## Headquarters Air Combat Command

# **Expeditionary Site Survey Process (ESSP)**

### **Overview**



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Slides are UNCLASSIFIED

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## Agenda

### ESSP defined

- Concept of operations
- GeoBase IM&V recap
- Data collection process

### Background

- Lessons learned
- ESSP IPT actions/recommendations
- ESSP process history
- ESSP current status

### Integration efforts

- LOGCAT
- Technical integration

### Way ahead

Conclusion



# Expeditionary Site Survey Process (ESSP)

Supports the global mobility CONOP base opening capability to...

- Assess an airfield/airbase (ESSP)
  - Perform pre-action (C4ISR capability, on-site team, historical database)
  - Perform follow-on/initial airfield assessment
    - 5-7 person team capable of linking with seizure force
    - Verifies pre-action assessment/survey & gap analysis
  - Perform threat assessment (force pro & bio environmental)
  - Perform ops/ECS beddown assessment
  - Begin development of base site plan layout



# Expeditionary Site Survey CONOPS

- Collect existing information prior to site survey
  - Access GeoReach pre-site survey CIP w/ tabular AAFIF or EKB data
- Validate/obtain new data during site survey
  - Collect physical characteristics and site compatibility
     Data
  - Standard data collection tools
  - Cross functional prioritized checklist
  - Reference common installation m
  - GPS enabled
- Products
  - Airfield suitability assessment
  - Full spectrum threat assessment
  - Pavement evaluation
  - Initial beddown assessment





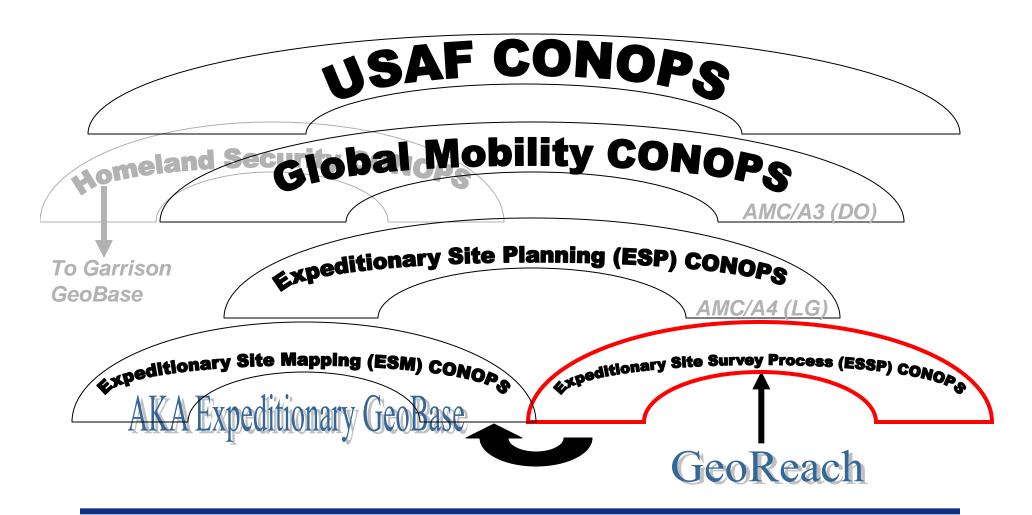
## Fusing Site Knowledge for Global Mobility

Synergy Through Expeditionary Tool Integration





### **CONOPS OV -1**





## COLLECT (PACAF) GeoBase IM&V Recap

### **Agreed:**

- Create one field collection database to store all geospatial and tabular data
- Use the Trimble Geo-XT device for the geospatial and tabular collection
- Create and field non-GPS handheld capability w/ CIP (e.g PDA)
- Use the 613<sup>th</sup> CRG data dictionary (AMC 174) until AF IESSC fielded

#### Task:

- Standardize the field collection database data model
- Automate the Integrated expeditionary site survey checklist (IESSC)



## COLLECT (PACAF) GeoBase IM&V Status

### **Under Review:**

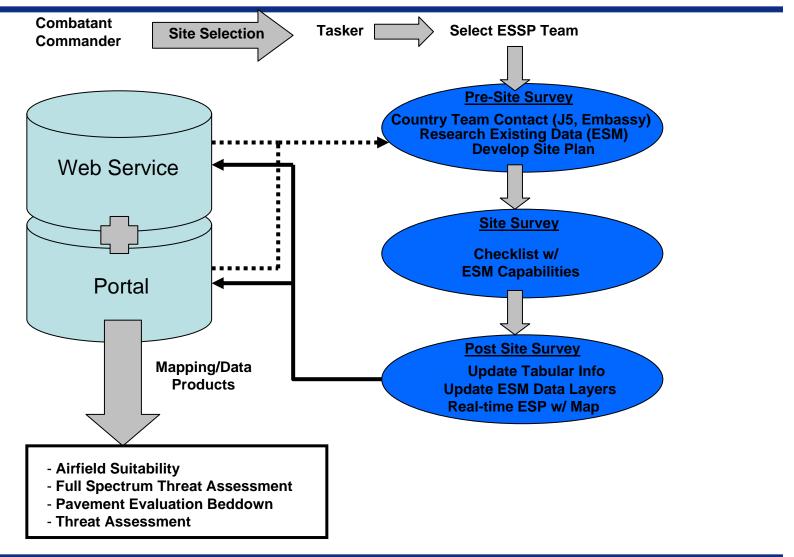
- Draft checklist from AMC
- Rebuilding the EKB in GeoReach geodatabase w/ SSG coord

### Task:

- Mapping the database from attribution to need
- Generating an automated checklist
- Automate the Integrated expeditionary site survey checklist (IESSC)



# Data Collection Process IAW ESSP CONOP





# ESSP CONOP Tools and Training

- Standardize Site Survey Tools
  - One Integrated checklists
  - Integrating LOGCAT attribution w/GeoReach CIP
  - Web Service as central data storage/access
- Training Requirements
  - Identify team composition
    - 14-16 team members
  - Providing equipment requirements
    - Hand-held survey tool
  - Train initial site survey team members
    - Course, manual and/or CBT

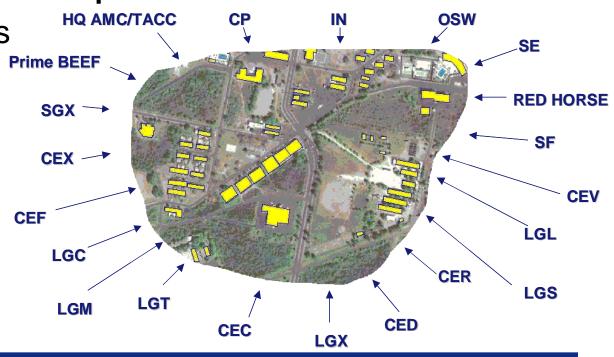


# Expeditionary Base Support Planning (AFI 10-404)

- Consolidate Maps Required by Functional Activities
  - Map the Base Areas, Facilities and Utility Layout
- Portray Areas for Emergency Use
- Maintain and Share the Map



- EOD
- Logistics
- CE Readiness
- Fire Protection
- Engineering
- CE Operations





## Lessons Learned

- Operation ALLIED FORCE (OAF)
- GAO 01-461 Kosovo Air Operations
- Operation ENDURING FREEDOM (OEF)

### Common Issues

<ul><li>Surveys Inadequate/not standardized</li></ul>	Lacked oversight/leadership
Surveys results not accessible	■ No Training
■ Multiple surveys/same sites (>4)	No aircraft basing plan
Most surveys done after execution	No POC basing decisions

Site Surveys are the cornerstone to contingency planning and execution



### ESPB Charter

- Co-Chaired: ILGD, ILEX
- Meet Semiannually
- Voting Members (2ea)
  - ACC
  - AFSOC
  - AMC
  - PACAF
  - USAFE
  - HAF ILEX/ILGD
- Non-Voting Members
  - AFCESA
  - SSG
  - AFC2ISRC\* (\*in negotiation)

- 4 ESP Working Groups
  - **■**Locate: Doctrine/Training (AMC)
  - **■**Collect: Data Collection (PACAF)
  - Assess: Arch./Interoperability (ACC)
  - **■**Enable: Visualization (USAFE)



## **ESSP IPT Actions**

- CSAF Tasker to XO (IL as OCR): Fix the Problem; Identify and recommend a standardized site survey process
  - Site Survey Tool (or Integrated Set of Tools)
  - Common Databases
- Identify training requirements for conducting and managing site survey process
- IPT included personnel from:
  - AF/ ILC, ILG, ILE, SGX, XOF
  - AMC/DOO, AFFSA/XAR

Provide the Warfighter Decision Quality Information



## ESSP IPT Recommendations

- Rewrite AFI 10-404 incorporate new process and key CONOPS
- Establish program leadership (Primary POCs)
  - Central POCs -- Air Staff and AMC IAW Global Mobility CONOPS (GMC) Champions
  - MAJCOMs and/or Air Components
- Standardize process/checklist
  - Create a process acceptable to all users
- Develop "One-Stop Shopping"
  - Make the process/information accessible to all users

**CONOPS Standardizes the Process** 



### **Current Status**

- Distributed CONOPs to MAJCOMS (Jul 03)
- Developed Integrated Checklists (Sep 03)
- Established ESSP course at AMWC (Oct 03)
- Coordinate ESSP Implementation Charter (Nov 03)
- Establish LOGCAT/GeoBase IWG (Nov 03)
- Coordinate ESSP Technical Roadmap (Dec 03)
- Publish AFI 10-404 Interim Message Change (Dec 03)
- Review AF-Wide Funct./PME for inclusion of ESSP (Apr 04)
- Publish new AFI 10-404 (Jun 04)
- Support C2B in initiative development for JEFX 04 (Jul 04)
- Implement ESSP CONOPS (Dec 04)

Standardization of Process On the Move

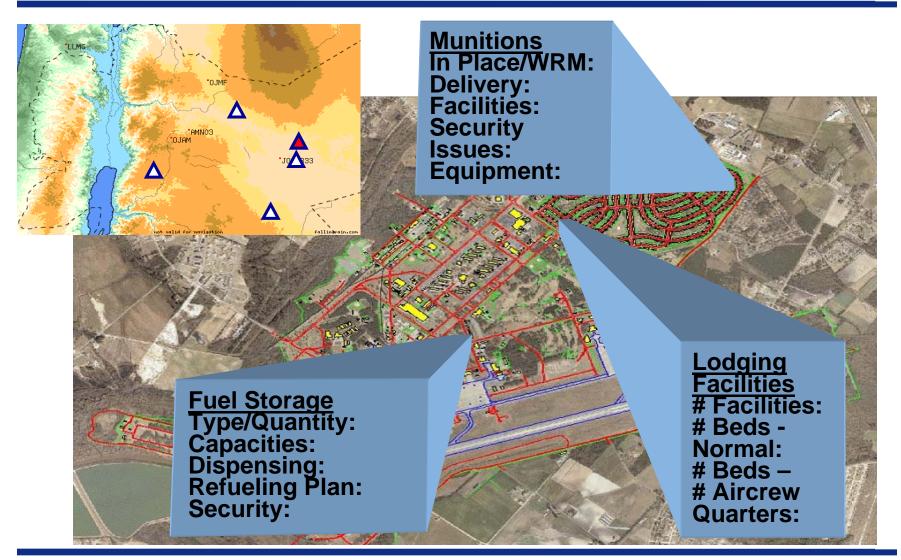


## AFCESA Support

- HQ AFCESA Taking Site Mapping Capabilities Forward
  - Enabling Tools Now in Prime BEEF UTC Equipment Lists
    - Prime BEEF Team A (4F9EA) GIS Equipment Supply Listing
    - Prime BEEF Equipment Only Survey Grade GPS UTC (4F9GP)
  - Expeditionary Site Mapping Training Underway
    - 5-Day Survey Grade GPS Course delivered w/4F9GP
    - Air Mobility Warfare Center ESSP Course
    - Fort Leonard Wood Engineering Schoolhouse
    - Silver Flag Contingency Training Sites
      - Ramstein, Kadena, and Tyndall
    - "Just-in-time" training for deploying units



## Integration Requirements



# Installations and Logistics Information Systems Strategic Plan

### -- VISION --

Integrated, timely, accurate, trusted, and secure information that is easily accessible anywhere in the world and supports all logistics processes, Air Force Core Competencies, and warfighting CINCs

### -- GOALS --

- <u>Data</u>: Integrated, Shared Across Applications, and Available
- **Processes**: Develop Systems that are Adaptable, Responsive, and Trusted
- Execution: Provide our Leaders with Credible Systems and Program to Champion our Vision and Resources
  - <u>Technology</u>: Make Users More Productive, System Easier to Learn and Operate, Smaller Footprint

# Installations and Logistics Information Systems Strategic Plan

### -- VISION --

Integrated, timely, accurate, trusted, and secure information that is easily accessible anywhere in the world and supports all logistics processes, Air Force Core Competencies, and warfighting CINCs

### -- ACTIONS --

- Use Automated Data Capture
  - Shareable Data: FY 04/06
  - Migrate to EDW by FY03
- Componentize Systems: FY 04/06
  - Web-enable Systems
- Use GCSS-AF Integration Framework: FY 04/06
  - Eliminate / Consolidate Systems



### What is LOGCAT?

- Employment-driven agile combat support planning
  - Detailed drawings and data for everything on a USAF Base (Bldgs, power, water, etc.)
  - Improves access/visibility of mission data
- Situational awareness
  - Crisis and routine situations, contingency planning
- Produces Expeditionary Site Plans (ESP)
  - Part 1: List of location's resources and capabilities by functional area (Unclass)
  - Part 2: Allocates resources, assesses support capability and IDs LIMFACs (Class)



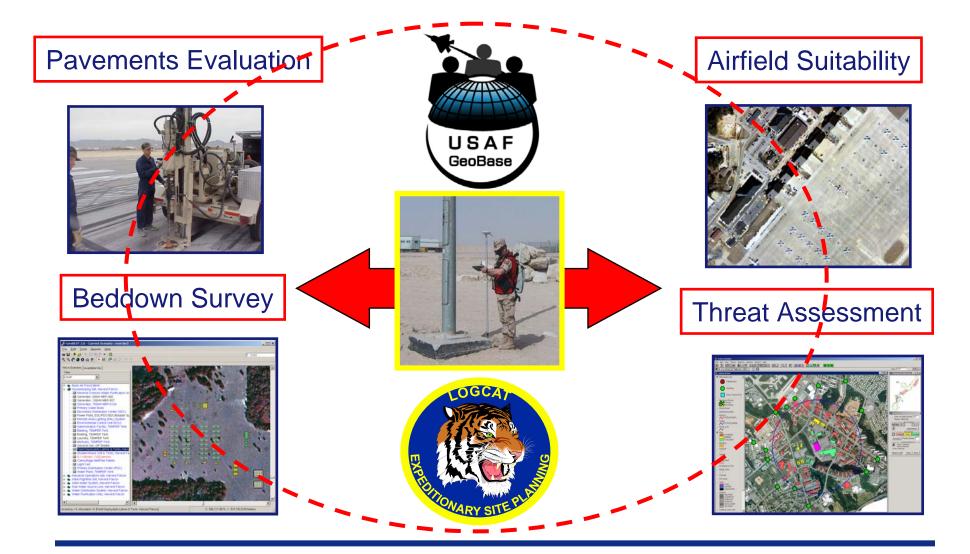


### What is EKB?

- **■** Employment Knowledge Base Database
  - Oracle Database
  - Contains AAFIF Tabular Data
  - Contains Historic Site Survey Tabular Data
  - Tabular info to support a Base Support Plan



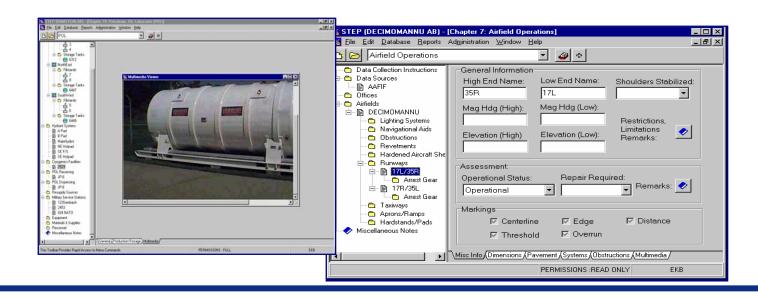
## Site Survey Products





## Logisticians Contingency Assessment Toolkit

- Automated, Employment-Driven, ACS Planning
- Collects site survey information for Base Support Plans
  - Includes Text, Photos, and Scanned Images
  - Identify Resources and Combat Support Requirements
  - Beddown Capability Analysis and LIMFAC Identification
  - Facilitate Force Tailoring Decisions to Reduce Footprint





## LOGCAT/GeoBase Process Integration

- Situational Awareness for Pre-Site Survey Planning
- Smart Checklists Integrated on Hand Held Collection Device
- On-Site Expeditionary Site Survey Data Collection
  - Survey Team Transmits Data to GeoServers: Available to MAJCOM/Air Component
  - Integration of GPS and Tabular Survey Data into ESP
- Post Survey Visualization and Analysis
  - Warfighter provided with decision quality information
- Sustainment through Expeditionary Site Planning
  - Expeditionary GeoBase Foundation in Place
  - Prime BEEF Teams Sustain Expeditionary Common Installation Picture (CIP)
  - Geo-Enabled Toolset utilized for tabular data updates



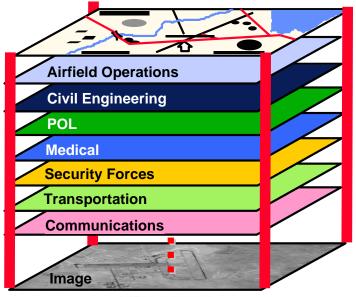
## Original ESSP Vision

### ISST – Initial Site Survey Team AFI 10-404 Functions

- Medical
- Munitions
- POL
- Contracting
- Communications
- Logistic Plans
- Airfield Operations
- Civil Engineering
- Security Forces



## **GeoReach and Expeditionary GeoBase CIP Layers**





**Geospatial Data** 

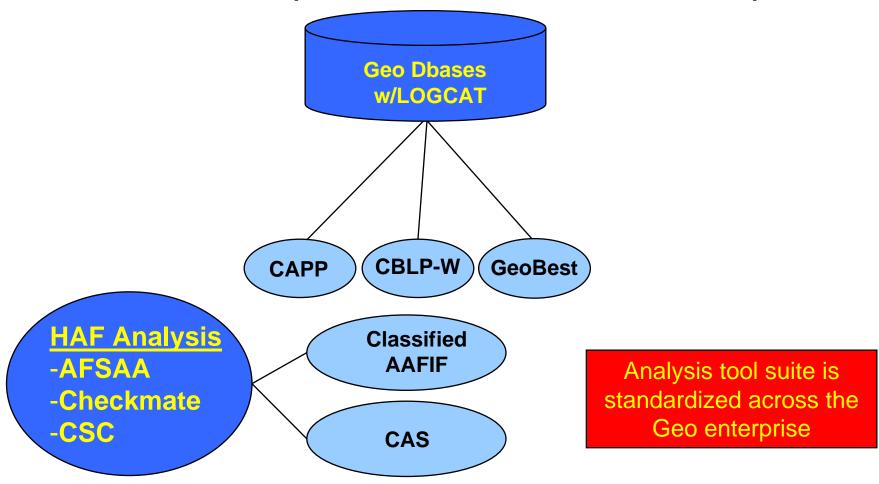






### Revised Vision

### Geo Servers (USAFE, PACAF, ACC, AFSOC)





# Technical Integration Road Map

- Spiral development integration process
  - Spiral 1 determine links between EKB and GeoReach
  - Spiral 2 integrate STEP and GeoReach collection tools
  - Spiral 3 integrate LOGCAT and GeoReach via the web
    - 3.1 link EKB data with GeoReach map service
    - 3.2 integrate LOGCAT application servers with GeoReach map application servers



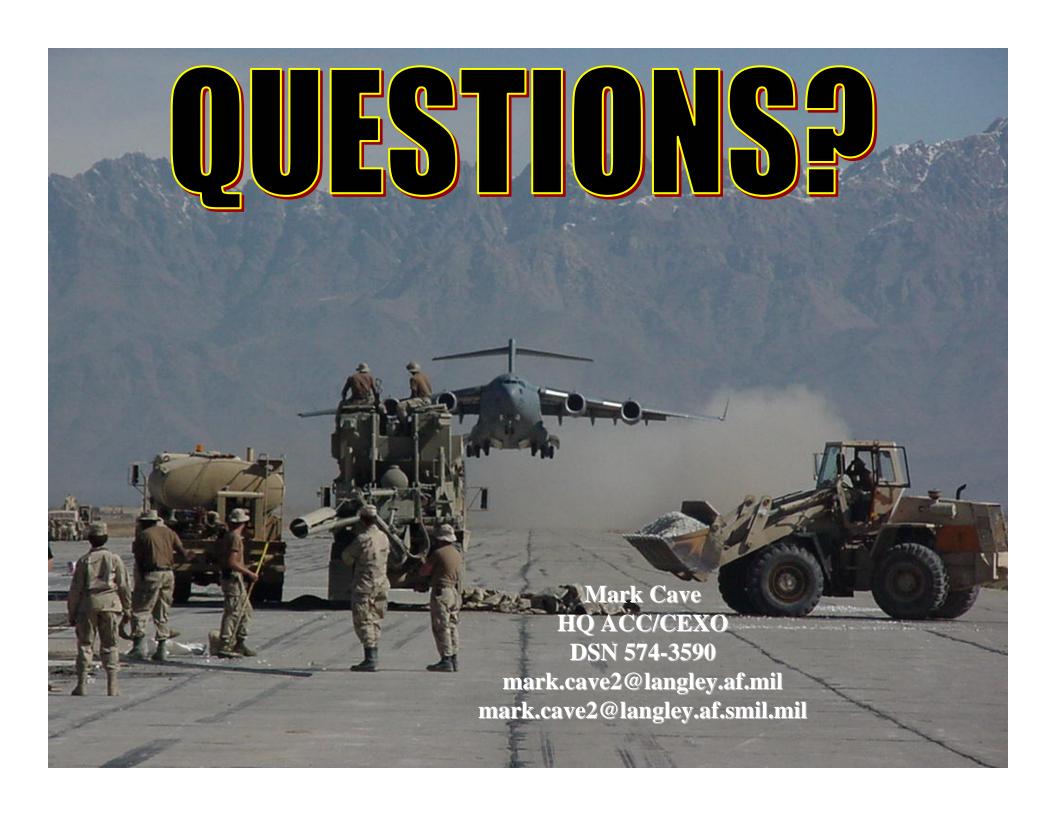
## Way Ahead

- Produce Standardized automated Site Survey Checklist
- Develop AF standardized database model
- Develop single standard web interface
- Develop integrated Expeditionary Site Survey Data Collection Tool – (STEP/GPS)
- Re-design the EKB database using a Geospatial Design Approach
- Integrate the Applications through single Web Service



### **Conclusion**

- GeoReach will maintain LOGCAT go/no go, "blue fields", and supporting attributes in an effort to make informed basing decisions.
- Total integration of LOGCAT to GeoReach requires an automated checklist, a common database model, and a common user interface to deliver accurate and up-to-date geospatial layers and descriptive logistics data to the warfighter.





## **Current Status**

- Standardize data collection process
  - GPS Field Methods and Data Collection for Expeditionary Environments
  - Develop Standard Feature Extraction Guidelines



### Site Mapping Capability Advancing at AFC2ISRC

- New "Committed Project" in Transformation Center
- AFC2ISRC/LG Guiding Integration
- Developing Capability to Put Logistics Data on Site Maps
- Ensures Site Survey Process Captures Data on Site Maps

### HQ AFCESA Taking Site Mapping Capabilities Forward

- Enabling Tools Now in Prime BEEF UTC Equipment Lists
- Expeditionary Site Mapping Training Underway
  - Air Mobility Warfare Center
  - Fort Leonard Wood Engineering Schoolhouse
  - Silver Flag Training Sites (Ramstein, Kadena, and Tyndall)



## Pre-Sept 04 ESSP Process

MAJCOM POC (Super User) Contacts appropriate Geo AOR Owner for site CIP & Checklist

Site Survey Team Receives Unclass CIP & IESSC-I

Site Survey Team (AT, CRG...) Performs survey using the IESSC-I

Site Survey data stored in personal Geo dbase (Access 97) stored on Team Chiefs computer

Data sent to A-3/A-4 Super planner for tabular data review

**IESSC-I: Integrated Exp Site Survey Checklist - Interim** 



# Pre-Sept 04 ESSP Process (cont)

MAJCOM Super Planner forwards data to CAF Geo office to check for spatial data accuracy

Data posted to the appropriate Geo database

Data is made available via the Geo viewer

HQ AMC A-3 or A-4 review the data

AMC A-3 pass message to MAJCOM Geo office accepting data for MAF use (approved by qualified/certified 1C0XX)

MAJCOM Geo office annotates the data: "AMC Approved"



## Post-Sept 04 ESSP Process

MAJCOM POC (Super User) Contacts appropriate Geo AOR Owner

Site Survey Team Receives Unclass CIP & IESSC

Site Survey Team (AT, CRG...) Performs survey using the IESSC (standardized checklist)

Same process as pre Sep 04