

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

PAGE OF PAGES

1 18

2. AMENDMENT/MODIFICATION NO.

97

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, 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

Incorporate 18 Technology Infrastructures Upgrades previously approved via "Fast Track" process

Change in Delivery Order Value: \$119,152.02 (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)

26 Sep 2003

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

10/1/03

10-01-152-8070

30-105

STANDARD FORM 30 (Rev. 10-83)

Prescribed by GSA
FAR (48 CFR) 53.243

US 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 \$119,152.02 These infrastructure upgrade

SWR #	Subject	Date of FT Approval	Amount
10AF 0045 00	Install GFE Cisco router in B2201 and install GFE 56K DSU/CSU circuit card for router in B2204 and B1201	9/10/03	\$1,096.19
5400 3N42 00	Install GFE Patch Link server in room 174, B1201 and apply patches to support NASA	8/8/03	\$4,268.90
5400 3N43 00	Install fiber cable in B1100 to support VITS for NASA	7/7/03	\$2,281.04
5400 3N45 00	Install (1) 48-strand and (1) 24-strand of singlemode fiber cable across room 116, B1201 to support network connections for NASA	8/8/03	\$8,297.12
5400 3N46 00 Rev 1	Install fiber transmitter and receiver to provide SSC cable TV to B8306 for NASA	7/29/03	\$9,856.47
5400 3N47 00	Install Cat6 and Cat3 wiring to support floor boxes under conference table, room 311, B1100. The Cat6 wiring will be used for network connections and Cat3 wiring will be used for OIS loops.	9/10/03	\$1,615.38
5400 3N48 00	Install GFE Cisco Catalyst 6513 13-slot network hub in B1105, room F601 for NASA and replace existing Cisco 6509 9-slot network hub	9/5/03	\$4,067.21
5400 3N50 00	Install fiber cable between B3201 and B3202 to support networks for MSS	8/8/03	\$6,912.51
5400 3N51 00	Install GFE Cisco 6509 network hub in B2104 for NASA to replace two existing Fore 3810 network hubs	9/5/03	\$9,561.68
5400 3N52 00	Install new hard drivers in (20) systems for LINUX training in B1210 for NASA	7/29/03	\$4,444.51
5400 3N53 00	Install Cat6 and Cat3 wiring and jacks in NASA Center Director and NASA Legal offices in B1100 and remove old wiring once cutover to new wiring is accomplished	9/10/03	\$9,982.30
5400 3N54 00	Attendance at Aprisma Spectrum training for level 1 and 2 combination courses in for Spectrum Core Administration and Spectrum Advance Core and Applications in Manchester NH to support NMC	8/8/03	\$4,448.51
SWR #	Subject	Date of FT Approval	Amount

COTC 3NEX 00	Install Cat3 and Cat5 wiring to support telephone and network for NEXCOM in B1100 for Navy Exchange	9/10/03	\$1,976.36
DB00 0305 02 Rev3	Test singlemode and multimode cables and install duplex singlemode fiber in B1100; terminate fiber in B3203 and upgrade connections between B1100 and B3203 for NASA	7/17/03	\$4,292.02
LSTC 0001 00	Install (1) 5-pair copper cable from B5100 to new Hazmat building to support emergency telephone for LMTO	8/8/03	\$1,384.40
NJ00 F2CN 01	Install singlemode fiber cable from B1201 to B1205 and B1210 to support networks for NAVOCEANO	9/10/03	\$18,527.15
P203 3N40 00	Install and configure GFE SurfControl sever for NASA	7/17/03	\$1,256.87
P203 3N41 00	Procure and install Net SatisFAXtion software on SE2 computer in support of NASA pilot for Fax Server	8/8/03	\$4,437.33
	TOTAL		119,152.02

2. SWR 10AF 0045 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) necessary to install GFE Cisco router in B2201 and install GFE 56K DSU/CSU circuit card for router in B2204 and B1201 as identified in OAO proposal dated July 31, 2003.

a. The contractor shall perform the following tasks:

- (1) Install a GFE Cisco router in building 2201's wiring closet
- (2) Provide for a 56k frame relay wide area link
- (3) Update network drawings
- (4) Update network databases
- (5) Install jack in room 111 of B2201 for frame relay circuit.
- (6) Place cross connects at B1201 and B2201 to extend circuit between buildings.
- (7) Install (1) (GFE) OCU DP circuit card in each existing channel bank in B2204 and B1201.

b. NASA will provide the following material:

- (1) 1 each Cisco router
- (2) 1 each Cisco 56k DSU/CSU Card for a router (WIC-1DSU/CSU-56K4)
- (3) 3 years of maintenance for the router (cont-snt-26xx) in yearly increments

c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

3. SWR 5400 3N42 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) necessary to install GFP PatchLink server in room 174, B1201 and apply patches to support NASA as identified in OAO proposal dated July 14, 2003.

- a. The contractor shall perform the following tasks:
 - (1) Rack mount GFE PatchLink server in room 174 of B1201.
 - (2) Bring system on-line and have it scanned by IT Security.
 - (3) Identify & apply patches/fixes that will be needed per IT Security scan.
 - (4) Future patches will be taken care of when NASA issues new SWR for maintenance & support.
 - (5) Bring up in lab environment for testing. Lab will include Windows 2000 with various quarter loads and Windows XP.
 - (6) Test deployment of patches first in lab environment then to pilot group.
 - (7) Test several systems with PatchLink prior to deployment to make sure it works.
- b. No contractor provided materials are required for this effort
- c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

4. 5400 3N43 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 cable in B1100 to support VITS for NASA as identified in OAO proposal dated June 30, 2003.

- a. The contractor shall perform the following tasks:

B1100

- (1) Install (1) 4-fiber multimode fanout cable from room 239B to room 241 in B1100.
- (2) Install (1) faceplate equipped with 4-ST fiber insert in both rooms.
- (3) Install (1) Panduit box in rooms 239B and 241 and install faceplate and insert in each.
- (4) Terminate fiber into ST connectors and place fiber into inserts.
- (5) Test and label fiber at both ends.

B1201

- (1) Install (1) 6-fiber multimode fanout cable within room 128.
- (2) Install (2) LIU's equipped with 10A panels and ST couplers on wall next to other LIU's in room 128.
- (3) Install (1) 6002B fiber shelf in existing equipment cabinet in room 128.
- (4) Terminate fiber into ST connectors and place fiber into LIU's and 6002B fiber shelf.
- (5) Test and label fiber at both ends.

- b. The contractor shall provide the following material:

- (1) 75 feet of multimode plenum 4-fiber fanout cable (370-648-FDDI-04)
- (2) 30 feet of multimode plenum 6-fiber fanout cable (370-648-FDDI-06)
- (3) 20 each cool cure consumables (142172)
- (4) 20 each P2020C-C-125 multimode ST connectors (118974)
- (5) 12 each C2000A multimode ST couplers (088987)
- (6) 6 each velcro ties
- (7) 2 each Avaya 10A panels (088980)

- (8) 2 each Avaya 100A3 LIU (146050)
- (9) 2 each IMO II PCB 4-fiber inserts (173628)
- (10) 2 each Panduit outlet boxes (207082)
- (11) 2 each IMO II PCB singlegang faceplates (148025)
- (12) 2 each 1-meter ST/SC multimode fiber jumper (152011)
- (13) 2 each 1-meter ST/ST multimode fiber jumper (123350)
- (14) 1 each 600B2 with 12ST multimode couplers with cover & tray (179749)
- (15) 1 each 2-meter ST/ST multimode fiber jumper (139055)

c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

5. 5400 3N45 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 (1) 48 strand and (1) 24-strand of singlemode fiber cable across room 116, B1201 to support network connections for NASA as identified in OAO proposal dated July 30, 2003.

a. The contractor shall perform the following tasks:

- (1) Install (1) 48-strand and (1) 24-strand singlemode fiber cable from one side of room 116 to the other side.
- (2) Install (1) LGX equipped with 1000ST panels and ST couplers in existing equipment racks on both sides of the room.
- (3) Terminate fiber into ST connectors and place in LGX panels on both sides of room 116.
- (4) Test and label fiber at both ends.

b. The contractor shall provide the following material:

- (1) 144 each cool cure consumables (142172)
- (2) 144 each P3020A-C-125 singlemode ST connectors (157475)
- (3) 144 each C3000A-2 singlemode ST couplers (105263)
- (4) 60 feet of Corning plenum 48-strand singlemode MIC cable (370-948-SMODE-48)
- (5) 60 feet of Corning plenum 24-strand singlemode MIC cable (370-948-SMODE-24)
- (6) 2 each LST1U-072/7 termination shelf (106722)
- (7) 2 each 1000ST panels (106730)

c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

6. 5400 3N46 00 Rev 1

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 transmitter and receiver to provide SSC cable TV to B8306 for NASA as identified in OAO proposal dated July 14, 2003.

a. The contractor shall perform the following tasks:

- (1) Install (1) fiber receiver in room 120 in B8306.
- (2) Install (1) 8-port tap in room 120 in B8306.
- (3) Install (2) angle polish ST connectors on existing fiber in room 120 of B8306.
- (4) Install (2) angle polish ST connectors on existing fiber in room 116 of B1201.
- (5) Make short singlemode fiber jumper with angle polish ST connectors.

- (6) Test with OAO to make sure fiber is working between B1201 and B8306
- (7) Install (1) fiber transmitter in room 174 in B1201.
- (8) Install fiber jumpers in B1201 and B8306 to complete video connection between B1201 and B8306.
- (9) Test and label both transmitter and receiver by building location.
- (10) Update video drawings

b. The contractor shall provide the following material:

- (1) 8 each P3060A-C-125 angle ST connectors (95-200-53)
- (2) 8 each cool cure consumables (142172)
- (3) 7 each theft-proof terminators (021946)
- (4) 3 each RG6 "F" connectors (103779)
- (5) 2 each 3-meter SCA pigtail FP/3M/SM/S/SCA
- (6) 2 each 1-meter SCA pigtail FP/1M/SM/S/SCA
- (7) 1 each Blonder-Tongue 8-port 11dB video tap (217901)
- (8) 1 each BNI TR2200-750(38)-N-R17-SCA fiber receiver
- (9) 1 each BNI TR2100-7705-860-R17-SCA fiber transmitter

c. Schedule: The completion of this effort shall be (6) six weeks after "Fast Track" approval.

7. 5400 3N47 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 Cat6 and Cat3 wiring to support floor boxes under conference table, room 311, B1100 as identified in OAO proposal dated September 5, 2003.

a. The contractor shall perform the following tasks:

- (1) Install (2) Cat6 and (3) Cat3 wires into new floor boxes under conference table in room 311 of B1100.
- (2) Cat6 wiring to run to room 306H and Cat3 wiring will run to communications room inside of room 303A.
- (3) Terminate Cat6 on existing Visipatch panels in room 306H.
- (4) Terminate Ca3 wiring on new 110 wiring block.
- (5) Test and label all wiring on both ends.
- (6) BOE-TEL will provide red line drawing to LMIT so that communications drawings can be updated.
- (7) Work will be done after hours due to asbestos above ceiling.

b. The contractor shall provide the following material:

- (1) 500 feet of Avaya 2071 Cat6 wiring (CMP-00424MAX-7U-06)
- (2) 500 feet of Avaya Cat3 wire (CMP-00424MAX-3U)
- (3) 12 each Avaya T568A/B Cat3 jacks (240706) (White)
- (4) 4 each Avaya T568A/B Cat6 jack (246746) (Green)
- (5) 4 each M14LE262 faceplate (208606) (White)
- (6) 1 each Avaya 100-pair terminal block (154069)
- (7) 1 pack 110C-4 connectors for 100-pair block (073039)

c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

8. 5400 3N48 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 GFE Cisco Catalyst 6513 13-slot network hub in B1105, room F601 for NASA and replace existing Cisco 6509 9-slot network hub as identified in OAO proposal dated August 15, 2003.

- a. The contractor shall perform the following tasks:
 - (1) Install (1) 7' aluminum equipment rack.
 - (2) Install (1) 6" vertical cable trough on equipment rack.
 - (3) Install (1) 336-pair Visipatch panel.
 - (4) Install and terminate (48) Cat6 solid copper cables from new network hub to existing Visipatch panels.
 - (5) Replace current Cat6509 in building 1105 F-wing with a Cat6513.
 - (6) Install IOS version of OS on Supervisor 2 Card for new Cat6513.
 - (7) Remove the 16 Gig port card for current Cat6509 and place in Cat6513.
 - (8) Store current 6509 for future use.
 - (9) Connect Cat6513 to the same uplink as the Cat6509.
 - (10) Update databases
 - (11) Update network drawing
 - (12) Update network security plan
- b. The contractor shall provide the following material:
 - (1) 48 each Avaya level 7 solid copper cords (108793-969-06-25)
 - (2) 6 each Avaya Visipatch distribution rings (532421)
 - (3) 5 packs 110C-4 connectors (073039)
 - (4) 1 each Avaya 336-pair Visipatch (532210)
 - (5) 1 each Avaya Visipatch horizontal duct (539650)
 - (6) 1 each double sided vertical trough (166031)
 - (7) 1 each CPI 19" x 84" aluminum equipment rack (086047)
- c. NASA will provide the following material:
 - (1) 1 each GFE Cisco Catalyst 6513
 - (2) 2 each GFE Cisco 2500W AC Power supply for the Catalyst 6513
 - (3) 2 each GFE Cisco power Cord 250VAC 16A Twist Lock NEMA L6-20 Plug, US
 - (4) 1 each GFE Cisco Catalyst 6000 Supervisor Engine-2
 - (5) 4 each GFE Cisco Catalyst 6500 10/100/1000, RJ-45, X-BAR cards
 - (6) 1 each GFE Cisco Catalyst 6500 Switch Fabric Module 2
- d. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

9. 5400 3N50 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 cable between B3201 and B3202 to support networks for MSS as identified in OAO proposal dated July 28, 2003.

- a. The contractor shall perform the following tasks:
 - (1) Install (1) 18" x 18" 8" weatherproof junction box over the existing (2) 4" conduits that are located on the west side of B3201.
 - (2) Install (1) 4" conduit from weatherproof junction box up wall and place electrical LB and sleeve thru wall.

- (3) Install (2) 100A LIU's equipped with 10A panels and ST couplers in room 102 of B3201 on existing plywood backboard.
 - (4) Install (2) 100A LIU's equipped with 10A panels and ST couplers in room 211B of B3202 on existing plywood backboard.
 - (5) Install (1) 6mm/6sm fiber cable from room 102 in B3201 to room 211B in B3202.
 - (6) Terminate fiber into ST connectors and place in LIU's in both buildings.
 - (7) Install (1) duplex multimode fiber cable from LIU in room 102 of B3201 to room 101.
 - (8) Install (1) outlet box and raceway down from drop ceiling to computer in room 101.
 - (9) Install (1) duplex fiber insert in outlet box in room 101 and room 102.
 - (10) Test and label fiber cable at both buildings.
 - (11) Test and label fiber cable that was placed in item (8) above in B3201.
- b. The contractor shall provide the following material:
- (1) 1,200 feet of Corning Altos fiber cable 6mm/6sm (370-342-HYBLST-6/6)
 - (2) 70 each Corning duplex singlemode fiber cable (370-948-SMODE-02)
 - (3) 28 each cool cure consumables (142172)
 - (4) 12 each P3020A-Z-125 ST singlemode connectors (157475)
 - (5) 12 each C3000A-2 singlemode ST couplers (105263)
 - (6) 16 each P2020C-C-125 multimode ST connectors (118974)
 - (7) 12 each C2000A multimode ST couplers (088987)
 - (8) 4 each Avaya 10A panel for LIU 100A (088980)
 - (9) 4 each Avaya 100A3 LIU (146050)
 - (10) 4 each IMO II PCB blank modules (148027)
 - (11) 2 each IMO II PCB fiber duplex insert (162979)
 - (12) 2 each 4" rigid pipe
 - (13) 2 each 4" rigid coupling
 - (14) 2 each 4" locknut
 - (15) 2 each 4" bushing
 - (16) 2 each Panduit outlet boxes (207082)
 - (17) 2 each MIL-S3112 100Base-FX (ST) media converter (237949)
 - (18) 2 each 2-meter duplex multimode fiber jumpers (139055)
 - (19) 2 each IMO II PCB singlegang faceplate (148025)
 - (20) 1 each Panduit LD5 raceway (131156)
 - (21) 1 each 18" x 18" x 8" weatherproof junction box
- c. Schedule: The completion of this effort shall be (6) six weeks after "Fast Track" approval.

10. 5400 3N51 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 GFP Cisco 6509 network hub in B2104 for NASA to replace two existing Fore 3810 network hubs as identified in OAO proposal dated August 15, 2003.

- a. The contractor shall perform the following tasks:
- (1) Install one GFE Cisco Cat6509 in 2104
 - (2) Install 3 each 48 port 10/100 cards in Cat6509
 - (3) Install 1 Supervisor Card in Cat6509
 - (4) Provide a GigaBit Ethernet Uplink for the new Cat6509 to 2201-CSC1
 - (6) Move all users to the new Cat6509 in 2104
 - (7) Remove 2104-ES1 and 2104-ES2 from B1105
 - (8) Update databases

- (9) Update network drawing
- (10) Update network security plan
- (11) Install (1) 7' aluminum equipment rack in room 114H.
- (12) Install (2) 6" vertical wiring troughs on rack.
- (13) Install overhead cable tray to support the equipment rack.
- (14) Install (2) Visipatch panels in room 114H.
- (15) Install (144) Cat6 solid copper cables from new 6509 to Visipatch panels.
- (16) Install Panduit outlet box with fiber inserts for fiber feeding hubs.
- (17) Install 6-strand singlemode fiber cable from room 114H to room 115.
- (18) Install (2) LIU's in room 115 and (2) in room 114H equipped with ST couplers.
- (19) Once new hub has been installed and cutover remove 4-strand multimode fiber cable from Panduit boxes in room 114H and room 115 and place in LIU's.
- (20) Test and label fiber.

b. The contractor shall provide the following material:

- (1) 144 each Avaya Cat6 solid copper cables (CPC3482-04F30)
- (2) 110 feet of Corning singlemode MIC plenum fiber cable (370-948-SMODE-06)
- (3) 20 each Velcro ties
- (4) 15 packs of 110C4 connectors for Visipatch panel (073039)
- (5) 12 each cool cure consumables (142172)
- (6) 12 each P3020A-C-125 singlemode ST connectors (157475)
- (7) 12 each C3000A-2 singlemode ST couplers (105263)
- (8) 12 each C2000A-2 multimode ST couplers (088987)
- (9) 12 each Avaya Visipatch distribution rings (532421)
- (10) 4 each 100A LIU (146050)
- (11) 4 each 10A panel for LIU (088980)
- (12) 2 each Avaya 336 pair Visipatch (532210)
- (13) 2 each Avaya Visipatch horizontal duct (539650)
- (14) 2 each double sided vertical through (166031)
- (15) 1 each CPI 12" wall angle support (034158)
- (16) 1 each CPI 12" cable runway (034636)
- (17) 1 each CPI 19" x 84" aluminum equipment rack (086047)
- (18) 1 each 2-meter ST/SC singlemode fiber jumper (152037)
- (19) 1 each 2-meter ST/ST singlemode fiber jumper (151987)
- (20) 1 each 5-meter ST/SC singlemode fiber jumper (12039)

c. NASA will provide the following material:

- (1) 1 each GFE Cisco Catalyst 6509
- (2) 2 each GFE Cisco 2500W AC Power supply for the Catalyst 6509
- (3) 2 each GFE Cisco power Cord 250VAC 16A Twist Lock NEMA L6-20 Plug, US
- (4) 1 each GFE Cisco Catalyst 6000 Supervisor Engine-1A
- (5) 4 each GFE Cisco Catalyst 6500 10/100 WS-X6348-RJ-45
- (6) 2 each GFE Cisco GBIC-LX

d. Schedule: The completion of this effort shall be (10) ten weeks after "Fast Track" approval and completion of SWR 5400 3N48 00.

11. 5400 3N52 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 new hard drives in (20) systems for LINUX training in B1210 for NASA as identified in OAO proposal dated July 24, 2003.

- a. The contractor shall perform the following tasks:
 - (1) Remove existing hard drives from (20) systems in IFMP training room #2 in B1210.
 - (2) Install new hard drives in the (20) systems and configure them so that they can be booted from CD prior to hard disk boot.
 - (3) Place all (20) systems on an isolated network.
 - (4) Test each system to make sure they can be booted with CD.
 - (5) Reconfigure all systems by reinstalling original hard drives with original configuration.
 - (6) Test each system to make sure that each will work with SSC main network.
- b. The contractor shall provide the following material:
 - (1) 20 each Western Digital Caviar XL 20 GB EIDE ATA/100 7200RPM hard drives
- c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

12. 5400 3N53 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 Cat6 and Cat3 wiring and jacks in NASA Center Director and NASA Legal offices in B1100 and remove old wiring once cutover to new wiring is accomplished as identified in OAO proposal dated August 8, 2003.

- a. The contractor shall perform the following tasks:
 - (1) Install (2) Cat6 plenum wires to (18) locations in the NASA Director and NASA legal services area on the 3rd floor of B1100 and terminate on Cat6 jacks.
 - (2) Install (1) Visipatch panel in room 345.
 - (3) Install (6) Visipatch distribution rings on item (2) above.
 - (4) Install (1) Visipatch horizontal duct on item (2) above.
 - (5) Install (2) Avaya Cat6 jacks at (18) locations.
 - (6) Terminate (36) Cat6 plenum wires on item (2) above.
 - (7) Install (2) Cat3 wires to (4) locations in old Law Library that will become legal offices. This area has never had phone or network jacks.
 - (8) Terminate (4) Cat3 wires on existing blocks in room 345.
 - (9) Terminate new Cat3 jacks on existing Cat3 wiring so that biscuit jacks can be removed and put in same faceplate with new Cat6 jacks.
 - (10) Test and label Cat6 and Cat3.
 - (11) Provide OAO with redline drawing showing locations of jacks and jack numbers.
 - (12) Remove all old Cat3 network wiring when LMIT cuts everyone over to new Cat6 wiring.
- b. The contractor shall provide the following material:
 - (1) 8,000 feet of Avaya 2071 plenum Cat6 wire (CMP-00424MAX-7U-06) Blue
 - (2) 1,000 feet of Avaya plenum Cat3 wire (CMP-00424MAX-3U) White
 - (3) 100 each Velcro ties
 - (4) 50 each caddy J-hooks (184873)
 - (5) 36 each Avaya T568A/B Cat6 jack (246746) Green
 - (6) 36 each Avaya white faceplate blanks (146674)
 - (7) 20 each D-rings

- (8) 19 each M14L-262 faceplate (197613)
- (9) 18 each 14 feet Cat6 station cords (MM14-AV7E-04) Green
- (10) 18 each 25 feet Cat6 station cords (MM25-AV7E-04) Green
- (11) 10 each Avaya Cat3 jacks (240705)
- (12) 6 each Avaya Visipatch distribution rings (532421)
- (13) 4 packs 110C-4 connectors (073039)
- (14) 1 each Avaya 336-pair Visipatch panel (532210)
- (15) 1 each Avaya Visipatch horizontal duct (539650)
- (16) 1 each Panduit box (207089)

c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

13. 5400 3N54 00

The contractor shall provide the labor necessary to attend Aprisma Spectrum training for Level 1 and 2 combination courses for Spectrum Core Administration and Spectrum Advance Core and Applications in Manchester NH to support NMC as identified in OAO proposal dated July 30, 2003.

- a. The contractor shall perform the following tasks:
 - (1) 1 each system administration person to attend Network Aprisma Spectrum training in Portsmouth, NH
- b. No materials are required for this effort
- c. Schedule: This effort shall be completed by September 12, 2003.

14. COTC 3NEX 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 Cat3 and Cat5 wiring to support telephones and networks for NEXCOM in B1100 for Navy Exchange as identified in OAO proposal dated August 14, 2003.

- a. The contractor shall perform the following tasks:
 - (1) Install (3) Cat3 wires to (6) Cat3 jacks in room S-170 back to room N-170D of B1100.
 - (2) Install (2) Cat5 wires to (2) Cat5 jacks in store room where NEXCOM will install network hub.
 - (3) Install (2) Panduit outlet boxes and raceway to hold Cat3 and Cat5 jacks in store room.
 - (4) Test and label Cat3 and Cat5 jacks.
 - (5) Provide red line drawing showing jack numbers and jack locations to LMIT so that drawings can be updated.
 - (6) Relocate T1 circuit from room S180B to S170 area in B1100.
 - (7) Relocate DSL circuit from room S180B to S170 area in B1100 that connects to trailer.
 - (8) LMIT telephone technician will make new cross connects to activate circuit at new location.
- b. The contractor shall provide the following material:
 - (1) 500 feet of Avaya Cat3 plenum wire (CMP-00424MAX-3U) white

- (2) 30 feet of Belden Cat5 plenum wire (CMP-00424BEL-5U-06) blue
- (3) 5 each IMO II PCB blank module (148027)

c. Schedule: The completion of this effort shall be (2) two weeks after "Fast Track" approval.

15. DB00 0305 02 Rev 3

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 test singlemode and multimode cables and install duplex singlemode fiber in B1100; terminate fiber in B3203 and upgrade connections from 10Mbps to 100 Mbps between B1100 and B3203 for NASA as identified in OAO proposal dated June 28, 2003.

a. The contractor shall perform the following tasks:

- (1) Upgrade NDBC circuit from 1201 to 3203 to 100Mbps Full Duplex
- (2) Install a new 100Mbps circuit from 1201 to building 1100 room 339A
- (3) Ensure these two circuits terminate on different port cards of the middle router.
- (4) Ensure spanning tree is running and that the circuit to 3203 is the primary circuit.
- (5) Update drawings and provide copy to NASA Engineer and NDBC Engineer
- (6) Update databases.

B1100

- (1) Test (1) multimode and (1) singlemode fiber jumpers from room 339A to room 241.
- (2) Replace (1) multimode ST connector in room 339A.
- (3) Label fiber jumpers at both ends.
- (4) Install (1) MILAN MIL-S-3414 15 transceiver in room 339A.
- (5) Install (2) Panduit deep outlet boxes in room 241. One will be used for the multimode fiber jumper and the other one for the singlemode fiber jumper.
- (6) Install (2) Panduit deep outlet boxes in room 339A inside of equipment cabinet. One will be used for the multimode fiber jumper and the other one for the singlemode fiber jumper.
- (7) Install (1) dual fiber insert in the Panduit deep outlet box labeled multimode in room 241 and place the duplex multimode fiber jumper from room 339A into fiber insert.
- (8) Install (2) dual fiber inserts in the Panduit deep outlet box labeled singlemode in room 241 and place (2) singlemode fiber jumpers from room 339A into fiber inserts.
- (9) Install (1) dual fiber insert in the Panduit deep outlet box labeled multimode in room 339A and place the duplex multimode fiber jumper from room 241 into the fiber insert.
- (10) Install (2) dual fiber inserts in the Panduit deep outlet box labeled singlemode in room 339A and place the (2) duplex singlemode fiber jumpers from room 241 into the fiber insert.
- (11) Provide (1) singlemode fiber jumper to **OAO** to install from Panduit deep outlet box labeled singlemode in equipment cabinet in room 339A up to fiber transceiver.
- (12) Provide (1) duplex singlemode fiber jumper to **OAO** to install in room 241 to connect to fiber back to B1201.
- (13) Provide (1) duplex singlemode fiber jumper to **OAO** to install in room 116 of B1201 to connect to fiber to B3203.

B3203

- (1) Terminate (8) singlemode fibers into ST connectors and place in LIU in room 123.
- (2) Terminate (8) singlemode fibers into ST connectors and place in LGX panel in room 308.
- (3) Test and label at both ends.

- (4) Provide (1) Milan MIL-S3413-15 fiber transceiver to OAO to install in equipment cabinet in room 308.
- (5) Provide (1) duplex singlemode fiber jumper to OAO to install from fiber transceiver to LGX panel and connect to fiber pair from B1100.

b. The contractor shall provide the following material:

B1100

- (1) 80 feet of Corning duplex singlemode fiber cable (370-948-SMODE-02)
- (2) 6 each IMO II PCB fiber inserts (169279)
- (3) 6 each cool cure consumables (142172)
- (4) 4 each IMO II PCB blank module (148027)
- (5) 4 each Panduit deep outlet boxes (207082)
- (6) 4 each IMO II PCB singlegang faceplates (148025)
- (7) 2 each 1 meter singlemode ST/SC fiber jumpers (152036)
- (8) 2 each 2 meter singlemode ST/ST fiber jumpers (151987)
- (9) 1 each Milan MIL-S3413-15 10/100Base-TX to 100Base-FX SC SMF

B3203

- (1) 16 each cool cure consumables (142172)
- (2) 16 each P3020A-Z-125 singlemode ST connectors (157475)
- (3) 16 each C3000A-2 singlemode ST couplers (105263)
- (4) 2 each 1 meter singlemode ST/SC fiber jumpers (152036)
- (5) 2 each 2 meter singlemode ST/ST fiber jumpers (151987)
- (6) 1 each Milan MIL-S3413-15 10/100Base-TX to 100Base-FX SC SMF

c. Schedule: The completion of this effort shall be (6) six weeks after "Fast Track" approval.

16. LSTC 0001 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 (1) 5-pair copper cable from B5100 to new Hazmat bulding to support emergency telephone for LMTO as identified in OAO proposal dated May 22, 2003.

a. The contractor shall perform the following tasks:

- (1) Install (1) 5-pair service wire thru existing conduit between B5100 and Hazmat building.
- (2) Install (1) 6-pair protector in B5100 and (1) on "H" fixture where existing weatherproof box is locate and ground to an approved ground.
- (3) Terminate 5-pair wire on 6-pair protectors at both locations.
- (4) Pull back (1) 4-pair inside telephone wire from box located on the outside of door and terminate it on 6-pair protector inside of B5100.
- (5) Terminate 4-pair on top of 5-pair installed item (1) above.
- (6) Install (1) 4-pair telephone wire from 6-pair protector up to weatherproof box and terminate on existing jack.
- (7) Test and label both ends of cable.

b. The contractor shall provide the following material:

- (1) 400 feet of 5-pair service wire (F-05P22DAF)
- (2) 40 feet of #6 ground wire
- (3) 2 each 6-pair station protector (177930)

- c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

17. NJ00 F2CN 01

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 singlemode fiber cable from B1201 to B1205 and B1210 to support networks for NAVOCEANO as identified in OAO proposal dated August 15, 2003.

- a. The contractor shall perform the following tasks:

B1201 to B1205

- (1) Install (1) 12-strand singlemode fiber cable from room 116 in B1201 to room 108 in B1205.
- (2) Install (2) 100A LIU's in room 108 in B1205.
- (3) Install (2) 10A panels equipped with (12) C3000A-2 couplers in (2) 100A LIU's that were installed in item (2) above.
- (4) Install (1) pack of 1000ST panels in existing LGX in room 116 in B1201.
- (5) Terminate fiber into singlemode ST connectors and connect to C3000A-2 couplers in room 108 in B1205.
- (6) Terminate fiber into singlemode ST connectors and connect to C3000A-2 couplers in room 116 of B1201.
- (7) Test and label fiber in B1201 and B1205.

B1201 to B1210

- (1) Install (1) 96-strand singlemode fiber cable from room 116 in B1201 to new addition of B1210.
- (2) Install (1) LGX equipped with A3000 couplers and 1200ST panels in existing 19" equipment rack in room 116 of B1201 and the other LGX in B1210 on rack furnished by customer.
- (3) Terminate fiber into singlemode ST connectors and connect to A3000 couplers in LGX panel in new room of B1210.
- (4) Terminate fiber into singlemode ST connectors and connect to A3000 couplers in LGX panel in room 116 of B1201.
- (5) Test and label fiber in B1201 and B1210.

- b. The contractor shall provide the following material:

B1201 to B1205

- (1) 800 feet of Corning 12-strand singlemode fiber (370-342-ASMODELST-12)
- (2) 24 each cool cure consumables (142172)
- (3) 24 each P3020A-C-125 singlemode ST connectors (157475)
- (4) 24 each C3000A-2 singlemode ST couplers (157475)
- (5) 2 each Avaya 10A panels (088980)
- (6) 2 each Avaya 100A3 LIU (146050)
- (7) 1 each 1000ST panels (106730)

B1201 to B1210

- (1) 1700 feet of Corning 96-strand singlemode fiber (370-342-ASMODE-96)
- (2) 192 each cool cure consumables (142172)
- (3) 192 each P3020A-C-125 singlemode ST connectors (157475)
- (4) 192 each A3000 singlemode ST couplers (184326)
- (5) 2 each LST1U-144/9 termination shelf (172178)

(6) 2 each 1200ST panels (178743)

c. Schedule: The completion of this effort shall be (8) eight weeks after "Fast Track" approval.

18. P203 3N40 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) necessary to install and configure GFE SurfControl server for NASA as identified in OAO proposal dated July 2, 2003.

a. The contractor shall perform the following tasks:

- (1) Install (1) GFE rack-mount server in room 116 of B1201 and configure for SurfControl software.
- (2) Remove SurfControl Software from SE2 seat and install and configure SurfControl software on server.
- (3) Install and configure Microsoft SQL Server 2000.
- (4) Import existing SurfControl database to new server.
- (5) Configure server for remote access via Timbuktu product, restricting access via IP address to NASA-specified list.
- (6) Create network drawing describing the connectivity of the new equipment into the site network.
- (7) Install system administration patches to new system as required.
- (8) Deactivate old system and notify Debra Rushing when complete.

b. No materials are required for this effort.

c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

19. P203 3N41 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 procure and install Net SatisFAXtion software on SE2 computer in support of NASA pilot for Fax Server as identified in OAO proposal dated July 29, 2003.

a. The contractor shall perform the following tasks:

- (1) Purchase and install Net SatisFAXtion software and fax card from FaxBack, Inc. into existing SE2 seat provided by NASA.
- (2) Install Windows 2000 server including patches, office suite for document conversion and hardening server.
- (3) Package fax software client for IDS web page for client installs. (Outlook fax address extension, Email attacher, and faxability for non windows clients).
- (4) Create user accounts for non-windows clients on the fax server to support those users.
- (5) Test sending/receiving faces from different systems.

b. The contractor shall provide the following material:

- (1) Net SatisFAXtion Small Business Package (FL1001)
 - 2 Fax Port Licenses
 - Unlimited Users
 - FAXability Browser-Based Fax Client

- (2) E-mail Gateway for SMTP/POP3 (FS2017)
- (3) Mainpine RockForce DUO (FW1402)
 - NET SatisFAXtion Certified Fax Hardware
 - 2 Analog Fax Ports on a Single Card w/DTMF Routing Capable
 - PCI 3.3V Slot Configuration
 - 3 Year Manufactures Warranty
 - 1 Year 24 Hour Swap-Out
- (4) 12 month Software Support Agreement (SS1005)
 - Online Knowledge Base Access
 - Unlimited Technical Support
 - Software Updates

c. Schedule: The completion of this effort shall be (4) four weeks after "Fast Track" approval.

20. Part II "Contract Administration Data", Item 4, is revised as indicated below to incorporate the increase of \$119,152.02 for these infrastructure upgrades:

ESTIMATED TOTAL (Contract Item 4) (through Mod 97)

Ordered Seats and Services	\$ 7,856,849.22
Catalog Actuals	\$ 481,597.49
Specialized Services Actuals	\$ 9,900.00
Infrastructure upgrades	\$ 2,529,972.03
Fast Track Mods Authorized	\$ -
Subtotal	\$ 10,878,318.74
Less credits	\$ (2,625.55)
Less retainage not earned	\$ (94,456.36)
Subtotal	\$ 10,781,236.83
Seats/service levels projected through 11/30/04	\$ 5,764,041.81
Total Estimated Delivery Order Value	\$ 16,545,278.64

21. 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 No.	Description	Date Signed	Date Completed	Amount
97	10AF 0045 00 Install GFE Cisco router in B2201 and install GFE 56K DSU/CSU circuit card for router in B2204 and B1201			\$1,096.19
97	5400 3N42 00 Install GFE Patch Link server in room 174, B1201 and apply patches to support NASA			\$4,268.90
97	5400 3N43 00 Install fiber cable in B1100 to support VITS for NASA			\$2,281.04
97	5400 3N45 00 Install (1) 48-strand and (1) 24-strand of singlemode fiber cable across room 116, B1201 to support network connections for NASA			\$8,297.12
97	5400 3N46 00 Install fiber transmitter and receiver to provide SSC cable TV to B8306 for NASA			\$9,856.47
97	5400 3N47 00 Install Cat6 and Cat3 wiring to support floor boxes under conference table, room 311, B1100. The Cat6 wiring will be used for network connections and Cat3 wiring will be used for OIS loops.			\$1,615.38
97	5400 3N48 00 Install GFE Cisco Catalyst 6513 13-slot network hub in B1105, room F601 for NASA and replace existing Cisco 6509 9-slot network hub			\$4,067.21
97	5400 3N50 00 Install fiber cable between B3201 and B3202 to support networks for MSS			\$6,912.51
Mod No.	Description	Date Signed	Date Completed	Amount

97	5400 3N51 00 Install GFE Cisco 6509 network hub in B2104 for NASA to replace 2 existing Fore 3810 network hubs			\$9,561.68
97	5400 3N52 00 Install new hard drivers in (20) systems for LINUX training in B1210 for NASA			\$4,444.51
97	5400 3N53 00 Install Cat6 and Cat3 wiring and jacks in NASA Center Director and NASA Legal offices in B1100 and remove old wiring once cutover to new wiring is accomplished			\$9,982.30
97	5400 3N54 00 Attendance at Aprisma Spectrum training for level 1 and 2 combination courses in for Spectrum Core Administration and Spectrum Advance Core and Applications in Manchester NH			\$4,448.51
97	COTC 3NEX 00 Install Cat3 and Cat5 wiring to support telephone and network for NEXCOM in B1100 for Navy Exchange			\$1,976.36
97	DB00 0305 02 Rev3 Test singlemode and multimode cables and install duplex singlemode fiber in B1100; terminate fiber in B3203 and upgrade connections between B1100 and B3203 for NASA			\$4,292.02
97	LSTC 0001 00 Install (1) 5-pair copper cable from B5100 to new Hazmat building to support emergency telephone for LMTO			\$1,384.40
97	NJ00 F2CN 01 Install singlemode fiber cable from B1201 to B1205 and B1210 to support networks for NAVOCEANO			\$18,527.15
97	P203 3N40 00 Install and configure GFE SurfControl sever for NASA			\$1,256.87
97	P203 3N41 00 Procure and install Net SatisFAXtion software on SE2 computer in support of NASA pilot for Fax Server			\$4,437.33

22. 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).
23. 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.
24. 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.
25. All other terms and conditions of this Delivery Order remain unchanged and in full force and effect.