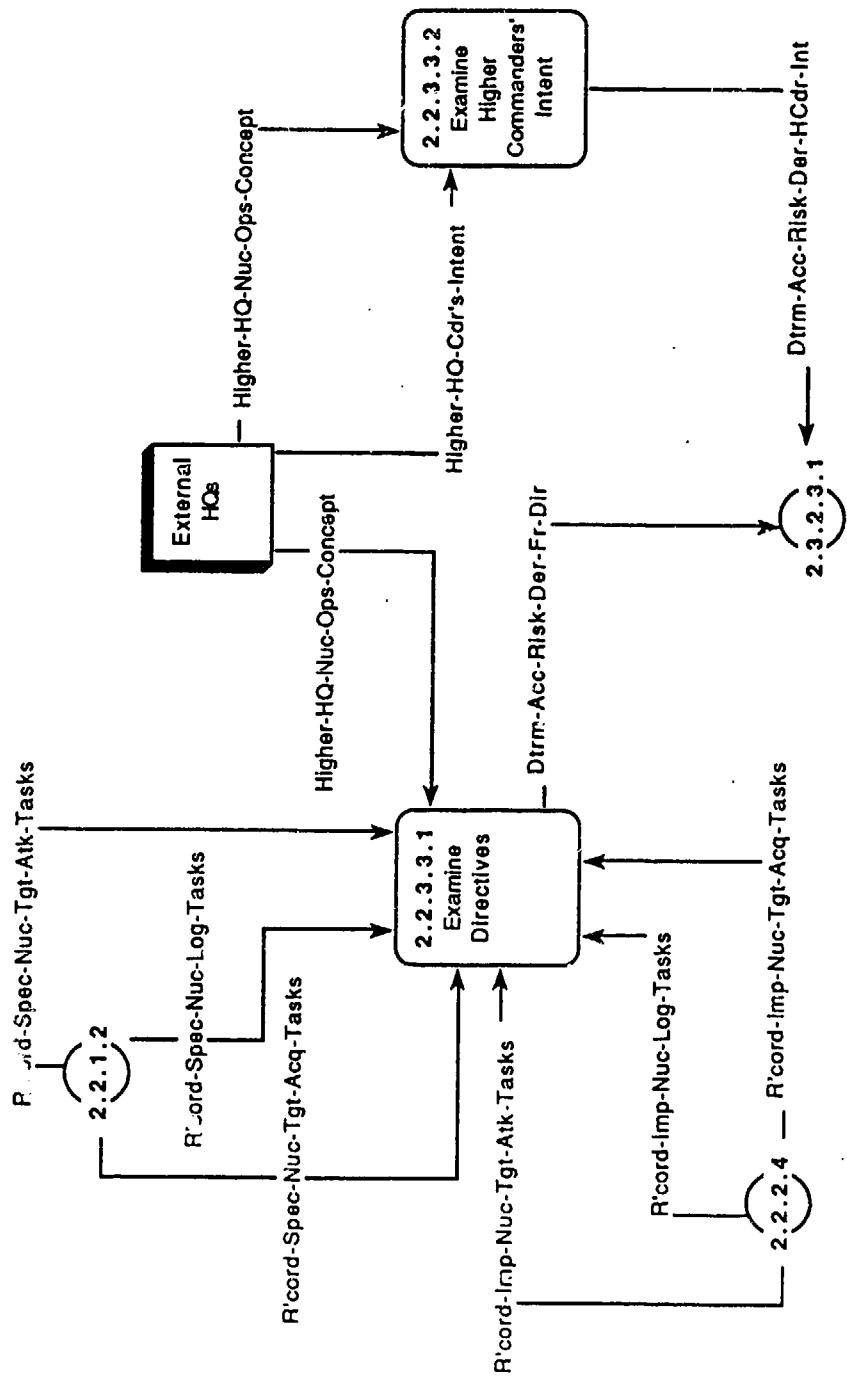
Examine Situation #2.2.2.2

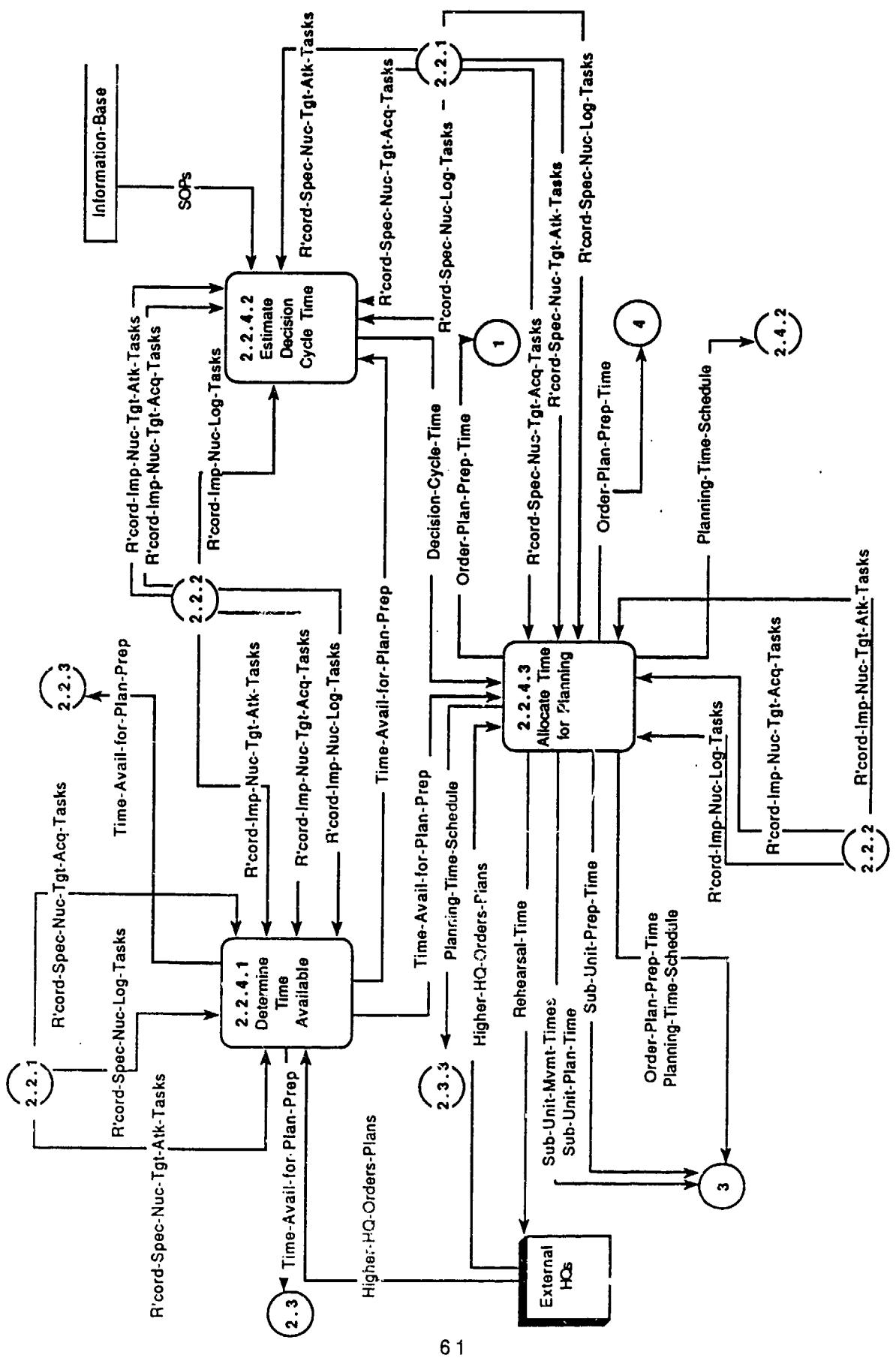


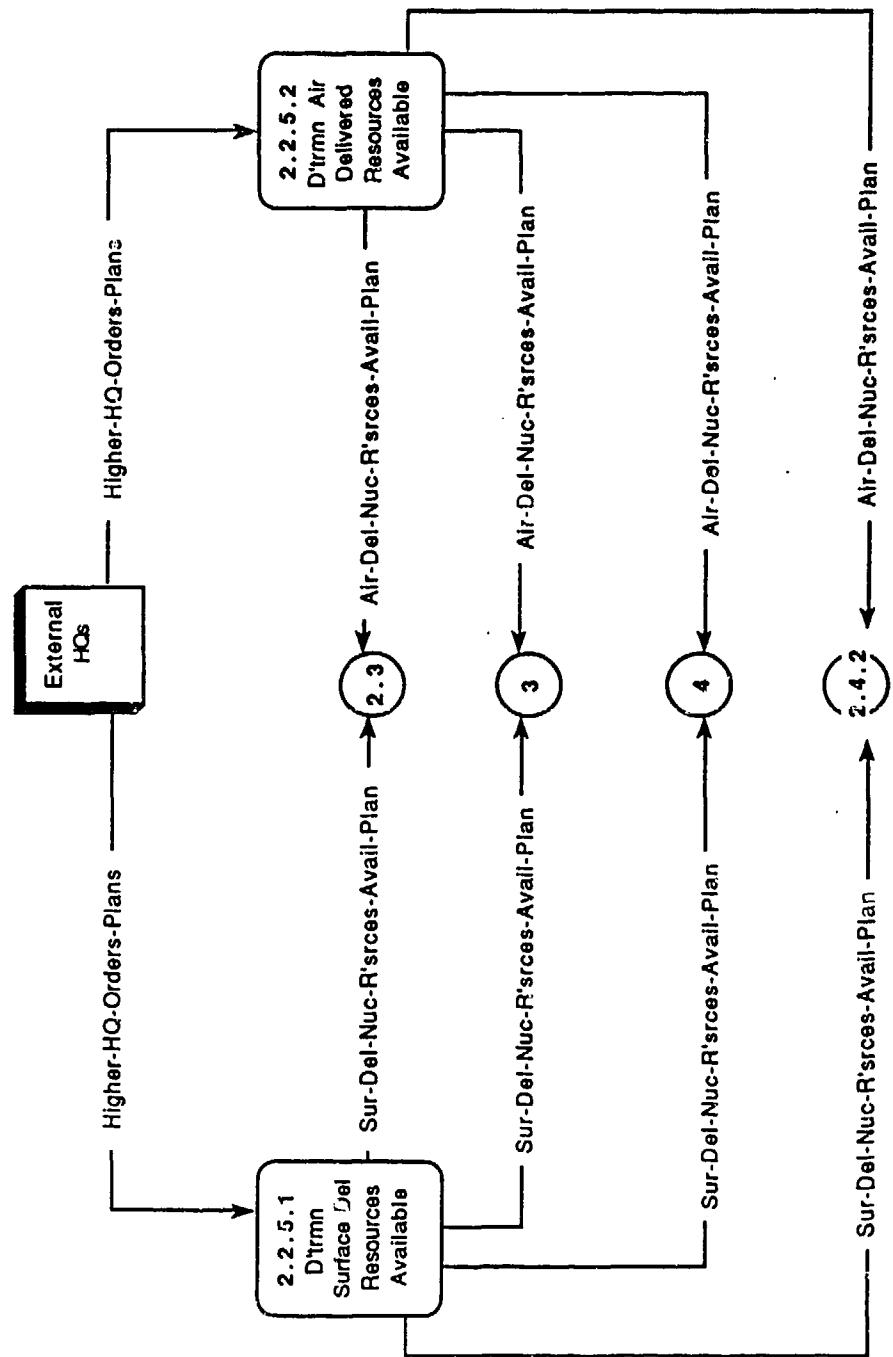


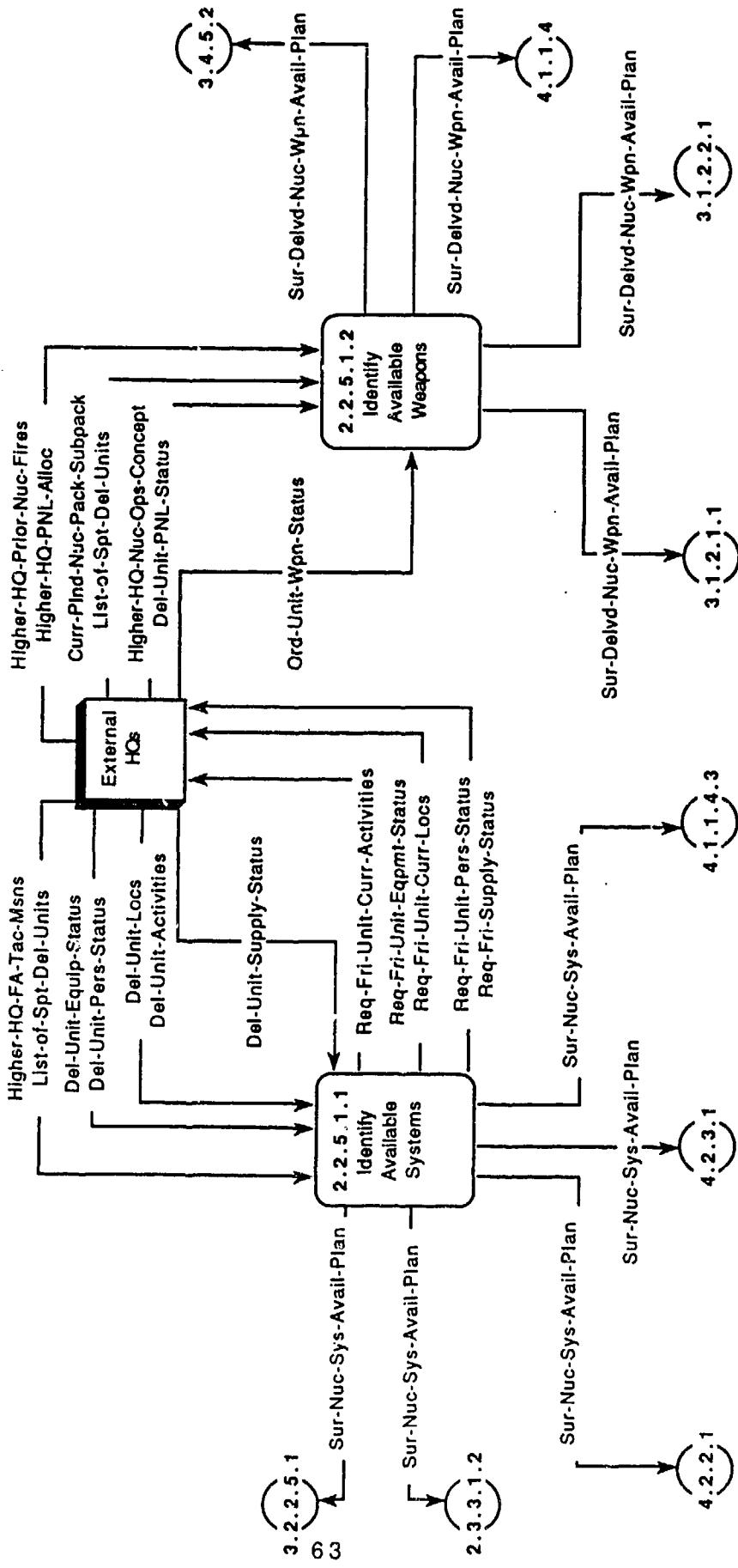
Identify Constraints #2.2.3.1



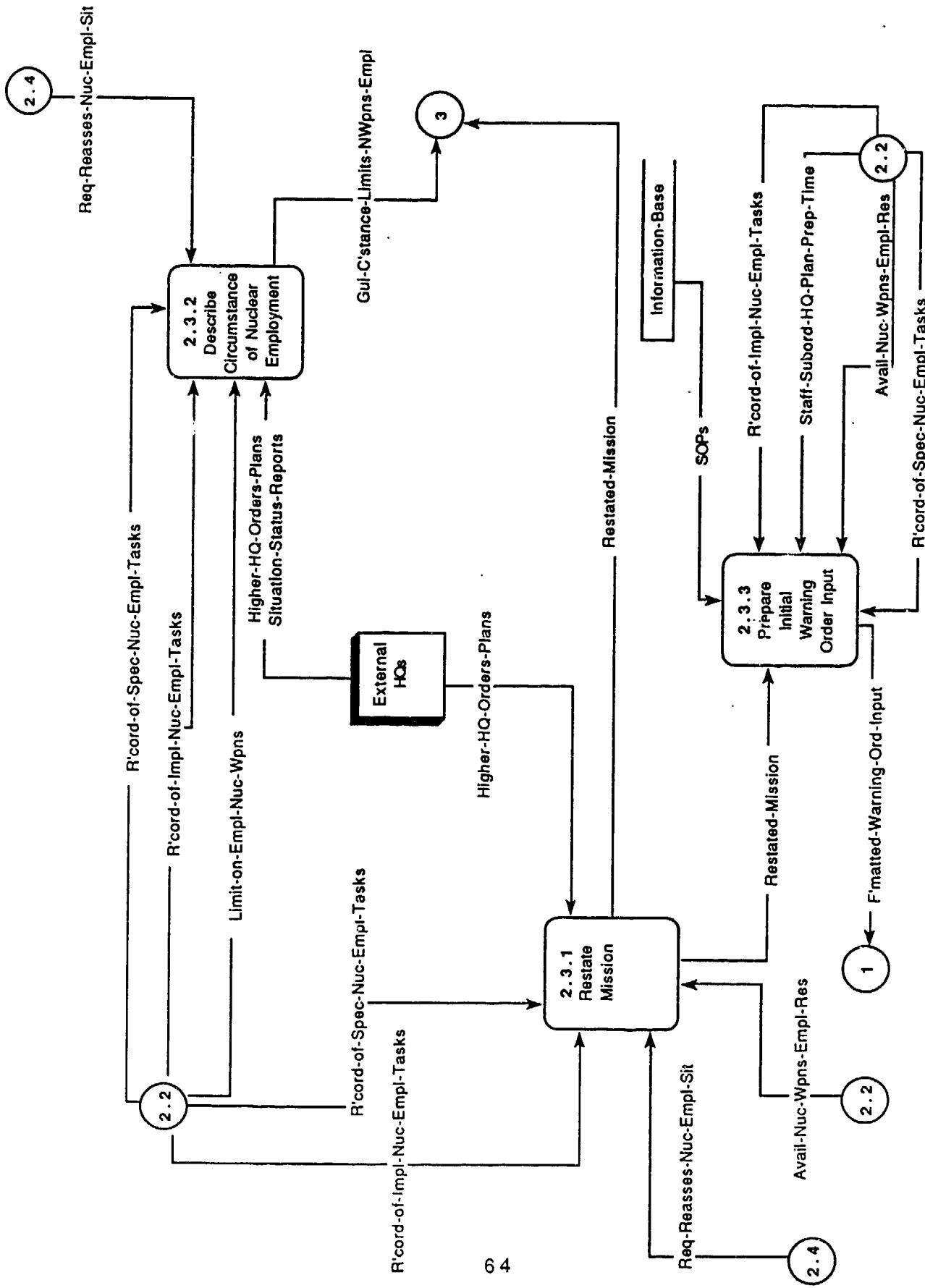


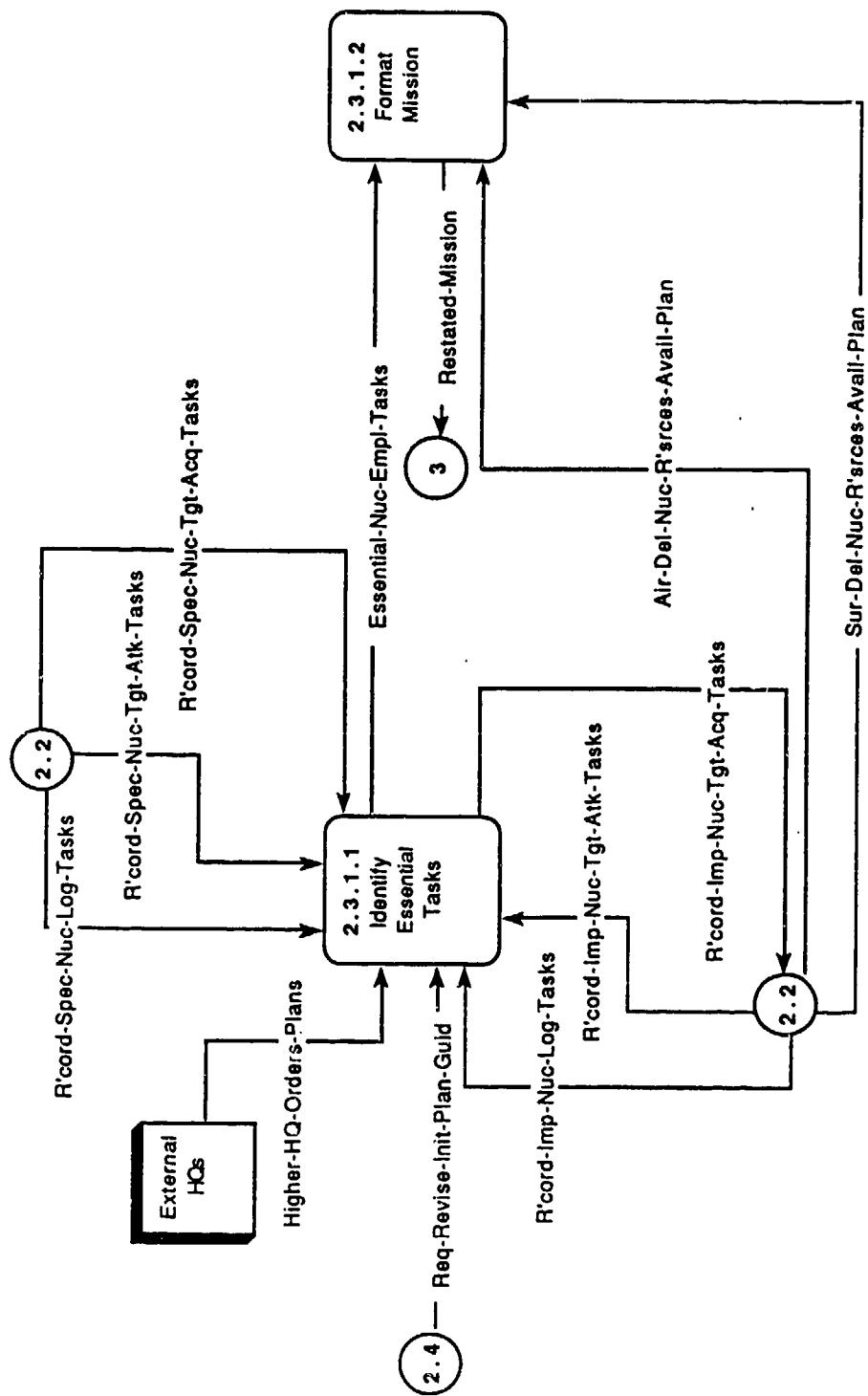


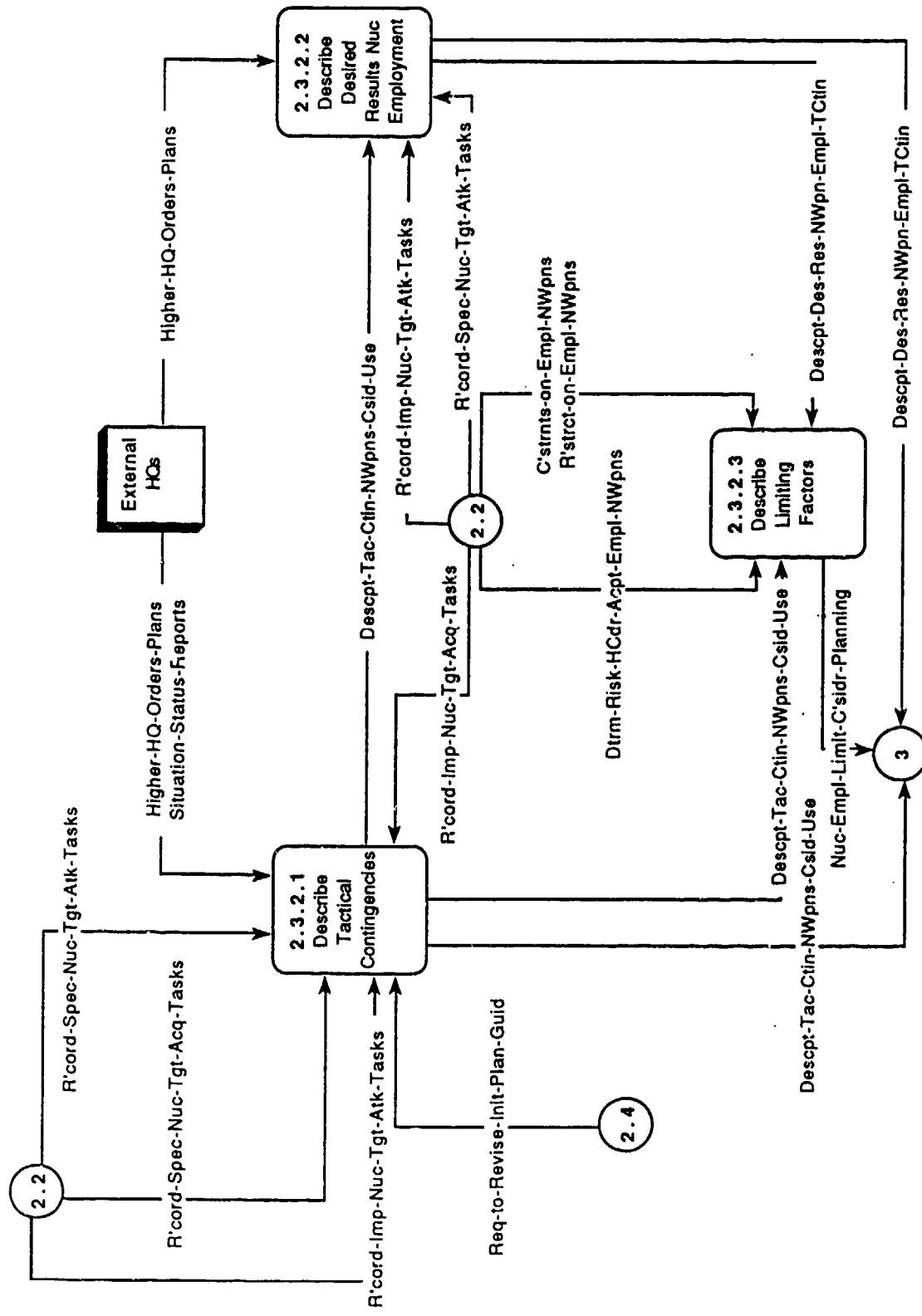


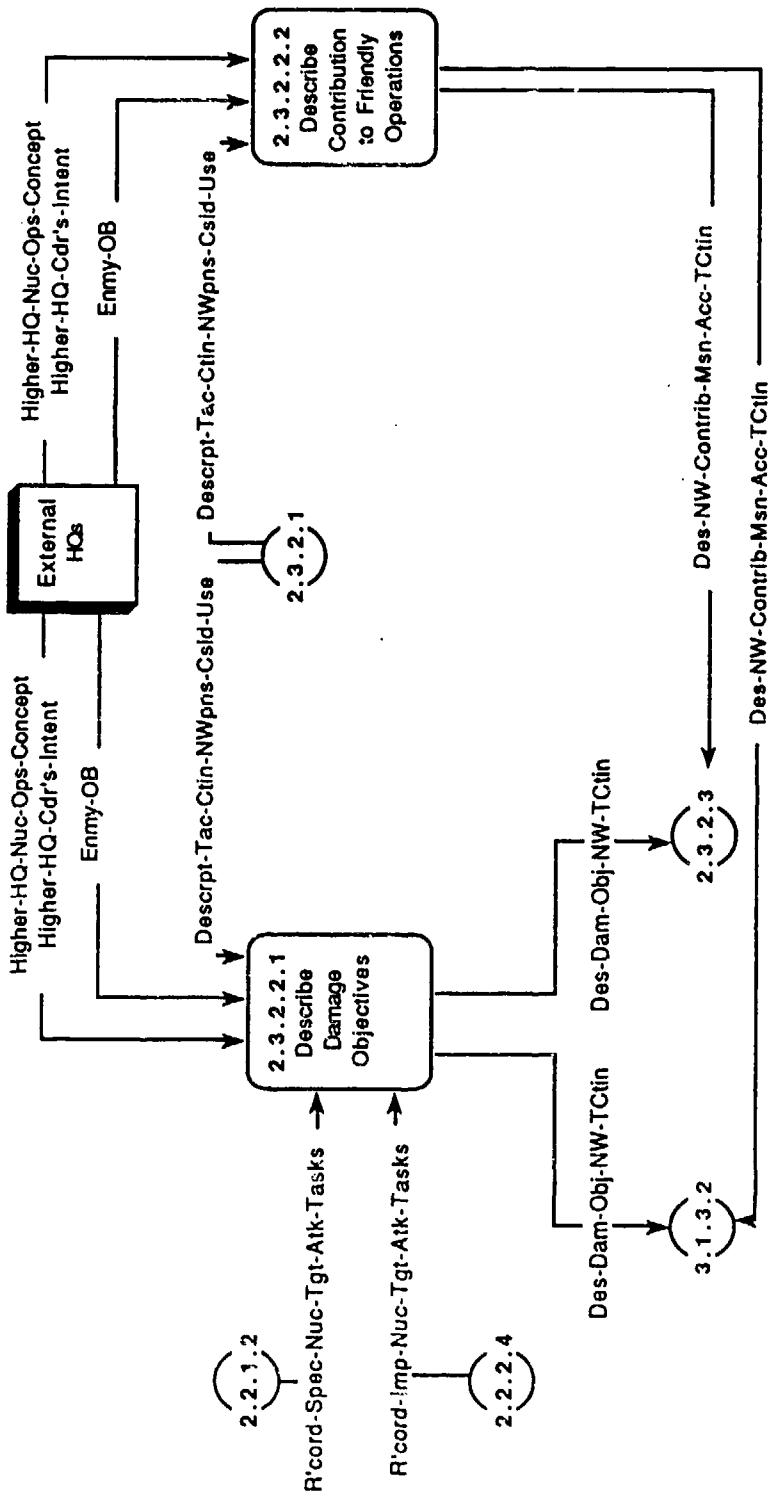


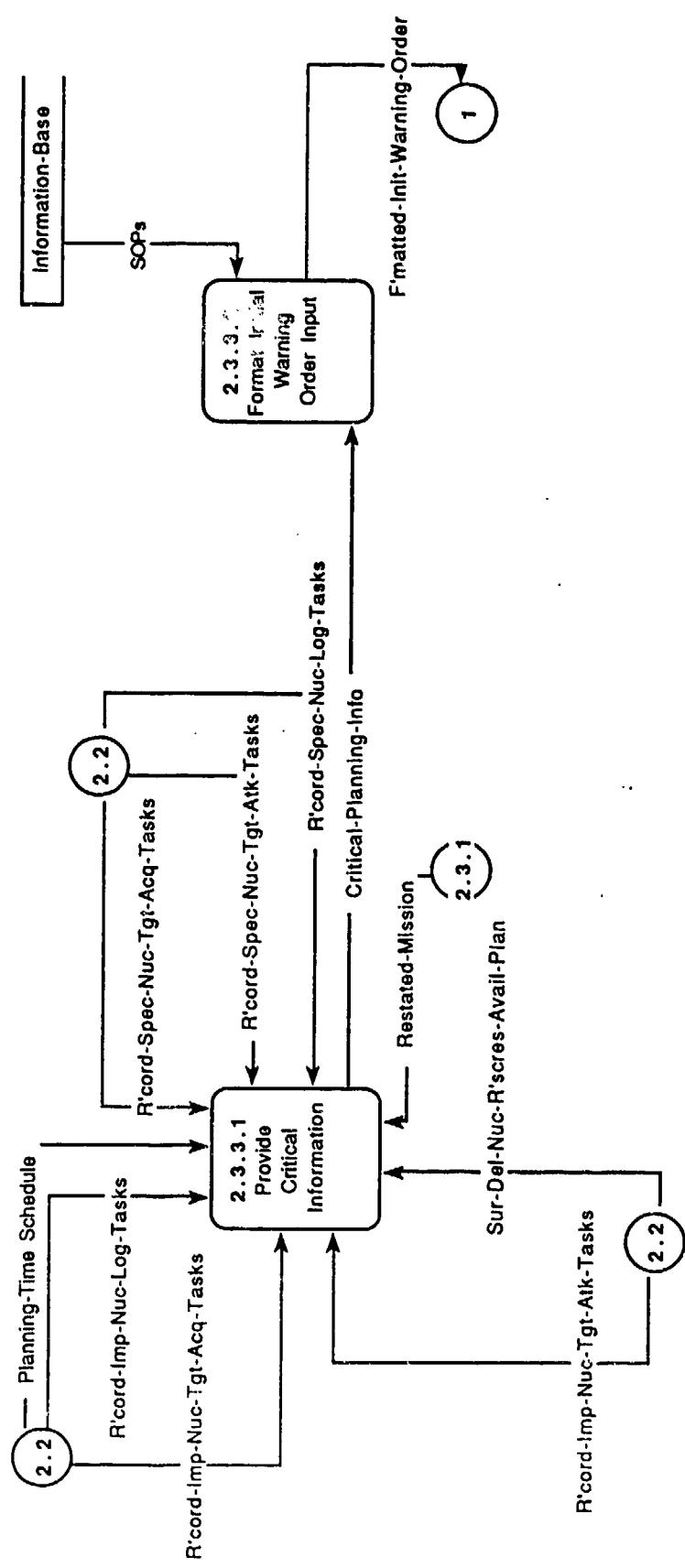
D'tmn Surface Del Resources ~available #2.2.5.1

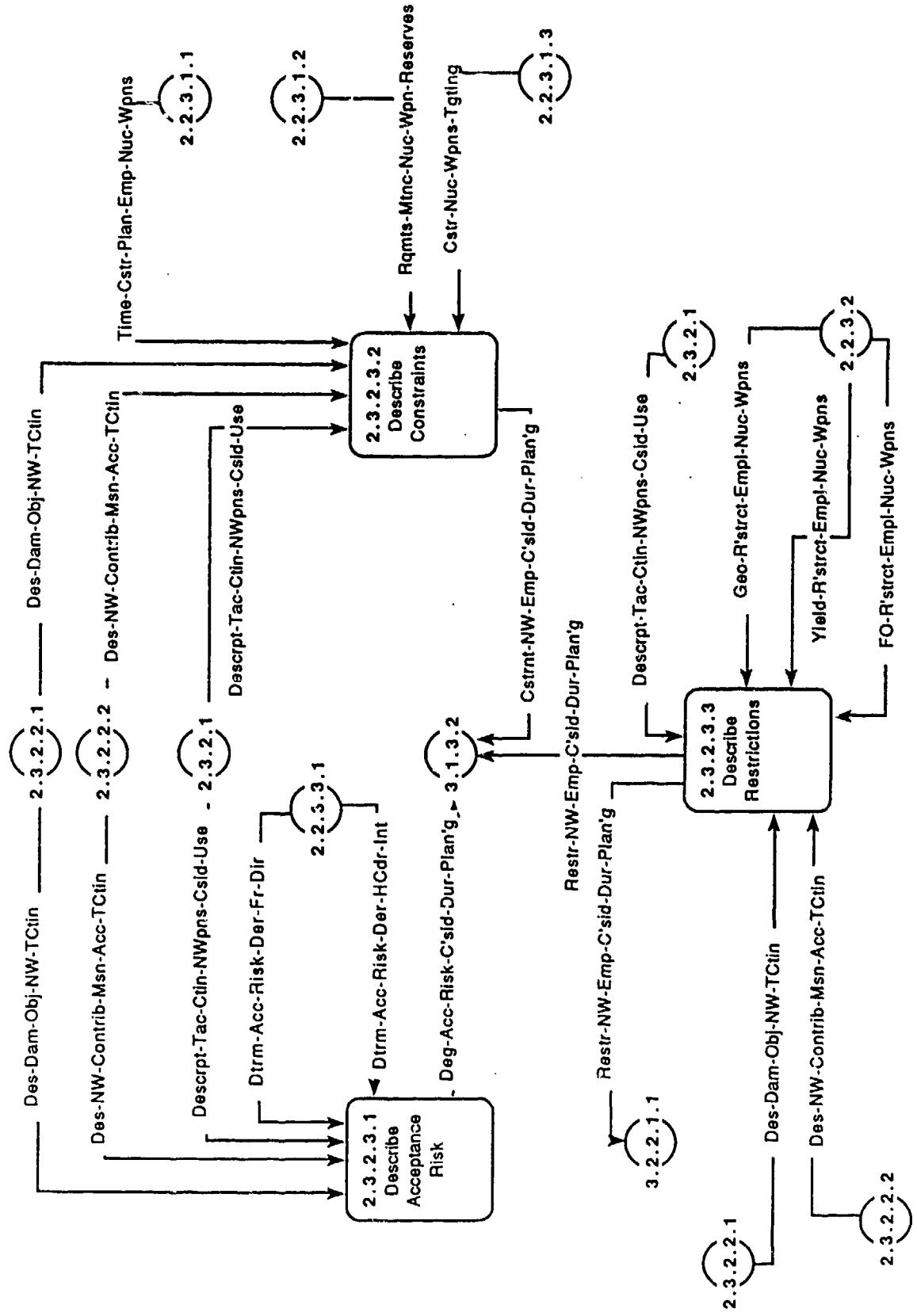


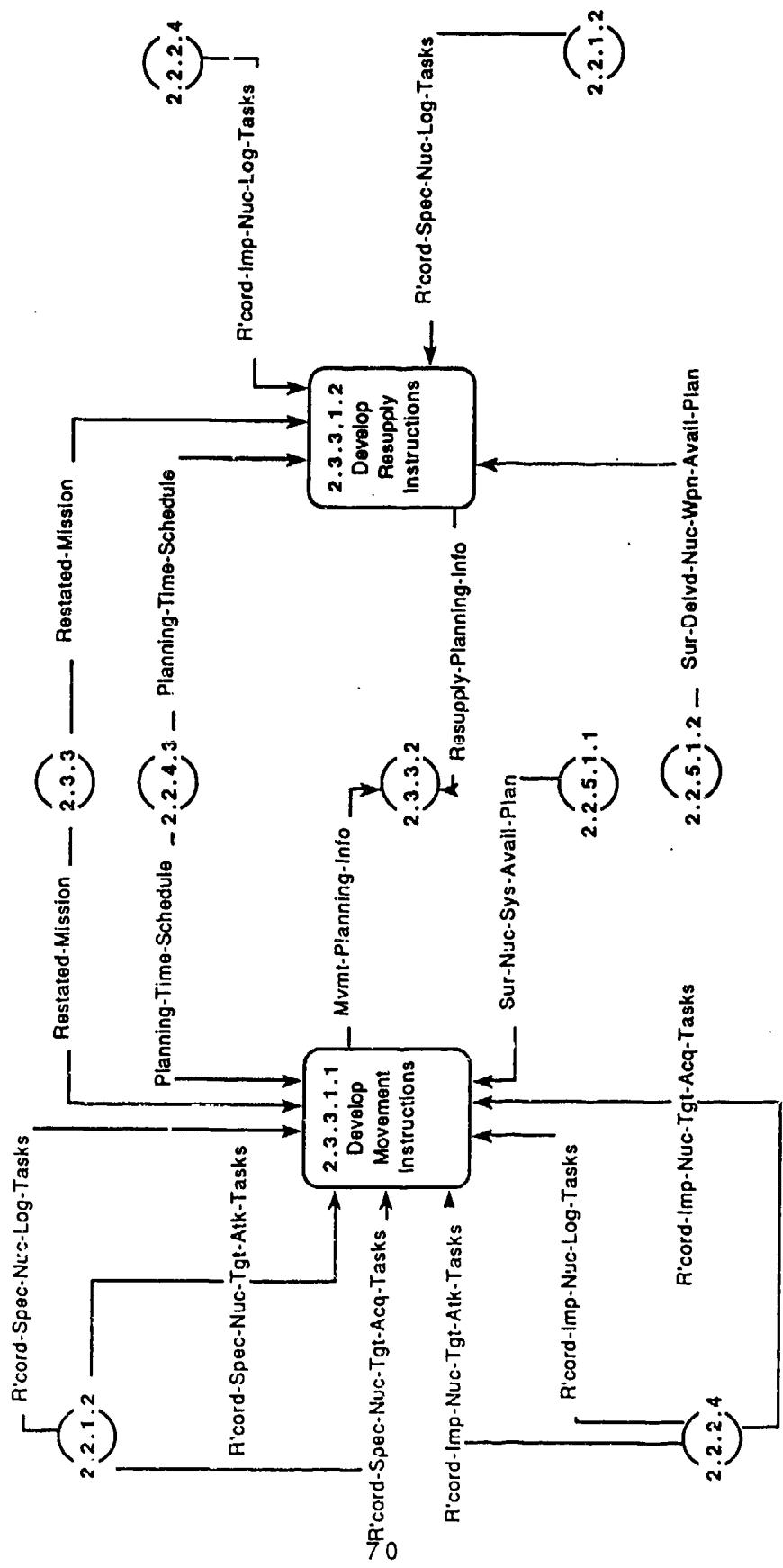


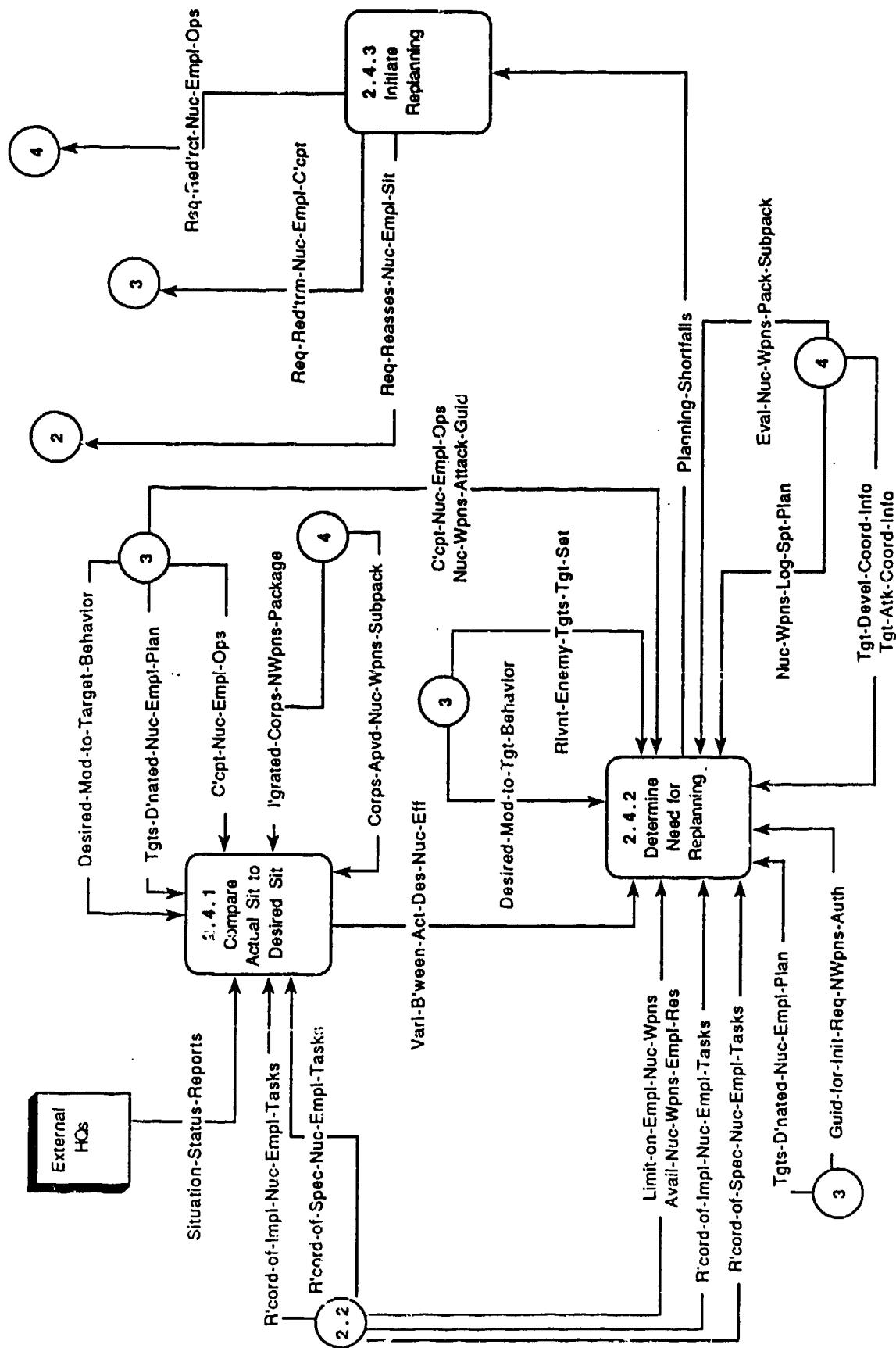


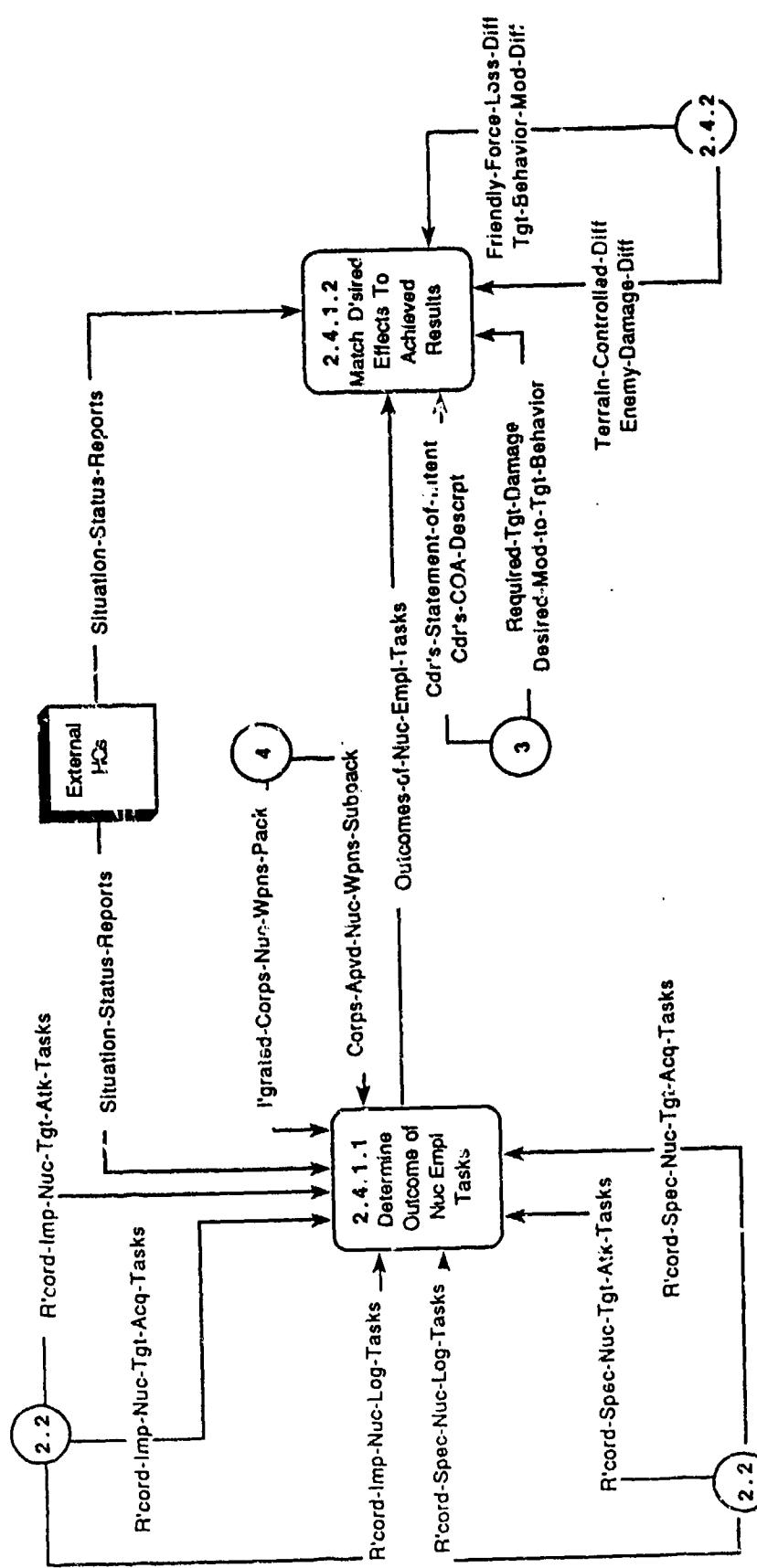




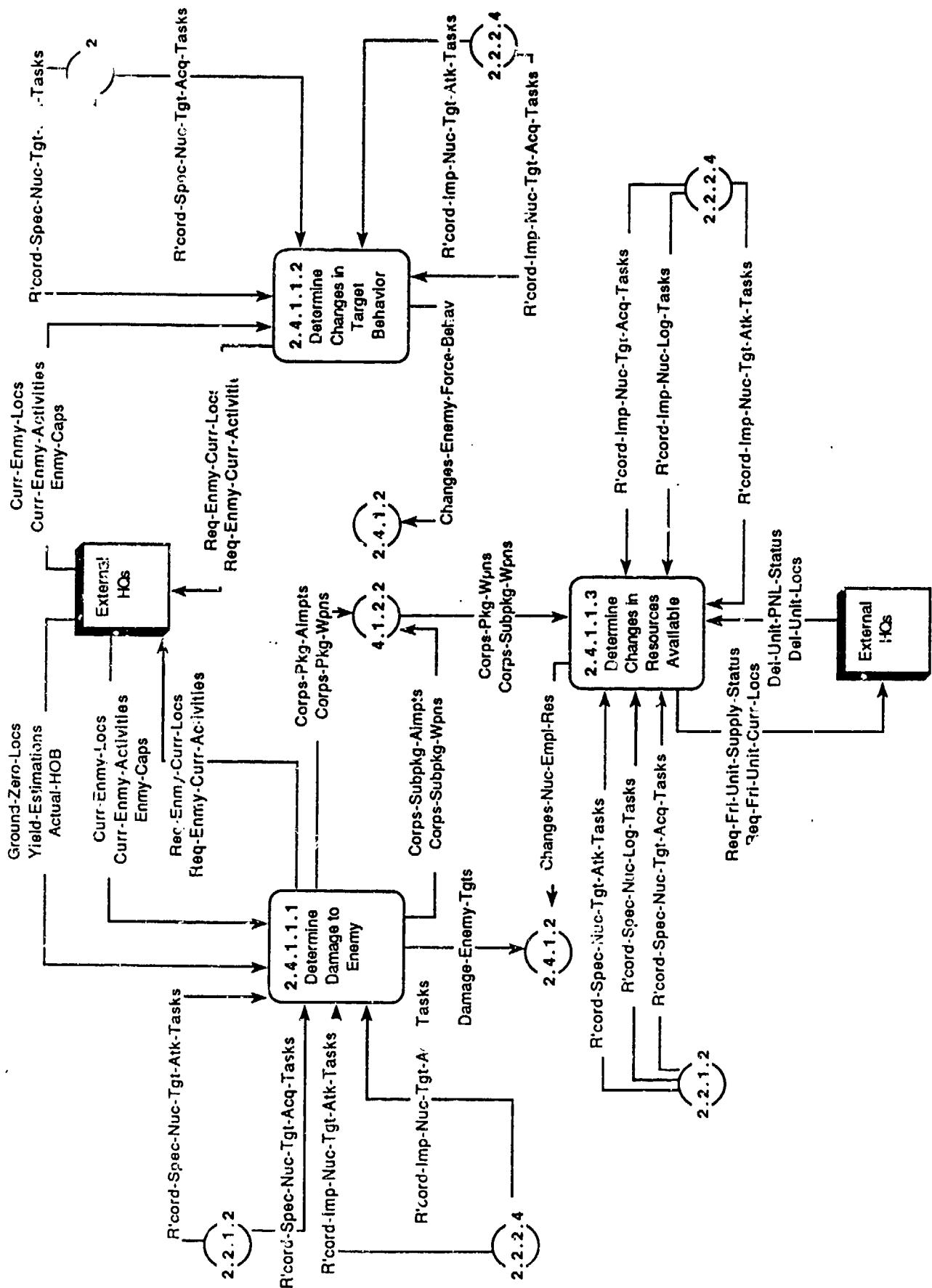


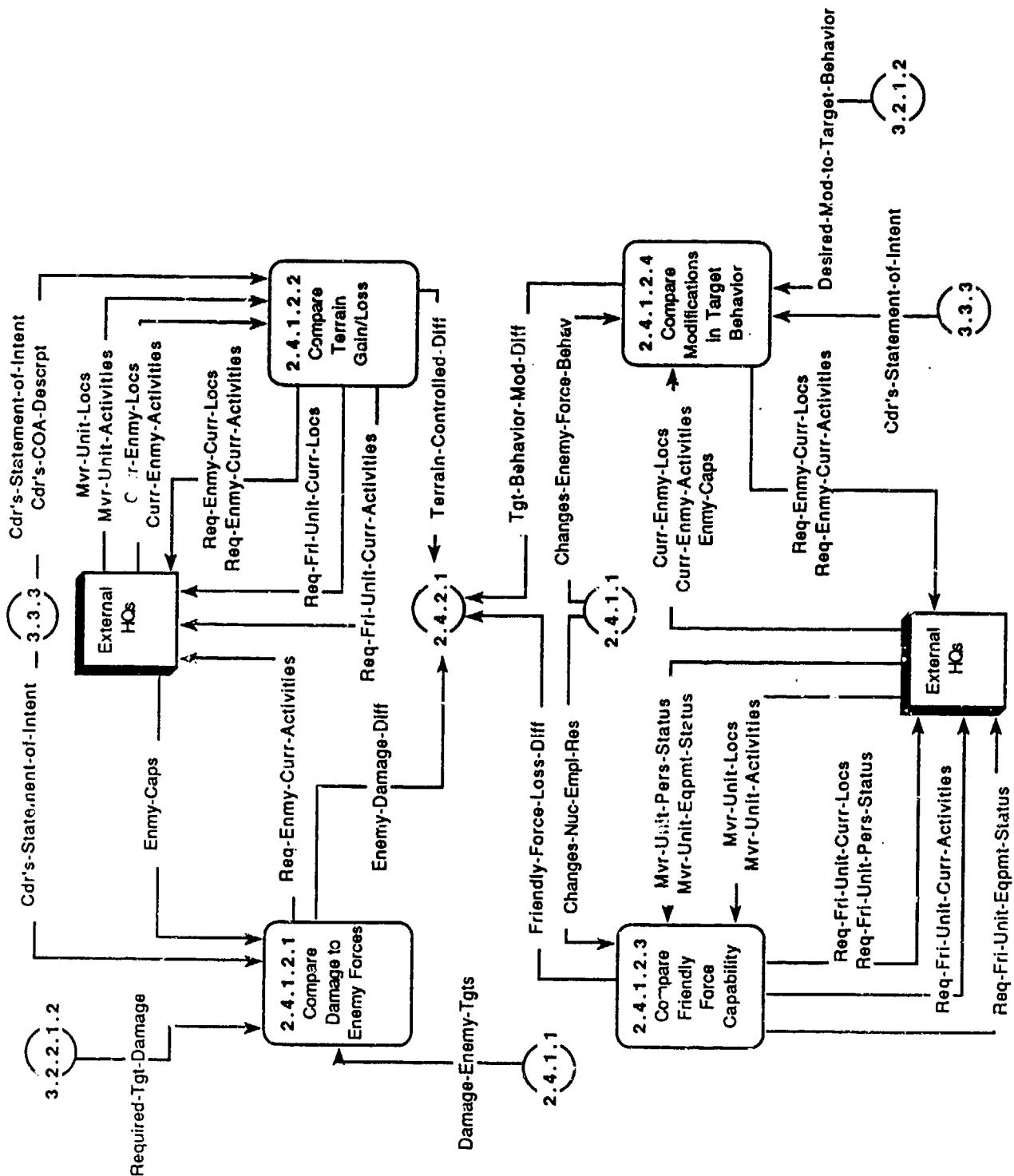


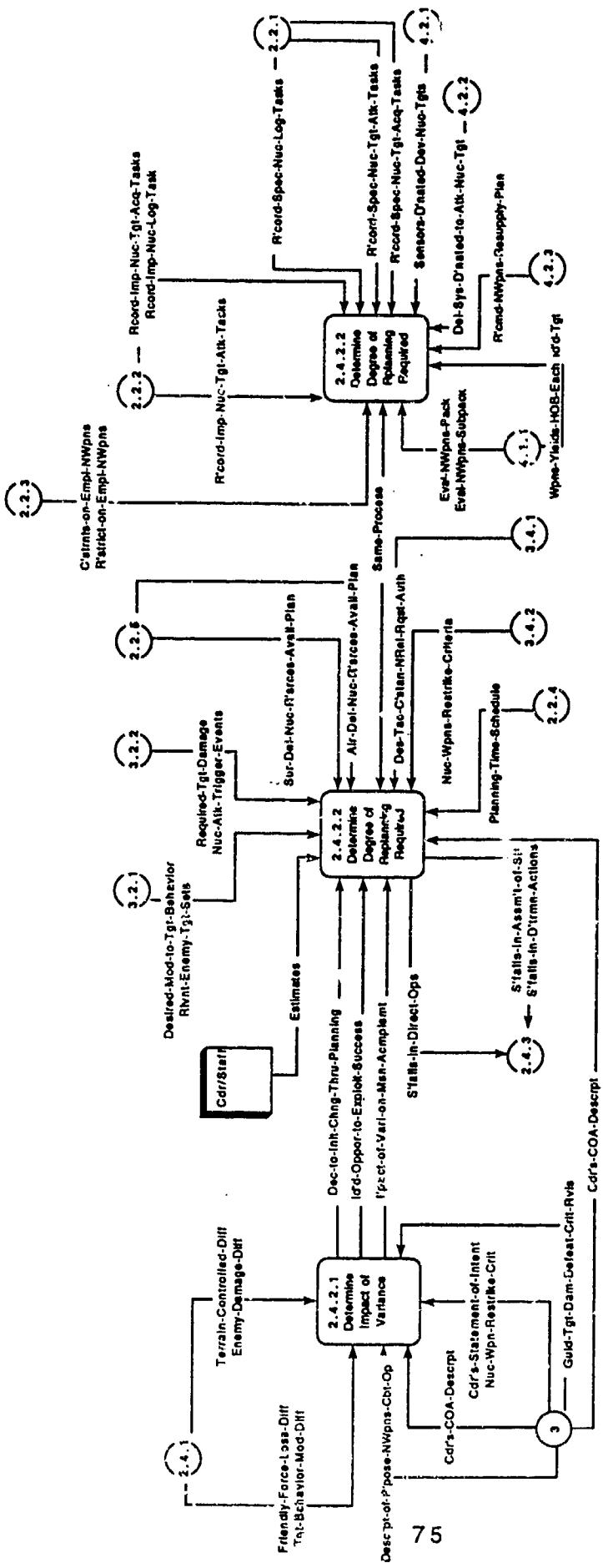


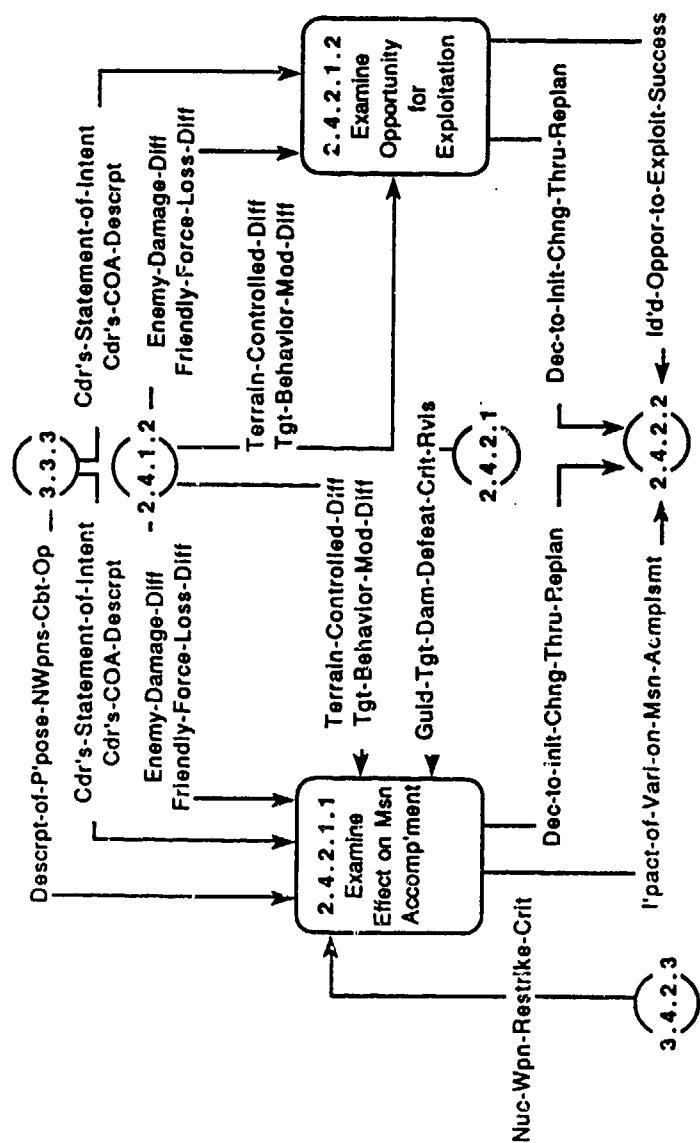


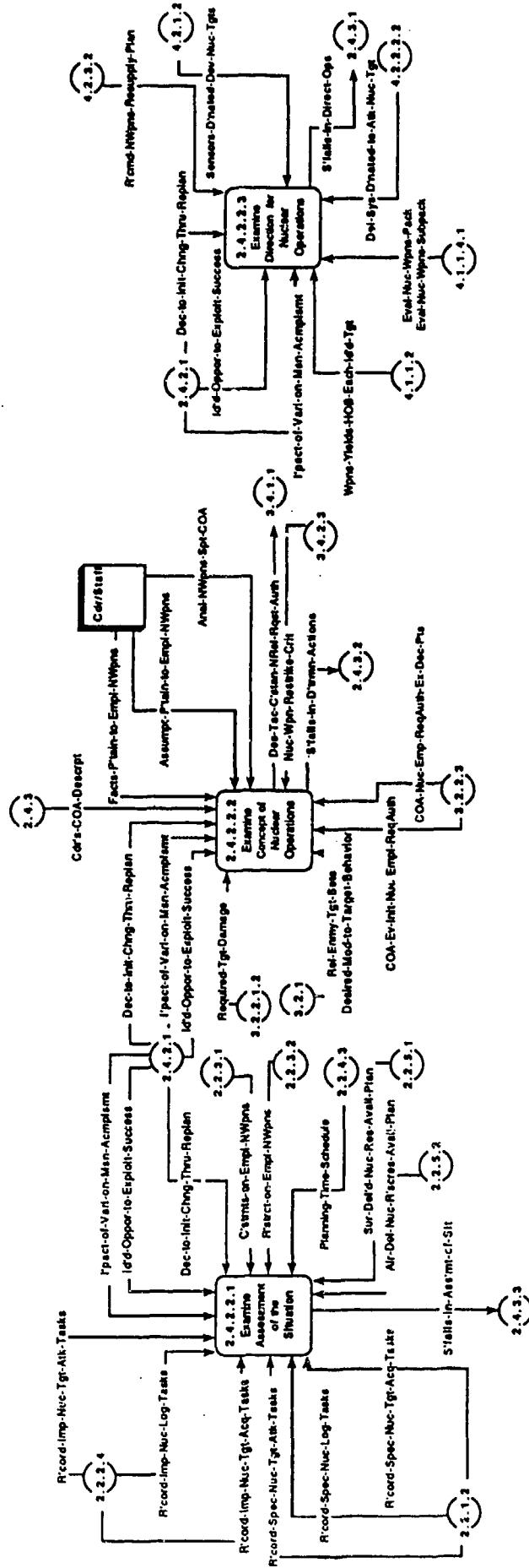
Complete Actual Sit to Desired Sit #2.4.1

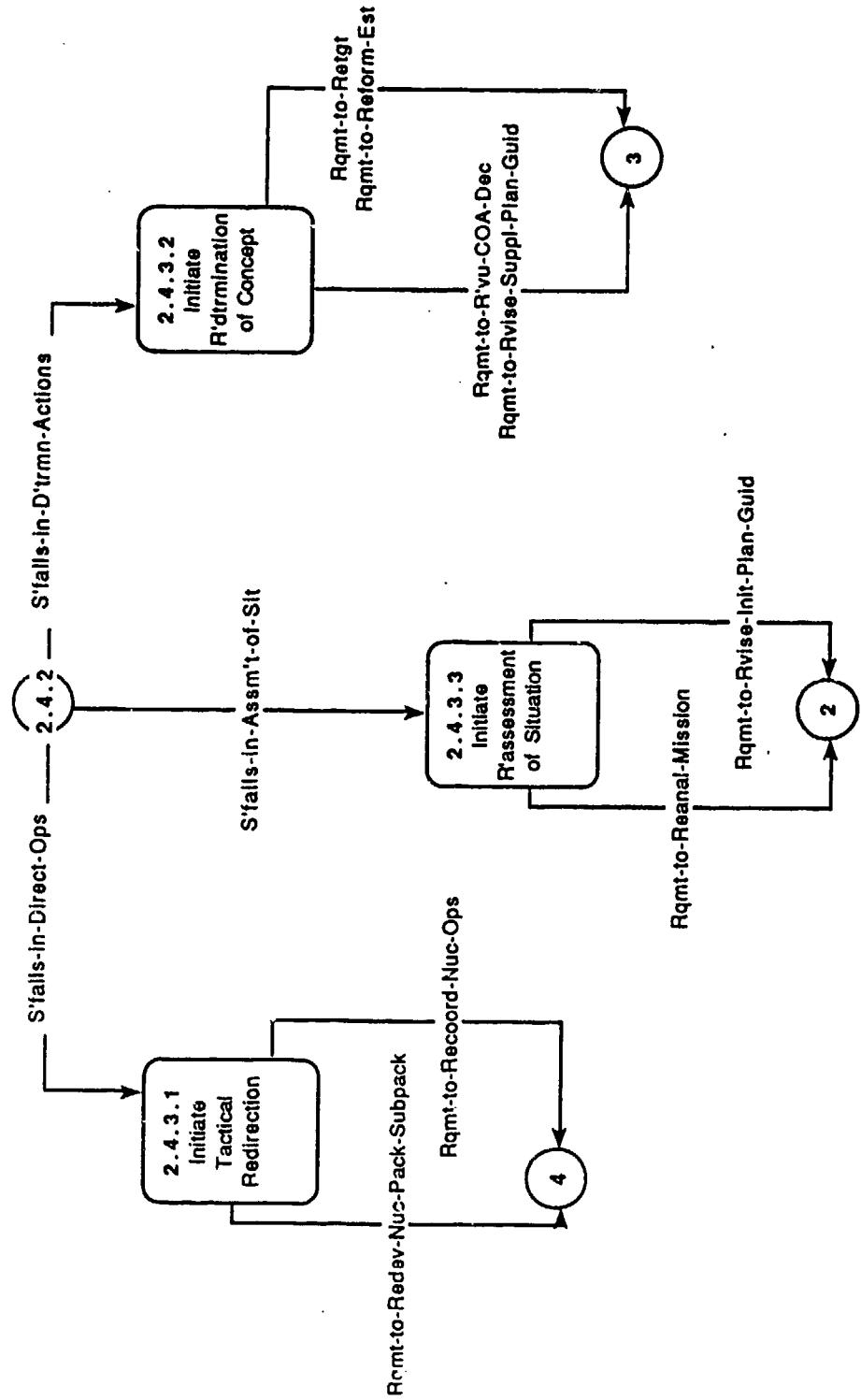




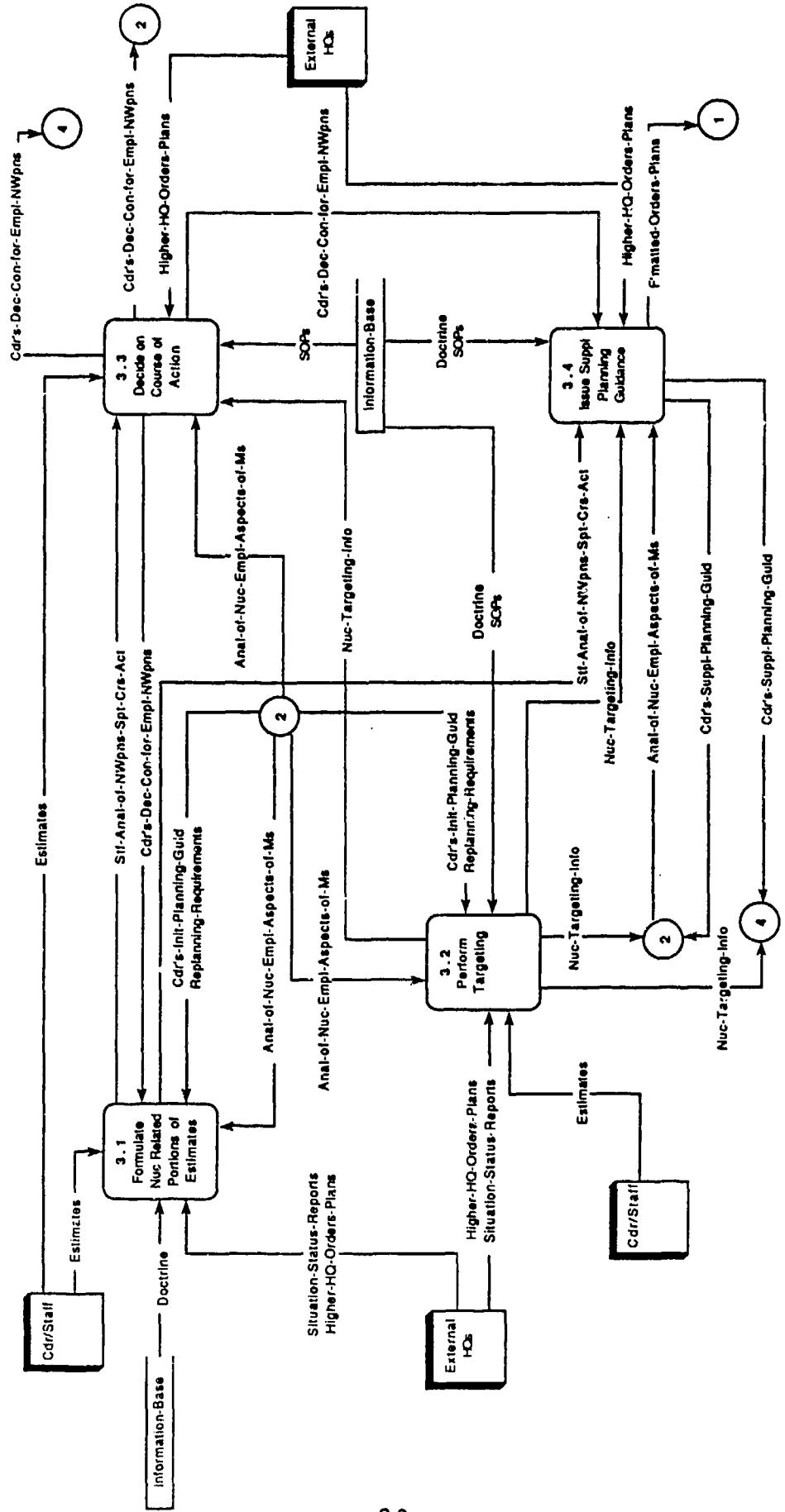


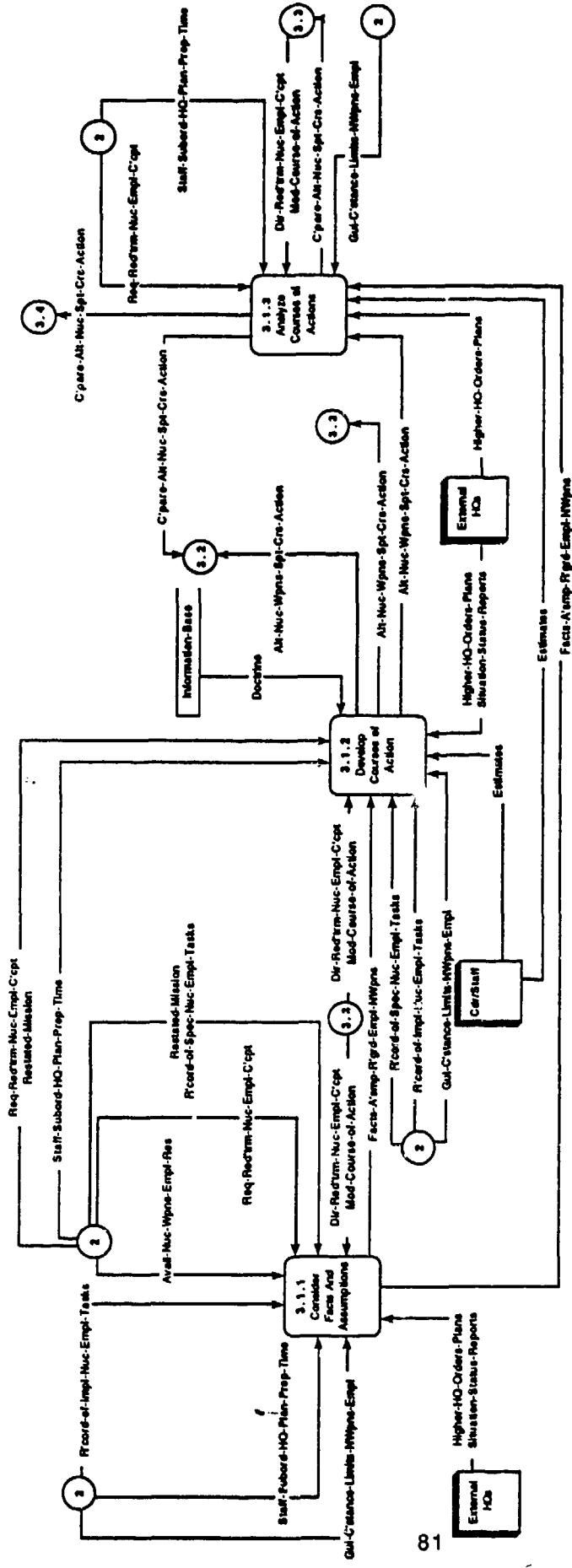


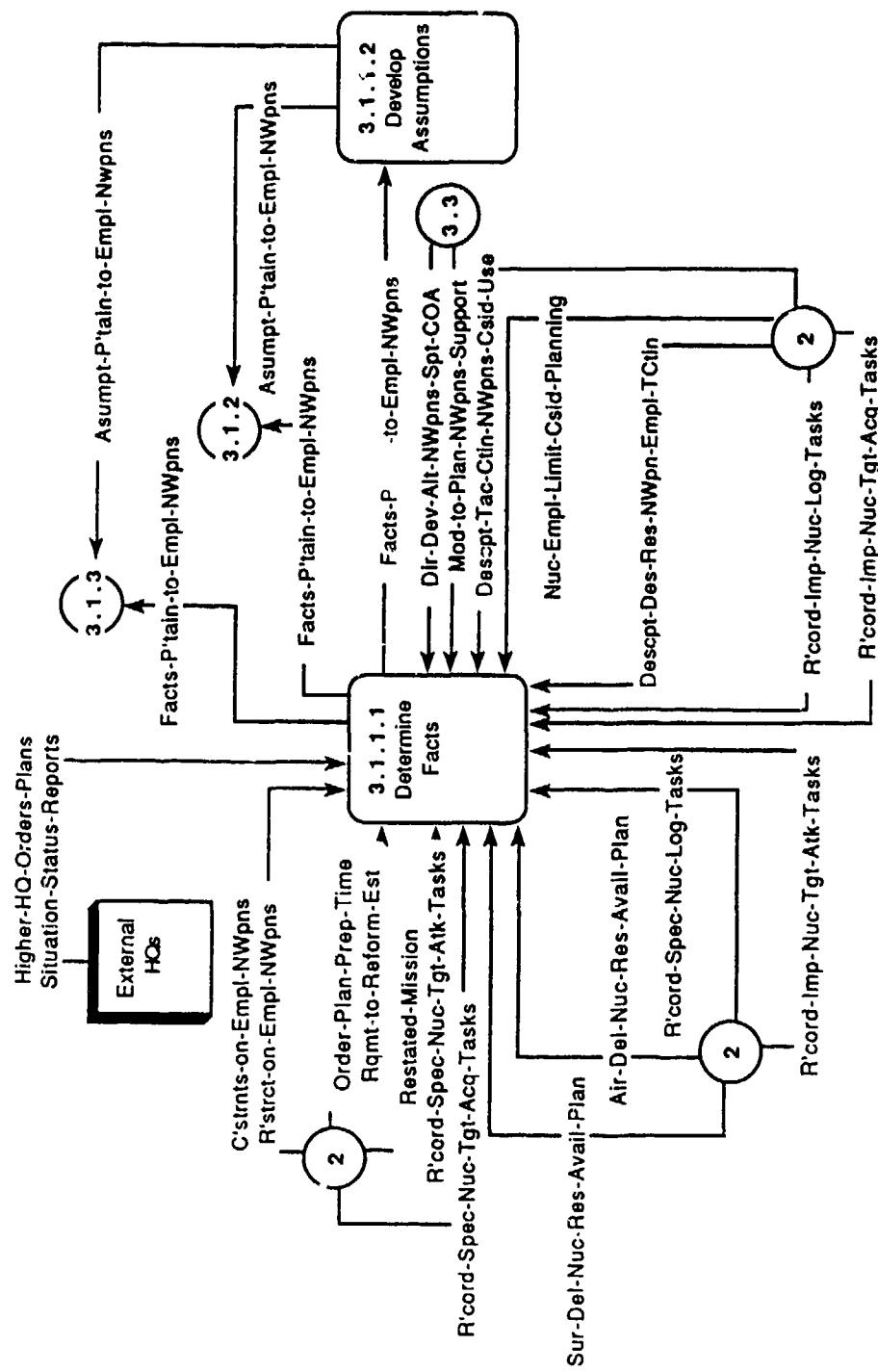


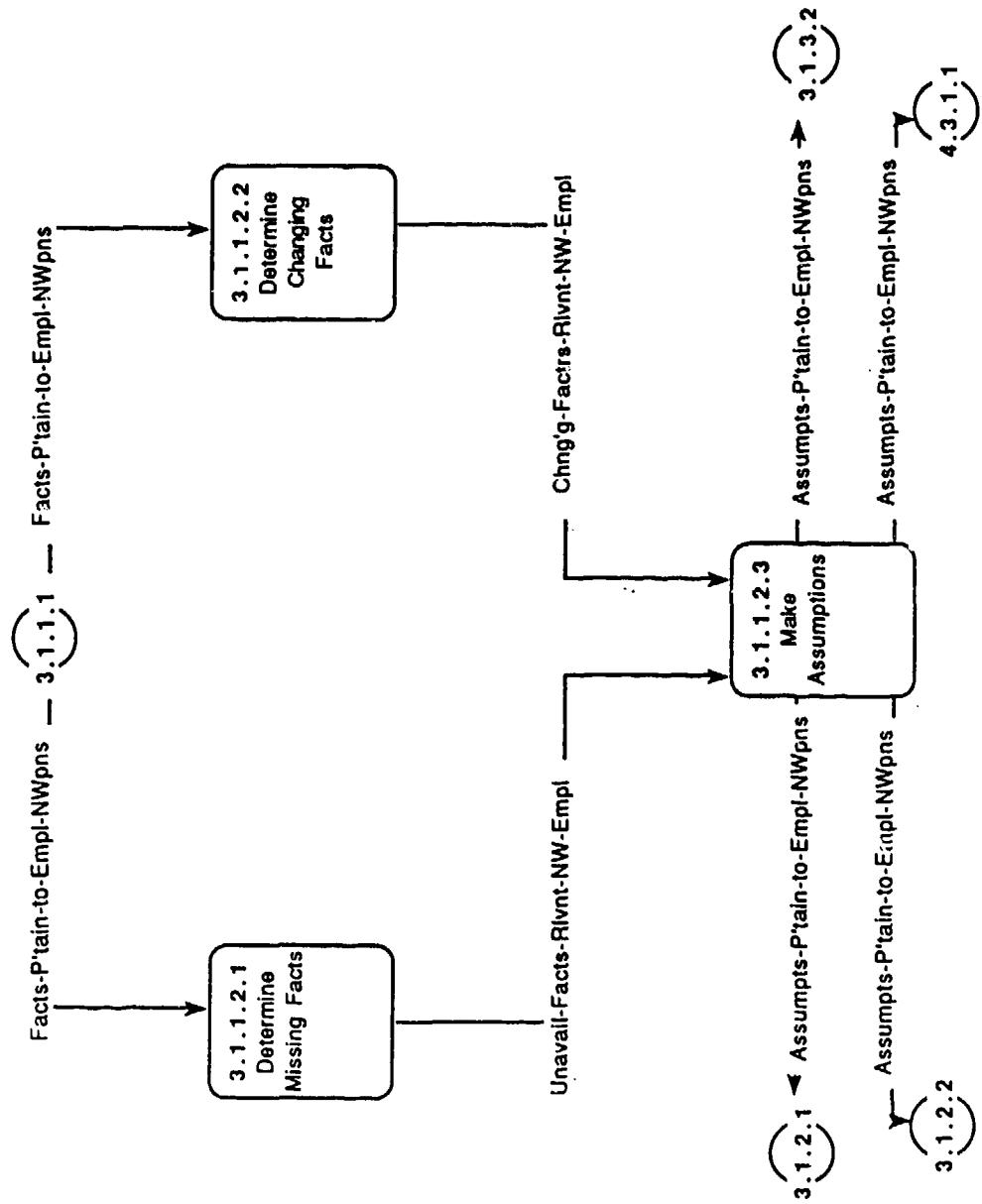


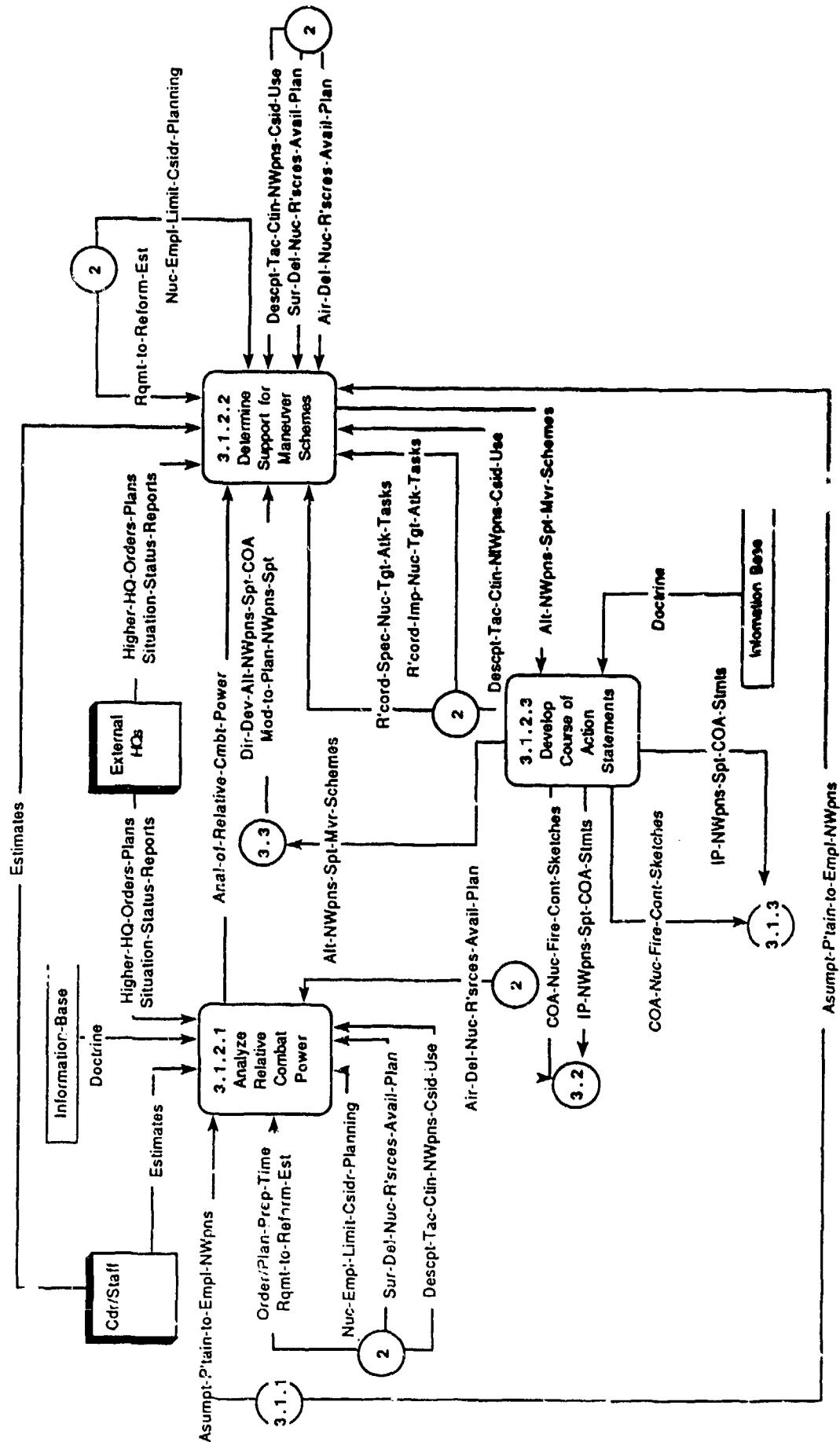
**DETERMINE CONCEPT OF NUCLEAR EMPLOYMENT
(3.1 THROUGH 3.4.5.2.3)**

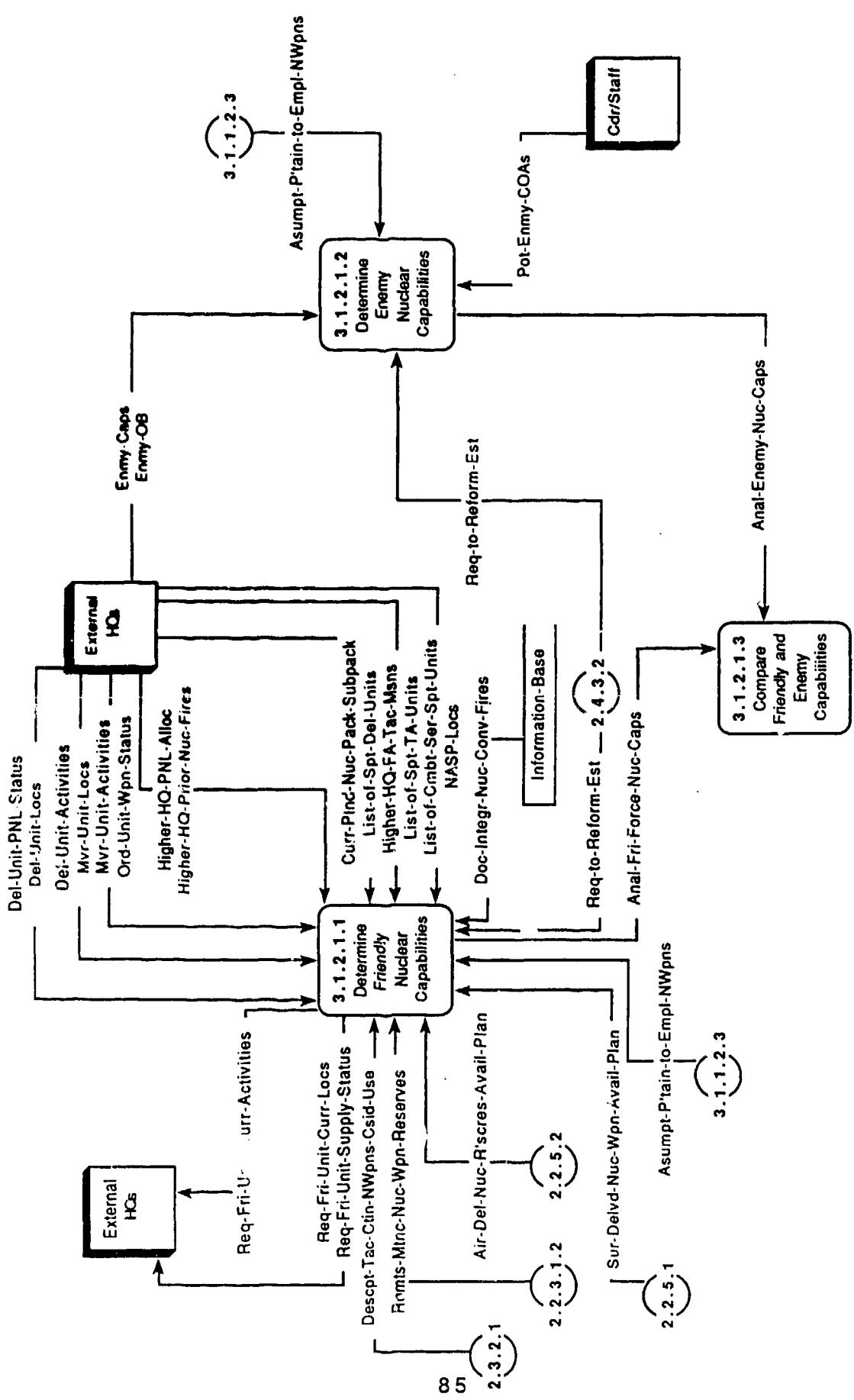




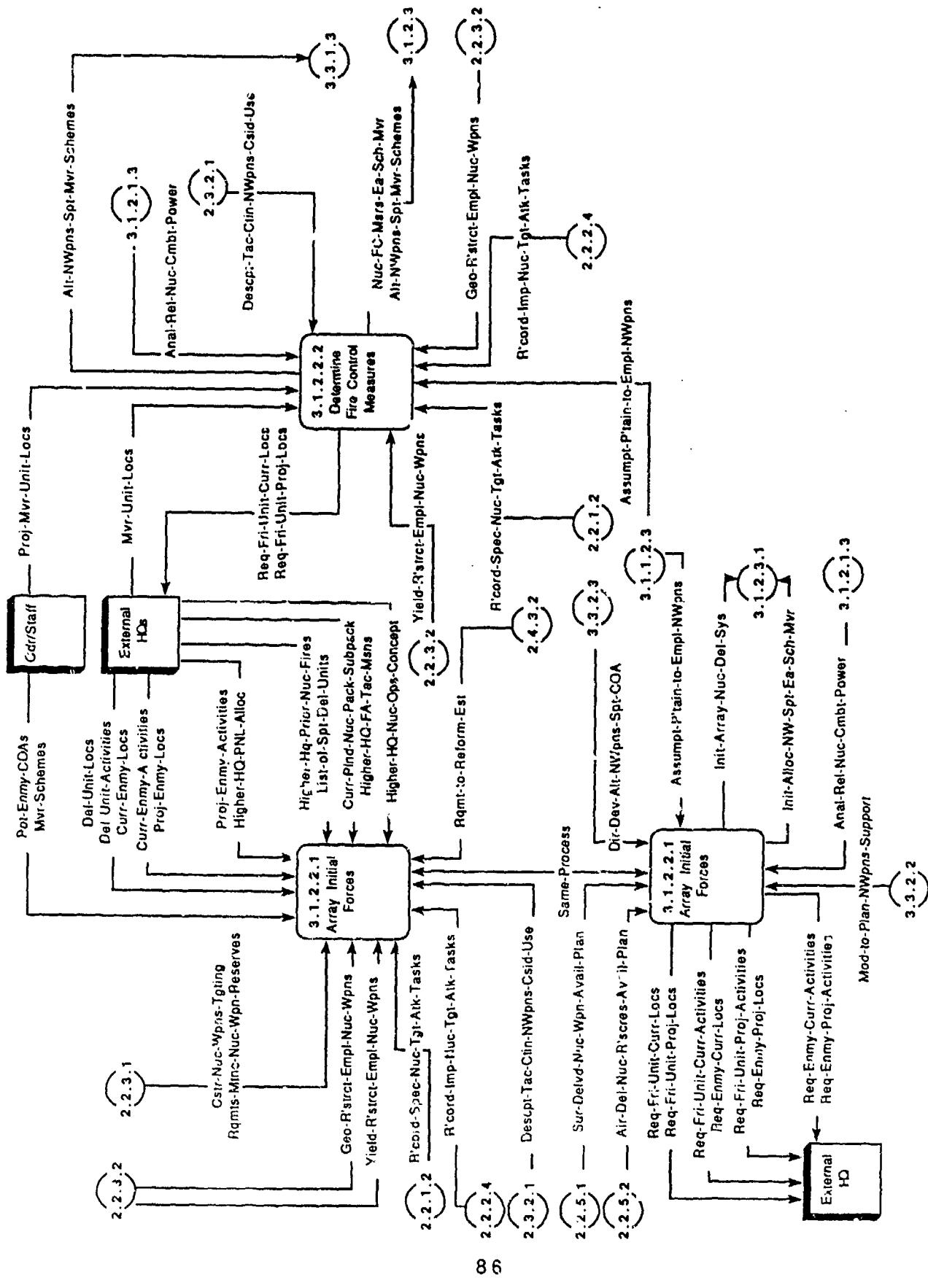




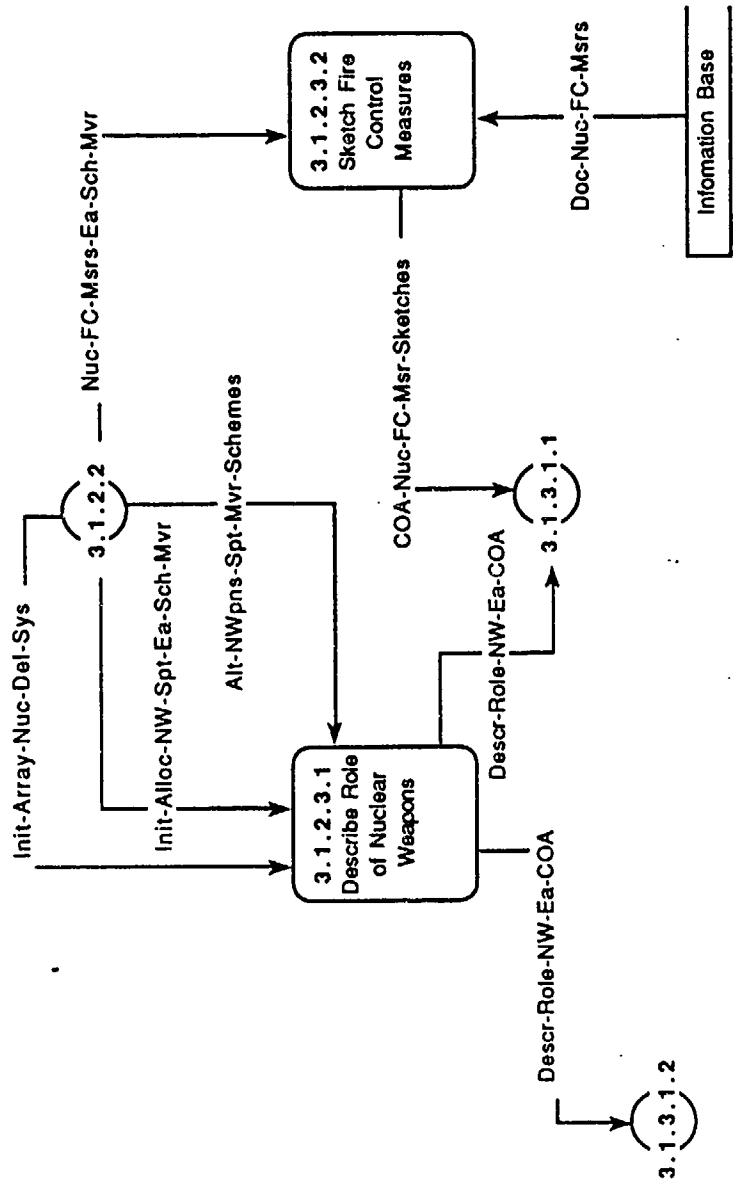


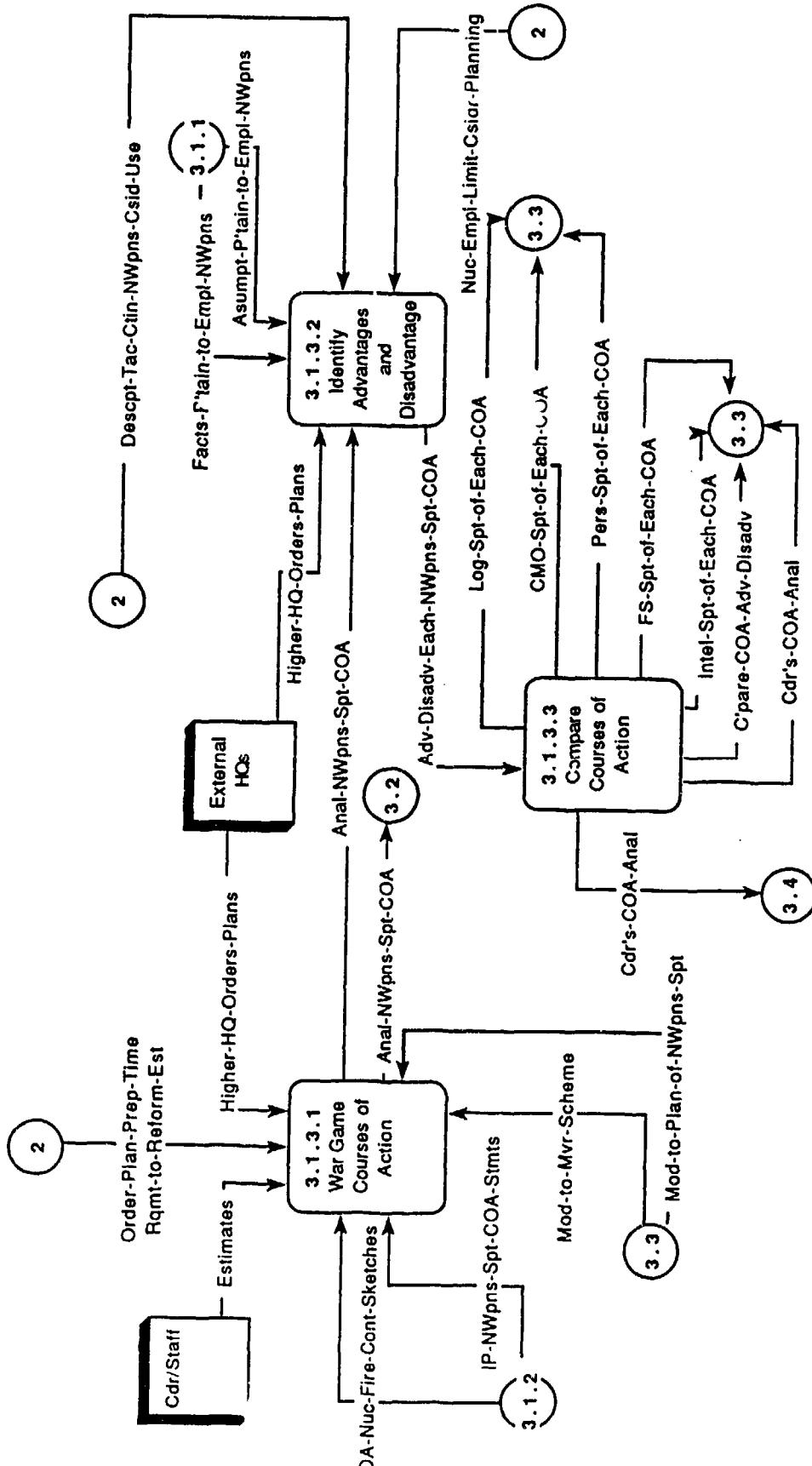


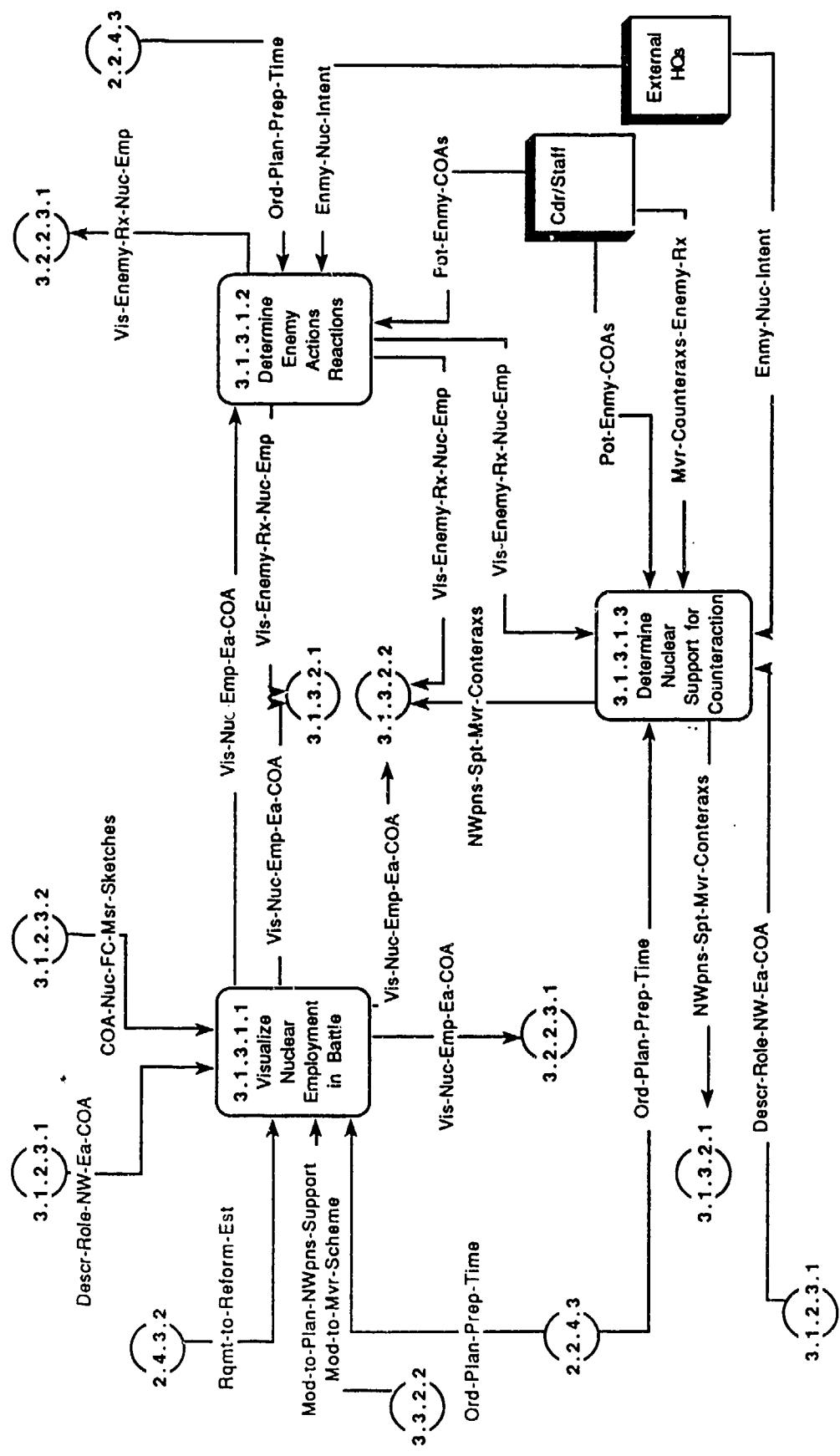
Analyze Relative Combat Power #3.1.2.1

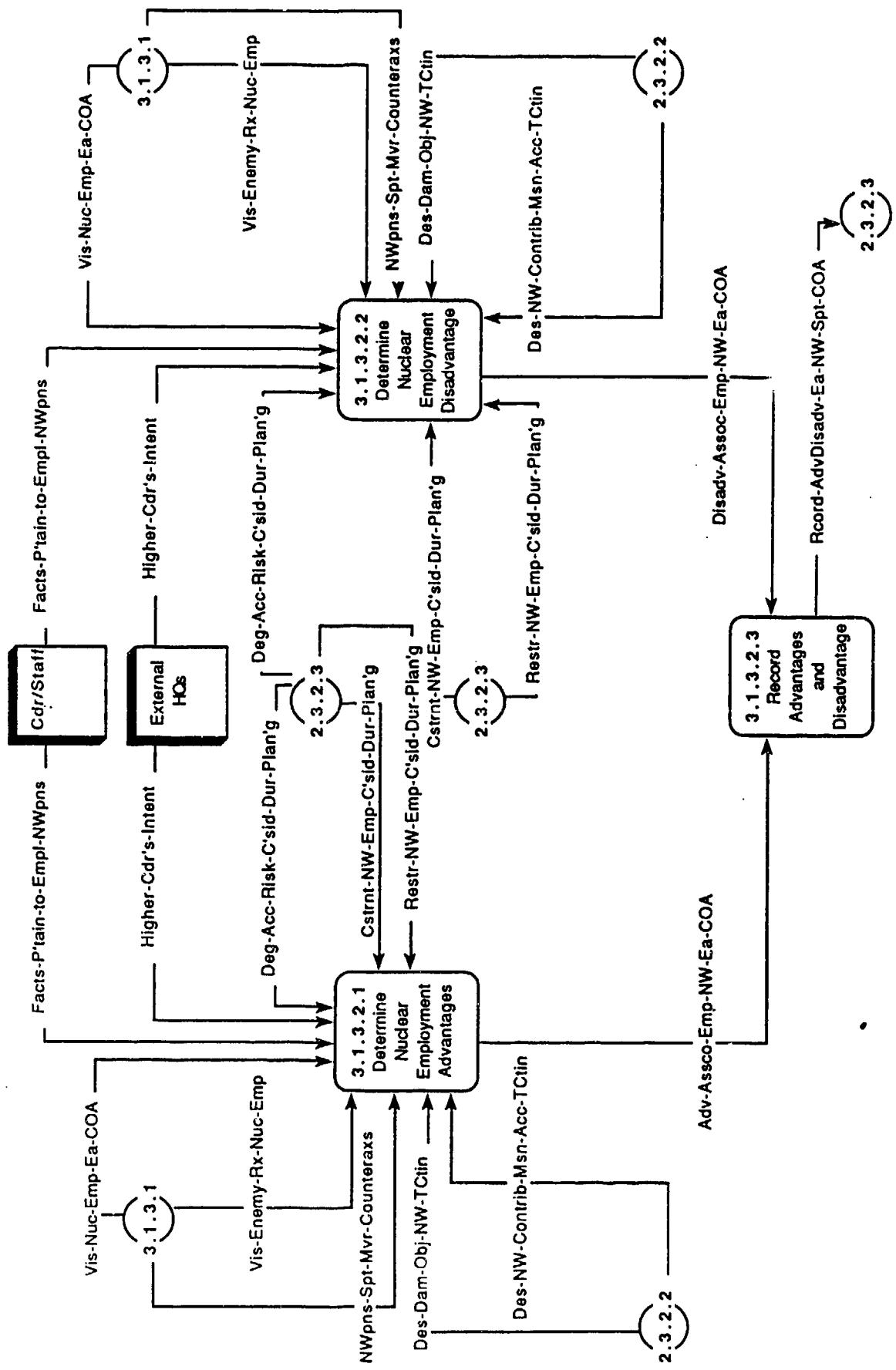


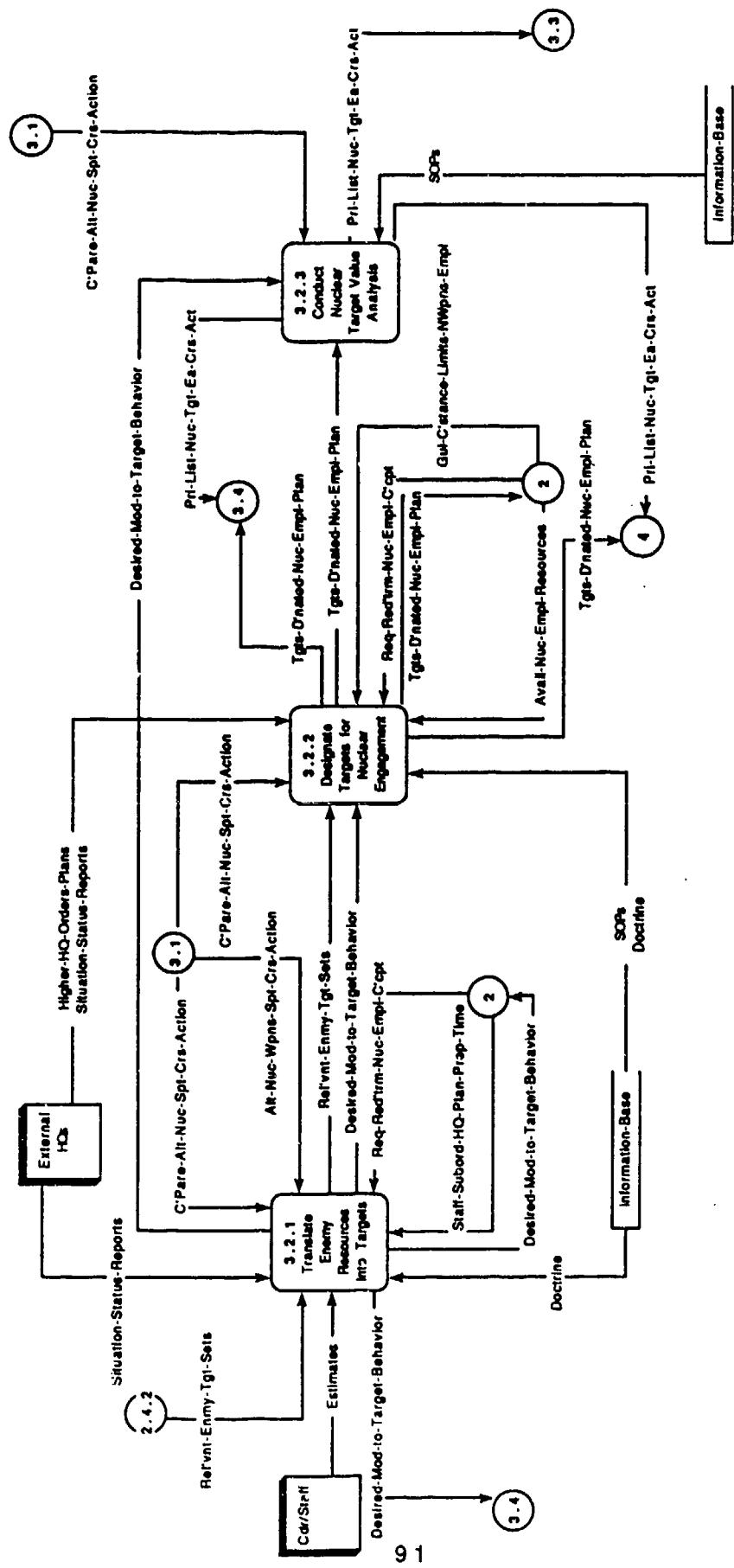
Determine Support for Maneuver Schemes #3.1.2.2

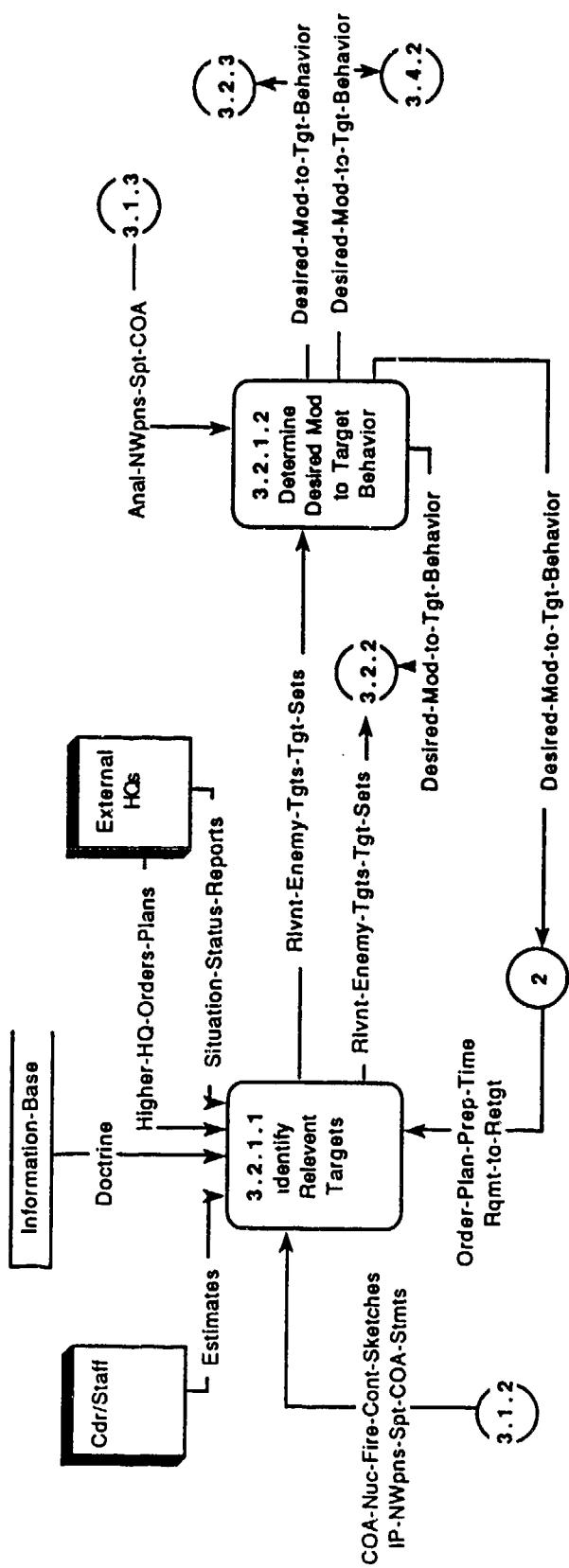


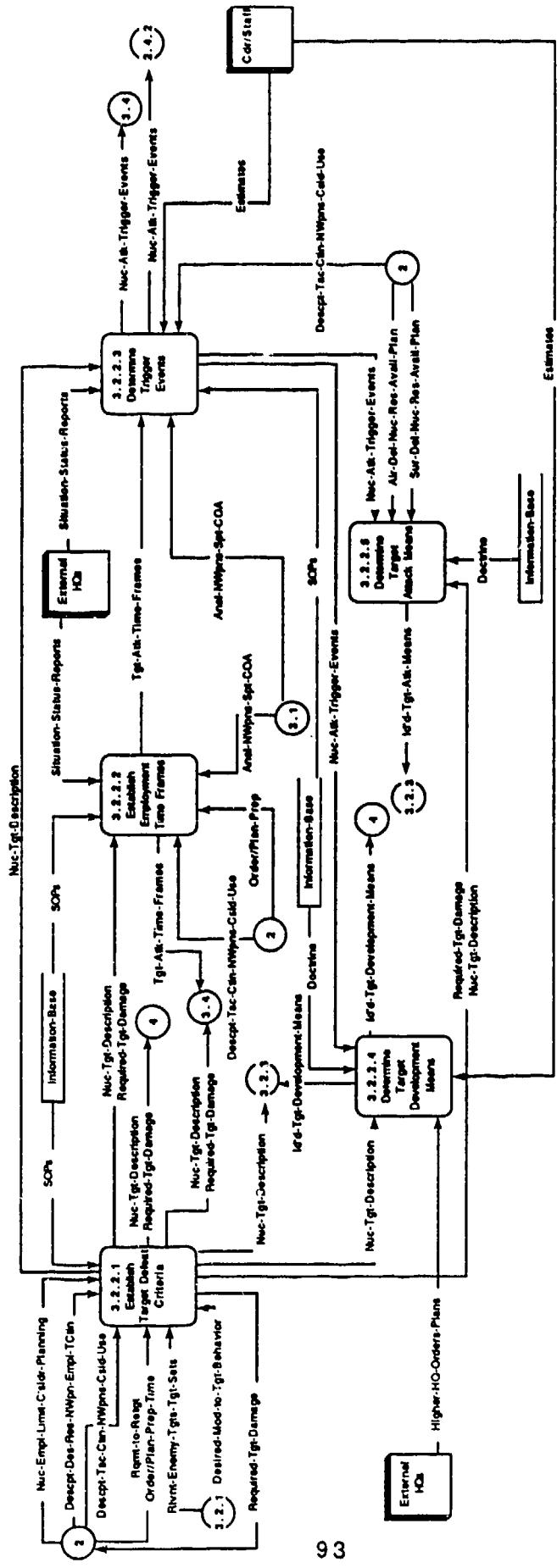


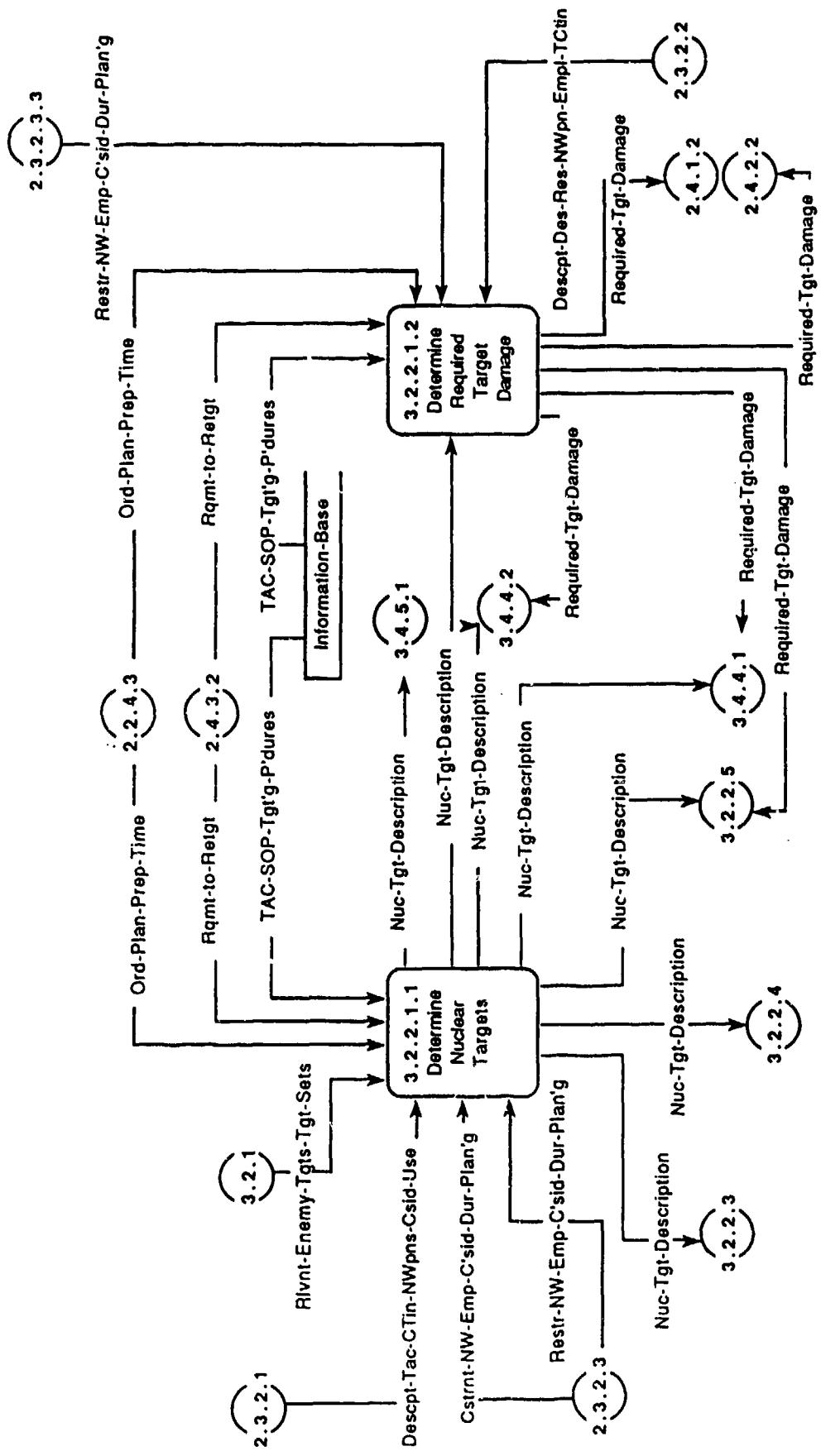


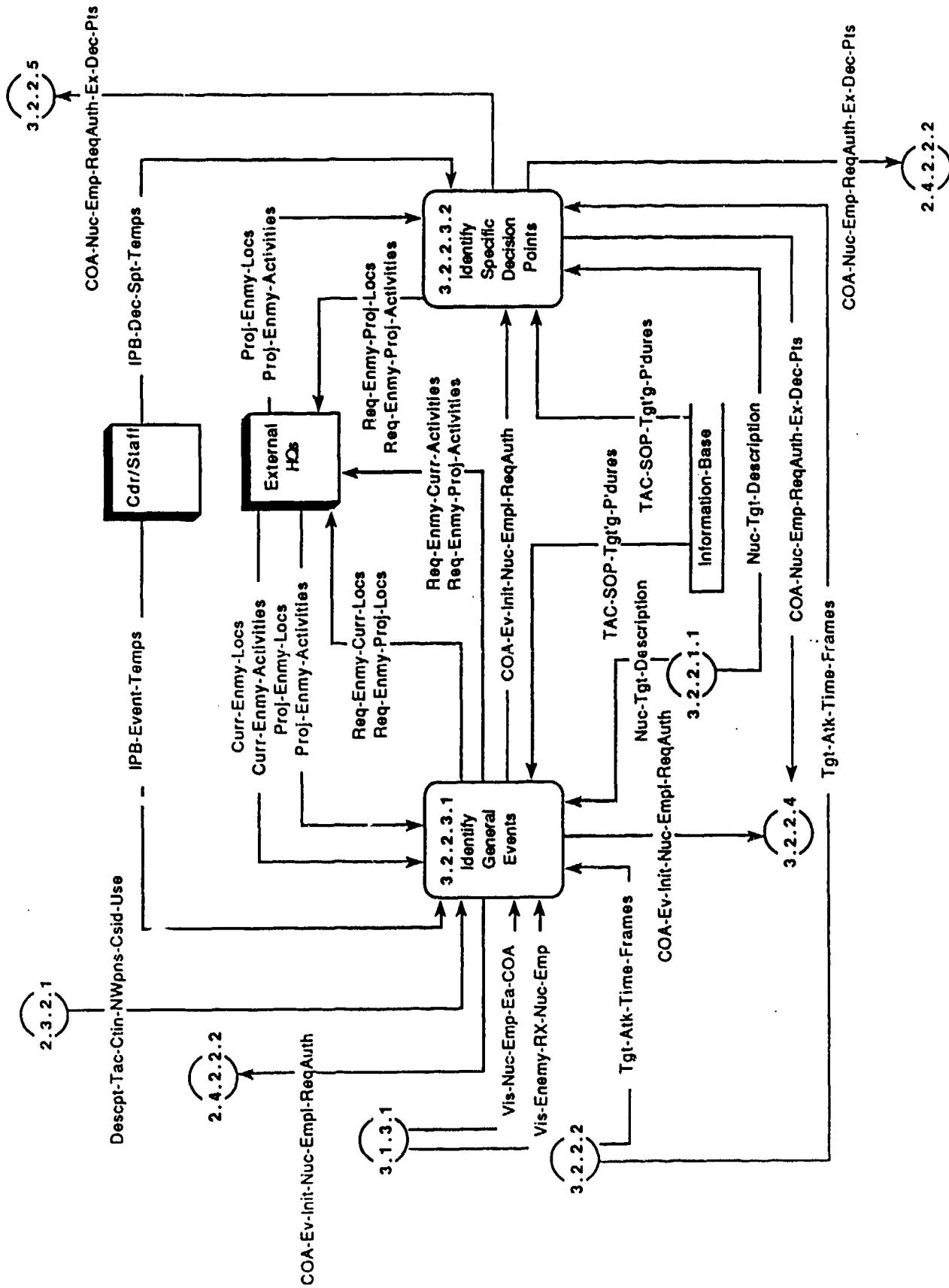


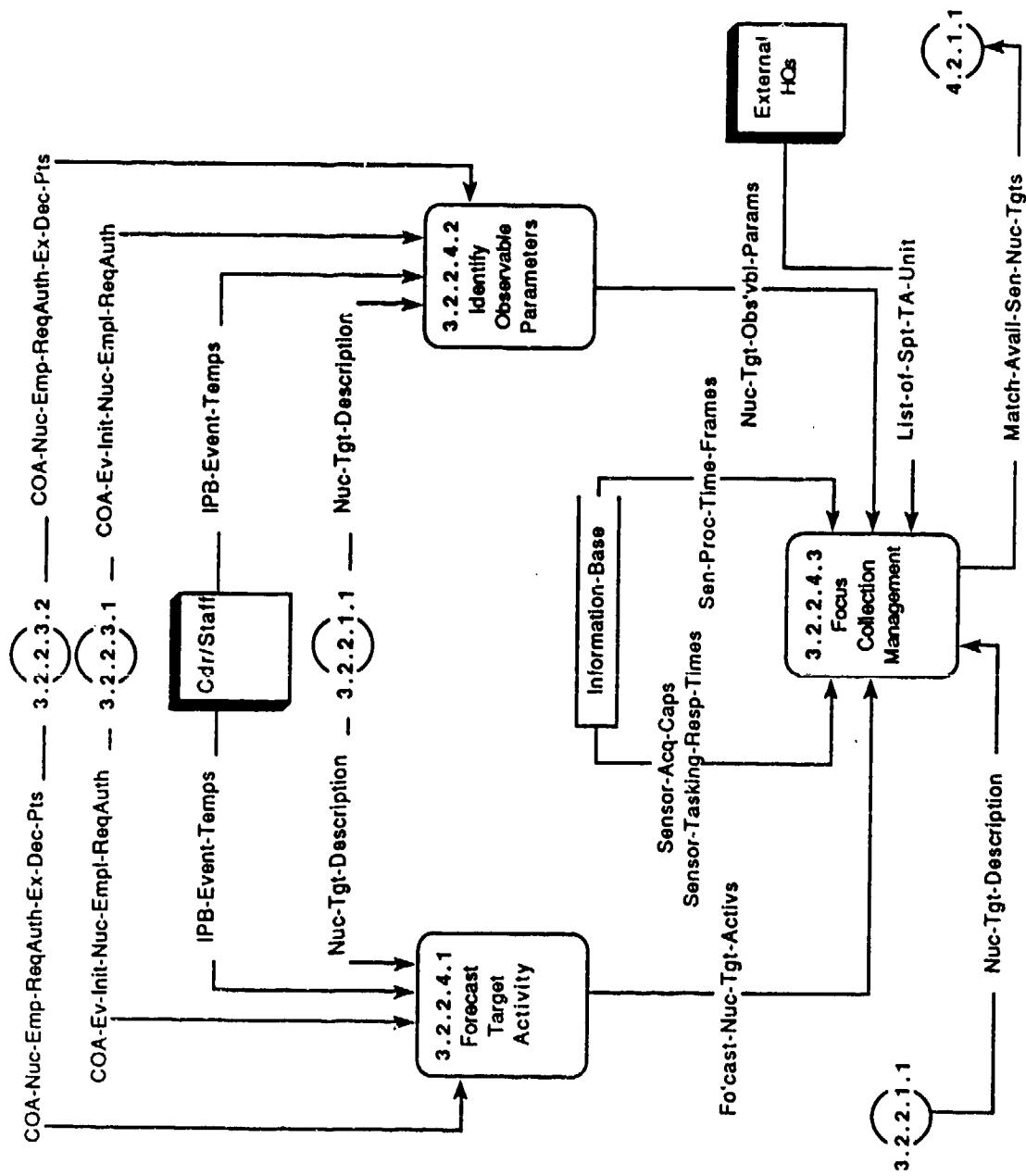




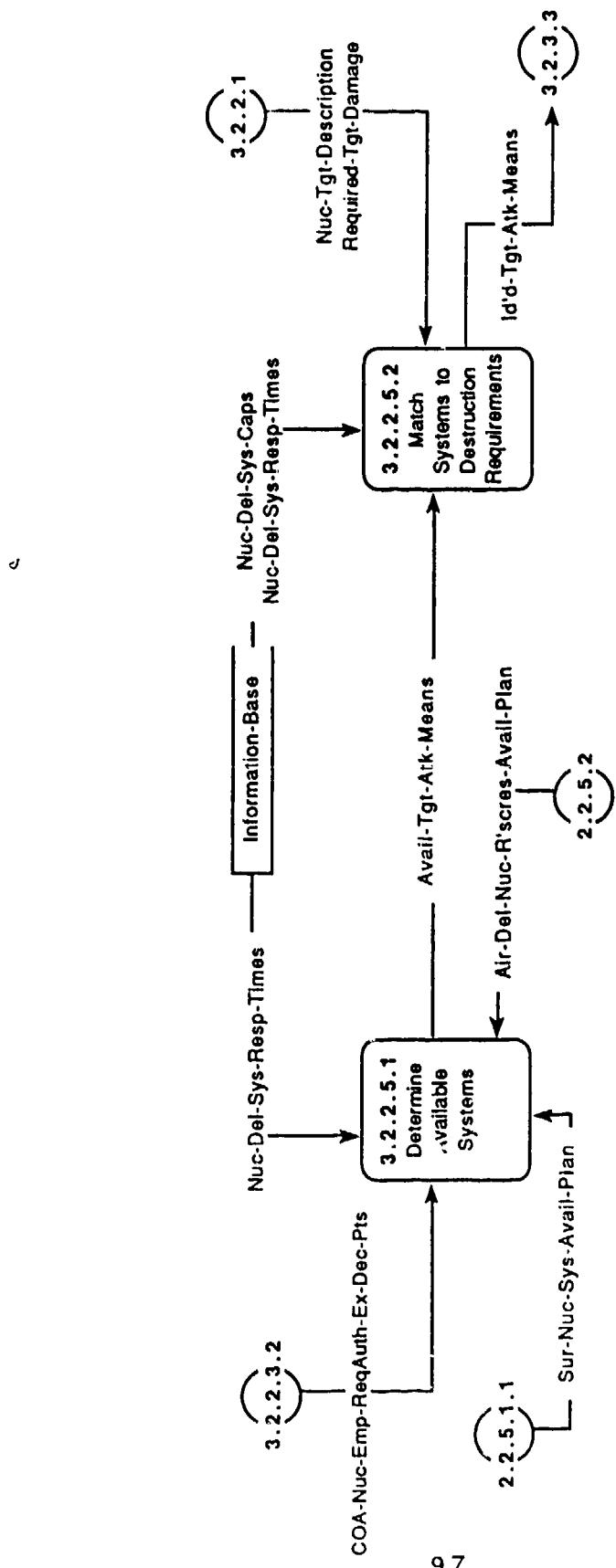


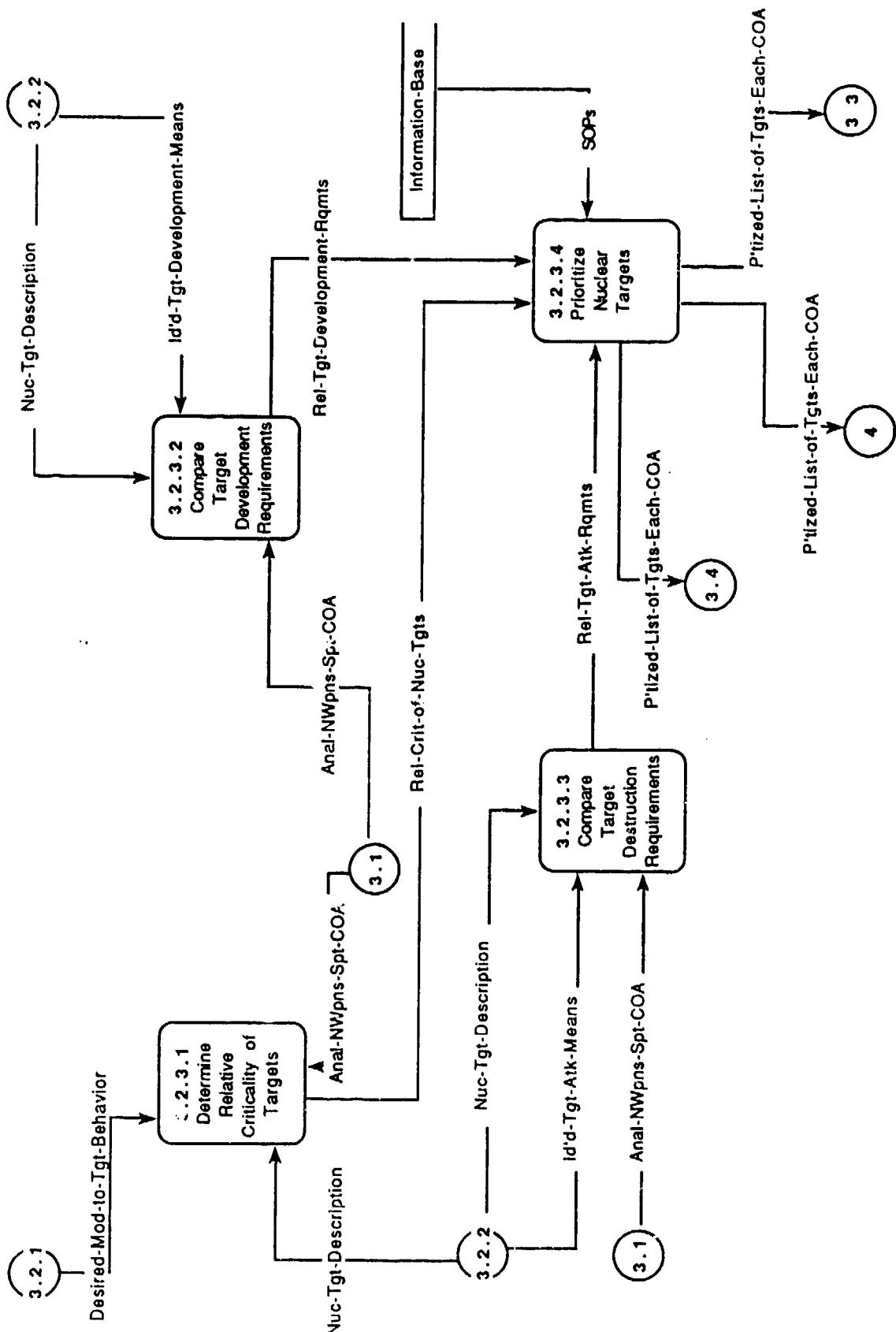


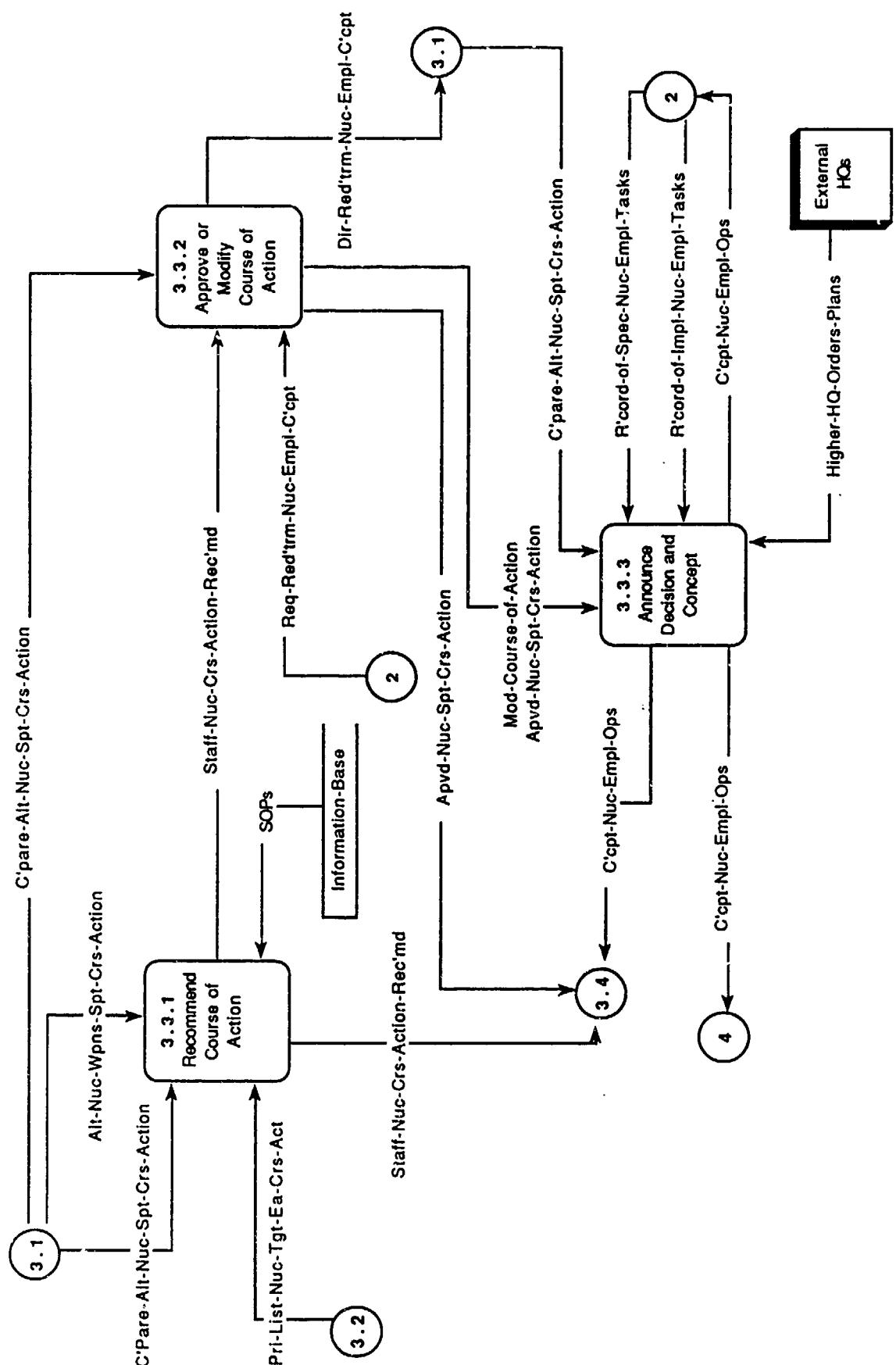




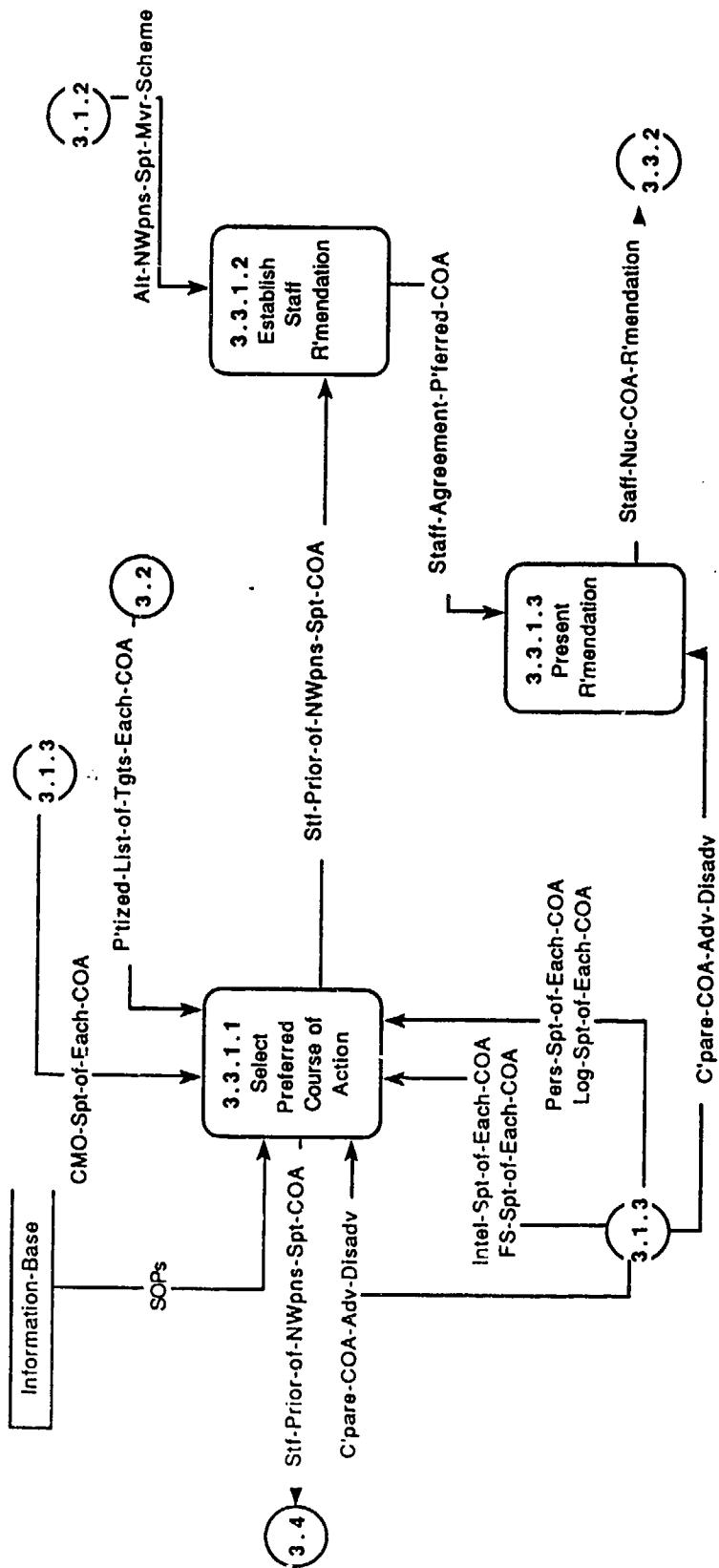
Determine Target Attack Means #3.2.2.5

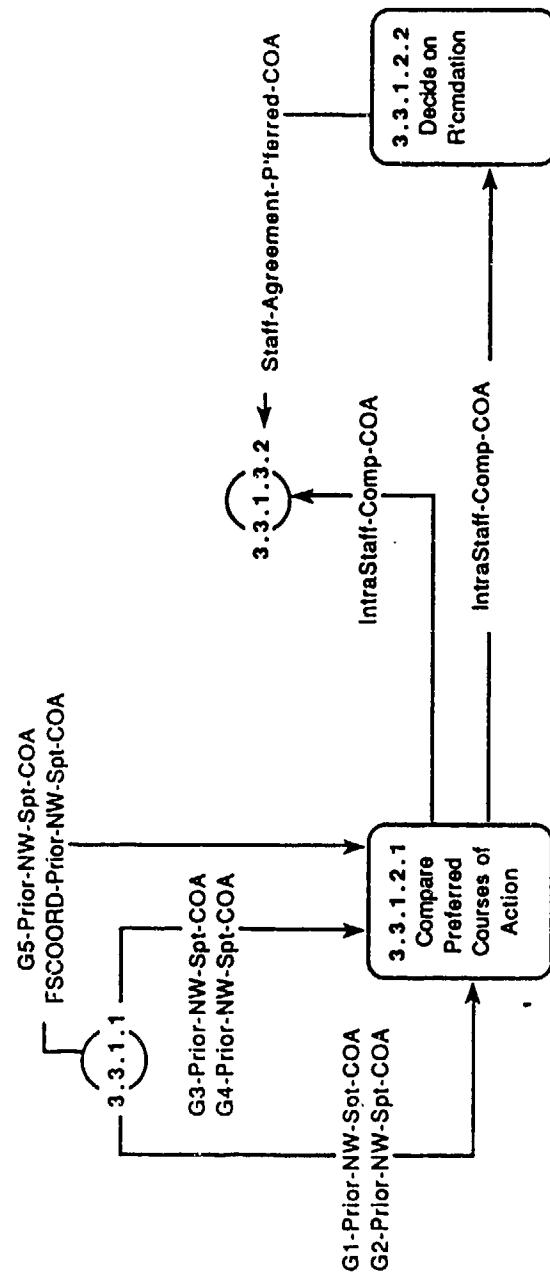


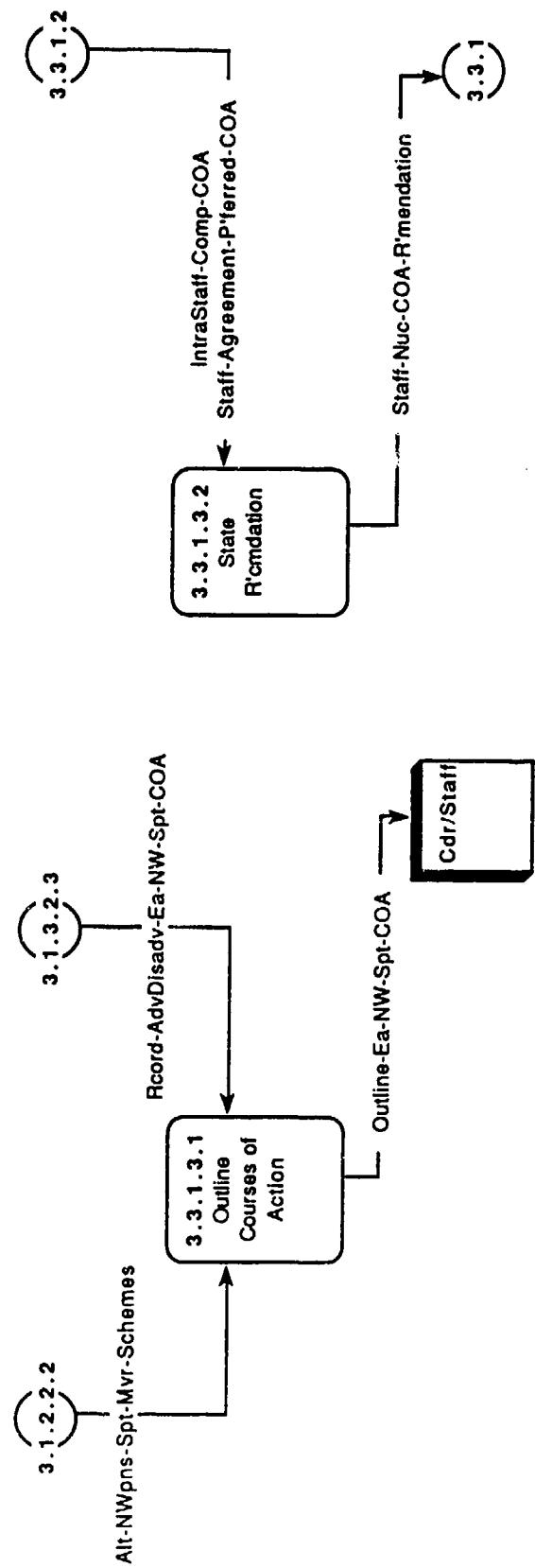


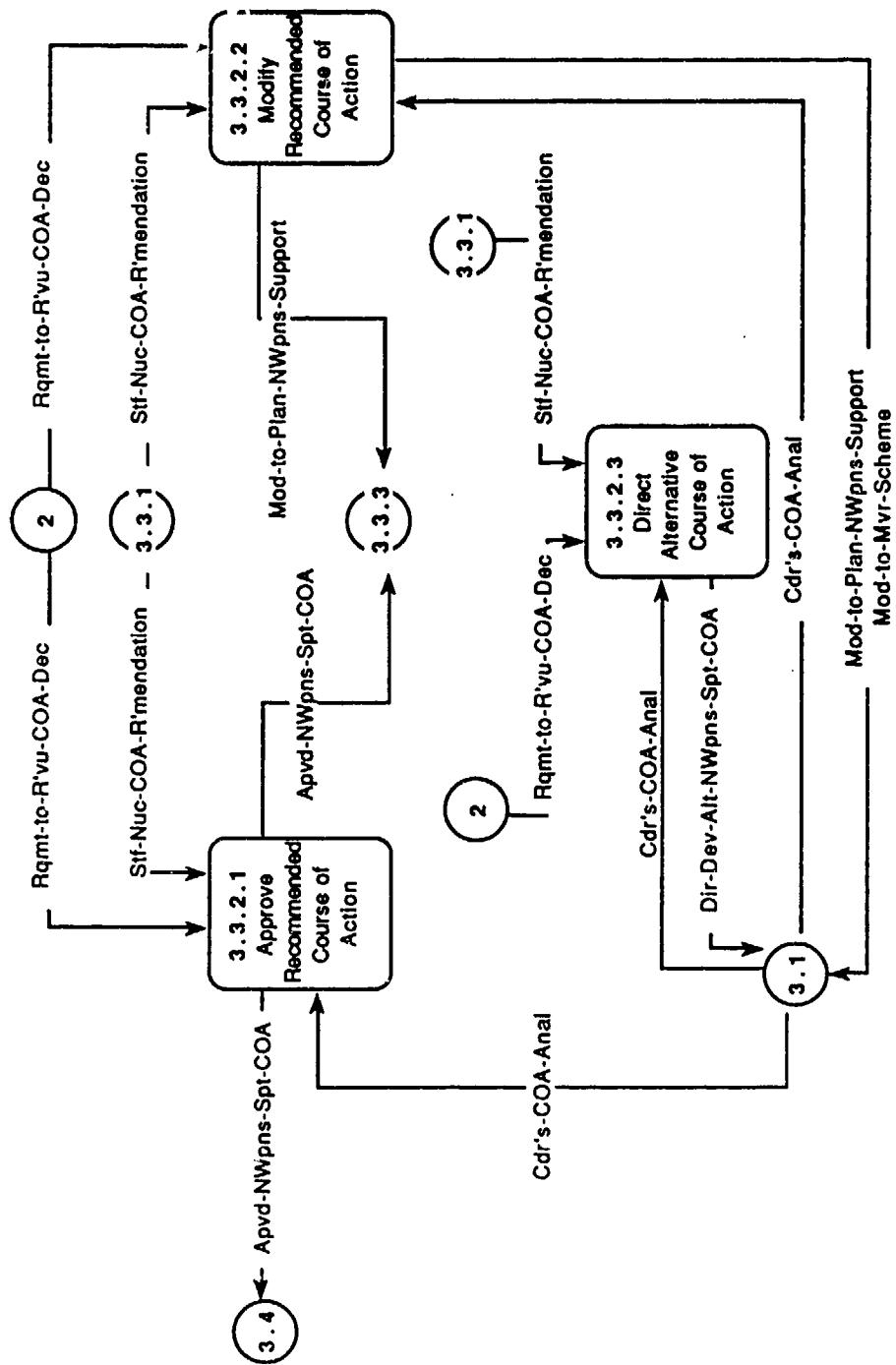


Decide on Course of Action #3.3

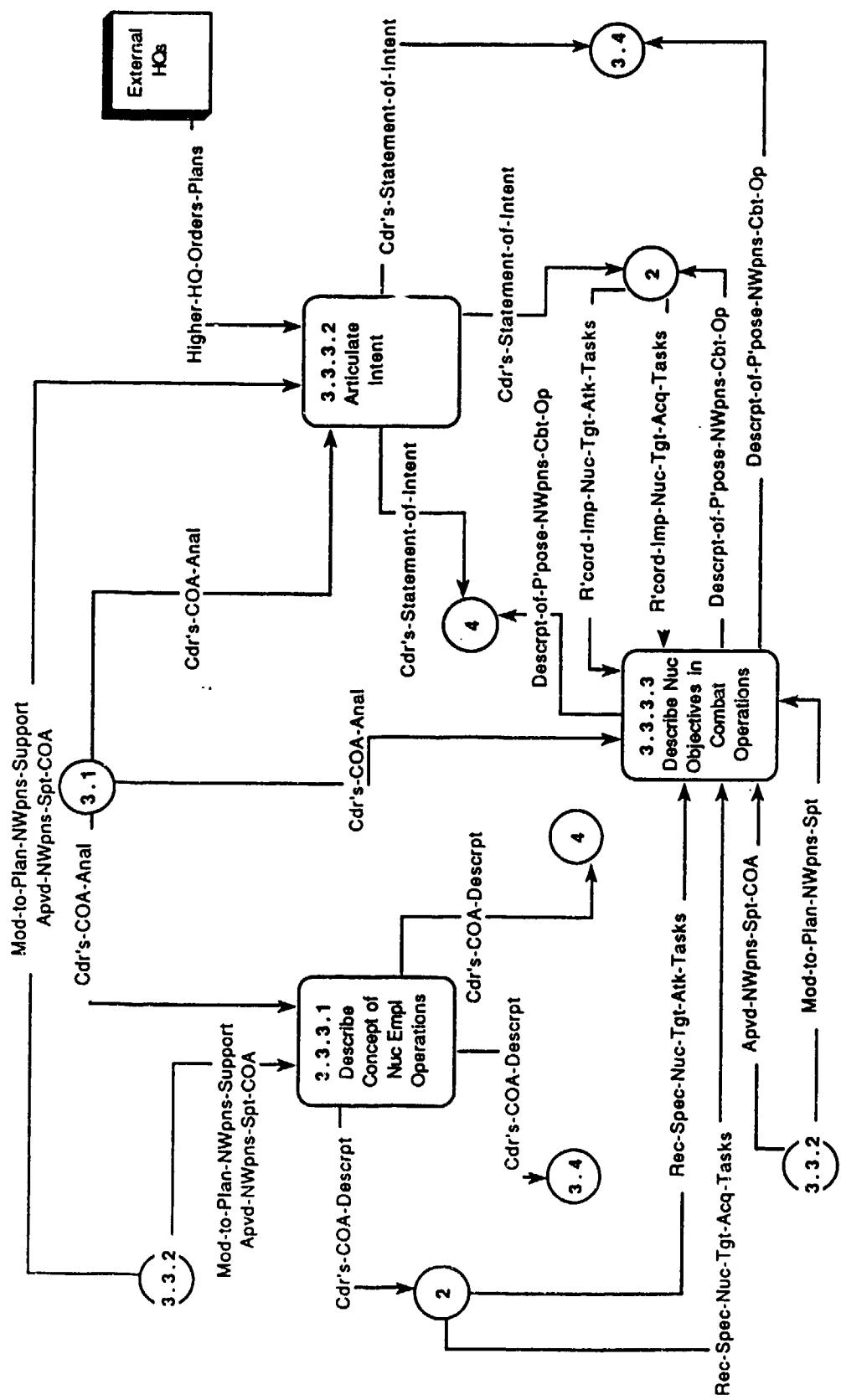


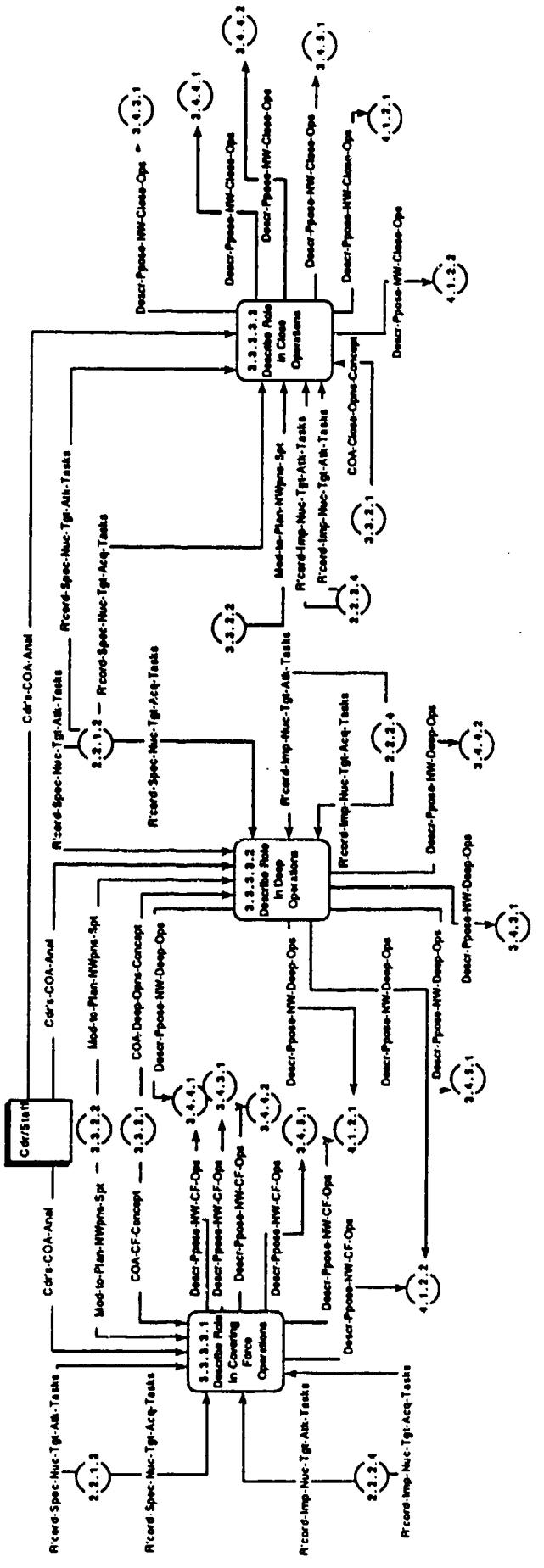


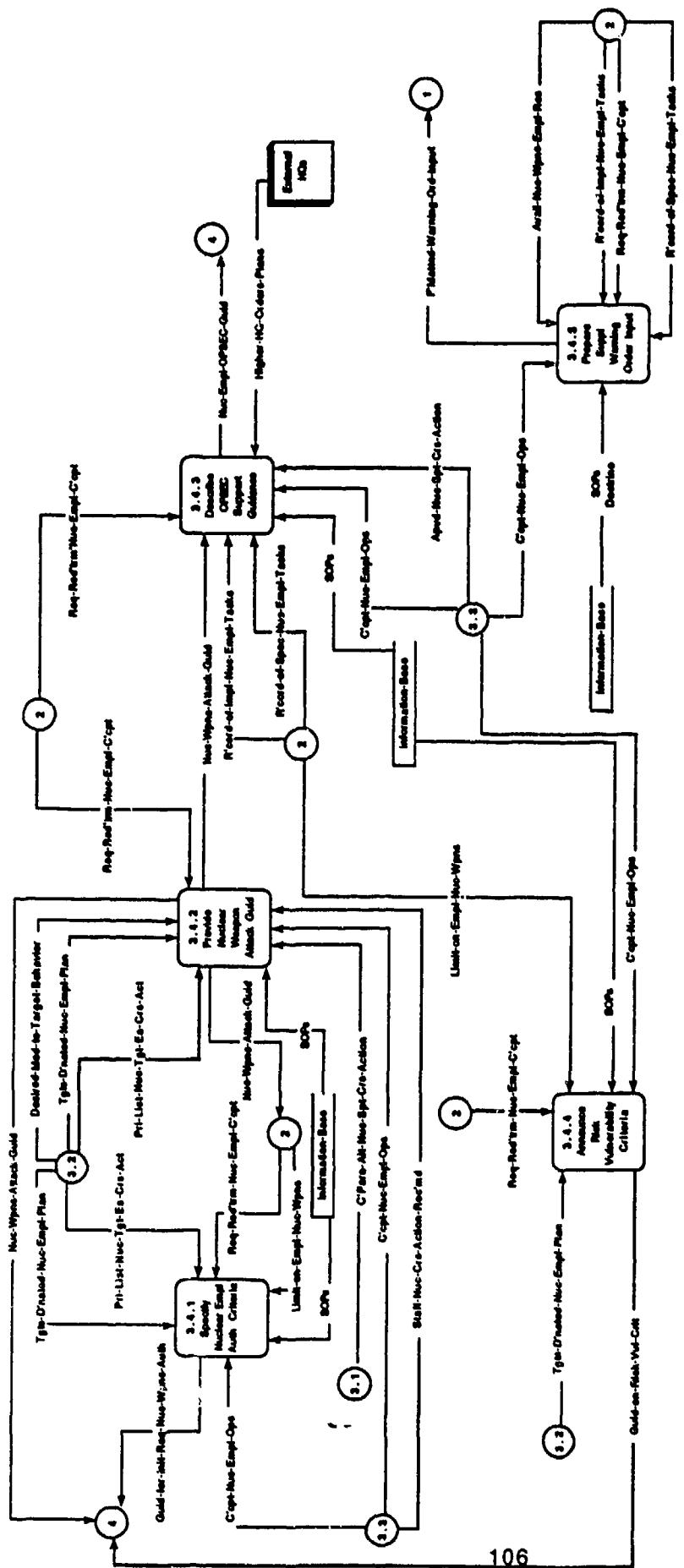




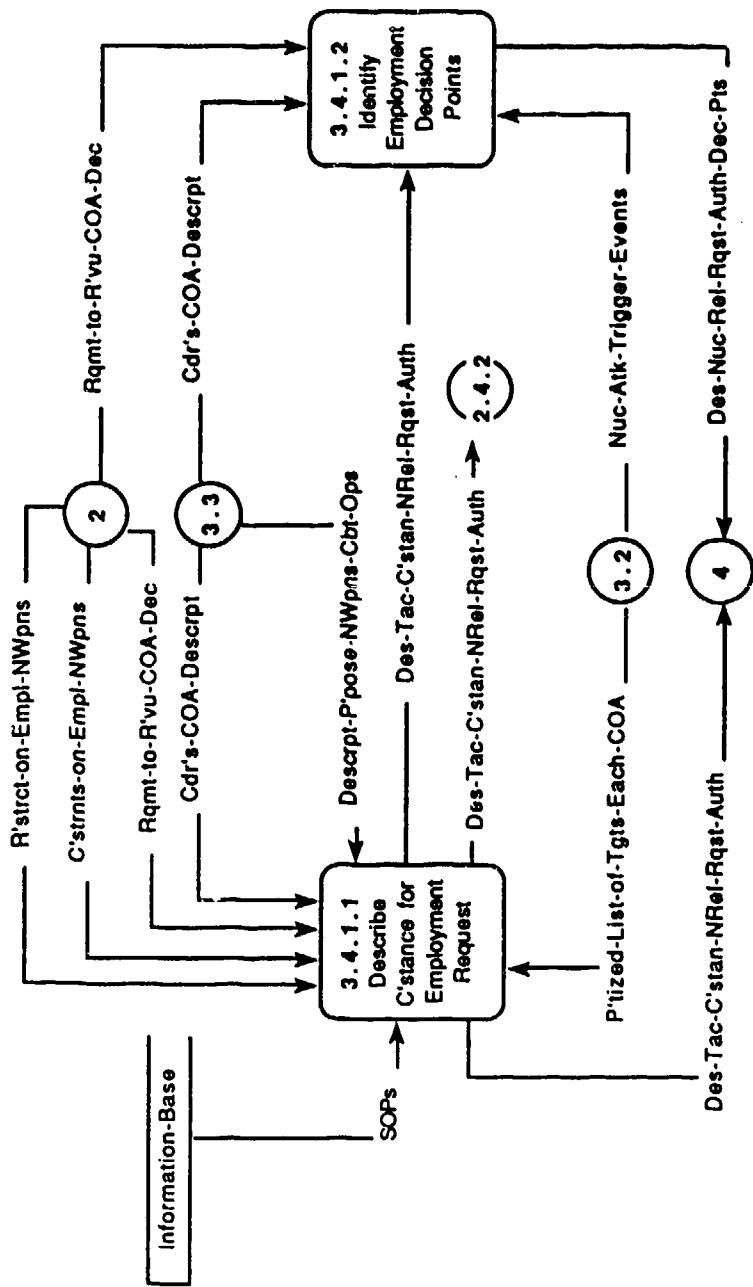
Approve or Modify Course of Action #3.3.2

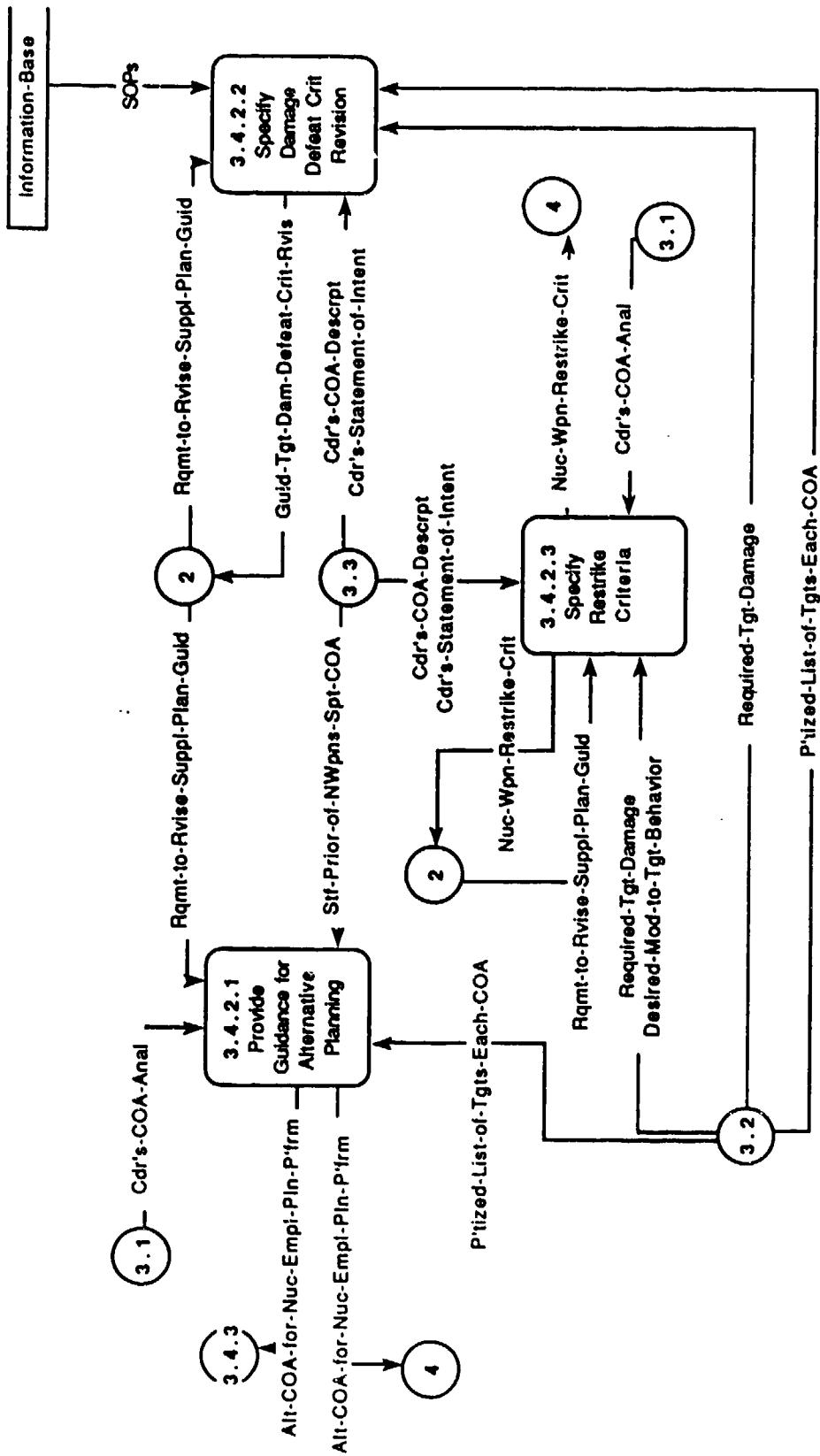


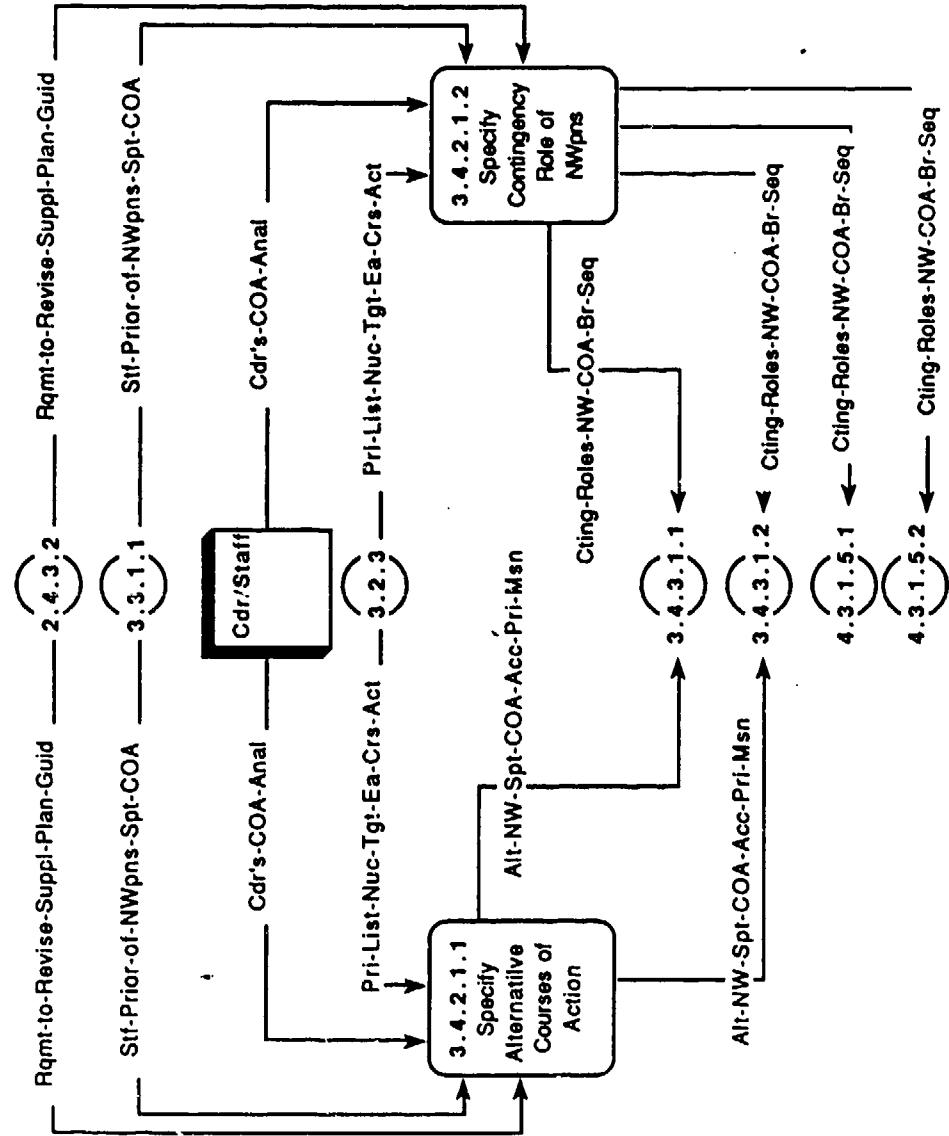


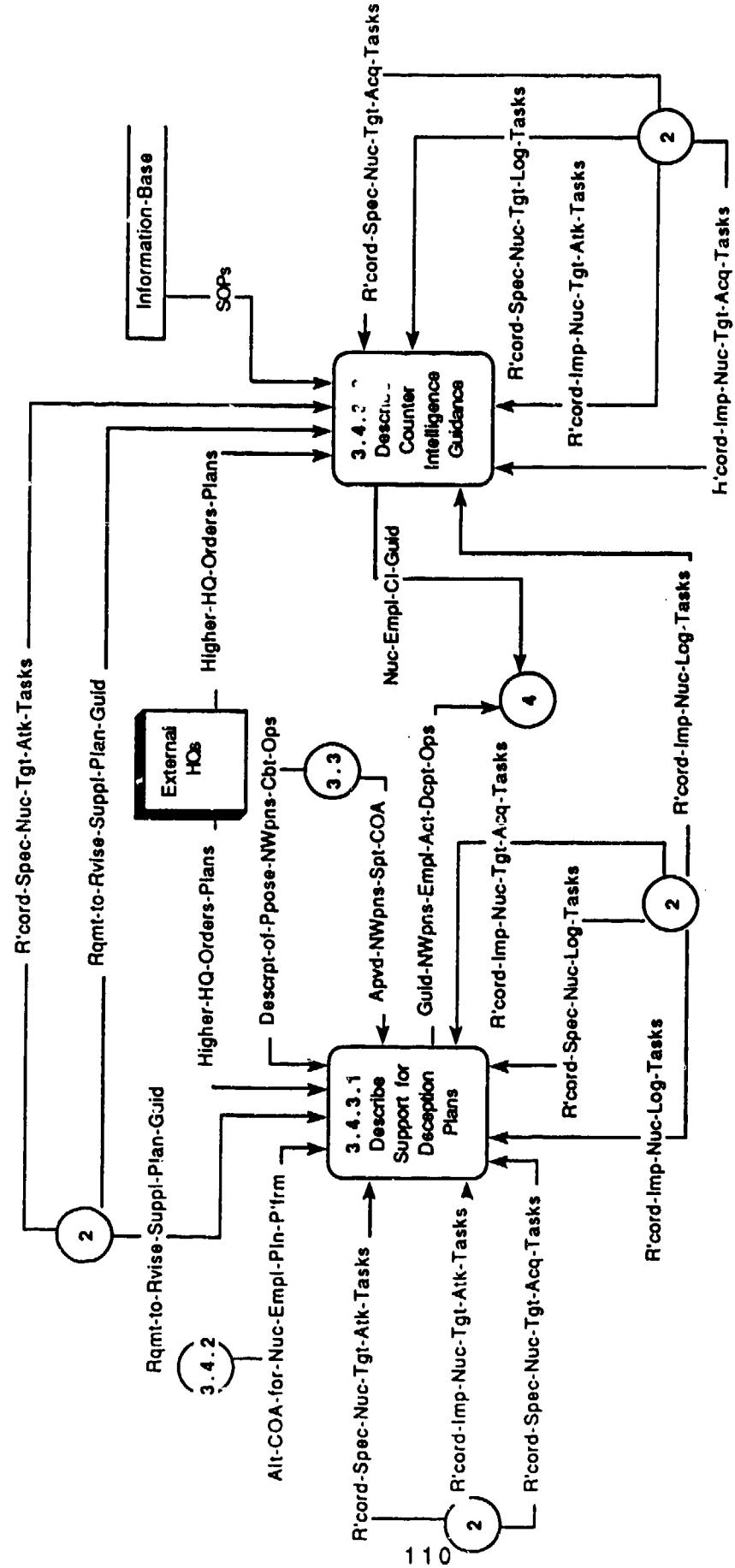


Specify Nuclear Emplo Auth Criteria #3.4.1

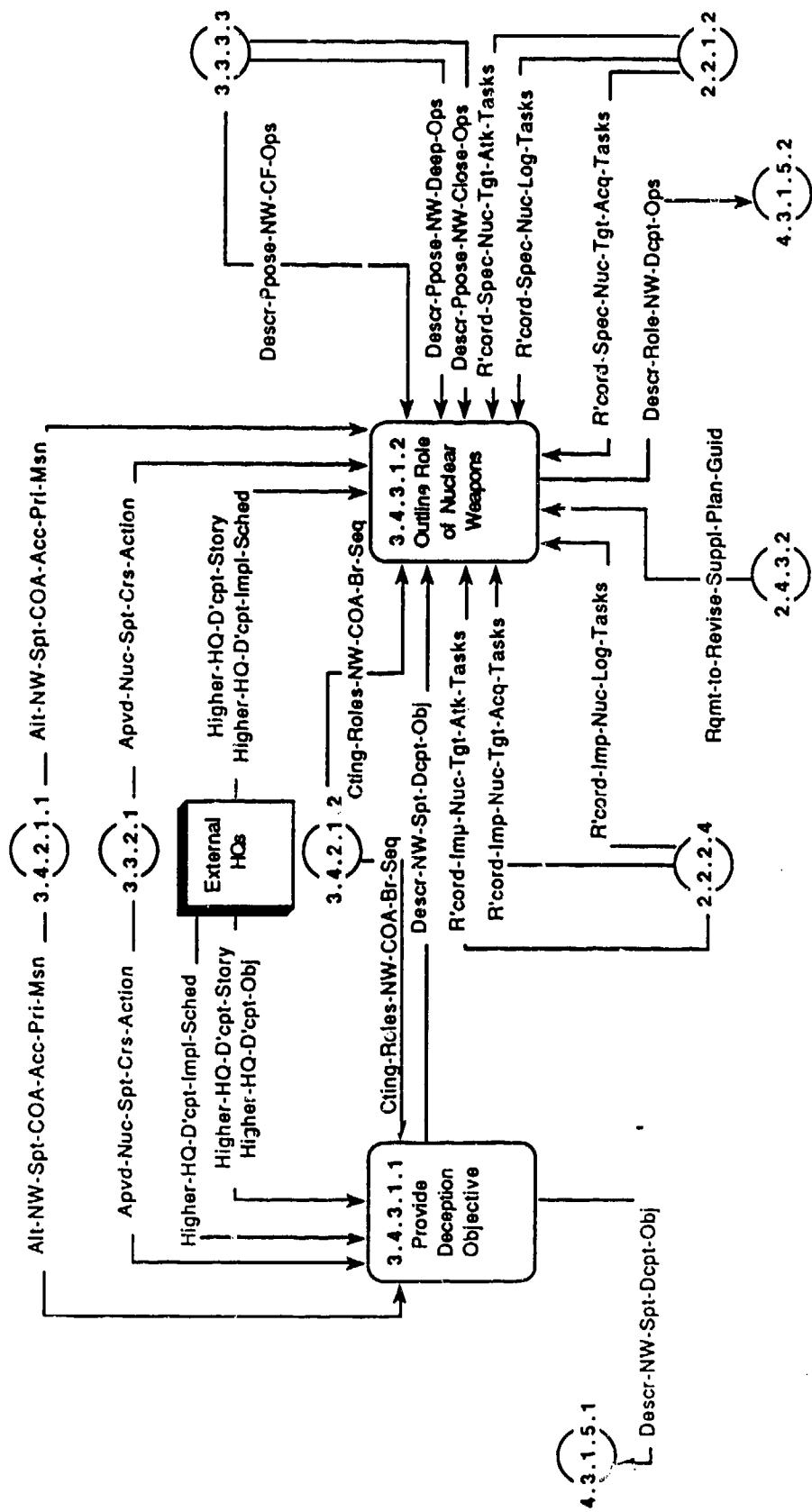


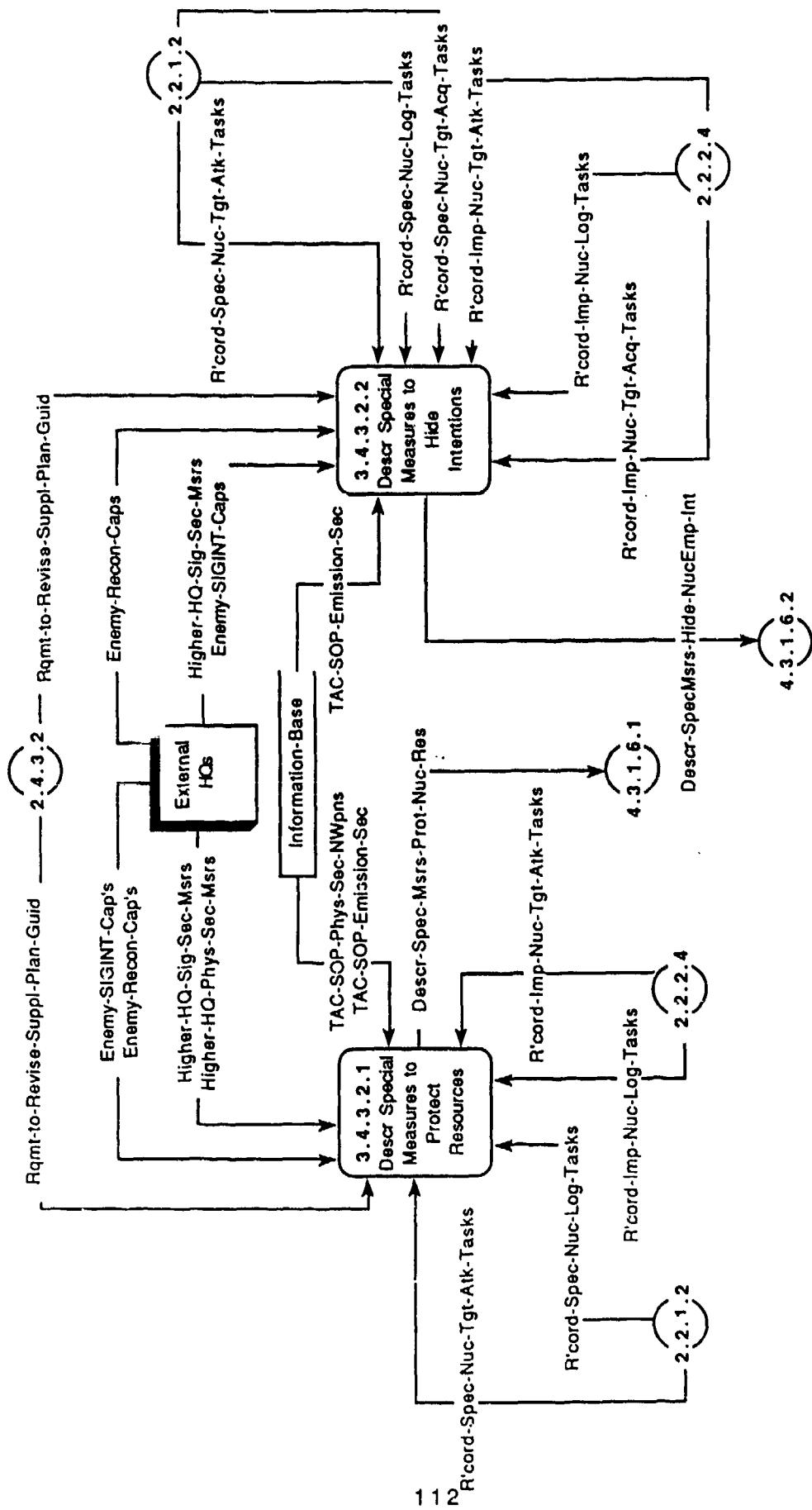




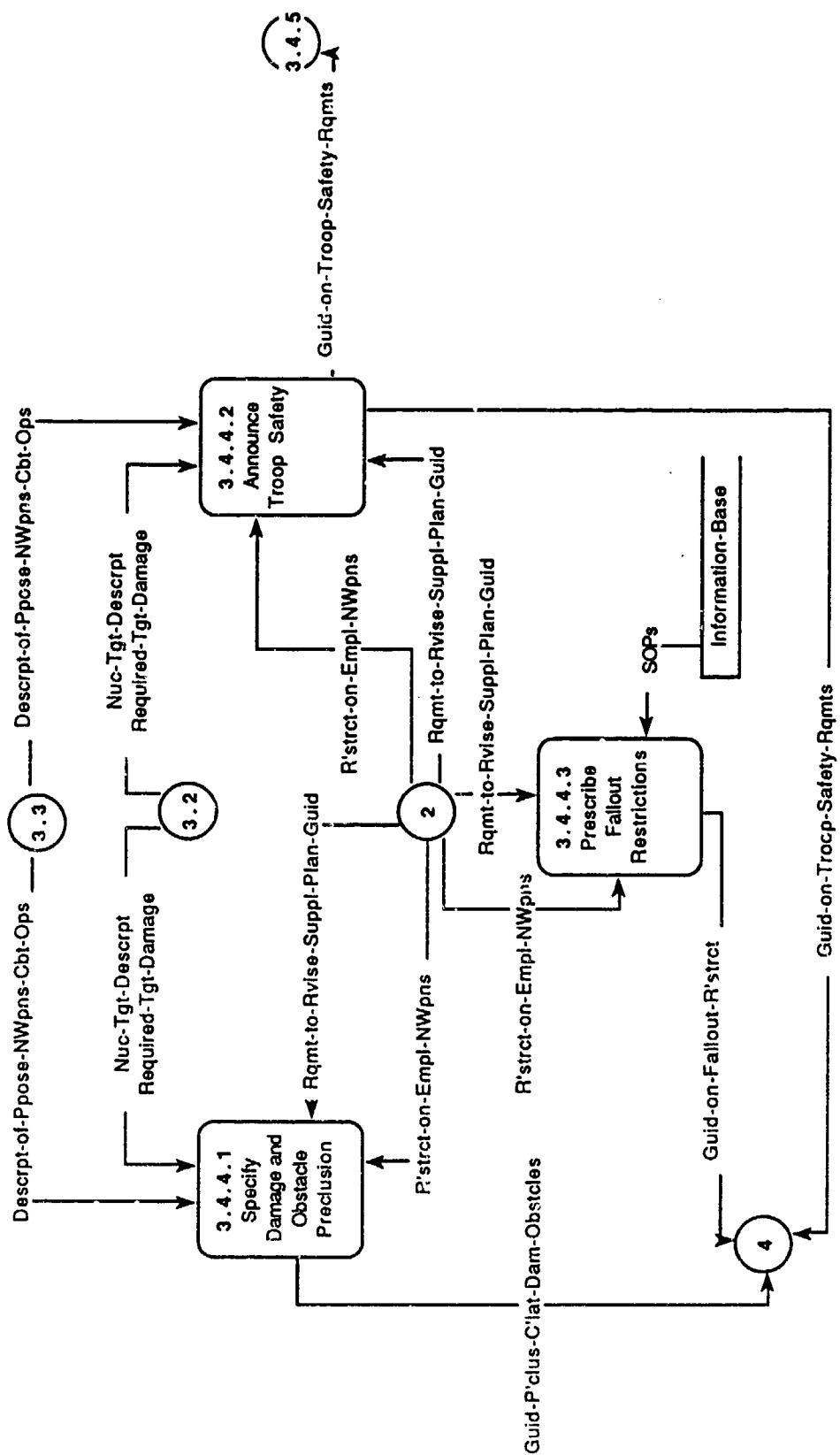


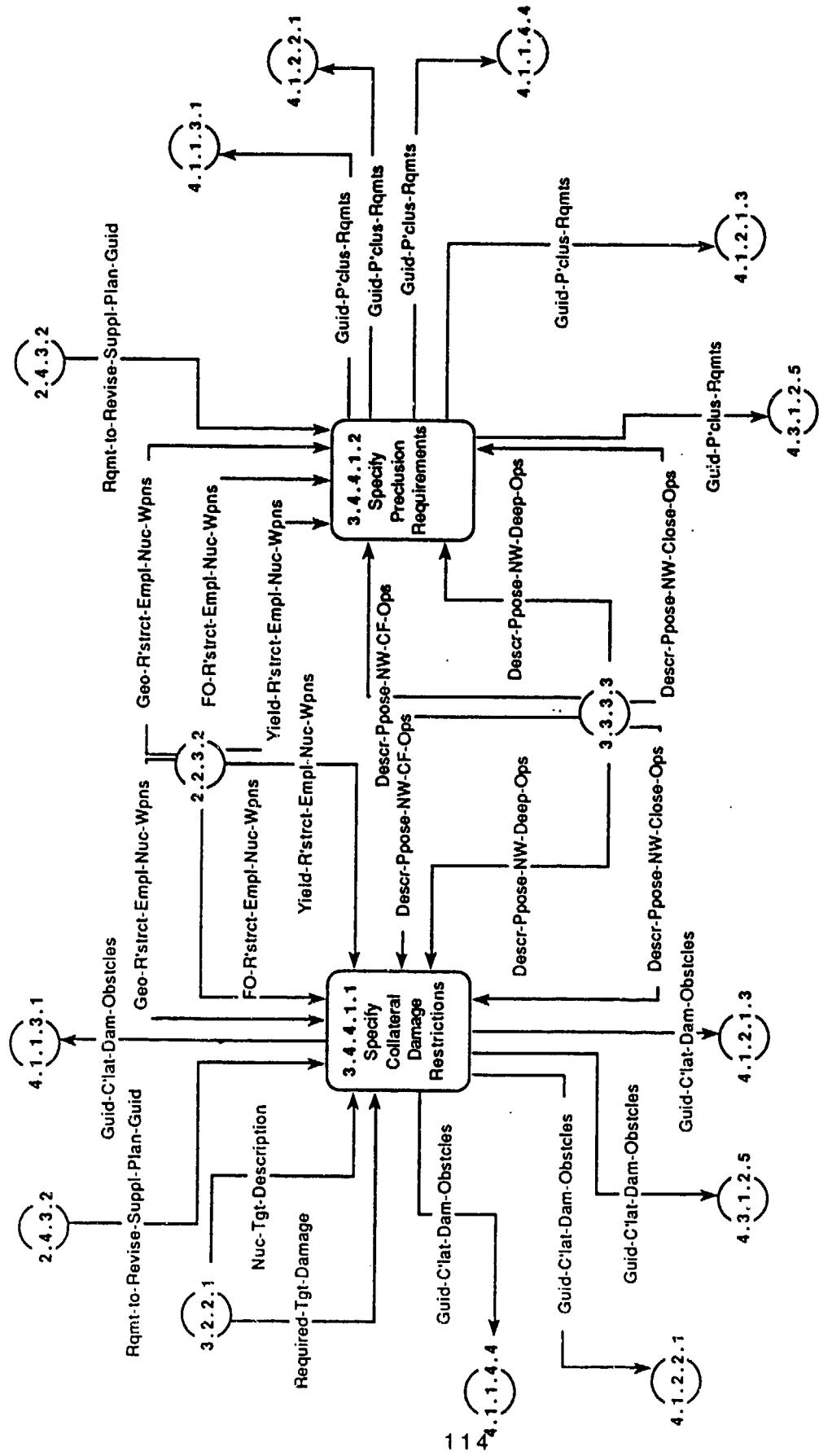
Describe Support for Deception Plans #3.4.3.1

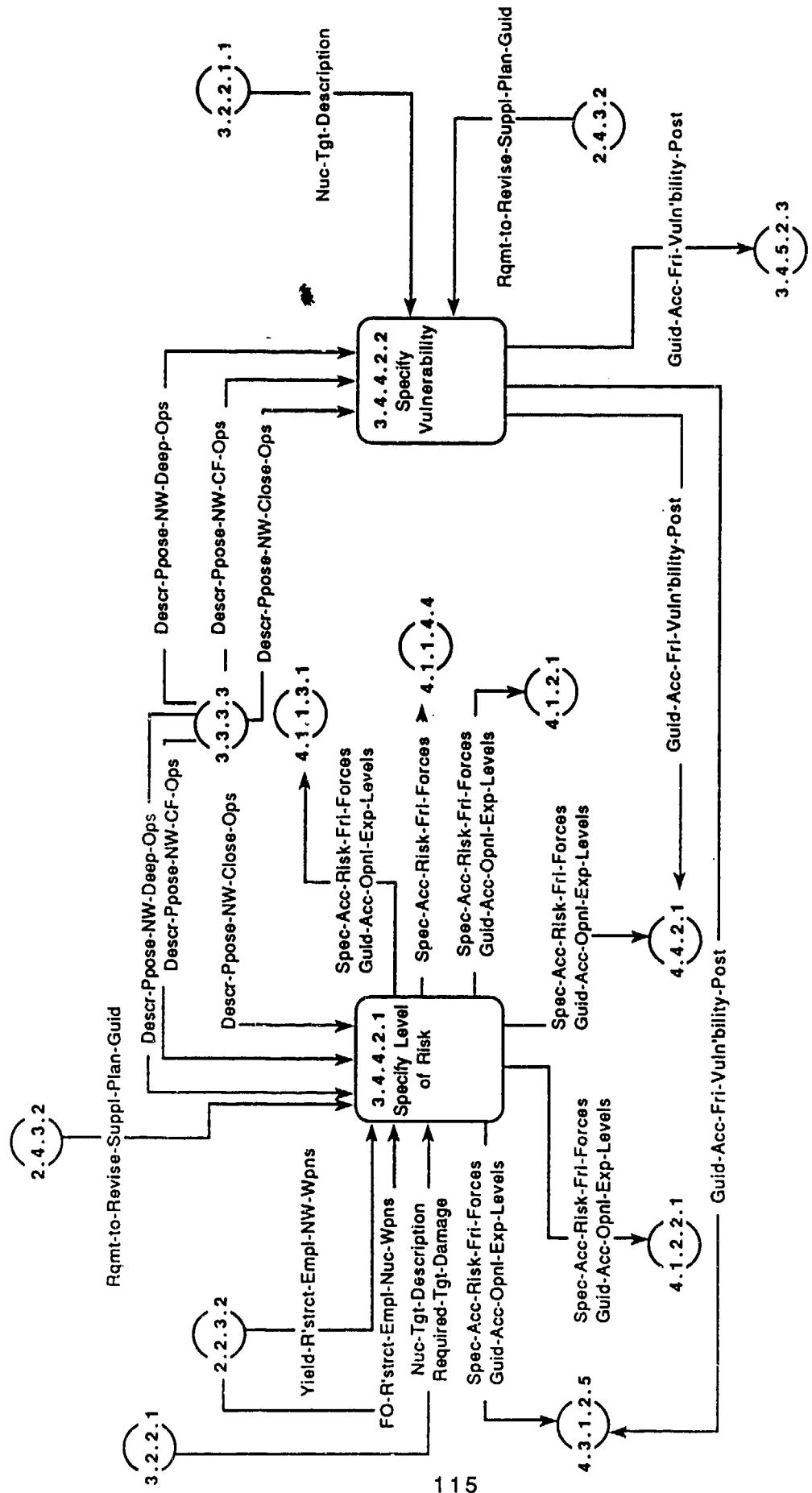


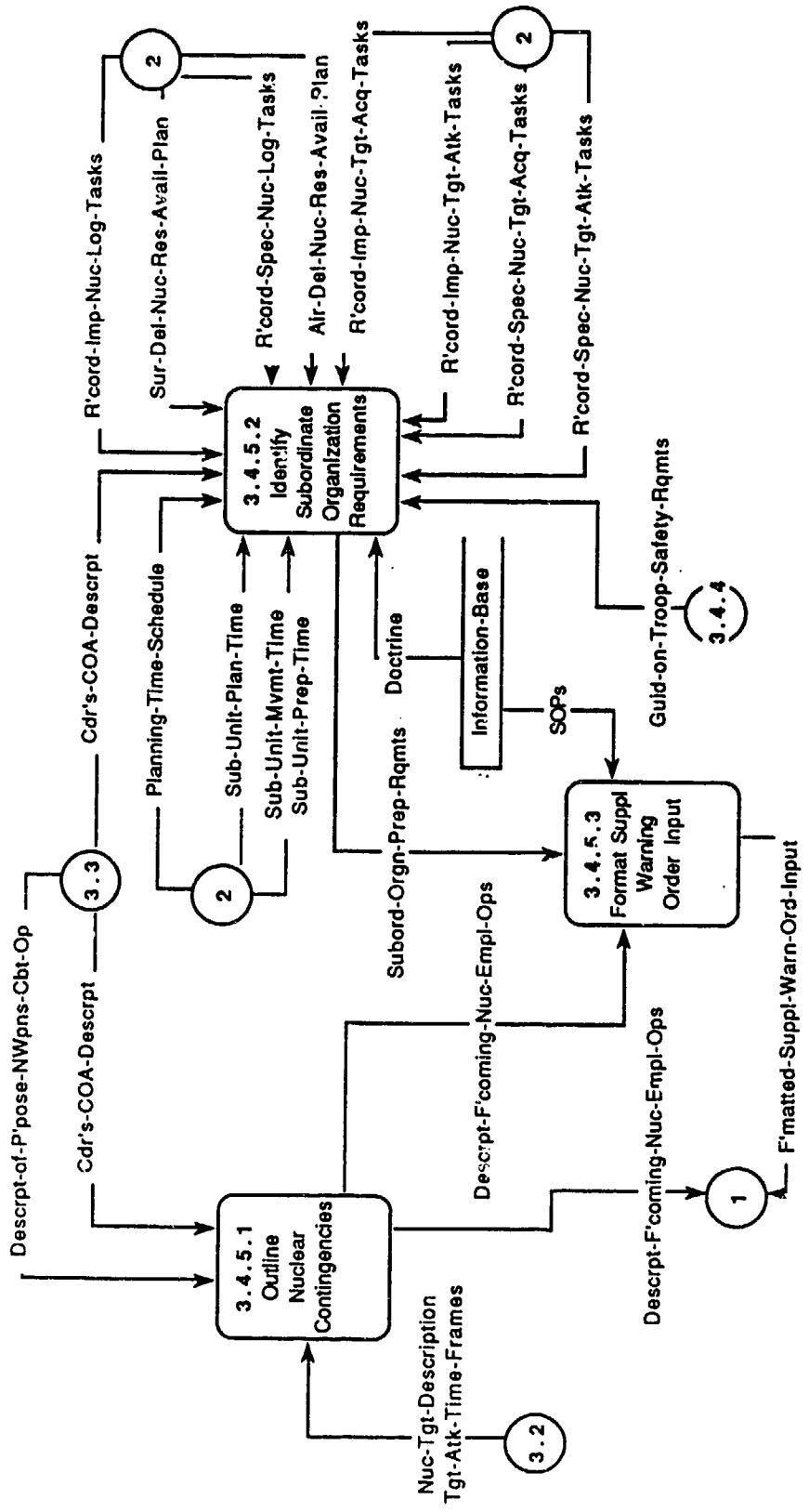


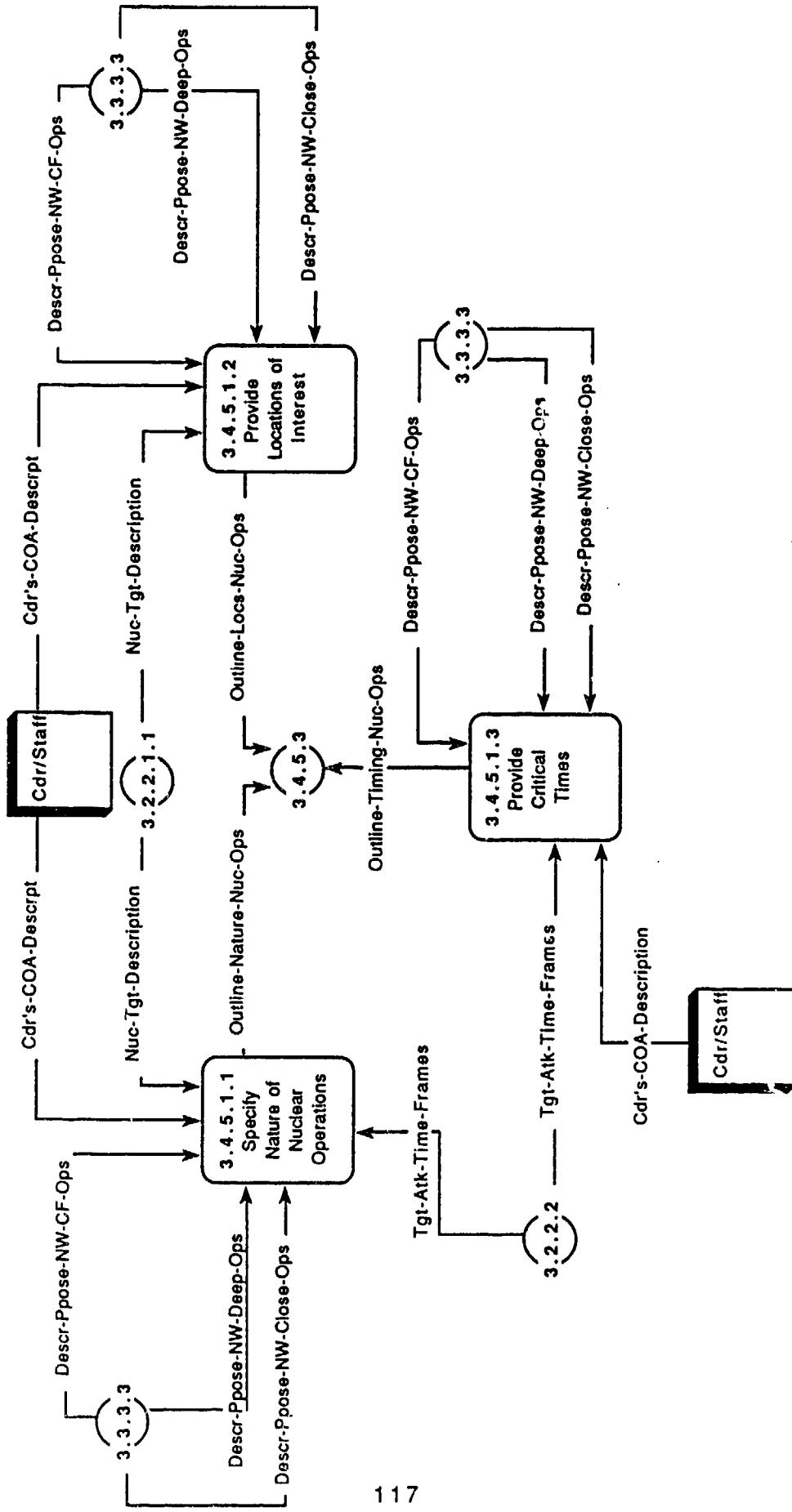
Describe Counter Intelligence Guidance #3.4.3.2

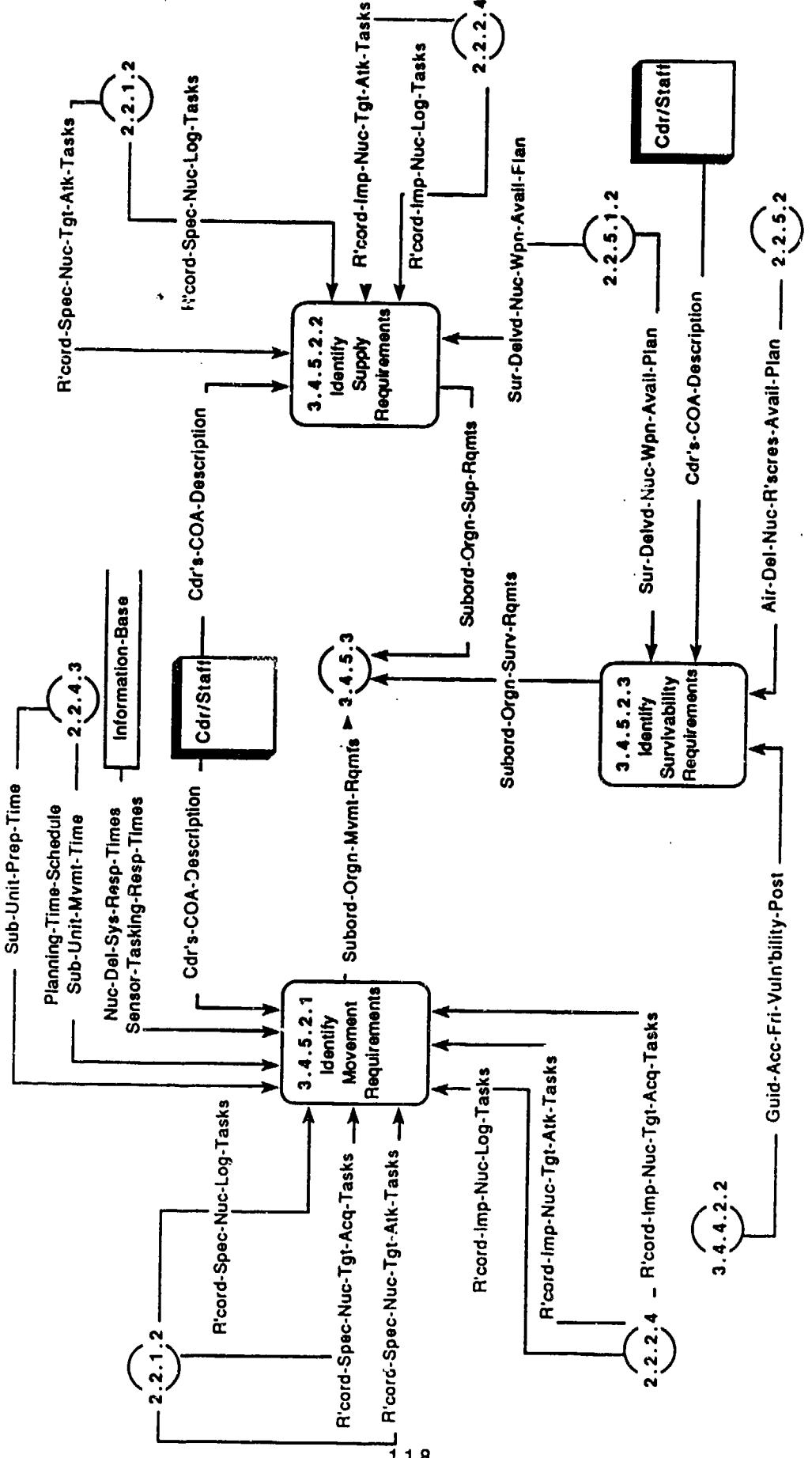




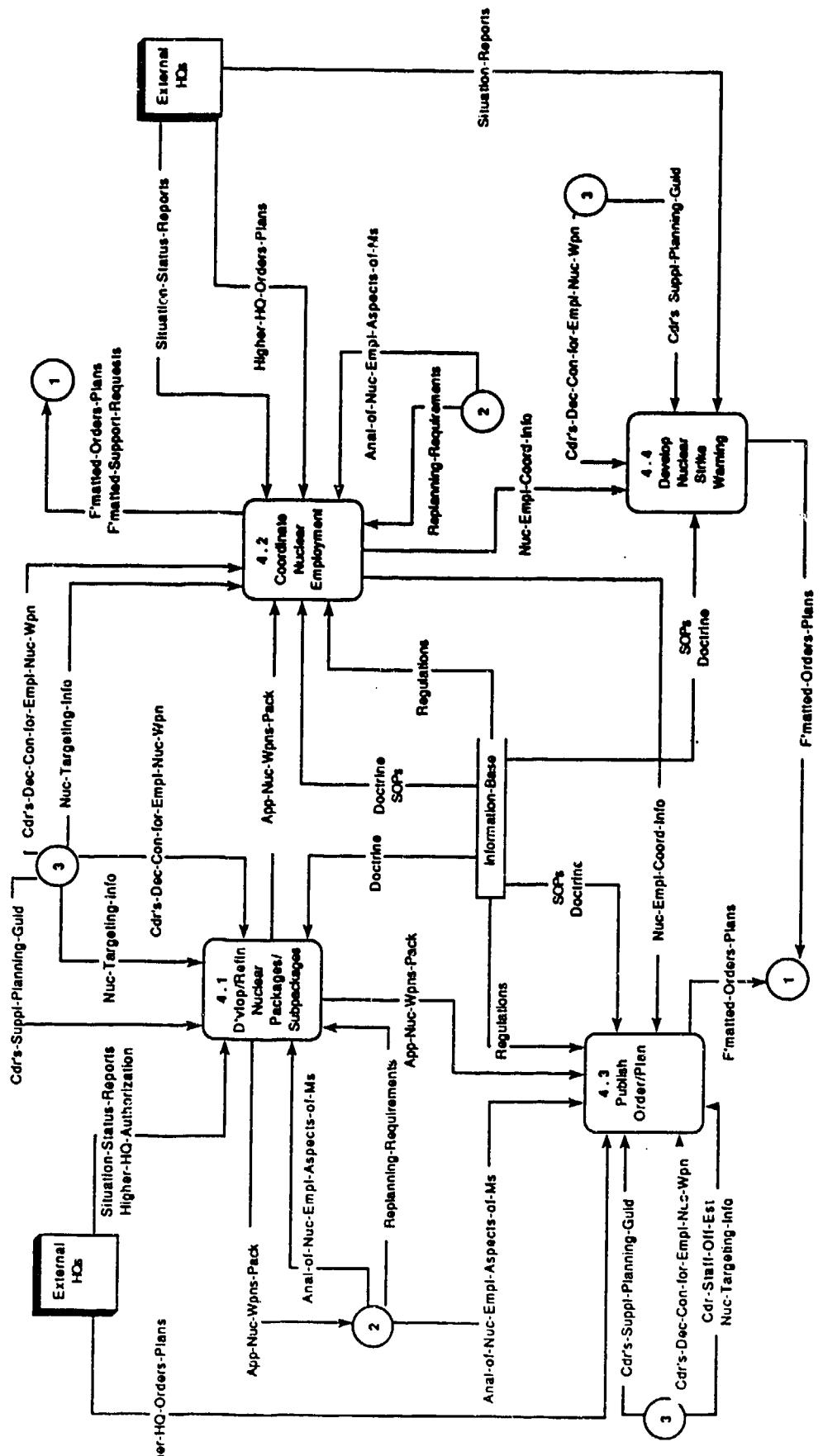


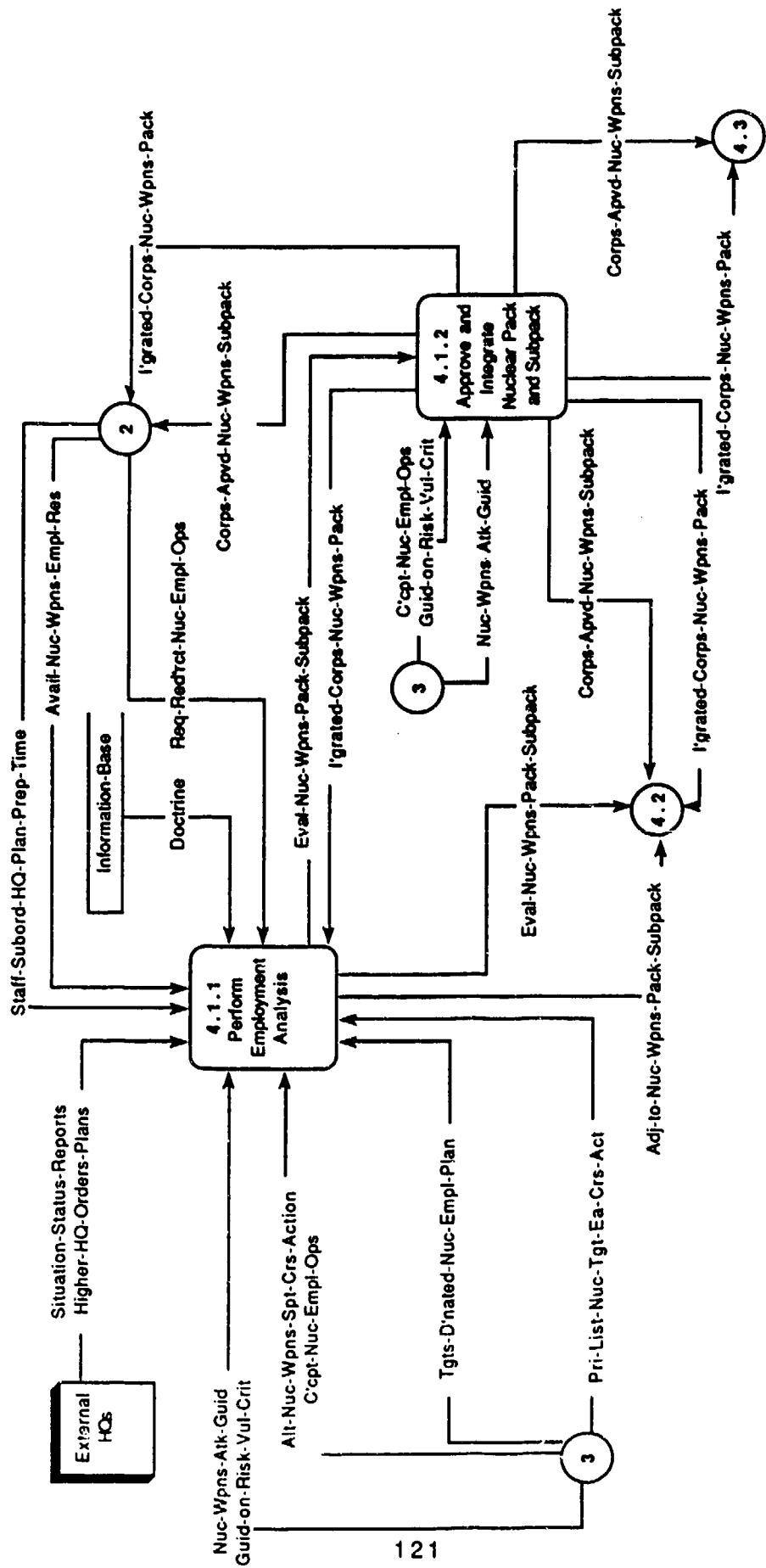


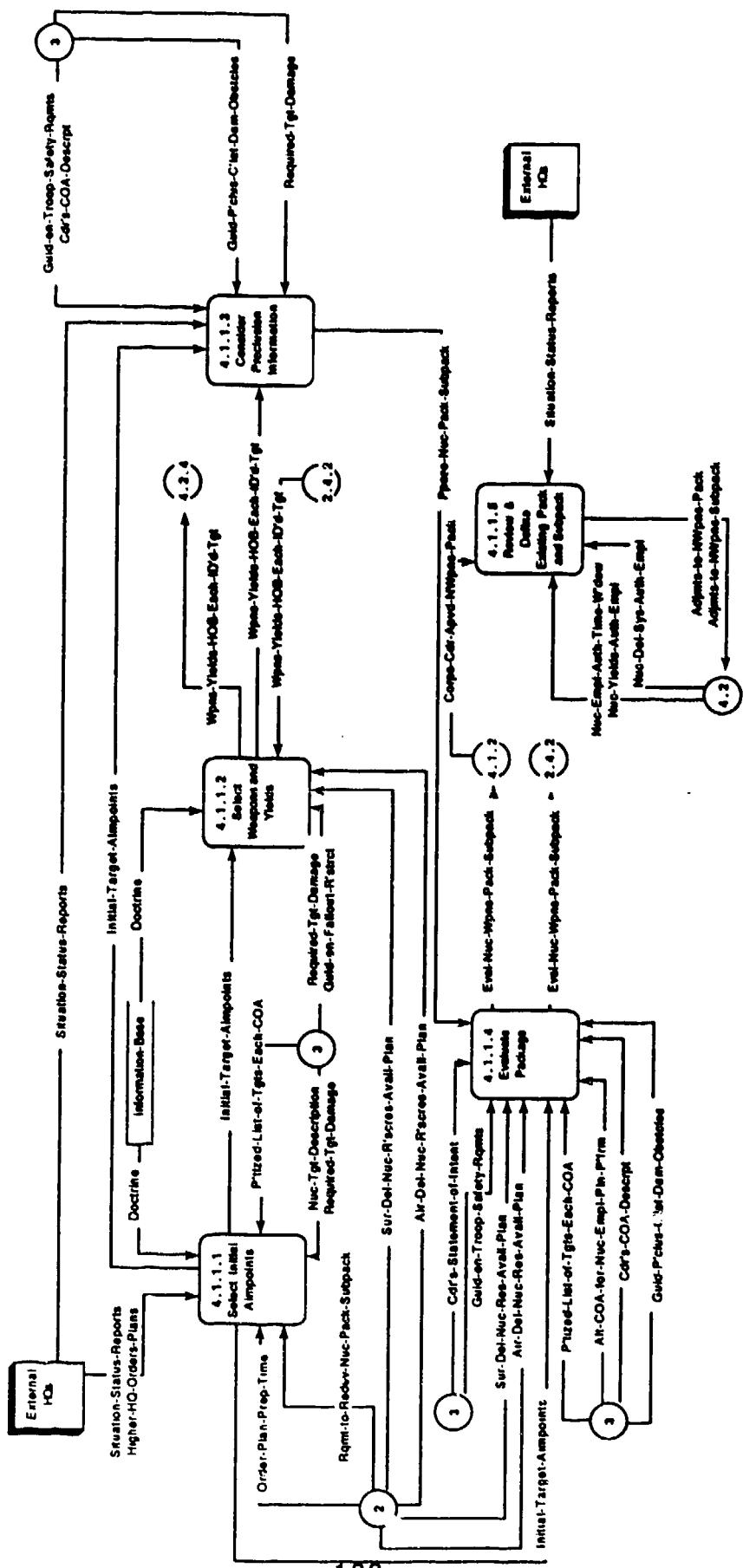


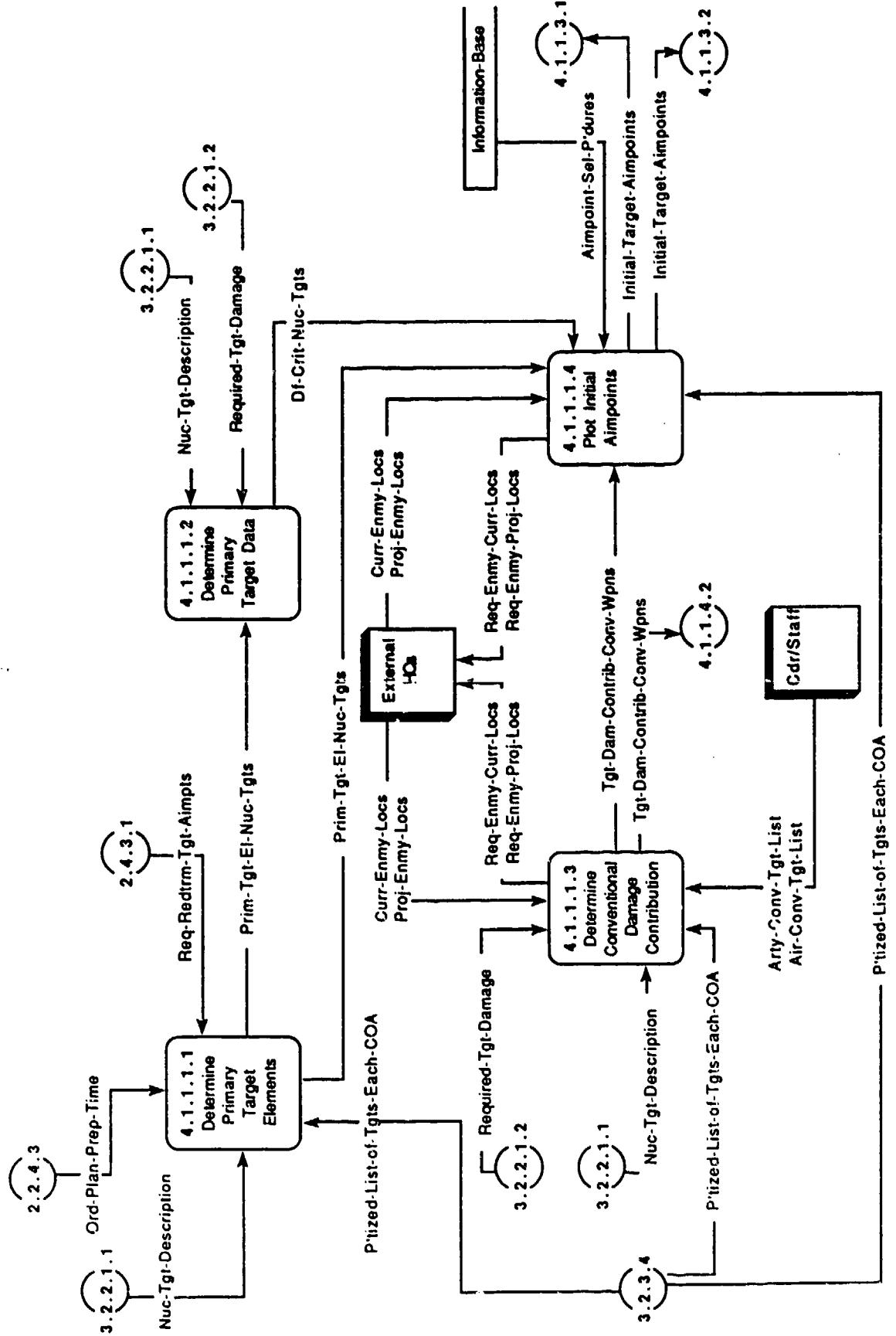


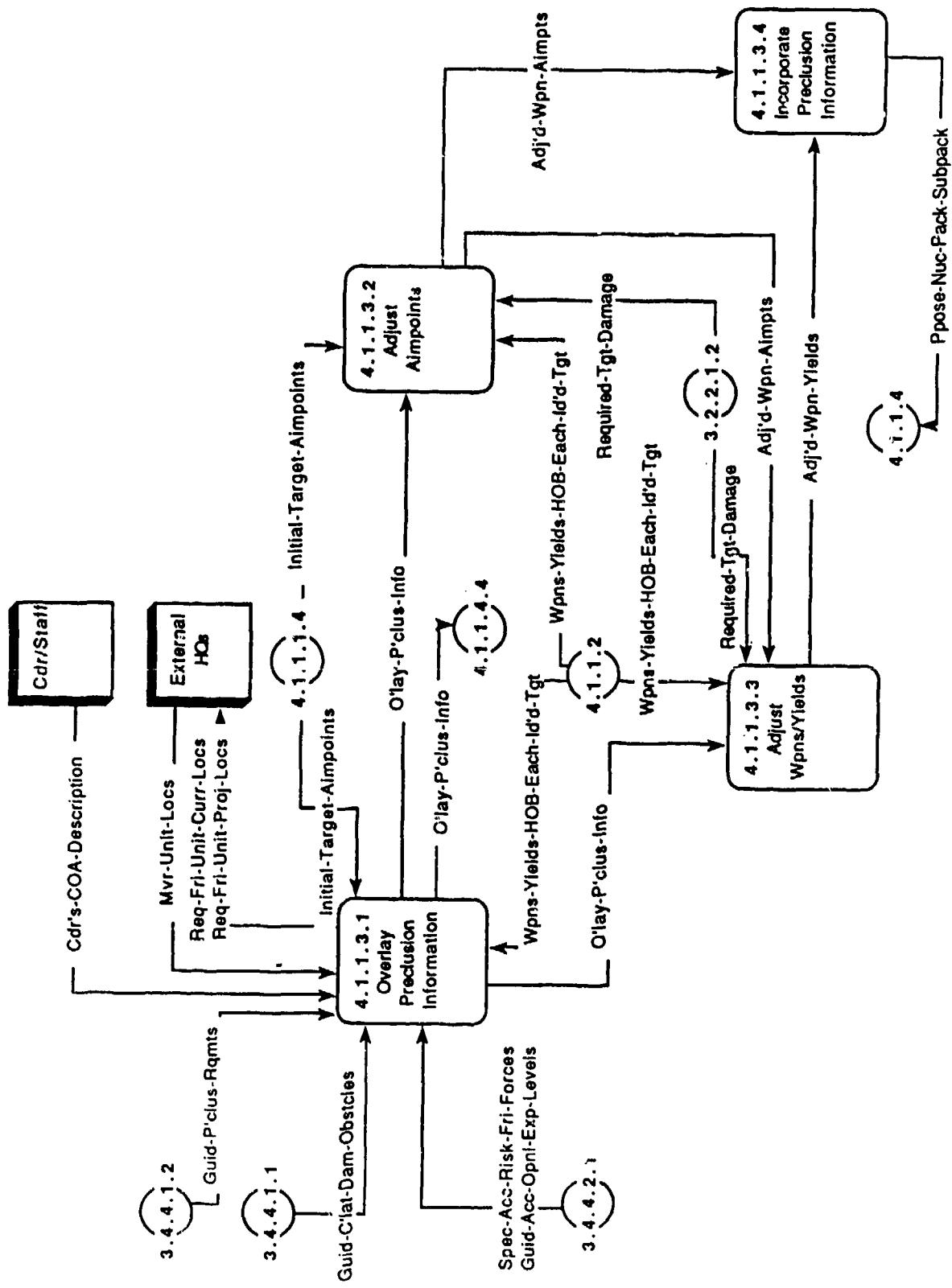
**DIRECT NUCLEAR EMPLOYMENT OPERATIONS
(4.1 THROUGH 4.4.3.3)**

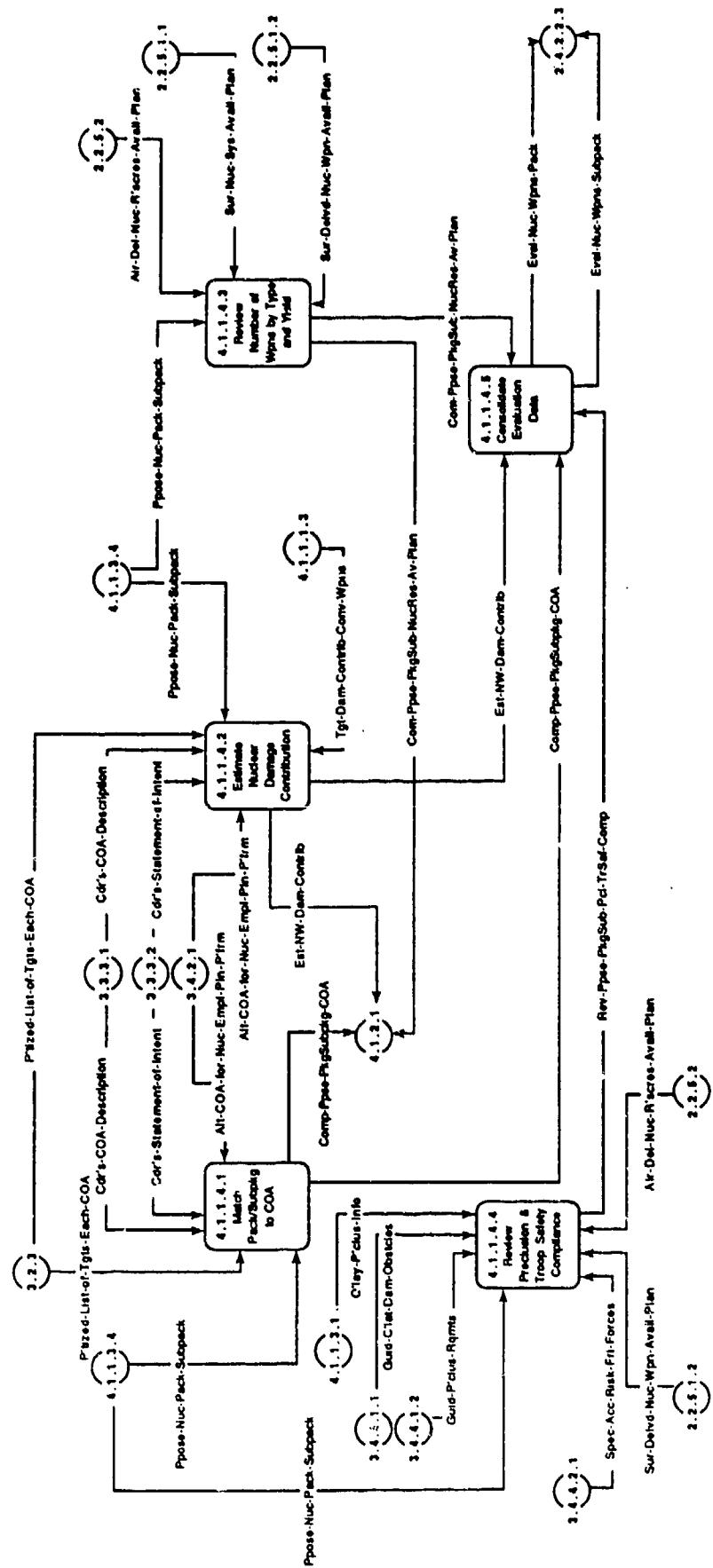


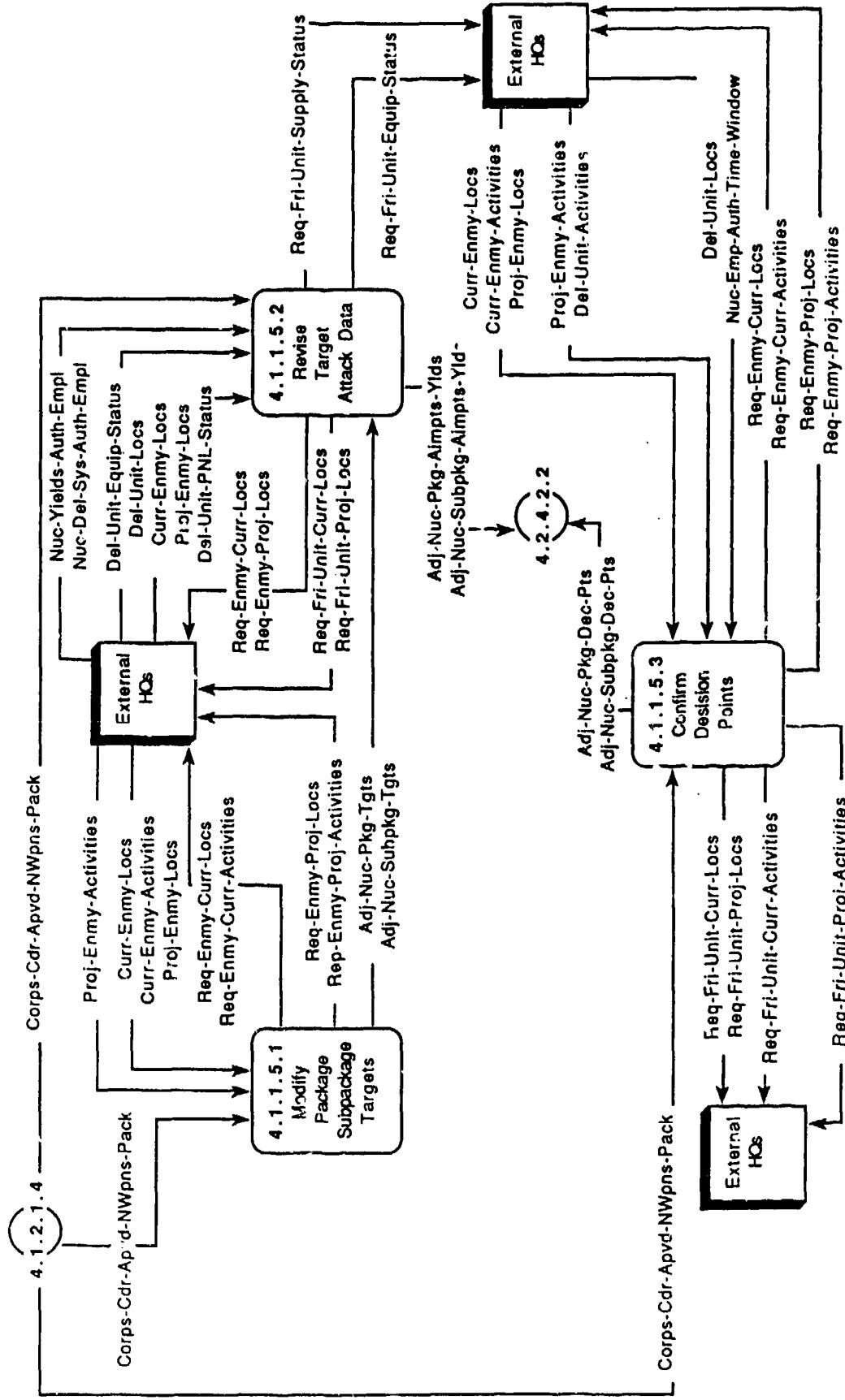


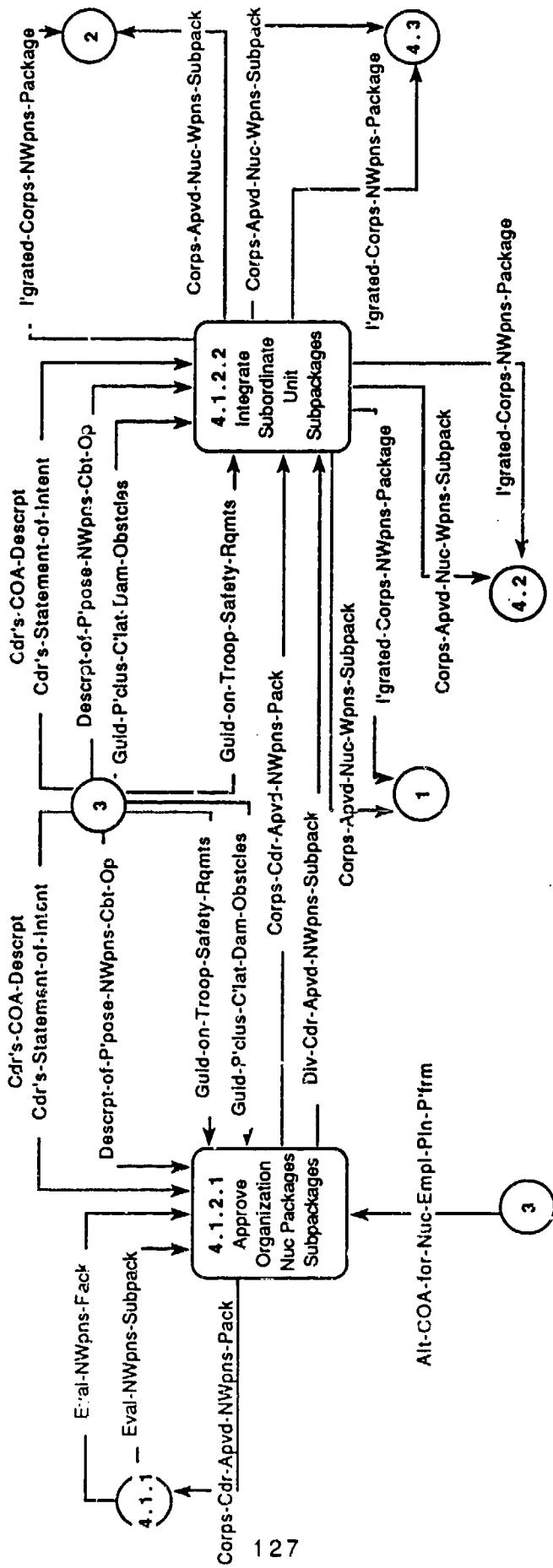


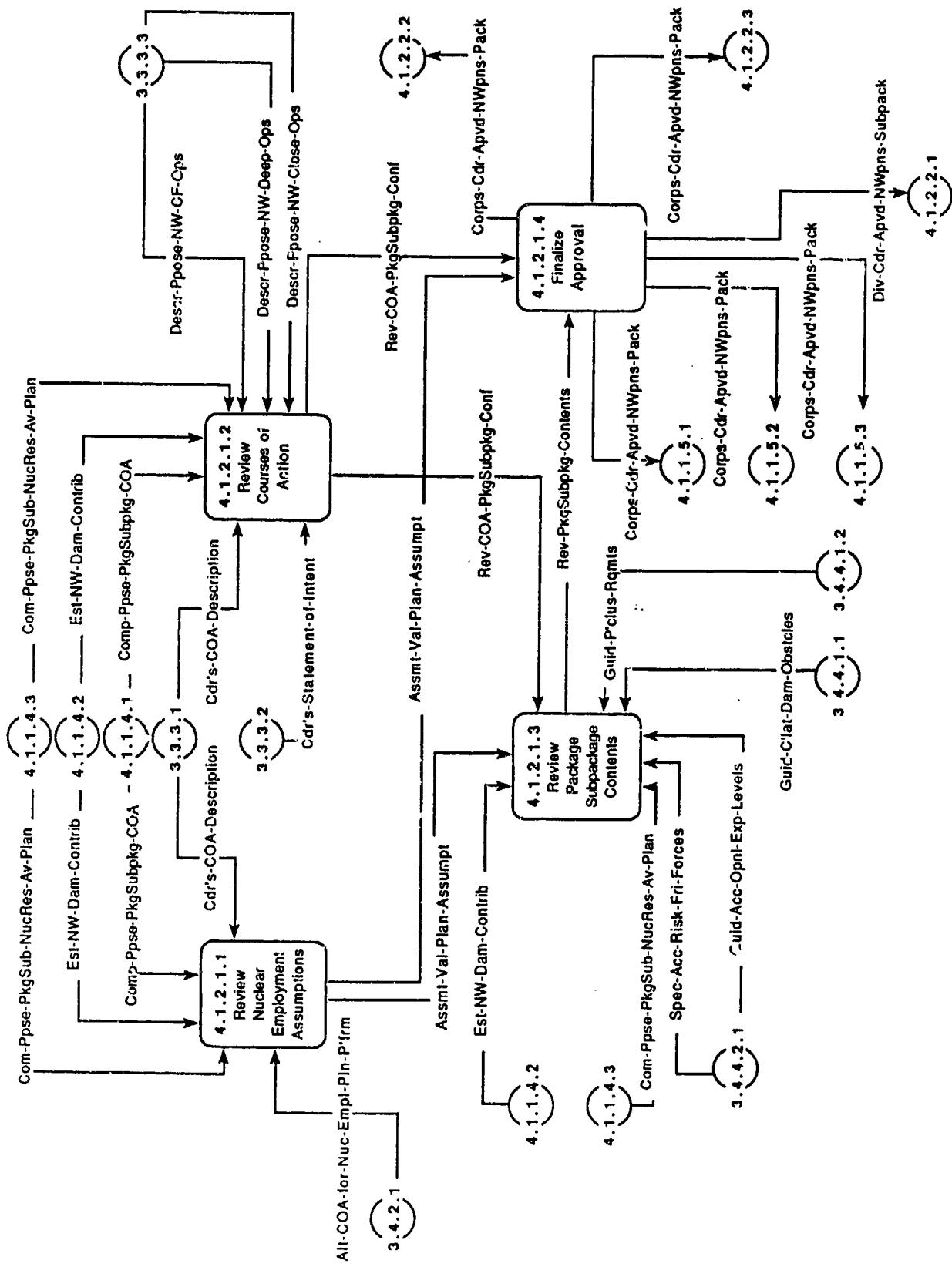


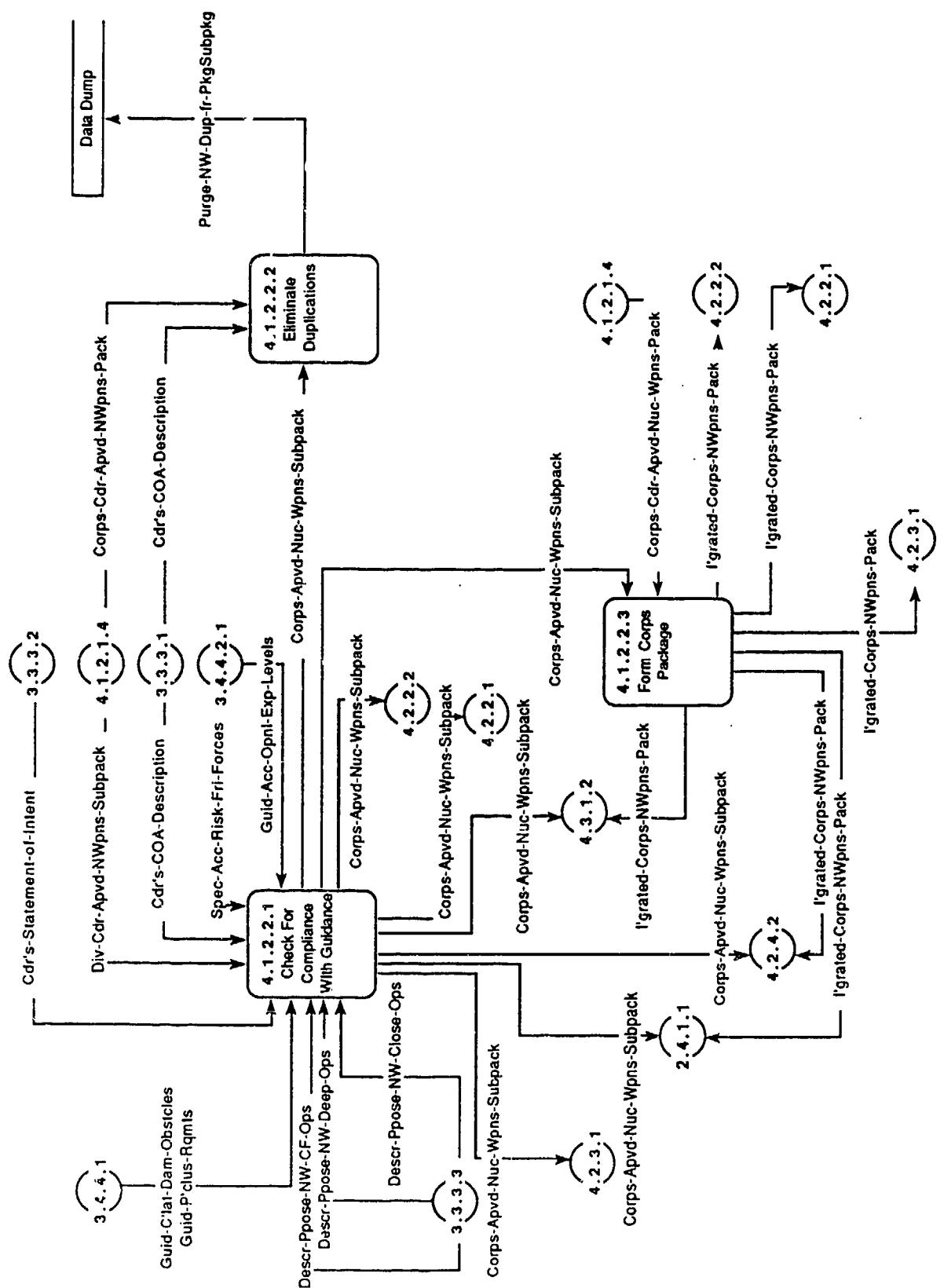


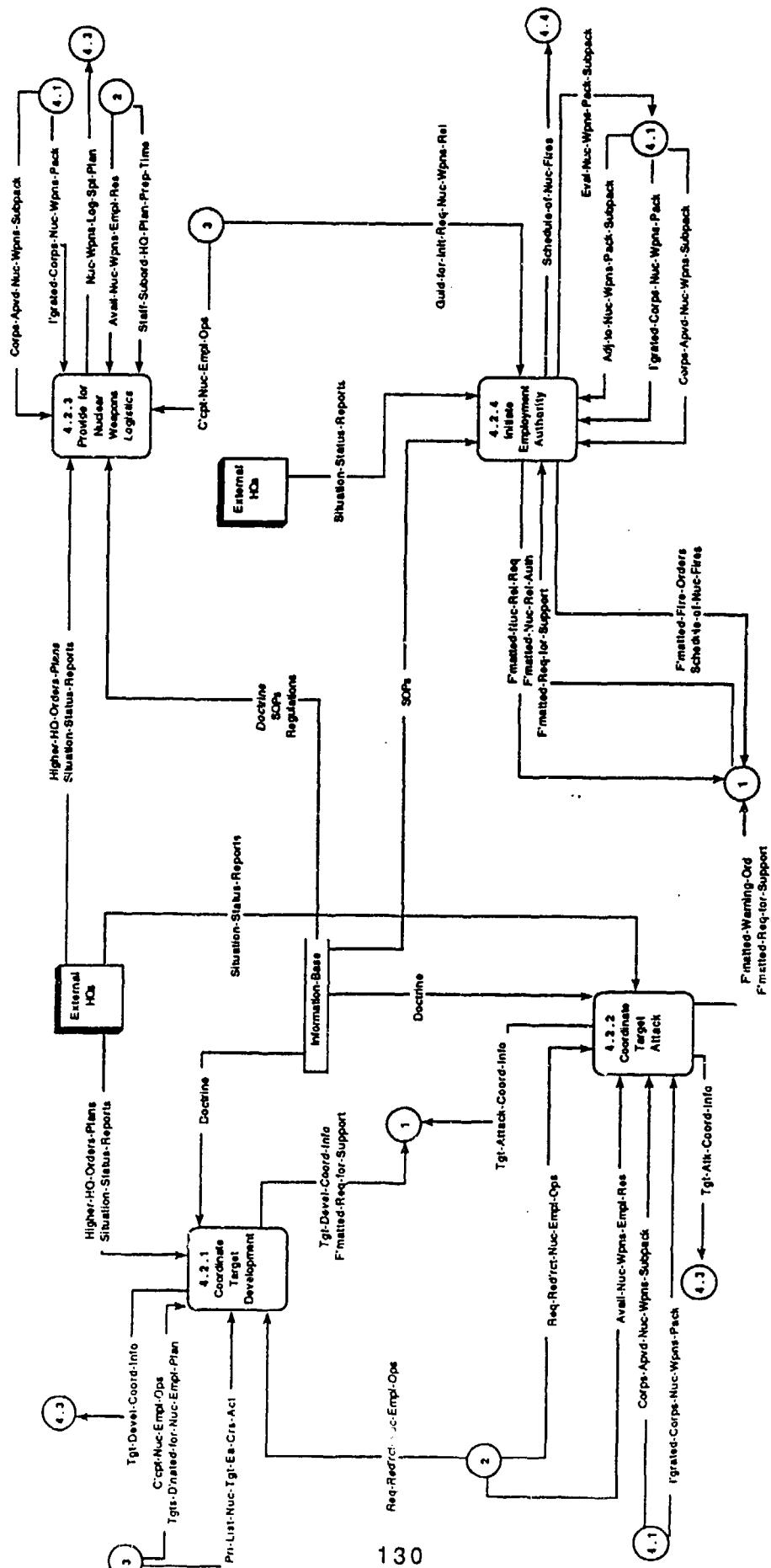


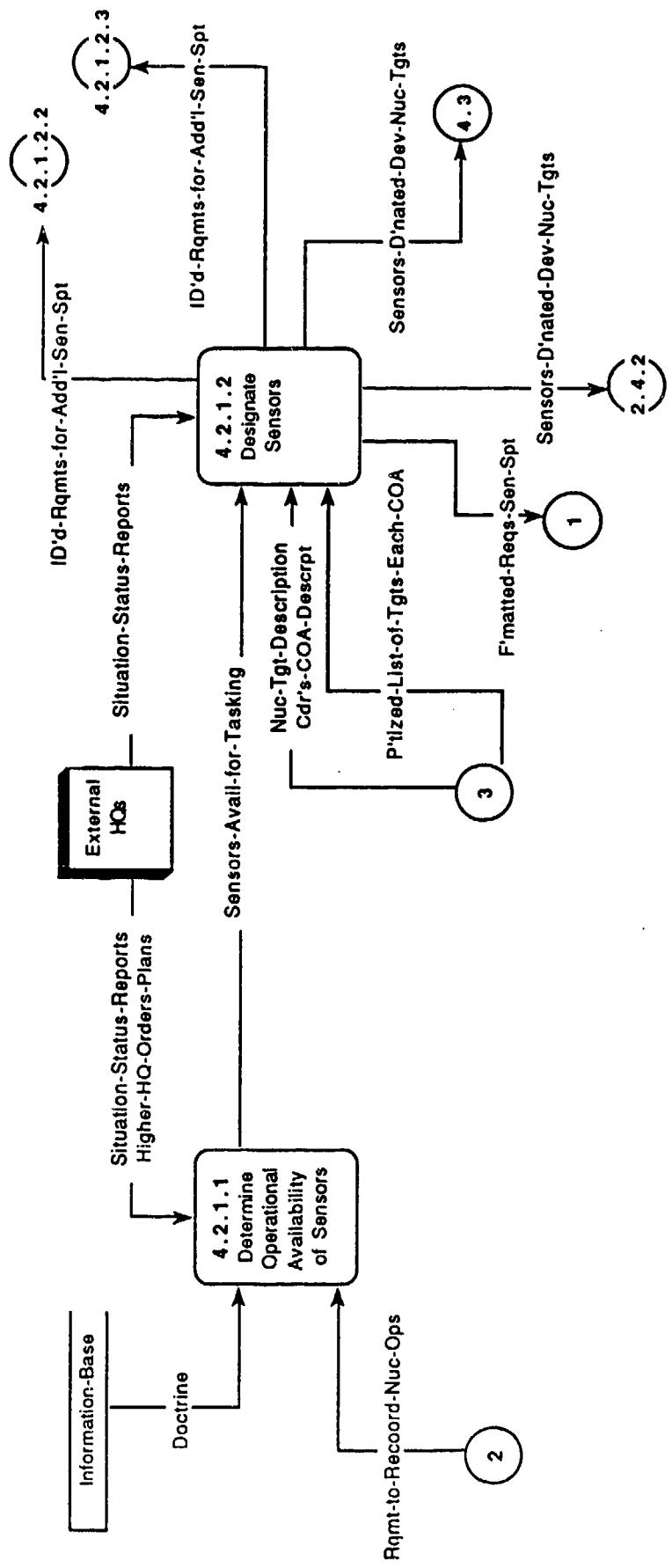


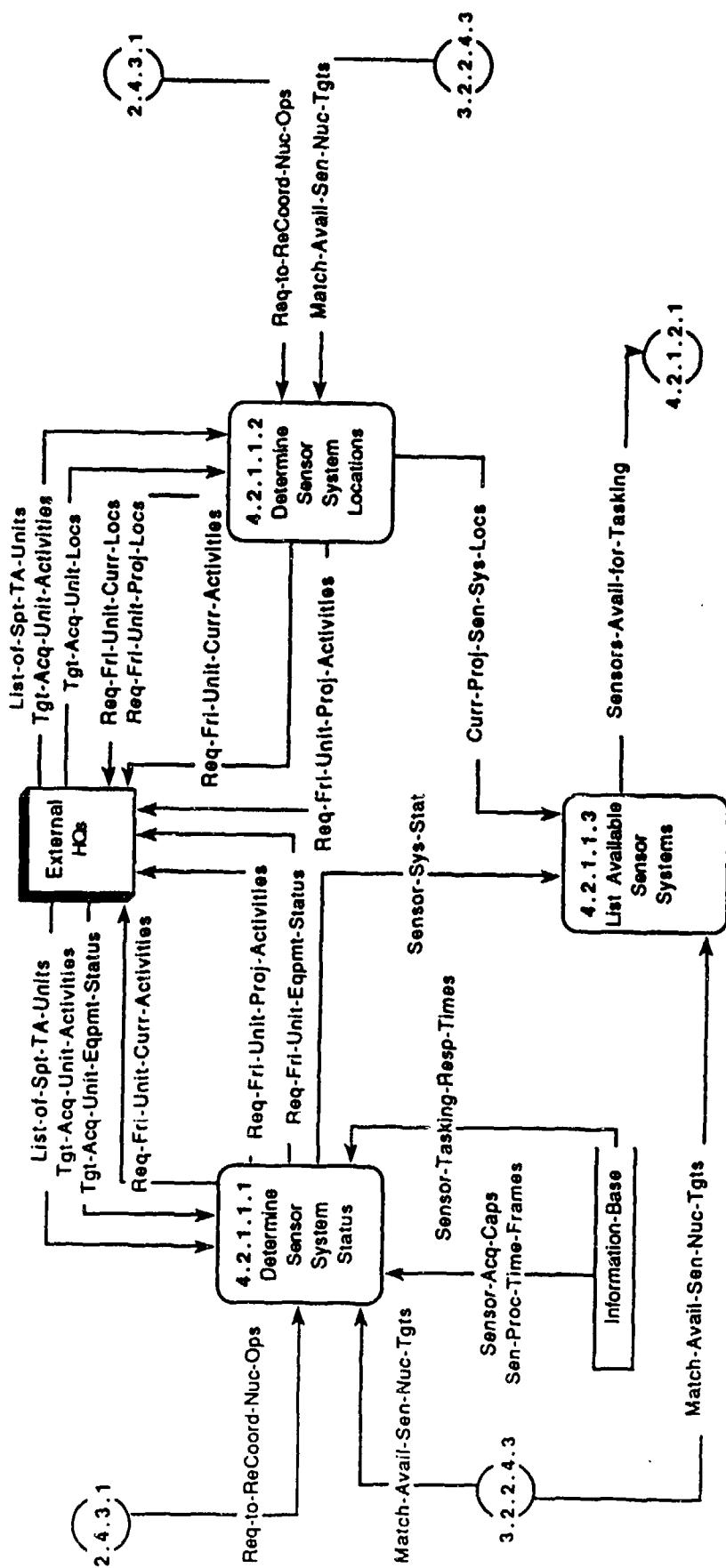


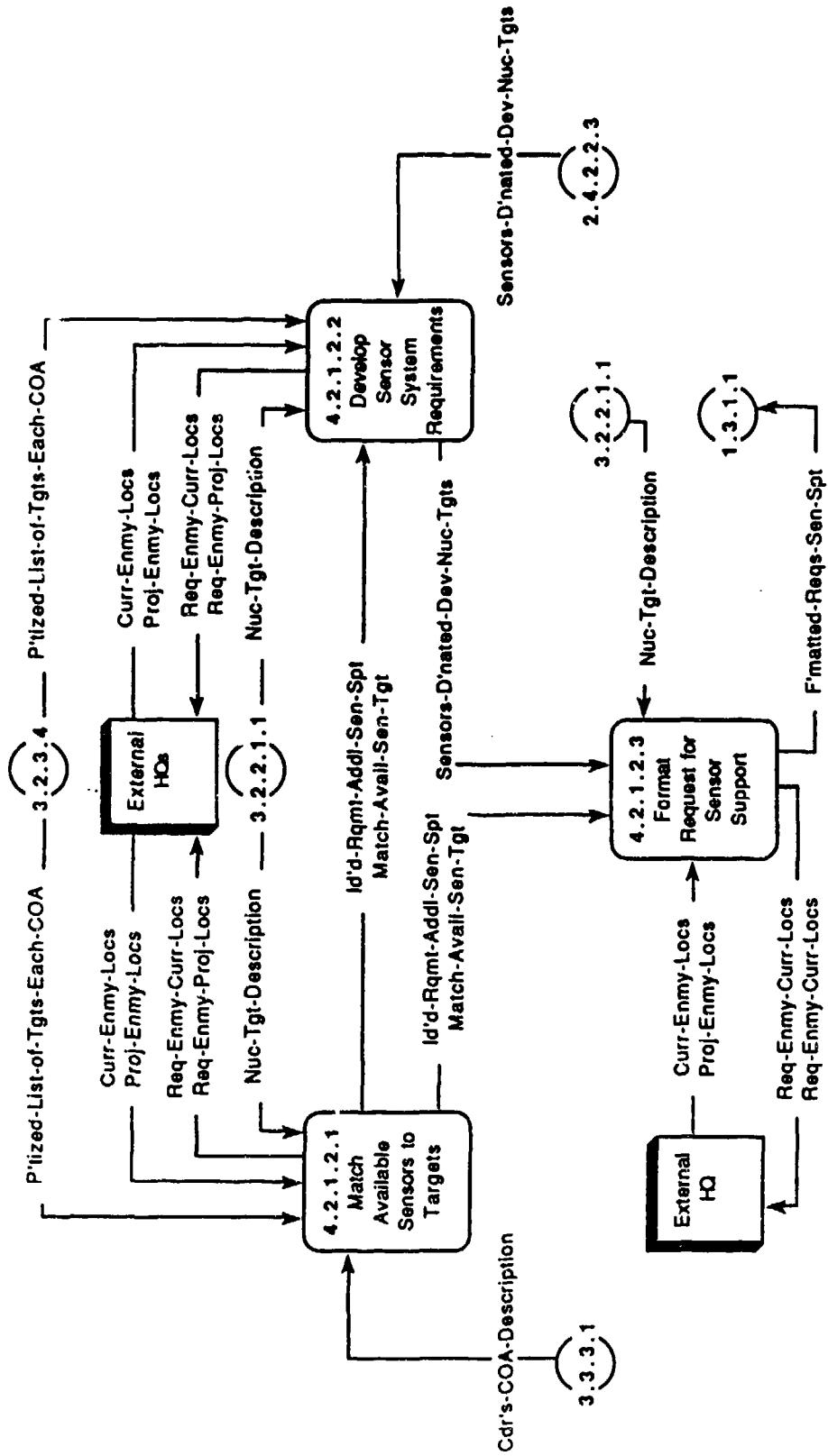




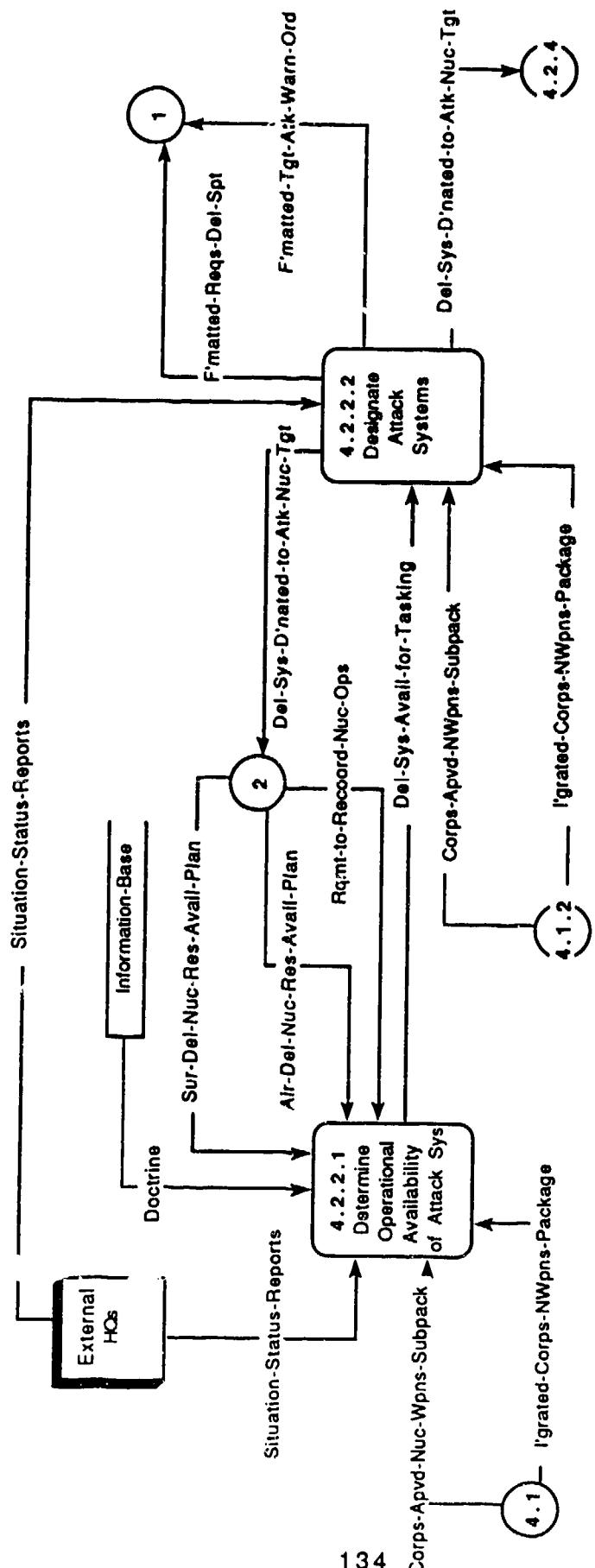


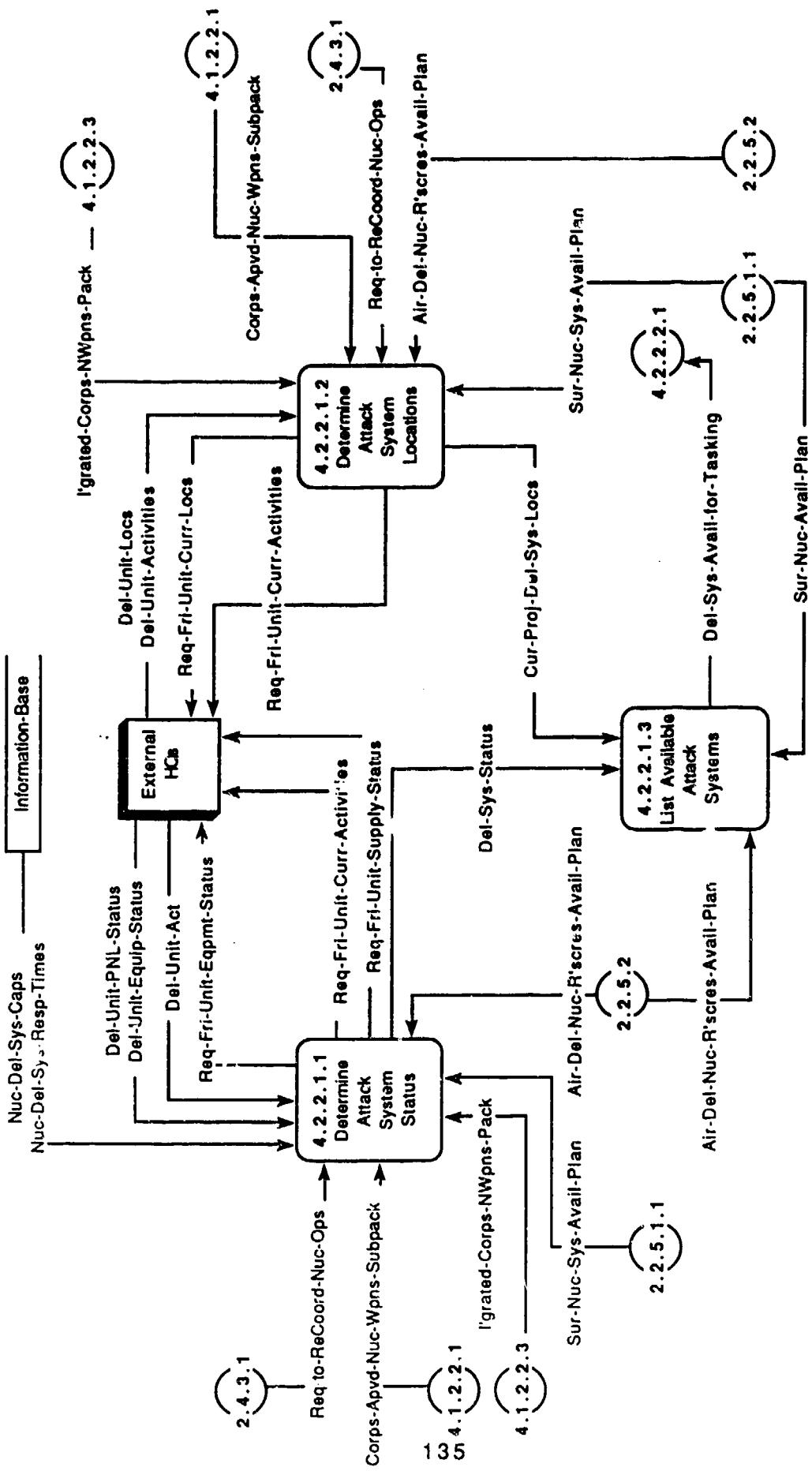




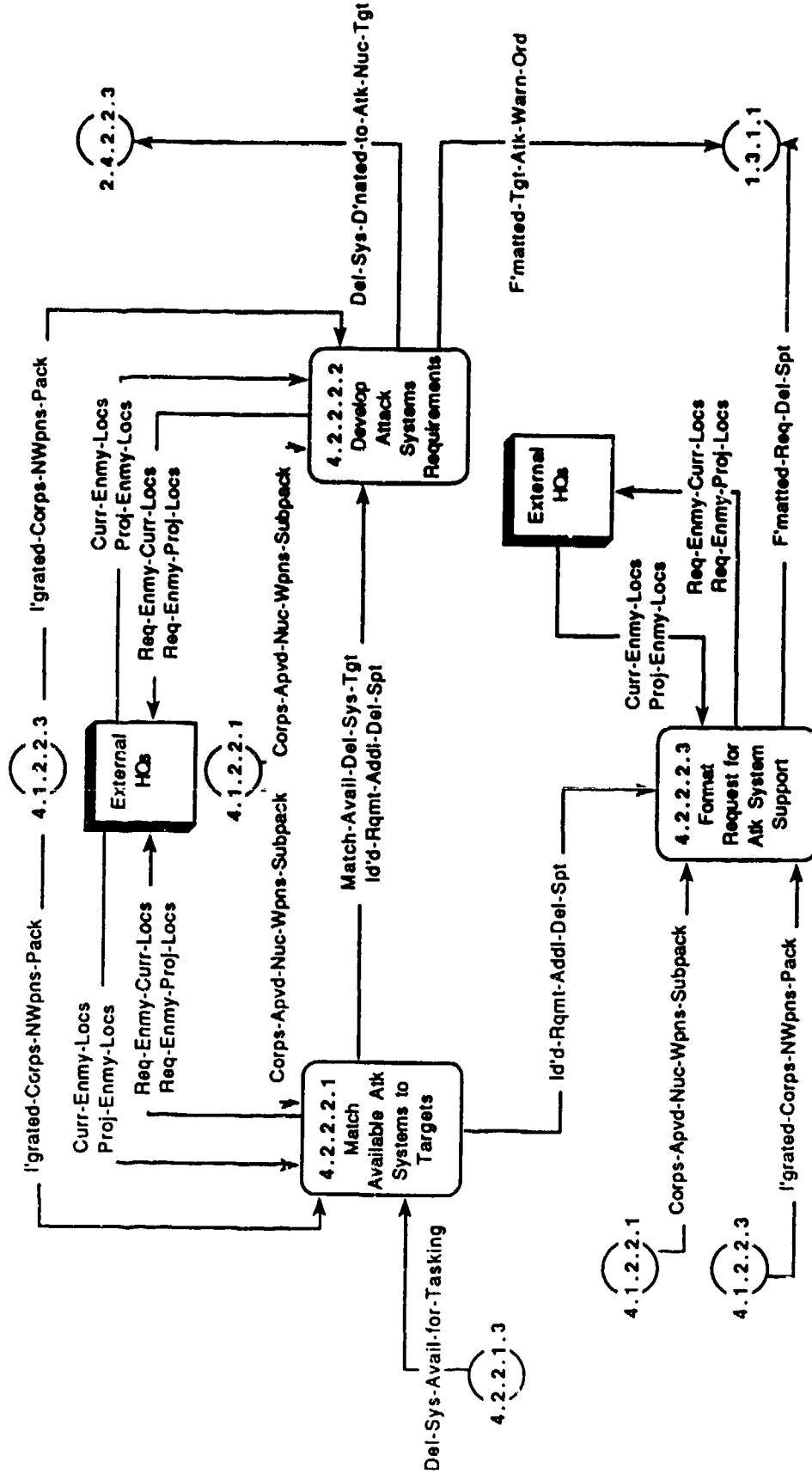


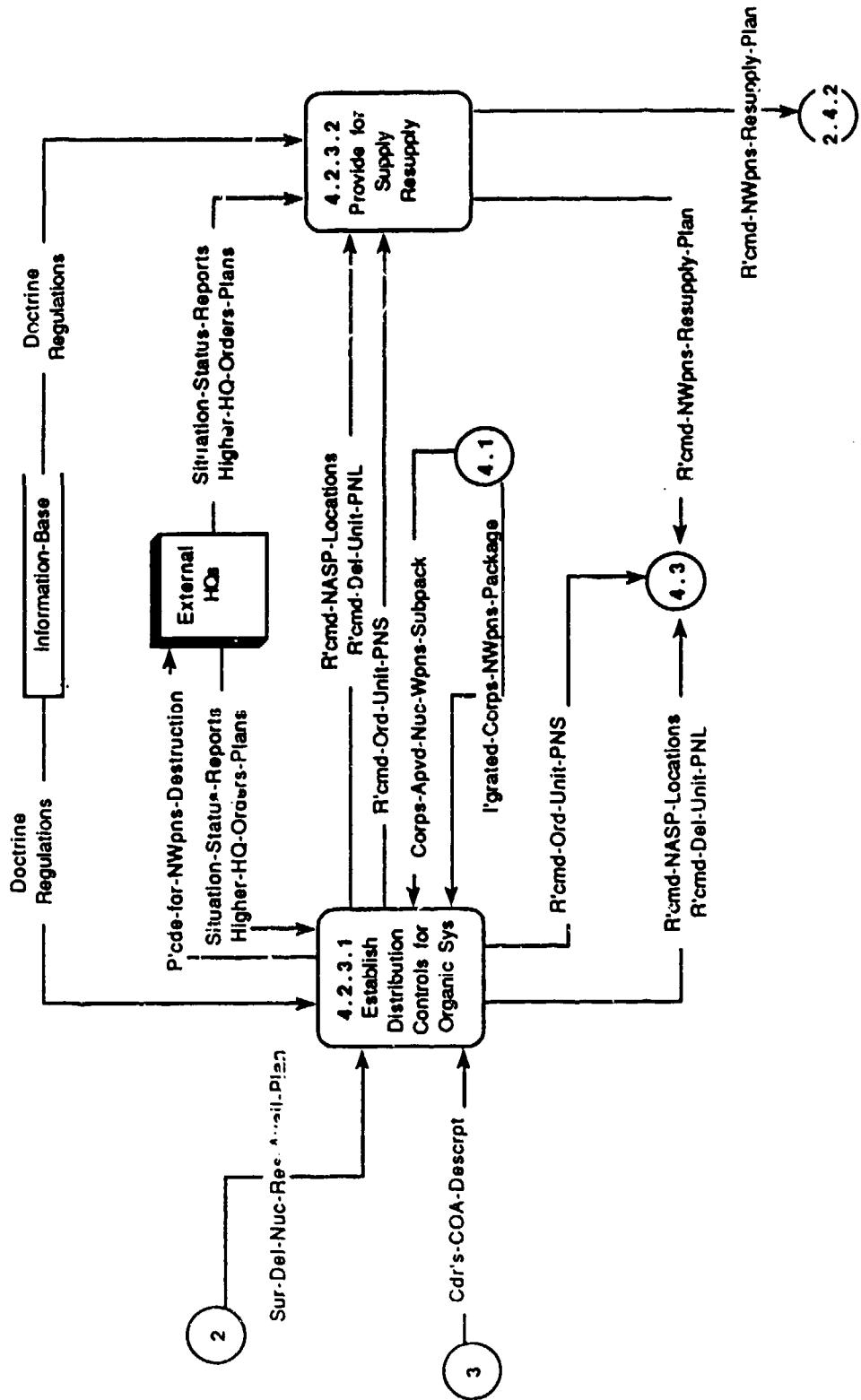
Designate Sensors #4.2.1.2

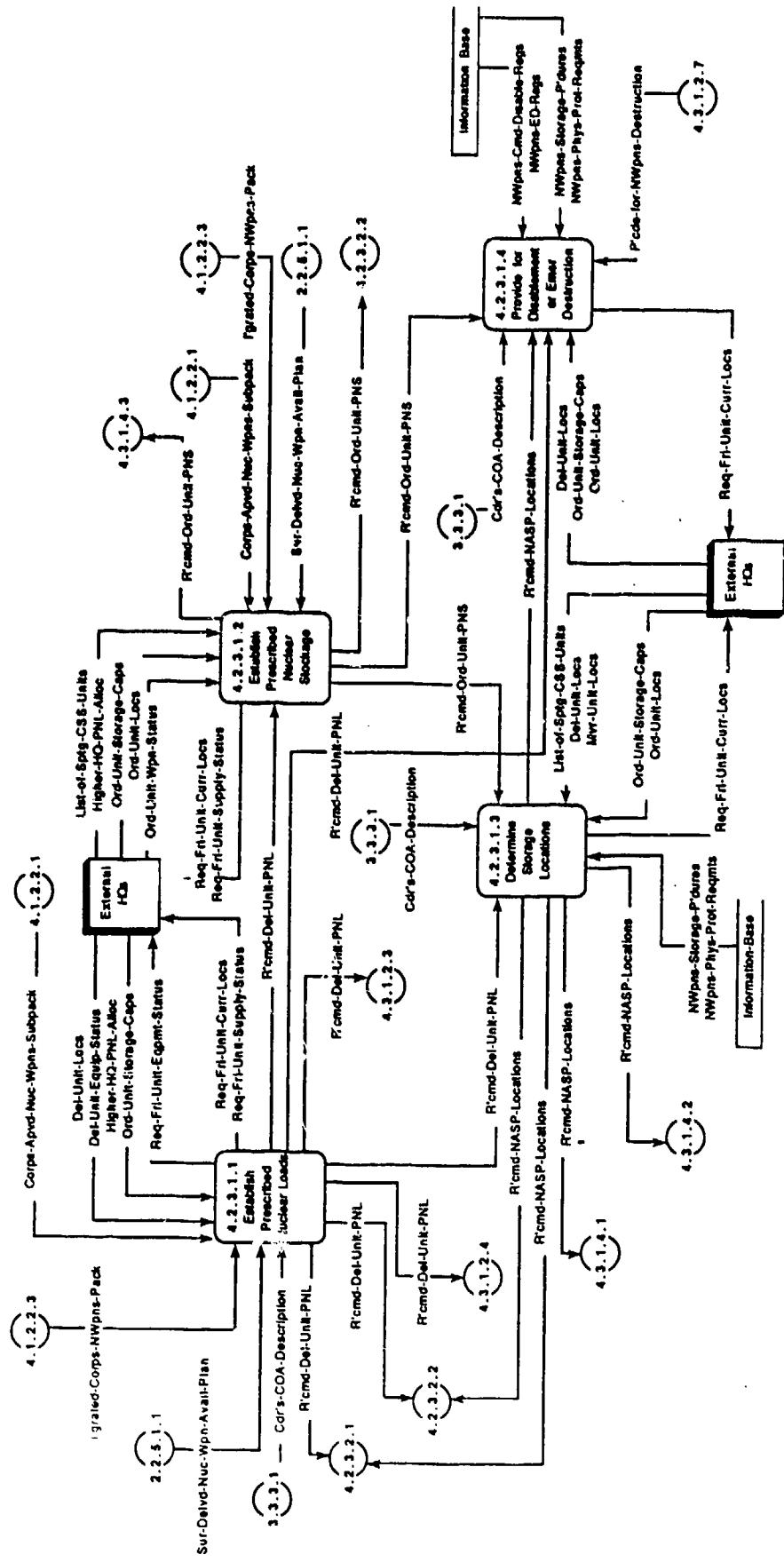


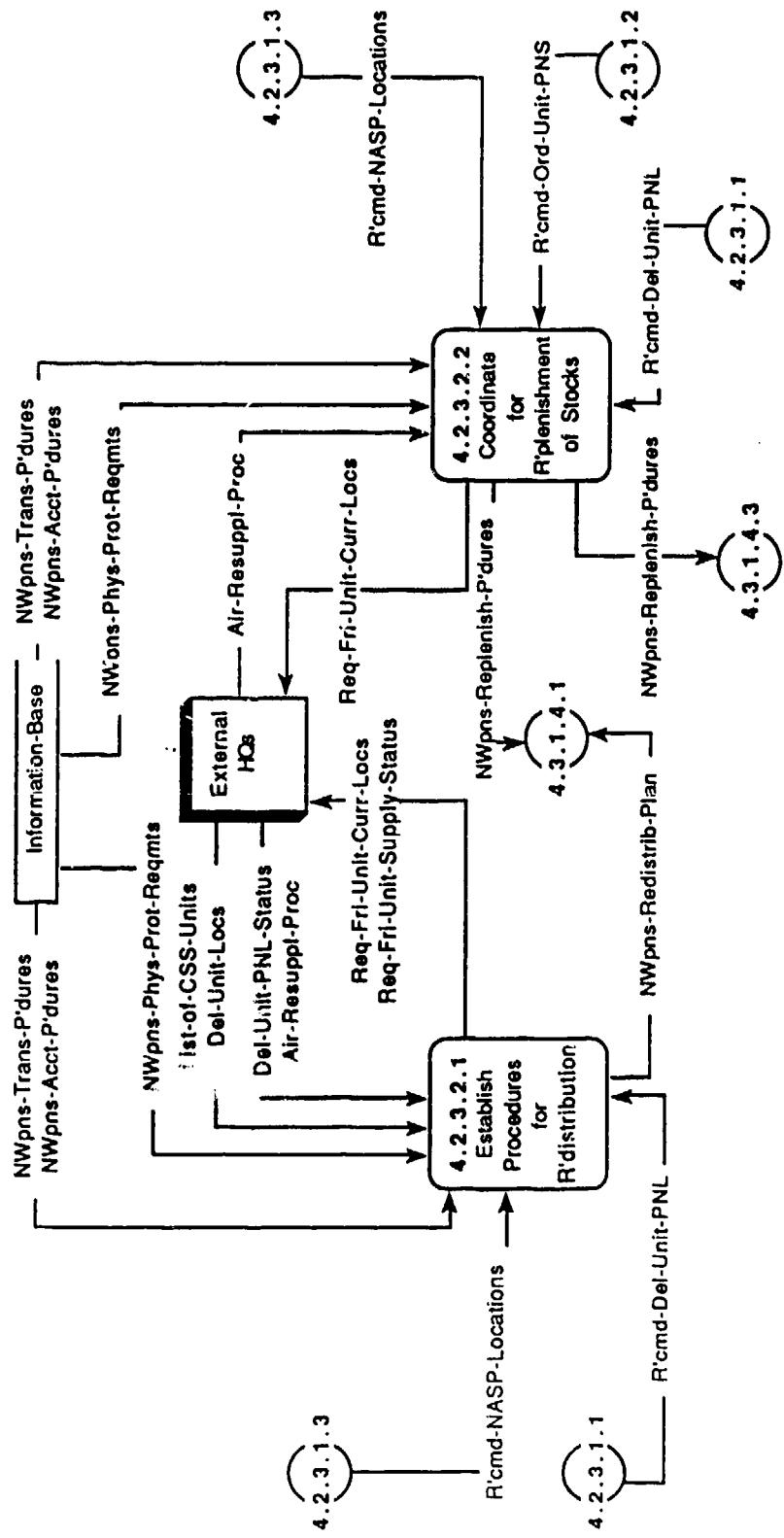


Determine Operational Availability of Attack Sys #4.2.2.1

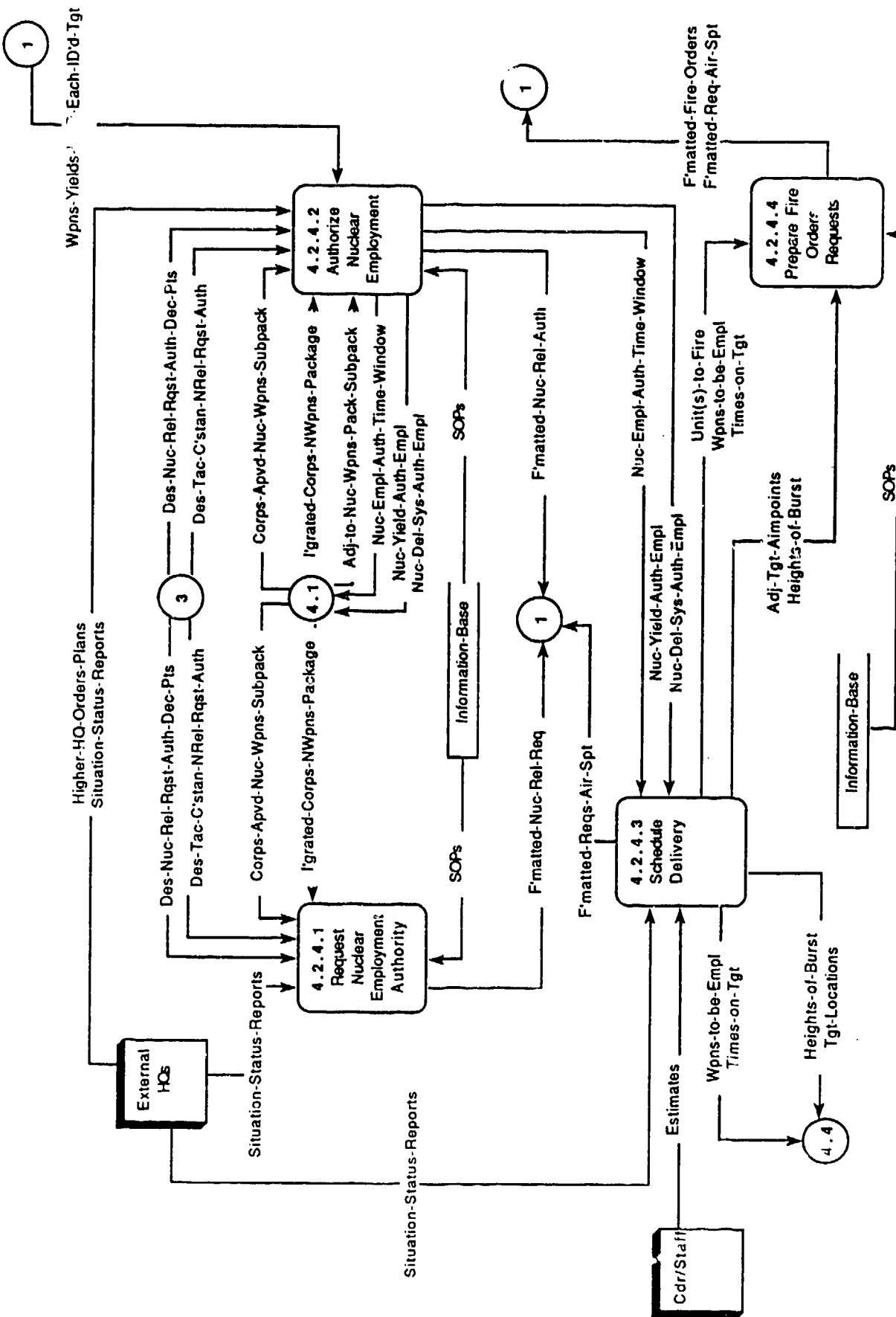


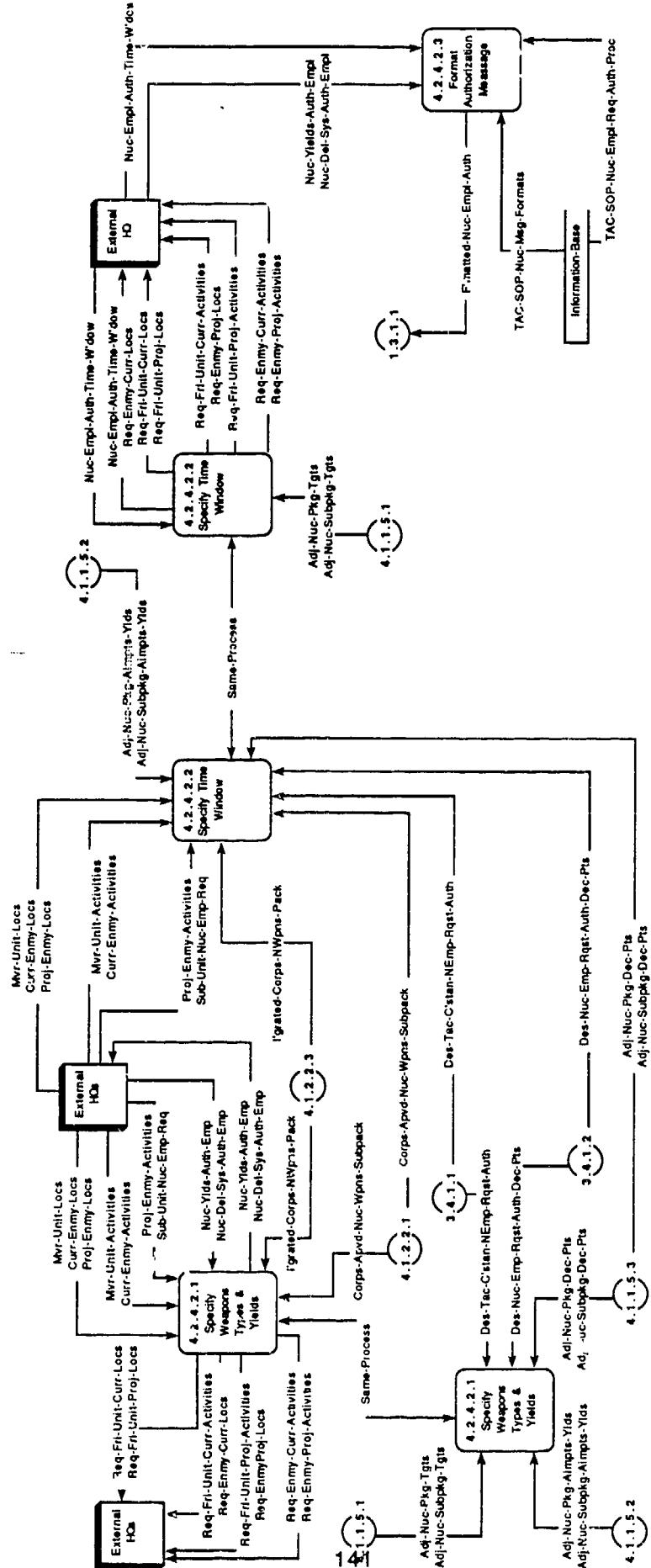


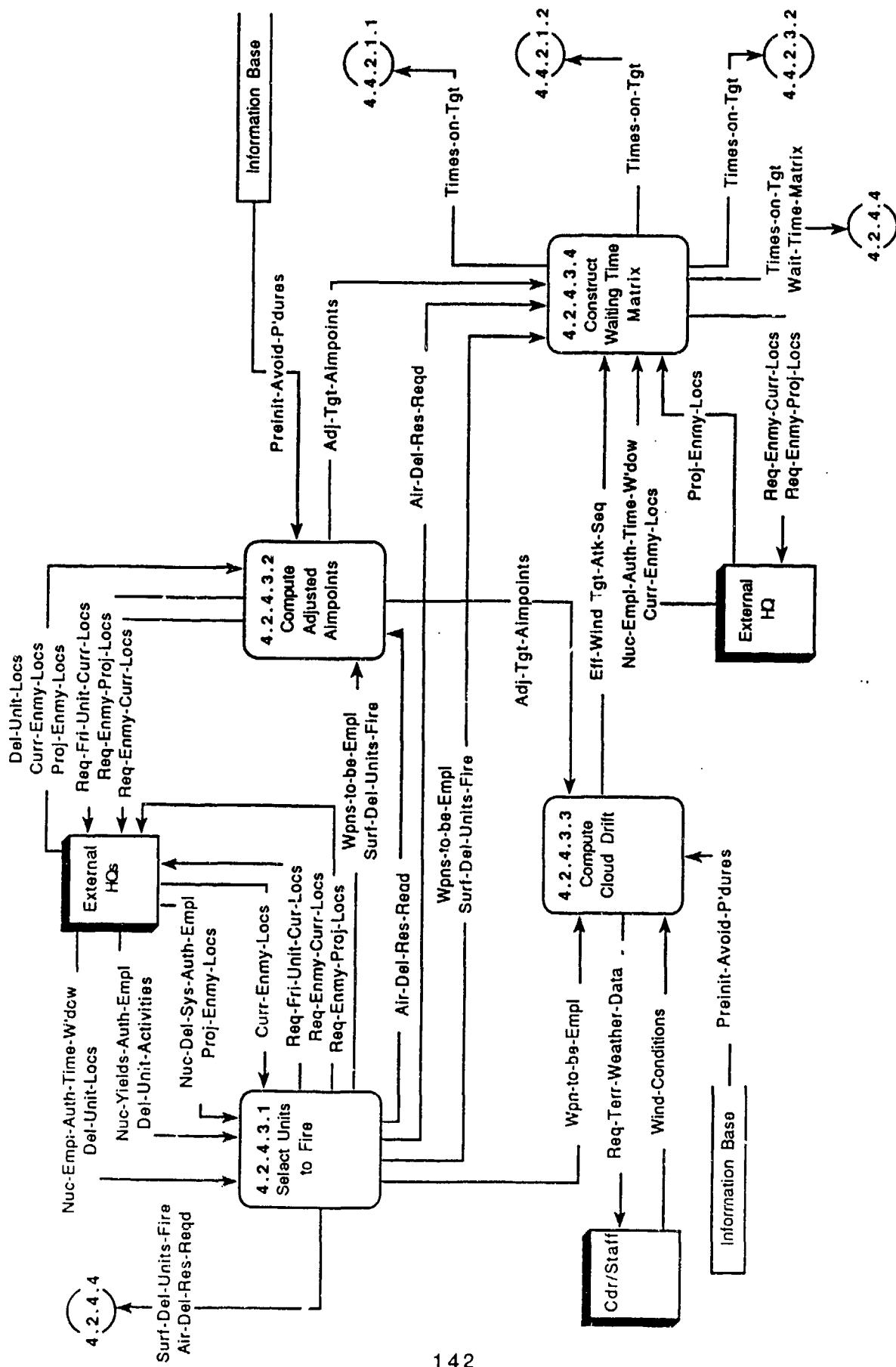


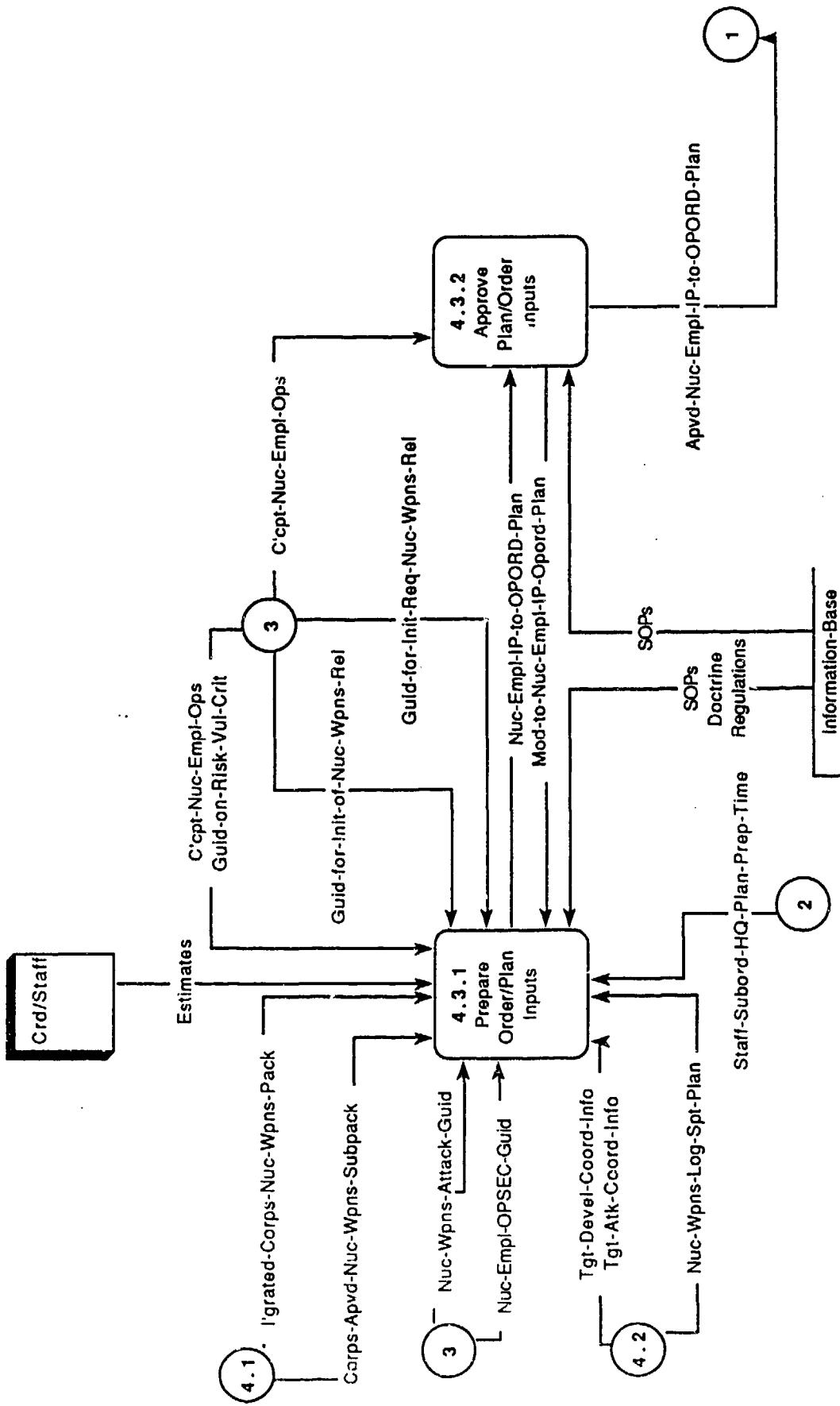


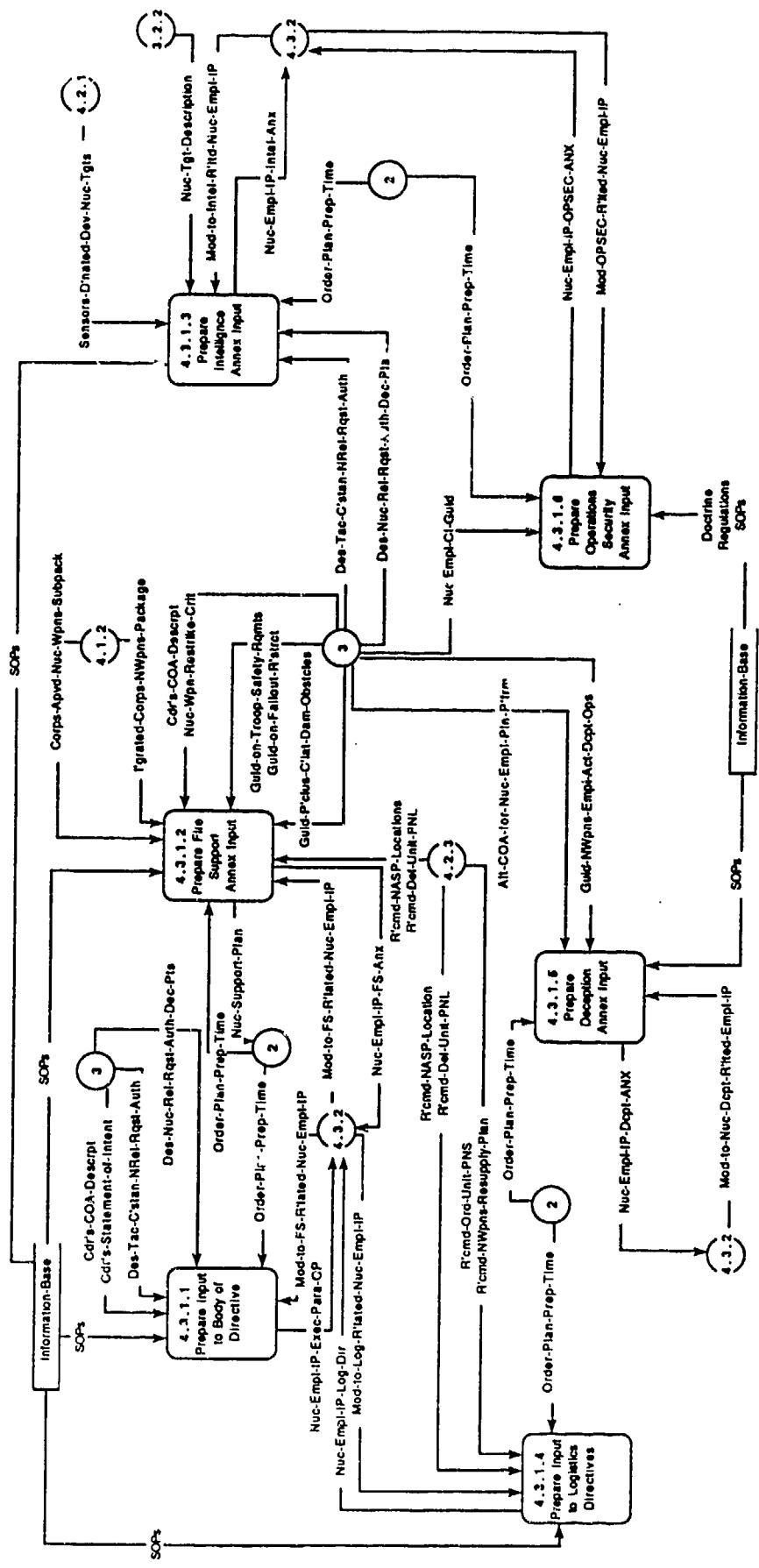
Provide for Supply Resupply #4.2.3.2

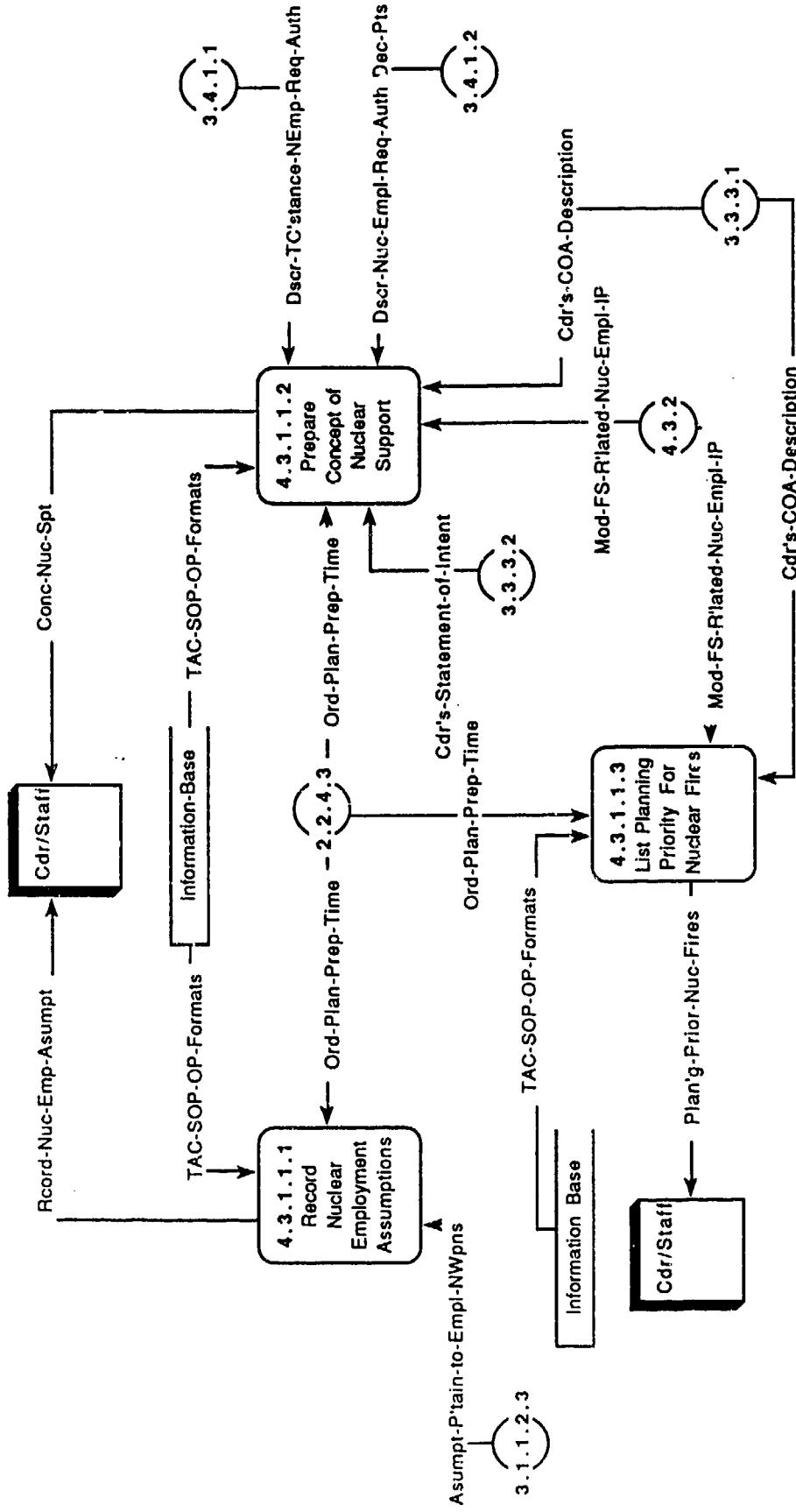


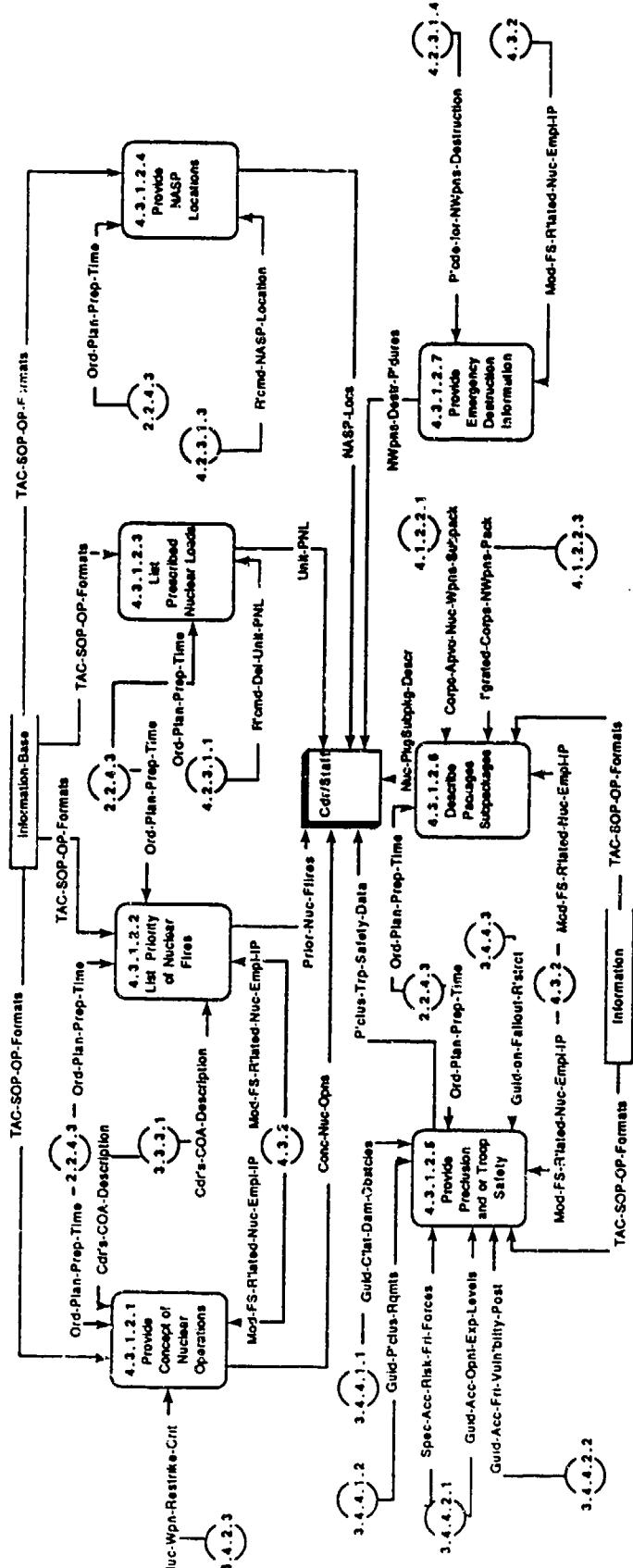


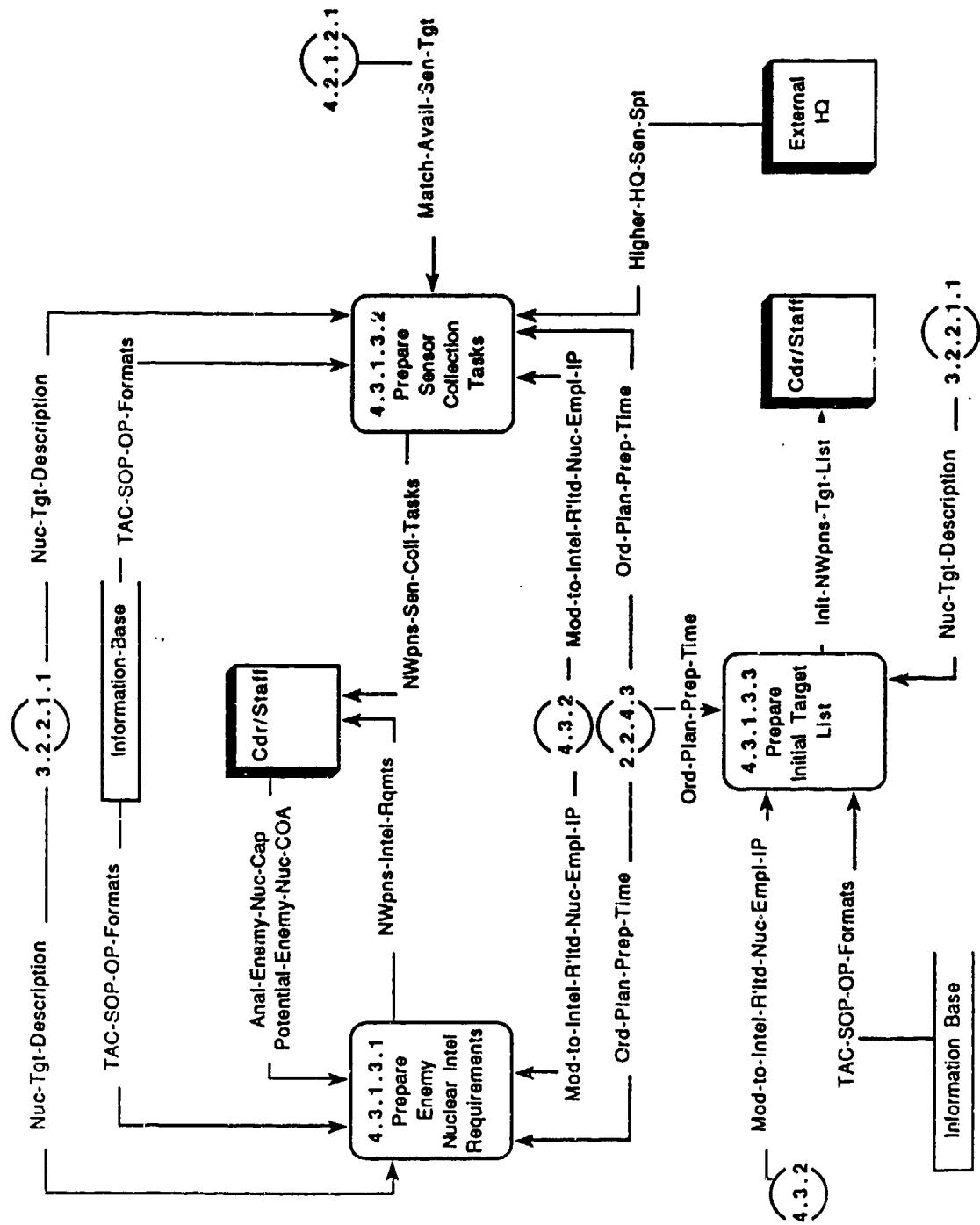




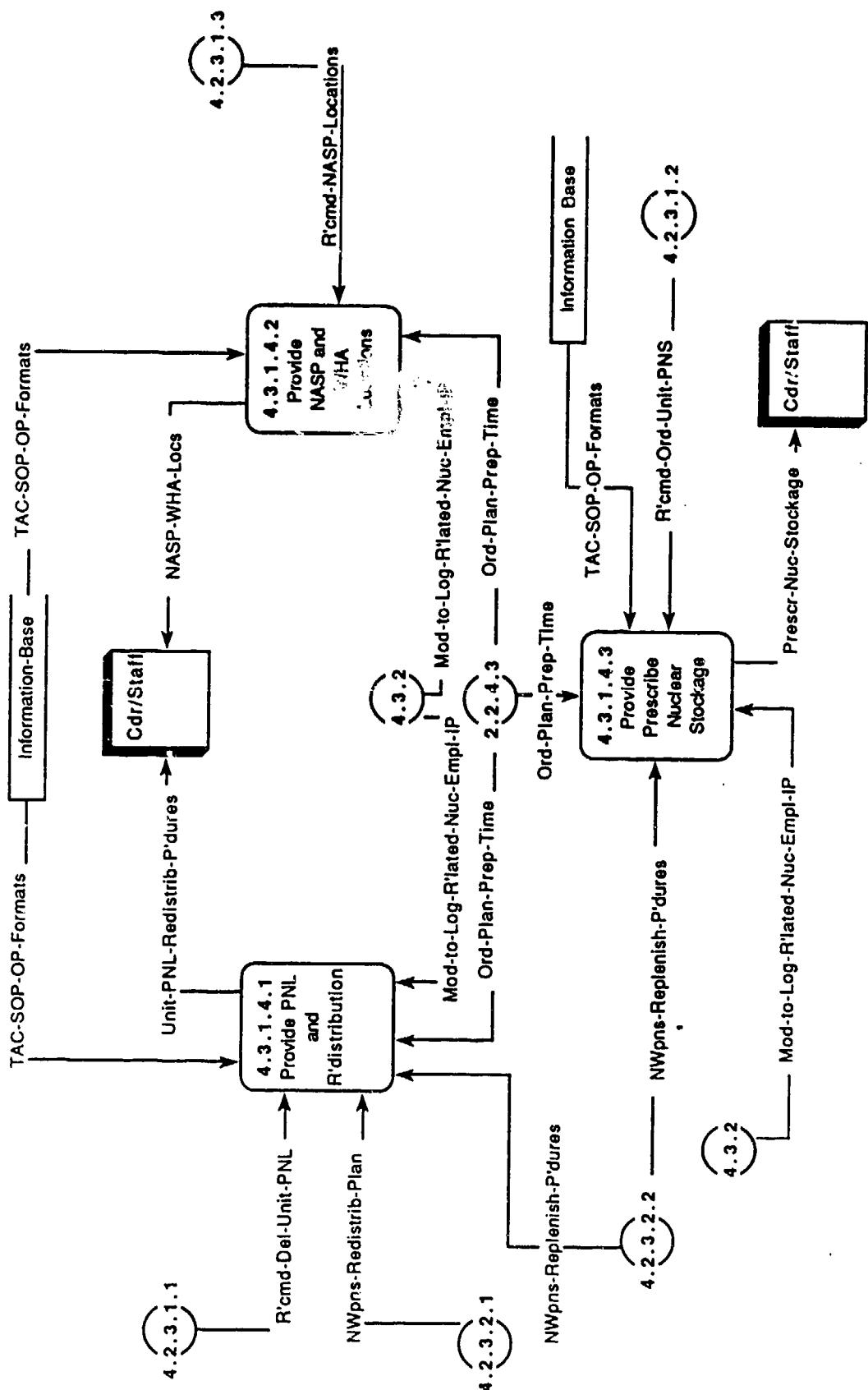


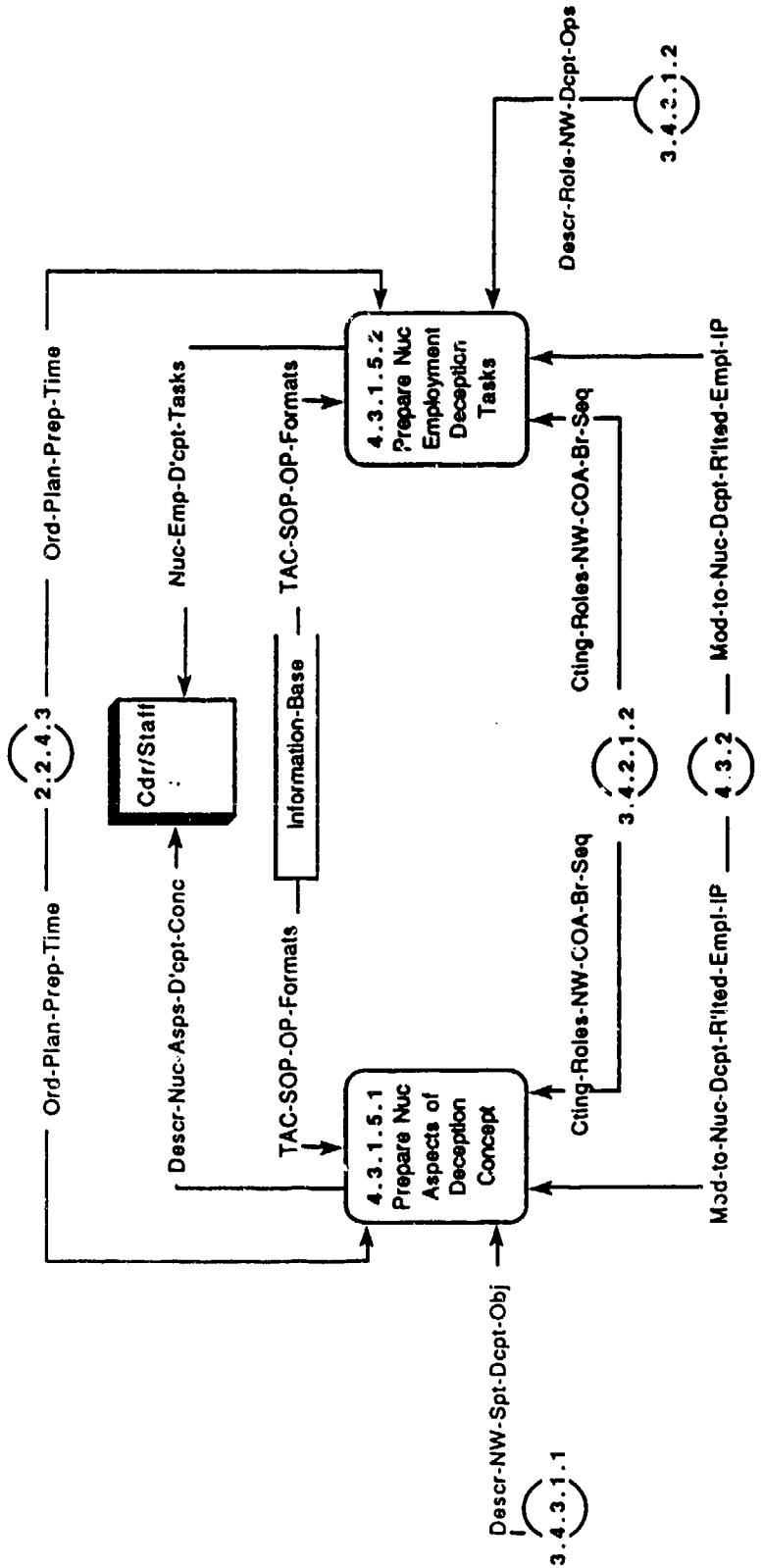


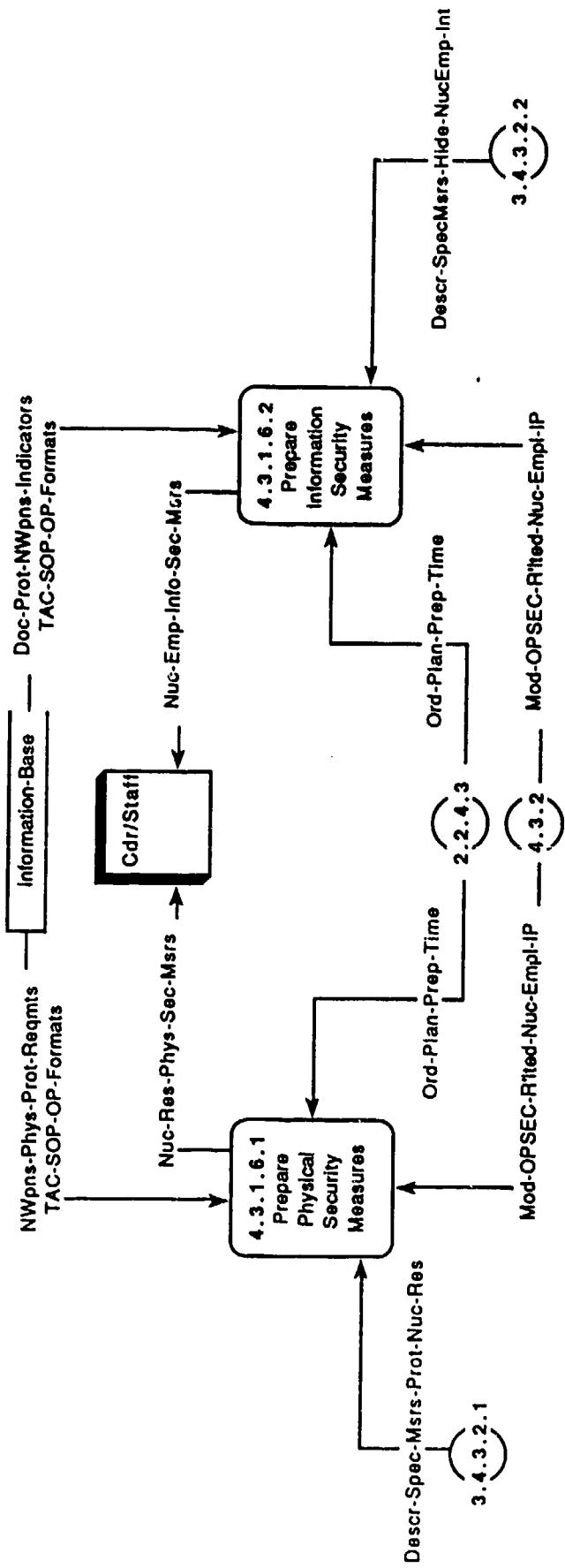


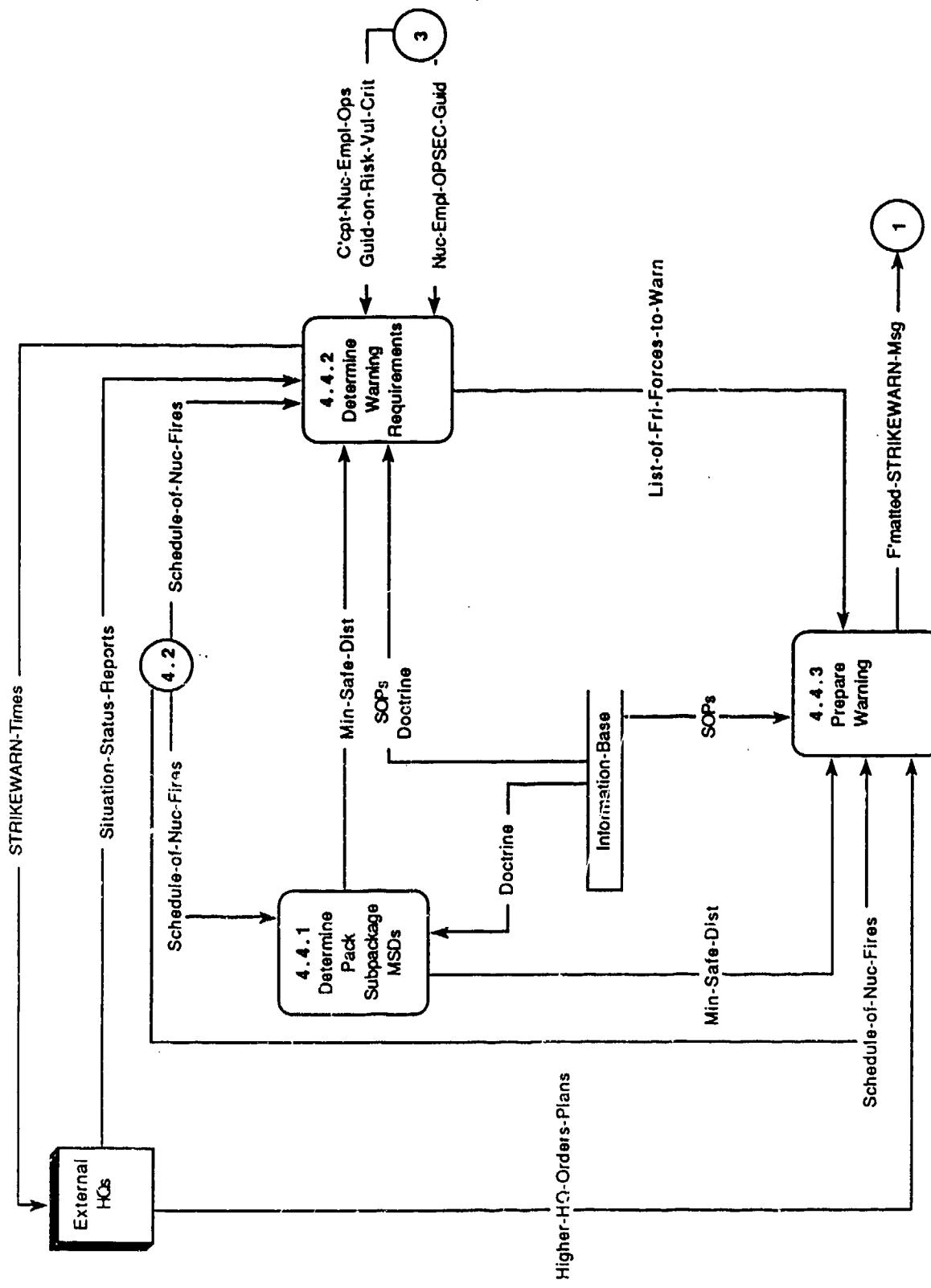


Prepare Intelligence Annex Input #4.3.1.3

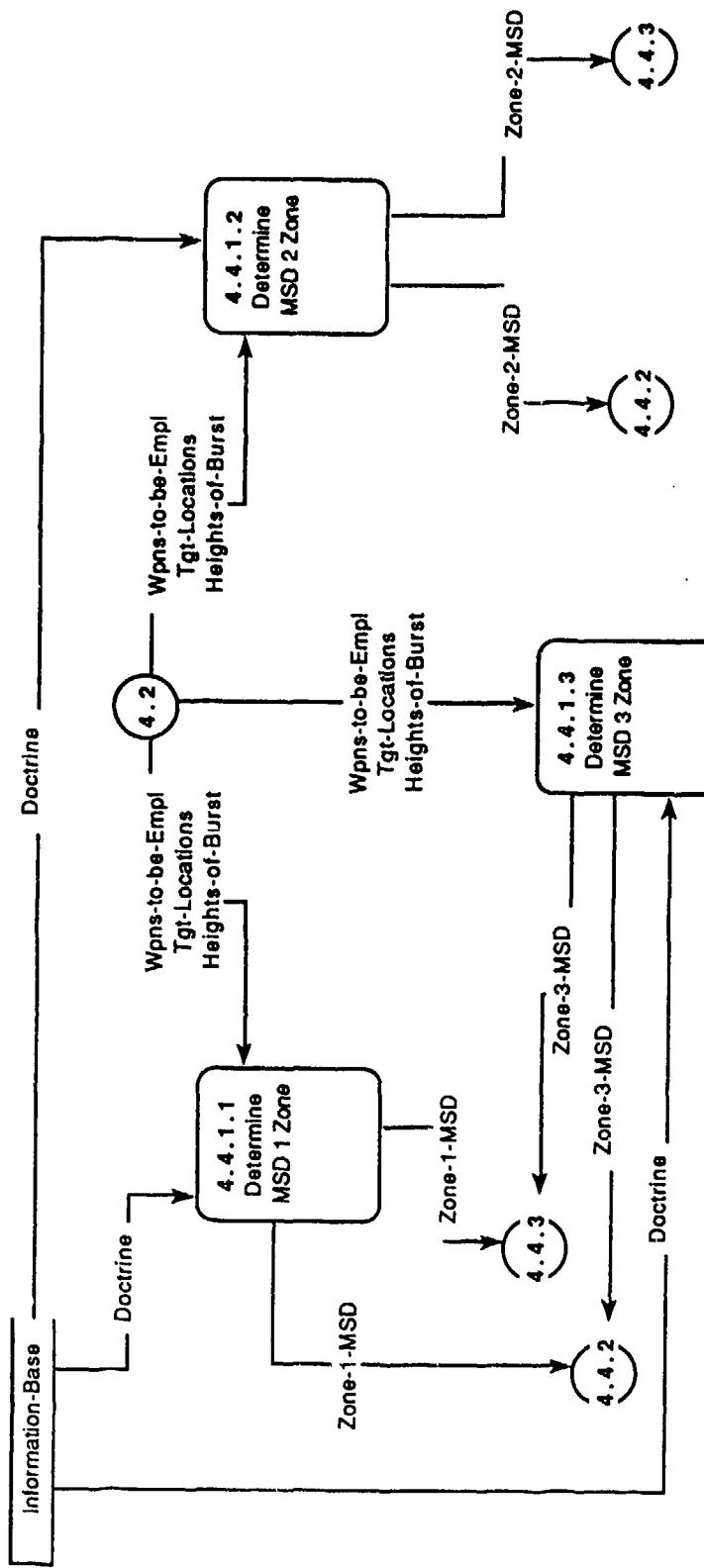




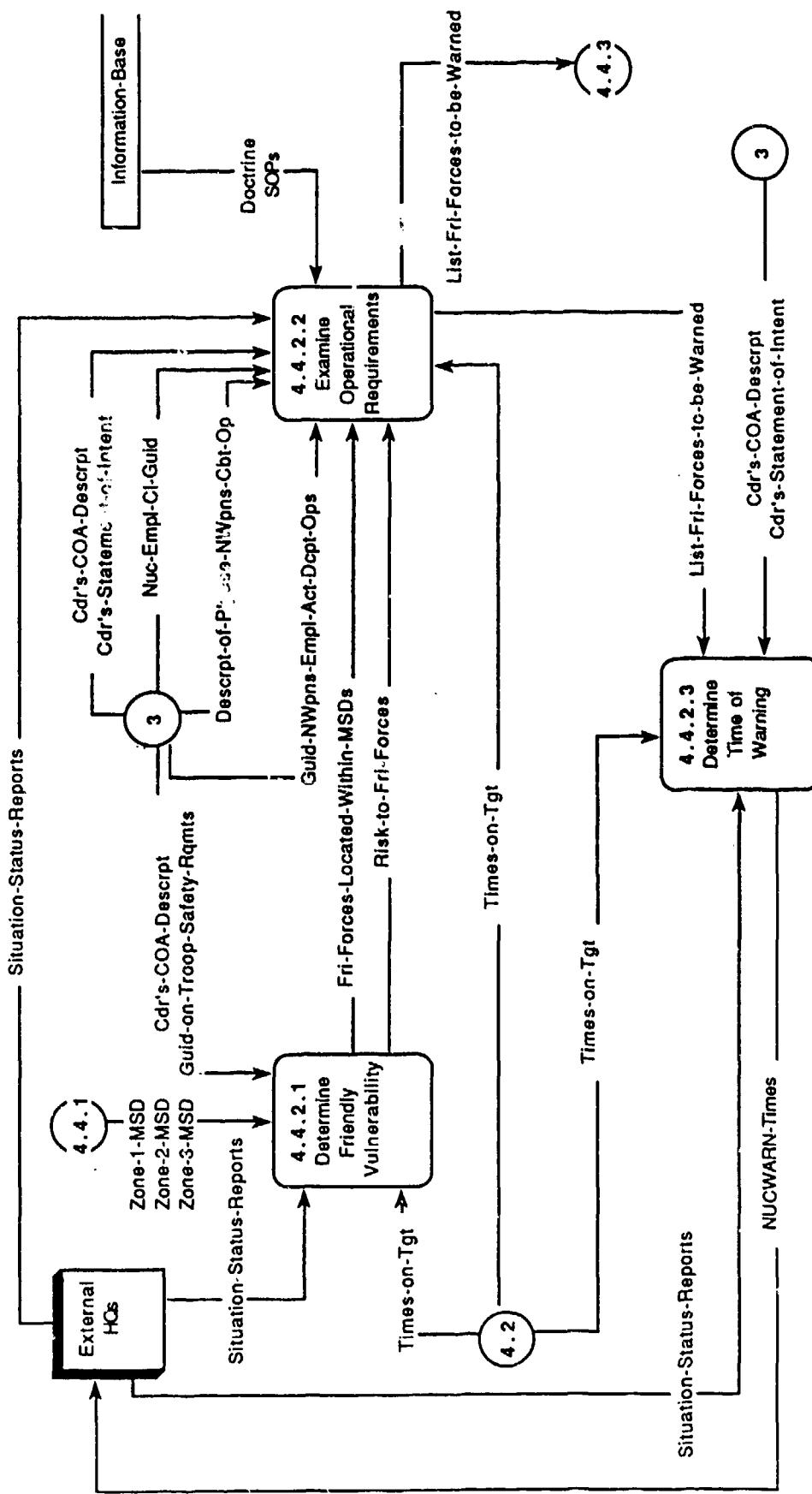




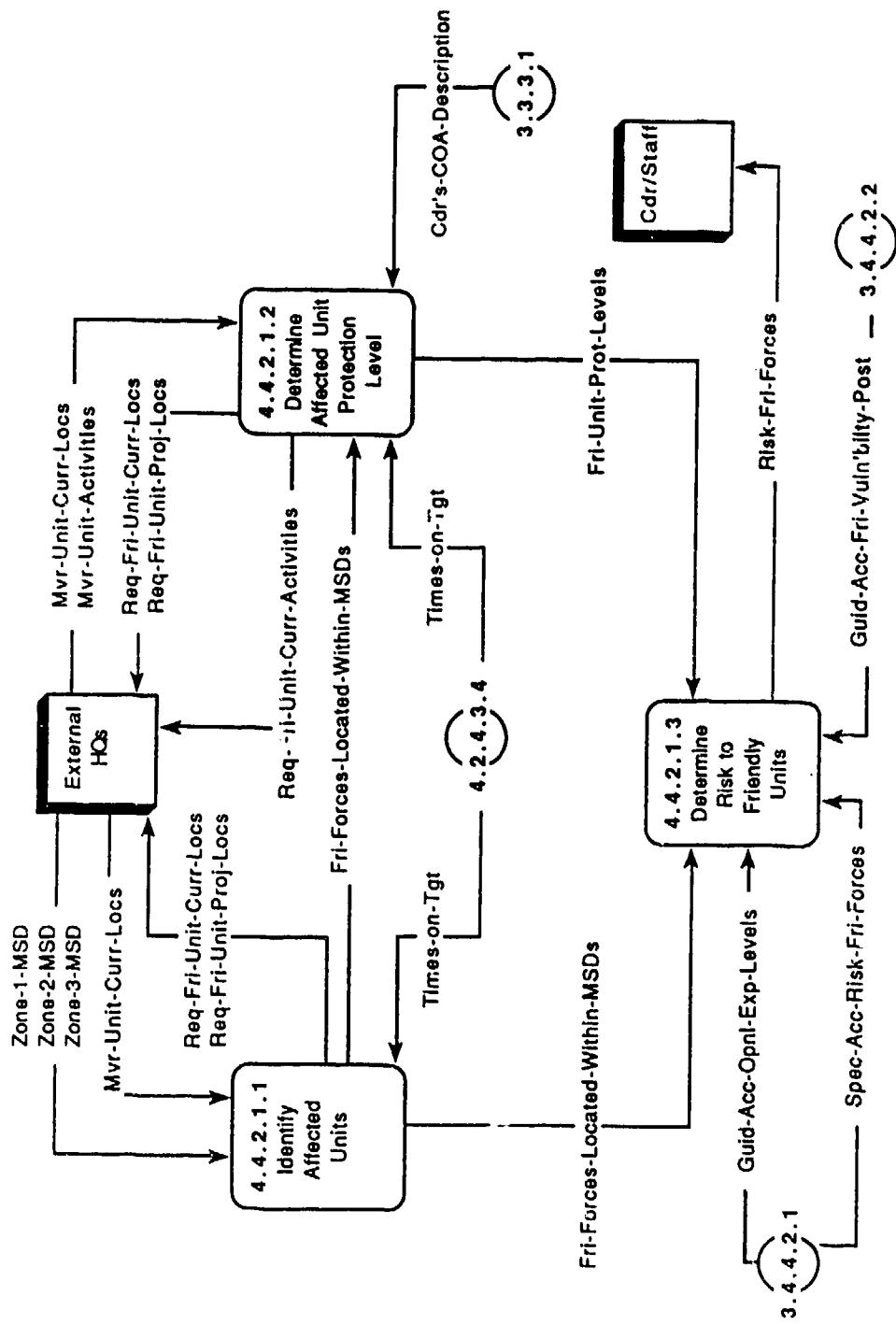
Develop Nuclear Strike Warning #4.4



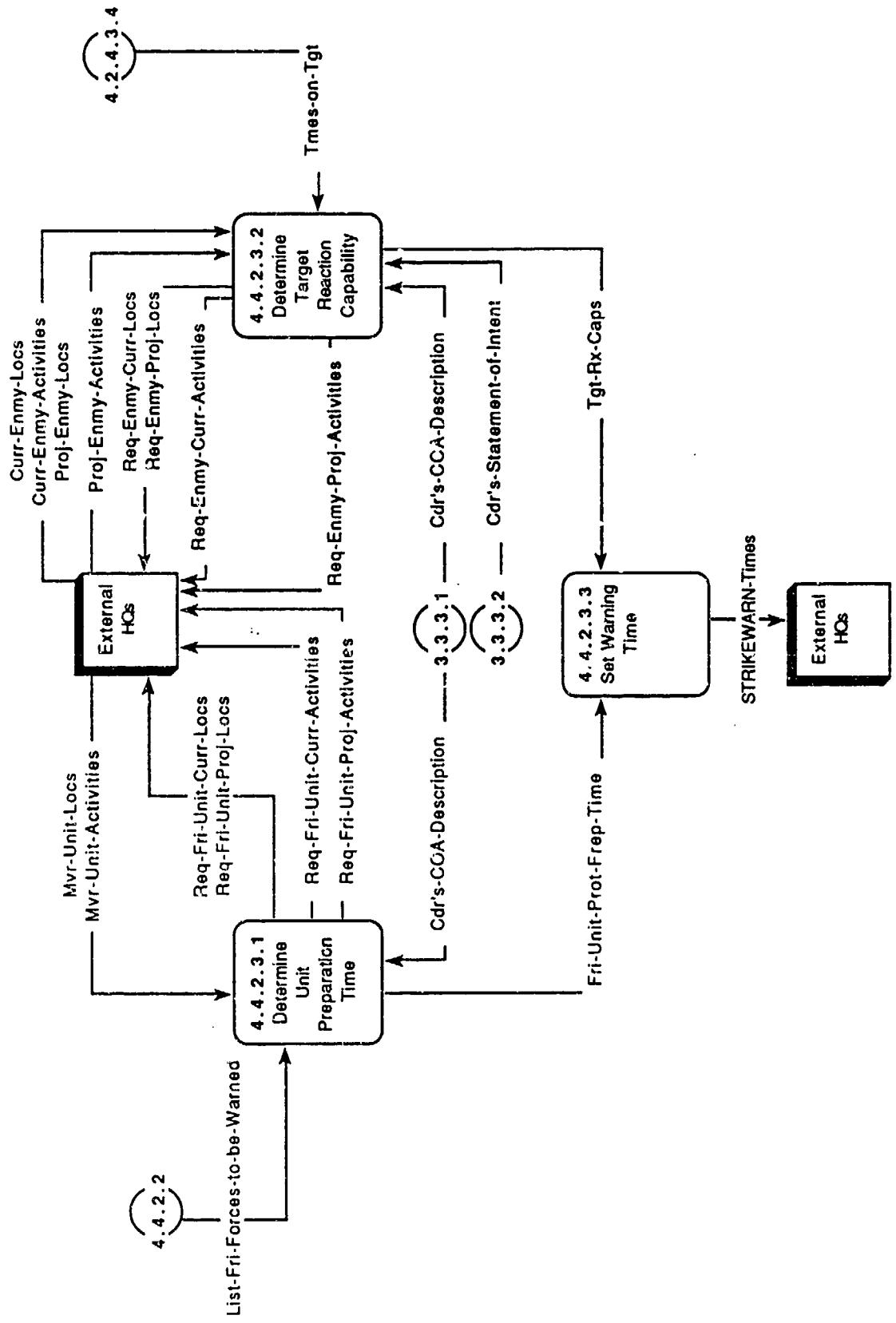
Determine Pack Subpackage MSDs #4.4.1



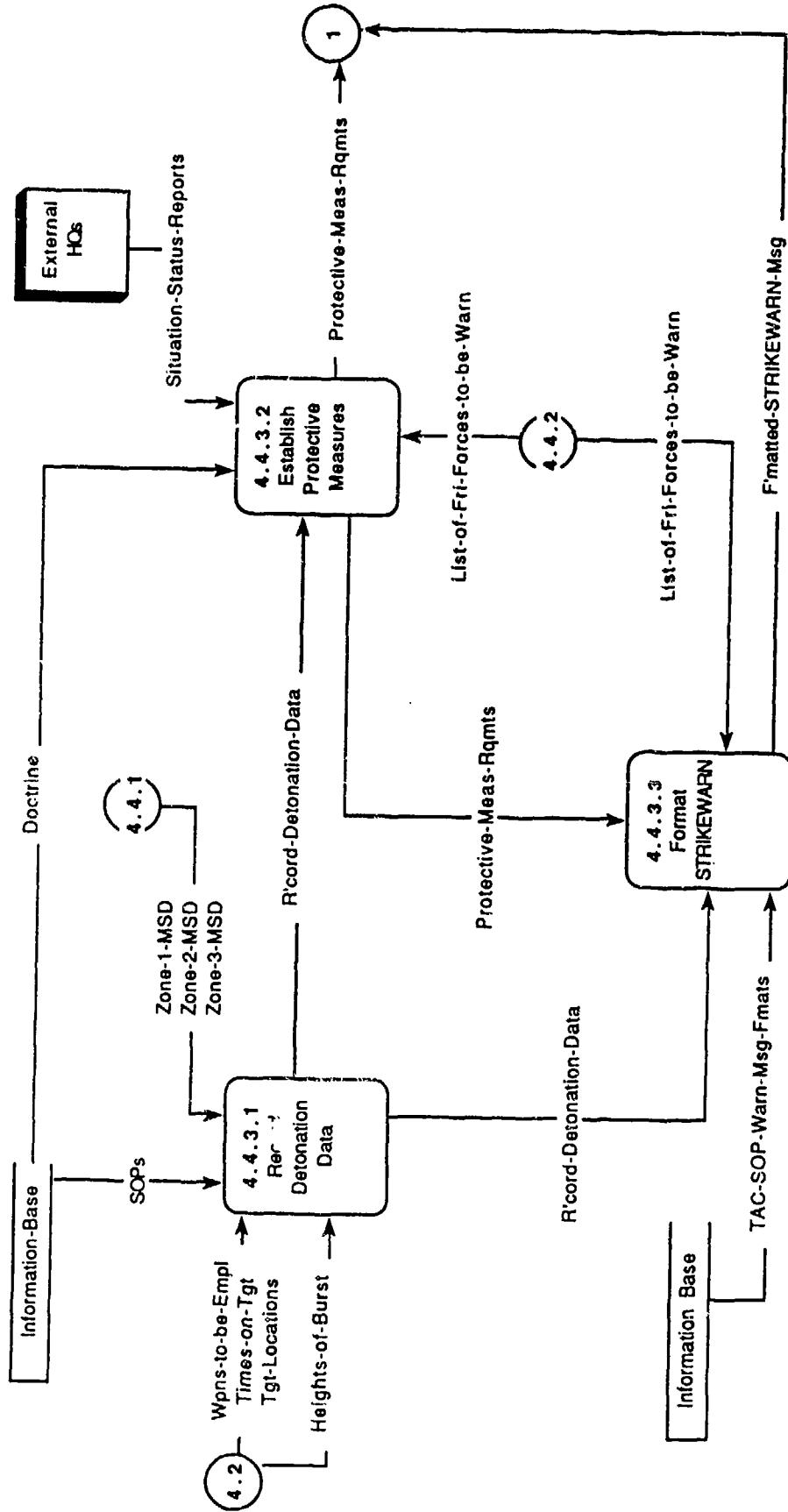
Determine Warning Requirements #4.4.2



Determine Friendly Vulnerability #4.4.2.1



Determine Time of Warning #4.4.2.3



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Defense Special Weapons Agency
6801 Telegraph Road
Alexandria, Virginia 22310-3398

TRC

15 April 1997

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SUBJECT: Report Distribution Changes

The Defense Special Weapons Agency (Formerly Defense Nuclear Agency) has reviewed the following reports under FOIA actions:

DNA-TR-90-33-V1, AD-B150535
DNA-TR-90-33-V2, AD-B150536
DNA-TR-90-33-V3, AD-B150824
DNA-TR-90-33-V4, AD-B150825

Under FOIA action, these reports are approved for **public release**. Distribution statement "**A**" now applies.

Ardith Jarrett
ARDITH JARRETT
Chief, Technical Resource Center