

# Utah Data Center (UDC)

**Sandy Ferguson**

**Troy Lange**

**Carlen Capenos**

Presented in Salt Lake City, Utah

13 November 2009



US Army Corps of Engineers  
**BUILDING STRONG®**



# Agenda

- 8:00 am Sign in Begin
- 9:00 am Presentation (Collect Written Questions)
- 10:00 am Industry Networking
- 11:00 am Answer Written Questions
- 12:00 pm Lunch
- 1:15 pm Buses Depart (No Privately Owned Vehicles)  
Tour Site
- 3:00 pm Arrive Back at Hotel for Wrap Up
- ~ 4:00 pm Conclusion



# Purpose

- Generate Interest in the Utah Data Center (UDC)
- Networking Opportunity for Large and Small Firms
- Discuss the Acquisition Strategy



# Rules of Engagement

- Place electronic devices on vibrate
- Please leave the room if you must take a call
- Recording the presentation is prohibited
- Submit questions in writing on cards provided
- Presentation, attendees and Q&A will be published on web
- Today's briefing is based on current concepts and may be subject to change



# UDC Project Delivery Team

## Project Mgmt Office, NSA

### Client Requirements

- Troy Lange
- George Ruo
- Tom Noonan
- Matt Boren
- Carolyn Whitaker

## Parsons –

Contracted support to PMO  
for technical issues

## US Army Corps of Engineers

### Baltimore District

#### Acquisition and Contracting

- Randy Winemiller
- Sandy Ferguson
- Tim Mathews
- Russ Marsh
- Carlen Capenos

### Sacramento District

#### Construction Execution

- Norbert Suter
- Tim Willard
- Dave Smeraldo
- Steve Gladwell
- Jerry Iacopini

## Black & Veatch/Louis Berger Group JV–

Contracted support to USACE for A/E and RFP development



# UDC Overview

- Customer – Intelligence Community
- Executive Agent – NSA
- Contracting / Construction Agent – USACE
- Over \$1B Military Construction (MILCON)
- Driver for this Procurement is SCHEDULE
- Design / Build, Firm Fixed Price

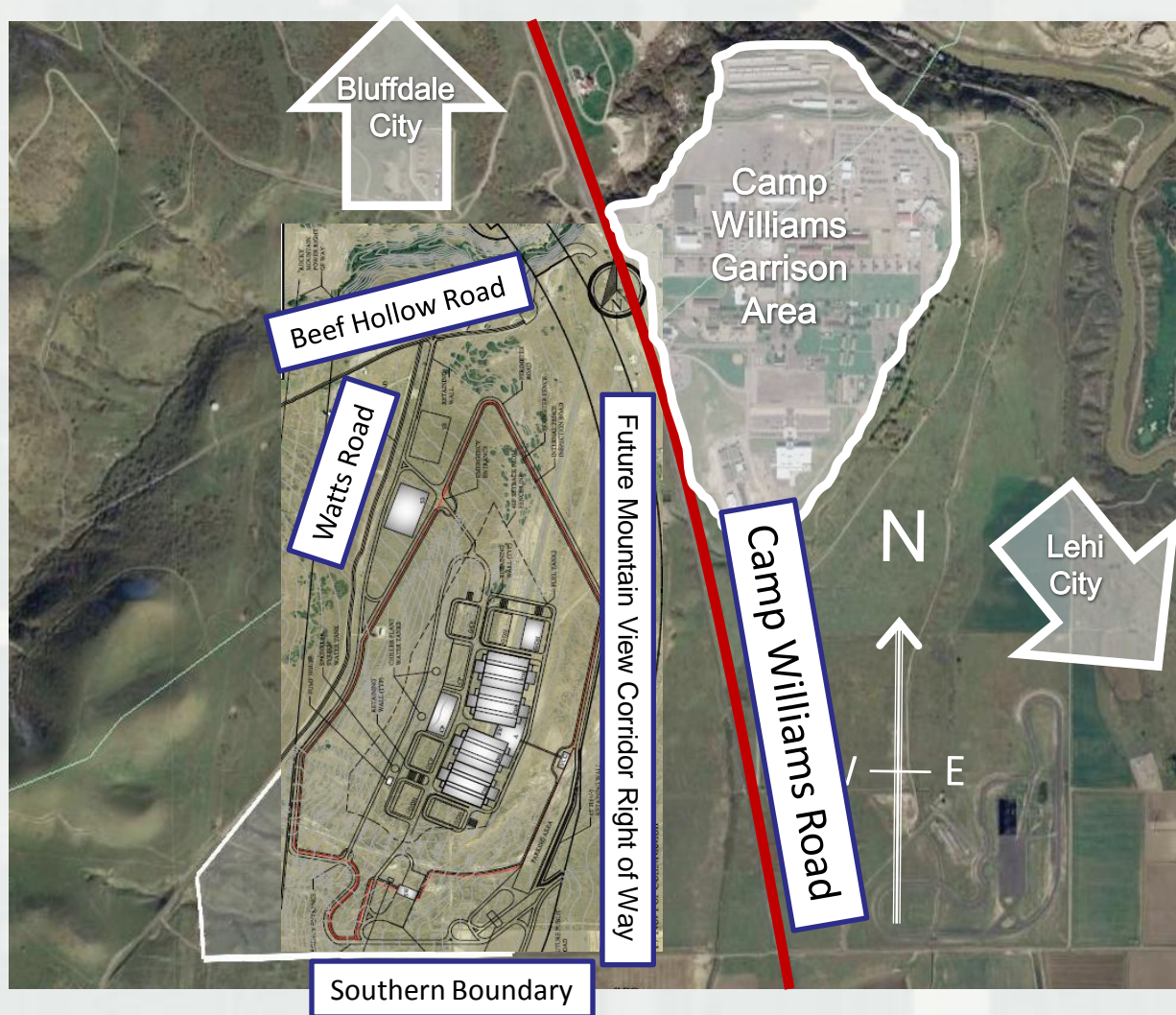




# Camp Williams, Utah

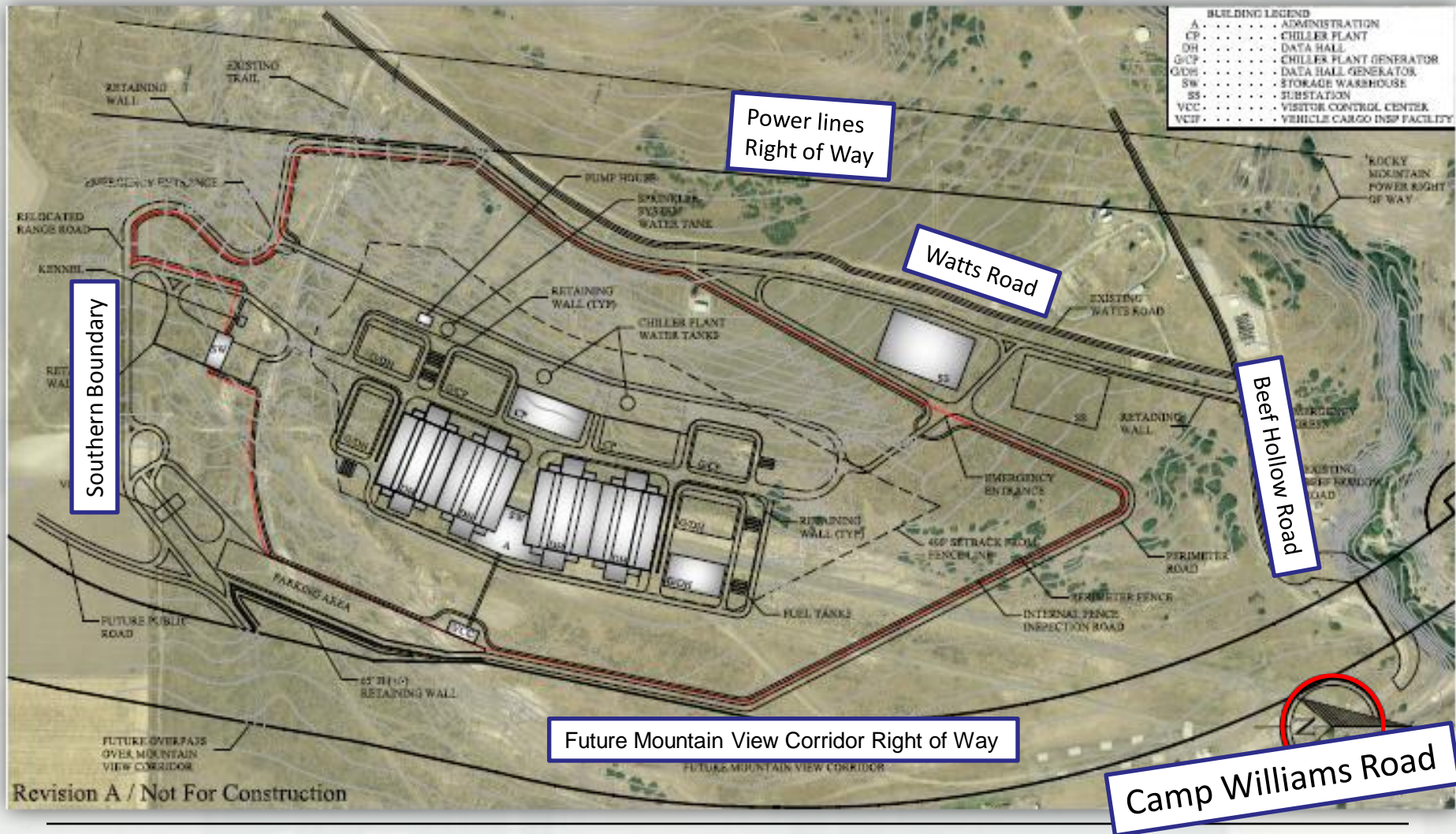


# Conceptual Site Layout





# Conceptual Site Plan



# Project Specifics

- 65 Mega Watts Technical Load to the Raised Floor
  - ▶ Average load density: 650 watts/square feet (sf)
  - ▶ Maximum load density: 1600 watts/sf
- 100,000 sf of Raised Floor in 4 Data Halls
- Tier III Data Center Standard, Concurrently Maintainable
- Flexible Cooling to Data Hall IT Rooms: Water and Air
  - ▶ Air: 250 watts/sf
  - ▶ Water: 1600 watts/sf
- Clean Agent Fire Suppression for Data Halls
- Redundant Utilities, 100% Generator & UPS Backup
- Mechanical & Electrical Support Structures



# Project Specifics (continued)

- 2 Substations
- Goal LEED Silver, Other Green Technologies Stressed
- Water usage at full load is approx 1.7 million gal/day
- Thermal energy storage tanks
- 3 days of fuel storage
- Piping distribution will be primary and secondary
- Secondary pumps will be on UPS
- Cooling towers shall be Cooling Technology Institute (CTI) certified or built up



# UDC Requirements\*

- Must comply with:
  - ▶ IBC – International Building Code
  - ▶ UFC – Unified Facilities Criteria
  - ▶ NFPA – National Fire Protection Association
  - ▶ UFGS – Unified Facilities Guide Specifications
  - ▶ All Local, State and Federal Codes
  
- Plus Executive Agent standards:
  - ▶ Facility Engineering Electrical Standards (FEES)
  - ▶ Facility Engineering Mechanical Standards (FEMS)
  - ▶ Intelligence Community Standards
  - ▶ Can deviate if justified and with express consent of PMO

\* Most Stringent of Codes / Standards Apply





# Data Hall Requirements

- Four 25,000 sf data halls:
  - ▶ Each data hall will be subdivided by firewalls into two IT equipment rooms
  - ▶ Each IT equipment room considered a separate electrical & fire zone
- Power requirements:
  - ▶ Total for all data halls: 65 MW technical power
  - ▶ For flexibility, each data hall will have up to 18.75 MW technical power
- Electrical connections to equipment:
  - ▶ Space provisions for under-floor and overhead connections to equipment
  - ▶ ~90% of the connections at 480/277V; most at 80A-150A
  - ▶ ~10% of the connections at 208/120V - 300 kVA PDUs on raised floor



# Data Hall Requirements (continued)

- Open ceiling return
- Looped secondary pipe mains
- Down flow CRAC (CRAH) units with MERV 8 Filtration
- Main piping not to interfere with under floor air distribution
- Independent Central Station AHU with MERV 13 filtration for each data hall

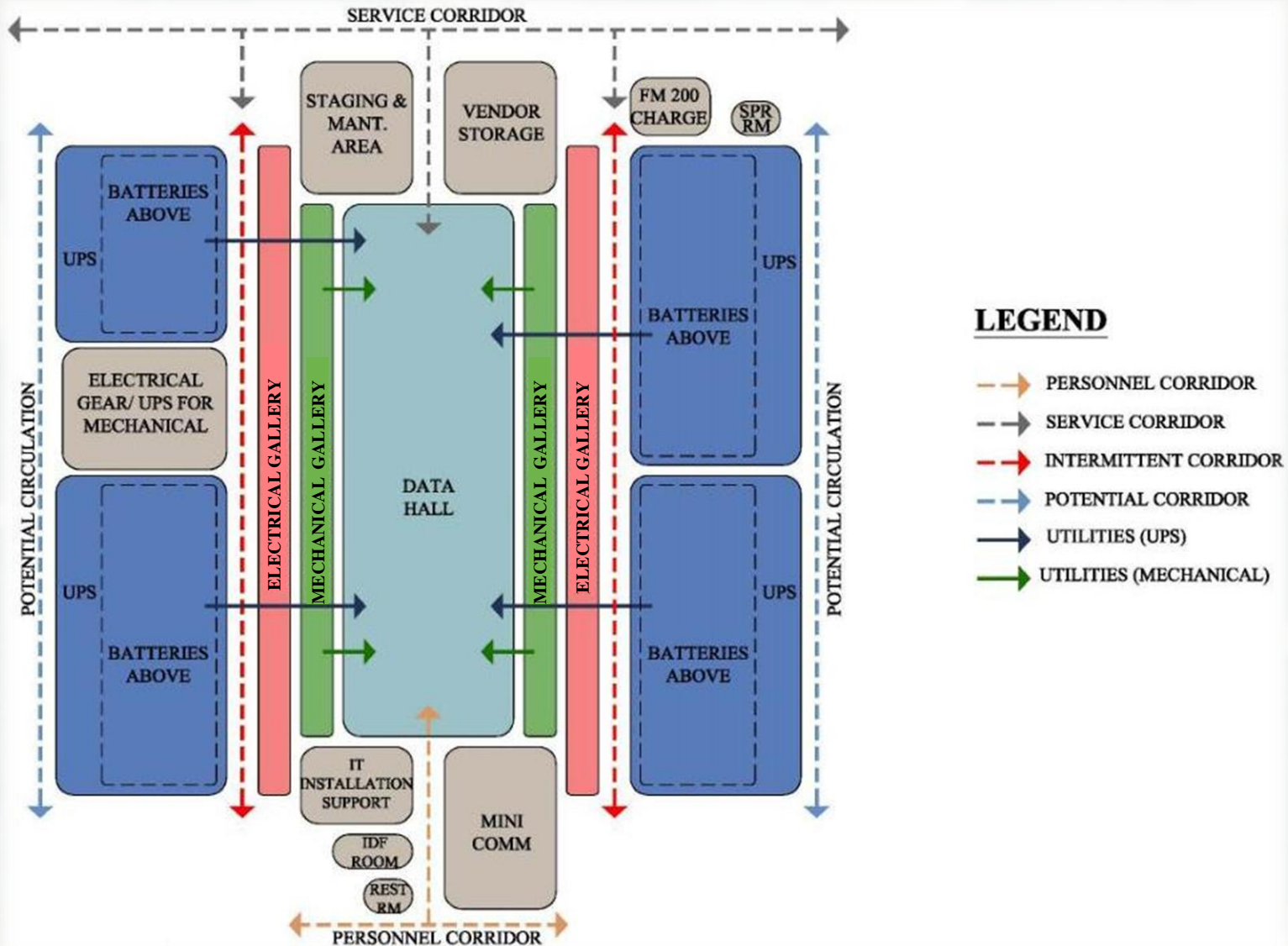
CRAC (CRAH): Computer Room Air Conditioner (Handler)

MERV: Minimum Efficiency Reporting Value

AHU: Air Handling Unit



# Conceptual Data Hall Layout



# Security Considerations

- Must be US citizens
- US owned firms only
- All employees will be vetted
- Jobsite will have Government access controls
- Large portion of the project will be SCIF construction
- AT/FP medium level w/ 400 foot exclusion standoff zone
- Fence rating of DoS K-12 anti-ram, IDS, cameras, CBRN

AT/FP: Anti-Terrorism / Force Protection

DoS: Department of State

IDS: Intrusion Detection System

SCIF: Sensitive Compartmented Information Facility

CBRN: Chemical Biological Radiological, and Nuclear





# Operational Considerations

A portion of the facility will be completed and come online prior to completion of the entire project, therefore:

- ▶ Operational portions cannot be disrupted
- ▶ Physical separation required with internal fence
- ▶ Access to operational side will require escorts



# Acquisition Considerations

- Munitions and Explosives of Concern (MEC) remediation completed to 24" depth
- “Low Probability” stand by construction support will be required for all soil disturbance activities
- D/B will coordinate with Hill AFB for UXO response
- NEPA/EA Finding of No Significant Impact (FONSI) signed
- Stipend is being considered for ‘Step 2’ Firms
- Bond amount currently under review

NEPA/EA: National Environmental Policy Act / Environmental Assessment



# Data Center RFP

|                       |   |
|-----------------------|---|
| Solicitation Type     | Best Value (Trade-Off)  |
| RFP                   | 'Two-Step' Design-Build Procurement   |
| Bonding Requirements  | Under review  |
| Funding               | Incremental. Specified in solicitation.   |
| Solicitation Schedule | <div> <div>'Step 1' Advanced Notice:</div> <div>Dec 2009</div> </div> <div> <div>'Step 1' Proposal Due</div> <div>Jan 2010</div> </div> <div> <div>'Step 1' Selected Contractors:</div> <div>Feb 2010</div> </div> <div> <div>RFP ('Step 1' Selected Contractors):</div> <div>Mar 2010</div> </div> <div> <div>Proposals Due:</div> <div>July 2010</div> </div> <div> <div>Contract Award:</div> <div>Oct 2010</div> </div> |
| Contract Duration     | ~600 calendar days. Offerors can specify a shorter time of performance.   |



# Data Center Submission 'Step 1'

## **Anticipated Submission Requirements:**

- Technical approach
- Technical qualifications that may include:
  - US owned firms only
  - Specialized experience and technical competence
  - Capability to perform to include size and scope of this project
  - Past performance of the offeror's team (including the A/E and construction members)
- Demonstrated ability to meet/exceed aggressive schedule(s)

## **Evaluation Process:**

- Technical Qualifications: All technical factors will be adjectivally rated
- Trade-Off Analysis:
  - All factors considered to determine "best value" for selection to 'Step 2'
- Discussions: The intent is to select 'Step 2' offerors without further discussions
- Selection: The Government intends to select three to five firms for 'Step 2'





# Data Center Submission 'Step 2'

## **Anticipated Submission Requirements:**

- Volume I - Technical proposal
- Volume II - Cost Proposal
- Volume III - Subcontracting Plan

## **Anticipated Evaluation Process:**

- Technical Qualifications: All technical factors will be adjectivally rated
- Price/Cost: Will be evaluated for reasonableness
- Trade-Off Analysis: All factors considered to determine “best value” to the Gov’t
  - Proposed schedule most heavily weighted factor
- Oral Presentations are being considered
- Discussions: May be necessary

## **Anticipated Subcontracting Plan:**

- Initial Plan: Submitted to demonstrate Small Business compliance
- Final Plan: Revised as needed to ensure acceptability and compliance
  - Failure to negotiate an acceptable plan will make the offer ineligible for award of the contract
- Subcontracting Participation Plan being considered



# Potential Technical Factors

## **Factor 1: Experience and Past Performance on Large Projects**

- Three to five projects
- Large complex Design-Build projects
- 500,000+ SF and completed in last 7 years
- Performance evaluations on projects for this factor

## **Factor 2: Experience and Past Performance on Similar Projects**

- Similar projects that include data centers
- If data center experience does not exist, demonstrate ability to construct data centers
- Performance evaluation on projects for this factor

## **Factor 3: Schedule**

- Demonstrate ability to meet or exceed aggressive schedules on D-B contracts
- Feature of work schedule

## **Factor 4: Project Management Plan**

- Technical approach
- Project team
- Commissioning firm



# Subcontracting Plan

USACE Small Business Goals will be included in the solicitation

The following are the current USACE goals:

(The goals current at the time of solicitation will be included)

|  |      |
|--|------|
| Small Business:                                  | 70%  |
| Small Disadvantage Business:                     | 6.2% |
| Women – Owned Small Business:                    | 7.0% |
| HUB Zones Small Business:                        | 9.8% |
| Service-Disabled Veteran-Owned Small Businesses: | 0.9% |
| Veteran–Owned Small Businesses:                  | 3.0% |



# Additional Opportunities

- Contracts for bringing utilities to the site
  - ▶ Power
    - Rocky Mountain Power
  - ▶ Water
    - Bluffdale City Potable and possibly Secondary Water
    - Jordan Valley Water Conservancy District – Aqueduct
  - ▶ Waste Water
    - South Valley Sewer District





# Complete Question Cards


- Pass to the attendants
- Turn in at registration desk
- Please be seated at 1100 a.m.
- Q & A will continue after site visit
- All Q & A will be posted on website:

<https://www.fbo.gov/>

search for “W912DR09S0012”

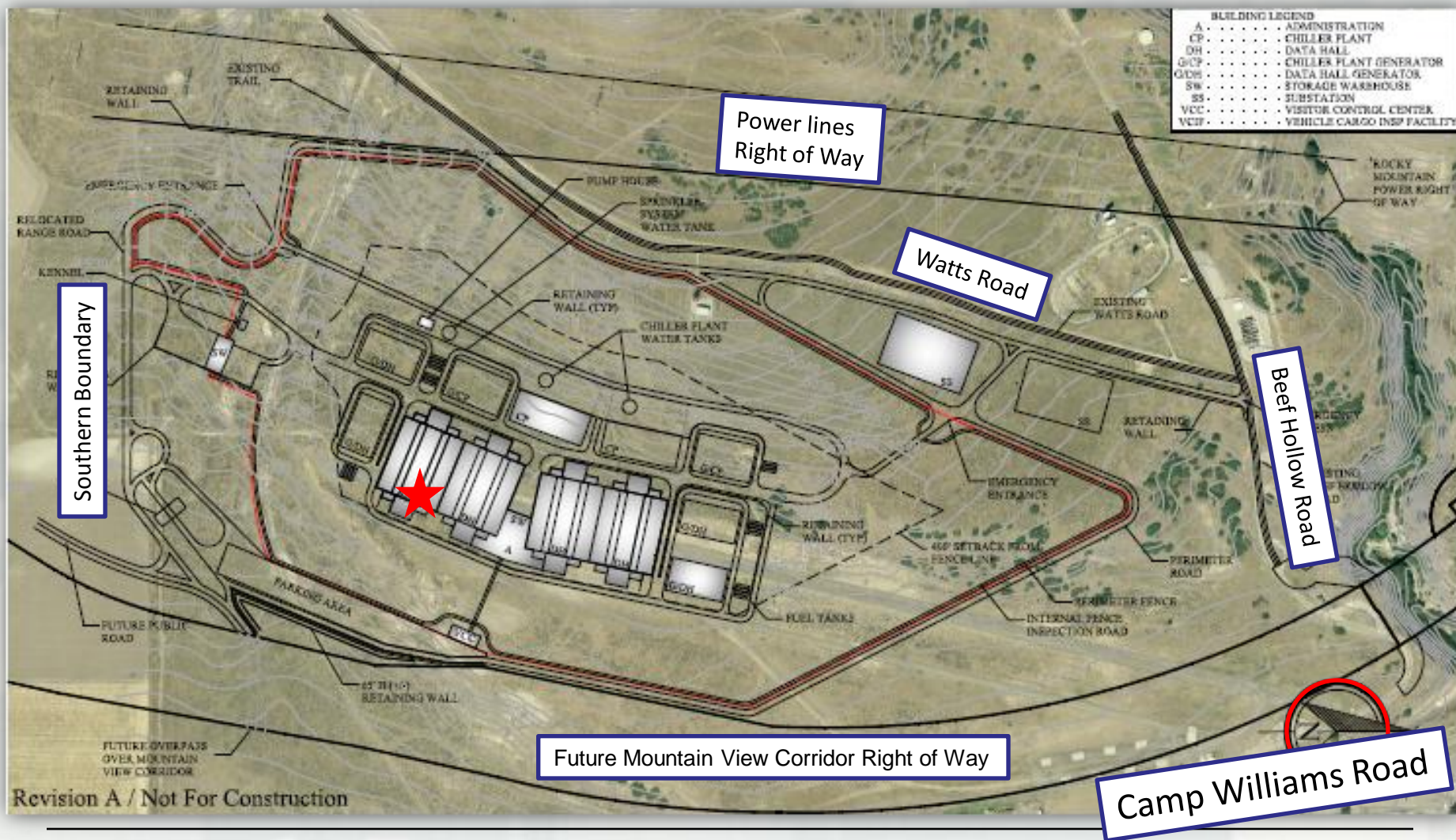


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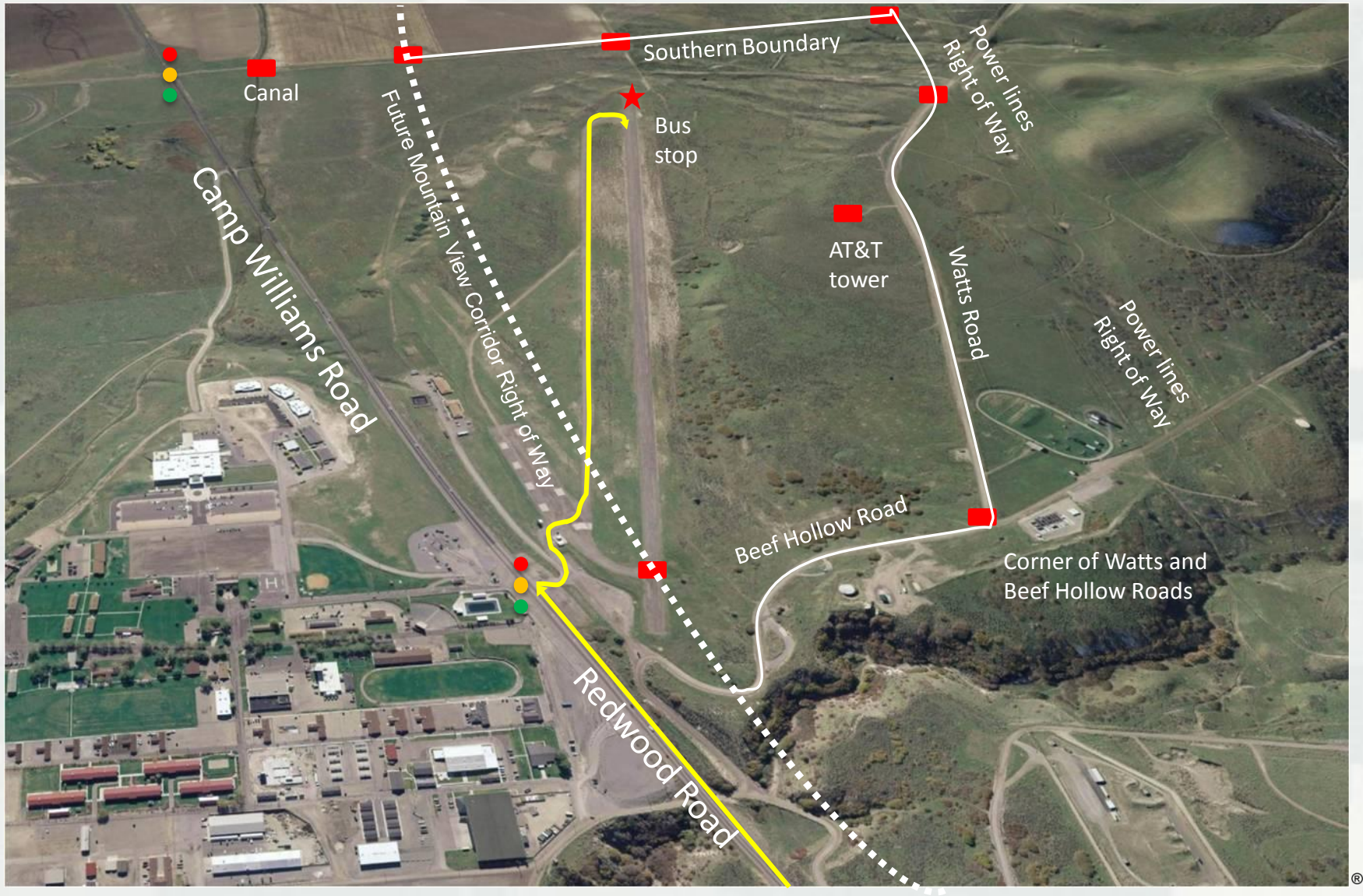


# Approx On Site Briefing Location






# Site Visit Orientation (Facing South)



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# Federal Business Opportunities

- Government will post to the FedBizOpps website:  
<https://www.fbo.gov/>  
Search: “W912DR09S0012”
  - ▶ This briefing
  - ▶ Roster of attendees
  - ▶ Appropriate questions & answers

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