

AMENDMENT OF SOLICITATION/ MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 7
2. AMENDMENT/MODIFICATION NO. 1547/ F47	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY CODE		7. ADMINISTERED BY (If other than Item 6) CODE	

NASA Space Station Program Office
Johnson Space Center
Attn: BG/Carol S. Neeley
Houston, TX 77058

APPROVED  JSC PROCUREMENT OFFICER 9/25/07 DATE

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

 The Boeing Company
 Attn: HB6-10/ISS Contract Management
 13100 Space Center Blvd
 Houston TX 77059-3556

CODE	FACILITY CODE
9A. AMENDMENT OF SOLICITATION NO.	9B. DATED (SEE ITEM 11)
X 10A. MODIFICATION OF CONTRACT/ORDER NO. NAS15-10000	10B. DATED (SEE ITEM 13) 1-13-95

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.(x)

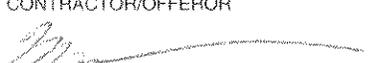
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Article I.8 Changes—Cost Reimbursement (Deviation)(FAR 52.243-2)(AUG 1987) Alternate V (APR 1984)
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return 3 copies to the issuing office.

14. description of amendment/modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

(See continuation pages)

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) Michael A. Dodds, Contract Manager		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Carol S. Neeley, Contracting Officer	
15B. CONTRACTOR/OFFEROR BY  (Signature of person authorized to sign)	15C. DATE SIGNED 9/24/08	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED 9/24/08

1. The purpose of this modification is to extend the period of performance of the subject contract to September 30, 2010.
2. In consideration of the modification described in paragraphs 3 through 23 below and agreed to herein as complete and full equitable adjustment for the change to the work or other contract action described in the Contractor's proposal dated March 14, 2008, and all updates and disclosures thereto in response to letter RFP BG-07-188, the parties hereby release each other from liability under this contract for further equitable adjustments exclusively attributable to this change to the work or contract action.
3. Section B, Supplies or Services and Price/Costs, Article B.1, Estimated Cost, paragraph A is revised as follows:

B.1. ESTIMATED COST AND FEE

The total estimated cost of this contract is **\$13,352,396,943** and consists of the following:

Estimated Cost	\$12,410,391,455
Exhibit D Estimated Cost	\$ 510,225,407
Variance at Completion Estimated Cost	\$ 311,905,000
Schedule 2 Estimated Cost	\$ 119,875,081

The term "estimated cost" as used elsewhere in this contract means the total estimated cost.

B) The total costs and fees agreed to by the parties for this contract are as follows:

SCHEDULE 1	Thru MOD 1545	Delta	Thru MOD 1547
1. Exhibit A Estimated Cost (Lines 2+3+4)	11,824,805,869	585,585,586	12,410,391,455
2. Estimated Cost	9,316,105,869	585,585,586	9,901,691,455
3. Estimated Cost for Letter Contract	1,014,000,000		1,014,000,000
4. Estimated Cost for PG Definitization Period	1,474,700,000		1,474,700,000
5. Maximum Award Fee	203,361,199		203,361,199
6. FY2000 Forward Technical Performance Pool	93,347,711		93,347,711
7. FY2000 Forward Cost Performance Pool	72,960,578		72,960,578
8. FY2004 Forward Performance Award Fee	223,586,992	64,414,414	288,001,406
9. Base Fee	17,054,425		17,054,425
10. Letter Contract Fixed Fee	81,000,000		81,000,000
11. Definitization Fixed Fee	99,000,000		99,000,000
12. FGB Fixed Fee	2,280,000		2,280,000
13. Provisioning Item Orders - Fixed Fee	224,083		224,083
14. Level of Effort Fixed Fee	27,348		27,348
15. Fixed Fee	82,741,169		82,741,169
16. Exhibit D, LOE, Estimated Cost	510,225,407		510,225,407
17. Exhibit D, LOE, Fixed Fee	854,000		854,000
18. Exhibit D, LOE, Maximum Award Fee	38,576,948		38,576,948
19. Exhibit D, LOE Maximum Special Rate	1,750,000		1,750,000
Incentive Fee – Earned			
20. Provisional Increase to Estimated Cost	0		0
21. Variance at Completion Estimated Cost	311,905,000		311,905,000
22. Total Contract Value for Schedule 1	13,563,700,729	650,000,000	14,213,700,729

SCHEDULE 2 – U.S. PROP MODULE

23.	Schedule 2 Estimated Cost	114,257,855		114,257,855
24.	Schedule 2 Fixed Fee	5,617,226		5,617,226
25.	Total Contract Value for Schedule 2	119,875,081		119,875,081
26.	Total Contract Value for Schedule 1 & 2	13,683,575,810	650,000,000	14,333,575,810

4. Section C, Statement of Work, paragraphs 1.2.3.1 and 1.2.3.2 under Resources Management are deleted in their entirety and replaced with the following:

1.2.3.1 The contractor shall develop and maintain a contract financial system which discretely tracks resources by fund source and contract Work Breakdown Structure (WBS) and elements of cost including labor, overhead, other direct costs, (e.g. travel and subcontracts) and indirect costs. The contractor's financial planning system shall support the Government budget process (e.g.; **Program Planning, Budgeting, and Execution (PPBE)** budget calls); and to support special requests for budget impacts. The ISS Program will, in accordance with the budget or special request guidelines and reporting format, specify the format and content of the contractor's inputs and supporting rationale. The contractor shall provide financial reporting in accordance with DRD PC27.

1.2.3.2 The contractor shall develop and maintain a Performance Measurement System (PMS) and provide Cost Performance Reports (CPR) **for Non-I&O WBS tasks (i.e. WBS 1.0, 3.0, 6.0, 7.0 and 8.0)** in accordance with DRD F-PC-02. The PMS shall provide management visibility into all aspects of contractor interdivisional, subcontractor and vendor activities and shall be integrated and reconcilable with other required management systems and reporting requirements. The level of detail for this system shall be consistent with the maturity and stability of the program elements. Performance measurement reporting is also required on subcontracts with a total annual subcontract value of \$1M or more that, based on risk, schedule criticality, or dollar value, have the potential to impact the successful fulfillment of this contract.

A summary of the CPR shall be provided in the Quarterly Integrated Review referenced in DRD F-PM-02. Technical issues, accomplishments, analysis of cost and schedule performance, and corrective actions in problem areas shall be provided within this report.

The contractor shall provide a CPR earned value methodology report **for Non-I&O WBS Tasks (i.e. 1.0, 3.0, 6.0, 7.0 and 8.0)** in accordance with DRD F-PC-05.

5. Section C, Statement of Work, paragraph 2.16 Thermal Cycle Acceptance Testing for the Solar Array Wing Locking Struts, remove the reference to "FW6".

6. Section C, Statement of Work, paragraph 3.3.7.1 is updated to add "commercial off-the-shelf". Paragraph 3.3.7.1 is deleted in its entirety and replaced with the following:

3.3.7.1 SOFTWARE MANAGEMENT

The contractor shall develop and implement a software sustaining strategy to manage, update, and maintain the ISS Program software. The ISS Program's software shall consist of flight, ground, and test software/simulation and data developed for the USOS and common software provided to the IP/P and Payloads. The software sustaining strategy shall specify the contractor's integrated maintenance and software systems engineering of all CSCIs (see SOW, appendix B), simulation software, **commercial off-the-shelf (COTS)**, and the resolution of related software problem reports.

7. Section C, Statement of Work, paragraph 3.4.1.7.1 is deleted in its entirety and replaced with the following:

3.4.1.7.1 The contractor shall provide as-built measurement data of flight hardware that will attach to the Vehicle to support clearance analyses and integration tasks (e.g., static fit analysis for ISS element mating interfaces). The items to be measured on the elements are defined at the Measurement Technical Interchange Meetings (TIMs) for the elements of USOS, GFE, IP/P hardware. The contractor shall incorporate the as-built measurements into the final CAD model. Elements to be measured through September 30, 2008 are:

1. DPA measurement and analysis of ESA Columbus Module, JAXA JEM PS, JAXA JEM PM, JAXA JEM ES, JAXA JEM EF, SPDM, HTV1 CBCS, and Node 3 element-to-element interfaces. (S/A 1355)
2. Redo DPA measurement and analysis of MPLM FM1 and MPLM FM2 element-to-element interfaces due to hatch replacement (PRACA 3251). (S/A 1297)
3. Perform DPA of ESP3. (S/A 1300)
4. Perform DPA of Node 3. (S/A 1315)
5. Perform DPA of UMAs removed from the outboard MT/CETA Rails. (S/A 1456)

Elements to be measured from October 1, 2008 through September 30, 2010 will be determined on a case-by-case basis. The contractor shall provide the capability to perform DPA measurement and analysis of 6 elements/year.

8. Section C, Statement of Work, paragraph 3.8 is deleted in its entirety and replaced with the following:

3.8 SAFETY AND MISSION ASSURANCE (S&MA)

For hardware sustained within the scope of this SOW, the S&MA analyses (e.g., FMEAs, hazards, etc.) previously developed for this hardware shall be maintained per the requirements within this section of the SOW.

9. Section C, Statement of Work, the heading for 6.5 is deleted in its entirety and replaced with the following to show what supplemental agreement (S/A) added each paragraph.

6.5 WASTE AND HYGIENE COMPARTMENT INTEGRATION (WHC) (S/A 1376 – 6.5.1 (1486- 6.5.2 through 6.5.8) (S/A 1547)

10. Section C, Statement of Work, paragraphs 6.9.2.5.3 and 6.9.2.5.4 are added to 6.9.2.5 Sustaining Engineering and Post Production Support of the ELC Electrical GSE (EGSE) as follows:

6.9.2.5.3 The contractor shall provide sustaining engineering and post production support for the GSFC provided ELC electrical GSE (payload interface test equipment). (S/A 1547)

6.9.2.5.4 The contractor shall provide Help Desk support to users of the EGSE devices. (S/A 1547)

11. Section C, Statement of Work, paragraph 6.9.3.1, the 2nd bullet should read Food Warmer ICD, SSP 53110 in lieu of Food Warmer ICD, SSP 531110.

12. Section C, Statement of Work, the following paragraph titles have the reference to S/A 1547 added:

6.9.2 Integration of the Expedite the Processing of Experiments to Space Station (EXPRESS) Subpallet Payloads in the EXPRESS Logistics Carrier (ELC) (S/A 1430) (S/A 1547)

6.93. SUPPORT TO THE OPERATIONAL CONCEPT FOR 6 PERSON CREW FOOD PREPARATION SYSTEM (S/A 1451) (S/A 1547)

6.11.1 GROUND PROCESSING ACTIVITIES (S/A 1406) (S/A 1547)

6.11.2 LAUNCH AND ASSEMBLY OF INTEGRATED NODE 3 AND CUPOLA (S/A 1460) (S/A 1547)

6.15.6 Analysis of Attitudes for Russian Vehicle Maneuvers (S/A 1500) (S/A 1547)

6.17 BIOLOGICAL RESEARCH PROGRAM SOLID STATE POWER CONTROL MODULE (BSSPCM) MOTHER BOARD RETROFIT (S/A 1464) (S/A 1547)

13. Section C, Statement of Work, paragraphs 8.0 through 8.5.4.1 are deleted in their entirety and replaced with the attached paragraphs 8.0 through 8.8.

14. Section C, Statement of Work, APPENDIX A Hardware to be Sustained Under Contract, the Sustaining Role is updated for the following components:

Component Name	Component Number	Sustaining Role
ScS-EXPRESS	683-46360-3	S, SE-Pri
ScS-EXPRESS	683-46360-4	S, SE-Pri
ISIS Drawers (Stowage Drawers)	683-43656-1	SE-Sec
EXPRESS Functional Checkout Unit (FCU)	683-46055-1	S, SE-Pri
BRP HHR Qual Rack	683-46710	S, SE-Pri
STEPs	683-21446	S, SE-Pri
Payload Ethernet Hub Bridge (PEHB)	683-46328-1	S, SE-Pri
BRIC	683-83614-1	S, SE-Pri
RIC	683-46323-1	S, SE-Pri
SSPCM	683-6314-1	S, SE-Pri
BSSPCM	683-46313-1	S, SE-Pri
BEMU	683-42584-1	S, SE-Pri
SSPCM Unit Tester	907184-1, -501	S, SE-Pri
RIC Test Sets	683-4216 683-42665	S, SE-Pri
Avionics Test Bed	683-36037	S, SE-Pri
Rack Software Test Bed	683-40350	S, SE-Pri

15. Section F, Deliveries or Performance, F.2.A Completion of Work-Exhibit A, the first sentence is updated to read as follows:

All work required under this contract shall be completed on or before September 30, 2010.

16. Section C, Statement of Work, APPENDIX E – ISS Program Documents to be Book Coordinated is deleted in its entirety and replaced with the attached.
17. Section H, Special Contract Requirements, H.55 Implementation Exclusion is deleted in its entirety and marked H.55 Reserved.
18. Section I, Contract Clauses, 52.244-1 is updated to read as follows;

52.244-2 AUG 1998 SUBCONTRACTS (ALTERNATE I) (MAR 2005)
 In paragraph (e) insert the following items:

1. All subcontracting actions with Spacehab
2. All subcontracting actions with Invocon
3. Any subcontract or contract modification over \$10M in value where consent was not provided at the time of Mod 1547 unless an exception at 15.403-1(b), "Exceptions to cost or pricing data requirements" applies.

19. Section J, Attachment J-1, Award Fee Plan, Table, V.B.6, CY 2004 Forward Technical Performance Award Fee, is revised to reflect the increase in award fee per this modification as follows:

TABLE V.B.6
CY2004 Forward Performance Award Fee

PERIOD NUMBER	START DATE	END DATE	MAXIMUM AVAILABLE MOD 1545	CHANGE	MAXIMUM AVAILABLE MOD 1547	DOLLARS EARNED
16	1/01/04	6/30/04	23,359,883	\$0	23,359,883	\$21,958,290
17	7/01/04	12/31/04	24,501,673	\$0	24,501,673	\$23,031,573
18	1/01/05	6/30/05	22,557,678	\$0	22,557,678	\$21,429,794
19	7/01/05	12/31/05	24,860,050	\$0	24,860,050	\$24,114,248
20	1/01/06	9/30/06	35,168,720	\$0	35,168,720	\$33,058,596
21	10/01/06	3/31/07	20,869,823	\$0	20,869,823	\$19,200,237
22	4/01/07	9/30/07	21,741,282	\$0	21,741,282	\$20,001,979
23	10/01/07	3/31/08	21,422,264	\$0	21,422,264	\$20,136,928
24	4/01/08	9/30/08	29,105,619	\$0	29,105,619	TBD
25	10/01/08	3/31/09	\$0	15,788,915	15,788,915	
26	4/01/09	9/30/09	\$0	16,048,186	16,048,186	
27	10/01/09	3/31/10	\$0	14,162,398	14,162,398	
28	4/01/10	9/30/10	\$0	18,414,915	18,414,915	
Totals			223,586,992	64,414,414	288,001,406	
Total Dollars Earned						TBD

20. Section J, Attachment J-4, Data Requirements Descriptions, the table of contents is deleted in its entirety and replaced with the attached.:

21. Section J, Attachment J-4, Data Requirements Descriptions, the following DRDs are deleted in their entirety and replaced with the attached. :

DRD	DRD Title
PC22	Integration & Operations (I&O) Management Products
F-PC-02	Cost Performance Report (CPR)
F-PC-04	Work Breakdown Structure (WBS) and Dictionary
F-PM-02	Integrated Management Review Products
F-RA-11	Payload Unique Displays Software Requirements Specifications

22. Section J, Attachment J-4, Data Requirements Descriptions, the following DRDs are deleted in their entirety:

DRD	DRD Title
F-MI-02	Standard Payload Integration Agreement (SPIA) for Pressurized Payloads
F-MI-03	Standard Payload Integration Agreement (SPIA) for Unpressurized Payloads
F-MI-05	Standard Payload Integration Agreement (SPIA) for Small Pressurized Payloads
F-MI-06	Payload Integration Agreement (PIA) Blank Book for Small Pressurized Payloads
F-MI-07	Payload Data Sets Blank Book
F-MI-08	ISS Payload Integration Template
F-MI-09	IDRD Annex 5 Payload Tactical Plan Blank Book
F-PA-02	Station Program Implementation Plan, Volume IV: Payload Engineering Integration

DRD	DRD Title
F-PA-03	Payload Verification Program Plan
F-PA-04	Payload Flight Equipment Requirements and Guidelines for Safety Critical Structures
F-PA-06	Pressurized Payloads Interface Requirements Documents
F-PA-07	Pressurized Payloads Hardware Interface Control Document Template
F-PA-08	Payloads Software Interface Control Document Template
F-PA-09	Attached Payload Interface Requirements Document
F-PA-25	Pressurized Payload Non-Rack ICD Template
F-RA-01	ISS Payload Interface Fault Tolerance Document
F-RA-02	Payload MDM Users Manual
F-RA-03	International Standard Payload Rack to ISS Software ICD
F-RM-03	NASA ALERT System Documentation
F-SE-44	EXPRESS Interface Definition Documents
F-SE-46	Generic EXPRESS Payload Verification Plan
F-SE-47	EXPRESS Payload Verification Plan
F-SE-49	Payload Data Library (PDL) Users Guide
F-SE-50	Payload Data Library Requirements Document
F-SE-57	Mission Integration Process Plan
F-SW-02	Payloads Software Management Plan

23. Section J, Attachment J-8, Small Business Plan, Revision F is deleted in its entirety and replaced with Section J, Attachment J-8, Small Business Plan, Revision G-A.

8.0 PAYLOAD INTEGRATION (S/A 1547)

The Contractor shall provide technical and programmatic functions to implement the ISS payload integration tasks into all phases of the ISS Program.

8.1 CONFIGURATION MANAGEMENT (S/A 1547)

The Contractor shall provide the configuration status accounting and verification functions consistent with the requirements in SSP 41170 except for the flight by flight as-built reconciliation of on-orbit payload hardware. This is applicable for Boeing-built payload hardware/software, payloads within Boeing-built payload hardware, all US or IP furnished facilities/payloads located in the U.S. Lab, all U.S. furnished facilities/payloads located in IP labs, unpressurized U.S. payloads, and IP payloads mounted on U.S. attached locations. Payload hardware will be tracked at the following levels:

- Facility Class - ORU level that comprises the primary interface to the Station subsystems
- Aisle Deployed - top assembly/stowage kit level
- Subrack - top assembly/stowage kit level

8.2 UTILIZATION LAUNCH PACKAGE READINESS (S/A 1547)

The Contractor shall ensure the readiness of the Utilization launch package to support all major integration milestones, including cargo integration reviews, bench reviews, MPLM/orbiter integration, launch, and on-orbit operation.:

8.3 SUPPORT TO DESIGN REVIEWS (S/A 1547)

The contractor shall provide payload integration technical support to the design reviews for payloads and new transportation vehicles.

8.4 BOARD AND PANEL SUPPORT (S/A 1547)

The contractor shall provide administrative support (secretary) to the following NASA payload boards and panels:

- Payload Mission Integration Team (PMIT)
- Payload Engineering Control Panel (PECP)
- Payload Software Control Panel (PSCP).

8.5 MISSION INTEGRATION (S/A 1547)

8.5.1 STAGE AND INCREMENT INTEGRATION

Develop, document and implement the processes required to integrate payloads into the ISS Stages and Increments for facility (pressurized/truss attached), aisle deployed, subrack and external payload classes. Processes shall address documentation of payload requirements, resource allocations, schedule, roles and responsibilities, and issue resolution.

8.5.2 PAYLOAD DEVELOPER (PD) SUPPORT (S/A 1547)

The contractor shall provide Payload Developers a primary point of contact and advocate for coordination of integration and operations activities and issue resolution.

8.5.3 PAYLOAD COMMUNITY WEB RESOURCES (S/A 1547)

The contractor shall maintain and revise the International Space Station (ISS) Payload Information Source Web site and Payload Developers Web Portal for the Payload community.

8.5.4 PAYLOAD SAFETY (S/A 1547)

8.5.4.1 SAFETY DATA PACKAGE REVIEW (S/A 1547)

The contractor shall review and analyze the Payload (facility/ rack/ pallet/ subrack/ subpallet) Safety Data Packages (PSDPs) to ensure adequate payload hazard identification and controls.

8.5.4.2 PAYLOAD SAFETY REVIEW PANEL (PSRP).PARTICIPATION (S/A 1547)

The contractor shall participate in the Payload Safety Review Panel (PSRP) and respond to actions from the PSRP.

8.5.5 COFR PROCESS MANAGEMENT (S/A 1547)

The contractor shall manage the stage specific CoFR process as defined in SSP 52054, "ISS Program Payloads Certification of Flight Readiness Implementation Plan, Generic".

8.6 PAYLOAD ENGINEERING INTEGRATION (S/A 1547)

8.6.1 PAYLOAD DEVELOPER VERIFICATION (S/A 1547)

The contractor shall coordinate with payload developers on the planning and execution of PD verification activities, provide status of these activities and present integrated results at ISS program reviews. The contractor shall provide technical support to the US payload test activities at KSC or at PD locations for complex payloads to resolve and close interface issues

8.6.2 HUMAN FACTOR VERIFICATION (S/A 1547)

The contractor shall perform human factors verification for payloads (racks, subracks, UOPs).

8.6.3 PAYLOAD DEVELOPER EXCEPTIONS AND ISSUES DISPOSITION (S/A 1547)

The contractor shall evaluate, coordinate, and provide approval/disapproval recommendations for NASA closure of proposed payload interface exceptions and payload developer issues.

8.6.4 OPERATIONS AND MAINTENANCE REQUIREMENTS AND SPECIFICATIONS DOCUMENT (OMRSD) REVIEW (S/A 1547)

The contractor shall review the OMRSD for inclusion of the necessary payload requirements and identify discrepancies.

8.6.5 EXPRESS RACK VERIFICATION (S/A 1547)

The contractor shall develop and maintain models to support verification coupled loads analyses for EXPRESS Racks on Shuttle flights.

8.6.6 VACUUM SYSTEM COMPATIBILITY (S/A 1547)

The contractor shall perform analysis that payload vacuum exhaust gases are compatible with the vacuum systems of the US lab and JEM.

8.7 PAYLOAD SOFTWARE INTEGRATION & FLIGHT PRODUCTION (S/A 1547)

8.7.1 SOFTWARE IDENTIFICATION (S/A 1547)

The contractor shall assign and manage the payload allocation of application process identifiers (APIDs), subset IDs, and program unique identifiers (PUIs) for the program.

8.7.2 ANCILLARY DATA SETS (S/A 1547)

The contractor shall develop and maintain payload unique ancillary data sets.

8.7.3 SOFTWARE FACILITY SUSTAINING (S/A 1547)

Provide hardware and software sustaining engineering for the Payload Software Integration and Verification Facility (PSIVF), Payload Development Laboratory (PDL), and the Mission Integration Software Tool (MIST).

8.8 HARDWARE AND SOFTWARE SUSTAINING ENGINEERING (S/A 1547)

The contractor shall provide sustaining engineering for delivered EXPRESS and EXPRESS derivative ground and flight software and hardware, Payload ground support equipment, and Active and Passive Rack Isolation (ARIS and PaRIS) hardware as defined in Appendix A.

APPENDIX E – ISS PROGRAM DOCUMENTS TO BE BOOK COORDINATED

Document Number	Title
683-71106	International Space Station Program Internal Systems R2 (INTSYS R2) Computer Software Configuration Item 683G93A Pre-Position Loads (PPL) Version Description Drawing
D683-35473-01	Payload Data Library (PDL) Users Guide
D683-47376-1	Payload MDM Users Manual
D684-10025 Vol 1	Integration and Verification Plan for ISS System
D684-10293 Vol 1	Software Configuration Handbook
684-10409	Node Control Software (NCS) Release 2 Multiplexer/Demultiplexer (MDM) Version Description Drawing (VDD)
684-10573	Display Data Control Tables (DDCT) for the Command And Control Software (CCS) Multiplexer/Demultiplexer (MDM) Version Description Drawing (VDD)
684-10649	International Space Station Program Command and Control Software (CCS) Release 4 (R4) Multiplexer/Demultiplexer (MDM) Version Description Drawing (VDD)
684-10716	International Space Station Program Hub Control Software (HCS) Multiplexer/Demultiplexer (MDM) Version Description Drawing (VDD)
S684-11032	Software Requirements Specification for the R2 command Control (C&C)
684-10716	International Space Station Program Hub Control Software (HCS) Multiplexer/Demultiplexer (MDM) Version Description Drawing (VDD)
S684-11032	Software Requirements Specification for the R2 command Control (C&C)
CSDL-306626-V01	User Interface Language Flight System Software Requirements Volume 1: Timeliner Kernel
CSDL-306626-V02	User Interface Language Flight System Software Requirements Volume 2: ISS Timeliner Adapter
D683-21459-1	PSIV/F Maintenance Concept for the STEP
D683-27519-1	User's Guide for the Payload Rack Checkout Unit (PRCU)
D683-27522-1	PRCU Maintenance Plan
D683-80552-1	Consolidated Sustaining Engineering Plan
D684-10017-01	Prime Contractor Software Development Plan
D684-10056-01	Prime Contractor Software Standards and Procedures Specifications
D684-10175-01	Software Test Plan For the Command and Control (C&C) Multiplexer/Demultiplexer (MDM) Computer Software Configuration Item (CSCI)
D684-10177-01	ISS MISSION Build Facility Standard Output Definition Part 1
D684-10189-01	Data Base Design Document (DBDD) for the Node 1 Control Software (NCS)
D684-10191-01	Software User's Manual for the Node 1 Control Software
D684-10195-01	Software Top Level Design Document for the Node 1 Control Software
D684-10696-01	ISS Post Production Support Warehouse Operations Plan
D684-10749-01	ISS Product Support Team TCTI Mod Kit Procedure
D684-10773-01	Product Support ISS Managed Asset Retention and Utilization Plan
D684-10850-01	Program Management and Implementation Plan for Hardware History Retrieval System
D684-11424-01	Product Support ISS PRCU H/W Calibration Process
D684-11074-01	ISS Product Support Inventory Management Plan

D684-11179-01	ISS Obsolescence Management Plan
D684-11424-01	Product Support ISS PRCU H/W Calibration Process
D684-11428-01	Science and Utilization Segment Payload Rack Checkout Unit (PRCU) Training & Certification Program
ISAC-245, Rev S	VMDB Release 9.0 Requirements Document
ISAC-319	Orbital Replacement Unit Data Directory (ORUDD) to International Space Station (ISS) Vehicle Master Database (VMDB) Interface Control Document (ICD)
ISS MPLM IDD 006	MPLM Interface Definition Document
JSC-26656	Project Technical Requirements Specification for the ISS Global Positioning System (GPS) Subsystem
JSC-26961	ACS Moding Indicator Critical Item Specification
JSC-26975	PCS Displays Software Requirements Specification
JSC-26976	ISS Displays Software Design Document for the Portable Computer System (PCS)
JSC-27274	Development Specification for the Portable Computer System (PCS)
JSC-27437	Command And Data Software Software Design Document for the Portable Computer System (PCS)
JSC-27440	Command And Data Software Software Requirements Specification (CDS SRS) for the Portable Computer System (PCS)
JSC-36387	Software Design Document for the Automated Procedure Viewer
JSC-36393	Software Requirements Specification for the Automated Procedure Viewer
NSTS-21000-IDD-ISS	Shuttle Orbiter/International Space Station Cargo Standard Interfaces
RP AI 0030	MDM Connectivity Document for Node 3
RR-00022V2	Component Data Interface Format Specification Volume 2: Remote Power Control Module
RR-00022V4	Component Data Interface Format Specification Volume 4: Power Converter Controller
RR-00022V6	Component Data Interface Format Specification Volume 6: Power Electronics Unit
S683-29523	Prime Item Development Specification for U.S. Laboratory
S683-70870	Internal Systems R2 CSCI 683G93A Software Requirements Specification
S683-70918	International Space Station Program Node 3 Systems 1 CSCI 683042A Software Requirements Specification
S683-70919	International Space Station Program Node 3 Systems 2 CSCI 683043A Software Requirements Specification
S684-10101	Prime Item Development Specification for Rack Standard/Payload
S684-10102	Prime Item Development Specification for Node 1
S684-10109	Addendum Specification for Photovoltaic Module S4
S684-10111	Prime Item Development Specification for Integrated Truss Segment S0
S684-10115	Prime Item Development Specifications for Pressurized Mating Adapter-1
S684-10122	Prime Item Development Specification for Photovoltaic Module P4
S684-10123	Prime Item Development Specification for Truss Element, Short Spacer, S5

S684-10124	Prime Item Development Specification for S6
S684-10131	Software Requirements Specification for the R1 Command And Control (C&C) Multiplexer/Demultiplexer (MDM) CSCI
S684-10137	Critical Item Development Specification for Main Bus Switching Unit
S684-10142	Prime Item Development Specification for Airlock
S684-10143	Prime Item Development Specification for Station Management and Control
S684-10144	Prime Item Development Specification For Guidance Navigation and Control Processor
S684-10145	Prime Item Development Specification for Power Management Control Unit
S684-10150	Addendum Specification for Truss Element, Short Spacer, P5
S684-10151	PIDs for Photovoltaic Module S6
S684-10154	PIDs for Integrated Truss Segment Z1
S684-10158	Prime Item Development Specification for Active Rack Isolation
S684-10439	Prime Item Development Specification for ARIS/Express Installation And Maintenance Trainer
S684-10584	Noncomplex Item Development Specification for the Payload Crew Aids Kit
S684-10585	Prime Item Development Specification for the Passive Rack Isolation System (PaRIS)
S684-10644	Software Requirements Specification (SRS) for the Hub Control Software (HCS) Computer Software Configuration Item (CSCI)
S684-11034	Software Requirements Specification for the R4 Command and Control (C&C) Multiplexer/Demultiplexer (MDM) Computer Software Configuration Item (CSCI)
SN-C-0005	Contamination Control Requirements
SP-M-229	Addendum Specification for Integrated Truss Segment S3
SP-M-233	PIDs for Integrated Truss Segment P1
SP-M-235	PIDs for Integrated Truss Segment P3
SP-M-301	Prime Item Development Specification For Pressurized Mating Adapter
SP-M-321	PIDS for Integrated Truss Segment S1
SSP 50257	Program Controlled Document Index
SSP-52000-ETRD-ERP	Expedite the Processing of Experiments to Space Station (EXPRESS) Transportation Requirements Document
SSP 52000-ICD-ERP	EXPRESS Rack Payloads Interface Control Document Blank Book
SSP 52000-ICD-WRP	WORF Rack Payloads Interface Control Document Blank Book
SSP-52000-PIH-WRP	Window Observational Research Facility (WORF) Payload Integration Handbook
SSP-52050	International Standard Payload Rack to ISS ICD Part 1
SSP 57005	ARIS To Payload ICD
SSP 57006	ARIS User's Handbook
SSP 57007	International Standard Payload Rack (ISPR) Structural Integrator's Handbook
SSP 57058	PaRIS-to-ISPR ICD

SSP-30233	Space Station Requirements for Materials and Processes
SSP-30237	Space Station Electromagnetic Emission and Susceptibility Requirements
SSP-30238	Space Station Electromagnetic Techniques
SSP-30240	Space Station Grounding Requirements
SSP-30242	Space Station Cable/Wire Design and Control Requirements for Electromagnetic Compatibility
SSP-30243	Space Station Requirements for Electromagnetic Compatibility
SSP-30245	Space Station Electrical Bonding Requirements
SSP-30256-001	SSP Extravehicular Activity (EVA) Standard Interface Control Document
SSP-30262-010	Portable Fire Extinguisher Standard ICD Part 1
SSP-30312	Electrical, Electronic, and Electronmechanical (EEE) and Mechanical Parts Management and Implementation Plan
SSP-30423	Space Station Approved Electrical, Electronic, and Electromechanical Parts List
SSP-30425	Space Station Program Natural Environment Definition for Design
SSP-30426	Space Station External Contamination Control Requirements
SSP-30482-01	Electric Power Specifications and Standards: V2 Consumer Constraints
SSP-30482-02	Electric Power Specification and Standards, Volume 2: Consumer Constraints
SSP-30512	Space Station Ionizing Radiation Design Environment
SSP-30513	Ionizing Radiation Environment Effects Test And Analysis
SSP-30550	Space Station Program Robotic System Integration Standards
SSP-30559	Structural Design and Verification Requirements
SSP-30573	Space Station Program Fluid Procurement and Use Control Specification
SSP-41004-PART 1	Common Berthing Mechanism to Pressurized Elements Interface Control Document Part 1
SSP-41004-PART 2	Common Berthing Mechanism to Pressurized Elements Interface Control Document Part 2
SSP-41015-PART 1	Common Hatch And Mechanism to Pressurized Elements Interface Control Document Part 1
SSP-41015-PART 2	Common Hatch And Mechanisms to Pressurized Elements Interface Control Document Part 2
SSP-41017-PART 1	Rack to Mini Pressurized Logistics Module Interface Control Document Part 1
SSP-41017-PART 2	Rack to Mini Pressurized Logistics Module Interface Control Document Part 2
SSP-41143-PART 2	Space Station Program Node Element 2 to U.S. Laboratory Element Interface Control Document Part 2
SSP-41145	Node Element 1 to Airlock Element Interface Control Document, Part 1
SSP 41153-01	Node Control Software General Software Interfaces Interface Control Document, Part 2
SSP-41153-02	Node Control Software to Common Berthing Mechanism ICD Part 2
SSP-41153-03	Node Control Software to Communications And Tracking Orbital Replaceable Units ICD Part 2
SSP-41153-04	Node Control Software to Remote Power Control Module ICD Part 2
SSP-41153-06	Node Control Software Release 1 to GFE ICD Part 2
SSP-41153-07	Node Control Software to Remote Power Control Module, DC/DC Converter Unit, and Plasma Contactor Unit ICD Part 2

SSP-41154	Software Interface Control Document Part 1 United States On-Orbit Segment To United States Ground Segment Command and Telemetry
SSP-41155	Refrigerator/Freezer Rack to Mini Pressurized Logistics Module Interface Control Document
SSP 41158	Software Interface Control Document Part I United States On-Orbit Segment To International Ground System Segment Ku-Band Telemetry Formats
SSP-41162	Segment Specification for the United States On-Orbit Segment
SSP-41164	Italian Mini-Pressurized Logistics Module
SSP-41172	Qualification and Acceptance Environmental Test Requirements
SSP-41175-01	Software ICD Part 1 SMC-to-ISS Book 1, Hardware Architecture
SSP-41175-02	Software ICD Part 1 SMC-to-ISS Book 2, General Software Interface Requirements
SSP-41175-03	Software ICD Part 1 SMC-to-ISS Book 3, Portable Computer System Interface
SSP-41175-04	Software ICD Part 1 SMC-to-ISS Book 4, Guidance, Navigation and Control Interface
SSP-41175-05	Software ICD Part 1 SMC-to-ISS Book 5, Power Management and Control Application
SSP-41175-06	Software Interface Control Document Station Management and Control To International Space Station Book 6, Internal Multiplexer/Demultiplexer Interface
SSP-41175-07	Software ICD Part 1 SMC-to-ISS Book 7, External Multiplexer/Demultiplexer Interface
SSP-41175-08	Software ICD Part 1 SMC-to-ISS Book 8, Payload Multiplexer/Demultiplexer Interface
SSP-41175-09	Software ICD Part 1 SMC-to-ISS Book 9, Node Control Software Interface
SSP-41175-10	Software ICD Part 1 SMC-to-ISS Book 10, Control Electronics Unit Interface
SSP-41175-14	Software ICD Part 1 SMC-to-ISS Book 14, Space-to-Space Station Radio Interface
SSP-41175-15	Software ICD Part 1 SMC-to-ISS Book 15, Video Baseband Signal Processor Interface
SSP-41175-16	Software ICD Part 1 SMC-to-ISS Book 16, High-Rate Frame Multiplexer Interface
SSP-41175-17	Software ICD Part 1 SMC-to-ISS Book 17, High-Rate Multiplexer Interface
SSP-41175-18	Software ICD Part 1 SMC-to-ISS Book 18, Assembly Contingency Baseband Signal Processor Interface
SSP-41175-19	Software ICD Part 1 SMC-to-ISS Book 19, Synchronization and Control Unit Interface
SSP-41175-20	Software ICD Part 1 SMC-to-ISS Book 20, Video Switching Unit Interface
SSP-41175-21	Software ICD Part 1 SMC-to-ISS Book 21, Internal Audio Controller Interface
SSP-41175-22	Software ICD Part 1 SMC-to-ISS Book 22, Transponder Interface
SSP-41175-23	Software ICD Part 1 SMC-To-ISS Book 23, External Video Switching Unit Interface
SSP-41175-24	Software ICD Part 1 SMC-to-ISS Book 24, Radio Frequency Group Interface
SSP-41175-25	Software ICD Part 1 SMC-to-ISS Book 25, Space-to-Ground Transmitter/Receiver Controller Interface
SSP-41175-26	Software ICD Part 1 SMC-to-ISS Book 26, Integrated Motor Controller Assembly Interface
SSP-41175-28	Software ICD Part 1 SMC-to-ISS Book 28, Monitor Interface
SSP-41175-29	Software ICD Part 1 SMC-to-ISS Book 29, Secondary Interface
SSP-41175-31	Software Interface Control Document Station Management and Control to ISS Book 31, Communication Outage Recorder (COR) Interface
SSP-41175-32	Software Interface Control Document Station Management And Control to ISS Book 32, Hub Control Zone (HCZ) Multiplexer/Demultiplexer Interface
SSP-41175-35	Software Interface Control Document, Station Management and Control to International Space Station PROX Interface Book 35
SSP-41176-01	Software ICD Part 1 PMC-to-ISS Book 1, Hardware Architecture

SSP-41176-04	Software ICD Part 1 PMC-to-ISS Book 4, Photovoltaic Control Unit Interface
SSP-41177-01	Software ICD Part 1 GN&C-to-ISS Book 1, Hardware Architecture
SSP-41177-03	Software ICD Part 1 GN&C-to-ISS Book 3, Control Momentum Gyroscope Interface
SSP-41177-04	Software ICD Part 1 GN&C-to-ISS Book 4, Rate Gyro Assembly Interface
SSP-41177-05	Software ICD Part 1 GN&C-to-ISS Book 5, Global Position System Receiver Processing
SSP-41177-07	Software ICD Part 1 GN&C-to-ISS Book 7, MDM/Node 1 MDM Pass thru Interfaces to Aft Flight Deck PCS/ECOMM and OIU
SSP-41178-01	Software ICD Part 1 Internal MDM-to-ISS Book 1, Hardware Architecture
SSP-41178-03	Software ICD Part 1 Internal MDM-to-ISS Book 3, Pump Package Assembly Interface
SSP-41178-07	Software ICD Part 1 Internal MDM-to-ISS Book 7, Laboratory Module 1 Interface
SSP-41178-08	Software ICD Part 1 Internal MDM-to-ISS Book 8, Laboratory Module 2 Interface
SSP-41178-09	Software ICD Part 1 Internal MDM-to-ISS Book 9, Laboratory Module 3 Interface
SSP-41178-10	Software ICD Part 1 Internal MDM-to-ISS Book 10, Airlock Interface
SSP-41178-12	Software ICD Part 1 Internal MDM-to-ISS Book 12, Major Constituent Analyzer Interface
SSP-41178-13	Software ICD Part 1 Internal MDM-to-ISS Book 13, Pressure Control Assembly Interface
SSP-41178-15	Software ICD Part 1 Internal MDM-to-ISS Book 15, Defibrillator Interface
SSP-41178-17	Software ICD Part 1 Internal MDM-to-ISS Book 17, Charged Particle Directional Spectrometer – LV
SSP-41178-18	Software ICD Part 1 Internal MDM-to-ISS Book 18, Volatile Organic Analyzer Interface
SSP-41178-20	Software ICD Part 1 Internal MDM-to-ISS Part 1, Charged Particle Directional Spectrometer – EV
SSP-41178-21	Software ICD Part 1 Internal MDM-to-ISS Book 21, Tissue Proportionate Counter Interface
SSP-41178-23	Software ICD Part 1 Internal MDM-to-ISS Book 23, Node Control Software Interface
SSP-41178-24	Software Interface Control Document Internal Multiplexer/Demultiplexer to International Space Station Book 24, Node 2 -1 Interface
SSP-41178-25	Software Interface Control Document Internal Multiplexer/Demultiplexer to International Space Station Book 25, Node 2-2 Interface
SSP-41178-27	Software ICD Part 1 Internal MDM-to-ISS Book 27, Common Berthing Mechanism Interface
SSP-41178-35	Software Interface Control Document, Internal Multiplexer/Demultiplexer to ISS Book 35, HTY Interface
SSP-41179-01	Software ICD Part 1 External MDM-to-ISS Book 1, Hardware Architecture
SSP-41179-03	Software ICD Part 1 External MDM-to-ISS Book 3, External Control Zone Tier 3 Com
SSP-41179-05	Software ICD Part 1 External MDM-to-ISS Book 5, Integrated Motor Controller Assembly Interface
SSP-41184-01	Multilateral Training Management Plan - Volume 1
SSP-41184-02	Multilateral Training Management Plan - Volume 2
SSP-41186	Software ICD Space Station Manned Base to Columbus Attached Pressurized Module
SSP-42003-PART 2	Space Station Manned Base to Mobile Servicing System Interface Control Document Part 2
SSP-42004	Mobile Servicing System to User Interface Control Document Part 1
SSP-42004-PART 2	Mobile Servicing System to User (Generic) Interface Control Document Part 2
SSP-42011	Integrated Truss Segment S0 to United States Laboratory Interface Control Document Part 1

SSP-42014	Crew Health Care System (CHeCS) to Laboratory Interface Control Document
SSP-42017	Space Station To Global Positioning System Interface Control Document
SSP-42018	ISS United Space On-Orbit Segment to Ground (Through Tracking & Data Relay Satellite System) Interface Control Document Part 1
SSP-42018-PART 2	ISS United Space On-Orbit Segment to Ground (Through Tracking & Data Relay Satellite System) Interface Control Document Part 2
SSP-42097-PART 2	Pressurized Mating Adapter 2 & 3 to U.S. Pressurized Elements Core (Node 2 to Pma2) Interface Control Document, Part 2
SSP-42104	United States On-Orbit Segment to Space Station Control Center Video ICD
SSP-42105	United States On-Orbit Segment to Space Station Control Center Audio ICD Part 1
SSP-42108	MDA GSE to LLS GSE Interface Control Document
SSP-42120-PART 1	Androgynous Peripheral Assembly System to Pressurized Mating Adapter Interface Control Document Part 1
SSP-42120-PART 1-AppA	Androgynous Peripheral Assembly System to Pressurized Mating Adapter Interface Control Document Part 1 - Appendix A
SSP-42120-PART 2 Core	Androgynous Peripheral Assembly System to Pressurized Mating Adapter Interface Control Document, Part 2, Core (APAS to PMA-2 & 3)
SSP-42120-PART 2-AppA	Androgynous Peripheral Assembly System to Pressurized Mating Adapter Interface Control Document, Part 2, Appendix A (APAS To PMA-1)
SSP-42124	Integrated Truss Segment S0 to Node 2 Interface Control Document Part 1
SSP-42124-PART 2	Space Station Program Integrated Truss Segment S0 to Node 2 Interface Control Document Part 2
SSP-42125	Integrated Truss Segment P1 to Integrated Truss Segment P3 Interface Control Document Part 1
SSP-42126	Integrated Truss Segment S0 to Integrated Truss Segment P1 ICD Part 1
SSP-42127	Integrated Truss Segment S0 to Integrated Truss Segment S1 ICD Part 1
SSP-42132	Mobile Transporter to Integrated Truss Segments S0, S1, S3, P1, P3, Interface
SSP-42150	SSP Space to Space Station Radio (SSSR) to U.S. Laboratory Standard ICD
SSP-44025 PART 2	Integrated Truss Segment S3 to Integrated Truss Segment S4 Interface Control Document, Part 2
SSP-44026	Part 2 Integrated Truss Segment P3 to Photovoltaic Module P4 Interface Control Document, Part 2
SSP-44029	PG-2 Ground Support Equipment (GSE) to Launch And Landing Site (LLS) GSE Interface Definition Document (IDD)
SSP-44030	Integrated Truss Segment Z1 to Node 1 Interface Control Document Part 1
SSP-44032	Integrated Truss Segment Z1 to Laboratory Umbilicals ICD Part 1
SSP-44033	Integrated Truss Segment Z1 to Integrated Truss Segment S0 ICD Part 1
SSP-50002	ISS Video Standard
SSP-50004	Ground Support Equipment Design Requirement
SSP-50005	International Space Station Flt Crew Integration
SSP-50026	Software Verification Facility (SVF) to Space Station Control Center ICD Part 1
SSP-50061-01	U.S. Laboratory to Global Positioning System Interface Control Document Part 1
SSP-50061-02	U.S. Laboratory to Global Positioning System Interface Control Document Part 2
SSP-50093-PART 1	Extravehicular Charged Particle Directional Spectrometer (EVCPDS) ICD Part 1

SSP-50093-PART 2	Extravehicular Charged Particle Directional Spectrometer (EVCPDS) ICD Part 2
SSP-50097-02	Space Station Manned Base to Russian Segment Software Interface Control Document Book 2, Caution And Warning
SSP-50097-03	Space Station United States On-Orbit Segment to Russian Segment Software Interface Control Document Book 3, Caution and Warning
SSP-50097-04	Space Station Manned Base to Russian Segment S/W ICD BK 4, Integrated RS/US GN&C Software Mode Configurations & Attitude Control Handover Descriptions
SSP-50097-PART 1	Space Station Manned Base to Russian Segment Software Interface Control Document Part 1
SSP-50098-PART 1	Robotic Workstation to Space Station Manned Base (SSMB) Interface Control Document, Part 1
SSP-50098-PART 2	Robotic Workstation to Space Station Manned Base (SSMB) Interface Control Document, Part 2
SSP-50103-PART 1	Integrated Truss Segment S0 to Global Positioning System Interface Control Document Part 1
SSP-50103-PART 2	Integrated Truss Segment S0 to Global Positioning System Interface Control Document Part 2
SSP-50104	Portable Breathing Apparatus Standard Interface Control Document
SSP-50142-01	Russian Segment (RS) to the Software Development and Integration Laboratory (SDIL) Interface Control Document Part 1
SSP-50142-02	Russian Segment (RS) to the Software Development and Integration Laboratory (SDIL) Interface Control Document Part 2
SSP-50144-01	Software ICD Part 1 NCS-to-ISS Book 1, Hardware Architecture Requirements
SSP-50144-03	Software ICD Part 1 NCS-to-ISS Book 3, Node Control Software (NCS) Non-1553 Input/Output (I/O) Interface
SSP-50144-04	Software ICD Part 1 NCS-to-ISS Book 4, Common Berthing Mechanism (CBC) Interface
SSP-50144-05	Software ICD Part 1 NCS-to-ISS Book 5, Assembly/Contingency Baseband Processor Interface
SSP-50144-06	Software ICD Part 1 NCS-to-ISS Book 6, Radio Frequency Group Interface
SSP-50144-07	Software ICD Part 1 NCS-to-ISS Book 7, Transponder Interface
SSP-50144-08	Software ICD Part 1 NCS-to-ISS Book 8, Plasma Contactor Interface
SSP-50144-09 – PART 1	Software Interface Control Document, Part 1, Node Control Software to International Space Station, Book 9, Remote Power Controller Module Interface
SSP-50144-10	Software ICD Primary NCS-to-ISS Book 10, Photovoltaic Control Unit (PYCU) Interface
SSP-50144-11	Software ICD Part 1 NCS-to-ISS Book 11, DC-to-DC Converter Unit (DDCU) Interface
SSP-50144-12	Software ICD Part 1 NCS-to-ISS Book 12, Secondary Node Control Software (NCS) Interface
SSP-50144-13	Software ICD Part 1 NCS-to-ISS Book 13, Portable Computer System Interface
SSP-50147-01	Mobile Service System (MSS) to the Software Development and Integration Laboratory (SDIL) Interface Control Document Part 1
SSP-50147-02	Mobile Service System (MSS) to the Software Development and Integration Laboratory (SDIL) Interface Control Document Part 2
SSP-50193-01	Software ICD Part 1, Payload MDM-to-ISS Book 1, Hardware Architecture Requirements
SSP-50193-03	Software ICD Part 1, Payload MDM-to-ISS Book 3, Charged Particle Directional Spectrometer-Extravehicular Interface
SSP-50193-04	Software ICD Part 1, Payload MDM-to-ISS Book 4, Defibrillator Interface
SSP-50193-05	Software ICD Part 1, Payload MDM-to-ISS Book 5, Tissue Equivalent Proportional Counter Interface

SSP-50193-06	Software ICD Part 1, Payload MDM-to-ISS Book 06, Volatile Organic Analyzer Interface
SSP-50193-07	Software ICD Part 1, Payload MDM-to-ISS Book 7, Blood Pressure and Electrocardiograph Interface
SSP-50193-08	Software ICD Part 1, Payload MDM-to-ISS Book 8, Incubator Interface
SSP-50193-09	Software ICD Part 1, Payload MDM-to-ISS Book 9, Medical Equipment Computer Interface
SSP-50193-10	Software ICD Part 1, Payload MDM-to-ISS Book 10, Spectrophotometer Interface
SSP-50193-11	Software ICD Part 1, Payload MDM-to-ISS Book 11, Charged Particle Directional Spectrometer Intravehicular Interface
SSP-50193-13	Software ICD Part 1, Payload MDM-to-ISS Book 13, Automated Payload Switch Interface
SSP-50193-14	Software ICD Part 1, Payload MDM-to-ISS Book 14, Payload Ethernet Hub/Gateway Interface
SSP-50200-04	Station Program Implementation Plan, Volume IV: Payload Engineering Integration
SSP-50200-05	Station Program Implementation Plan (SPIP) Vol. V Logistics and Maintenance (Part 1&2)
SSP-50221	ACS Moding Indicator to Pressurized Mating Adapter Standard Interface Control Document
SSP-50228-09	Space Station Program Configuration and Assembly Standard Interface Control Document Volume 9: Advanced Vision Function to Integrated Truss Segment P1
SSP-50228-10	Space Station Program Configuration and Assembly Standard Interface Control Document Volume 10: Advanced Vision Function to Integrated Truss Segment S3
SSP-50228-11	Space Station Program Configuration and Assembly Standard Interface Control Document Volume 11: Advanced Vision Function to Integrated Truss Segment P3
SSP-50228-13	Space Station Program Configuration and Assembly Standard Interface Control Document Volume 13: Advanced Vision Function to United States Laboratory
SSP-50235	Interface Definition Document (IDD) for ISS Visiting Vehicles
SSP-50276	Depot/Manufacturing Facility Certification Plan
SSP-50276-ANX1	NPLD Facility and ORU Certifications-Increment 1 Annex
SSP-50276-ANX2	NSLD Facility and ORU Certifications - Increment 2 Annex
SSP-50276-ANX3	Boeing Reusable Space Systems - Palmdale Facility and ORU Certifications - Increment 3 Annex
SSP-50280	Node 2 Bilateral Hardware and Software Exchange Agreements Lists and Schedules For Node 2
SSP-50285	Shuttle-Based Wireless Instrumentation System (SWIS) to ISS Elements Interface Control Document
SSP-50290	Prime Item Development Specification for Node 2
SSP-50324	U.S. Oversize Hardware Transportation Roles and Responsibilities Plan - Super Guppy Transportation System
SSP-50335	ATV Demonstration and Nominal Operations Flight Plan
SSP-50337	Software Requirements Specification for Mobile Servicing System (MSS) Graphical User Interface (GUI)
SSP-50337-01-ANX08A	Software Requirements Specification for Mobile Servicing System (MSS) Graphical User Interface (GUI) Volume 1: Space Station Remote Manipulator System (SSRMS), Annex 8a
SSP-50337-02	Software Requirements Specification for Mobile Servicing System (MSS) Graphical User Interface (GUI) Volume 2: Mobile Base System (MBS)
SSP-50342	Mil-Std 1553 Remote Terminal Test Exceptions Report

SSP-50351	Software Interface Control Document Part 2 Mobile Servicing System PCS/GUI Configuration Files
SSP-50405-01	Software Interface Control Document, Hub Control Zone Multiplexer/Demultiplexer to International Space Station Book 1, Hardware Architecture
SSP-50405-03	Software Interface Control Document Hub Control Zone (HCZ) Multiplexer/Demultiplexer (MDM) to ISS Book 3 Hub Control Zone (HCZ) to N3-1 Interface
SSP-50405-04	Software Interface Control Document Hub Control Zone (HCZ) Multiplexer/Demultiplexer (MDM) to ISS Book 4 Hub Control Zone (HCZ) to N3-2 Interface
SSP-50405-05	Software Interface Control Document Hub Control Zone (HCZ) Multiplexer/Demultiplexer (MDM) to ISS Book 5 Oxygen Generator Assembly (OGA) Interface
SSP-50405-06	Software Interface Control Document Hub Control Zone (HCZ) Multiplexer/Demultiplexer (MDM) to ISS Book 6 Urine Processor Assembly (UPA) Interface
SSP-50405-07	Software Interface Control Document Hub Control Zone (HCZ) Multiplexer/Demultiplexer (MDM) to ISS Book 7 Water Processor Assembly (WPA) Interface
SSP-50405-08	Software Interface Control Document Hub Control Zone (HCZ) Multiplexer/Demultiplexer (MDM) to ISS Book 8 Pump/Fan Motor Controller (PFMC) Interface
SSP-50451	Electrical Flight Grapple Fixture to Strela Cargo Crane Adapter Interface Control Document
SSP-50461	Interim Resistive Exercise Device (IRED) to Node 1 Interface Control Agreement (ICA) Hardmounted and Isolated IRED Assemblies
SSP-50462	International Space Station (ISS) Telemetry Format Definition Document
SSP-50478	Payload Data Library Requirements Document
SSP-50482	ISSP Software Management Plan
SSP-50493	Prime Item Development Specification for the Direct Current Switching Unit Interface Flight Support Equipment
SSP-50520	International Space Station Logistics & Maintenance Operational Support Concepts and Requirements
SSP-50531	FRAM AVT Card
SSP-50539	Software Interface Definition Document Application Process Identifiers and Logical Data Path Identifier Definition
SSP-50540	Software Interface Definition Document for Broadcast Ancillary Data
SSP-50610	External Maintenance Operations
SSP-50672	Software Interface Control Document, United States On-Orbit Segment to Japanese Experiment Module
SSP-52000-EIA-ERP	EXPRESS Integration Agreement Blank Book
SSP-52000-IDD-ERP	EXPRESS Rack Payloads Generic Payload Verification Plan
SSP-52000-PDA	Payload Data Sets Blank Book
SSP-52000-PIA-SP	Payload Integration Agreement (PIA) Blank Book for Small Pressurized Payloads
SSP-52000-PVP-ERP	EXPRESS Rack Payloads Generic Payload Verification Plan
SSP-52005	Payload Flight Equipment Requirements and Guidelines for Safety Critical Structures
SSP-52052	Portable Computer System (PCS) Interface Description Document (IDD)

SSP-57000	Pressurized Payloads Interface Requirements Document
SSP-57001	Pressurized Payloads Hardware Interface Control Document Template
SSP-57002	Payloads Software Interface Control Document Template
SSP-57003	Attached Payload Interface Requirements Document
SSP-57004	Attached Payloads Hardware Interface Control Document Template
SSP-57008	Pressurized Payload Non-Rack ICD Template
SSP-57011	Payload Verification Program Plan
SSP-57027	ISS Payload Interface Fault Tolerance Document
SSP-57057	ISS Payload Integration Template
SSP-57059	Standard Payload Integration Agreement (SPIA) for Pressurized Payloads
SSP-57061	Standard Payload Integration Agreement (SPIA) for Attached Payloads
SSP-57063	Standard Payload Integration Agreement (SPIA) for Small Pressurized Payloads
SSP-57072	Standard Payload Integration Agreement for ISS Payloads
SSP-53109	EXPRESS Rack ICD for Potable Water Dispenser (PWD)
SSP-53110	EXPRESS Rack ICD for ISS Food Warmer
SSP-54504	IDRD Annex 5 Payload Tactical Plan Blank Book
SSP-57206	EXPRESS Rack 6 Hardware ICD
SSP-58029	Payloads Software Management Plan
SSQ 21005	Resistor, Fixed, Film, Chip, Space Quality
SSQ 21006	Resistor, Network, Fixed Film 10 PIN SIP, Space Quality
SSQ 21007	Resistor, Network, Fixed Film 16 PIN SIP, Space Quality
SSQ 21008	Resistor, Network, Fixed Film 4 PIN SIP Space Quality
SSQ 21009	Resistor, Network, Fixed Film 6 PIN SIP Space Quality
SSQ 21010	Resistor, Network, Fixed, Film 8 PIN SIP, Space Quality Specification For
SSQ 21111	Capacitors, Fixed, Supermetalized, Plastic Film Dielectric (DC, AC or DC & AC), Hermetically Sealed, Space Quality
SSQ 21112	Capacitors, Chip, Fixed, Tantalum High Reliability
SSQ 21113	Capacitors, Ceramic, High Voltage Radial-Leaded, High Reliability General Specification For
SSQ 21215	Filters, Radio Frequency/Electromagnetic Interface Suppression, Hermetically Sealed, Space Quality
SSQ 21216	Filters, Radio Frequency/Electromagnetic Interface Suppression, Resin Sealed Space Quality
SSQ 21217	Filters, Radio Frequency/Electromagnetic Interface Suppression, Hermetically Sealed On One End, Space Quality
SSQ 21218	Filters, Radio Frequency/Electromagnetic Interface Suppression, Hermetically Sealed, Space Quality
SSQ 21635	Connectors and Accessories Electrical Circular Miniature IVA/EVA Compatible Space Quality General Specification For
SSQ 21636	Connectors and Accessories Electrical Rectangular Rack And Panel Space Quality General Specification For
SSQ 21637	Connectors and Accessories Electrical Umbilical Interface Environmental Space Quality General Specification For
SSQ 21644	Clamp Electrical Cable Harness Space Quality, General Specification For
SSQ 21652	Wire, Electric, Silicone Insulated, Nickel Coated Copper, Space Quality General Specification For

SSQ 21653	Cable, Coaxial, Twinaxial and Triaxial Flexible and Semirigid General Specification For
SSQ 21654	Cable Single Fiber Multimode Space Quality, General Specification For
SSQ 21655	Cable, Electrical MIL-STD-1553 Data Bus Space Quality, General Specification For
SSQ 21656	Wire And Cable, Electric, Fluoropolymer-Insulated Nickel Coated Copper Or Copper Alloy, General Specification For
SSQ 21676	Coupler Data Bus MIL-STD-1553B Space Quality General Specification For
SSQ 21678	Switch MIL-STD-1553B Data Bus, Space Quality General Specification For
SSQ 21936	Semiconductor Device, Diode, Silicon, Fast Recovery, Power Rectifier (Similar To 1N5816 Type)
SSQ 21937	SSPO Semiconductor Device Diode Silicon Schottky Barrier Fast Recovery Specification
SSQ 22039	Semiconductor Device, Transistor, Silicon, PNP Power (Similar To 2N5153)
SSQ 22039	Microcircuit, Digital, Advanced Schottky TTL Monolithic Silicon (Selected 54F Device Types)
SSQ 22263	Microcircuit, Digital, Advanced Schottky TTL Monolithic Silicon (Selected 54F Device Types)
SSQ 22264	SSPO Microcircuit, Digital High Speed CMOS Monolithic Silicon General Specification
SSQ 22563	SSPO Microcircuit, Linear, CMOS, Analog Switch Monolithic Silicon Specification
SSQ 22569	Microcircuit, Linear, CMOS/Analog Single 8 Channel Multiplexer/Demultiplexer With Overvoltage Protection, Monolithic Silicon, Positive Logic (508A)
SSQ 22580	Microcircuit, Linear, Quad High Speed Differential Line Driver, Monolithic Silicon (26LS31)
SSQ 22581	Microcircuit, Linear, Quad Differential Line Receiver, Monolithic Silicon (26LS32)
SSQ 22582	SSPO Microcircuit Linear Regulating Pulse - Width Modulator Monolithic Silicon (1526 and 1527A) General Specification For
SSQ 22662	Microcircuit Digital CMOS, Microprocessor, Monolithic Silicon (80C86)
SSQ 22663	Microcircuit Digital CMOS Programmable Interval Timer, Monolithic Silicon (82C54)
SSQ 22665	Microcircuit Digital CMOS, Programmable Interrupt Controller, Monolithic Silicon (82C59A-5)
SSQ 22667	SSPO Microcircuit Digital 16 Bit Microprocessor, CHMOS Monolithic, Silicon General Specification For
SSQ 22668	Microcircuit Digital 32 Bit Microprocessor CHMOS Microcircuit, Circuit Digital 32 Bit
SSQ 22669	SSPO Microcircuit Digital 80 Bit Numeric Process SSPO Microcircuit, Digital, 80 Bit Numeric Processor, CHMOS Monolithic, Silicon General Specification For
SSQ 22670	SSPO Microcircuit Multi-Bus II Interface Controller CHMOS Monolithic, Silicon General Specification For
SSQ 22673	Microcircuit, Digital, CMOS, MIL-STD-1553, BUS Controller, Monolithic, Silicon
SSQ 22676	Transformer, MIL-STD-1553, Terminal Interface, Space Quality
SSQ 22678	SSPO Microcircuit, Hybrid, MIL-STD-1553 Terminal Interface, and Transceiver Space Quality General Specification For
SSQ 22679	Microcircuit, Interface, Bipolar, MIL-STD-1553, Dual BUS Transceiver
SSQ 22680	Connectors Rectangular (ORU) Space Quality General Specification For
SSQ 22681	Connectors, Modular, Rectangular Space (RPCM), Quality, General Specification For
SSQ 22684	Semiconductors, Device, Coupler, Opto-Electronic Solid State Types 4N47, 4N48, and 4N49
SSQ 22685	Microcircuit Linear High Speed Pulse Width Modulator Controller 1825
SSQ 22687	Microcircuit Bipolar Hall Effect Digital Latch Omh-3075
SSQ 22689	MOS Field Effect Transistor Semiconductor Device N-Channel Silicon IRHM 7450SE
SSQ 22691	Microcircuit, Hybrid, Smart Power 3-Phase Motor Drivers

SSQ 22698	Connectors Electrical Circular EVA/IVA Compatible Space Quality General Specification For
SSQ 22720	Wire, Electrical, Super Flex, Tefzel Insulated, Nickel Coated, Space Quality, General Specification For
SSQ 25000	Destruct Physical Analysis Testing Specification For The Space Station Program
SSQ 25001	Upgrade Screening EEE Parts Requirements
SSQ 26000	Space Station Program, Standard Repair For Sharp Edges on SSQ 21635 NZGL Type Connector Assemblies and Components

DRD	DATA TYPE	DRD TITLE	SOW PARAGRAPH	REVISED BY
OP03	2	Prelaunch/Post-Landing Operations Requirements	2.6.2	1356
PC05	3	Engineering Drawings and Associated Lists	2.5.3.2.a	1466
PC06	3	Integrated Program Schedules	1.2.5.1	1356
PC08	3	Acceptance Data Package	2.7.2.d	1356
PC18	3	Modification Package Acceptance Data Package	2.9.1	1356
PC19	3	Time Compliance Technical Instructions for Modification Packages	2.9.1	1356
PC20	3	Mod Kit Unique Engineering Drawings and Associated Lists	2.9.1	1466
PC22	1	Integration and Operations Management Products	H.37	1547
PC24	3	Node 2 and 3 Hardware Progress Report	4.3	1356
PC25	3	On-Orbit Installation Drawings	3.3.2.8.1 3.3.2.8.2 2.5.3.2.c, d,e,f,g,h	1415
PC27	3	Contractor Financial Management Report (533M)	1.2.3.1	1466
SE02	2	Integrated Flight Loads (IFLs) and Software Package	3.3.7.3.1 3.3.7.2.3 3.3.7.2.4 2.10.1	1231
SM02	2	Hazard Reports and System Description	2.5.9.1.a (4), 2.7.1.a (2)	1315
SM03	3	Mishap and Investigation Reports	2.7.1.b	1356
SM04		Merged with F-SA-05		1327
SM05		Merged with F-SA-06		1327
SW01	2	Delivery of Software Applications, Patches, and/or Pre-Positioned Loads Data package Other than DD250 Flight Software	2.5.9.2.a	1356
VE06	3	Intra-Segment Interface Control Documents (ICDs)	5.10.f	1356
VE09	2	Materials Identification and Usage Lists (MIUL)	2.5.4.b, 3.4.6.1	1356
VE10	1	Materials Usage Agreements (MUAs)	2.5.4.b, 3.4.6.1	1356
VE12	1 and 3	Structural Loads Control Plan and Reports	2.5.2.f	1356
VE15	1 and 3	Integrated Thermal Control Plan and Reports	2.5.2.h	1356
VE20	2	Integration and Verification Requirements for U.S. Segments & ISS System	2.5.5.c (4) 3.2.1.11.3 2.6.2.a	1356
VE23	2	ISS System and Vehicle Subsystems Analyses and Analytical Models	2.5.2.g	1398
VE24	3	Specification Traceability and Compliance Reports	2.5.5.c.5 (b),(c),(d) 3.2.1.11.3	1356
VE28	2	Integrated Signal Lists (ISL)	3.3.7.2.5 2.5.1.c	1231

VE32	2 and 3	Vehicle Engineering Data	2.5.3.2.a 2.5.3.3.a 2.5.3.3.b 2.6.1.a (2),(4),(5) 2.7.1.a (2),(3),(4) 3.3.2.9.2 3.3.4.1.1	1356
VE42	3	Flight Releasable Attachment Mechanism (FRAM) Design Data Book	5.10.g	1356
F-CM-01	1	Configuration Management Plan	1.3.1.1	1356
F-EC-01	2	Export Control Audit Results	1.5.2	1356
F-LM-01	3	ISS On-Orbit Logistics Supportability Assessment Report	2.17 3.3.8.2.2 3.3.8.2.5	1382
F-LM-02	3	ISS ORU Ground Supportability Assessment Report	2.17, 3.3.8.2.2	1356
F-LM-03	1	Increment Definition and Requirements Document (IDRD) Annex 2, On-Orbit Maintenance Plan	3.3.8.2.3	1430
F-LM-04	3	Parts Obsolescence Monitoring	3.3.8.5.3	1356
F-MA-12	3	Certification of Flight Readiness (CoFR)	3.2.1.6	1333
F-MI-01	2	Certification of Flight Readiness (CoFR) Plan	3.2.1.6	1231
F-MI-02		Deleted		1547
F-MI-03		Deleted		1547
F-MI-05		Deleted		1547
F-MI-06		Deleted		1547
F-MI-07		Deleted		1547
F-MI-08		Deleted		1547
F-MI-09		Deleted		1547
F-MI-11	1	Increment Unique IDRD Annex 5 Payload Tactical Plan	8.2.1.9, 8.2.1.17	1333
F-MI-12	1	Payload Unique Integration Agreements	8.2.1.9	1333
F-PA-02		Deleted		1547
F-PA-03		Deleted		1547
F-PA-04		Deleted		1547
F-PA-06		Deleted		1547
F-PA-07		Deleted		1547
F-PA-08		Deleted		1547
F-PA-09		Deleted		1547
F-PA-10		Deleted		1547

F-PA-14	3	Element Level and Truss Level Payload Engineering Analysis Reports	8.3.3.3	1333
F-PA-15	3	ISS Level Payload Engineering Integration Reports	8.3.3.4	1333
F-PA-16	1	Payload Unique Hardware Interface Control Documents	8.2.1.23	1430
F-PA-17	1	Unique Payload Software Interface Control Documents	8.4.1.2	1333
F-PA-19	3	Payload Operations Guidelines and Constraints Document	8.3.3.5	1333
F-PA-20	3	Verification Reports	8.3.2.5	1333
F-PA-21	3	Configuration Layout/Interface Schematics	8.3.3.8, 8.3.3.9	1333
F-PA-25		Deleted		1547
F-PA-27	3	Increment Capability Reports	8.3.3.6	1333
F-PC-02	3	Cost Performance Report (CPR)	1.2.3.2	1547
F-PC-03	3	Workforce Reports	1.2.3.3	1356
F-PC-04	1	Work Breakdown Structure (WBS) and Dictionary	1.2.3.4	1547
F-PC-05	2	Cost Performance Report (CPR) Earned Value Methodology Report	1.2.3.2	1356
F-PC-06	3	Cost, Schedule, and Technical Report for Avionics and Software	1.2.3.2	1382
F-PM-01	1	Management Plan	1.1.1.1	1356
F-PM-02	3	Integrated Financial Review Products	1.1.1.2	1547
F-PM-03	2	Socio-Economic Subcontract Reporting	G.17	1356
F-PM-04	1	Subcontracting Plan	52.219-9	1356
F-PM-07	3	Data Accession List	H.43	1356
F-PM-08	3	Property Reporting with Element Pricing Methodology	H.52	1296
F-PM-09	1	SOW Evidence of Completion Matrix	H.37, H.51	1547
F-PM-10	3	Certification Baseline Documents and Supporting Documentation	3.2.2.3.4	1265
F-RA-01		Deleted		1547
F-RA-02		Deleted		1547
F-RA-03		Deleted		1547
F-RA-04	3	Payload MDM Configuration Files and PCS Displays	8.4.1.15	1333
F-RA-10	3	Payload Product Integrated List (PPIL)	8.4.1.5	1333
F-RA-11	1	Payload Unique Displays Software Requirements Specifications	8.4.1.4	1547
F-RM-03		Deleted		1547
F-SA-01	1	Safety & Mission Assurance/Risk Management Plan	3.8.1.1, 3.8.6.1	1356
F-SA-02	3	Monthly Safety & Health Metrics	3.8.1.4	1356
F-SA-03	2	Safety Compliance Data	8.2.2.6	1333
F-SA-04	2	Hazard Reports	3.8.4.1 3.8.4.2	1315
F-SA-05	1	Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL)	2.7.1.a.3 3. 8.5.1	1327

F-SA-06	3	R&M Allocations, Assessment, and Analyses Reports	2.7.1.a.3 2.7.1.a.4 3.8.5.2.1 3.8.5.2, 3.8.5.2.2	1356
F-SE-31	3	Engineering Integration Reports	8.3.3.1, 8.3.3.5, 8.3.3.10	1333
F-SE-44		Deleted		1547
F-SE-46		Deleted		1547
F-SE-47		Deleted		1547
F-SE-49		Deleted		1547
F-SE-50		Deleted		1547
F-SE-57		Deleted		1547
F-SV-03	2	Traceability Verification Requirements	8.5.3.1	1333
F-SW-01	2	Data Integration Standards	3.3.7.2.5	1356
F-SW-02		Deleted		1547
F-SW-03	2	Integrated Software Schedule	3.3.7.11.2	1231
F-SW-05	2	Flight Software Operations Handbook (FSOH)	3.3.7.13	1231
F-SW-12	3	Payload Integrated Flight Load (PIFL) Version Description Drawing	8.5.1.1	1333
F-SW-15	3	EXPRESS Configuration Files	8.4.1.15	1333
F-UT-32	3	PSIVF Flight Products Verification Documents	8.4.1.17	1333
F-UT-39	3	Software Version Description Document (VDD), Software and Data Item Package		1333
F-VE-02	3	Engineering CAD Models	3.3.2.7.1, 3.3.2.7.2	1231
F-VE-03	3	Abstracts for CAD, Thermal, and Structural Models	4.12	1246
F-VE-09	3	Sustaining Engineering Drawings, Mod Kit Drawings and Associated Lists	3.3.2.9.1, 3.3.4.1.2.2	1356
F-VE-13	3	Data Conversion and Interface for GFE/IP Drawings to the VMDB	3.3.4.1.3	1231
F-VE-14	3	Launch Configuration Drawings	3.3.2.9.3	1466
F-SSPTS-01	3	Engineering Drawings and Associated Lists	4.16.3.6.2.5	1356
F-SSPTS-02	3	Material Review (MR) Evaluation Report	4.16.3.6.2.7	1356
F-SSPTS-03	3	EEE Parts Documentation	4.16.3.6.2.8	1356
F-SSPTS-04	3	Analyses, Models, Evaluations and Study Reports	4.16.3.7.1, 4.16.3.7.4, 4.16.3.7.5, 4.16.3.7.6, 4.16.3.7.8, 4.16.3.8.2	1356
F-SSPTS-05	2	Measurements and Instrumentation	4.16.3.9.1	1356
F-SSPTS-06	3	Operational Ground Support Equipment (GSE) Operation and Maintenance Documentation for Contractor Produced GSE	4.16.3.10.2.3	1356
F-SSPTS-07	2	Inputs to NSTS 08934, Shuttle Operational Book (SODB)	4.16.3.10.2.4	1356
F-SSPTS-08	1 & 3	Verification/Certification Data	4.16.3.11.1, 4.16.3.11.3.2	1356
F-SSPTS-09	2	Orbiter Safety Analysis Report and Hazard Reports	4.16.3.12.2	1356
F-SSPTS-10	1 & 3	Failure Modes and Affects Analysis (FMEA)/Critical Items List (CILs)	4.16.3.12.3	1356

DATA REQUIREMENTS DESCRIPTION

1. DR Title: PC22, Integration & Operations (I&O) Management Products
2. DRD Extension Number(s): None
3. TPR Code: Business Management/BG
4. Data Type: 1
5. Frequency of Submission: Initial Baseline: 90 days after contract award

Yearly Work Plan for January 1 – September 30, 2004:
30 days after contract award.

Yearly Work Plan: September 1st of each year except 2008
October 1, 2008 for GFY 2009

Yearly Work Plan Reconciliation: March 1st of each year, or as
requested by NASA in support of the Yearly Program
Planning, Budgeting, and Execution exercise.

6. First Submission Date: Initial Baseline: March 30, 2004

Yearly Work Plan for January 1 – September 30, 2004:
January 30, 2004.

Yearly Work Plan: September 1, 2004

Yearly Work Plan Reconciliation: December 1, 2004
7. As-of-Date: N/A
8. Copies and Distribution: 1 copy distributed to each of the following:
 - (a) BG/Contracting Officer
 - (b) LO/Space Station Resources Office
 - (c) OA/COTR
 - (d) Data Management, OH
 - (e) Program-authorized electronic repository (EDMS or equivalent)
9. Remarks: NONE
10. Use: These products will be utilized by Government and contractor personnel to manage the I&O baseline for the contract
11. References: Section H, Special Contract Requirements, H.37 Management of I&O Tasks
12. Interrelationships: I&O Reporting; DR PC27; NASA Form 533

13. Preparation Information:

13.1 Scope:

Initial Baseline: The contractor shall provide a baseline, which documents the negotiated contract value of all I&O tasks throughout the entire period of performance including options through September 30, 2008. The contractor shall provide the negotiated contract value of all I&O tasks at the 3rd level WBS for October 1, 2008 through September 30, 2009 by October 15, 2008. The contractor shall provide the negotiated contract value of all I&O tasks at the 3rd level WBS for October 1, 2009 through September 30, 2010 by August 15, 2009.

Yearly Work Plan: The plan will be comprised of work packages, which document the content and estimated resources/cost for I&O (the I&O Baseline and forecast) which will be performed in the subsequent fiscal year. For GFY 2009 forward, this will include the time-phased budget and forecast for Sustaining Engineering tasks* only. Work packages will be jointly developed by the Government and the Contractor and approved by the Government. *Sustaining Engineering tasks are defined as all tasks in SOW sections 1.0, 2.0, 3.0 and 8.0 or discrete tasks in SOW section 6.0 that are considered sustaining engineering (vs. a modification).

Yearly Baseline Reconciliation: This document shall provide a yearly update of the negotiated contract value of all I&O tasks throughout the entire period of performance. This data will be delivered in support of NASA's Program Planning, Budgeting, and Execution exercise.

13.2 Format: NASA and contractor agreed to format.

13.3 Content:

For the purposes of this DRD, the Work Plan is defined as the summary of all work packages under the contract (for GFY 2009 forward, this will include Sustaining Engineering tasks* only). Work packages represent a subset of tasks within the work plan.

For each work package include:

- (a) Identifiers – Reference WBS, SOW paragraph number, task title, and team or subteam designation
- (b) Schedules – related to work included in task descriptions.
- (c) Task Descriptions include:
 - (i) Description of the work to be accomplished and how it will be accomplished
 - (ii) Parameters for performance describing limitations of performance scope,
 - (iii) Tangible outputs generated by performance (at a minimum DRD and DIL products should be specified where appropriate)
- (d) Resource requirements – monthly spread of resources, including totals at the work package level
- (e) Reference to tasks required by the Evidence of Completion Matrix (DRD F-PM-09).
- (f) Metrics. For GFY 2009 forward, include the task performance metrics showing progress towards satisfying the completion criteria in the F-PM-09.

Initial Baseline: The initial baseline shall consist of task descriptions, schedule, and resources by contractor team. A summary section shall be provided which documents the resources by lowest level reportable WBS, by each major SOW section (1.0, 2.0, 3.0 and 4.0), by major task and the total I&O level. Resources will include all direct cost elements, other direct costs and indirect costs. The initial baseline for FY 2009 and 2010 shall consist of distributed budget by 3rd level WBS.

Yearly Work Plan: The Work Plan shall consist of a compilation of I&O Baseline/forecast Work Packages from designated program functional areas. Each of these Work Packages shall identify the tasks, schedule, resources, basis for resources, and signature block for contractor and government technical managers.

Yearly Work Plan Reconciliation: This document shall individually identify the resource adjustments and schedule impacts to the initial contract value baseline caused by approved supplemental agreements and/or Work Package Revision Requests (WPRRs).

- 13.4 Maintenance: All deliverables shall be maintained electronically. Government approved adjustments to individual Work Packages as a result of added or deleted or modified tasks shall be maintained in the electronic file. The current Work Plan shall be available as a "read-only" file.

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Cost Performance Report (CPR) 1b. Data Type: 3	2. Date of Current Version 10/01/08	3a. DRD No. F-PC-02	3b. RFP/Contract No. NAS 15 -10000
4. Use (Define need for, intended use of, and/or anticipated results of data) CPR data will be used by NASA managers to: (a) integrate cost and schedule performance data with technical performance measures, (b) identify the magnitude and impact of actual and potential problem areas causing significant cost and schedule variances, and (c) provide valid, timely program status information to higher management.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW 1.2.3.2 NPD 7120.5D Program/Project Management Process and Requirements		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: See attachments

SCOPE: The Cost Performance Report (CPR) shall establish the ISS Performance Measurement System management criteria, implementation approach, and cost/schedule control plan on this contract. The associated report(s) shall document the ISS program cost and schedule status using the four of the five (5) standard formats contained in the CPR (See attachment). Format 2, Organizational Categories, is not required for performance on this contract. The CPR shall be integrated and reconcilable with other required management systems and reporting requirements. Additionally, the contractor shall provide Management Reserve (MR), Undistributed Budget (UB), and Statement of Work (SOW) logs with its monthly CPR submissions. The data provided per the requirements of this DRD should reconcile with the data provided per the requirements of DRD PC27 (NF533 M/Q Cost Reporting) and DRD F-PM-02 (Integrated Management Review Products).

CONTENT: See attachment.

FORMAT: See attachment.

9. OPR: LO.

10. FIRST SUBMISSION DATE: Ten (10) workdays after initial month end for Formats 1, 3 and 4. Fifteen (15) workdays after the initial month end for Format 5.

Frequency Of Submission: Monthly. On or before the Fifteenth (15th) workday for formats 1, 3 and 4. On or before the twentieth (20th) workday for Format 5.

Additional Submissions:

11. MAINTENANCE: The reports shall be maintained electronically by the contractor.

12. COPIES/DISTRIBUTION:

(hard copy): 3 copies to LO

1 copy DCMA

(electronic) 1 copy to LO

1 copy BG/Contracting Officer

1 copy DCMA

1 copy OA/COTR

1 copy to a Program authorized repository
(EDMS or Equivalent)

13. (REMARKS: NONE)

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Work Breakdown Structure (WBS) and Dictionary 1b. Data Type: 1	2. Date of Current Version 10/01/08	3a. DRD No. F-PC-04	3b. RFP/Contract No. NAS 15 -10000
4. Use (Define need for, intended use of, and/or anticipated results of data) Provides framework to define work and to establish financial reporting levels and to correlate schedules.			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW 1.2.3.4		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: Contains the contractual Work Breakdown Structure (WBS), the WBS Dictionary, and a map to the ISS Program WBS.

CONTENT: Contains the contractual WBS, the corresponding dictionary, Program map, and specific requirements as follows:

- a. **WBS:** The WBS shall subdivide the total contracted effort into elements that serve as the basis for detailed planning and control of the project, and permit collection of cost and schedule data at element level. These elements include hardware, software, services, tasks, etc. It shall include all subcontracting and major procurement effort at the proper level. It shall be product oriented and structured so that key SOW tasks are at an appropriately high level.
- b. **WBS Dictionary:** The WBS Dictionary shall define the scope of each WBS element and narratively describe the tasks included in each element
- c. **Program WBS Map:** The contractor shall provide a mapping of the contract WBS to the ISS Program WBS.
- d. **Specific requirements:** Integration and Operations (I&O) discrete tasks considered to be modifications shall be reported in WBS 8.0, "Modifications". Categorization of an I&O discrete task as WBS 5.0 or WBS 8.0 should be agreed to by NASA and Boeing. In general, scope to be reported under WBS 8.0 consists of hardware and software deliverable items with corresponding DIL numbers. I&O work that is underlimit (\leq \$550K) shall not be reported under WBS 8.0. This work shall be reported under WBS 5.0. Infrastructure teams (Program Management, Configuration Management and Business Management) do not report I&O work under WBS 8.0 (all under WBS 5.0). Software teams (software development, software integration and software testing) do not have to report under 8.0 unless the work is associated with a specific software DIL.

FORMAT: Per JSC instructions and in a format supported by the program-authorized electronic library. The WBS shall be in a chart format showing element relationships. The WBS Dictionary shall be ordered in consonance with the WBS and shall reference each WBS element by its identifier and name. Specific formatting for the map to the Program WBS will be done by LO/contractor.

9. OPR: OH

10. FIRST SUBMISSION DATE: Draft with initial proposal. Baseline submission within thirty (30) operating days after contract start date.

Frequency Of Submission: Update as required.

Additional Submissions:

11. MAINTENANCE: Document will be maintained electronically. Information shall be updated as required by the contractor.

12. COPIES/DISTRIBUTION:

(hard copy): 2 copies to LO

1 copy to OH

1 copy OH/Data Management

1 copy DCMA

(electronic): 1 copy to LO

1 copy to OH

1 copy Contracting Officer's Technical Representative (COTR)

1 copy to the Contracting Officer

1 copy DCMA

1 copy to a Program authorized repository (EDMS or equivalent)

13. REMARKS: NONE

DATA REQUIREMENTS DOCUMENT

PREPARATION INFORMATION

TITLE: COST PERFORMANCE REPORT (CPR)

8.0 DESCRIPTION /PURPOSE (Attachment)

8.1 INTRODUCTION

8.1.1 This report consists of five formats containing cost and related data for measuring contractors' cost and schedule performance. This report also includes the Electronic Data Interchange in the American National Standards Institute (ANSI) X12 Standards (Transaction Sets 839 for Cost and an electronic schedule file which is compatible with Microsoft Project which contain the WBS number identified in text field 4 and the Organizational Breakdown Structure number identified in text field 5. These files shall contain schedule data from the total program level to the lowest level in which resources are loaded. The five formats should be prepared in accordance with DI-MGMT-81466. Format 1 (Sample Format 1) provides data to measure cost and schedule performance by summary level Work Breakdown Structure (WBS) elements, the hardware, software and services the Government is buying. Format 2 (Sample Format 2) provides the same data by the contractor's organization. Format 3 (Sample Format 3) provides the budget baseline plan against which performance is measured. Format 4 (Sample Format 4) provides staffing forecasts for correlation with the budget plan and cost estimates. Format 5 (Sample Format 5) is a narrative report used to explain significant cost and schedule variances and other identified contract problems and topics.

8.1.2 CPR data will be used by NASA managers to: (a) integrate cost and schedule performance data with technical performance measures, (b) identify the magnitude and impact of actual and potential problem areas causing significant cost and schedule variances, and (c) provide valid, timely program status information to higher management.

8.1.3 The CPR is a management report. It should provide timely, reliable summary-level data with which to assess current and projected contract performance. The CPR's primary value to government program management is its ability to reasonably reflect current contract status. If the CPR contains excessively detailed or outdated information, management's ability to make informed, timely decisions may be impaired. It is important that the CPR be as accurate as possible so it can be used for its intended purpose. It should be used by the NASA management team, including Program Managers, engineers, cost estimators and financial management personnel, to confirm, quantify and track known or emerging contract problems and as a basis for communicating with the contractor. The contractor should ensure that CPR data accurately reflect how work is being performed and is consistent with the actual contract status.

8.2 APPLICATION /INTERRELATIONSHIP

8.2.1 This Data Requirements Document (DRD) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the contract.

8.2.2 This DRD will be used in conjunction with the standard NASA Form 533M/Q DRD (PC27), the Contract Work Breakdown Structure and Dictionary DRD (F-PC-04) and the Integrated Program Schedules DRD (PC06).

8.2.3 The CPR will be provided consistent with Industry Guidelines for Earned Value Management Systems (ANSI/EIA Standard 748-98).

8.2.4 Unless otherwise provided in the contract, the CPR will be required on a monthly basis and submitted to the DRD distribution list no later than 10 workdays following the reporting cutoff date. Reports may reflect data either as of the end of the calendar month or as of the contractor's accounting period cutoff date.

8.2.5 Data reported in the CPR will pertain to all authorized contract work, including both priced and unpriced effort.

8.2.6 Certain aspects of the report are subject to negotiation between the Government and the contractor, such as:

8.2.6.1.a The CPR reporting on I&O work (WBS 2.0 and WBS 5.0) are not required.

8.2.6.1.b The WBS levels to be reported on Format 1. The level of detail to be reported on Format 1 normally will be limited to level three of the Contract WBS or higher, but lower levels may be specified for high-cost or -risk items. The Government and the contractor should periodically review and adjust as necessary WBS reporting levels on Format 1 to ensure they continue to provide appropriate visibility without requiring excessive information. If there is a significant problem at a lower level, detailed reporting for that WBS element may be required until the problem is resolved.

8.2.6.2 The formats required on the CPR. Only 4 of the 5 formats are required. Format 2, Organizational categories, is not a requirement on this contract. This contract requires submission of the Electronic Data Interchange in the American National Standards Institute (ANSI) X12 Standards (Transaction Sets 839 for Cost and 806 for Schedule).

8.2.6.3 The variance analysis thresholds, (established at 10 percent or \$500K). which, if exceeded, require problem analysis and narrative explanations. (Thresholds to be established by LO and contractor.)

8.2.6.4 The specific time increments to be used for the baseline and staffing projections required by Formats 2 and 3, will correspond (within the limits of the contractor's disclosed Fiscal Calendar) with the Government Fiscal Year.

8.2.6.5 The reporting provisions which apply to the Cost of Money line on Format 1 .

8.2.6.6 Organizational categories for Format 3. The Government may request that different organizational categories be used for reporting staffing in Format 3. If so, the Government and the contractor will negotiate the Format 3 categories.

8.2.6.7 In all cases, the CPR CDRL is subject to "tailoring." Tailoring is defined as deleting requirements from this DRD. All negotiated reporting provisions will be specified in the contract.

8.3 PREPARATION INSTRUCTIONS

8.3.1 Format. Contractor formats should be substituted whenever they contain all the required data elements at the specified reporting levels in a form suitable for NASA management.

8.3.2 Content. The Cost Performance Report shall contain the following:

8.3.2.1 Heading Information - Formats 1 - 4. Preparation instructions for Heading Information (Blocks 1 through 4) apply to Formats 1 through 4.

8.3.2.1.1 Contractor. Enter in Block 1.a the contractor's name and division, if applicable. Enter in Block 1.b the plant location and mailing address of the reporting contractor.

8.3.2.1.2 Contract. Enter the contract name in Block 2.a, the contract number in Block 2.b, the contract type in Block 2.c and the contract share ratio, if applicable, in Block 2.d.

8.3.2.1.3 Program. Enter in Block 3.a the program name, number, acronym and/or type, model, and series, or other designation of the item(s) purchased under the contract. Indicate the program phase, DDT&E or Production, in Block 3.b.

8.3.2.1.4 Report Period. Enter the beginning date in Block 4.a and the ending date in Block 4.b of the period covered by the report.

8.3.2.1.5 Security Classification. Enter the appropriate security classification at the top and bottom of each page.

8.3.2.1.6 Dollars in Factors. If reported dollar amounts have been factored down by a thousand, a million or a billion, enter the factor at the top of each page.

8.3.2.2 Format 1 - Work Breakdown Structure.

8.3.2.2.1 Contract Data.

8.3.2.2.1.1 Quantity. Enter in Block 5.a the number of items to be procured on this contract.

8.3.2.2.1.2 Negotiated Cost. Enter in Block 5.b the dollar value (excluding fee or profit) on which contractual agreement has been reached as of the cutoff date of the report. For an incentive contract, enter the definitized contract target cost. Amounts for changes will not be included in this item until they have been priced and incorporated in the contract through contract change order or supplemental agreement. For a cost plus fixed fee or award fee contract, enter the estimated cost negotiated. Changes to the estimated cost will consist only of amounts for changes in the contract scope of work, not for cost growth ("overrun") from the original estimated cost.

8.3.2.2.1.3 Estimated Cost of Authorized, Unpriced Work. Enter in Block 5.c the amount (excluding fee or profit) estimated for that work for which written authorization has been received, but for which definitized contract prices have not been incorporated in the contract through contract change order or supplemental agreement.

8.3.2.2.1.4 Target Profit/Fee. Enter in Block 5.d the fee or percentage of profit which will apply if the negotiated cost of the contract (see 8.3.2.2.1.2, above) is met.

8.3.2.2.1.5 Target Price. Enter in Block 5.e the target price (negotiated contract cost plus profit/fee) applicable to the definitized contract effort.

8.3.2.2.1.6 Estimated Price. Based on the most likely estimate of cost at completion for all authorized contract work and the appropriate profit/fee, incentive, and cost sharing provisions, enter in Block 5.f the estimated final contract price (total estimated cost to the Government). This number will be based on the most likely management estimate at completion in Block 6.c.1 and normally will change whenever the management estimate or the contract is revised.

8.3.2.2.1.7 Contract Ceiling. Enter in Block 5.g the contract ceiling price applicable to the definitized effort.

8.3.2.2.1.8 Estimated Contract Ceiling. Enter in Block 5.h the estimated ceiling price applicable to all authorized contract effort including both definitized and undefinitized effort.

8.3.2.2.2 Estimated Cost at Completion. These blocks will present the contractor's range of estimated costs at completion. The range of estimates is intended to allow contractor management flexibility to express possible cost outcomes. Contractors are encouraged to provide the most accurate EACs possible through program-level assessments of factors that may affect the cost, schedule or technical outcome of the contract. Where possible, such program-level assessments should include consideration of known or anticipated risk areas, and planned risk reductions or cost containment measures. EACs should be reported without regard to contract ceiling, if applicable. The methods used to develop worst case, best case and most likely management estimates at completion need not be described in the contractor's C/SCSC-compliant management control system description or CPR-No Criteria management procedures.

8.3.2.2.2.1 Management Estimate at Completion - Best Case. Enter in Block 6.a.1 the contractor's best case estimate at completion. The best case estimate is the one that results in the lowest cost to the Government. This estimate should be based on the outcome of the most favorable set of circumstances. If this estimate is different from the most likely estimate at completion (Block 6.c.1), the assumptions and conditions underlying this estimate should be explained briefly in Format 5. This estimate is for informational purposes only; it is not an official company estimate. There is no requirement for the contractor to prepare and maintain backup data beyond the explanation provided in Format 5.

8.3.2.2.2.2 Management Estimate at Completion - Worst Case. Enter in Block 6.b.1 the contractor's worst case estimate at completion. The worst case estimate is the one that results in the highest cost to the Government. This estimate should be based on the outcome of the least favorable set of circumstances. If this estimate is different from the most likely estimate at completion (Block 6.c.1), the assumptions and conditions underlying this estimate should be explained briefly in Format 5. This estimate is for informational purposes only; it is not an official company estimate. There is no requirement for the contractor to prepare and maintain backup data beyond the explanation provided in Format 4.

8.3.2.2.2.3 Management Estimate at Completion - Most Likely. Enter in Block 6.c.1 the contractor's most likely estimate at completion. This estimate is the contractor's official contract EAC and, as such, takes precedence over the estimates presented in Column (15) of Format 1 and Blocks 6.a.1 and 6.b.1. This EAC is the value that the contractor's management believes is the most likely outcome based on a knowledgeable estimate of all authorized work, known risks and probable future conditions. This value need not agree with the total of Column (15) (Block 8.e). However, any difference should be explained in Format 4 in such terms as risk, use of management reserve, or higher management knowledge of current or future contract conditions. This EAC need not agree with EACs contained in the contractor's internal data, but must be reconcilable to them. The most likely EAC also will be reconcilable to the contractor's latest statement of funds required as reported in the Contract Funds Status Report, or its equivalent, if this report is a contractual requirement.

8.3.2.2.2.4 Contract Budget Base. Enter in Block 6.c.2 the total of negotiated cost (Block 5.b) and estimated cost of authorized, unpriced work (5.c).

8.3.2.2.2.5 Variance. Enter in Block 6.c.3 the Contract Budget Base (Block 6.c.2) minus the most likely estimate at complete (Block 6.c.1). This value will be explained in Format 5 according to applicable contractual requirements.

8.3.2.2.3 Authorized Contractor Representative. Enter in Block 7.a the name of the authorized person signing the report. Enter that person's title in Block 7.b. The authorized person will sign in Block 7.c. Enter the date signed in Block 7.d.

8.3.2.2.4 Performance Data.

8.3.2.2.4.1 Work Breakdown Structure Element. Enter in Column (1) of Block 8.a the noun description of the WBS items for which cost information is being reported. WBS items or levels reported will be those specified in the contract. (See 8.2.6.1 above.)

8.3.2.2.4.2 Cost of Money. Enter in Columns (2) through (16) of Block 8.b the Facilities Capital Cost of Money applicable to the contract.

8.3.2.2.4.3 General and Administrative (G&A). Enter in Columns (2) through (16) of Block 8.c the appropriate G&A costs. If G&A has been included in the total costs reported in Block 8.a above, G&A will be shown as a nonadd entry on this line with an appropriate notation. If a G&A classification is not used, no entry will be made other than an appropriate notation to that effect.

8.3.2.2.4.4 Undistributed Budget. Enter the amount of budget applicable to contract effort which has not yet been identified to WBS elements at or below the reporting level. For example, contract changes which were authorized late in the reporting period should have received a total budget; however, assignment of work and allocation of budgets to individual WBS elements may not have been accomplished as of the end of the period. Budgets which can be identified to WBS elements at or below the specified reporting level will be included in the total budgets shown for the WBS elements in Block 8.a and will not be shown as undistributed budget. Enter in Column (15) of Block 8.d the estimate at completion for the scope of work represented by the undistributed budget in Column (14) of Block 8.d. Enter in Column (16) of Block 8.d the variance, if any, and fully explain it in Format 5. All undistributed budget will be fully explained in Format 5.

8.3.2.2.4.4.1 Use of Undistributed Budget. The provisions made in this report for undistributed budget are primarily to accommodate temporary situations where time constraints prevent adequate budget planning or where contract effort can only be defined in very general terms. Undistributed budget should not be used as a substitute for adequate contract planning. Formal budgets should be allocated to contract effort and responsible organizations at the earliest possible time, preferably within the next reporting period.

8.3.2.2.4.5 Subtotal (Performance Measurement Baseline). Enter the sum of the direct, indirect, Cost of Money, and G&A costs and budgets in Columns (2) through (16) of Block 8.a through e. This subtotal is also referred to as the Performance Measurement Baseline because it represents the allocated budget baseline (less management reserve) against which performance is actually measured.

8.3.2.2.4.6 Management Reserve. Management reserve is an amount of the overall contract budget withheld for management control purposes rather than for the accomplishment of a specific task or set of tasks. It is not a contingency fund, and may not be eliminated from contract prices by the Government during subsequent negotiations nor used to absorb the cost of contract changes. In Column (14) of Block 8.f enter the total amount of budget identified as management reserve as of the end of the current reporting period. The amount shown in Format 1 is management reserve. Amounts of management reserve applied to WBS elements during the reporting period will be listed in Block 6.b of Format 3 and explained in Format 5.

8.3.2.2.4.6.1 Negative Management Reserve. Negative entries will not be made in Management Reserve (Column (14) of Block 8.f). There is no such thing as "negative management reserve." If the contract is budgeted in excess of the Contract Budget Base (the negotiated contract cost plus the estimated cost for authorized, unpriced work), the provisions applicable to formal reprogramming and the instructions in paragraphs 8.3.2.2.5.1, 8.3.2.2.6.6, 8.3.2.2.6.7 and 8.3.2.4.1.7 apply.

8.3.2.2.4.7 Total. Enter the sum of all direct, indirect, Cost of Money, G&A cost, undistributed budgets and management reserves, if applicable, in Columns (2) through (14) of Block 8.g. The total of Column (14), Block 8.g, will equal the Total Allocated Budget shown in Block 5.f on Format 3.

8.3.2.2.5 Reconciliation to Contract Budget Base.

8.3.2.2.5.1 Formal Reprogramming. In exceptional cases, the procuring agency may authorize the contractor to establish performance measurement budgets that in total exceed the Contract Budget Base. This process is called formal reprogramming. The contractor and the Government will agree on how the results of a formal reprogramming will be reported in the Cost Performance Report before the formal reprogramming is initiated. This agreement and any other pertinent details on the reporting of the formal reprogramming will be included in Format 4. Blocks 9.a and 9.b provide the contractor the opportunity to reconcile the higher performance measurement budgets, also called an "Over Target Baseline," to the Contract Budget Base. (See 8.3.2.2.6.6, 8.3.2.2.6.7, 8.3.2.4.1.7, and 8.3.2.6.5 below for more information on reporting Over Target Baselines.)

8.3.2.2.5.2 Variance Adjustment. In reporting the results of a formal reprogramming (Over Target Baseline) the contractor may 1) apply the additional budget to completed work, thereby eliminating some or all of the existing cost or schedule variances, 2) apply the additional budget to remaining work, 3) apply some of the additional budget to completed work and some to remaining work, or 4) apply some of the additional budget to management reserve. If the contractor uses a portion of the additional budget to eliminate variances applicable to completed work, the total adjustments made to the cost and schedule variances will be shown in Columns (10) and (11) of Block 9.a. The total cost variance adjustment entered in Column (11) of Block 9.a will be the sum of the individual cost variance adjustments shown in Column (12) of Blocks 8.a through g.

8.3.2.2.5.3 Total Contract Variance. In Columns (10) and (11) of Block 9.b, enter the sum of the cost and schedule variances shown on the Total line (Block 8.g) and on the Variance Adjustment line (Block 9.a). In Column (14) enter the Contract Budget Base from Block 6.c.2. In Column (15) enter the management estimate at completion from Block 6.c.1. In Column (16) of Block 9.b enter the difference between Columns (14) and (15) of Block 9.b.

8.3.2.2.6 Columns (2) Through (16). When compliance with the C/SCSC is contractually required, the data in Columns (2) through (16) shall reflect the output of the contractor's C/SCSC-compliant integrated management system (refer to DFARS 252.234-7001 and NFARS 1852.242-75. When compliance with the C/SCSC is not contractually required ("CPR - No Criteria"), the data in these columns shall be derived using the contractor's summary management procedures (refer to DFARS 252.242-7005 and NFARS 1852.242-76).

8.3.2.2.6.1 Column (2) and Column (7) - Budgeted Cost - Work Scheduled. For the time period indicated, enter the Budgeted Cost for Work Scheduled (BCWS) in these columns.

8.3.2.2.6.2 Column (3) and Column (8) - Budgeted Cost - Work Performed. For the time period indicated, enter the Budgeted Cost for Work Performed (BCWP) in these columns.

8.3.2.2.6.3 Column (4) and Column (9) - Actual Cost - Work Performed (ACWP). For the time period indicated, enter the Actual Cost of Work Performed without regard to ceiling. In all cases, costs and budgets will be reported on a comparable basis.

8.3.2.2.6.4 Column (5) and Column (10) - Variance - Schedule. For the time period indicated, these columns reflect the differences between BCWS and BCWP. For the current period, Column (5) (schedule variance) is derived by subtracting Column (2) (BCWS) from Column (3) (BCWP). For the cumulative to date, Column (10) (schedule variance) is derived by subtracting Column (7) (BCWS) from Column (8) (BCWP). A positive figure indicates a favorable variance. A negative figure (indicated by parentheses) indicates an unfavorable variance. Significant variances as specified in the contract will be fully explained in Format 5. If the contract does not specify variance analysis thresholds, the contractor will provide appropriate variance analyses. (See 8.3.2.6.3.2.4 below.)

8.3.2.2.6.5 Column (6) and Column (11) - Variance - Cost. For the time period indicated, these columns reflect the difference between BCWP and ACWP. For the current period, Column (6) (cost variance) is derived by subtracting Column (4) (ACWP) from Column (3) (BCWP). For cumulative to date, Column (11) (cost variance) is derived by subtracting Column (9) (ACWP) from Column (8) (BCWP). A positive figure indicates a favorable variance. A negative figure (indicated by parentheses) indicates an unfavorable variance. Significant variances as specified in the contract will be fully explained in Format 5. If the contract does not specify variance analysis thresholds, the contractor will provide appropriate variance analyses. (See 8.3.2.6.3.2.4 below.)

8.3.2.2.6.6 Column (12) Reprogramming Adjustments - Cost Variance. Formal reprogramming (Over Target Baseline) results in budget allocations in excess of the Contract Budget Base and, in some instances, adjustments to previously reported variances. If previously reported variances are being adjusted, the adjustment applicable to each reporting line item affected will be entered in Column (12). The total of Column (12) will equal the amount shown on the Variance Adjustment line (Block 9.a) in Column (11).

8.3.2.2.6.7 Column (13) Reprogramming Adjustments - Budget. Enter the total amounts added to the budget for each reporting line item as the result of formal reprogramming (Over Target Baseline). The amounts shown will consist of the sum of the budgets used to adjust cost variances (Column (12)) plus the additional budget added to the WBS element for remaining work. Enter the amount of budget added to management reserve in the space provided on the management reserve line (Block 8.f). The total of Column (13) will equal the amount the Total Allocated Budget has been budgeted in excess of the Contract Budget Base as shown in Block 5.g of Format 3. An explanation of the reprogramming will be provided in Format 5.

8.3.2.2.6.7.1 Formal Reprogramming Reporting. Columns (12) and (13) are intended for use only in situations involving formal reprogramming (Over Target Baseline). Internal replanning actions within the Contract Budget Base do not require entries in these columns. Where contractors are submitting CPR data directly from automated systems, the addition of Columns (12) and (13) as shown may not be practical due to computer reprogramming problems or space limitations. In such cases, the information may be provided on a separate sheet and attached as Format 1a to each subsequent report. Contractors will not be required to abandon or modify existing automated reporting systems to include Columns (12) and (13) if significant costs will be associated with such change. Nor will contractors be required to prepare the report manually solely to include this information.

8.3.2.2.6.7.2. Formal Reprogramming Timeliness. Formal reprogramming (Over Target Baseline) can be a significant undertaking that may require more than a month to implement. To preclude a disruption of management visibility caused by a reporting hiatus, the contractor should implement the formal reprogramming expeditiously. If a reporting hiatus is needed, the contractor and the Government will agree on the date and duration of the hiatus before the formal reprogramming is initiated.

8.3.2.2.6.8 Column (14) - At Completion - Budgeted. Enter the budgeted cost at completion for the items listed in Column (1). This entry will consist of the sum of the original budgets plus or minus budget changes resulting from contract changes, internal replanning, and application of management reserves. The total (Block 8.g) will equal the Total Allocated Budget shown in Block 5.f on Format 2.

8.3.2.2.6.9 Column (15) - At Completion - Estimated. Enter the latest revised estimate of cost at completion including estimated overrun/underrun for all authorized work. If the subtotal (Block 8.e) does not agree with the most likely management estimate at completion (Block 6.c.1), the difference will be explained in Format 5. (See 8.3.2.2.2.3 above.)

8.3.2.2.6.10 Column (16) - At Completion - Variance. Enter the difference between the Budgeted - At Completion (Column (14)) and the Estimated - At Completion (Column (15)) by subtracting Column (15) from Column (14). A negative figure (indicated by parentheses) reflects an unfavorable variance. Significant variances as specified in the contract will be fully explained in Format 5. If the contract does not specify variance analysis thresholds, the contractor will provide appropriate variance analyses. (See 8.3.2.6.3.2.4 below.)

8.3.2.2.7 Other. The contractor shall provide to the Government, with its monthly CPR submission, a record of the transactions occurring within the Management Reserve (MR), Undistributed Budget (UB), and Statement of Work (SOW) categories of contract activity. The contractor's locally developed format is acceptable for this submission.

8.3.2.3 Format 2 - Organizational Categories (Not currently required).

8.3.2.3.1 Performance Data.

8.3.2.3.1.1 Column (1) - Organizational Category. In Block 5.a list the organizational categories which reflect the contractor's internal management structure. This format will be used to collect organizational cost information at the total contract level rather than for individual WBS elements. The level of detail to be reported will normally be limited to the organizational level immediately under the operating head of the facility. The contractor shall be given flexibility to report this information according to its own internal management structure. If the contractor is organized by product teams, this format may not be needed because it should resemble Format 1.

8.3.2.3.1.2 Cost of Money. Enter in Columns (2) through (16) of Block 5.b the Facilities Capital Cost of Money applicable to the contract.

8.3.2.3.1.3 General and Administrative. Enter in Columns (2) through (16) of Block 5.c the appropriate G&A costs. (See 8.3.2.2.4.3 above.)

8.3.2.3.1.4 Undistributed Budget. Enter in Column (14) of Block 5.d the budget applicable to contract effort, which cannot be planned in sufficient detail to be assigned to a responsible organizational area at the reporting level. The amount shown on this format may exceed the amount shown as undistributed budget on Format 1 if budget is identified to a task at or below the WBS reporting level but organizational identification has not been made; or may be less than the amount on Format 1 where budgets have been assigned to organizations but not to WBS elements. Enter in Column (15) of Block 5.d the estimate at completion for the scope of work represented by the undistributed budget in Column (14) of Block 5.d. Enter in Column (16) of Block 5.d the variance, if any, and fully explain it in Format 5. (See 8.3.2.2.4.4 above.)

8.3.2.3.1.5 Subtotal (Performance Measurement Baseline). Enter the sum of the direct, indirect, Cost of Money, and G&A costs and budgets in Columns (2) through (16) of Block 5.a through e. (See 8.3.2.2.4.5 above.)

8.3.2.3.1.6 Management Reserve. In Column (14) of Block 5.f enter the amount of budget identified as management reserve. The Management Reserve entry will agree with the amounts shown in Format 1 and 3. (See 8.3.2.2.4.6 above.)

8.3.2.3.1.7 Total. Enter the sum of all direct, indirect, Cost of Money, and G&A costs and budgets, undistributed budgets and management reserves, if applicable, in Columns (2) through (14) of Block 5.g. The totals on this page will equal the Total line on Format 1. The total of Column (14) will equal the Total Allocated Budget shown in Block 5.f on Format 3.

8.3.2.3.2 Columns (2) Through (16). The instructions applicable to these columns are the same as the instructions for corresponding columns on Format 1. (See 8.3.2.2.6 and 8.3.2.2.6.1 through 8.3.2.2.6.10 above.)

8.3.2.4 Format 3 - Baseline.

8.3.2.4.1 Contract Data.

8.3.2.4.1.1 Original Negotiated Cost. Enter in Block 5.a the dollar value (excluding fee or profit) negotiated in the original contract. For a cost plus fixed fee or award fee contract, enter the estimated cost negotiated. For an incentive contract, enter the definitized contract target cost.

8.3.2.4.1.2 Negotiated Contract Changes. Enter in Block 5.b the cumulative cost (excluding fee or profit) applicable to definitized contract changes, which have occurred since the beginning of the contract.

8.3.2.4.1.3 Current Negotiated Cost. Enter in Block 5.c the sum of Blocks 5.a and 5.b. The amount shown should equal the current dollar value (excluding fee or profit) on which contractual agreement has been reached and should be the same as the amount in Negotiated Cost (Block 5.b) on Format 1.

8.3.2.4.1.4 Estimated Cost of Authorized, Unpriced Work. Enter in Block 5.d the estimated cost (excluding fee or profit) for contract changes for which written authorizations have been received, but for which contract prices have not been incorporated in the contract, as shown in Block 5.c of Format 1.

8.3.2.4.1.5 Contract Budget Base. Enter in Block 5.e the sum of Blocks 5.c and 5.d.

8.3.2.4.1.6 Total Allocated Budget. Enter in Block 5.f the sum of all budgets allocated to the performance of the contractual effort. The amount shown will include all management reserves and undistributed budgets. This amount will be the same as that shown on the Total line in Column (14) on Format 1 (Block 8.g).

8.3.2.4.1.7 Difference. Enter in Block 5.g the difference between Blocks 5.e and 5.f. In most cases, the amounts shown in Blocks 5.e and 5.f will be identical. If the amount shown in Blocks 5.f exceeds that shown in Block 5.e, it usually is an indication of a formal reprogramming (Over Target Baseline). The difference should be explained in Format 4 at the time the negative value appears and subsequently for any change in the value.

8.3.2.4.1.8 Contract Start Date. Enter in Block 5.h the date the contractor was authorized to start work on the contract, regardless of the date of contract definitization. (Long lead procurement efforts authorized under prior contracts are not to be considered.)

8.3.2.4.1.9 Contract Definitization Date. Enter in Block 5.i the date the contract was definitized.

8.3.2.4.1.10 Planned Completion Date. Enter in Block 5.j the completion date to which the budgets allocated in the Performance Measurement Baseline have been planned. This date should represent the planned completion of all significant effort on the contract. The cost associated with the schedule from which this date is taken is the Total Allocated Budget (Block 5.f of Format 3).

8.3.2.4.1.10.1 Performance Measurement Schedule Inconsistent With Contractual Schedule. In exceptional cases, the contractor may determine that the existing contract schedule cannot be achieved and no longer represents a reasonable basis for management control. With Government approval, the contractor may rephrase its performance measurement schedule to new dates which exceed the contractual milestones, a condition known as "Over Target Schedule." These new dates are for performance measurement purposes only and do not represent an agreement to modify the contract terms and conditions. The Government and the contractor will agree on the new performance measurement schedule prior to reporting it in the Cost Performance Report. The contractor should provide pertinent information in Format 5 on any schedule milestones that are inconsistent with contractual milestones, beginning the month the schedule is implemented and each month thereafter.

8.3.2.4.1.10.2 Indicators of a Performance Measurement Schedule Inconsistent With the Contractual Schedule. Formal reprogramming or internal replanning may result in performance measurement milestones that are inconsistent with the contractual milestones (Over Target Schedule). A difference between the planned completion date (Block 5.j) and the contract completion date (Block 5.k) indicates that some or all of the performance measurement milestones are inconsistent with the contractual milestones. However, some performance measurement milestones may be inconsistent with contractual milestones even if these dates are the same.

8.3.2.4.1.11 Contract Completion Date. Enter in Block 5.k the contract scheduled completion date in accordance with the latest contract modification. The cost associated with the schedule from which this date is taken is the Contract Budget Base (Block 5.e of Format 3).

8.3.2.4.1.12 Estimated Completion Date. Enter the contractor's latest revised estimated completion date. This date should represent the estimated completion of all significant effort on the contract. The cost associated with the schedule from which this date is taken is the most likely management estimate at completion (Block 6.c.1 of Format 1).

8.3.2.4.2 Column (1) - Item.

8.3.2.4.2.1 Performance Measurement Baseline (Beginning of Period). Enter in Block 6.a the time-phased Performance Measurement Baseline (PMB) (including G&A) which existed at the beginning of the current reporting period. Most of the entries on this line are taken directly from the PMB (End of Period) line on the previous report. For example, the number in Column (4) on the PMB (End of Period) line from last month's report becomes the number in Column (3) on the PMB (Beginning of Period) line on this report. The number in Column (5) (end of period) last report becomes Column (4) (beginning of period) on this report, etc. This rule pertains through Column (9) where the time increments change from monthly to some other periods of time. At this point, a portion of Column (10) (end of period) would go into Column (9) (beginning of period) and the remainder of Column (10) (end of period) would go into Column (10) (beginning of period). Columns (11) through (16) simply move directly up to the (beginning of period) line without changing columns. Total amounts should be segregated by major WBS element.

8.3.2.4.2.2 Baseline Changes. List by number in Block 6.b, the contract changes and supplemental agreements authorized during the reporting period. All authorized baseline changes should be listed whether priced or unpriced. The amount of management reserve applied during the period should also be listed. Total amounts should be segregated by major WBS element.

8.3.2.4.2.3 Performance Measurement Baseline (End of Period). Enter in Block 6.c the time-phased PMB as it exists at the end of the reporting period. The difference between this line and the PMB (Beginning of Period) should represent the effects of the authorized changes and allocations of management reserves made during the period. Significant differences should be explained in Format 5 in terms of reasons for necessary changes to time-phasing due to internal replanning or formal reprogramming, and reasons for the application of management reserve. Total amounts should be segregated by major WBS element.

8.3.2.4.2.4 Management Reserve. Enter in Block 7 the total amount of management reserve remaining as of the end of the reporting period. This figure will agree with the amounts shown as management reserve in Format 1.

8.3.2.4.2.5 Total. Enter in Column (16) of Block 8 the sum of Column (16) of Block 6.c (PMB (End of Period)) and Column (16) of Block 7 (Management Reserve). This amount should be the same as that shown on the Total line (Block 8.g) in Column (14) on Format 1.

8.3.2.4.3 Column (2) - BCWS - Cum To Date. On the PMB (Beginning of Period) line (Block 6.a), enter the cumulative BCWS as of the first day of the reporting period. This should be the same number reported as BCWS - Cum To Date on the Total line (Column (7) of Block 8.g) of Format 1 of the previous CPR. On the PMB (End of Period) line (Block 6.c), enter the cumulative BCWS as of the last day of the reporting period. This should be the same number reported as BCWS - Cum to Date on the Total line (Column (7) of Block 8.g) of Format 1 for this CPR.

8.3.2.4.4 Column (3) - BCWS For Report Period. On the PMB (Beginning of Period) line (Block 6.a), enter the BCWS planned for the reporting period. This should be the number in Column (4) on the PMB (End of Period) line (Block 6.c) on the preceding month's report.

8.3.2.4.5 Columns (4) Through (14). Enter the names of the next six months in the headings of Columns (4) through (9) of Block 6, and the names of the appropriate periods in the headings of Columns (10) through (14). In the PMB (Beginning of Period) line (Block 6.a), enter the BCWS projection reported in the previous CPR as PMB (End of Period) (Block 6.c). In the PMB (End of Period) line (Block 6.c) of this report, enter the projected BCWS (by month for six months and by periodic increments thereafter, or as negotiated with the procuring activity) for the remainder of the contract. The time-phasing of each item listed in Column (1) of Block 6.b need not be shown in Columns (4) through (14).

8.3.2.4.6 Column (15) - Undistributed Budget. On the PMB (Beginning of Period) line (Block 6.a), enter the number from Column (15) on the PMB (End of Period) line (Block 6.c) from the preceding report. On the PMB (End of Period) line, enter the undistributed budget shown in Column (14) of Block 8.d on Format 1 of this report.

8.3.2.4.7 Column (16) - Total Budget. On the PMB (Beginning of Period) line (Block 6.a) enter the number from Column (16) on the PMB (End of Period) line (Block 6.c) from the preceding report. In the section where baseline changes that occurred during the period are listed (Column (1) of Block 6.b), enter the amount of each of the changes listed. On the PMB (End of Period) line (Block 6.c), enter the sum of the amounts in the preceding columns on this line. On the Management Reserve line (Block 7), enter the amount of management reserve available at the end of the period. On the Total line (Block 8) enter the sum of the amounts in this column on the PMB (End of Period) line and the Management Reserve line. (This should equal the amount in Block 5.f on this format and also the amount of the Total line in Column (14), Block 8.g, of Format 1.)

8.3.2.5 Format 4 - Staffing.

8.3.2.5.1 Performance Data. For those organizational categories shown in Column (1) of Block 5, equivalent months will be indicated for the current reporting period, cumulative through the current period, and forecast to completion. Direct equivalent months will be shown for each organizational category for the contract. An equivalent month is defined as the effort equal to that of one person for one month. Figures should be reported in whole numbers. (Partial months, .5 and above, will be rounded to 1; below .5 to 0.) When the Government and the contractor agree, staffing may be reported in equivalent days or hours.

8.3.2.5.1.1 Organizational Category. List the organizational categories that reflect the contractor's internal management structure in Block 5.

8.3.2.5.1.2 Total Direct. In Block 6, Columns (2) through (15), enter the sum of all direct equivalent months for the organizational categories shown in Column (1).

8.3.2.5.2 Column (2) - Actual - Current Period. Enter the actual equivalent months incurred during the current reporting period.

8.3.2.5.3 Column (3) - Actual End of Current Period (Cum). Enter the actual equivalent months incurred to date (cumulative) as of the end of the report period.

8.3.2.5.4 Columns (4) Through (14) - Forecast (Non Cumulative). Enter a staffing forecast by month for a six-month period following the current period and by periodic increment thereafter, as negotiated with the procuring activity (see 7.6.4 above). The forecast will be updated at least quarterly unless a major revision to the plan or schedule has taken place, in which case forecasts will be changed for all periods involved in the report submitted at the end of the month in which the change occurred.

8.3.2.5.5 Column (15) - Forecast at Completion. Enter the estimate of equivalent months necessary for the total contract in Column (15) by organizational category. This estimate should be consistent with the most likely management estimate at completion shown in Block 6.c.1 of Format 1. Any significant change in the total number of equivalent months at completion of the contract (i.e., Column (15) Total) should be explained in Format 5.

8.3.2.6 Format 5 - Explanations and Problem Analyses.

8.3.2.6.1 General. Format 5, Explanations and Problem Analyses, is a narrative report prepared to supplement the other CPR formats. Format 5 will normally address 1) contractually required cost, schedule and estimate at completion variance analyses, 2) management reserve changes and usage, 3) undistributed budget contents, 4) differences between the best case, worst case, and most likely management estimate at completion, if any, 5) the difference between the most likely management estimate at completion and the estimate in Block 8.e of Column (15), if any, 6) significant differences between beginning of period PMB timephasing and end of period PMB timephasing in Format 2, 7) performance measurement milestones that are inconsistent with contractual milestones (Over Target Schedule), 8) formal reprogramming (Over Target Baseline) implementation details, and 9) significant staffing estimate changes in Format 5. However, any topic relevant to contract cost, schedule or technical performance can be addressed in this format.

8.3.2.6.2 Total Contract. Provide a summary analysis, identifying significant problems affecting performance. Indicate corrective actions required, including Government action where applicable. Significant changes since the previous report should be highlighted. Discuss any other issues affecting successful attainment of contract cost, schedule or technical objectives which the contractor deems significant or noteworthy. This section should be brief, normally one page.

8.3.2.6.3 Cost and Schedule Variances. Explain all variances which exceed specified variance thresholds. Explanations of variances must clearly identify the nature of the problem, significant reasons for cost or schedule variance, effect on the immediate task, impact on the total contract, and the corrective action taken or planned. Explanations of cost variances should identify amounts attributable to rate changes separately from amounts applicable to hours worked; amounts attributable to material price changes separately from amounts applicable to material usage; and amounts attributable to overhead rate changes separately from amounts applicable to overhead base changes or changes in the overhead allocation basis. To reduce the volume of variance analysis, the Government may allow the contractor to refer to a prior CPR's variance analysis explanations if the explanation for the current CPR's variance has not changed significantly.

8.3.2.6.3.1 Integration of Contract CPR with ISS PMS / EVM System Variance Reporting. CPR variance analysis threshold reporting levels will be consistent with the ISS Performance Measurement System / Earned-Value Management (PMS/EVM) reporting requirements. The overall monthly reporting threshold will not exceed 5 percent and \$1M for schedule and cost variances and 5 percent for Variances at Completion (VAC). The contractor shall propose a performance measurement reporting structure, including the number and size of Control Account Packages (CAPs), CAP reporting thresholds, etc. The Government shall review the proposed structure to verify that overall thresholds are within the limits specified above. Appropriate changes to the CAP and PMS/EMS reporting structure will be negotiated with the Contractor.

8.3.2.6.3.2 Setting Variance Analysis Thresholds. The Government should require the minimum amount of variance analysis in Format 5, which satisfies its management information needs. Excessive variance analysis is burdensome and costly, and detracts from the CPR's usefulness, while too little information is equally undesirable. The contract should include a provision to review cost and schedule variance analysis thresholds periodically, normally semiannually, to determine if they continue to meet the Government's information needs. If they do not, the thresholds should be changed at no cost to the Government.

8.3.2.6.3.3 Identifying Significant Variances. There is no prescribed basis for identifying which cost and schedule variances are to be explained in Format 5. The Government may specify any one of several ways to identify such variances, including, but not limited to the following:

8.3.2.6.3.3.1 Fixed Number of Variances. Specify a number of significant variances. These variances can be either current month, cumulative, or at-completion. Any number of significant variances may be selected, but the Government should be careful to select only the number that it feels are necessary.

8.3.2.6.3.3.2 Percentage or Dollar Thresholds. Select variances based on percentage or dollar thresholds. Significant schedule variances are identified based on their size or percentage to Budgeted Cost for Work Scheduled, and significant cost variances are identified based on their size or percentage to Budgeted Cost for Work Performed. For example, all current month, cumulative or at-completion variances greater than 5% or \$1M may be selected for analysis. This method usually results in a larger number of variances requiring reporting. Consequently, the thresholds should be reviewed periodically to ensure they continue to provide a reasonable amount of useful information.

8.3.2.6.3.3.3 Specific Variances. Select variances for analysis only after reviewing Format 1. Under this method, the CPR is delivered promptly after the contractor's accounting period ends with all required information in Formats 1 through 5 except variance analyses. Once the Government has reviewed this performance data, it selects specific variances for analysis. This method may be the most efficient in that the Government can pinpoint areas to be analyzed. It is also the most flexible because there may be some months where a review of the performance data yields few or no variance analysis candidates. However, this method should only be used if the Government is certain it has sufficient resources to review the CPR early and select variances each month.

8.3.2.6.3.3.4 No Variance Analysis Thresholds Specified. If the contract does not specify variance analysis thresholds, the contractor will determine what significant variance explanations are reported. These explanations should focus on 1) areas where the Government should be informed of developing issues or problems, 2) areas of identified program risk or management interest, or 3) areas of significantly unfavorable cost or schedule performance.

8.3.2.6.4 Other Analyses. In addition to variance explanations, the following analyses are mandatory:

8.3.2.6.4.1 Management Estimate at Completion. If the best or worst case management estimates at completion differ from the most likely estimate, the contractor must provide a brief explanation of the difference. Also, if the most likely management estimate at completion differs from the total entered in Column 15 of Format 1, the contractor must explain the difference. The explanations should focus on such areas as differences in underlying assumptions; a knowledgeable, realistic risk assessment; projected use of management reserve; estimate for undistributed budget; and higher management knowledge of current or future contract conditions.

8.3.2.6.4.2 Undistributed Budget. Identify the effort to which the undistributed budget applies. Also, explain any variance between the undistributed budget and the estimate for undistributed budget in Format 1.

8.3.2.6.4.3 Management Reserve Changes. Identify the sources and uses of management reserve changes during the reporting period. For management reserve uses, identify the WBS and organizational elements to which applied, and the reasons for application.

8.3.2.6.4.4 Baseline Changes. Explain reasons for significant shifts in time-phasing of the PMB shown on Format 3.

8.3.2.6.4.5 Staffing Level Changes. Explain significant changes in the total staffing estimate at completion shown on Format 4. Also, explain reasons for significant shifts in time-phasing of planned staffing.

8.3.2.6.5 Formal Reprogramming (Over Target Baseline). If the difference shown in Block 5.g on Format 2 becomes a negative value or changes in value, provide information on the following:

8.3.2.6.5.1 Authorization. Procuring activity authorization for the baseline change which resulted in negative value or change.

8.3.2.6.5.2 Reason. A discussion of the reason(s) for the change.

8.3.2.6.5.3 CPR Reporting. A discussion of how the change affected CPR reporting (i.e., amount allocated to management reserve, adjustments to cost or schedule variances, etc.).

8.3.2.6.5.4 Schedule. Indicate whether the contract schedule was retained for performance measurement or was replaced with a schedule that exceeds the contractual schedule (Over Target Schedule).

8.3.2.6.6 Over Target Schedule. If a performance measurement schedule exceeding the contractual schedule (Over Target Schedule) has been implemented, provide a discussion of the pertinent information, such as authorization, reasons and significant dates

CLASSIFICATION (When filled in)

**COST PERFORMANCE REPORT
FORMAT 1 - WORK BREAKDOWN STRUCTURE**

DOLLARS IN

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 3.1 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Paperwork Project, Washington, DC 20301-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME		a. NAME		a. NAME		a. FROM (YYYYMMDD)	
b. LOCATION (Address and ZIP Code)		b. NUMBER		b. PHASE (X one)		b. TO (YYYYMMDD)	
c. TYPE		d. SHARE RATIO		RDT&E		PRODUCTION	
5. CONTRACT DATA							
a. QUANTITY	b. NEGOTIATED COST	c. EST. COST AUTHORIZED UNPRICED WORK	d. TARGET PROFIT/ FEE	e. TARGET PRICE	f. ESTIMATED PRICE	g. CONTRACT CEILING	h. ESTIMATED CONTRACT CEILING
6. ESTIMATED COST AT COMPLETION							
MANAGEMENT ESTIMATE AT COMPLETION		CONTRACT BUDGET FEE		VARIANCE		b. TITLE	
(1)		(2)		(3)		d. DATE SIGNED (YYYYMMDD)	
a. BEST CASE	b. WORST CASE						
c. MOST LIKELY							
8. PERFORMANCE DATA							
ITEM	CURRENT PERIOD		CUMULATIVE TO DATE		REPROGRAMMING ADJUSTMENTS		AT COMPLETION
(1)	BUDGETED COST WORK SCHEDULED (2)	ACTUAL COST WORK PERFORMED (4)	VARIANCE SCHEDULE (5)	BUDGETED COST WORK SCHEDULED (7)	ACTUAL COST WORK PERFORMED (9)	COST VARIANCE (12)	BUDGETED ESTIMATED (14) VARIANCE (16)
a. WORK BREAKDOWN STRUCTURE ELEMENT							
b. COST OF MONEY							
c. GENERAL & ADMINISTRATIVE							
d. UNDISTRIBUTED BUDGET							
e. SUBTOTAL (Performance Measurement Baseline)							
f. MANAGEMENT RESERVE							
g. TOTAL							
9. RECONCILIATION TO CONTRACT BUDGET BASE							
a. VARIANCE ADJUSTMENT							
b. TOTAL CONTRACT VARIANCE							

DD FORM 2734/1, AUG 96 PREVIOUS EDITION MAY BE USED.

LOCAL REPRODUCTION AUTHORIZED.

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CLASSIFICATION (When filled in)

**COST PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Form Approved
OMB No. 0704-0188

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1. **a. NAME** _____

b. LOCATION (Address and ZIP Code) _____

2. CONTRACT

a. NAME _____

b. NUMBER _____

c. TYPE _____

d. SHARE _____

3. PROGRAM

a. NAME _____

b. PHASE (X one) _____

RDt&E _____ **PRODUCTIO** _____

4. REPORT

a. FROM (YYYYMMDD) _____

b. TO (YYYYMMDD) _____

5. PERFORMANCE DATA (All figures in whole numbers)

ORGANIZATION CATEGORY	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (3)	FORECAST (Non-Cumulative)						ENTER SPECIFIED	AT COMPLETION (15)									
			SIX MONTH FORECAST BY	(4)	(5)	(6)	(7)	(8)			(9)	(10)	(11)	(12)	(13)	(14)			
(1)																			

6. TOTAL _____

DD FORM 2734/4, AUG 96 PREVIOUS EDITION MAY BE DELETED

CLASSIFICATION (When filled in)

LOCAL

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Integrated Management Review Products 1b. Data Type: 3	2. Date of Current Version <p align="center">10/01//08</p>	3a. DRD No. <p align="center">F-PM-02</p>	3b. RFP/Contract No. <p align="center">NAS 15 -10000</p>
4. Use (Define need for, intended use of, and/or anticipated results of data) These packages support the monthly management reviews of costs, schedule, and technical performance. The format provides a standardized approach for review materials.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW paragraph 1.1.1.2 NPG 7120.5A and NG 9501.2D		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: These data packages document the monthly integrated management reviews of the cost, schedule, and technical performance on the contract. There are two types of reviews: monthly and quarterly. The data provided per the requirements of this DRD should reconcile with the data provided per the requirements of DRD PC27 (Contractor Financial Management Report (533M)) and DRD F-PC-02 (**Cost Performance Report**).

CONTENT: These packages support the monthly and quarterly management reviews of cost, schedule, and technical performance. The metrics shall be developed and defined by the contractor with concurrence from the Government. These metrics shall provide linkage to Program level metrics in the Management Information System. Metrics that effectively indicate the level of success in the execution of contract requirements and the status of the contractor's achievement against the performance standards contained within this statement of work or elsewhere in this contract shall be presented at the program review. The cost baseline is the Performance Measurement Baseline (PMB). The format provides a standardized approach for review materials.

The Monthly Integrated Review package:

Summary Section:

- Stoplight Status of fiscal year Program cost, schedule, and technical performance.
- Summary status of fiscal year reserves, risks and opportunities, and earned value performance.

- Fiscal year cost and workforce summaries
- Cumulative variance explanations (to fiscal year plan) and End-Of-Year trend variance explanations.
- Major Contract Milestone Schedule

Component Sections (done at major element/organization/subsystem level):

- Include all Summary Section items.
- Statement of Work reconciliation

- I&O Sustaining Task Dashboard
- I&O Sustaining Task Status

- I&O Sustaining Metrics
- Evidence of Completion Status
- Earned value project status and schedule for projects (I&O Modifications, OPD, and Spares) greater than \$5M. This value includes the entire project regardless of fiscal year expenditures.
- DIL Status
- IMP/IMS Spotlight Schedule

FORMAT: Specific formatting to be tailored by NASA/contractor

9. OPR: OH

10. FIRST SUBMISSION DATE: The first Monthly input should support a review 20 working days after the initial financial month end.

Frequency Of Submission: Monthly

Additional Submissions:

11. MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION:

1 original/record (hard copy): OH/Data Management

2 copies LO

1 copy LW

1 copy OH

1 copy DMCA

1 electronic copy: to a Program authorized repository (EDMS or equivalent)

1 copy to LO

1 copy to LW

1 copy to OH

1 copy to Contracting Officer's Technical Representative (COTR)

1 copy to BG/Contracting Officer

1 copy to DCMA

13. REMARKS: None

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Payload Unique Displays Software Requirements Specifications	2. Date of Current Version 10/01/08	3a. DRD No. F-RA-11	3b. RFP/Contract No. NAS 15 -10000
1b. Data Type: 1 4. Use (Define need for, intended use of, and/or anticipated results of data) This DRD provides the requirements for which payload unique PCS displays must be verified.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW paragraph 8.4.1.4		7. Interrelationships (e.g., with other DRDs) None	

8. PREPARATION INFORMATION:

SCOPE: This DR provides the payload-unique PCS display requirements for payloads.

CONTENT: Documents the requirements for the Computer Software Configuration Item (CSCI) identified as the Payload Support Systems Portable Computer System (PCS) Display CSCI. This CSCI is provided to support the operation of payloads on orbit.

FORMAT: Any format acceptable to the electronic repository.

9. OPR: OZ

10. FIRST SUBMISSION DATE: As required per negotiated work plan.

Frequency Of Submission: Once with update for each flight of payloads that require new payload-unique displays to be resident on the Portable Computer System (PCS).

Additional Submissions: None.

11. MAINTENANCE: The data item shall be maintained electronically or as otherwise directed by NASA.

12. COPIES/DISTRIBUTION: NASA Data Management electronically using EDMS or follow-on system

13. REMARKS: None.



International Space Station Program

**Individual Small Business
Subcontracting Plan**

**D684-11716-01
Revision G-A
Extension Only**

**United States On-Orbit Segment (USOS)
Acceptance and Vehicle Sustaining Engineering**

NAS15-10000

Type – 1 Preliminary NASA approval pending

September 3, 2008

Submitted to: NASA
Johnson Space Center
Contract No. NAS15-10000 (F-PM-04)

This document is controlled by the Boeing Houston Supplier Diversity Specialist -- Kevin Howard.

The NASA Contracting Officer, prior to incorporation into the contract, shall approve all revisions to this document.

Title: USOS Acceptance and Vehicle Sustaining Engineering, Small Business Subcontracting Plan

Prepared By: Kevin Howard


ISS Supplier Diversity Specialist
Space Exploration
Integrated Defense Systems

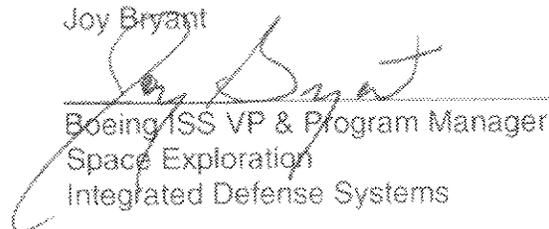
September 3, 2008
Date

Concurrence By: Thomas R. Hill


ISS Supplier Management Manager
Space Exploration
Integrated Defense Systems

September 3, 2008
Date

Approved By: Joy Bryant


Boeing ISS VP & Program Manager
Space Exploration
Integrated Defense Systems

September 3, 2008
Date

REVISION AND HISTORY PAGE

REV.	DESCRIPTION	PUB. DATE
-	Initial Release per DRD F-PM-04	04-22-04
A	Approval Pending. The defined changes during the period are incorporated into this revision A. The original subcontract projections for the Sustaining Engineering follow-on contract are 40% realized. Revisions to the Women Owned projections reflect the better than projected cumulative performance. The W/O upward revision reflects the differences between the Sustaining dollars expended to-date against the original Sustaining forecast. The difference is projected forward in this revision.	07-29-04
A	Revision A – Approval Pending, second delivery. This revision A second delivery incorporates changes in language and format prescribed by the NASA Small Business Liaison Officer. Since revision A was never accepted, this second delivery remains as revision A. This revision includes modifications through 1288.	01-25-05
A	Revision A – Approval Pending, third delivery. This revision A third delivery incorporates changes in language and format prescribed by the NASA ISS Contracting Officer. This revision includes modifications through 1307.	05-13-05
A	Revision A – Approval Pending, fourth delivery. The defined changes during the period are incorporated into this version. Revise through modification 1231. This revision incorporates Mentor Protégé activities.	06-30-05
A	Revision A – Approved by NASA	08-29-05
B	Revision B The defined changes during the period are incorporated into this Revision B. Revision is through modification 1333 and incorporates International Payload Integration migration activities.	10-04-05
C	Revision C This revision is through modification 1347. This also describes the use of the new government reporting system ESRS for performance reporting.	01-26-06
D	Revision D This revision incorporates changes through modification 1373	07-26-06

E	Revision E – Approval not given, changes reflected in 8/2/07 for current version of Rev E This revision incorporates changes through modification 1404	01-30-07 08/02/07
E	Revision E - This revision incorporates negotiated changes through modification 1436 Revision E - Approved 8/9/07	
F	Revision F – This revision incorporates negotiated changes through modification 1484 Revision F - Approved 2/27/08	1/23/08
G	Revision G – This revision incorporates negotiated changes through modification 1519	7/30/08
G-A	Revision G-A Includes the projections for the GFY 2009/10 extension only. This plan provides visibility into the extension.	9/3/08

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1.0 INTRODUCTION

This Individual Small Business Subcontracting Plan has been prepared for the International Space Station contract. In submitting this Small Business Subcontracting Plan, The Boeing Company is committed to demonstrate best efforts to meet the Small Business (SB), Small Disadvantaged Business (SDB), Woman Owned Small Business (WOSB), Historically Underutilized Business Zone (HUBZone), Veteran Owned Businesses (VOSB) and Service Disabled Veterans (SDVOSB) Business goals. In this plan the term "Small Business" refers to all of the aforementioned categories, unless otherwise stated.

Authority for such plans is contained in FAR 52.219-9, "Small Business Subcontracting Plan" and describes the Small Business goals, which are measured against the estimated subcontracting value and reported on the Individual Subcontracting Report (ISR).

This plan is submitted to provide visibility of the base period of the extension contract only. If approved, these values will be reflected in a succeeding revision, inclusive of the program cumulative to-date values.

2.0 ESTABLISHMENT OF SUBCONTRACT AND TOTAL CONTRACT GOALS

Under this plan, two distinct sections are represented to satisfy both Federal Acquisition Regulations (FAR) and NASA requirements. Goals have been established to satisfy Small Business FAR subcontracting requirements, which describe Small Business goals, measured against the value of Boeing's projected scope, subcontracted to its suppliers (See Table 1). Table 2 describes NASA diversity targets at the total contract value. The projected goals in table 1 and 2 apply to the extension dated 10/1/2008 – 9/30/2010.

Boeing will use its best efforts to award a minimum of 40.8% of the Boeing subcontract dollars to Small Businesses qualifying under the U.S. Small Business Administration (SBA) company size criteria (See Table 1*).

Table 1. FAR Method (% of subcontracted value – extension only)

FAR Method (Subcontract Value)	Dollar Goal	Percent
Small Business	\$62,962,823	40.8 %
Large Business	\$91,357,822	59.2%
TOTAL	\$154,320,645	100.0%
Small Disadvantaged Business	\$29,629,564	19.2%
Women-Owned Small Business	\$31,944,374	20.7%
Historically Underutilized Business Zones	\$1,080,245	0.7%
Veteran Owned Small Business	\$10,648,125	6.9%
Service Disabled Vet-Owned Small Business	\$6,018,505	3.9%
Historically Black Colleges/Minority Institutions	\$308,641	0.2%

Table 2. Total Contract Method (% of Sustaining Engineering contract value)

NASA Method (Total Contract Value)	Target	Percent
Small Business	\$128,832,000	22.00%
Small Disadvantaged Business	\$64,416,000	11.00%
Women-Owned Small Business	\$29,280,000	5.00%
Historically Underutilized Business Zones	\$5,856,000	1.00%
Veteran Owned Small Business	\$5,856,000	1.00%
Service Disabled Vet-Owned Small Business	\$5,856,000	1.00%
Historically Black Colleges/Minority Institutions	\$5,856,000	1.00%

*THE ESTIMATED CONTRACT VALUE OF \$585,600,000 (EXCLUDES FEE AND COM) IS USED FOR THE BASE PERIOD OF THE EXTENSION CONTRACT. IF APPROVED, THESE VALUES WILL BE REFLECTED IN A SUCCEEDING REVISION, INCLUSIVE OF PROGRAM CUMMULATIVE TO DATE ACTIVITIES.

3.0 INDIVIDUAL SMALL BUSINESS SUBCONTRACT PLAN REQUIREMENTS

3.1 DESCRIPTION OF THE PRINCIPAL TYPES OF SUPPLIERS AND SERVICES

Table 3 provides a general description of the principal types of products and services planned for subcontracting to Small Businesses.

TABLE 3. PRINCIPAL TYPES OF SUPPLIERS AND SERVICES

ARES	Veteran Owned	Risk Management	541710
Barrios Technology, Inc	Woman Owned	Electrical Power Systems, Avionics Verification, Vehicle Integration	541710
Bastion Technologies Inc	Small Disadvantaged	Extra Vehicular Activities, Flight & Mission Operations	541330
BLACKHAWK Management Corp.	Small Disadvantaged Native American	Post Production Support	541330
Cimarron	Women Owned	Software Support Services	541710
GB Tech	Small Disadvantaged Business	Configuration and Data Mgmt ISS Software Integration, Program Office/Project Engineering, Quality Assurance Reliability & Maintainability, Safety	541710
GeoControls	WOSB/SDB/HUBZone	Engineering, Administrative, computing and Systems Analysts	541330
Mainthia Technologies	Small Disadvantaged Business	Logistic Services	541330
MRI	Women Owned	Engineering Services	541330
MEI	Small/Disadvantaged/SDVOSB	Engineering Services	541710
Prairie View A&M Univ.	HBCU/MI	Technical & Administrative services, Cooperative education	
Systems Studies & Simulation	WOSB/SDB	Modeling, Simulation; System, Engineering, Technical Services	541710
Southern University	HBCU	Cooperative education	

3.2 METHOD USED TO DEVELOP THE SUBCONTRACTING GOALS

To demonstrate good faith effort toward meeting the small business goals established under the ISS, NAS15-10000 contract, the Engineering and Technical Support

organizations, supported by the Supplier Diversity Specialist, have assessed program requirements and identified work that was competed among Small Businesses. These requirements resided in the augmented labor areas of Engineering and Technical Support services. Engineering was tasked to be as specific as possible in defining all significant subcontracting requirements during the program cycle. This ensured that the determined goals were realistic in terms of requirements and those requirements were clearly understood by various levels of management. The historical performance data combined with the 2008, 2009 projections were used to calculate the new goals.

3.3 METHOD USED TO IDENTIFY POTENTIAL SOURCES FOR SOLICITATION PURPOSES

Boeing has exerted a targeted effort in identifying and matching qualified high potential Small Business with applicable work content. Boeing will continuously refine our potential list as we:

- Evaluate existing and prospective candidates through a pre-qualification process, including, but not limited to; technical and quality competency, along with financial stability requirements
- Continue the practice of utilizing internal communications whereby supplier diversity specialists routinely share information with one another as well as with procurement agents to promote capable Small Business suppliers

3.4 DESCRIPTION OF ALLOCATED INDIRECT COST

Indirect costs are included within this plan. Indirect costs for the program are allocated based on a percentage of the total direct dollars. Boeing has identified the major types of equipment and services to be procured by category, both for direct and indirect purchases. The methodology of how the ISS program achieves indirect dollars in addition to their direct dollars is an automated process built in to the data warehouse that captures all the commitment dollars.

Indirect costs are dollars that are not identifiable to a unique program and are allocated to customers/programs based on subcontract commitment dollars. Included in indirect costs are:

- Site Indirect – Purchase Order Commitment transactions (overhead) from site procurement systems not identifiable to a specific program
- Indirect Allocation-Site Indirect records as allocated to a program
- Contract Labor Allocation-Shared Services Group (SSG) indirect/allocable paid dollars to a contract labor supplier as allocated to a program.

Each month during a Government Fiscal Year (GFY) dollars are accrued for direct and indirect procurements at any given Boeing site. Direct dollars are totaled, and each Program/Contract is issued a stratified percent based on their total commitments at the end of each month. Indirect dollars are summed during the same timeframe and distributed, by business size, to each Program/Contract based on the level of direct commitment dollars.

3.5 ADMINISTRATION OF THE SMALL BUSINESS SUBCONTRACTING PROGRAM

The executives responsible for oversight of the International Space Station diversity program will be Joy Bryant, VP & Program Manager, Thomas R. Hill, ISS SM Manager, and Kevin Howard as the Lead Boeing Supplier Diversity Specialist, all whom will reside in Houston, TX with the program office. The VP & Program Manager is responsible for the overall execution of the Small Business Plan. In those duties the VP & Program Manager will ensure the vision and initiatives are provided adequate resources for successful program execution. The SM manager will work in coordination with the Supplier Diversity Specialist to negotiate and execute contracts with small businesses. The Supplier Diversity Specialist will be responsible for the administration of the subcontracting plan. Those duties are to coordinate and expand the utilization of small businesses through various outreach efforts; prepare and submit periodic reports and assist buyers, engineers, and requirements personnel in locating small business partners, and to monitor the overall performance of the program.

3.6 DESCRIPTION OF EFFORTS TO PROVIDE AN EQUITABLE OPPORTUNITY FOR SMALL BUSINESSES TO COMPETE FOR SUBCONTRACTS

The Boeing Company's Supplier Diversity Program is designed to maximize utilization of Small Business suppliers through a series of proven best practices and initiatives cited below.

- Provide training to program personnel regarding supplier diversity programs
- Advise/counsel Program Managers and SM Managers, as decision-makers in the procurement process, for Small Business suppliers to present and showcase their products and services.
- Counsel representatives of suppliers on "doing business with Boeing" and discuss subcontracting opportunities with Small Business suppliers
- Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as a Small Business concern, for the purpose of obtaining a subcontract
- Conducting Boeing Small Business forums to assist in the introduction of Small Businesses to various Boeing organizations.
- Creating Small Business "only" competitions in those commodity groups in which there are a sufficient number of qualified businesses to ensure adequate competition
- Identifying, developing and evaluating Small Business bidding possibilities, during the product development and make/buy planning phases

3.7 ASSURANCES OF SUBCONTRACTING PLAN FLOW-DOWN

Boeing will ensure that Small Business subcontracting requirements are imposed on each of our large business Subcontractors through the provisions of the purchase contract. This includes FAR 52.219-8, Utilization of Small Business Concerns, and FAR 52.219-9, Small Business Subcontracting Plan, for subcontracts over \$550K, (except

small business concerns over \$1,000,000 for construction of public facilities). Qualifying subcontractors are required to prepare a plan and flow-down goals similar to Boeing's plan that complies with the requirements of FAR 52.219-8 and 52.219-9 clauses or provide documentation regarding the company's participation in a corporate level Comprehensive Subcontracting Plan (CSP). In support of this contract, Boeing will submit an Individual Subcontracting Report (ISR) semi-annually. Boeing requires its large business subcontractors to report Small Business subcontracting dollars on a semi-annual basis. This reporting is conducted through the Electronic Subcontracting Reporting System (eSRS) located at <http://www.esrs.gov>.

3.8 ASSURANCES OF PERFORMANCE REPORTING

The Boeing Company agrees to;

- I. Cooperate in studies and surveys as required.
- II. Submit periodic reports so that the Government can determine the extent of compliance by Boeing, operating under an Individual Small Business Subcontract plan.
- III. Submit Individual Subcontract Report (ISR) following the instructions on the forms or as provided in agency regulation.
- IV. Ensure that our subcontractors that do not have corporate level Comprehensive Subcontracting Plans in place agree to submit ISR's.

3.9 DESCRIPTION OF THE TYPES OF RECORDS THAT WILL BE MAINTAINED

Boeing will maintain the following records:

- I. Source lists, guides, and other data that identify SB, SDB, WOSB, HUBZone, VET, SDVOSB & concerns.
- II. Organizations contacted in an attempt to locate sources that are Diverse concerns.
- III. Records on each subcontract solicitation resulting in an award of more than \$100,000, indicating -
 - a. Whether SB, SDB, WOSB, HUBZone, VET, SDVOSB concerns were solicited and if not, why not;
 - b. If applicable, the reason award was not made to a Small Business concern
- IV. Records of any outreach efforts to contact trade associations, business development organizations, conferences and trade fair participation to locate Small Businesses

- V. Records to support internal guidance and encouragement provided to buyers through workshops, seminars, training, incentives, etc.; and monitoring performance to evaluate compliance with program requirements.
- VI. On a contract-by-contract basis, records to support award data submitted by Boeing to Government, including the name, address, and business size of each contractor.

3.10 EFFECTIVE IMPLEMENTATION OF THE SMALL BUSINESS PLAN CONSISTENT WITH EFFICIENT CONTRACT PERFORMANCE

In order to effectively implement this plan to the extent consistent with efficient contract performance Boeing shall perform the following functions:

- I. Assist small business, small disadvantaged business, women-owned small business, veteran-owned small business, service-disabled veteran-owned small business, and HUBZone small business, concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the lists of potential small business, veteran-owned small business, small disadvantaged business, women-owned small business, service-disabled veteran-owned small business, and HUBZone small business are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.
- II. Provide adequate and timely consideration of the potentialities of small business, small disadvantaged business, women-owned small business, veteran-owned small business, service-disabled veteran-owned small business, and HUBZone small business, concerns in all "make-or-buy" decisions.
- III. Counsel and discuss subcontracting opportunities with representatives of small business, small disadvantaged business, women-owned small business firms, veteran-owned small business, service-disabled veteran-owned small business, and HUBZone businesses.
- IV. Confirm that a subcontractor representing itself as a HUBZone small business concern is identified as a certified HUBZone small business concern by accessing the Central Contractor Registration (CCR) database or by contacting SBA.
- V. Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as small, small disadvantaged, or women-owned small business, veteran-owned small business, service disabled veteran-owned small business, HUBZone business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in this subcontracting plan.

APPENDIX A: LIST OF ACRONYMS

CCR	Central Contractor Registration
FAR	Federal Acquisition Regulations
HBCU/MI	Historically Black Colleges and Universities/Minority Institutions
HUBZone	Historically Underutilized Business Zone
ISS	International Space Station
ISR	Individual Subcontract Report
NASA	National Aeronautics and Space Administration
OEM	Original Equipment Manufacturer
QA	Quality Assurance
SB	Small Business
SBA	Small Business Administration
SBIR	Small Business Innovation Research
SDB	Small Disadvantaged-Owned Business
SD	Supplier Diversity
SDP	Supplier Diversity Program
SDVOSB	Service Disabled Veteran Owned Small Business
SE	Sustaining Engineering
SF294	Standard Form SF294
SM	Supplier Management
SOW	Statement of Work
VOSB	Veteran Owned Small Business
WOSB	Woman Owned Small Business