

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

PAGE OF PAGES

1 13

2. AMENDMENT/MODIFICATION NO.

114

3. EFFECTIVE DATE

See Block 16C

4. REQUISITION/PURCHASE REQ. NO.

5. PROJECT NO. (If applicable)

ISSUED BY

CODE

John F. Kennedy Space Center, NASA
Procurement Office – ODIN – OP-OS-ODIN
Kennedy Space Center, FL 32899

7. ADMINISTERED BY (If other than Item 6)

CODE

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and Zip Code)

OAO Corporation
7375 Executive Place
Seabrook, MD 20706-2278

(x)

9A. AMENDMENT OF SOLICITATION NO.

9B. DATED (SEE ITEM 11)

10A. MODIFICATION OF CONTRACT/ORDER NO.

NAS5-98144/CC90303B

10B. DATED (SEE ITEM 13)

December 1, 2001

CODE

FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning ___ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).

X

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

NAS5-98144 Contract Clause C.7 Technology Refreshment Process and FAR Clause 52.212-4 Contract Terms and Conditions-Commercial Items, (c) Changes

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, X is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Stennis Space Center --- ODIN SERVICES

Technology Infrastructures: Incorporation of 13 SWRs Previously Approved Utilizing Fast Track Approval Process

Change in Delivery Order Price: \$42,610.29 (INCREASE)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)

Keith L. Spencer
Sr. Contracts Manager

16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)

Penelope A. Ebright
Contracting Officer

15B. CONTRACTOR/OFFEROR

15C. DATE SIGNED

16B. UNITED STATES OF AMERICA

16C. DATE SIGNED

Keith L. Spencer
(Signature of person authorized to sign)

2 APR 2004

BY *Penelope A. Ebright*
(Signature of Contracting Officer)

4/5/2004

NSN 7540-01-152-8070

30-105

STANDARD FORM 30 (Rev. 10-83)

Prescribed by GSA
FAR (48 CFR) 53.243

THIS EDITION UNUSABLE

1. In accordance with Master Contract NAS5-98144, C.7, Technology Refreshment Process, the technology refreshment services referenced below is hereby incorporated into this Delivery Order at a fixed price of \$42,610.29. These infrastructure upgrades were previously approved through the "Fast Track" approval process.

SWR #	Subject	Amount
85FH LB41 FD Rev 2	Install Cat3 wiring to be used for DataNet connectivity to support EMCS in B1022	\$1,261.61
CM00 0066 00 Rev 2	Install T1AX circuit cards in B1201 and B2040 so that T1 circuits can be extended to B2040	\$3,516.91
DS72 C100 00	Install fiber and Level 7 wires from trailers to B4010 and B3226 for Boeing	\$1,581.54
NATC 0408 00	Extend (6) ISDN lines from B1201 to B2603 fo4 Special Boat Unit 22	\$752.64
NJ00 L4AB 00	Install and relocate classified and unclassified Cat5e wire and duplex multimode fiber cables in room 210 and room 269 of B1002 in support of NAVOCEANO networks	\$6,384.31
NJ00 L4AC 00	Install Cat5e network connectivity to support desktop services in B1002 for NAVOCEANO	\$4,264.84
NJ00 L4AD 00	Install fiber loop equipment and power supply to extend DS3 from room 116 in B1201 to room 147 in B1210	\$4,363.13
NM00 4R51 00	Install Cat5e wiring and 4-strand fiber cable to support CNMOC networks in room 33347G in B1100S	\$1,231.99
P203 4212 F6	Upgrade all memory, flash and code for existing network switches running Supervisor 1 and II modules in Cisco 6500 series switches and upgrade Supervisor module, memory and code for all Cisco 400 series switches for NASA	\$4,298.51
P203 4217 P1	Install GFE NetContext server in B1201 room 116 for NASA	\$588.23
P203 4217 P2	Install 100-pair type 600B tinned copper cable from room 128 to room 116 in B1201 to support T1 circuits for NASA	\$1,741.89
PT0A 7R1E ST	Install new Cat5e wiring to support computers and printers in B2205 for MSS	\$3,777.81
WS00 PAC3 00	Install fiber cabling into new EMT conduit from room C35 to A10 and D18 in B1005 to support NRLDET classified security plan	\$8,846.88
	TOTAL	\$42,610.29

2. SWR 85FH LB41 FD Rev 2

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling (IEEE 802.3, EIA/TIA Building Wiring Standards, National Electric Code, and Fire Protection Code, as

applicable), and equipment installation) and materials necessary to install Cat3 wiring to be used for DataNet connectivity to support EMCS in B1022 as outlined in OAO proposal dated February 25, 2004. Installation will include testing, labeling, and configuration documentation (red line drawings).

- a. The contractor shall be responsible for performance of the following tasks:
 - (1) Install (1) GFE ISU128 modem in B1022.
 - (2) Install (1) GFE ISU128 modem in B2201.
 - (3) Test and label GFE ISU128 modems at both buildings.
 - (4) Update drawings
 - (5) Install (1) 4-pair Cat3 wire from mechanical room back to room 231 in B1022.
 - (6) Install (1) biscuit jack inside of enclosure.
 - (7) Terminate on existing 66 block in room 231.
 - (8) Test and label at both ends.
 - b. The contractor shall provide the following material:
 - (1) 200 feet of Cat3 white plenum wire (CMP-00424-MAX-3U)
 - (2) 4 each Caddy J-hooks (184873)
 - (3) 1 each Suttle biscuit jack (060885)
 - c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval (March 12, 2004).
3. **CM00 0066 00 Rev 2**
- The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabbling and equipment installation) and materials necessary to install T1AX circuit cards in B1201 and B2040 so that T1 circuits can be extended to B2040 as outlined in OAO proposal dated February 11, 2004.
- a. The contractor shall be responsible for performance of the following tasks:
 - (1) Install (3) T1AX circuit cards in existing UMC chassis in B1201 and (3) T1AX circuit cards in existing UMC chassis in B2040 so that (3) T1 circuits can be extended to B2040.
 - (2) Make cross connects in B1201 and B2040 to activate circuits when catalog orders have been received.
 - (3) Test and label circuits at both ends.
 - b. The contractor shall provide the following material:
 - (1) 6 each T1AX circuit cards (0110-0193) Advance Fibre
 - c. Schedule: The completion of this effort shall be (4) four weeks after the receipt of Fast Track approval (February 27, 2004).
4. **DS72 C100 00**
- The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabbling and equipment installation) and materials necessary to install fiber in B4010 and level 7 wires in B3226 to support Boeing move from trailers to B4010 and B3226 as outlined in OAO proposal dated December 8, 2003.

- a. The contractor shall be responsible for performance of the following tasks:

B4010

- (1) Install (1) multimode 4-fiber fanout cable from room 203 to room 204.
- (2) Install (1) Panduit box equipped with (1) 4-fiber insert in each room.
- (3) Terminate fiber into ST connectors and place on fiber inserts.
- (4) Test and label fiber in both locations.

B3226

- (5) Install (24) level7 solid copper cords from Boeing network hub to visipatch panel.
- (6) Install (1) 112-pair visipatch panel and terminate (24) wires installed in item (1) above.

- b. The contractor (and its subcontractor) shall provide the following material:

B4010

- (1) 75 feet of multimode 4-fiber fanout cable (370-648FDDI-04)
- (2) 8 each P2020C-C-125 multimode ST connectors (170290)
- (3) 8 each cool cure consumables (142172)
- (4) 2 each Panduit boxes (205872)
- (5) 2 each IMO II PCB singlegang faceplate (148025)
- (6) 2 each IMO II PCB 4-fiber insert (173628)

B3226

- (7) Avaya 24 each level 7 solid copper cords (CPC3482-05F30)
- (8) Avaya 1 each Avaya 112-pair visipatch (542990)

- c. Schedule: The completion of this effort shall be (4) four weeks after the receipt of Fast Track approval (January 16, 2004).

5. NATC 0408 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to extend (6) ISDN lines from B1201 to B2603 to be used for video teleconference system for Special Boat Unit 22 as outlined in OAO proposal dated December 8, 2003.

- a. The contractor shall be responsible for performance of the following tasks:

- (1) Place cross connects from Bell South to existing UMC unit in room 106 of B1201.
- (2) Place cross connects from existing UMC unit in B2603 to station cables feeding jacks in B2603.
- (3) Test circuits from jacks provided by SBT22 back to B1201.
- (4) Update cable plant.

- b. No materials will be provided for this effort.

- c. Schedule: The completion of this effort shall be (6) six weeks after the receipt Fast Track approval (December 18, 2003)

6. NJ00 L4AB 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment

installation) and materials necessary to install and relocate classified and unclassified Cat5e wiring and duplex multimode fiber cables in room 210 and room 269 of B1002 in support of NAVOCEANO networks as outlined in OAO proposal dated December 10, 2003

a. The contractor shall be responsible for performance of the following tasks:

B1002 – Room 210 - Unclassified

- (1) Install (2) Cat5e and (1) duplex multimode fiber to (2) cubicles.
- (2) Relocate (2) Cat5e wires and (1) duplex fiber from north wall of cubicle to south wall.

Room 269 - Classified

- (1) Relocate (1) Classified jack from one cubicle to another cubicle.
- (2) Install (2) Cat5e and (1) multimode fiber to (2) cubicles.
- (3) Install Panduit from classified locations back to network hub room 295.

Room 269 - Unclassified

- (1) Install (2) Cat5e wires and (1) duplex multimode fiber cable to (5) locations.

b. The contractor shall provide the following material:

- (1) 4,000 feet of Belden Cat5e Blue plenum wire (CMP-00424BEL-5u-06)
- (2) 2,000 feet of Corning MIC duplex multimode fiber cable (370-949-FDDI-02)
- (3) 1,000 feet of Belden Cat5e Red wire (CM-00424BEL-5U-03)
- (4) 36 each P2020C-C-125 multimode ST connectors (170290)
- (5) 10 each Panduit LD10 raceway (131155)
- (6) 10 each Panduit LD5 raceway (131156)
- (7) 9 each IMO II PCB dual Cat jack (148031)
- (8) 9 each IMO II PCB blank modules (148027)
- (9) 9 each IMO II PCB duplex fiber inserts (162979)
- (10) 9 each IMO II PCB singlegang faceplate (148025)
- (11) 7 each Panduit boxes (201336)
- (12) 2 each Caddy clips (157703)
- (13) 1 pack Panduit TEES (142140)
- (14) 1 pack Panduit inside corners (131130)
- (15) 1 pack Panduit end caps (131132)
- (16) 1 pack Panduit right angles (131126)

c. Schedule: The completion of this effort shall be (4) four weeks after receipt of Fast Track approval (January 16, 2004).

7. NJ00 L4AC 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install Cat5e network connectivity to support desktop services in B1002 for NAVOCEANO networks as outlined in OAO proposal dated January 22, 2004.

a. The contractor shall be responsible for performance of the following tasks:

Installation shall include testing, labeling and configuration documentation (red line drawings).

b. The contractor shall provide the following material:

- (1) 1,000 feet of Belden PVC Cat5e red wire (CM-00424BEL-5U-03)
- (2) 1,000 feet of Belden Plenum Cat5e blue wire (CMP-00424BEL-5U-06)
- (3) 500 feet of Belden Plenum Cat5e white wire (CMP-00424BEL-5U)
- (4) 20 each Panduit LD5 (131156)
- (5) 16 each Panduit MINICOM executive faceplates (174002)
- (6) 9 each Panduit MINICOM 5E jack (212940) red
- (7) 7 each Panduit MINICOM 5E jack (212941) blue
- (8) 7 each Panduit MINICOM 5E jack (540002) green
- (9) 7 each Panduit outlet boxes (201336)
- (10) 3 each Panduit MINICOM 5E jack (212936) gray
- (11) 2 each caddy clips (157703)
- (12) 1 pack Panduit TEES (142138)
- (13) 1 pack Panduit inside corners (131142)
- (14) 1 pack Panduit end caps (131140)
- (15) 1 pack Panduit right angles (131138)

- c. Schedule: The completion of this effort shall be (4) four weeks after receipt of Fast Track approval (February 11, 2004).

8. NJ00 L4AD 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install fiber loop equipment and power supply to extend DS3 circuit from room 116 in B1201 to room 147 in B1210 for NAVOCEANO/NMCI to support NMCI network services as outlined in OAO proposal dated December 24, 2003.

- a. The contractor shall be responsible for performance of the following tasks:
Installation shall include testing, labeling, and configuration document (red line drawings)
- b. The contractor shall provide the following material:
 - (1) 1 each Marconi 48 volt power supply (V6CAB) 3-Amp
 - (2) 6 each Marconi GMT fuses
 - (3) 1 each ADC rack mount chassis (FRM-RAW08B)
 - (4) 1 each ADC DS3 unprotected adapter kit for 8-position rack mount chassis (FRM-DS3KIT-8UN)
 - (5) 1 each 2-meter duplex ADC singlemode fiber jumper (FPC2-SPFC/PCT-S-2M)
- c. Schedule: The completion of this effort shall be (4) four weeks after receipt of Fast Track approval (January 30, 2004).

9. NM00 4R51 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install Cat5e wiring and 4-strand fiber cable to support CNMOC networks in room 33347G in B1100S as outlined in OAO proposal dated February 5, 2004.

- a. The contractor shall perform the following tasks:

- (1) Install (2) Cat5e wires from room 33347G to room 33347A in existing conduit.
- (2) Install (1) 4-strand multimode fiber cable from room 33347G to room 33347A in existing conduit.
- (3) Install Panduit raceway below the ceiling in room 33347G for the Cat5 and fiber.
- (4) Test and label Cat5 wiring at both ends.
- (5) Test and label fiber at both ends.
- (6) Provide OAO with redline drawing with jack numbers and location

b. The contractor shall provide the following material:

- (1) 160 feet of Belden plenum Cat5e blue wire (CMP-00424BEL-5U-06)
- (2) 80 feet of Corning 4-strand MIC fiber cable (370-949-FDDI-04)
- (3) 20 each Panduit LD5 raceway (131156)
- (4) 2 each Ortronics IMO II PCB blank module (148027)
- (5) 1 each Ortronics IMO II PCB dual gang faceplate (187805)
- (6) 1 each Ortronics IMO II PCB dual Cat5 jack (248945)
- (7) 1 each Ortronics 4-fiber insert (173628)
- (8) 1 each Panduit dual gang deep box (203852)

c. Schedule: The completion of this effort shall be (4) four weeks after receipt of Fast Track approval (February 27, 2004).

10. P203 4212 F6 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to upgrade all memory, flash and code for existing network switches running Supervisor I and II modules in Cisco 6500 series switches and upgrade Supervisor module, memory and code for all Cisco 400 series switches for NASA as outlined in OAO proposal dated October 27, 2003

a. The contractor shall perform the following tasks:

- (1) Upgrade the following switches 1201S-CSC1, 1201-MSCI-CSC1, 8301-CSC1, and 8110-CSC1 by replacing the current supervisory card with a SUP IV running the latest supported IOS.
- (2) Upgrade the following switches 2204-CSC1, 4995-CSC1, 1110-CSC1, 1100N-CSC1, 4010- CSC1, 1100M-CSC1, and 1110-CSC2 by installing 128MB of RAM and upgrading to the latest supported CAT OS.
- (3) Upgrade the following routers SSCTuna-RTR and SSC Shark-RTR by installing 128MB of RAM and upgrading to the latest supported code.
- (4) Ensure all 4000 and 4500 series switches are running the latest supported IOS code.
- (5) Ensure all 6500 series Sup2 cards are running the latest supported IOS code.
- (6) Ensure all 6500 series Sup1 cards are running the latest supported CAT code
- (7) Ensure all routers to include SSC-Tuna RTR, SSC-Shark RTR, Uranus, and SSC-RAS are running the latest supported code.
- (8) Update databases
- (9) Update network drawing
- (10) Update network security plan

b. NASA will provide the following material:

- (1) 5 each GFE Cisco WS-X4515 Sup 4 cards

- (2) 5 each GFE Cisco MEM-C4K-FLD 128M
- (3) 8 each GFE Cisco MEM-S1-128M
- (4) 5 each GFE Cisco WS-X6K-MSFC2 KIT
- (5) 8 each GFE Cisco MEM-C6K-FLC64M
- (6) 3 each GFE Cisco MEM-C6K-ATA-1-6M

- c. Schedule: The completion of this effort shall be (10) ten weeks after receipt of Fast Track approval (November 3, 2003).

11. P203 4217 P1

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install GFE NetContext server in B1201 room 116 for NASA as outlined in OAO proposal dated November 4, 2003

- a. The contractor shall perform the following tasks:
 - (1) Mounting 1 GFE NetContext Server into rack in Building 1201 Room 116A.
 - (2) Wiring of the GFE NetContext Server.
 - (3) Install Cat6 station cords
 - (4) Update Network Drawing
- b. The contractor shall provide the following material:
 - (1) 2 each 14 Cat6 line cords (MM14-AV7E-04)
- c. NASA will provide the following material:
 - (1) 1 each GFE NetContext Server
 - (2) 1 each GFE Rack Kit for NetContext Server
- d. Schedule: The completion of this effort shall be (4) four weeks after receipt of Fast Track approval (December 2, 2003).

12. P203 4217 P2

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install 100-pair type 600B tinned copper cable from room 128 to room 116 in B1201 to support T1 circuits for NASA as outlined in OAO proposal dated November 8, 2003

- a. The contractor shall perform the following tasks:
 - (1) Install (1) 100-pair copper cable from room 128 to room 116.
 - (2) Install (4) each 66M1-50 connector blocks on existing backboard in room 128 and terminate on blocks.
 - (3) Install (1) 89F1F-100 connector block in room 116 and wire wrap 100-pair copper cable on block.
 - (4) Install J-hooks in ceiling to support cable where there is no overhead cable tray.
 - (5) Test and label cable at both ends.
- b. The contractor shall provide the following material:
 - (1) 180 feet of 100-pair type600B tinned copper cable (N-010022WAA)
 - (2) 10 each Caddy J-hooks (184873)
 - (3) 4 each S66M1-50 connector blocks (005815)

(4) 1 each 89F1F-100 connector block (080112)

c. Schedule: The completion of this effort shall be (2) two weeks after receipt of Fast Track approval (December 18, 2003).

13. PT0A 7R1E ST

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install new Cat5e wiring to support computers and printers in B2205 for MSS as outlined in OAO proposal dated December 17, 2003

a. The contractor shall perform the following tasks:

- (1) Install Caddy J-hooks above ceiling to hold new wiring.
- (2) Install Caddy clips at each location that wiring is coming out of the wall.
- (3) Install Panduit raceway and Panduit outlet boxes at each cubicle.
- (4) Install (2) Cat5e plenum wires to (1) location in room 157.
- (5) Install (2) Cat5e plenum wires to (2) locations in room 159.
- (6) Install (2) Cat5e plenum wires to (4) locations in room 157E.
- (7) Install (2) Cat5e plenum wires to (1) location in room 151.
- (8) Install (2) Cat5e plenum wires to (1) location in room 152.
- (9) Install (2) Cat5e plenum wires to (1) location in room 158.
- (10) Install (2) Cat5e plenum wires to (1) location in room 150A.
- (11) Relocate (2) Cat5e plenum wires at (2) locations in room 150.
- (12) Relocate (2) Cat5e plenum wires to (1) location in room 155.
- (13) Terminate one end of wiring on existing 110 wiring blocks in room 207.
- (14) Terminate other end on dual Cat5 jacks at all locations.
- (15) Test and label wiring at both ends.
- (16) Provide OAO with redline drawing showing jack numbers and locations.

b. The contractor shall provide the following material:

- (1) 4,000 feet of plenum Belden Cat5e blue wire (CMP-00424BEL-5U-06)
- (2) 40 each Caddy J-hooks (184873)
- (3) 21 each IMO II PCB blanks (148027)
- (4) 11 each IMO II PCB singlegang plates (148025)
- (5) 11 each IMO II PCB dual Cat5 jacks (248945)
- (6) 10 each Panduit LD5 (131156)
- (7) 10 packs caddy clips (157703)
- (8) 4 each Panduit outlet boxes (201336)
- (9) 3 packs 110C-4 connectors for 110 wiring blocks (073039)
- (10) 1 pack Panduit inside corners (131130)
- (11) 1 pack Panduit right angles (131126)
- (12) 1 each IMO II PCB USOC jack (148035)

c. Schedule: The completion of this effort shall be (4) four weeks after receipt of Fast Track approval (January 29, 2004).

14. WS00 PAC3 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install fiber cabling into new EMT conduit from room C35 to A10 and D18 in B1005 to support NRLDET classified security plan as outlined in OAO proposal dated October 22, 2003

a. The contractor shall perform the following tasks:

Room D18

- (1) Install (1) 12-strand multimode fiber cable in new conduit placed by other contractor from C35 to room D18.
- (2) Install (1) $\frac{3}{4}$ " x 4' x 4' piece of plywood in room D18.
- (3) Relocate existing stereo speaker in room D18 in order to install plywood.
- (4) Install (2) 100A3 LIU equipped with (2) 10A panels and (12) ST couplers.
- (5) Terminate fiber into multimode ST connectors and place in 100A3 LIUS.
- (6) Relabel existing 12-strand fiber cable to unclassified.
- (7) Label new 12-strand fiber cable classified.

Room A10

- (1) Move existing shelf that holds LGX panel up so that the new 400A2 lockable LIU can be placed beside the existing 400A2 lockable LIU.
- (2) Install (1) new 400A2 lockable LIU equipped with 1000ST panels and (36) ST couplers and place new unclassified label.
- (3) Install (1) 36-strand multimode fiber cable in new conduit placed by other contractor from room A10 to room C35.
- (4) Relocate existing 36-strand fiber into the new 400A2 LIU and label as unclassified.
- (5) Terminate new 36-strand multimode fiber into ST connectors and place in existing 400A2 lockable LIU that presently feeds buildings B1000, B1007 and B1008.
- (6) Put new classified label on existing 400A2 lockable LIU.

Room C35

- (1) Install (1) $\frac{3}{4}$ " x 4' x 4' sheet of plywood on wall behind door that comes into C35 to mount new 400A2 LIU.
- (2) Install (1) 400A2 lockable LIU equipped with 1000ST panels and (48) ST couplers on plywood.
- (3) Relocate existing 12-strand multimode fiber cable from LGX panel that is going to D18 into the last 12 ports of the 400A2 LIU and relabel unclassified.
- (4) Relocate existing 36-strand multimode fiber cable from existing LGX panel that is going to room A10 and place in the first 36-ports of 400A2 lockable LIU that was installed above in item (2).
- (5) Terminate new 12-strand fiber that was installed in item (1) under room D18 into multimode ST connectors and place into existing LGX panel where old 12-strand fiber was removed.
- (6) Terminate new 36-strand fiber that was installed from A10 into ST connectors and place in existing Classified LGX panel.
- (7) Test new cable.
- (8) Provide OAO with red line drawing showing route of new fiber cable.

b. The contractor shall provide the following material:

- (1) 400 feet of Corning MIC multimode fiber cable (370-947-FDDI-12)
- (2) 350 feet of Corning MIC multimode fiber cable (370-947-FDDI-36)
- (3) 96 each P2020C-C-125 multimode ST connectors (170290)
- (4) 96 each C2000A multimode ST couplers (088987)
- (5) 96 each cool cure consumables (142172)
- (6) 2 each Avaya 400A2 lockable LIU (134146)

- (7) 2 packs of 1000ST panels for 400A2 LIU (106730)
- (8) 2 each Avaya 10A panel for 100A3 LIU (088980)
- (9) 2 each Avaya 100A3 LIU (146050)
- (10) 1 sheet of ¾" x 4' x 8' plywood.

c. Schedule: The completion of this effort shall be (4) four weeks after receipt of Fast Track approval (December 2, 2003).

15. Part II "Contract Administration Data", Item 4, is revised as indicated below to incorporate the increase of \$42,610.29 for this infrastructure upgrade:

ESTIMATED TOTAL (Contract Item 4) (through Mod 114)

Ordered Seats and Services	\$ 10,552,446.48
Catalog Actuals	\$ 658,182.03
Specialized Services Actuals	\$ 224,346.72
Infrastructure upgrades	\$ 3,125,955.83
Fast Track Mods Authorized	\$ -
Subtotal	\$ 14,560,931.06
Less credits	\$ (2,625.55)
Less retainage not earned	\$ (33,905.56)
Subtotal	\$ 14,524,399.95
Seats/service levels projected through 11/30/04	\$ 3,075,752.64
Total Estimated Delivery Order Value	\$ 17,600,152.59

16. Part V "Technology Infusion (Infrastructure Upgrades)", Item 2 is modified to include the subject infrastructure upgrades. The signed date and completion date will be completed in a future infrastructure upgrade modification.

Mod	Description	Date Signed	Date Completed	Amount
114	85FH LB41 FD Rev 2 Install Cat3 wiring to be used for DataNet connectivity to support EMCS in B1022			\$1,261.61
114	CM00 0066 00 Rev 2 Install T1AX circuit cards in B1201 and B2040 so that T1 circuits can be extended to B2040			\$3,516.91
114	DS72 C100 00 Install fiber and Level 7 wires from trailers to B4010 and B3226 for Boeing			\$1,581.54
114	NATC 0408 00 Extend (6) ISDN lines from B1201 to B2603 fo4 Special Boat Unit 22			\$752.64
114	NJ00 L4AB 00 Install and relocate classified and unclassified Cat5e wire and duplex multimode fiber cables in room 210 and room 269 of B1002 in support of NAVOCEANO networks			\$6,384.31
114	NJ00 L4AC 00 Install Cat5e network connectivity to support desktop services in B1002 for NAVOCEANO			\$4,264.84
114	NJ00 L4AD 00 Install fiber loop equipment and power supply to extend DS3 from room 116 in B1201 to room 147 in B1210			\$4,363.13
114	NM00 4R51 00 Install Cat5e wiring and 4-strand fiber cable to support CNMOC networks in room 33347G in B1100S			\$1,231.99
114	P203 4212 F6 Upgrade all memory, flash and code for existing network switches running Supervisor 1 and II modules in Cisco 6500 series switches and upgrade Supervisor module, memory and code for all Cisco 400 series switches for NASA			\$4,298.51
114	P203 4217 P1 Install GFE NetContext server in B1201 room 116 for NASA			\$588.23
114	P203 4217 P2 Install 100-pair type 600B tinned copper cable from room 128 to room 116 in B1201 to support T1 circuits for NASA			\$1,741.89
114	PT0A 7R1E ST Install new Cat5e wiring to support computers and printers in B2205 for MSS			\$3,777.81
114	WS00 PAC3 00 Install fiber cabling into new EMT conduit from room C35 to A10 and D18 in B1005 to support NRLDET classified security plan			\$8,846.88

17. Payment Schedule: Invoicing and Payment for this modification will be made in accordance with Master Contract NAS5-98144, FAR 52.212-4: Commercial Items (May 1997) (Modified).
18. Reporting requirements: The contractor shall provide monthly status reports to the SSC Alternate DOCOTR, with a copy to the DOCO. These reports shall include, as a minimum, installation progress, and potential problem areas.
19. In consideration of the modification agreed to herein as complete equitable adjustment for the changes set forth, the Contractor hereby releases the Government from any and all liability under this delivery order for further equitable adjustments attributable to such facts or circumstances giving rise to these changes.
20. All other terms and conditions of this Delivery Order remain unchanged and in full force and effect.