National Security Agency
Military Construction, Defense-Wide
FY 2010 Budget Estimates
($ in thousands)

State/Installation/Project	Authorization Request	Approp. Request	New/ Current Mission	Page No.
Maryland				
Fort Meade				
Mission Support – PSAT	8,800	8,800	C	102
South Campus Utility Plant PH 2	175,900	175,900	C	104
NSAW Campus Chilled Water Backup	19,100	19,100	C	107
Utah				
Camp Williams				
Data Center PH 1	800,000	800,000	C	110
United Kingdom				
Menwith Hill Station				
Power/Cooling Infrastructure Upgrade	37,588	37,588	C	99
Total	**1,041,388**	**1,041,388**		

1. COMPONENT NSA/CSS DEFENSE	FY 2010 MILITARY CONSTRUCTION PROGRAM	2. DATE May 2009
3. INSTALLATION AND LOCATION RAF Menwith Hill, United Kingdom	4. COMMAND NSA/CSS	5. AREA CONSTRUCTION COST INDEX 1.35

6. PERSONNEL STRENGTH	PERMANENT			STUDENTS			SUPPORTED			TOTAL
Army Installation	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	
a. AS OF				x						
b. END FY				CLASS	IFIED					

7. INVENTORY DATA ($000)

A. TOTAL ACREAGE	
B. INVENTORY TOTAL AS OF	
C. AUTHORIZED NOT YET IN INVENTORY	37,588
D. AUTHORIZATION REQUESTED IN THIS PROGRAM	0
E. AUTHORIZATION INCLUDED IN FOLLOWING PROGRAM	0
F. PLANNED IN NEXT THREE YEARS	0
G. REMAINING DEFICIENCY	0
H. GRAND TOTAL	37,588

8. PROJECTS REQUESTED IN THIS PROGRAM:

CATEGORY CODE	PROJECT NUMBER	PROJECT TITLE	COST ($000)	DESIGN START	COMPLETE
811-145	MWHL103001	Power & Cooling Upgrade (FY10)	37,588		

9. FUTURE PROJECTS:

a. INCLUDED IN FOLLOWING PROGRAM

CATEGORY CODE	PROJECT TITLE	COST ($000)

b. PLANNED IN THE FUTURE

CATEGORY CODE	PROJECT TITLE	COST ($000)
	MHS Generator Plant	67,472
	MHS Power Substation	8,729

10. MISSION OR MAJOR FUNCTION

Agency activities are classified.

11. OUTSTANDING POLLUTION AND SAFETY DEFICIENCIES:

A. AIR POLLUTION	0
B. WATER POLLUTION	0
C. OCCUPATIONAL SAFETY AND HEALTH	0

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1. COMPONENT
NSA/CSS
DEFENSE

FY 2010 MILITARY CONSTRUCTION
PROJECT DATA

2. DATE
May 2009

3. INSTALLATION AND LOCATION		5. PROJECT	
RAF MENWITH HILL, UNITED KINGDOM		Power & Cooling Infrastructure Upgrade	
5. PROGRAM ELEMENT	6. CATEGORY CODE 811-145	7. PROJECT NUMBER MWHL103001	8. PROJECT COST ($000) $37,588

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Primary Facility				21,282
30MVA Transformer	LS			(750)
Substation Modifications	LS			(15,344)
AT/FP	LS			(1,729)
DEMOLITION	LS			(3,459)
Support Facilities				13,305
Electrical Distribution System Modifications	LS			(13,305)
Subtotal				34,587
Contingency (5%)	LS			1,729
ESTIMATED CONTRACT COST				36,316
SIOH (3.5%)	LS			1,272
PROJECT COST				37,588

10. DESCRIPTION OF PROPOSED WORK: Major system improvements to upgrade RAF Menwith Hill's primary commercial electrical service, upgrade and develop a redundant support infrastructure to integrate backup and emergency power improvements, and increase the reliability and maintainability of the power infrastructure. Infrastructure upgrades should be fully integrated and compatible with planned power and generator projects. Upgrade the Operations compound chilled water systems by providing increased capacity and redundant power facility to central chiller plants.

11. REQUIREMENT: **ADEQUATE:** **SUBSTANDARD:**

PROJECT: Provide upgraded primary power infrastructure along with modifications to Menwith Hill's electrical distribution system to meet projected power requirements and support the expanding mission on Menwith Hill. Upgrades include, but are not limited to, a new 30MVA transformer at the main base substation, switchgear, modifications to the existing main base substation and distribution substations to permit an expanded 30MVA capacity, an expanded SCADA control/metering/status monitoring system, and modifications to Menwith Hill's electrical distribution system to permit synchronizing the incoming commercial power supply with the emergency generator plant located on RAF Menwith Hill. Provide chilled water piping system improvements, new pumps, new distribution system, and chiller power redundancy improvements.

REQUIREMENT: Adequate dependable commercial power is fundamental to MHS missions in support of the war-fighter and the safe, continued operation of mission equipment. Safe, reliable power is also needed to meet the needs of the many support functions on the base. Detailed investigations and studies have shown that RAF Menwith Hill's electrical demand will exceed the primary electrical service's existing capacity by FY11. The base must replace its 15 MVA transformer on the Harrogate feed in the Nessfield substation with redundant transformer capacity i.e. N+1 Transformers capable of supporting a reserve

1. COMPONENT **NSA/CSS** **DEFENSE**	**FY 2010 MILITARY CONSTRUCTION PROJECT DATA**	2. DATE May 2009
3. INSTALLATION AND LOCATION RAF MENWITH HILL, UNITED KINGDOM		
4. PROJECT TITLE Power & Cooling Infrastructure Upgrade		5. PROJECT NUMBER MWHL103001

capacity of 30 MVA to take advantage of any available increase in power capacity. Additionally, the base's existing electrical distribution system must be modified to maintain electrical support once the base's load exceeds the 15MVA limit and until the local power provider can increase its supply capacity. The chilled water systems, which cool the mission equipment, can no longer supply cooling to the new racks being built today. The chilled water distribution network needs upgrading. Pumps must be replaced and chiller power needs additional redundancies built in.

CURRENT SITUATION: The incoming power to Menwith Hill is provided by a 15MVA feed from Harrogate with a 12MVA backup feed from Wormald Green. The backup feed provides power (with appropriate load shedding) should the primary 15MVA power be lost or when maintenance needs to be performed. Emergency generators are available should the commercial power feed fail. Menwith Hill's electrical load continues to increase in support of current mission activities. Future mission deployments are projected to exceed current electrical capacities within three years. The chilled water systems have adequate chiller capacity, but are limited by outdated, inefficient distribution and delivery infrastructure. There are many single points of failure that make the systems vulnerable to unscheduled outages. Negotiations are in hand with the local commercial power company to operate the two existing transformers in parallel to a capacity of 17MVA as an interim measure, but some modifications will be necessary to allow this to occur.

IMPACT IF NOT PROVIDED: Some missions may need to be downsized, or ceased completely so that RAF Menwith Hill can maintain its power demand below 17MVA. All future projects requiring additional commercial power would either need to be suspended, capping mission growth and directly affecting Transformational Initiatives, or be part of a triage-driven load-shedding effort. Multiple stakeholders and partnerships across the communities of interest would be significantly impacted.

ADDITIONAL: This project is not eligible for NATO funding. SIOH is 3.5% to fund United Kingdom execution agents and Air Force project oversight. Base Civil Engineer: Lt Col Kevin Wong, (44) 1423-84-4240. FOREIGN CURRENCY: FCF Budget Rate Used: POUND / 0.5905 (Per DOD RMD800)

12. Supplemental Data:

A. Estimated Design Data:

1. Status

(a) Date Design Started:	Jun 09
(b) Percent Completed as of January 2009:	0
(c) Date Design Complete:	Feb 10
(d) Type of Design Contract:	Design/Bid/Build

2. Basis

(a) Standard or Definitive Design:	No
(b) Date Design was Most Recently Used:	N/A

3. Total Cost (c) = (a)+(b) or (d)+(e) ($000)

(a) Production of Plans and Specifications	2,400
(b) All Other Design Costs	1,600
(c) Total	4,000
(d) Contract	0
(e) In-House	

4. Contract Award	Mar 10
5. Construction Start	Jun 10
6. Construction Completion	Jul 12

/s/_____

Jeffrey P. Rutt, NSA

Technical Director, I&L

1. COMPONENT NSA/CSS DEFENSE	**FY 2010 MILITARY CONSTRUCTION PROGRAM**	**2. DATE** May 2009
3. INSTALLATION AND LOCATIONS **Fort George G. Meade, Maryland**	**4. COMMAND** **NSA/CSS**	**5. AREA CONSTRUCTION COST INDEX** **1.02**

6. PERSONNEL STRENGTH	PERMANENT			STUDENTS			SUPPORTED			TOTAL
Tenant of USAF	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	
A. AS OF										
B. END FY				CLASS	IFIED					

7. INVENTORY DATA ($000)

A. TOTAL ACREAGE	633
B. INVENTORY TOTAL AS OF DEC 2008	1,822,000
C. AUTHORIZED NOT YET IN INVENTORY	39,000
D. AUTHORIZATION REQUESTED IN THIS PROGRAM	203,800
E. AUTHORIZATION INCLUDED IN FOLLOWING PROGRAM	
F. PLANNED IN NEXT THREE YEARS	
G. REMAINING DEFICIENCY	
H. GRAND TOTAL	

8. PROJECTS REQUESTED IN THIS PROGRAM:

CATEGORY CODE	PROJECT NUMBER	PROJECT TITLE	COST ($000)	DESIGN START	STATUS COMPLETE
812	10563	NSAW PSAT t	8,800	NOV 08	10%
82710	17872	South Campus Utility Plant	175,900	AUG 08	30%
82710	17781	Campus Chilled Water Back Up	19,100	SEP 08	30%

9. FUTURE PROJECTS:

a.

CATEGORY CODE		PROJECT TITLE	COST ($000)
610	17780	SCADA Extension Ph. 2	5,899
81320	17866	North Campus Utility Plant	206,457
		Primary Substation Generators	19,663

CATEGORY CODE		**PROJECT TITLE**	COST ($000)
610	17780	SCADA Extension Ph. 2	5,869
		Primary Substation Generators	19,562
610	17780	SCADA Extension Ph. 2	5,857
	10563	Mission Support - PSAT	11,556
	17836	South Campus Building Feeders	15,347
	17869	North/South Power Distribution	27,329
		New Boiler Plant	19,521
		Primary Substation Generators	39,042
		North Campus Utility Plant	9,761
	17868	Substation Inter-Ties/Generation Integration Control	2,618
		North South Power Distribution	39,746

10. MISSION OR MAJOR FUNCTION

Agency activities are classified.

11. OUTSTANDING POLLUTION AND SAFETY DEFICIENCIES:

A.	AIR POLLUTION	0
B.	WATER POLLUTION	0
C.	OCCUPATIONAL SAFETY AND HEALTH	0

1. Component NSA/CSS DEFENSE	FY 2010 MILITARY CONSTRUCTION PROJECT DATA		2. Date May 2009
3. Installation and Location NSA, FORT GEORGE G. MEADE, MARYLAND		4. Project Title Mission Support – Perimeter Secure Anti-Terrorism (PSAT)	
5. Program Element	6. Category Code 141	7. Project Number 10563	8. Project Cost ($000) $8,800

9. COST ESTIMATES

Item	U/M	Quantity	Unit Cost	Cost ($000)
PRIMARY FACILITY				4,420
Vehicle Control Barriers and Booths	LS			(4,420)
SUPPORTING FACILITIES				
Demo / Site Improvements				3,509
Paving	LS			(520)
Electrical	LS			(1153)
	LS			(1836)
SUBTOTAL				7,929
CONTINGENCY (5.00%)				396
SUBTOTAL PROJECT REQUEST				8,325
SIOH (5.70%)				475
TOTAL PROJECT COST (ROUNDED)				8,800

DESCRIPTION OF PROPOSED CONSTRUCTION:

The Vehicle Control Point (VCP), determined to be of primary importance by agency security group threat assessment, will be outfitted to comply with current ATFP requirements. Vehicle restraint structures with controls will be provided at all drive lanes. Each lane will be provided with a series of guardrails leading to corresponding vehicle restraint structures. A new over-watch booth will be constructed adjacent to the main restraint barrier and will be suitable for year-round use. Traffic control lights, over speed protection and pole lighting will also be provided. Vehicle rejection facilities will be expanded to lessen impact of rejections on traffic flow.

REQUIREMENT:

This project is required to provide ATFP compliant VCP facilities for NSAW at the security-designated VCP.

CURRENT SITUATION:

Present VCP security services are being provided with substandard facilities. Existing over-watch booths are not environmentally controlled, vehicle restraint structures do not meet current ATFP standards, and lighting in the VCP areas is insufficient.

IMPACT IF NOT PROVIDED:
If this project is not provided, perimeter security at the NSAW VCP campus will not comply with current ATFP standards.

ADDITIONAL:

This project has been coordinated with the installation physical security plan, and all physical security measures are included. All required environmental and ATFP measures are included. An economic analysis has been prepared and utilized in evaluating this project. This project is the most cost effective method to satisfy the requirement.

1. Component NSA/CSS DEFENSE	FY 2010 MILITARY CONSTRUCTION PROJECT DATA		2. Date May 2009
3. Installation and Location NSA, FORT GEORGE G. MEADE, MARYLAND			4. Project Title Mission Support – Perimeter Secure Anti-Terrorism (PSAT)
5. Program Element	6. Category Code 141	7. Project Number 10563	8. Project Cost ($000) $8,800

12. Supplemental Data:

A. Estimated Design Data:

1. Status

(a) Date Design Started:	Jan 09
(b) Percent Completed as of January 2009:	0%
(c) Date Design Complete :	Jul 09
(d) Type of Design Contract:	Design/Bid/Build

2. Basis

(a) Standard or Definitive Design:	No
(b) Date Design was Most Recently Used:	N/A

3. Total Cost (c) = (a)+(b) or (d)+(e) ($000)

(a) Production of Plans and Specifications:	528
(b) All Other Design Costs:	352
(c) Total:	880
(d) Contract:	880
(e) In-House:	
4. Contract Award:	Oct 09
5. Construction Start:	Nov 09
6. Construction Completion:	May 10

/s/ _____

Jeffrey P. Rutt, NSA
Technical Director, I&L

1. Component	FY 2010 MILITARY CONSTRUCTION PROJECT DATA		2. Date
NSA/CSS DEFENSE			May 2009
3. Installation and Location		4. Project Title	
NSA, FORT GEORGE G. MEADE, MARYLAND		SOUTH CAMPUS UTILITY PLANT- Phase 2	
5. Program Element	6. Category Code: 81320	7. Project Number: 17872	8. Project Cost ($000): $175,900

9. COST ESTIMATES

Item	U/M	Quantity	Unit Cost	Cost ($000)
PRIMARY FACILITY	LS			150,086
SOUTH SUBSTATION (115/13.8 KV, 50 MVA)	LS			(23,914)
GENERATING PLANT (13.8 KV, 41.8 MW plant)	LS			(126,172)
SUPPORTING FACILITIES	LS			5,296
WATER, SEWER, GAS	LS			(684)
STEAM AND/OR CHILLED WATER DISTRIBUTION	LS			(175)
PAVING, WALKS, CURBS AND GUTTERS	LS			(508)
STORMWATER MANAGEMENT	LS			(234)
SITE IMPROVEMENTS/DEMOLITION	LS			(1,531)
SECURITY	LS			(2,164)
SUBTOTAL				155,382
AT/FP REQUIREMENTS (2%)				3,108
SUBTOTAL				158,490
CONTINGENCY (5.00%)				7,924
SUBTOTAL PROJECT REQUEST				166,414
SIOH (5.70%)				9,486
TOTAL PROJECT COST (ROUNDED)				175,900
OTHER APPROPRIATIONS (Soil/Hazmat Remediation)	LS			(65)

10. Description of Proposed Construction

Construct a new South Campus Utility Plant to replace existing Substation #2 and to provide a new Power Generation Plant (41.8 MW) with pollution control to replace the existing Dennis Way and Annex power generation plants (combined 16.25 MW.) Supporting facilities include infrastructure for electrical, communications, gas, water and steam distribution, as well as sanitary sewer, paving, walks, curbs, gutters, and storm water management. Security and antiterrorism measures include fencing, access control and alarm systems, cameras, and exterior lighting. Project includes demolition of one substation, two generation plants and their associated fuel tanks and underground utilities.

11. REQUIREMENT: 115/13.8 KV ADEQUATE: None SUBSTANDARD: 115/13.8 KV

PROJECT:

Construct a new 115/13.8 KV South Substation (50MVA) and 41.8 MW Generation Plant to replace existing facilities. (Current Mission.)

REQUIREMENT:

This project is required to upgrade the electrical power distribution system to NSA Headquarters to improve the reliability of the electric infrastructure and ensure rapid, reliable emergency power to support current and future NSA mission needs. This project provides a new 115/13.8 KV South Substation, which replaces the existing antiquated 115/13.8 KV Substation #2. The substation must provide 100% secure and reliable electrical service to critical NSA operations. The project also constructs a 41.8 MW power generation plant, which, in combination with the existing Electrical Power Enhancement Project (EPEP) plant, will provide 54.4 MW of backup power to the NSA mission. The new 41.8 MW generation plant replaces the current Dennis Way and Annex generation plants, with a current combined capacity of 16.25 MW. The new South Substation must be built before demolition of the existing Substation #2, to ensure seamless continuity of the NSA mission. After demolition of Substation #2 and two generator plants, as well as the removal of the abandoned underground utilities, the new generator plant will be built on the site of those facilities. After construction is complete, the existing EPEP switchgear will be removed.

1. Component NSA/CSS DEFENSE	FY 2010 MILITARY CONSTRUCTION PROJECT DATA		2. Date May 2009
3. Installation and Location NSA, FORT GEORGE G. MEADE, MARYLAND			4. Project Title SOUTH CAMPUS UTILITY PLANT – Phase 2
5. Program Element	6. Category Code 81320	7. Project Number 17872	8. Project Cost ($000) $175,900

The long-term objective is to become self-sufficient from an emergency power basis, driven by security and reliability requirements that meet the needs of the NSA mission. The power distribution system should be able to redirect power to buildings to meet the needs resulting from continuously changing mission requirements or unexpected system failure conditions. NSA operations require upgrade to employ state-of-the-art technology advances in power systems' efficiency, safety, maintainability, pollution control, and most importantly, reliability.

CURRENT SITUATION:

The existing Substation #2 was built circa 1960, and cannot provide the 100% reliable power necessary to continue the NSA mission. The existing electrical power distribution network is near the end of its useful life and prone to unplanned power outages. The outages, both power system and weather-induced, are very costly and negatively affect reliability of the power delivery system.

The Dennis Way and Annex generating plants are outdated, inefficient, and do not meet the demand for 100% reliable back-up power generation necessary to continue NSA operations without interruption. Operators and maintainers face greater challenges securing replacement parts, training, and other support for these older systems. Existing systems are not equipped with pollution control devices.

IMPACT IF NOT PROVIDED:

If this project is not provided, NSA's critical operations will continue without assurance of reliable, efficient power to support its needs. Back-up power generation will be less reliable and efficient than is demanded by the NSA mission.

If this project is not provided, the existing facilities will continue to operate, but at a progressively reduced levels of reliability. As mission power requirements continue to increase, any form of power outages will pose a serious threat to the NSA mission.

ADDITIONAL:

This project has been coordinated with NSA/Ft. Meade's physical security plan, and complies with all required physical security and/or combating terrorism measures. Alternative methods of meeting NSA/Ft. Meade's utility requirements have been explored during the development of this project, and this project is the only feasible option to meet those requirements. Typical NSA construction is more complex than a similar project on an average military installation, for several reasons. First, the nature of NSA work mandates very closely scheduled events, with outages and other sensitive work typically occurring on weekends and at night. Second, limited access to controlled facilities during the programming and design phases can lead to unforeseen conditions during construction. Third, access to the installation, clearances for personnel, waiting for escorts, and other daily processes at NSA create additional costs for contractors. Escorts are required for positive control of access to primary and secondary utilities which service critical NSA operational facilities.

12. Supplemental Data:

A. Estimated Design Data:

1. Status

(a) Date Design Started:	Aug 08
(b) Percent Completed as of January 2009:	15%
(c) Date Design Complete:	Mar 10
(d) Type of Design Contract:	Design/Bid/Build

2. Basis

(a) Standard or Definitive Design:	No
(b) Date Design was Most Recently Used:	N/A

3. Total Cost (c) = (a)+(b) or (d)+(e) ($000)

(a) Production of Plans and Specifications:	11,700
(b) All Other Design Costs:	3,300
(c) Total:	15,000
(d) Contract:	15,000
(e) In-House:	
4. Contract Award:	Jul 10
5. Construction Start:	Sep 10
6. Construction Completion:	Jan 14

/s/_____

Jeffrey P. Rutt, NSA
Technical Director, I&L

1. Component	FY 2010 MILITARY CONSTRUCTION PROJECT DATA	2. Date
NSA/CSS DEFENSE		May 2009

3. Installation and Location	4. Project Title
NSA, FORT GEORGE G. MEADE, MARYLAND	NSAW CAMPUS CHILLED WATER BACKUP

5. Program Element	6. Category Code	7. Project Number	8. Project Cost ($000)
	82710	17781	$19,100

9. COST ESTIMATES

Item	U/M	Quantity	Unit Cost	Cost ($000)
PRIMARY FACILITY	LS			15,465
CHILLED WATER STORAGE SYSTEM	LS			(15,465)
SUPPORTING FACILITIES	LS			1,744
ELECTRIC SERVICE	LS			(79)
WATER AND SANITARY SEWER SERVICE	LS			(101)
SITE IMPROVEMENTS (662)/DEMOLITION (22)	LS			(1,564)
SUBTOTAL				17,209
CONTINGENCY (5.00%)				861
SUBTOTAL				18,070
SIOH (5.70%)				1,030
TOTAL PROJECT COST (ROUNDED)				19,100

10. Description of Proposed Construction

Construct a chilled water system to provide back-up cooling capacity for mission critical systems. Supporting facilities include electric service, water, sanitary sewer; and site improvements, including demolition of existing water and sewer piping.

11. REQUIREMENT: 1 System ADEQUATE: None SUBSTANDARD: None

PROJECT:

Construct backup chilled water storage system for the NSAW Campus. (Current Mission)

REQUIREMENT:

This project is required to construct new chilled water storage capacity in NSAW buildings to provide a backup supply of chilled water to mission equipment in the event of a disruption to the buildings' primary chilled water system. During a power failure, primary chilled water systems will not operate, but mission systems, chilled water pumps, and computer room air conditioners (CRAC) will continue to operate because they are supported by Uninterruptible Power Supply (UPS) power. This new chilled water storage capacity will provide "ride-through" capacity during power failures to avoid mission shut-down due to loss of cooling.

CURRENT SITUATION:

The NSAW campus buildings have primary chilled water systems, without backup capability for short-term power disruptions or primary system outages. Power and cooling densities have risen significantly in recent years. The thermal inertia from ambient air in the data center is no longer capable of providing "ride through" cooling during power bumps and primary cooling outages. Current mission systems require tightly controlled ambient room temperatures and in densely equipped areas even minimal temperature fluctuations can cause a mission outage.

1. Component NSA/CSS DEFENSE	FY 2009 MILITARY CONSTRUCTION PROJECT DATA		2. Date May 2009
3. Installation and Location NSA, FORT GEORGE G. MEADE, MARYLAND		4. Project Title NSAW CAMPUS CHILLED WATER BACKUP	
5. Program Element	6. Category Code 82710	7. Project Number 17781	8. Project Cost ($000) $19,100

IMPACT IF NOT PROVIDED:

If funding for this project is not provided the existing facilities will not have an adequate supply of chilled water to keep systems up and running in the event of a major outage.

ADDITIONAL:

This project has been coordinated with NSA/Ft Meade's physical security plan, and complies with all required physical security and/or combating terrorism measures. Alternative methods of meeting NSA/Ft Meade's utility requirements have been explored during the development of this project, and this project is the only feasible option to meet those requirements. Typical NSA construction is more complex than a similar project on an average military installation, for several reasons. First, the nature of NSA work mandates very closely scheduled events, with outages and other sensitive work typically occurring on weekends and at night. Second, limited access to controlled facilities during the programming and design phases can lead to unforeseen conditions during construction. Third, access to the installation, clearances for personnel, waiting for escorts, and other daily processes at NSA create additional costs for contractors. Escorts are required for positive control of access to primary and secondary utilities which service critical NSA operational facilities.

12. Supplemental Data:

A. Estimated Design Data:

1. Status

(a) Date Design Started:	Sep 08
(b) Percent Completed as of January 2009:	15%
(c) Date Design Complete	Aug 09
(d) Type of Design Contract:	Design/Bid/Build

2. Basis

(a) Standard or Definitive Design:	No
(b) Date Design was Most Recently Used:	N/A

3. Total Cost (c) = (a)+(b) or (d)+(e) ($000)

(a) Production of Plans and Specifications	
(b) All Other Design Costs:	1,146
(c) Total:	764
(d) Contract:	1,910
(e) In-House:	1,910
4. Contract Award:	Oct 09
5. Construction Start:	Nov 09
6. Construction Completion:	May 10

/s/ _____

Jeffrey P. Rutt, NSA
Technical Director, I&L

1. COMPONENT NSA/CSS DEFENSE	FY 2010 MILITARY CONSTRUCTION PROGRAM	2. DATE May 2009
3. INSTALLATION AND LOCATION Camp Williams, Utah	4. COMMAND NSA/CSS	5. AREA CONSTRUCTION COST INDEX 1.11

6. PERSONNEL STRENGTH	PERMANENT			STUDENTS			SUPPORTED			TOTAL
	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	
a. AS OF 30 SEP 2007	0	0	0	0	0	0	0	0	0	0
b. END FY 2010	0	0	0	0	0	0	0	0	0	0

7. INVENTORY DATA ($000)

A. TOTAL ACREAGE	120
B. INVENTORY TOTAL AS OF 30 SEP 2007	207,400
C. AUTHORIZED NOT YET IN INVENTORY	121,500
D. AUTHORIZATION REQUESTED IN THIS PROGRAM	800,000
E. AUTHORIZATION INCLUDED IN FOLLOWING PROGRAM	800,000
F. PLANNED IN NEXT THREE YEARS	0
G. REMAINING DEFICIENCY	0
H. GRAND TOTAL	1,928,900

8. PROJECTS REQUESTED IN THIS PROGRAM:

CATEGORY CODE	PROJECT NUMBER	PROJECT TITLE	COST ($000)	DESIGN START	DESIGN COMPLETE
141		Utah Data Center-30MW	800,000	Nov 08	Feb 10

9. FUTURE PROJECTS:

a.

CATEGORY CODE	PROJECT NUMBER	PROJECT TITLE	COST ($000)
141		Utah Data Center- 35MW	800,000

CATEGORY CODE	PROJECT NUMBER	PROJECT TITLE	COST ($000)
None			

10. MISSION OR MAJOR FUNCTION:

NSA/CSS delivers responsive, reliable, effective, and expert Signals Intelligence and Information Assurance products and services, and enables Network Warfare operations to gain a decisive information advantage for the Nation and our allies under all circumstances.

11. OUTSTANDING POLLUTION AND SAFETY DEFICIENCIES:

D. AIR POLLUTION	0
E.WATER POLLUTION	0
F.OCCUPATIONAL SAFETY AND HEALTH	0

DD Form 1390, DEC 76 PREVIOUS EDITIONS MAY BE USED INTERNALLY UNTIL EXHAUSTED

1. Component	FY 2010 MILITARY CONSTRUCTION PROJECT DATA		2. Date
NSA/CSS DEFENSE			May 2009
3. Installation and Location Utah National Guard Facility, Camp Williams, Utah			4. Project Title Utah Data Center-30MW Phase 1
5. Program Element	6. Category Code 141	7. Project Number	8. Project Cost ($000) 800,000

9. COST ESTIMATES

Item	U/M	Quantity	Unit Cost	Cost ($000)
PRIMARY FACILITY	LS			672,103
Building Modular Shells	LS			(28,774)
Mechanical	LS			(124,513)
Electrical	LS			(340,266)
Building Enhancements	LS			(85,143)
Site Preparation	LS			(17,442)
Fire Protection	LS			(2,331)
Building Security (Antiterrorism/Force Protection)	LS			(10,006)
Communications	LS			(5,409)
Commissioning	LS			(18,360)
General Conditions	LS			(39,859)
SUPPORTING FACILITIES	LS			48,715
Visitor Control Center/Perimeter Control	LS			(9,700)
Primary Electric Service	LS			(23,500)
Water, Sewer, and Gas	LS			(1,200)
Site Improvements	LS			(9,515)
Construction Security-Information Assurance	LS			(4,800)
TOTAL CONTRUCTION COST				720,818
Contingency (5%)				36,041
SUBTOTAL				756,859
SIOH (5.70%)				43,141
Total Project Request				800,000
TOTAL PROJECT COST (ROUNDED)				800,000

10. DESCRIPTION OF PROPOSED CONSTRUCTION: Construct 30 MW technical load data center to include modular structural components, finished flooring (both raised and administrative), ceiling, lighting, electrical, generators and associated air pollution control systems, mechanical, ventilation, and fire suppression. Also, these funds will provide utilities to include building electrical service, chilled water systems, communications, water, sanitary sewer and storm water management. Installed infrastructure will support 65MW technical load data center capacity for future expandability. The design is to be capable of Tier 3 reliability. Power density will be appropriate for current state-of-the- art high-performance computing devices and associated hardware architecture. U.S. Government and local support services will be provided. Security measures for this project include, but are not limited to a Visitor Control Center provided for data center personnel which is separate from the interim Visitor Control Center for construction personnel; perimeter security; and access control facilities. Physical and technical security of the construction site will be assured.

This project will be designed in accordance with the Uniform Federal Accessibility Standards (UFAS)/Americans with Disabilities Act (ADA) Accessibility Guidelines, Antiterrorism Force Protection (ATFP) standards and Unified Facilities Criteria (UFC) design standards.

1. Component NSA/CSS DEFENSE	**FY 2010 MILITARY CONSTRUCTION PROJECT DATA**		2. Date May 2009
3. Installation and Location Utah National Guard Facility, Camp Williams, Utah		4. Project Title Utah Data Center-30MW Phase 1	
5. Program Element	6. Category Code 141	7. Project Number	8. Project Cost ($000) 800,000

11. REQUIREMENT: 30 MW ADEQUATE: None SUBSTANDARD: None

PROJECT: Construct a 30 MW technical load data center and infrastructure for 65MW technical load data center capacity.

REQUIREMENT: This project is required to provide a 30MW technical load data center and infrastructure for 65MW technical load data center capacity to support mission. The project will include the following:

(1) Site
- (a) Facility design goal will be to the highest LEED standard attainable within available resources and will include: sustainable site characteristics, water and energy efficiency, materials and resources criteria, and indoor environmental quality.
- (b) Mechanical and electrical plants are to be housed in separate structures to prevent transfer of noise and vibrations to the data centers

(2) Facilities
- (a) Data center technical load of 30 MW distributed across raised floor are the design parameters for the facility.
- (b) The infrastructure support and administrative areas will be designed to support state-of-the-art high-performance computing devices and associated hardware architecture.
- (c) Slab floor loading of approximately 1500 pounds per square foot (PSF)
- (d) Enhancements to the building for IT and security include construction as a sensitive compartmented information facility (SCIF), as well as, requirements related to Antiterrorism Force Protection (ATFP).

(3) Structural
- (a) Technical load will be distributed across the data center areas.
- (b) Seismic considerations are to be made in the facility design.
- (c) Data center areas are to have depressed concrete slab construction with a load bearing capacity of 1500 pounds per square foot (PSF).
- (d) Facility command and control contained in a central modular office component.
- (e) Facility will have a loading dock with vehicle bays, three (3) of which are to be equipped with dock levelers sized to handle tractor trailers.

(4) Electrical
- (a) Technical load capacity is 30 MW with loads distributed evenly across the data center areas.
- (b) Supervisory Control and Data Acquisition (SCADA) to either PDU level or distribution panel level if required
- (c) Dedicated substation for each critical UPS.
- (d) UPS and generator backup for facility systems.
- (e) Generators will include Selective Catalytic Reduction (SCR) pollution control equipment, chemical storage tanks and feed system.

(5) Mechanical
- (a) Chilled water system to support both air and water cooled equipment.
- (b) Each data center area is to have air cooled and water cooled equipment with Computer Room Air Handlers (CRAHs) located external to the raised floor area. The piping headers / systems are to be designed to accommodate future expansion.
- (c) Back-up capability for mechanical equipment.
- (d) Cooling Towers
- (e) Air distribution redundancy for CRAHs.
- (f) Fire Protection - Double interlocked pre-action fire protection system for all electrical and mechanical support spaces.
- (g) Wet pipe for administrative and raised floor areas per DOD standards.

(6) Security systems
- (a) Video surveillance
- (b) Intrusion detection
- (c) Access control system

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1. Component NSA/CSS DEFENSE	**FY 2010 MILITARY CONSTRUCTION PROJECT DATA**		2. Date May 2009
3. Installation and Location Utah National Guard Facility, Camp Williams, Utah		4. Project Title Utah Data Center Phase 1	
5. Program Element	6. Category Code 141	7. Project Number	8. Project Cost ($000) 800,000

CURRENT SITUATION:
No current data processing capability exists at the planned location.

IMPACT IF NOT PROVIDED:
Current and anticipated mission requirements will not be met without completion in the specified time frame.

ADDITIONAL: This project has been coordinated with the installation physical security plan, and all physical security measures are included. All required environmental and ATFP measures are included. An economic analysis has been prepared and utilized in evaluating this project. This project is the most cost effective method to satisfy the requirement.

12. SUPPLEMENTAL DATA:

(a) Status	
(i) Date Design Started	Nov 2008
(ii) Percent Completed as of Feb 2009	35%
(iii) Date Design Completed	Feb 2010
(iv) Type of Design Contract:	Integrated Design-Bid-Build
(b) Basis	
(i) Standard or Definitive Design:	No
(ii) Date Design was Most Recently Used:	N/A
(c) Contract Award	May 2010
(d) Construction Start	Jun 2010
(e) Construction Complete	Mar 2013

/s/_____
Jeffrey P. Rutt, P.E.
Technical Director, I&L

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