



**OPERATIONS COMMITTEE  
MARCH 18, 2003**

**SUBJECT: UNIVERSAL FARE SYSTEM (UFS) NEW REGIONAL CLEARINGHOUSE  
& TAP SERVICE CENTER**

**ACTION: APPROVE THE LIFE OF PROJECT BUDGET AND AMEND CONTRACT  
TO BOOZ-ALLEN HAMILTON (BAH) FOR TECHNICAL DESIGN AND  
IMPLEMENTATION OVERSIGHT**

**RECOMMENDATION**

- A. Approve life of project budget in the amount of \$16 million for implementation of the Regional Transit Access Pass (TAP) Clearinghouse and Service Center; and
- B. Authorize the Chief Executive Officer to execute a contract modification with Booz-Allen Hamilton, Contract PS-4610-1026, to provide technical design, program development, and implementation oversight of the Regional Universal Fare System Program in an amount not to exceed \$2,996,458 increasing the Total Contract Value from \$4,705,185 to \$7,701,643.

**RATIONALE**

In September 2003, staff was authorized to proceed with the Phase I cost analysis to implement the Regional UFS Clearinghouse and Transit Access Pass (TAP) Service Center. Now, having concluded this analysis, Phase II requires the acquisition of the regional central data collection system (regional CDCS, or server/computer system) and the retention of a service provider to operate the Regional Clearinghouse/TAP Service Center. This final regional phase of the UFS project will allow the MTA and all eleven Municipal operators to achieve interoperability, and deliver "seamless travel" for Los Angeles County transit riders.

In Phase I, three "scenarios", Outsourced, In-House (MTA and Muni) and Combined In-House/Outsourced, were evaluated for the operation and maintenance of a Regional UFS Clearinghouse and TAP Center. Staff recommends an outsourcing scenario by which Regional Clearinghouse and Service Center activities will be obtained through a competitive procurement. This is consistent with the approach other peer agencies have used in the implementation of similar programs. This approach will ensure that MTA and Municipal operators focus on the core business of service delivery, permits scalability based on demand and penetration of the regional UFS smart card, and assures a single point of accountability

for the entire Los Angeles County's smart card-based revenue transactions and data collection reporting.

Metro will be installing bus and rail UFS equipment beginning Summer 2004. The municipal operators also completed their purchases of UFS equipment with contractual delivery dates beginning late 2004. In order for the Regional TAP program to become operational, as the equipment installations for both Metro and Municipal operators are completed, requires immediate engagement of Booz-Allen to provide technical design, program development, and implementation oversight of the Regional Programs in order to meet the UFS Regional Project Schedule (Attachment A). Their specific, discrete scope of work and period of performance is identified in Attachment B.

Booz-Allen will not be the operator of the Regional TAP Service Center. They are the technical oversight consultants responsible for the design, development, installation, testing and systems acceptance oversight of the regional system. Booz Allen is currently engaged as the single consultant accountable for UFS "systems integration" and is singularly responsible for delivering to Metro a fully operational and functional fare collection system. The continuation of services from Booz-Allen & Hamilton will provide the same level of accountability for the Regional TAP program.

Booz-Allen has provided technical expertise and experience for delivering regional automated fare collection systems across the country. Currently, Translink, in the San Francisco Bay Area, WMATA and Baltimore, Maryland, and San Diego are all regional systems in various stages of implementation with technical assistance and oversight by Booz-Allen.

Now that there is firm financial commitment by the Municipal operators to engage in this regional program as evidenced by their individual contracts in place with the UFS supplier and considering that they have committed to participate in the on-going operation and maintenance of the regional system, the next immediate step is to retain Booz-Allen so that the procurement of the capital equipment and the service operator can be initiated.

### **FINANCIAL IMPACT**

The table below illustrates the recommended funding plan, for a total not-to-exceed amount of \$16 million for this regional capital project. Metro will fund \$10 million, which has been reserved in the FY04 Budget (*Item 16, Finance and Budget Committee, May 15, 2003* – see "Discussion" last paragraph.) The source of funding is a combination of federal funds, CMAQ, 5309 fixed guideway and local match from Prop C 40%, likely bonds. The specific allocations will be determined as part of the FY05 budget process based on a review of the progress of other grant funded activities throughout the regional program.

The table represents the funding shared regionally with Municipal operators, Local Transit Service System (LTSS) operators, and Metro:

	TOTAL	MUNI	Metro	LTSS
Booz Allen Contract	3,000,000	-	3,000,000	-
Regional Clearinghouse Equip.	6,000,000	1,080,000	4,920,000	-
Regional CDCS	6,000,000	4,000,000	1,000,000	1,000,000
Contingency	1,000,000	-	1,000,000	-
<b>TOTAL</b>	<b>16,000,000</b>	<b>5,080,000</b>	<b>9,920,000</b>	<b>1,000,000</b>

<b>Metro Funding</b>	
Metro FY04 UFS CP Increase	10,000,000
Muni Funding	5,080,000
LTSS Funding	1,000,000

### ALTERNATIVES CONSIDERED

The alternatives for the two separate issues are presented – first, the alternatives evaluated for the operation and maintenance of the Regional Clearinghouse and TAP Service Center; and second, the alternatives considered for the contract amendment to Booz-Allen Hamilton.

1. Regional Clearinghouse & TAP Service Center		Rationale for Alternatives Not Selected
Alt. A	In-house (Metro and Munis)	<ul style="list-style-type: none"> <li>▪ More expensive for Metro &amp; Munis to “ramp up” since we do not have staff or equipment to do this work. (Economies of scale from an outsourced vendor already performing similar functions for other agencies).</li> <li>▪ Accountability is split up between Operators – not one entity is completely responsible for operating and maintaining this multi-million dollar regional revenue system and database.</li> <li>▪ Difficulty to scale up or down, due to different hiring processes, training, and access to resources experienced in performing this work.</li> <li>▪ Actual cost to operate and maintain the system will be difficult to identify because multiple operators would be performing various functions. Tracking and monitoring will be difficult since the responsibility of various functions will be split between organizations of various sizes, needs and priorities..</li> <li>▪ Easier to charge per use of card if handled by third party – this would be difficult to administratively track and manage if handled internally by in-house staff</li> <li>▪ Creates diversion from the core business of providing transit service. Once deployed regionally, this will become another “business”, and takes staff resources away from the business of operating service.</li> <li>▪ Lack of resident expertise in-house. No transit operator has staff experienced in operating a regional smart-card based financial clearinghouse, or service center.</li> <li>▪ Once this work in brought internally, it is more difficult to later outsource if such rationale is considered. Conversely, anything outsourced can always be</li> </ul>

		brought in-house more easily.
Alt. B	Combined Metro/Muni In-house & Outsource	All the rationale identified above in Alternative A above, plus <ul style="list-style-type: none"> <li>▪ More complex administrative and management structure to handle activities that is outsourced. Multiple entities will be responsible for procurement activities, tracking and timing the procured needs versus those that are done internally.</li> <li>▪ Essentially further complicates issues of accountability in managing a third party, in addition to internal staff.</li> </ul>
<b>2. Booz-Allen contract modification Rationale for Alternatives Not Selected</b>		
Alt. A	Compete the amended scope of work	<ul style="list-style-type: none"> <li>▪ Bifurcates responsibility for a single integrator to be responsible for the complete system, from design, installation, testing and systems acceptance.</li> <li>▪ Can potentially result in conflict of design or specifications from the originator of the UFS base contract, if another consultant has different philosophies or experience in implementing one design over another.</li> <li>▪ Learning curve for new consultant will further delay implementation</li> <li>▪ May result in Booz getting contract anyway, after taking the time to compete</li> </ul>
Alt. B	Have a Municipal Operator handle the procuring of this scope of work	<ul style="list-style-type: none"> <li>▪ Further bifurcates responsibility so that one lead agency is not accountable for the delivery of a complete, interoperable regional system.</li> <li>▪ Many Munis do not have the staff resources required to administer a contract of this order of magnitude over multiple years.</li> <li>▪ Administrative oversight for auditing and accountability of Federal grants are diluted; potentially may risk FTA guidelines for Procurement Best Practices.</li> </ul>

**NEXT STEPS**

Staff will continue to work with the regional operators to develop detailed, comprehensive work rules to support the division of operating and maintenance costs, and in addition, create an administrative and organizational structure to operate the regional “business”.

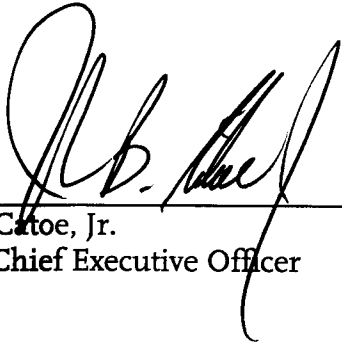
Upon approval of the contract modification to the consultant, staff will begin immediately to design and develop the technical specifications for the Regional Central Data Collection System, and separately, the Regional Clearinghouse and TAP Service Center.

Staff will return with monthly progress updates to the Operations Committee to report on the progress of the Regional UFS program as a separate, but related activity, to the Metro UFS equipment installation.

**ATTACHMENT(S)**

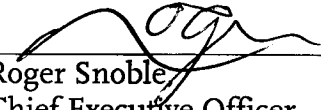
- A Procurement Summary
- A-1 Procurement History
- A-2 List of Subcontractors
- B UFS Project Schedule
- C Booz Allen Scope of Work

Prepared by: Richard Hunt, Deputy Executive Officer, New Vehicle Technology  
Jane Matsumoto, UFS Project Manager  
Don Dwyer, Contracts Administration Manager



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John B. Catoe, Jr.  
Deputy Chief Executive Officer



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Roger Snoble  
Chief Executive Officer

**BOARD REPORT ATTACHMENT A  
PROCUREMENT SUMMARY**

**UNIVERSAL FARE SYSTEM (UFS)  
NEW REGIONAL CLEARINGHOUSE & TAP SERVICE CENTER**

1.	Contract Number: ps-4610-1026		
2.	Recommended Vendor: Booz-Allen & Hamilton		
3.	Cost/Price Analysis Information:		
	A. Bid/Proposed Price: \$2,996,704	Recommended Price: \$2,996,458	
	B. Details of Significant Variances are in Attachment A-1.D		
4.	Contract Type: Cost Plus Fixed Fee		
5.	Procurement Dates:		
	A. Issued: N/A		
	B. Advertised: N/A		
	C. Pre-proposal Conference: N/A		
	D. Proposals Due: 5-14-03		
	E. Pre-Qualification Completed: Yes		
	F. Conflict of Interest Form Submitted to Ethics:		
6.	Small Business Participation:		
	A. Bid/Proposal Goal: 13.8 DBE Goal, Base Contract	Date Small Business Evaluation Completed: March 17, 2003	
	B. Small Business Commitment: 15.47% for Amendment 2. Details are in Attachment A-2		
7.	Invitation for Bid/Request for Proposal Data:		
	Notifications Sent: N/A	Bids/Proposals Picked up: N/A	Bids/Proposals Received: N/A
8.	Evaluation Information:		
	A. Bidders/Proposers Names:  Booz-Allen & Hamilton	<u>Bid/Proposal Amount:</u>  \$2,996,458	<u>Best and Final Offer Amount:</u>  \$2,996,458
	B. Evaluation Methodology: Details are in Attachment A-1.C		
9.	Protest Information:		
	A. Protest Period End Date: N/A		
	B. Protest Receipt Date:		
	C. Disposition of Protest Date:		
10.	Contract Administrator: Donald C. Dwyer	Telephone Number: 922-6387	
11.	Project Manager: Jane Matsumoto	Telephone Number: 922-3405	

BOARD REPORT ATTACHMENT A-1  
PROCUREMENT HISTORY

**UNIVERSAL FARE SYSTEM (UFS) NEW  
REGIONAL CLEARINGHOUSE & TAP SERVICE CENTER**

**A. Background on Contractor**

Booz-Allen & Hamilton (BAH) has provided technical consultation to Metro on fare collection since the inception of Metro's automated fare collection systems. BAH's involvement includes the drafting of the UFS technical specification, UFS implementation management services and various studies related to fare collection. BAH is a recognized leader in the design and management of fare collection systems throughout world

**B. Procurement Background**

In February, 2001, the Metro Board approved a non-competitive contract with BAH for UFS Implementation Management services.

Amendment No. 3:

At the request of the Metro, BAH submitted a proposal to provide additional technical support related to the extension of the Metro's Universal Fare System into a Regional Fare Collection System. Municipal Operators who have signed contracts with Cubic Transportation Systems as UFS Affiliated Agencies, expressed the need for technical representation and consultation. In addition, the Universal Fare System as a Regional System requires the technical scope development of a Regional Clearinghouse and Service Center in preparation for a future open solicitation. Booz-Allen & Hamilton's final proposal was received on June 5, 2003

**C. Evaluation of Proposals**

A technical analysis was performed on the proposal received. The hours proposed and distribution of labor are technically acceptable.

**D. Cost/Price Analysis Explanation of Variances**

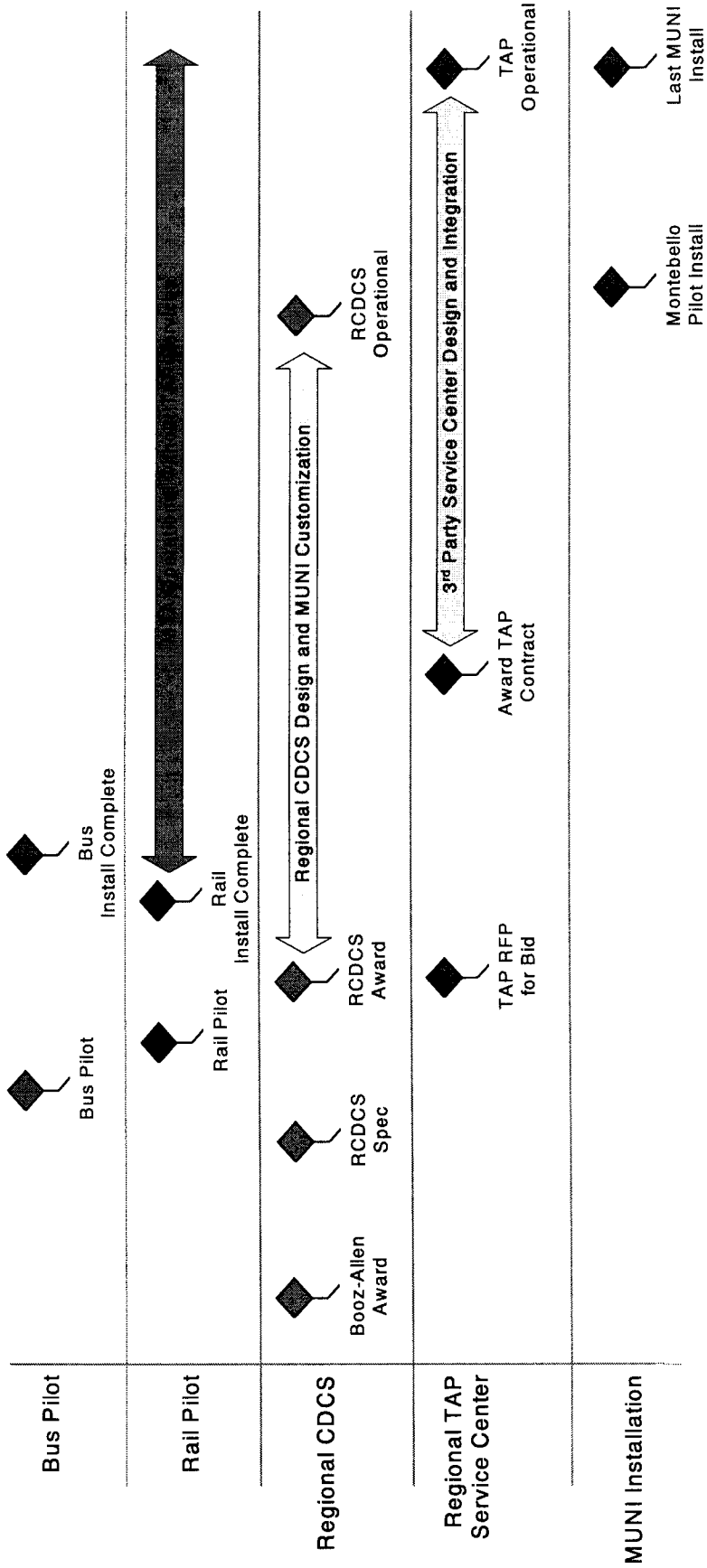
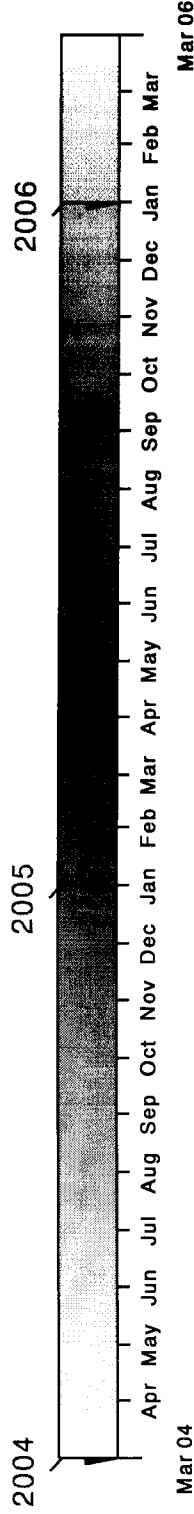
The recommended price has been determined to be fair and reasonable based upon cost analysis. Booz-Allen & Hamilton proposed the same breakdown of costs as is included in the base contract. The elements of cost are consistent with the base contract.

Bid/Proposal Amount	Metro Estimate	Recommended/Negotiated Amount
\$2,996,458	\$1,969,770	\$2,996,458

Estimate did not include hours for Task 2, Fare System Business Planning in the amount of 1,640 hours. The difference between the amount of the Estimate and the Proposed amount is primarily due the differences in the estimated hours to perform the work. The Estimate is based on 17,760 hours and the proposal is based on 23,840 hours.

# UFS Operational Schedule Metro

2/12/04





BOARD REPORT ATTACHMENT A-2  
LIST OF SUBCONTRACTORS

UNIVERSAL FARE SYSTEM (UFS)  
NEW REGIONAL CLEARINGHOUSE & TAP SERVICE CENTER

PRIME CONTRACTOR – Booz Allen Hamilton, Inc.

Small Business Commitment

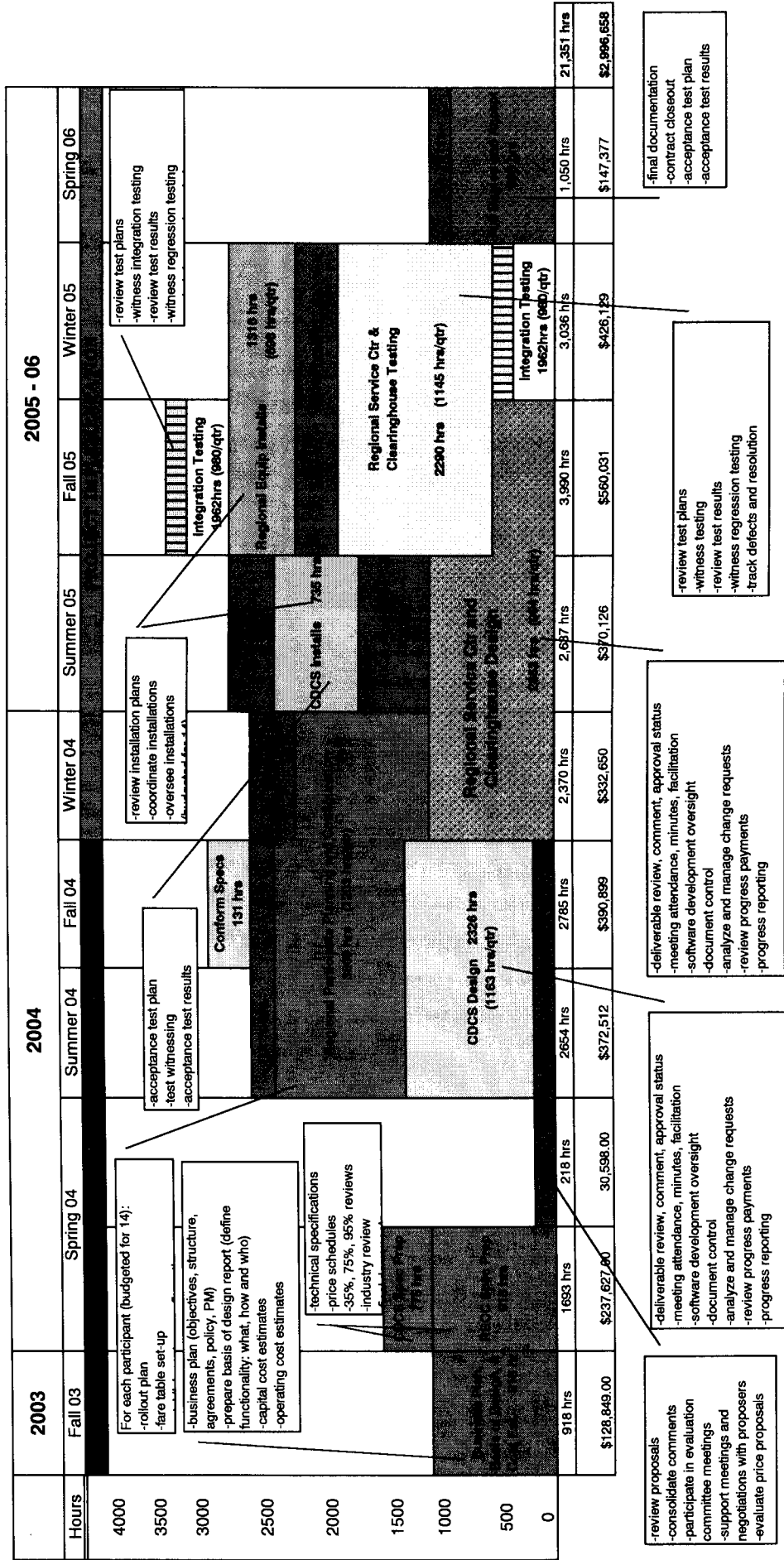
Eigertech (6.96%)  
LKG (6.83%)  
Acumen(1.66%)

Other Subcontractors

ASE

Total Commitment 15.47% .

**Booz - Allen Hamilton PROPOSED  
Regional UFS Program  
Design - BID - Build and Technical Oversight**



For each participant (budgeted for 14):  
 -rollout plan  
 -fare table set-up  
 -business plan (objectives, structure, agreements, policy, PM)  
 -prepare basis of design report (define functionality: what, how and who)  
 -capital cost estimates  
 -operating cost estimates

Technical specifications  
 -price schedules  
 -35%, 75%, 95% reviews  
 -industry review

-acceptance test plan  
 -test witnessing  
 -acceptance test results

Conform Specs  
 131 hrs

-review installation plans  
 -coordinate installations  
 -oversee installations  
 (International, etc.)

CDCS installs 736 hrs

CDCS Design 2326 hrs  
 (1163 hrs/qtr)

Regional Service Ctr and Clearinghouse Design 2683 hrs (695 hrs/qtr)

Regional Service Ctr & Clearinghouse Testing 2290 hrs (1145 hrs/qtr)

-review test plans  
 -witness integration testing  
 -review test results  
 -witness regression testing

Integration Testing 1962hrs (980/qtr)

Regional Equip Inmate 3316 hrs (829 hrs/qtr)

Integration Testing 1962hrs (980/qtr)

-review proposals  
 -consolidate comments  
 -participate in evaluation committee meetings  
 -support meetings and negotiations with proposers  
 -evaluate price proposals

-deliverable review, comment, approval status  
 -meeting attendance, minutes, facilitation  
 -software development oversight  
 -document control  
 -analyze and manage change requests  
 -review progress payments  
 -progress reporting

-deliverable review, comment, approval status  
 -meeting attendance, minutes, facilitation  
 -software development oversight  
 -document control  
 -analyze and manage change requests  
 -review progress payments  
 -progress reporting

-review test plans  
 -witness testing  
 -review test results  
 -witness regression testing  
 -track defects and resolution

-final documentation  
 -contract closeout  
 -acceptance test plan  
 -acceptance test results