



STATE OF MICHIGAN CENTRAL PROCUREMENT SERVICES

Department of Technology, Management, and Budget

525 W. ALLEGAN ST., LANSING, MICHIGAN 48913

P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **16**

to

Contract Number **071B6600020**

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
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	CV0007364

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	Contract Administrator	Sean Regan	DTMB
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CONTRACT SUMMARY

VENDOR MANAGED SERVICES FOR IT STAFF AUGMENTATION

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021
PAYMENT TERMS		DELIVERY TIMEFRAME	
NET 45			
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
<input type="checkbox"/> P-Card	<input type="checkbox"/> PRC	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

MINIMUM DELIVERY REQUIREMENTS

DESCRIPTION OF CHANGE NOTICE

OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		June 30, 2021
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$535,840,000.00	\$0.00	\$535,840,000.00		

DESCRIPTION

Effective June 1, 2020, this contract is hereby amended with the following changes:

- 1. All existing contractors are to reduce their rate by 10%.
- 2. All new contractors will follow the new rate table below.
- 3. The new payment terms in section 5.d of the Participating Addendum are replaced with the following: the supplier network to a pay when paid model for those suppliers who do not opt into one of the prompt payment options. If a supplier does not opt into one of the prompt payment options, they will be paid net 7 from receipt of payment from the State of Michigan.
- 4. The MSP fee in section 5. a. of the Participating Addendum is reduced to 3.2% (total fee reduction of 5% to 4.2% inclusive of the 1% DTMB administration fee).

All other terms, conditions, specifications, and pricing remain the same. Per Contractor, agency and DTMB Procurement approval.

Exhibit C: CAI Michigan Rate Card - Version 5

Job Category	Job Title	Skill Level	NTE Rates
			Bill
Applications	Programmer Analyst	Analyst 1	\$63.16
		Analyst 2	\$74.86
		Analyst 3	\$81.69
		Analyst 4	\$86.50
		Analyst 5	\$87.65
		Analyst 6	\$102.37
	Programmer	Programmer 1	\$59.41
		Programmer 2	\$62.41
		Programmer 3	\$71.06
		Programmer 4	\$82.76
		Programmer 5	\$87.23
		Programmer 6	\$102.22
	Software Test Analyst	Analyst 1	\$37.29
		Analyst 2	\$41.83
		Analyst 3	\$51.63
		Analyst 4	\$53.15
		Analyst 5	\$54.55
	Technical Writer	Technical Writer 1	\$40.79
		Technical Writer 2	\$43.14
		Technical Writer 3	\$53.84
	Business Analyst	Analyst 1	\$51.54
		Analyst 2	\$53.91
		Analyst 3	\$65.17
		Analyst 4	\$74.33
		Analyst 5	\$83.31
	System Analyst	Analyst 1	\$59.41
		Analyst 2	\$62.41
		Analyst 3	\$68.27
		Analyst 4	\$79.79
		Analyst 5	\$86.44
		Analyst 6	\$97.57
	Software Solutions Architect		\$100.22
	Geographic Information Systems	Geospatial Projects Manager	\$100.74
		Analyst	\$94.81
		Specialist I	\$67.16
		Specialist II	\$78.40
		Technician Trainee	\$63.16
		Technician I	\$67.16
		Technician II	\$71.08
		Technician III	\$74.86
	Graphic Designer	Graphic Designer 1	\$43.06
		Graphic Designer 2	\$46.90
	Mobile Specialist	Mobile Specialist 1	\$157.79
		Mobile Specialist 2	\$189.35

Exhibit C: CAI Michigan Rate Card - Version 5

Job Category	Job Title	Skill Level	NTE Rates
			Bill
Applications	Web Application Developer	Web Application Developer 1	\$58.76
		Web Application Developer 2	\$62.65
	Webmaster	Webmaster 1	\$59.41
		Webmaster 2	\$63.93
Customer/Technical Support	Contact Center Agent	Contact Center Agent 1	\$24.59
		Contact Center Agent 2	\$31.86
		Contact Center Agent 3	\$37.11
	Help Desk	Help Desk 1	\$34.84
		Help Desk 2	\$40.17
		Help Desk 3	\$45.25
	Technical Support	Technical Support 1	\$50.00
		Technical Support 2	\$56.98
		Technical Support 3	\$64.21
	Infrastructure Solutions Architect	Infrastructure Solutions Architect 1	\$72.24
		Infrastructure Solutions Architect 2	\$76.27
		Infrastructure Solutions Architect 3	\$87.98
		Infrastructure Solutions Architect 4	\$108.95
		Infrastructure Solutions Architect 5	\$115.66
	System Administrator	System Administrator 1	\$55.70
		System Administrator 2	\$64.69
		System Administrator 3	\$72.22
Data Management	Database Architect	Database Architect 1	\$71.82
		Database Architect 2	\$74.43
		Database Architect 3	\$79.86
		Database Architect 4	\$94.42
	Data Warehouse Architect	Data Warehouse Architect 1	\$75.62
		Data Warehouse Architect 2	\$93.18
		Data Warehouse Architect 3	\$95.76
	Database Administrator	Database Administrator 1	\$58.68
		Database Administrator 2	\$72.96
		Database Administrator 3	\$81.82
		Database Administrator 4	\$85.55
		Database Administrator 5	\$92.92
Governance	IT Governance Analyst		\$124.18
	IT Procurement Analyst		\$64.83
IT Management Services	Business Continuity Planner		\$95.00
	Business Process Reengineering		\$104.09
	Enterprise Architect		\$132.54
	IT Strategist		\$115.75
	IT Auditor	I.T. Auditor 1	\$47.68
		I.T. Auditor 2	\$52.16
		I.T. Auditor 3	\$67.88
		I.T. Auditor 4	\$75.85
		I.T. Auditor 5	\$80.15
	IT Trainer		\$61.51
	IT Sourcing Consultant	IT Sourcing Consultant 1	\$94.90

Exhibit C: CAI Michigan Rate Card - Version 5

Job Category	Job Title	Skill Level	NTE Rates
			Bill
IT Management Services	IT Sourcing Consultant	IT Sourcing Consultant 2	\$107.24
IT Security	IT Security Analyst	IT Security Analyst 1	\$57.95
		IT Security Analyst 2	\$68.53
		IT Security Analyst 3	\$71.45
	IT Security Architect	IT Security Architect 1	\$70.60
		IT Security Architect 2	\$74.11
	Security Auditor		\$119.31
Project Management	Program Manager		\$140.03
	Project Manager	Project Manager 1	\$105.50
		Project Manager 2	\$109.67
		Project Manager 3	\$113.85
	Project Coordinator		\$44.71
Telecommunications and Computer Networking	Network Administrator	Network Administrator 1	\$50.99
		Network Administrator 2	\$55.66
		Network Administrator 3	\$59.93
	Network Architect	Network Architect 1	\$60.78
		Network Architect 2	\$68.01
		Network Architect 3	\$84.23
	Network Engineer	Network Engineer 1	\$55.59
		Network Engineer 2	\$60.78
		Network Engineer 3	\$72.30
		Network Engineer 4	\$82.74
	Public Safety Consultant		\$78.11
	Radio Engineer		\$103.23

Exhibit D: Job Titles and Descriptions

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5. Business Analyst	10
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7. Software Solutions Architect	13
8. Geospatial Projects Manager	14
9. Geographic Information System Analyst	14
10. Geographic Information System Specialist 1	15
11. Geographic Information System Specialist 2	15
12. Geographic Information System Technician Trainee	15
13. Geographic Information System Technician I	16
14. Geographic Information System Technician II	16
15. Geographic Information System Technician III	17
16. Graphic Designer	17
17. Mobile Specialist	18
18. Web Application Developer	19
19. Webmaster	19
Customer/Technical Support	19
20. Contact Center Agent	19
21. Help Desk	20
22. Technical Support	21
23. Infrastructure Solutions Architect	23
24. System Administrator	24
Data Management	25
25. Database Architect	25
26. Data Warehouse Architect	26
27. Database Administrator	27
Governance	29
28. IT Procurement Analyst	29
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Exhibit D: Job Titles and Descriptions

30.	Business Continuity Planner	31
31.	Business Process Reengineering	31
32.	Enterprise Architect	32
33.	IT Strategist	32
34.	IT Auditor	33
35.	IT Trainer	34
36.	IT Sourcing Consultant	34
IT Security		35
37.	IT Security Analyst	35
38.	IT Security Architect	36
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Project Management		37
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41.	Project Manager	38
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Telecommunications and Computer Networking		40
43.	Network Administrator	40
44.	Network Architect	41
45.	Network Engineer	42
46.	Public Safety Consultant	43
47.	Radio Engineer	43

Exhibit D: Job Titles and Descriptions

APPLICATIONS

1. Programmer Analyst

- Plans, develops, tests, and documents computer programs, applying knowledge of programming techniques and computer systems. Evaluates user request for new or modified program, such as for financial or human resource management systems, clinical research trial results, statistical study of traffic patterns, or analyzing and developing specifications for bridge design, to determine feasibility, cost and time required, compatibility with current system, and computer capabilities. Consults with user to identify current operating procedures and clarify program objectives. Formulates plan outlining steps required to develop program, using methodologies such as structured analysis and design or object-oriented development.
- Work involves assisting in analyzing systems outlines to develop programs for computer applications, writing solution programs, documenting the methods and procedures used in program development, and testing and correcting programs. Works under moderate supervision with limited latitude for the use of initiative and independent judgment. Develops block diagrams and machine logic flowcharts to represent operations and data flow for applications.
- Captures requirements using industry standard development frameworks and tools. Designs reports, forms and letters along with computer terminal screen displays to accomplish goals of user request. Reviews screens, reports, forms and letters designs with users. Converts project specifications, using industry standard tools, such as object-oriented tools and code generation, into sequence of detailed instructions and logical steps for coding into language processable by computer, applying knowledge of computer programming techniques and computer languages.
- Enters program codes into computer system. Enters commands into computer to run and test program. Reads computer printouts or observes display screen to detect syntax or logic errors during program test, or uses diagnostic software to detect errors. Replaces, deletes, or modifies codes to correct errors. Analyzes, reviews and alters program to increase operating efficiency or adapt to new requirements. Writes documentation to describe program development, logic, coding, and corrections. Writes manual for users to describe installation and operating procedures. Assists users to solve operating problems. Recreates steps taken by user to locate source of problem and rewrites program to correct errors. May use computer-aided software tools in each stage of system development. May train users to use program. May oversee installation of hardware and software. May provide technical assistance to program users. May install and test program at user site. May monitor performance of program after implementation. May specialize in developing programs for business or technical applications.

Programmer Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment

Exhibit D: Job Titles and Descriptions

Programmer Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Programmer Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 5	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer Analyst 6	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

Exhibit D: Job Titles and Descriptions

2. Programmer

- Converts data from project specifications and statements of problems and procedures to create or modify computer programs. Prepares, or receives detailed specifications to describe sequence of steps that program must follow and input, output, and logical operations involved. Analyzes specifications, applying knowledge of computer capabilities, subject matter, and symbolic logic. Confers with supervisor and representatives of departments concerned with program to resolve questions of program intent, data input, output requirements, and inclusion of internal checks and controls. Converts detailed specifications to language processable by computer. Enters program codes into computer system. Inputs test data into computer. Observes computer monitor screen to interpret program operating codes. Corrects program errors, using methods such as modifying program or altering sequence of program steps. May prepare computer block diagrams and machine logic flowcharts for detailed coding of problems, and provides for the documentation of programming work.
- Writes instructions to guide operating personnel during production runs. Analyzes, reviews, and rewrites programs to increase operating efficiency or to adapt program to new requirements. Compiles and writes documentation of program development and subsequent revisions. May assist computer operator to resolve problems in running computer program. May work with System Analyst to obtain and analyze project specifications. May direct and coordinate work of others to write, test, and modify computer programs. Work involves writing programs to solve problems, documenting the methods and procedures used in program development, and testing and correcting programs. Work involves analyzing system outlines to develop programs for computer applications; writing solution programs; May train others. Works under general supervision with limited latitude for the use of initiative and independent judgment. Analyzes proposed computer applications in terms of equipment requirements and capabilities. Assists in developing solutions to software-related problems. May assist in the generation or installation of systems software.
- Prepares test data. May assist in writing and maintaining functional and technical specifications. Experience in computer programming work. Knowledge of the principles, practices, and techniques of computer programming and systems analysis, of computer operations procedures and systems, and of computer programming languages. Skill in the use of computer equipment. Ability to design programs and systems architecture; to prepare program specifications; to code, test, and debug computer programs; to interpret technical information relating to computer programming and other areas of data processing; and to communicate effectively.

Programmer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Programmer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

Programmer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 5	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer 6	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

3. Software Test Analyst

- Develops, publishes, and implements test plans. Writes and maintains test automation. Evaluates, recommends, and implements automated test tools and strategies. Develops, maintains, and upgrades automated test scripts and architectures for application products. Also writes, implements, and reports status for system test cases for testing. Analyzes test cases and provides regular progress reports. Participates in the testing process through test review and analysis, test witnessing and certification of software.

Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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Analyst 2	
Years of Experience	4-7 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>

Analyst 3	
Years of Experience	7-10 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and</p>

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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Analyst 4	
Years of Experience	11-14 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>

Analyst 5	
Years of Experience	15 or more years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and</p>

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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4. Technical Writer

- Develops and maintains user and technical documentation and project process documentation for Application Teams. Understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. Provides expertise on technical concepts of applications and /or user groups and structuring procedures in a logical sequence, due to a broad understanding of the applications. Writes a variety of technical articles, reports, brochures, and/or manuals for documentation for a wide range of uses. May be responsible for coordinating the display of graphics and the production of the document.
- Develop, enhance, and maintain user documentation for multiple applications including documentation required for the operations provider. Develop on-line source documentation as appropriate. Maintain documentation libraries and subscription lists. Identify, create, revise, and maintain documentation and templates. Ensure appropriate control access/use of documentation materials. Maintain application and user documentation. Ensure messages and terminology is consistent across all written materials. Research and complete documentation service requests. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Follow quality standards. Ability to work in a team environment. Strong communication skills; both written and spoken.
- Composes technical documents, manuals, bulletins, brochures, publications, training manuals, and special reports. Organizes and coordinates the composition of material and drafting of forms suitable for reproduction. Reviews and edits prepared material and illustrations. Develops and refines material for publication in journals and periodicals. Prepares informational material for release to the mass media. Works with agency staff in the development of formats, graphics, and the layout of publications. Assists agency staff in preparing and refining material for speeches and other public presentations. May research product design, capabilities, and compatibility ranges.
- May oversee the writing, editing, publishing, and distribution of specification documents. May review various resources and prepare analyses or summaries. May train others. Experience in technical writing, journalism, or communications work. Knowledge of the techniques and methods of planning, organizing, and writing various types of materials; of research methodology; and of departmental policies, procedures, and regulations. Skill in the use of office equipment. Ability to conduct research; to compose, review, illustrate, and edit technical documents, materials, and reports; to communicate effectively; and to train others.

Exhibit D: Job Titles and Descriptions

Technical Writer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Writer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Technical Writer 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

5. Business Analyst

- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Experienced with business process reengineering and identifying new applications of technology to business problems to make business more effective. Familiar with industry standard (including Legacy, Core, and Emerging technologies), business process mapping, and reengineering. Prepares solution options, risk identification, and financial analyses such as cost/benefit, ROI, buy/build, etc. Writes detailed description of user needs, program functions, and steps required to develop or modify computer programs.
- Prepare and document Functional and Technical Specifications for reporting and data warehouse work. Assist with business warehouse/intelligence support and enhancements. Develops RFPs. Assist in deployment and management of end-user reporting tools and platforms. Work with IT and business project teams to understand reporting and data warehousing requirements and propose solutions. Document and provide knowledge transfer to the rest of the Enterprise Reporting Team for all solutions.
- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Familiar with relational database concepts, and client-server concepts. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a project manager. A certain degree of creativity and latitude is required.

Exhibit D: Job Titles and Descriptions

Business Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Business Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Business Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 5	
Years of Experience	16 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Exhibit D: Job Titles and Descriptions

6. System Analyst

- Understands business objectives and problems, identifies alternative solutions, performs studies and cost/benefit analysis of alternatives. Analyzes user requirements, procedures, and problems to automate processing or to improve existing computer system: Confers with personnel of organizational units involved to analyze current operational procedures, identify problems, and learn specific input and output requirements, such as forms of data input, how data is to be summarized, and formats for reports. Writes detailed description of user needs, program functions, and steps required to develop or modify computer program. Reviews computer system capabilities, specifications, and scheduling limitations to determine if requested program or program change is possible within existing system.
- Studies existing information processing systems to evaluate effectiveness and develops new systems to improve production or specifications as required. Prepares specifications to detail operations to be performed by equipment and computer programs and operations to be performed by personnel in system. Conducts studies pertaining to development of new information systems to meet current and projected needs. Plans and prepares technical reports, memoranda, and instructional manuals as documentation of program development. Upgrades system and corrects errors to maintain system after implementation. May assist computer programmer in resolution of work problems related to project specifications, or programming. May direct and coordinate work of others to develop, test, install, and modify programs.
- Provides technical assistance and support for applications and hardware problems and for information sharing with external entities in a customer service environment. Provides field coordination and planning for the effective use of management information systems. Determines operational, technical, and support requirements for the location, installation, operation, and maintenance of various office equipment and systems. Prepares charts, diagrams, tables, and flowcharts. Details input and output record formats for computer programs. Assists in formulating logical descriptions of problems and devising optimum solutions. Assists in the design, development, and maintenance of various computer applications. May provide support and make recommendations for information technology systems processes associated with software technology planning, development, implementation, system security, and interfaces.
- Graduation from an accredited four-year college or university with major course work in computer science, computer information systems, or management information systems is generally preferred. Knowledge of the limitations and capabilities of computer systems and of the techniques used in the design of non-automated systems, of information technology equipment, of applicable programming languages, of computer hardware and software, of computer operating systems, of writing program code, and of automated mapping. Ability to analyze systems and procedures, to write and revise standards and procedures, to communicate effectively, and to train others.

System Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

System Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with

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	considerable latitude for the use of initiative and independent judgment.
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System Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

System Analyst 4	
Years of Experience	10 or more years of experience in the field.
Job Description	Advanced experience in the field.

System Analyst 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals.

System Analyst 6	
Years of Experience	14 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals. Works independently and cooperatively with management and stakeholders.

7. Software Solutions Architect

Solutions Architect	
Years of Experience	5 or more years of experience in the field.
Job Description	Lead and manage the design, implementation and delivery of system and software architecture designs, strategies and quality assurance plans. Design, prototype, develop and implement to achieve business results for the client. Experienced expert able to lead and deliver solutions using object-oriented, service-oriented architecture, and n-tier architectures. Adopt, develop, and execute a robust software development lifecycle, using industry best practices. Follows both the State and industry best practices for software engineering. · Leads in the development of long term technology strategy and planning for the entire organization leveraging existing and acquiring new resources. Leads and actively participates on project teams, clarifying business needs and requirements, performing analysis, design, development, integration, and maintenance of systems across

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	the enterprise. Willing and able to engage with other internal organizations to maximize delivery capabilities and provide value to clients. Participates and leads the development of delivery approach, and labor and cost estimates. Manage projects or tasks using the State and industry project delivery methodologies and best practices. Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.
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8. Geospatial Projects Manager

Geospatial Projects Manager	
Years of Experience	A minimum of three years of professional experience is required in Geographical Information System (GIS), cartography, CADD, or a related field. A minimum of three years of professional experience as a project manager for geospatial projects is required.
Job Description	Lead and direct cross-functional teams to deliver complex geospatial projects within the constraints of schedule, budget and scope. Assess desired outcomes and identify user requirements and needs. Design geospatial solutions, including geo-database schema, system requirements, system configuration and application functional requirements. Develop and obtain approval of project plans according to accepted practices and procedures. Integrate resources and develop additional resources to facilitate, manage and execute geospatial projects. Facilitate stakeholder communications, project reporting, and project oversight. Manage project closeout and the development of operations and support plans for geospatial data and application maintenance. Provide technical oversight and develop standards for geospatial data and applications.

9. Geographic Information System Analyst

Geographic Information System Analyst	
Years of Experience	A minimum of two years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing complex spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial basemap information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

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10. Geographic Information System Specialist 1

Geographic Information System Specialist 1	
Years of Experience	Two (2) years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

11. Geographic Information System Specialist 2

Geographic Information System Specialist 2	
Years of Experience	3-4 years of experience in the field or in a related area.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

12. Geographic Information System Technician Trainee

Geographic Information System Technician Trainee	
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Exhibit D: Job Titles and Descriptions

Years of Experience	One year of professional experience related to GIS, cartography, CADD, or a related field, or a minimum of six undergraduate credit hours in GIS, cartography or CADD.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

13. Geographic Information System Technician I

Geographic Information System Technician I	
Years of Experience	A minimum of two (2) years of successful experience at the equivalent of the GIS Trainee level.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

14. Geographic Information System Technician II

Geographic Information System Technician II	
Years of Experience	A minimum of three (3) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

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15. Geographic Information System Technician III

Geographic Information System Technician III	
Years of Experience	A minimum of four (4) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

16. Graphic Designer

Graphic Designer 1	
Years of Experience	Less than five years industry experience.
Job Description	Ability to assemble and create images for use with electronic and print publishing. Strong understanding of visual identifies and application of logos and identity marks.

Graphic Designer 2	
Years of Experience	5-7 years industry experience.
Job Description	Advanced experience in the use of various design software and technologies; advanced understanding of electronic design standards and techniques.

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17. Mobile Specialist

- The Mobile Specialist serves in many capacities, including Developer, Engineer, Technical Architect, and Analyst for Mobile Projects. The Mobile Specialist often guides and mentors the technical team in all phases of the SDLC including requirement validation, detail design, development, and implementation.

Mobile Specialist 1	
Years of Experience	4 year college degree or equivalent technical study.
Job Description	<ul style="list-style-type: none"> Serves as the Designer, Developer and/or Engineer on Mobile Projects. Meets with end users and technical staff of all types to gather business and system requirements Develops and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects. Develops standards, repeatable processes, and reusable components Assists in project planning, including developing of timelines, composition of technical teams, and leveling of resources. Mentors technical team leads and team members on Department processes and standards to promote consistency and improve productivity. Assists in the development and review of technical deliverables on projects.

Mobile Specialist 2	
Years of Experience	4 year college degree or equivalent technical study.
Job Description	<ul style="list-style-type: none"> Serves as the Lead Architect/Designer/Developer /Engineer on Mobile Projects. Meets with end users and technical staff of all types to gather business and system requirements. Proposes comprehensive solutions based on business and technical requirements Architects, designs, develops, and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects. Develops standards, repeatable processes, and reusable components Leads project planning, including developing of timelines, composition of technical teams, and leveling of resources. Mentors and manages technical team leads and team members on Department processes and standards to promote consistency and improve productivity. Leads the development and review of technical deliverables on projects.

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18. Web Application Developer

Web Application Developer 1	
Years of Experience	Five years industry experience.
Job Description	Perform specialized programming and technical work for website and Internet development.

Web Application Developer 2	
Years of Experience	5-7 years industry experience.
Job Description	Perform advanced programming and technical development for website and Internet development

19. Webmaster

Webmaster 1	
Years of Experience	Five years industry experience.
Job Description	Experience maintaining multiple websites. Responsibilities include publishing, examining traffic patterns and transactions, and maintaining usability standards.

Webmaster 2	
Years of Experience	More than five years of industry experience.
Job Description	Advanced experience maintaining multiple websites; examining traffic patterns and transactions; testing for multiple platforms; maintaining usability standards and security standards as they relate to the sites; and the ability to coordinate among content managers and developers.

CUSTOMER/TECHNICAL SUPPORT

20. Contact Center Agent

- Answers inbound and places outbound calls in a call center with the goal of increasing business, customer satisfaction, and customer retention. Takes care of somewhat complex customer inquiries and problems and non-routine matters than those handled by lower-level

Exhibit D: Job Titles and Descriptions

Call Center Representatives. Requires a higher degree of skill and ability to explain more complex matters to ensure customer satisfaction and retention, and to sell products and services.

Contact Center Agent 1	
Years of Experience	1 to 5 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Contact Center Agent 2	
Years of Experience	6-11 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Contact Center Agent 3	
Years of Experience	12 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

21. Help Desk

- Provide technical assistance to computer system users on a variety of issues. Identifies, researches, and resolves technical problems. Responds to telephone calls, email and personnel requests for technical support. Documents, tracks, and monitors the problem to ensure a timely resolution. Has knowledge of commonly used concepts, practices, and procedures within a particular field. Answer questions or resolve computer problems for clients in person, via telephone or from remote location. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.
- Provide service and preventive maintenance activities on terminals, printers, personal computers, etc. Basic knowledge of electrical/mechanical principles and basic electronics. Read and comprehend technical service manuals and publications. Knowledge of basic mathematics to read and understand various gauges, meters, and measurement devices. Able to diagnose and repair products by

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replacing worn or broken parts, and making technical adjustments. Makes appropriate use of reference publications and diagnostic aids in resolving technical problems. Strong communication skills.

- Assist in coordination of changes, upgrades and new products, ensuring systems shall operate correctly in current and future environment. Provide accurate and complete answers to general use and administrative environment questions in a timely manner. Implement shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Ability to work in a team environment.

Help Desk 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Help Desk 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Help Desk 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

22. Technical Support

- Maintains, analyzes, troubleshoots, and repairs computer systems, hardware, and computer peripherals. Documents, maintains, upgrades or replaces hardware and software systems. Supports and maintains user account information including rights, security, and systems groups. Performs basic operation, monitoring, installation, trouble shooting, relocations, or maintenance of communications equipment. Identifies and resolves basic communications problems. Prepares or assists in the preparation of service record documentation. Shows awareness of standards and regulatory requirements related to assigned tasks.

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- Assists in monitoring and providing assistance on the use and interface of systems, subsystems, and software applications. May be responsible for accessing data from and transferring data to various local, state, or federal databases. May assist in the review and recommendation of the procurement and inventory of information resources hardware or software. May write and update personal computer and mainframe application programs. Experience in automated data processing systems. Knowledge of the practices, principles, and techniques of computer operations, of information systems, of computer software and hardware, and of information security policies and procedures. Skill in the use and support of personal computers, in the use of applicable programs and systems, and in troubleshooting information systems. Ability to operate information technology systems, to communicate effectively, and to train others.
- Provides assistance in the design, development, and maintenance of various system applications. Provides technical assistance and support for applications and hardware problems. Installs, maintains, moves, and assists in testing and upgrading new and existing hardware/software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on system efficiency and utilization. May be responsible for accessing data from and transferring data to various local, state, or federal databases.
- Installs, maintains, moves, and assists in testing and upgrading new and existing hardware and software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Develops procedure manuals. Develops and makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on systems efficiency and utilization. May supervise the work of others.

Technical Support 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Support 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Technical Support 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

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23. Infrastructure Solutions Architect

- Must be proficient at the techniques that go into the formulation of architectures, including requirements discovery and analysis, application of abstraction, formulation of solution context, solution alternatives identification and assessment, technology selection, and architectural configuration. Extensive understanding and experience in technology areas for Mainframe and Distributed platforms, networking, databases, High Availability/Disaster Recovery, and IT security.
- Ability to work closely with client/application architects, senior managers, and project managers to design and assist with the implementation of the solutions infrastructure related components. Demonstrated ability to work independently and complete assigned project responsibilities under limited supervision. Experience and skills in prevailing industry architecture and engineering methodologies such as ITIL. Knowledge of and experience with a broad range of application servers, web servers, messaging servers, database servers, and related technologies. Able to analyze business requirements and define solutions to address complex business needs. Experience in web infrastructure design and operations including IP, HTTP, HTTPS, FTP, load balancing, clustering, failover, monitoring, diagnostics, performance tuning, etc. Possess high aptitude for problem-solving and trouble-shooting.

Infrastructure Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Infrastructure Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Infrastructure Architect 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Infrastructure Architect 4	
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Years of Experience	10-12 years of experience.
Job Description	Advanced experience in architecting infrastructure solutions including proven experience with infrastructure integration.

Infrastructure Architect 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Includes descriptions detailed earlier as well as experience in architecting advanced infrastructure solutions which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

24. System Administrator

- The System Administrator (SA) is responsible for effective provisioning, installation/configuration, operation, and maintenance of computer hardware and software and related infrastructure. This individual participates in technical research and development to enable continuing innovation within the infrastructure. This individual ensures that system hardware, operating systems, software systems, and related procedures adhere to State policies, standards, and guidelines. Responsibilities include systems administration engineering and provisioning, operations and support, maintenance and research and development to ensure continual innovation. Install new / rebuild existing servers and configure hardware, peripherals, services, settings, directories, storage, etc. in accordance with standards and project/operational requirements. Perform daily system monitoring, verifying the integrity and availability of all hardware, server resources, systems and key processes, reviewing system and application logs, and verifying completion of scheduled jobs such as backups. Perform regular security monitoring to identify any possible intrusions. Perform daily backup operations, ensuring all required file systems and system data are successfully backed up to the appropriate media, recovery tapes or disks are created, and media is recycled and sent off site as necessary. Perform regular file archival and purge as necessary. Create, change, and delete user accounts per request. Provide Tier III/other support per request from various constituencies. Investigate and troubleshoot issues. Diagnose and recover from hardware or software failures. Coordinate and communicate with impacted constituencies. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software that supports GIS infrastructure applications or Asset Management applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required. Maintain data center environmental and monitoring equipment. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software or Asset Management applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required.

System Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.

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Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.
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System Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

System Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

DATA MANAGEMENT

25. Database Architect

- Designs and builds relational databases. Develops strategies for data acquisitions, archive recovery, and implementation of a database. Must be able to design, develop and manipulate database management systems, data warehouses and multidimensional databases. Requires a depth and breadth of database knowledge that shall help with formal design of relational databases and provides insight into strategic data manipulation. Responsible for making sure an organization's strategic goals are optimized through the use of enterprise data standards. This frequently involves creating and maintaining a centralized registry of metadata. Capable of performing the role of a database administrator, if needed.

Database Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

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Database Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Database Architect 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Architect 4	
Years of Experience	12 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

26. Data Warehouse Architect

- Designs, implements and supports data warehousing. Implements business rules via stored procedures, middleware, or other technologies. Defines user interfaces and functional specifications. Responsible for verifying accuracy of data, and the maintenance and support of the data warehouse. Knowledge of data warehouse end-to-end implementation processes, from business requirement logical modeling, physical database design, ETL, end-user tools, database, SQL, performance tuning. Demonstrated problem resolution skills with team of persons, and strong leadership with implementation team Experience in data warehouse design and data modeling (both relational and dimensional) and development and maintenance of multi-dimensional data models. Development experience in implementation of data warehousing utilizing RDBMS. Understanding of data warehouse Metadata concepts, tools and different data warehouse methodologies. Expertise in SQL and proficiency in database tuning techniques. Responsible for the ongoing architecture and design of the data warehouse, data mart, and reporting environments. Develop strategies for flexibility and scalability, and define the future technical architecture direction for the business intelligence reporting physical environment.
- Responsible for proper selection of appropriate hardware, software, tools and system lifecycle techniques for the different components of the end-to-end data warehouse architecture including ETL, metadata, data profiling software, database platform, performance monitoring, reporting and analytic tools. Defining and documenting the technical architecture of the data warehouse, including the physical components and their functionality. Setting or enforcing standards and overall architecture for data warehouse systems. Monitoring the data warehousing industry and assisting in establishing the organization's data warehousing strategy and section of strategic warehousing

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tools and techniques. Ensuring compatibility of the different components of the DW architecture and ensuring alignment with broader IT strategies and goals. Ability to educate the project teams on the standards and architecture of each component of the data warehouse architecture. Very strong written and oral communication skills, including some presentation skills.

Data Warehouse Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Data Warehouse Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Data Warehouse Architect 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

27. Database Administrator

- Responsible for data analysis and database management. Involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Knowledge of the utilities and production tools used for data storage management to support the Application Team. Coordinates physical changes to computer databases; codes, tests, and implements physical database, applying knowledge of data base management system. Designs logical and physical databases reviews description of changes to database design to understand how changes to be made affect physical data base (how data is stored in terms of physical characteristics, such as location, amount of space, and access method).
- Establishes physical database parameters. Uses structured query language (SQL) to define database objects using database definition language (DDL) and control access to database objects using data control language (DCL). Language descriptions and specifies identifiers of database to database management system or directs others in coding database descriptions. Calculates optimum values for database parameters, such as amount of computer memory to be used by database, following manuals and using calculator. Specifies

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user access level for each segment of one or more data items, such as insert, replace, retrieve, or delete data. Specifies which users can access data bases and what data can be accessed by user. Tests and corrects errors, and refines changes to database.

- Enters SQL to create production data base. Uses database utility programs and 3rd party utilities to monitor database performance, such as distribution of records and amount of available memory. Directs programmers and analysts to make changes to data base management system. Reviews and corrects programs. Answers user questions. Confers with coworkers to determine impact of data base changes on other systems and staff cost for making changes to data base. Modifies data base programs to increase processing performance, referred to as performance tuning. Workers typically specialize in one or more types of data base management systems. Providing assistance in the planning, development, maintenance, and monitoring of integrated database systems, and ensuring that the conceptual and design phases of new applications are consistent with the structural parameters within the database environment.
- Evaluates users' requests for new data elements and systems, incorporates them into the existing shared data environment, and provides technical assistance. Coordinates the use of data to ensure data integrity and control redundancy, loads databases, and reorganizes as needed. Performs data modeling and prototyping. Performs logical and physical data modeling, designs relational database models, and creates physical data models from logical data models. Performs security recovery procedures. Determines and implements database search strategies and storage requirements. Maintains data dictionary ensuring uniformity of definitions and sets standards for use of data dictionary. Monitors database performance and recommends efficiency improvements. Creates test database environment for applications section, including the creation of necessary libraries and procedures.
- Executes the procedures necessary to save, retrieve, and recover databases from hardware and software failures within established procedures. Assists with determining, implementing, and enhancing standards on database security and with monitoring agency disaster recovery procedures and systems. Assists with the installation of database software and with analyzing, designing, and implementing databases. Assists in benchmarking and threshold testing of databases and with establishing and controlling necessary database security. Assists in the selection of database management software. Experience in computer systems analysis or computer programming work.
- Knowledge of the principles, practices, and techniques of computer programming and systems design; of computer operations, systems, and procedures; of project control and cost estimating techniques; of computer programming languages; of data processing flowcharting techniques; of database structures and theories; and of current database technologies.

Database Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Database Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

Database Administrator 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 4	
Years of Experience	12 - 14 years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 5	
Years of Experience	15 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

GOVERNANCE

28. IT Procurement Analyst

- Considerable knowledge of principles and practices of IT procurement including automated procurement systems and tools, budget monitoring/maintenance, file and records management, statistical report development, and related bookkeeping/governmental accounting/fiscal procedures.
- Effective oral and written communication skills; strong computer skills including a high level of proficiency with MS Office, databases, spreadsheets, and automated financial systems; proven ability to maintain divisional inventory and to establish effective working relationships with both internal and external vendors and personnel.
- Demonstrated ability to analyze data, develop statistical reports, reconcile records, and provide customer service at all levels; significant experience in IT procurement including, but not limited to, software and hardware licenses; experience administering state contracts.
- Degree in information technology, business, a related field, or an equivalent combination of education and/or training/experience; demonstrated competencies in customer service, problem solving, organizational and negotiation skills.

IT Procurement	
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Exhibit D: Job Titles and Descriptions

Analyst	
Years of Experience	A minimum of four years of experience required in the following areas; IT procurement experience, purchasing of software/hardware, negotiation. A minimum of two years of experience required in problem solving. A minimum of four years of experience in an accounting-related field highly desired.
Job Description	Will be responsible for a wide range of information technology procurements including IT goods and services through a variety of purchasing options; follows procurement guidelines, selects appropriate procurement method, processes and maintains procurement requests and invoices through automated accounting systems; reconciles vendor inquiries and discrepancies; participates in pre-bid conferences as needed. Will also perform administrative and fiscal tasks, accounts payable and receivable, and IT software inventory; will compile financial data and review/analyze for budget formulation; develop and maintain numerous fiscal and/or procurement related spreadsheets; and perform related functions as required.

29. IT Governance Analyst

- Works within IT Project Governance to provide oversight, direction and guidance/consultation for IT projects from project request submission through project close-out and post-implementation review. As a governance liaison, works with project managers to ensure all aspects of project management disciplines and ensures compliance with agency specific and State project management and project governance policies, procedures, standards and guidelines have been followed. Reviews and validates project deliverables to ensure information accuracy, thoroughness, completeness and compliance. Ensures all projects have a valid project plan that maintains scope, tasks, schedules, estimates, and status, and that information is accurately disseminated to IT management. Directs corrective actions in any area where performance falls below objectives.
- Assists with the development, promulgation, implementation and regular updates of IT Project Management and Systems Development standards, policies, and guidelines and any other governance policies and procedures needed for the overall IT governance framework. Ensures compliance with all policies and procedures in the execution of technology projects. Monitor the progress of technology projects and provide quick and accurate responses to IT Management as to status, issues and risks of those projects. Serve as liaison between IT management, project managers and SOM. Monitor and support the management of the division's technology portfolio comprised of projects, systems, data and tools. Provide mentoring, coaching, training and on-boarding for project managers in the areas of project management tools, standards, policies, and procedures. Train and mentor new members of the IT Project Governance team as needed.
- Initiate and conduct ongoing and regular IT Policy, Process, Procedure, and Standard reviews to ensure technology and governance best practices are incorporated into the agency's set of procedures and improve business and IT compliance with legislative and regulatory policies which impact IT deliverables. Assist in the preparation of reports and materials for regularly scheduled project and program portfolio reviews with IT CIO, IT Managers and PM's.

IT Governance Analyst	
Years of Experience	10 years of experience in the field
Job Description	Ensure projects have adequate project management and oversight structures and processes that will enable the success of the project. Verifies and validates project status reports. Assists with the training and implementation of new agency and/or COV project policies, standards, guidelines and procedures introduced. Assists with assessment of project management training needs, schedules classes as needed, or provides one on one project consulting. Reviews project documentation

Exhibit D: Job Titles and Descriptions

	including project initiation documents such as the project charter, budget, schedule, cost benefit analysis, etc. throughout the project lifecycle until the end of the project including the project closeout report. Recommends approval of documents to AITR and Director. Attends project review and steering committee meetings for all projects for which he or she is governance liaison.
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IT MANAGEMENT SERVICES

30. Business Continuity Planner

Business Continuity Planner	
Years of Experience	5 or more years
Job Description	Provides specialized expertise in business continuity planning, project management and problem analysis and resolution. Participates in major project assignments to: assist business partners in resolving business issues related to work area (business function), recovery planning and recovery plan development / enhancements. Capitalizes on business opportunities to refine processes to mitigate exposure during disruptions of service, and possibly, improve day-to-day operations. Facilitates and coordinates the development of work area (business function) business continuity plans for business units. Responsibilities include, but are not limited to, the following: assist business units with assessment of potential business impact, definition of critical, time-sensitive functions, design, development, and documentation of business continuity plans, recommend recovery strategies and options, and assist with the implementation of recovery solutions, coordinate business continuity plan exercises, develop schedules for training / awareness for business partner associates, coordinate development of business unit schedules for annual business continuity documentation maintenance and update, exercises, and independent review and validation, report the business continuity status of business units to senior management, provide expertise and support to management and business functional areas, as requested, when a disruption occurs.

31. Business Process Reengineering

Business Process Reengineering	
Years of Experience	5 or more years

Exhibit D: Job Titles and Descriptions

Job Description	<p>This position applies process improvement and re-engineering methodologies and principles to conduct process modernization projects. Additional duties may include activity and data modeling, developing modern business methods, identifying best practices, and creating and assessing performance measurements. Providing group facilitation, interviewing, training, and provides additional forms of knowledge transfer. Serves as a key coordinator between multiple project teams to ensure enterprise wide integration of re-engineering efforts.</p> <p>Additional Responsibilities: Design workflow for purchasing software, collect and analyze statistics/metrics for software purchases, identify gaps in all associated processes and risks, establish memorandum of understanding (MOU's) where required, maintain SOP's for all processes, and support the client at customer meetings.</p>
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32. Enterprise Architect

Enterprise Architect	
Years of Experience	5 or more years
Job Description	<p>This position works across Application Development, Service Delivery and Infrastructure to identify, research, discuss, design, and implement key enterprise architecture standards. Other responsibilities include: Research, design, document, build, and pilot prioritized topics for standards. Manage the list of potential standards and work with the application development management to prioritize efforts. Work closely with Development, Infrastructure, and Service Delivery teams to understand their needs and ensure the best enterprise standard is implemented. Work closely with development teams to pilot and prove out the standard. Drive the identification, development and implementation of key new standards in areas such as: Performance Testing, Security, Event Management, Web UI Framework, .NET Design Standards, Application To Application Communication, Caching, etc. Propose new enterprise standards based on business need, IT need and technology advances. Assist development teams to implement the standards into business applications. Investigate new technology and techniques that should be developed into an agency enterprise architecture standard.</p> <p>Lead key enterprise architectural design projects as necessary. Operate as business savvy technical leader across the organization. Influence development teams to design high-quality technical solutions that fit the Enterprise Architecture and standards. Educate application development managers, developers, and business analyst on State Enterprise Architecture Standards.</p>

33. IT Strategist

IT Strategist	
Years of Experience	5 or more years
Job Description	<p>Supports top management in IT strategy formulation, IT strategic plans execution, strategic process improvements, and communication of IT strategies to all stakeholders. Analyze business performance, industry trends, existing or new regulatory requirements and their impact on IT operations; make recommendations on alternative courses of action, including risk assessment, capital investment, and acquisitions needed to align IT strategy with agency strategic plan. Requires advanced knowledge of strategic planning concepts and frameworks, business issues and concepts, research methodology, general management and financial analysis. Additionally, requires good interaction skills with senior management, with ability to articulate and defend recommendations made.</p>

Exhibit D: Job Titles and Descriptions**34. IT Auditor**

IT Auditor 1	
Years of Experience	0-2 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 2	
Years of Experience	2-4 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 3	
Years of Experience	4-6 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 4	
Years of	6-8 years

Exhibit D: Job Titles and Descriptions

Experience	
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 5	
Years of Experience	8+ years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

35. IT Trainer

IT Trainer	
Years of Experience	0-2 years
Job Description	Develop an agency-wide training plan. Coordinate IT strategic planning process to determine the department's training requirements through communications with staff throughout the agency. Identify existing training that meets the requirements and provide a gap analysis of courses to develop in house. Develop curriculum and training plan. Develop evaluation and monitoring methods to ensure quality training. Develop short video training. Produce written documents with clearly organized thoughts using proper English sentence construction, punctuation, and grammar.

36. IT Sourcing Consultant

IT Sourcing Consultant 1	
Years of Experience	5+ years
Job Description	Position requires the ability to work independently as the team leader in the development and execution of sourcing strategies for assigned projects, assisting customers in solving IT business problems. This role will function to lead the sourcing process,

Exhibit D: Job Titles and Descriptions

	through creation of the solicitation documents, evaluation of proposals and in execution of agreed upon negotiations strategy with selected suppliers. Leads evaluation and execution of risk mitigation strategies and establishes solid contracts that are in the long-term best interest of the customer. Has responsibility for managing customer expectations for project deliverables through effective and timely communications. Conducts a post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.
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IT Sourcing Consultant 2	
Years of Experience	10+ years
Job Description	Position requires a proven ability to lead development and execution of complex sourcing strategies for assigned projects and consulting with customers to solve IT business problems. Conducts meaningful market research and works with business owners to develop sourcing scope, timelines and deliverables. This role will function as the leader of cross-functional teams through the sourcing process, in the evaluation of proposals, conducting and managing the negotiations process with selected suppliers. Has responsibility for proactively managing customer expectations for project deliverables through effective and timely communications to various levels of senior management. Identifies and manages contractual risks and establishes firm contracts that are in the long-term best interest of the customer. Conduct post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.

IT SECURITY

37. IT Security Analyst

- Monitor and advise on information security issues related to the systems and workflow at an agency to ensure the internal IT security controls for an agency are appropriate and operating as intended. Coordinate and execute IT security related projects for the agency. Coordinate response to information security incidents. Develop and publish Information Security policies, procedures, standards and guidelines based on knowledge of best practices and compliance with State IT Security policies, standards, and guidelines..
- Conduct campus-wide data classification assessment and security audits and manage remediation plans. Collaborate with IT management, Internal Audit, and SOM to manage security vulnerabilities. Create, manage and maintain user security awareness. Conduct security research and keeps abreast of latest security issues.
- Prepares IT security documentation, including department policies and procedures, agency notifications, Web content, and alerts.

IT Security Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent

Exhibit D: Job Titles and Descriptions

	judgment.
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IT Security Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

IT Security Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

38. IT Security Architect

IT Security Architect 1	
Years of Experience	3+ years of experience in security architecture 9+ years of experience in information security 9+ years of experience working with computer systems 9+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware
Job Description	Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying State IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture. Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills. Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Exhibit D: Job Titles and Descriptions

IT Security Architect 2	
Years of Experience	<p>5+ years of experience in security architecture</p> <p>11+ years of experience in information security</p> <p>11+ years of experience working with computer systems</p> <p>11+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware</p>
Job Description	<p>Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying State IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture.</p> <p>Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills.</p> <p>Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.</p>

39. IT Security Auditor

IT Security Auditor	
Years of Experience	15 or more years with IT security and audit experience
Job Description	Advanced knowledge of security standards and progressive experience performing security audits.

PROJECT MANAGEMENT

40. Program Manager

- Provides project control support and coordinates the work of the PCO staff implementing solutions to meet the customer requirements and supports the customer's on-going system engineering life-cycle processes. Responsible for supporting all project delivery work in accordance with required methodology (such as the State of Michigan's State Unified Information Technology Environment (SUITE) methodology), and following all standard project management industry standards such as PMI's framework.
- Coordinates and controls the end to end process of capturing all key project artifacts, including but not limited to: business cases, project charters, baselined project schedules, project management plans, change requests, status reports, lessons learned. May require consistent utilization of the State of Michigan's SUITE methodology and Project Portfolio Management (PPM) tool.

Exhibit D: Job Titles and Descriptions

- Raises identified issues and risks to the appropriate senior management level including the Project Management Office (PMO) for action inclusive of description of the issue, comprehensive analysis of options and recommendation for remediation.
- Manages portfolio of projects' execution to ensure conformity to established budgets, timelines and scope.
- Works with the stakeholders, including the PMO to facilitate project governance effectiveness through weekly status reporting, project/portfolio data, regular governance meetings, etc.

Program Manager 1	
Years of Experience	5+ years of recent experience in managing IT projects (preferably within a government environment) 3-5 years of experience in successfully managing the establishment and operations of a fully functioning Project Control Office
Job Description	Experience in successfully managing Information Technology (IT) projects (full project life cycle) whose budget was greater than \$10,000,000 (excluding hardware/software costs) and whose timeline was greater than 3 years. Experience in successfully managing a PCO for complex projects (including multiple stakeholders, PCO staff, multiple vendors, data conversions and multiple technologies). Documented experience in successfully managing a PCO/PCO for complex projects (including multiple stakeholders, PCO staff, multiple vendors, data conversions and multiple technologies). Documented experience in performing Project Management, Quality Management, or other critical functions within complex Information Technology projects (preferably with budgets greater than \$10,000,000 and multi-phase, multiyear implementations). Professional certification in Project Management, such as Project Management Professional (PMP) certification from the Project Management Institute.

41. Project Manager

- Designs, plans, and coordinates work teams. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable.
- May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project.

Exhibit D: Job Titles and Descriptions

Project Manager 1	
Years of Experience	Minimum 2 years of experience as a Project Manager.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 2	
Years of Experience	Minimum 4 years of experience as a Project Manager.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 3	
Years of Experience	Minimum 5 years of experience as a Project Manager.
Job Description	Advanced experience managing programs of projects, complex projects or multiple projects. Demonstrated and advanced understanding of project management methodologies. Relies on experience and judgment to plan and accomplish goals. A significant degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

42. Project Coordinator

Project Coordinator	
Years of Experience	Minimum 2 years of experience as a Project Coordinator
Job Description	The Project Coordinator shall provide day-to-day coordination of project tasks. The project coordinator maintains version control and provides administrative support for project management information system. Prior experience of large project administration. Ability to communicate at all levels of an organization and third parties. Experience with similar scale roles and organizations. The project coordinator is task focused. Works under the direction of the project manager and reports to a project manager.

TELECOMMUNICATIONS AND COMPUTER NETWORKING

43. Network Administrator

- Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software. Monitor network to ensure network availability to all system users and perform necessary maintenance to support network availability. May supervise other network support and client server specialists and plan, coordinate, and implement network security measures. Coordinate the development, implementation, and maintenance of a local area network or wide area network. Maintains the network's physical and logical structures, including network connections. Maintains network support software, analyzes user support statistics, and recommends appropriate measures. Installs, tests, and maintains network hardware and software. Prepares and analyzes statistics on network utilization and availability. Prepares training courses and provides user support and training in the use of available hardware, software, and utilities. Performs tuning and capacity planning activities to enhance the performance of the network resources.
- Assist in the development, implementation, maintenance, and monitoring of a local area network or wide area network. Works under close supervision with minimal latitude for the use of initiative and independent judgment. Performs procedures for backup, recovery, and archival of files stored on the network. Communicates with vendors, users, management, and network programming staff. Serves as contact for remote network locations to obtain clarification of problems and to identify solutions or corrective actions. Assists in preparing training courses and providing user support and training in the use of available hardware, software, and utilities. Assists in maintaining the local area network or wide area network, cable and hub installations, and inventories. Conducts product evaluations of upgraded or new hardware and software—identifying strengths, weaknesses, and potential benefits to the agency—and recommends enhancements to network facilities.
- Assists in maintaining the network's physical and logical structures and in installing and testing hardware and software. Assists in performance tuning and capacity planning activities to enhance the performance of the network resources and in maintaining network support software. Assists in or conducts product evaluations of upgraded or new hardware and software and identifies strengths, weaknesses, and potential benefits to the agency. Assists in maintaining the operating system and security software utilized on the network, including the addition of new users to the network and establishment of rights and privileges. Experience in local or wide area network work. Knowledge of network facilities and data processing techniques; of personal computer hardware and software; of network operating system and security software; and of performance monitoring and capacity management tools.

Network	
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Exhibit D: Job Titles and Descriptions

Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

44. Network Architect

- Participates in designing and developing the network to ensure that it is secure, reliable, and robust; implements and maintains network management servers that assist the agency in managing, monitoring, and securing the network.
- Develops and implements detection activities to test network vulnerability to intrusion by hostile individuals or groups; participates in detecting, investigating, documenting, and reporting actual or potential network security violations, intrusions, or other inappropriate use.
- Designs backbone infrastructure, network facilities, wide area networks, local area network, wireless and telecommunication networks to provide reliable Internet access, remote access to information technology services (ITS), network security, and high performance networking.
- Evaluates security products and tests security systems performance; assists in planning, implementing, and testing disaster recovery procedures; participates in making formal risk assessments related to network security.
- Certification in areas related to network management and security preferred (CNE, MCSE, MSCE+1, CISA, CCNA, CCNP, CCIE, CCSA, CCSE, CCSE-PLUS, Cisco Security Specialist).
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Exhibit D: Job Titles and Descriptions

Network Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Architect 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

45. Network Engineer

- Responsible for installing networking technologies and supporting networks. Assesses existing network configurations and makes recommendations based on product specifications. Configures equipment and software to meet business needs, trains others on the solution, and documents the solution for ongoing support. Functions as part of a team on larger projects, or individually provides the services on support visits or smaller projects. Provides technical support and assists with the design of network solutions.
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Network Engineer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent

Exhibit D: Job Titles and Descriptions

	judgment.
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Network Engineer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Engineer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Network Engineer 4	
Years of Experience	12 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

46. Public Safety Consultant

Public Safety Communications Consultant	
Years of Experience	Extensive knowledge of public safety communications and enhanced 9-1-1 systems. Knowledge of current 9-1-1 industry trends in technology architecture, microcomputers, networking, and the Internet/Worldwide Web.
Job Description	Performs systems analysis, design, documentation, and implementation of complex public safety communications projects. These projects may include needs analyses, staffing studies, consolidation plans, equipment assessments and planning, budget preparation and forecasting, performance reporting/analysis and other related supporting the operation of public safety answering points and first responders.

47. Radio Engineer

Radio Engineer	
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Exhibit D: Job Titles and Descriptions

Years of Experience	Considerable experience in voice, data and video systems. Training in electronics is required. Advanced technical experience in the design of voice, data, video and wireless/radio systems and services. FCC General Radio Telephone license or Amateur Radio License highly desirable. Certification in public procurement would be desirable. Advanced knowledge of complex communications systems; business management practices and principles.
Job Description	Conducts the review, analysis and design of current and proposed voice, data and video communications, both wire line and wireless, also develop engineering plans and networks for state agencies and institutions. Performs research to develop recommendations for enhancements, expansions and/or consolidations of voice, data and video communications, using wire line and wireless equipment, facilities and services. Engineer system/network migration details toward sharing of integrated services, while laying the foundation of Open System Interconnections. Assist in the coordination, engineering and processing of FCC licenses. Educate and keeps abreast of FCC Land Mobile Radio (LMR) rules, policies, legal rulings and ongoing spectrum issues--analyzes results and impacts.



STATE OF MICHIGAN CENTRAL PROCUREMENT SERVICES

Department of Technology, Management, and Budget

525 W. ALLEGAN ST., LANSING, MICHIGAN 48913

P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **15**

to

Contract Number **071B6600020**

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
	248-449-4902
	dennis_lauderback@compaid.com
	CV0007364

STATE	Program Manager	Natalie Spaniolo	MULTI
		517-241-5526	
		spaniolon@michigan.gov	
	Contract Administrator	Sean Regan	DTMB
		(517) 243-8459	
		regans@michigan.gov	

CONTRACT SUMMARY

VENDOR MANAGED SERVICES FOR IT STAFF AUGMENTATION

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021
PAYMENT TERMS		DELIVERY TIMEFRAME	
NET45			
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
<input type="checkbox"/> P-Card	<input type="checkbox"/> PRC	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS			

DESCRIPTION OF CHANGE NOTICE

OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		June 30, 2021
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$375,840,000.00	\$160,000,000.00	\$535,840,000.00		

DESCRIPTION

Effective January 17, 2020, this contract is hereby increased by \$160,000,000.00 for the continuation of IT staff augmentation services.

All other terms, conditions, specifications, and pricing remain the same. Per contractor and agency agreement, DTMB Procurement approval, and State Administrative Board approval on 2/11/2019.



STATE OF MICHIGAN CENTRAL PROCUREMENT SERVICES

Department of Technology, Management, and Budget

525 W. ALLEGAN ST., LANSING, MICHIGAN 48913

P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **14**

to

Contract Number **071B6600020**

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
	248-449-4902
	dennis_lauderback@compaid.com
	CV0007364

STATE	Program Manager	Cindy Peruchietti	MULTI
		517-897-2118	
		Peruchietti@michigan.gov	
	Contract Administrator	Sean Regan	DTMB
		(517) 243-8459	
		regans@michigan.gov	

CONTRACT SUMMARY

VENDOR MANAGED SERVICES FOR IT STAFF AUGMENTATION

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021
PAYMENT TERMS		DELIVERY TIMEFRAME	
NET45			
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
<input type="checkbox"/> P-Card	<input type="checkbox"/> PRC	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS			

DESCRIPTION OF CHANGE NOTICE

OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		June 30, 2021
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$376,872,988.00	\$0.00	\$376,872,988.00		

DESCRIPTION

Effective September 3, 2019, this Contract is amended to add the attached revised Exhibit C, (CAI Michigan Rate Card - Version 4) and Exhibit D, (Job Titles and Descriptions Version - 4), which replaces in whole the existing Exhibit C and Exhibit D in the Contract. This change notice adds the Contact Center Agent rate and job description to the Contract. Please note the Contract Administrator has been changed to Sean Regan.

All other term, conditions, specifications, and pricing remain the same. Per Contractor, agency and DTMB Procurement approval.

Exhibit C: CAI Michigan Rate Card - Version 4

Job Category	Job Title	Skill Level	NTE Rates
			Bill
Applications	Programmer Analyst	Analyst 1	\$70.77
		Analyst 2	\$83.89
		Analyst 3	\$91.53
		Analyst 4	\$96.93
		Analyst 5	\$98.21
		Analyst 6	\$114.71
	Programmer	Programmer 1	\$66.58
		Programmer 2	\$69.93
		Programmer 3	\$79.63
		Programmer 4	\$92.74
		Programmer 5	\$97.75
		Programmer 6	\$114.54
	Software Test Analyst	Analyst 1	\$41.79
		Analyst 2	\$46.87
		Analyst 3	\$57.85
		Analyst 4	\$59.56
		Analyst 5	\$61.12
	Technical Writer	Technical Writer 1	\$45.71
		Technical Writer 2	\$48.34
		Technical Writer 3	\$60.33
	Business Analyst	Analyst 1	\$57.75
		Analyst 2	\$60.41
		Analyst 3	\$73.03
		Analyst 4	\$83.29
		Analyst 5	\$93.35
	System Analyst	Analyst 1	\$66.58
		Analyst 2	\$69.93
		Analyst 3	\$76.50
		Analyst 4	\$89.40
		Analyst 5	\$96.86
		Analyst 6	\$109.34
	Software Solutions Architect		\$112.30
	Geographic Information Systems	Geospatial Projects Manager	\$112.88
		Analyst	\$106.24
		Specialist I	\$75.25
		Specialist II	\$87.85
		Technician Trainee	\$70.77
		Technician I	\$75.25
		Technician II	\$79.65
		Technician III	\$83.89
	Graphic Designer	Graphic Designer 1	\$48.25
		Graphic Designer 2	\$52.55
	Mobile Specialist	Mobile Specialist 1	\$176.81
		Mobile Specialist 2	\$212.17

Exhibit C: CAI Michigan Rate Card - Version 4

Job Category	Job Title	Skill Level	NTE Rates
			Bill
Applications	Web Application Developer	Web Application Developer 1	\$65.84
		Web Application Developer 2	\$70.20
	Webmaster	Webmaster 1	\$66.57
		Webmaster 2	\$71.64
Customer/Technical Support	Contact Center Agent	Contact Center Agent 1	\$27.56
		Contact Center Agent 2	\$35.70
		Contact Center Agent 3	\$41.58
	Help Desk	Help Desk 1	\$39.04
		Help Desk 2	\$45.01
		Help Desk 3	\$50.70
	Technical Support	Technical Support 1	\$56.02
		Technical Support 2	\$63.85
		Technical Support 3	\$71.96
	Infrastructure Solutions Architect	Infrastructure Solutions Architect 1	\$80.95
		Infrastructure Solutions Architect 2	\$85.46
		Infrastructure Solutions Architect 3	\$98.59
		Infrastructure Solutions Architect 4	\$122.08
		Infrastructure Solutions Architect 5	\$129.61
	System Administrator	System Administrator 1	\$62.41
		System Administrator 2	\$72.49
		System Administrator 3	\$80.93
Data Management	Database Architect	Database Architect 1	\$80.48
		Database Architect 2	\$83.40
		Database Architect 3	\$89.49
		Database Architect 4	\$105.80
	Data Warehouse Architect	Data Warehouse Architect 1	\$84.74
		Data Warehouse Architect 2	\$104.41
		Data Warehouse Architect 3	\$107.30
	Database Administrator	Database Administrator 1	\$65.76
		Database Administrator 2	\$81.76
		Database Administrator 3	\$91.69
		Database Administrator 4	\$95.86
		Database Administrator 5	\$104.12
Governance	IT Governance Analyst		\$139.15
	IT Procurement Analyst		\$72.64
IT Management Services	Business Continuity Planner		\$106.45
	Business Process Reengineering		\$116.64
	Enterprise Architect		\$148.52
	IT Strategist		\$129.70
	IT Auditor	I.T. Auditor 1	\$53.43
		I.T. Auditor 2	\$58.45
		I.T. Auditor 3	\$76.06
		I.T. Auditor 4	\$85.00
		I.T. Auditor 5	\$89.81
	IT Trainer		\$68.92

Exhibit C: CAI Michigan Rate Card - Version 4

Job Category	Job Title	Skill Level	NTE Rates
			Bill
	IT Sourcing Consultant	IT Sourcing Consultant 1	\$106.34
		IT Sourcing Consultant 2	\$120.17

Exhibit C: CAI Michigan Rate Card - Version 4

Job Category	Job Title	Skill Level	NTE Rates
			Bill
IT Security	IT Security Analyst	IT Security Analyst 1	\$64.94
		IT Security Analyst 2	\$76.78
		IT Security Analyst 3	\$80.06
	IT Security Architect	IT Security Architect 1	\$79.11
		IT Security Architect 2	\$83.04
	Security Auditor		\$133.69
Project Management	Program Manager		\$156.90
	Project Manager	Project Manager 1	\$118.21
		Project Manager 2	\$122.89
		Project Manager 3	\$127.57
	Project Coordinator		\$50.10
Telecommunications and Computer Networking	Network Administrator	Network Administrator 1	\$57.13
		Network Administrator 2	\$62.36
		Network Administrator 3	\$67.16
	Network Architect	Network Architect 1	\$68.11
		Network Architect 2	\$76.21
		Network Architect 3	\$94.39
	Network Engineer	Network Engineer 1	\$62.29
		Network Engineer 2	\$68.11
		Network Engineer 3	\$81.02
		Network Engineer 4	\$92.71
	Public Safety Consultant		\$87.52
	Radio Engineer		\$115.67

Exhibit D: Job Titles and Descriptions

Applications	3
1. Programmer Analyst	3
2. Programmer	5
3. Software Test Analyst	6
4. Technical Writer	9
5. Business Analyst	10
6. System Analyst	12
7. Software Solutions Architect	13
8. Geospatial Projects Manager	14
9. Geographic Information System Analyst	14
10. Geographic Information System Specialist 1	15
11. Geographic Information System Specialist 2	15
12. Geographic Information System Technician Trainee	15
13. Geographic Information System Technician I	16
14. Geographic Information System Technician II	16
15. Geographic Information System Technician III	17
16. Graphic Designer	17
17. Mobile Specialist	18
18. Web Application Developer	19
19. Webmaster	19
Customer/Technical Support	19
20. Contact Center Agent	19
21. Help Desk	20
22. Technical Support	21
23. Infrastructure Solutions Architect	23
24. System Administrator	24
Data Management	25
25. Database Architect	25
26. Data Warehouse Architect	26
27. Database Administrator	27
Governance	29
28. IT Procurement Analyst	29
29. IT Governance Analyst	30
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Exhibit D: Job Titles and Descriptions

30.	Business Continuity Planner	31
31.	Business Process Reengineering	31
32.	Enterprise Architect	32
33.	IT Strategist	32
34.	IT Auditor	33
35.	IT Trainer	34
36.	IT Sourcing Consultant	34
IT Security		35
37.	IT Security Analyst	35
38.	IT Security Architect	36
39.	IT Security Auditor	37
Project Management		37
40.	Program Manager	37
41.	Project Manager	38
42.	Project Coordinator	40
Telecommunications and Computer Networking		40
43.	Network Administrator	40
44.	Network Architect	41
45.	Network Engineer	42
46.	Public Safety Consultant	43
47.	Radio Engineer	43

Exhibit D: Job Titles and Descriptions

APPLICATIONS

1. Programmer Analyst

- Plans, develops, tests, and documents computer programs, applying knowledge of programming techniques and computer systems. Evaluates user request for new or modified program, such as for financial or human resource management systems, clinical research trial results, statistical study of traffic patterns, or analyzing and developing specifications for bridge design, to determine feasibility, cost and time required, compatibility with current system, and computer capabilities. Consults with user to identify current operating procedures and clarify program objectives. Formulates plan outlining steps required to develop program, using methodologies such as structured analysis and design or object-oriented development.
- Work involves assisting in analyzing systems outlines to develop programs for computer applications, writing solution programs, documenting the methods and procedures used in program development, and testing and correcting programs. Works under moderate supervision with limited latitude for the use of initiative and independent judgment. Develops block diagrams and machine logic flowcharts to represent operations and data flow for applications.
- Captures requirements using industry standard development frameworks and tools. Designs reports, forms and letters along with computer terminal screen displays to accomplish goals of user request. Reviews screens, reports, forms and letters designs with users. Converts project specifications, using industry standard tools, such as object-oriented tools and code generation, into sequence of detailed instructions and logical steps for coding into language processable by computer, applying knowledge of computer programming techniques and computer languages.
- Enters program codes into computer system. Enters commands into computer to run and test program. Reads computer printouts or observes display screen to detect syntax or logic errors during program test, or uses diagnostic software to detect errors. Replaces, deletes, or modifies codes to correct errors. Analyzes, reviews and alters program to increase operating efficiency or adapt to new requirements. Writes documentation to describe program development, logic, coding, and corrections. Writes manual for users to describe installation and operating procedures. Assists users to solve operating problems. Recreates steps taken by user to locate source of problem and rewrites program to correct errors. May use computer-aided software tools in each stage of system development. May train users to use program. May oversee installation of hardware and software. May provide technical assistance to program users. May install and test program at user site. May monitor performance of program after implementation. May specialize in developing programs for business or technical applications.

Programmer Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment

Exhibit D: Job Titles and Descriptions

Programmer Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Programmer Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 5	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer Analyst 6	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

Exhibit D: Job Titles and Descriptions

2. Programmer

- Converts data from project specifications and statements of problems and procedures to create or modify computer programs. Prepares, or receives detailed specifications to describe sequence of steps that program must follow and input, output, and logical operations involved. Analyzes specifications, applying knowledge of computer capabilities, subject matter, and symbolic logic. Confers with supervisor and representatives of departments concerned with program to resolve questions of program intent, data input, output requirements, and inclusion of internal checks and controls. Converts detailed specifications to language processable by computer. Enters program codes into computer system. Inputs test data into computer. Observes computer monitor screen to interpret program operating codes. Corrects program errors, using methods such as modifying program or altering sequence of program steps. May prepare computer block diagrams and machine logic flowcharts for detailed coding of problems, and provides for the documentation of programming work.
- Writes instructions to guide operating personnel during production runs. Analyzes, reviews, and rewrites programs to increase operating efficiency or to adapt program to new requirements. Compiles and writes documentation of program development and subsequent revisions. May assist computer operator to resolve problems in running computer program. May work with System Analyst to obtain and analyze project specifications. May direct and coordinate work of others to write, test, and modify computer programs. Work involves writing programs to solve problems, documenting the methods and procedures used in program development, and testing and correcting programs. Work involves analyzing system outlines to develop programs for computer applications; writing solution programs; May train others. Works under general supervision with limited latitude for the use of initiative and independent judgment. Analyzes proposed computer applications in terms of equipment requirements and capabilities. Assists in developing solutions to software-related problems. May assist in the generation or installation of systems software.
- Prepares test data. May assist in writing and maintaining functional and technical specifications. Experience in computer programming work. Knowledge of the principles, practices, and techniques of computer programming and systems analysis, of computer operations procedures and systems, and of computer programming languages. Skill in the use of computer equipment. Ability to design programs and systems architecture; to prepare program specifications; to code, test, and debug computer programs; to interpret technical information relating to computer programming and other areas of data processing; and to communicate effectively.

Programmer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Programmer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

Programmer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 5	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer 6	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

3. Software Test Analyst

- Develops, publishes, and implements test plans. Writes and maintains test automation. Evaluates, recommends, and implements automated test tools and strategies. Develops, maintains, and upgrades automated test scripts and architectures for application products. Also writes, implements, and reports status for system test cases for testing. Analyzes test cases and provides regular progress reports. Participates in the testing process through test review and analysis, test witnessing and certification of software.

Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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Analyst 2	
Years of Experience	4-7 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>

Analyst 3	
Years of Experience	7-10 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and</p>

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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Analyst 4	
Years of Experience	11-14 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>

Analyst 5	
Years of Experience	15 or more years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and</p>

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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4. Technical Writer

- Develops and maintains user and technical documentation and project process documentation for Application Teams. Understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. Provides expertise on technical concepts of applications and /or user groups and structuring procedures in a logical sequence, due to a broad understanding of the applications. Writes a variety of technical articles, reports, brochures, and/or manuals for documentation for a wide range of uses. May be responsible for coordinating the display of graphics and the production of the document.
- Develop, enhance, and maintain user documentation for multiple applications including documentation required for the operations provider. Develop on-line source documentation as appropriate. Maintain documentation libraries and subscription lists. Identify, create, revise, and maintain documentation and templates. Ensure appropriate control access/use of documentation materials. Maintain application and user documentation. Ensure messages and terminology is consistent across all written materials. Research and complete documentation service requests. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Follow quality standards. Ability to work in a team environment. Strong communication skills; both written and spoken.
- Composes technical documents, manuals, bulletins, brochures, publications, training manuals, and special reports. Organizes and coordinates the composition of material and drafting of forms suitable for reproduction. Reviews and edits prepared material and illustrations. Develops and refines material for publication in journals and periodicals. Prepares informational material for release to the mass media. Works with agency staff in the development of formats, graphics, and the layout of publications. Assists agency staff in preparing and refining material for speeches and other public presentations. May research product design, capabilities, and compatibility ranges.
- May oversee the writing, editing, publishing, and distribution of specification documents. May review various resources and prepare analyses or summaries. May train others. Experience in technical writing, journalism, or communications work. Knowledge of the techniques and methods of planning, organizing, and writing various types of materials; of research methodology; and of departmental policies, procedures, and regulations. Skill in the use of office equipment. Ability to conduct research; to compose, review, illustrate, and edit technical documents, materials, and reports; to communicate effectively; and to train others.

Exhibit D: Job Titles and Descriptions

Technical Writer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Writer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Technical Writer 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

5. Business Analyst

- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Experienced with business process reengineering and identifying new applications of technology to business problems to make business more effective. Familiar with industry standard (including Legacy, Core, and Emerging technologies), business process mapping, and reengineering. Prepares solution options, risk identification, and financial analyses such as cost/benefit, ROI, buy/build, etc. Writes detailed description of user needs, program functions, and steps required to develop or modify computer programs.
- Prepare and document Functional and Technical Specifications for reporting and data warehouse work. Assist with business warehouse/intelligence support and enhancements. Develops RFPs. Assist in deployment and management of end-user reporting tools and platforms. Work with IT and business project teams to understand reporting and data warehousing requirements and propose solutions. Document and provide knowledge transfer to the rest of the Enterprise Reporting Team for all solutions.
- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Familiar with relational database concepts, and client-server concepts. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a project manager. A certain degree of creativity and latitude is required.

Exhibit D: Job Titles and Descriptions

Business Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Business Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Business Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 5	
Years of Experience	16 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Exhibit D: Job Titles and Descriptions

6. System Analyst

- Understands business objectives and problems, identifies alternative solutions, performs studies and cost/benefit analysis of alternatives. Analyzes user requirements, procedures, and problems to automate processing or to improve existing computer system: Confers with personnel of organizational units involved to analyze current operational procedures, identify problems, and learn specific input and output requirements, such as forms of data input, how data is to be summarized, and formats for reports. Writes detailed description of user needs, program functions, and steps required to develop or modify computer program. Reviews computer system capabilities, specifications, and scheduling limitations to determine if requested program or program change is possible within existing system.
- Studies existing information processing systems to evaluate effectiveness and develops new systems to improve production or specifications as required. Prepares specifications to detail operations to be performed by equipment and computer programs and operations to be performed by personnel in system. Conducts studies pertaining to development of new information systems to meet current and projected needs. Plans and prepares technical reports, memoranda, and instructional manuals as documentation of program development. Upgrades system and corrects errors to maintain system after implementation. May assist computer programmer in resolution of work problems related to project specifications, or programming. May direct and coordinate work of others to develop, test, install, and modify programs.
- Provides technical assistance and support for applications and hardware problems and for information sharing with external entities in a customer service environment. Provides field coordination and planning for the effective use of management information systems. Determines operational, technical, and support requirements for the location, installation, operation, and maintenance of various office equipment and systems. Prepares charts, diagrams, tables, and flowcharts. Details input and output record formats for computer programs. Assists in formulating logical descriptions of problems and devising optimum solutions. Assists in the design, development, and maintenance of various computer applications. May provide support and make recommendations for information technology systems processes associated with software technology planning, development, implementation, system security, and interfaces.
- Graduation from an accredited four-year college or university with major course work in computer science, computer information systems, or management information systems is generally preferred. Knowledge of the limitations and capabilities of computer systems and of the techniques used in the design of non-automated systems, of information technology equipment, of applicable programming languages, of computer hardware and software, of computer operating systems, of writing program code, and of automated mapping. Ability to analyze systems and procedures, to write and revise standards and procedures, to communicate effectively, and to train others.

System Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

System Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with

Exhibit D: Job Titles and Descriptions

	considerable latitude for the use of initiative and independent judgment.
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System Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

System Analyst 4	
Years of Experience	10 or more years of experience in the field.
Job Description	Advanced experience in the field.

System Analyst 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals.

System Analyst 6	
Years of Experience	14 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals. Works independently and cooperatively with management and stakeholders.

7. Software Solutions Architect

Solutions Architect	
Years of Experience	5 or more years of experience in the field.
Job Description	Lead and manage the design, implementation and delivery of system and software architecture designs, strategies and quality assurance plans. Design, prototype, develop and implement to achieve business results for the client. Experienced expert able to lead and deliver solutions using object-oriented, service-oriented architecture, and n-tier architectures. Adopt, develop, and execute a robust software development lifecycle, using industry best practices. Follows both the State and industry best practices for software engineering. · Leads in the development of long term technology strategy and planning for the entire organization leveraging existing and acquiring new resources. Leads and actively participates on project teams, clarifying business needs and requirements, performing analysis, design, development, integration, and maintenance of systems across

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	the enterprise. Willing and able to engage with other internal organizations to maximize delivery capabilities and provide value to clients. Participates and leads the development of delivery approach, and labor and cost estimates. Manage projects or tasks using the State and industry project delivery methodologies and best practices. Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.
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8. Geospatial Projects Manager

Geospatial Projects Manager	
Years of Experience	A minimum of three years of professional experience is required in Geographical Information System (GIS), cartography, CADD, or a related field. A minimum of three years of professional experience as a project manager for geospatial projects is required.
Job Description	Lead and direct cross-functional teams to deliver complex geospatial projects within the constraints of schedule, budget and scope. Assess desired outcomes and identify user requirements and needs. Design geospatial solutions, including geo-database schema, system requirements, system configuration and application functional requirements. Develop and obtain approval of project plans according to accepted practices and procedures. Integrate resources and develop additional resources to facilitate, manage and execute geospatial projects. Facilitate stakeholder communications, project reporting, and project oversight. Manage project closeout and the development of operations and support plans for geospatial data and application maintenance. Provide technical oversight and develop standards for geospatial data and applications.

9. Geographic Information System Analyst

Geographic Information System Analyst	
Years of Experience	A minimum of two years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing complex spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial basemap information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

Exhibit D: Job Titles and Descriptions

10. Geographic Information System Specialist 1

Geographic Information System Specialist 1	
Years of Experience	Two (2) years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

11. Geographic Information System Specialist 2

Geographic Information System Specialist 2	
Years of Experience	3-4 years of experience in the field or in a related area.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

12. Geographic Information System Technician Trainee

Geographic Information System Technician Trainee	
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Exhibit D: Job Titles and Descriptions

Years of Experience	One year of professional experience related to GIS, cartography, CADD, or a related field, or a minimum of six undergraduate credit hours in GIS, cartography or CADD.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

13. Geographic Information System Technician I

Geographic Information System Technician I	
Years of Experience	A minimum of two (2) years of successful experience at the equivalent of the GIS Trainee level.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

14. Geographic Information System Technician II

Geographic Information System Technician II	
Years of Experience	A minimum of three (3) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

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15. Geographic Information System Technician III

Geographic Information System Technician III	
Years of Experience	A minimum of four (4) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

16. Graphic Designer

Graphic Designer 1	
Years of Experience	Less than five years industry experience.
Job Description	Ability to assemble and create images for use with electronic and print publishing. Strong understanding of visual identifies and application of logos and identity marks.

Graphic Designer 2	
Years of Experience	5-7 years industry experience.
Job Description	Advanced experience in the use of various design software and technologies; advanced understanding of electronic design standards and techniques.

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17. Mobile Specialist

- The Mobile Specialist serves in many capacities, including Developer, Engineer, Technical Architect, and Analyst for Mobile Projects. The Mobile Specialist often guides and mentors the technical team in all phases of the SDLC including requirement validation, detail design, development, and implementation.

Mobile Specialist 1	
Years of Experience	4 year college degree or equivalent technical study.
Job Description	<ul style="list-style-type: none"> Serves as the Designer, Developer and/or Engineer on Mobile Projects. Meets with end users and technical staff of all types to gather business and system requirements Develops and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects. Develops standards, repeatable processes, and reusable components Assists in project planning, including developing of timelines, composition of technical teams, and leveling of resources. Mentors technical team leads and team members on Department processes and standards to promote consistency and improve productivity. Assists in the development and review of technical deliverables on projects.

Mobile Specialist 2	
Years of Experience	4 year college degree or equivalent technical study.
Job Description	<ul style="list-style-type: none"> Serves as the Lead Architect/Designer/Developer /Engineer on Mobile Projects. Meets with end users and technical staff of all types to gather business and system requirements. Proposes comprehensive solutions based on business and technical requirements Architects, designs, develops, and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects. Develops standards, repeatable processes, and reusable components Leads project planning, including developing of timelines, composition of technical teams, and leveling of resources. Mentors and manages technical team leads and team members on Department processes and standards to promote consistency and improve productivity. Leads the development and review of technical deliverables on projects.

Exhibit D: Job Titles and Descriptions

18. Web Application Developer

Web Application Developer 1	
Years of Experience	Five years industry experience.
Job Description	Perform specialized programming and technical work for website and Internet development.

Web Application Developer 2	
Years of Experience	5-7 years industry experience.
Job Description	Perform advanced programming and technical development for website and Internet development

19. Webmaster

Webmaster 1	
Years of Experience	Five years industry experience.
Job Description	Experience maintaining multiple websites. Responsibilities include publishing, examining traffic patterns and transactions, and maintaining usability standards.

Webmaster 2	
Years of Experience	More than five years of industry experience.
Job Description	Advanced experience maintaining multiple websites; examining traffic patterns and transactions; testing for multiple platforms; maintaining usability standards and security standards as they relate to the sites; and the ability to coordinate among content managers and developers.

CUSTOMER/TECHNICAL SUPPORT

20. Contact Center Agent

- Answers inbound and places outbound calls in a call center with the goal of increasing business, customer satisfaction, and customer retention. Takes care of somewhat complex customer inquiries and problems and non-routine matters than those handled by lower-level

Exhibit D: Job Titles and Descriptions

Call Center Representatives. Requires a higher degree of skill and ability to explain more complex matters to ensure customer satisfaction and retention, and to sell products and services.

Contact Center Agent 1	
Years of Experience	1 to 5 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Contact Center Agent 2	
Years of Experience	6-11 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Contact Center Agent 3	
Years of Experience	12 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

21. Help Desk

- Provide technical assistance to computer system users on a variety of issues. Identifies, researches, and resolves technical problems. Responds to telephone calls, email and personnel requests for technical support. Documents, tracks, and monitors the problem to ensure a timely resolution. Has knowledge of commonly used concepts, practices, and procedures within a particular field. Answer questions or resolve computer problems for clients in person, via telephone or from remote location. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.
- Provide service and preventive maintenance activities on terminals, printers, personal computers, etc. Basic knowledge of electrical/mechanical principles and basic electronics. Read and comprehend technical service manuals and publications. Knowledge of basic mathematics to read and understand various gauges, meters, and measurement devices. Able to diagnose and repair products by

Exhibit D: Job Titles and Descriptions

replacing worn or broken parts, and making technical adjustments. Makes appropriate use of reference publications and diagnostic aids in resolving technical problems. Strong communication skills.

- Assist in coordination of changes, upgrades and new products, ensuring systems shall operate correctly in current and future environment. Provide accurate and complete answers to general use and administrative environment questions in a timely manner. Implement shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Ability to work in a team environment.

Help Desk 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Help Desk 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Help Desk 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

22. Technical Support

- Maintains, analyzes, troubleshoots, and repairs computer systems, hardware, and computer peripherals. Documents, maintains, upgrades or replaces hardware and software systems. Supports and maintains user account information including rights, security, and systems groups. Performs basic operation, monitoring, installation, trouble shooting, relocations, or maintenance of communications equipment. Identifies and resolves basic communications problems. Prepares or assists in the preparation of service record documentation. Shows awareness of standards and regulatory requirements related to assigned tasks.

Exhibit D: Job Titles and Descriptions

- Assists in monitoring and providing assistance on the use and interface of systems, subsystems, and software applications. May be responsible for accessing data from and transferring data to various local, state, or federal databases. May assist in the review and recommendation of the procurement and inventory of information resources hardware or software. May write and update personal computer and mainframe application programs. Experience in automated data processing systems. Knowledge of the practices, principles, and techniques of computer operations, of information systems, of computer software and hardware, and of information security policies and procedures. Skill in the use and support of personal computers, in the use of applicable programs and systems, and in troubleshooting information systems. Ability to operate information technology systems, to communicate effectively, and to train others.
- Provides assistance in the design, development, and maintenance of various system applications. Provides technical assistance and support for applications and hardware problems. Installs, maintains, moves, and assists in testing and upgrading new and existing hardware/software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on system efficiency and utilization. May be responsible for accessing data from and transferring data to various local, state, or federal databases.
- Installs, maintains, moves, and assists in testing and upgrading new and existing hardware and software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Develops procedure manuals. Develops and makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on systems efficiency and utilization. May supervise the work of others.

Technical Support 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Support 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Technical Support 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Exhibit D: Job Titles and Descriptions

23. Infrastructure Solutions Architect

- Must be proficient at the techniques that go into the formulation of architectures, including requirements discovery and analysis, application of abstraction, formulation of solution context, solution alternatives identification and assessment, technology selection, and architectural configuration. Extensive understanding and experience in technology areas for Mainframe and Distributed platforms, networking, databases, High Availability/Disaster Recovery, and IT security.
- Ability to work closely with client/application architects, senior managers, and project managers to design and assist with the implementation of the solutions infrastructure related components. Demonstrated ability to work independently and complete assigned project responsibilities under limited supervision. Experience and skills in prevailing industry architecture and engineering methodologies such as ITIL. Knowledge of and experience with a broad range of application servers, web servers, messaging servers, database servers, and related technologies. Able to analyze business requirements and define solutions to address complex business needs. Experience in web infrastructure design and operations including IP, HTTP, HTTPS, FTP, load balancing, clustering, failover, monitoring, diagnostics, performance tuning, etc. Possess high aptitude for problem-solving and trouble-shooting.

Infrastructure Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Infrastructure Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Infrastructure Architect 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Infrastructure Architect 4	
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Years of Experience	10-12 years of experience.
Job Description	Advanced experience in architecting infrastructure solutions including proven experience with infrastructure integration.

Infrastructure Architect 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Includes descriptions detailed earlier as well as experience in architecting advanced infrastructure solutions which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

24. System Administrator

- The System Administrator (SA) is responsible for effective provisioning, installation/configuration, operation, and maintenance of computer hardware and software and related infrastructure. This individual participates in technical research and development to enable continuing innovation within the infrastructure. This individual ensures that system hardware, operating systems, software systems, and related procedures adhere to State policies, standards, and guidelines. Responsibilities include systems administration engineering and provisioning, operations and support, maintenance and research and development to ensure continual innovation. Install new / rebuild existing servers and configure hardware, peripherals, services, settings, directories, storage, etc. in accordance with standards and project/operational requirements. Perform daily system monitoring, verifying the integrity and availability of all hardware, server resources, systems and key processes, reviewing system and application logs, and verifying completion of scheduled jobs such as backups. Perform regular security monitoring to identify any possible intrusions. Perform daily backup operations, ensuring all required file systems and system data are successfully backed up to the appropriate media, recovery tapes or disks are created, and media is recycled and sent off site as necessary. Perform regular file archival and purge as necessary. Create, change, and delete user accounts per request. Provide Tier III/other support per request from various constituencies. Investigate and troubleshoot issues. Diagnose and recover from hardware or software failures. Coordinate and communicate with impacted constituencies. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software that supports GIS infrastructure applications or Asset Management applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required. Maintain data center environmental and monitoring equipment. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software or Asset Management applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required.

System Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.

Exhibit D: Job Titles and Descriptions

Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.
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System Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

System Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

DATA MANAGEMENT

25. Database Architect

- Designs and builds relational databases. Develops strategies for data acquisitions, archive recovery, and implementation of a database. Must be able to design, develop and manipulate database management systems, data warehouses and multidimensional databases. Requires a depth and breadth of database knowledge that shall help with formal design of relational databases and provides insight into strategic data manipulation. Responsible for making sure an organization's strategic goals are optimized through the use of enterprise data standards. This frequently involves creating and maintaining a centralized registry of metadata. Capable of performing the role of a database administrator, if needed.

Database Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Exhibit D: Job Titles and Descriptions

Database Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Database Architect 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Architect 4	
Years of Experience	12 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

26. Data Warehouse Architect

- Designs, implements and supports data warehousing. Implements business rules via stored procedures, middleware, or other technologies. Defines user interfaces and functional specifications. Responsible for verifying accuracy of data, and the maintenance and support of the data warehouse. Knowledge of data warehouse end-to-end implementation processes, from business requirement logical modeling, physical database design, ETL, end-user tools, database, SQL, performance tuning. Demonstrated problem resolution skills with team of persons, and strong leadership with implementation team Experience in data warehouse design and data modeling (both relational and dimensional) and development and maintenance of multi-dimensional data models. Development experience in implementation of data warehousing utilizing RDBMS. Understanding of data warehouse Metadata concepts, tools and different data warehouse methodologies. Expertise in SQL and proficiency in database tuning techniques. Responsible for the ongoing architecture and design of the data warehouse, data mart, and reporting environments. Develop strategies for flexibility and scalability, and define the future technical architecture direction for the business intelligence reporting physical environment.
- Responsible for proper selection of appropriate hardware, software, tools and system lifecycle techniques for the different components of the end-to-end data warehouse architecture including ETL, metadata, data profiling software, database platform, performance monitoring, reporting and analytic tools. Defining and documenting the technical architecture of the data warehouse, including the physical components and their functionality. Setting or enforcing standards and overall architecture for data warehouse systems. Monitoring the data warehousing industry and assisting in establishing the organization's data warehousing strategy and section of strategic warehousing

Exhibit D: Job Titles and Descriptions

tools and techniques. Ensuring compatibility of the different components of the DW architecture and ensuring alignment with broader IT strategies and goals. Ability to educate the project teams on the standards and architecture of each component of the data warehouse architecture. Very strong written and oral communication skills, including some presentation skills.

Data Warehouse Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Data Warehouse Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Data Warehouse Architect 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

27. Database Administrator

- Responsible for data analysis and database management. Involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Knowledge of the utilities and production tools used for data storage management to support the Application Team. Coordinates physical changes to computer databases; codes, tests, and implements physical database, applying knowledge of data base management system. Designs logical and physical databases reviews description of changes to database design to understand how changes to be made affect physical data base (how data is stored in terms of physical characteristics, such as location, amount of space, and access method).
- Establishes physical database parameters. Uses structured query language (SQL) to define database objects using database definition language (DDL) and control access to database objects using data control language (DCL). Language descriptions and specifies identifiers of database to database management system or directs others in coding database descriptions. Calculates optimum values for database parameters, such as amount of computer memory to be used by database, following manuals and using calculator. Specifies

Exhibit D: Job Titles and Descriptions

user access level for each segment of one or more data items, such as insert, replace, retrieve, or delete data. Specifies which users can access data bases and what data can be accessed by user. Tests and corrects errors, and refines changes to database.

- Enters SQL to create production data base. Uses database utility programs and 3rd party utilities to monitor database performance, such as distribution of records and amount of available memory. Directs programmers and analysts to make changes to data base management system. Reviews and corrects programs. Answers user questions. Confers with coworkers to determine impact of data base changes on other systems and staff cost for making changes to data base. Modifies data base programs to increase processing performance, referred to as performance tuning. Workers typically specialize in one or more types of data base management systems. Providing assistance in the planning, development, maintenance, and monitoring of integrated database systems, and ensuring that the conceptual and design phases of new applications are consistent with the structural parameters within the database environment.
- Evaluates users' requests for new data elements and systems, incorporates them into the existing shared data environment, and provides technical assistance. Coordinates the use of data to ensure data integrity and control redundancy, loads databases, and reorganizes as needed. Performs data modeling and prototyping. Performs logical and physical data modeling, designs relational database models, and creates physical data models from logical data models. Performs security recovery procedures. Determines and implements database search strategies and storage requirements. Maintains data dictionary ensuring uniformity of definitions and sets standards for use of data dictionary. Monitors database performance and recommends efficiency improvements. Creates test database environment for applications section, including the creation of necessary libraries and procedures.
- Executes the procedures necessary to save, retrieve, and recover databases from hardware and software failures within established procedures. Assists with determining, implementing, and enhancing standards on database security and with monitoring agency disaster recovery procedures and systems. Assists with the installation of database software and with analyzing, designing, and implementing databases. Assists in benchmarking and threshold testing of databases and with establishing and controlling necessary database security. Assists in the selection of database management software. Experience in computer systems analysis or computer programming work.
- Knowledge of the principles, practices, and techniques of computer programming and systems design; of computer operations, systems, and procedures; of project control and cost estimating techniques; of computer programming languages; of data processing flowcharting techniques; of database structures and theories; and of current database technologies.

Database Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Database Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

Database Administrator 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 4	
Years of Experience	12 - 14 years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 5	
Years of Experience	15 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

GOVERNANCE

28. IT Procurement Analyst

- Considerable knowledge of principles and practices of IT procurement including automated procurement systems and tools, budget monitoring/maintenance, file and records management, statistical report development, and related bookkeeping/governmental accounting/fiscal procedures.
- Effective oral and written communication skills; strong computer skills including a high level of proficiency with MS Office, databases, spreadsheets, and automated financial systems; proven ability to maintain divisional inventory and to establish effective working relationships with both internal and external vendors and personnel.
- Demonstrated ability to analyze data, develop statistical reports, reconcile records, and provide customer service at all levels; significant experience in IT procurement including, but not limited to, software and hardware licenses; experience administering state contracts.
- Degree in information technology, business, a related field, or an equivalent combination of education and/or training/experience; demonstrated competencies in customer service, problem solving, organizational and negotiation skills.

IT Procurement	
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Exhibit D: Job Titles and Descriptions

Analyst	
Years of Experience	A minimum of four years of experience required in the following areas; IT procurement experience, purchasing of software/hardware, negotiation. A minimum of two years of experience required in problem solving. A minimum of four years of experience in an accounting-related field highly desired.
Job Description	Will be responsible for a wide range of information technology procurements including IT goods and services through a variety of purchasing options; follows procurement guidelines, selects appropriate procurement method, processes and maintains procurement requests and invoices through automated accounting systems; reconciles vendor inquiries and discrepancies; participates in pre-bid conferences as needed. Will also perform administrative and fiscal tasks, accounts payable and receivable, and IT software inventory; will compile financial data and review/analyze for budget formulation; develop and maintain numerous fiscal and/or procurement related spreadsheets; and perform related functions as required.

29. IT Governance Analyst

- Works within IT Project Governance to provide oversight, direction and guidance/consultation for IT projects from project request submission through project close-out and post-implementation review. As a governance liaison, works with project managers to ensure all aspects of project management disciplines and ensures compliance with agency specific and State project management and project governance policies, procedures, standards and guidelines have been followed. Reviews and validates project deliverables to ensure information accuracy, thoroughness, completeness and compliance. Ensures all projects have a valid project plan that maintains scope, tasks, schedules, estimates, and status, and that information is accurately disseminated to IT management. Directs corrective actions in any area where performance falls below objectives.
- Assists with the development, promulgation, implementation and regular updates of IT Project Management and Systems Development standards, policies, and guidelines and any other governance policies and procedures needed for the overall IT governance framework. Ensures compliance with all policies and procedures in the execution of technology projects. Monitor the progress of technology projects and provide quick and accurate responses to IT Management as to status, issues and risks of those projects. Serve as liaison between IT management, project managers and SOM. Monitor and support the management of the division's technology portfolio comprised of projects, systems, data and tools. Provide mentoring, coaching, training and on-boarding for project managers in the areas of project management tools, standards, policies, and procedures. Train and mentor new members of the IT Project Governance team as needed.
- Initiate and conduct ongoing and regular IT Policy, Process, Procedure, and Standard reviews to ensure technology and governance best practices are incorporated into the agency's set of procedures and improve business and IT compliance with legislative and regulatory policies which impact IT deliverables. Assist in the preparation of reports and materials for regularly scheduled project and program portfolio reviews with IT CIO, IT Managers and PM's.

IT Governance Analyst	
Years of Experience	10 years of experience in the field
Job Description	Ensure projects have adequate project management and oversight structures and processes that will enable the success of the project. Verifies and validates project status reports. Assists with the training and implementation of new agency and/or COV project policies, standards, guidelines and procedures introduced. Assists with assessment of project management training needs, schedules classes as needed, or provides one on one project consulting. Reviews project documentation

Exhibit D: Job Titles and Descriptions

	including project initiation documents such as the project charter, budget, schedule, cost benefit analysis, etc. throughout the project lifecycle until the end of the project including the project closeout report. Recommends approval of documents to AITR and Director. Attends project review and steering committee meetings for all projects for which he or she is governance liaison.
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IT MANAGEMENT SERVICES

30. Business Continuity Planner

Business Continuity Planner	
Years of Experience	5 or more years
Job Description	Provides specialized expertise in business continuity planning, project management and problem analysis and resolution. Participates in major project assignments to: assist business partners in resolving business issues related to work area (business function), recovery planning and recovery plan development / enhancements. Capitalizes on business opportunities to refine processes to mitigate exposure during disruptions of service, and possibly, improve day-to-day operations. Facilitates and coordinates the development of work area (business function) business continuity plans for business units. Responsibilities include, but are not limited to, the following: assist business units with assessment of potential business impact, definition of critical, time-sensitive functions, design, development, and documentation of business continuity plans, recommend recovery strategies and options, and assist with the implementation of recovery solutions, coordinate business continuity plan exercises, develop schedules for training / awareness for business partner associates, coordinate development of business unit schedules for annual business continuity documentation maintenance and update, exercises, and independent review and validation, report the business continuity status of business units to senior management, provide expertise and support to management and business functional areas, as requested, when a disruption occurs.

31. Business Process Reengineering

Business Process Reengineering	
Years of Experience	5 or more years

Exhibit D: Job Titles and Descriptions

Job Description	<p>This position applies process improvement and re-engineering methodologies and principles to conduct process modernization projects. Additional duties may include activity and data modeling, developing modern business methods, identifying best practices, and creating and assessing performance measurements. Providing group facilitation, interviewing, training, and provides additional forms of knowledge transfer. Serves as a key coordinator between multiple project teams to ensure enterprise wide integration of re-engineering efforts.</p> <p>Additional Responsibilities: Design workflow for purchasing software, collect and analyze statistics/metrics for software purchases, identify gaps in all associated processes and risks, establish memorandum of understanding (MOU's) where required, maintain SOP's for all processes, and support the client at customer meetings.</p>
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32. Enterprise Architect

Enterprise Architect	
Years of Experience	5 or more years
Job Description	<p>This position works across Application Development, Service Delivery and Infrastructure to identify, research, discuss, design, and implement key enterprise architecture standards. Other responsibilities include: Research, design, document, build, and pilot prioritized topics for standards. Manage the list of potential standards and work with the application development management to prioritize efforts. Work closely with Development, Infrastructure, and Service Delivery teams to understand their needs and ensure the best enterprise standard is implemented. Work closely with development teams to pilot and prove out the standard. Drive the identification, development and implementation of key new standards in areas such as: Performance Testing, Security, Event Management, Web UI Framework, .NET Design Standards, Application To Application Communication, Caching, etc. Propose new enterprise standards based on business need, IT need and technology advances. Assist development teams to implement the standards into business applications. Investigate new technology and techniques that should be developed into an agency enterprise architecture standard.</p> <p>Lead key enterprise architectural design projects as necessary. Operate as business savvy technical leader across the organization. Influence development teams to design high-quality technical solutions that fit the Enterprise Architecture and standards. Educate application development managers, developers, and business analyst on State Enterprise Architecture Standards.</p>

33. IT Strategist

IT Strategist	
Years of Experience	5 or more years
Job Description	<p>Supports top management in IT strategy formulation, IT strategic plans execution, strategic process improvements, and communication of IT strategies to all stakeholders. Analyze business performance, industry trends, existing or new regulatory requirements and their impact on IT operations; make recommendations on alternative courses of action, including risk assessment, capital investment, and acquisitions needed to align IT strategy with agency strategic plan. Requires advanced knowledge of strategic planning concepts and frameworks, business issues and concepts, research methodology, general management and financial analysis. Additionally, requires good interaction skills with senior management, with ability to articulate and defend recommendations made.</p>

Exhibit D: Job Titles and Descriptions**34. IT Auditor**

IT Auditor 1	
Years of Experience	0-2 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 2	
Years of Experience	2-4 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 3	
Years of Experience	4-6 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 4	
Years of	6-8 years

Exhibit D: Job Titles and Descriptions

Experience	
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 5	
Years of Experience	8+ years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

35. IT Trainer

IT Trainer	
Years of Experience	0-2 years
Job Description	Develop an agency-wide training plan. Coordinate IT strategic planning process to determine the department's training requirements through communications with staff throughout the agency. Identify existing training that meets the requirements and provide a gap analysis of courses to develop in house. Develop curriculum and training plan. Develop evaluation and monitoring methods to ensure quality training. Develop short video training. Produce written documents with clearly organized thoughts using proper English sentence construction, punctuation, and grammar.

36. IT Sourcing Consultant

IT Sourcing Consultant 1	
Years of Experience	5+ years
Job Description	Position requires the ability to work independently as the team leader in the development and execution of sourcing strategies for assigned projects, assisting customers in solving IT business problems. This role will function to lead the sourcing process,

Exhibit D: Job Titles and Descriptions

	through creation of the solicitation documents, evaluation of proposals and in execution of agreed upon negotiations strategy with selected suppliers. Leads evaluation and execution of risk mitigation strategies and establishes solid contracts that are in the long-term best interest of the customer. Has responsibility for managing customer expectations for project deliverables through effective and timely communications. Conducts a post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.
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IT Sourcing Consultant 2	
Years of Experience	10+ years
Job Description	Position requires a proven ability to lead development and execution of complex sourcing strategies for assigned projects and consulting with customers to solve IT business problems. Conducts meaningful market research and works with business owners to develop sourcing scope, timelines and deliverables. This role will function as the leader of cross-functional teams through the sourcing process, in the evaluation of proposals, conducting and managing the negotiations process with selected suppliers. Has responsibility for proactively managing customer expectations for project deliverables through effective and timely communications to various levels of senior management. Identifies and manages contractual risks and establishes firm contracts that are in the long-term best interest of the customer. Conduct post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.

IT SECURITY

37. IT Security Analyst

- Monitor and advise on information security issues related to the systems and workflow at an agency to ensure the internal IT security controls for an agency are appropriate and operating as intended. Coordinate and execute IT security related projects for the agency. Coordinate response to information security incidents. Develop and publish Information Security policies, procedures, standards and guidelines based on knowledge of best practices and compliance with State IT Security policies, standards, and guidelines..
- Conduct campus-wide data classification assessment and security audits and manage remediation plans. Collaborate with IT management, Internal Audit, and SOM to manage security vulnerabilities. Create, manage and maintain user security awareness. Conduct security research and keeps abreast of latest security issues.
- Prepares IT security documentation, including department policies and procedures, agency notifications, Web content, and alerts.

IT Security Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent

Exhibit D: Job Titles and Descriptions

	judgment.
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IT Security Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

IT Security Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

38. IT Security Architect

IT Security Architect 1	
Years of Experience	3+ years of experience in security architecture 9+ years of experience in information security 9+ years of experience working with computer systems 9+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware
Job Description	Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying State IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture. Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills. Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Exhibit D: Job Titles and Descriptions

IT Security Architect 2	
Years of Experience	<p>5+ years of experience in security architecture</p> <p>11+ years of experience in information security</p> <p>11+ years of experience working with computer systems</p> <p>11+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware</p>
Job Description	<p>Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying State IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture.</p> <p>Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills.</p> <p>Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.</p>

39. IT Security Auditor

IT Security Auditor	
Years of Experience	15 or more years with IT security and audit experience
Job Description	Advanced knowledge of security standards and progressive experience performing security audits.

PROJECT MANAGEMENT

40. Program Manager

- Provides project control support and coordinates the work of the PCO staff implementing solutions to meet the customer requirements and supports the customer's on-going system engineering life-cycle processes. Responsible for supporting all project delivery work in accordance with required methodology (such as the State of Michigan's State Unified Information Technology Environment (SUITE) methodology), and following all standard project management industry standards such as PMI's framework.
- Coordinates and controls the end to end process of capturing all key project artifacts, including but not limited to: business cases, project charters, baselined project schedules, project management plans, change requests, status reports, lessons learned. May require consistent utilization of the State of Michigan's SUITE methodology and Project Portfolio Management (PPM) tool.

Exhibit D: Job Titles and Descriptions

- Raises identified issues and risks to the appropriate senior management level including the Project Management Office (PMO) for action inclusive of description of the issue, comprehensive analysis of options and recommendation for remediation.
- Manages portfolio of projects' execution to ensure conformity to established budgets, timelines and scope.
- Works with the stakeholders, including the PMO to facilitate project governance effectiveness through weekly status reporting, project/portfolio data, regular governance meetings, etc.

Program Manager 1	
Years of Experience	5+ years of recent experience in managing IT projects (preferably within a government environment) 3-5 years of experience in successfully managing the establishment and operations of a fully functioning Project Control Office
Job Description	Experience in successfully managing Information Technology (IT) projects (full project life cycle) whose budget was greater than \$10,000,000 (excluding hardware/software costs) and whose timeline was greater than 3 years. Experience in successfully managing a PCO for complex projects (including multiple stakeholders, PCO staff, multiple vendors, data conversions and multiple technologies). Documented experience in successfully managing a PCO/PCO for complex projects (including multiple stakeholders, PCO staff, multiple vendors, data conversions and multiple technologies). Documented experience in performing Project Management, Quality Management, or other critical functions within complex Information Technology projects (preferably with budgets greater than \$10,000,000 and multi-phase, multiyear implementations). Professional certification in Project Management, such as Project Management Professional (PMP) certification from the Project Management Institute.

41. Project Manager

- Designs, plans, and coordinates work teams. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable.
- May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project.

Exhibit D: Job Titles and Descriptions

Project Manager 1	
Years of Experience	Minimum 2 years of experience as a Project Manager.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 2	
Years of Experience	Minimum 4 years of experience as a Project Manager.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 3	
Years of Experience	Minimum 5 years of experience as a Project Manager.
Job Description	Advanced experience managing programs of projects, complex projects or multiple projects. Demonstrated and advanced understanding of project management methodologies. Relies on experience and judgment to plan and accomplish goals. A significant degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

42. Project Coordinator

Project Coordinator	
Years of Experience	Minimum 2 years of experience as a Project Coordinator
Job Description	The Project Coordinator shall provide day-to-day coordination of project tasks. The project coordinator maintains version control and provides administrative support for project management information system. Prior experience of large project administration. Ability to communicate at all levels of an organization and third parties. Experience with similar scale roles and organizations. The project coordinator is task focused. Works under the direction of the project manager and reports to a project manager.

TELECOMMUNICATIONS AND COMPUTER NETWORKING

43. Network Administrator

- Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software. Monitor network to ensure network availability to all system users and perform necessary maintenance to support network availability. May supervise other network support and client server specialists and plan, coordinate, and implement network security measures. Coordinate the development, implementation, and maintenance of a local area network or wide area network. Maintains the network's physical and logical structures, including network connections. Maintains network support software, analyzes user support statistics, and recommends appropriate measures. Installs, tests, and maintains network hardware and software. Prepares and analyzes statistics on network utilization and availability. Prepares training courses and provides user support and training in the use of available hardware, software, and utilities. Performs tuning and capacity planning activities to enhance the performance of the network resources.
- Assist in the development, implementation, maintenance, and monitoring of a local area network or wide area network. Works under close supervision with minimal latitude for the use of initiative and independent judgment. Performs procedures for backup, recovery, and archival of files stored on the network. Communicates with vendors, users, management, and network programming staff. Serves as contact for remote network locations to obtain clarification of problems and to identify solutions or corrective actions. Assists in preparing training courses and providing user support and training in the use of available hardware, software, and utilities. Assists in maintaining the local area network or wide area network, cable and hub installations, and inventories. Conducts product evaluations of upgraded or new hardware and software—identifying strengths, weaknesses, and potential benefits to the agency—and recommends enhancements to network facilities.
- Assists in maintaining the network's physical and logical structures and in installing and testing hardware and software. Assists in performance tuning and capacity planning activities to enhance the performance of the network resources and in maintaining network support software. Assists in or conducts product evaluations of upgraded or new hardware and software and identifies strengths, weaknesses, and potential benefits to the agency. Assists in maintaining the operating system and security software utilized on the network, including the addition of new users to the network and establishment of rights and privileges. Experience in local or wide area network work. Knowledge of network facilities and data processing techniques; of personal computer hardware and software; of network operating system and security software; and of performance monitoring and capacity management tools.

Network	
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Exhibit D: Job Titles and Descriptions

Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

44. Network Architect

- Participates in designing and developing the network to ensure that it is secure, reliable, and robust; implements and maintains network management servers that assist the agency in managing, monitoring, and securing the network.
- Develops and implements detection activities to test network vulnerability to intrusion by hostile individuals or groups; participates in detecting, investigating, documenting, and reporting actual or potential network security violations, intrusions, or other inappropriate use.
- Designs backbone infrastructure, network facilities, wide area networks, local area network, wireless and telecommunication networks to provide reliable Internet access, remote access to information technology services (ITS), network security, and high performance networking.
- Evaluates security products and tests security systems performance; assists in planning, implementing, and testing disaster recovery procedures; participates in making formal risk assessments related to network security.
- Certification in areas related to network management and security preferred (CNE, MCSE, MSCE+1, CISA, CCNA, CCNP, CCIE, CCSA, CCSE, CCSE-PLUS, Cisco Security Specialist).
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Exhibit D: Job Titles and Descriptions

Network Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Architect 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

45. Network Engineer

- Responsible for installing networking technologies and supporting networks. Assesses existing network configurations and makes recommendations based on product specifications. Configures equipment and software to meet business needs, trains others on the solution, and documents the solution for ongoing support. Functions as part of a team on larger projects, or individually provides the services on support visits or smaller projects. Provides technical support and assists with the design of network solutions.
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Network Engineer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent

Exhibit D: Job Titles and Descriptions

	judgment.
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Network Engineer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Engineer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Network Engineer 4	
Years of Experience	12 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

46. Public Safety Consultant

Public Safety Communications Consultant	
Years of Experience	Extensive knowledge of public safety communications and enhanced 9-1-1 systems. Knowledge of current 9-1-1 industry trends in technology architecture, microcomputers, networking, and the Internet/Worldwide Web.
Job Description	Performs systems analysis, design, documentation, and implementation of complex public safety communications projects. These projects may include needs analyses, staffing studies, consolidation plans, equipment assessments and planning, budget preparation and forecasting, performance reporting/analysis and other related supporting the operation of public safety answering points and first responders.

47. Radio Engineer

Radio Engineer	
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Exhibit D: Job Titles and Descriptions

Years of Experience	Considerable experience in voice, data and video systems. Training in electronics is required. Advanced technical experience in the design of voice, data, video and wireless/radio systems and services. FCC General Radio Telephone license or Amateur Radio License highly desirable. Certification in public procurement would be desirable. Advanced knowledge of complex communications systems; business management practices and principles.
Job Description	Conducts the review, analysis and design of current and proposed voice, data and video communications, both wire line and wireless, also develop engineering plans and networks for state agencies and institutions. Performs research to develop recommendations for enhancements, expansions and/or consolidations of voice, data and video communications, using wire line and wireless equipment, facilities and services. Engineer system/network migration details toward sharing of integrated services, while laying the foundation of Open System Interconnections. Assist in the coordination, engineering and processing of FCC licenses. Educate and keeps abreast of FCC Land Mobile Radio (LMR) rules, policies, legal rulings and ongoing spectrum issues--analyzes results and impacts.

STATE OF MICHIGAN
CENTRAL PROCUREMENT SERVICES
 Department of Technology, Management, and Budget
 525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
 P.O. BOX 30026 LANSING, MICHIGAN 48909



CONTRACT CHANGE NOTICE

Change Notice Number **13 - REVISED**
 to
 Contract Number **071B6600020**

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
	248-449-4902
	dennis_lauderback@compaid.com
	CV0007364

STATE	Program Manager	Cindy Peruchietti	MULTI
		517-897-2118	
		Peruchietti@michigan.gov	
	Contract Administrator	Mike Breen	DTMB
		(517) 249-0428	
		breenm@michigan.gov	

CONTRACT SUMMARY				
VENDOR MANAGED SERVICES FOR IT STAFF AUGMENTATION				
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE	
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021	
PAYMENT TERMS		DELIVERY TIMEFRAME		
NET45				
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
<input type="checkbox"/> P-Card <input type="checkbox"/> PRC <input type="checkbox"/> Other			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
MINIMUM DELIVERY REQUIREMENTS				
DESCRIPTION OF CHANGE NOTICE				
OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		June 30, 2021
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$374,807,012.00	\$1,032,988.00	\$375,840,000.00		
DESCRIPTION				
Effective 7/3/2019, the parties hereby rescind Contract Change Notice 11 and restore the \$1,032,988.00 funding associated therewith to the contract. All other terms, conditions, specifications, and pricing remain the same. Per Contractor, agency and DTMB Procurement approval.				

STATE OF MICHIGAN
CENTRAL PROCUREMENT SERVICES
 Department of Technology, Management, and Budget
 525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
 P.O. BOX 30026 LANSING, MICHIGAN 48909



CONTRACT CHANGE NOTICE

Change Notice Number **12**

to

Contract Number **071B6600020**

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
	248-449-4902
	dennis_lauderback@compaid.com
	CV0007364

STATE	Program Manager	Cindy Peruchietti	MULTI
		517-897-2118	
		Peruchiettic@michigan.gov	
	Contract Administrator	Mike Breen	DTMB
		(517) 249-0428	
		breenm@michigan.gov	

CONTRACT SUMMARY				
VENDOR MANAGED SERVICES FOR IT STAFF AUGMENTATION				
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE	
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021	
PAYMENT TERMS		DELIVERY TIMEFRAME		
NET45				
ALTERNATE PAYMENT OPTIONS				EXTENDED PURCHASING
<input type="checkbox"/> P-Card <input type="checkbox"/> PRC <input type="checkbox"/> Other				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS				
DESCRIPTION OF CHANGE NOTICE				
OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		June 30, 2021
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$375,840,000.00	\$0.00	\$375,840,000.00		
DESCRIPTION				
Effective immediately and with mutual signature the program manager has been changed to Cindy Peruchietti. All other terms and conditions remain the same.				

STATE OF MICHIGAN
CENTRAL PROCUREMENT SERVICES
 Department of Technology, Management, and Budget
 525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
 P.O. BOX 30026 LANSING, MICHIGAN 48909



CONTRACT CHANGE NOTICE

Change Notice Number **11**
 to
 Contract Number **071B6600020**

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
	248-449-4902
	dennis_lauderback@compaid.com
	CV0007364

STATE	Program Manager	Steve Wensko	MULTI
		517-335-1084	
		wenskos@Michigan.gov	
	Contract Administrator	Mike Breen	DTMB
		(517) 249-0428	
		breenm@michigan.gov	

CONTRACT SUMMARY				
VENDOR MANAGED SERVICES FOR IT STAFF AUGMENTATION				
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE	
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021	
PAYMENT TERMS		DELIVERY TIMEFRAME		
NET45				
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
<input type="checkbox"/> P-Card <input type="checkbox"/> PRC <input type="checkbox"/> Other			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
MINIMUM DELIVERY REQUIREMENTS				
DESCRIPTION OF CHANGE NOTICE				
OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		June 30, 2021
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$375,840,000.00	(\$1,032,988.00)	\$374,807,012.00		
DESCRIPTION				
Effective 5/1/2019, the parties agree to reduce the contract by \$1,032,988 via (1) a 10% rate reduction for the 32 resources engaged at DHHS under the MiSAM contract (a \$241,956 cost reduction) and (2) reducing 10 resources (a \$791,032 cost reduction). See attached documentation for detailed breakdown. All other terms, conditions, specifications, and pricing remain the same. Per Contractor, agency and DTMB Procurement approval.				

Rate Reductions for 32 Engaged Resources

						Potential savings 10% reduction through 5/1/2019
Agency	Req ID	Req Title	Current Bill Rate	Current Vendor Rate	10% Reduction Bill Rate	10% Savings per hour
MDHHS	456974	MDHHS - Programmer 1	\$62.00	\$58.90	\$55.80	\$4,960.00
MDHHS	467080	MDHHS - Business Analyst 2	\$58.95	\$56.00	\$53.06	\$4,716.00
MDHHS	474117	MDHHS - Programmer Analyst 1	\$64.51	\$61.29	\$58.06	\$5,160.80
MDHHS	474129	MDHHS - Programmer Analyst 3	\$81.66	\$77.58	\$73.49	\$6,532.80
MDHHS	474986	MDHHS - Programmer Analyst 1	\$71.00	\$67.45	\$63.90	\$5,680.00
MDHHS	475843	MDHHS - Software Solution Architect 1	\$103.00	\$97.85	\$92.70	\$8,240.00
MDHHS	486080	Project Manager 2	\$120.00	\$114.00	\$108.00	\$9,600.00
MDHHS	486080	Project Manager 2	\$120.00	\$114.00	\$108.00	\$9,600.00
MDHHS	486081	Business Analyst 3	\$73.03	\$69.38	\$65.73	\$5,842.40
MDHHS	486082	Enterprise Architect 1	\$148.52	\$141.10	\$133.67	\$11,881.60
MDHHS	486084	Software Solution Architect 1	\$100.00	\$95.00	\$90.00	\$8,000.00
MDHHS	486084	Software Solution Architect 1	\$100.00	\$95.00	\$90.00	\$8,000.00
MDHHS	486085	Project Coordinator 1	\$50.10	\$47.60	\$45.09	\$4,008.00
MDHHS	486086	Program Manager 1	\$140.00	\$133.00	\$126.00	\$11,200.00
MDHHS	486086	Program Manager 1	\$140.00	\$133.00	\$126.00	\$11,200.00
MDHHS	487317	Project Manager 1	\$112.30	\$106.69	\$101.07	\$8,984.00
MDHHS	487317	Project Manager 1	\$133.00	\$126.35	\$119.70	\$10,640.00
MDHHS	487317	Project Manager 1	\$120.00	\$114.00	\$108.00	\$9,600.00
MDHHS	501659	MDHHS - Web Administrator/Web AppDev2	\$70.20	\$66.69	\$63.18	\$5,616.00
MDHHS	503774	MDHHS - IT Security Analyst 2	\$76.78	\$72.94	\$69.10	\$6,142.40
MDHHS	506358	MDHHS - IT Application Developer	\$65.00	\$61.75	\$58.50	\$5,200.00
MDHHS	515905	MDHHS - Project Manager 3	\$127.56	\$121.18	\$114.80	\$10,204.80
MDHHS	531075	IT Specialist	\$97.00	\$92.15	\$87.30	\$7,760.00
MDHHS	557387	WebSphere Administrator	\$100.00	\$95.00	\$90.00	\$8,000.00
MDHHS	558508	Network Administrator 2	\$61.00	\$57.95	\$54.90	\$4,880.00
MDHHS	558849	Business Analyst 3	\$73.04	\$69.39	\$65.74	\$5,843.20
MDHHS	563237	MDHHS - System Administrator 3	\$80.03	\$76.03	\$72.03	\$6,402.40
MDHHS	563242	MDHHS - Database Administrator 5	\$104.11	\$98.91	\$93.70	\$8,328.80
MDHHS	564442	WebSphere Administrator	\$120.00	\$114.00	\$108.00	\$9,600.00
MDHHS	577480	MDHHS - Programmer Analyst 3	\$81.66	\$77.58	\$73.49	\$6,532.80
MDHHS	583434	MDHHS - Senior Web Application Developer	\$85.00	\$80.75	\$76.50	\$6,800.00
MDHHS	587264	MDHHS - Senior Web Application Developer	\$85.00	\$80.75	\$76.50	\$6,800.00
						\$241,956.00

Cost Reduction for 10 Released Resources

Agency	Req ID	Req Title	Bill Rate	Vendor Rate	Savings based on resource ending 5/1/2019
CSS- EPMO/PMO/DHHS	519215	MDHHS - Project Manager 2	\$120.00	\$114.00	\$96,000.00
MDHHS	456976	MDHHS - Programmer 1	\$62.00	\$58.90	\$49,600.00
MDHHS	486081	Business Analyst 3	\$73.03	\$69.38	\$58,424.00
MDHHS	486081	Business Analyst 3	\$73.03	\$69.38	\$58,424.00
MDHHS	490315	Enterprise Architect 1	\$142.00	\$134.90	\$113,600.00
MDHHS	490317	Business Analyst 3	\$72.00	\$68.40	\$57,600.00
MDHHS	515013	MDHHS - IT Specialist	\$97.00	\$92.15	\$77,600.00
MDHHS	527394	MDHHS - Project Manager 1	\$115.00	\$109.25	\$92,000.00
MDHHS	558906	MDHHS - Project Manager 1	\$114.73	\$109.00	\$91,784.00
MDHHS	486080	Project Manager 2	\$120.00	\$114.00	\$96,000.00
					\$791,032.00

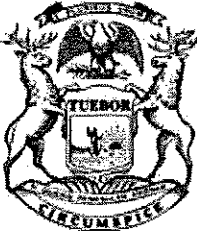
STATE OF MICHIGAN

CENTRAL PROCUREMENT SERVICES

Department of Technology, Management, and Budget

525 W. ALLEGAN ST., LANSING, MICHIGAN 48913

P.O. BOX 30026 LANSING, MICHIGAN 48909



CONTRACT CHANGE NOTICE

Change Notice Number 10

to

Contract Number 071B6600020

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
	248-449-4902
	dennis_lauderback@compaid.com
	CV0007364

STATE	Program Manager	Steve Wensko	MULTI
		517-335-1084	
	Contract Administrator	wenskos@Michigan.gov	
		Mike Breen	DTMB
		(517) 249-0428	
		breenm@michigan.gov	

CONTRACT SUMMARY

VENDOR MANAGED SERVICES FOR IT STAFF AUGMENTATION

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021
PAYMENT TERMS		DELIVERY TIMEFRAME	
NET45			
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
<input type="checkbox"/> P-Card	<input type="checkbox"/> PRC	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS			

DESCRIPTION OF CHANGE NOTICE

OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		June 30, 2021
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$279,840,000.00	\$96,000,000.00	\$375,840,000.00		

DESCRIPTION

Effective with mutual signature the contract is amended to add \$96,000,000 with the approved ad bd request of 4/23/19. All other terms and conditions remain the same.



STATE OF MICHIGAN ENTERPRISE PROCUREMENT

Department of Technology, Management, and Budget

525 W. ALLEGAN ST., LANSING, MICHIGAN 48913

P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **7**

to

Contract Number **071B6600020**

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
	248-449-4902
	dennis_lauderback@compaid.com
	CV0007364

STATE	Program Manager	Steve Wensko	MULTI
		517-335-1084	
		wenskos@Michigan.gov	
	Contract Administrator	Garrick Paraskevin	DTMB
		(517) 284-6993	
		paraskeving@michigan.gov	

CONTRACT SUMMARY				
VENDOR MANAGED SERVICES (VMS) FOR INFORMATION TECHNOLOGY STAFF AUGMENTATION; STATEWIDE				
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW	
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021	
PAYMENT TERMS		DELIVERY TIMEFRAME		
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
<input type="checkbox"/> P-Card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
MINIMUM DELIVERY REQUIREMENTS				
DESCRIPTION OF CHANGE NOTICE				
OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		June 30, 2021
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$189,840,000.00	\$90,000,000.00	\$279,840,000.00		
DESCRIPTION				
Effective 7/17/2018, this Contract is increased by \$90,000,000.00 for Statewide use.				
All other terms, conditions, specifications, and pricing remain the same. Per contractor and agency agreement, DTMB Procurement approval, and State Administrative Board approval on 7/17/2018.				



STATE OF MICHIGAN ENTERPRISE PROCUREMENT

Department of Technology, Management, and Budget
525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **6**

to

Contract Number **071B6600020**

CONTRACTOR	COMPUTER AID, INCORPORATED	STATE	Program Manager	Steve Wensko	DTMB-IT
	1390 Ridgeview Drive			517-335-1084	
	Allentown, PA 18104		Contract Administrator	wenskos@Michigan.gov	
	Dennis Lauderback			Gerrick Paraskevin	DTMB
	248-449-4902			(517) 284-6993	
	dennis_lauderback@compaid.com			paraskeving@michigan.gov	

CONTRACT SUMMARY

VENDOR MANAGED SERVICES (VMS) FOR INFORMATION TECHNOLOGY STAFF AUGMENTATION;
STATEWIDE

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021

PAYMENT TERMS

DELIVERY TIMEFRAME

N/A

ALTERNATE PAYMENT OPTIONS

EXTENDED PURCHASING

☐ P-Card

☐ Direct Voucher (DV)

☐ Other

☒ Yes

☐ No

MINIMUM DELIVERY REQUIREMENTS

N/A

DESCRIPTION OF CHANGE NOTICE

OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		June 30, 2021
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$189,840,000.00	\$0.00	\$189,840,000.00		

DESCRIPTION

Effective March 30, 2018, this Contract is amended to add the attached Attachment 3 - Safeguarding Contract Language Exhibit 7 Publication 1075. All other terms, conditions, specifications, and pricing remain the same, per Contractor and Agency agreement, DTMB Procurement approval.

Attachment 3 - Exhibit 7 Safeguarding Contract Language

CONTRACT LANGUAGE FOR GENERAL SERVICES

I. PERFORMANCE

In performance of this contract, the Contractor agrees to comply with and assume responsibility for compliance by his or her employees with the following requirements:

- (1) All work will be performed under the supervision of the contractor or the sub contractor's responsible employees.
- (2) The contractor and the contractor's employees with access to or who use FTI must meet the background check requirements defined in IRS Publication 1075.
- (3) Any Federal tax returns or return information (hereafter referred to as returns or return information) made available shall be used only for the purpose of carrying out the provisions of this contract. Information contained in such material shall be treated as confidential and shall not be divulged or made known in any manner to any person except as may be necessary in the performance of this contract. Inspection by or disclosure to anyone other than an officer or employee of the contractor is prohibited.
- (4) All returns and return information will be accounted for upon receipt and properly stored before, during, and after processing. In addition, all related output and products will be given the same level of protection as required for the source material.
- (5) No work involving returns and return information furnished under this contract will be subcontracted without prior written approval of the IRS.
- (6) The contractor will maintain a list of employees authorized access. Such list will be provided to the agency and, upon request, to the IRS reviewing office.
- (7) The agency will have the right to void the contract if the contractor fails to provide the safeguards described above.
- (8) (Include any additional safeguards that may be appropriate.)

II. CRIMINAL/CIVIL SANCTIONS

- (1) Each officer or employee of any person to whom returns or return information is or may be disclosed shall be notified in writing by such person that returns or return information disclosed to such officer or employee can be used only for a purpose and to the extent authorized herein, and that further disclosure of any such returns or return information for a purpose or to an extent unauthorized herein constitutes a felony punishable upon conviction by a fine of as much as \$5,000 or imprisonment for as long as five years, or both, together with the costs of prosecution. Such person shall also notify each officer and employee

that any such unauthorized future disclosure of returns or return information may also result in an award of civil damages against the officer or employee in an amount not less than \$1,000 with respect to each instance of unauthorized disclosure. These penalties are prescribed by IRCs 7213 and 7431 and set forth at 26 CFR 301.6103(n)-1.

- (2) Each officer or employee of any person to whom returns or return information is or may be disclosed shall be notified in writing by such person that any return or return information made available in any format shall be used only for the purpose of carrying out the provisions of this contract. Information contained in such material shall be treated as confidential and shall not be divulged or made known in any manner to any person except as may be necessary in the performance of this contract. Inspection by or disclosure to anyone without an official need-to-know constitutes a criminal misdemeanor punishable upon conviction by a fine of as much as \$1,000.00 or imprisonment for as long as 1 year, or both, together with the costs of prosecution. Such person shall also notify each such officer and employee that any such unauthorized inspection or disclosure of returns or return information may also result in an award of civil damages against the officer or employee [United States for Federal employees] in an amount equal to the sum of the greater of \$1,000.00 for each act of unauthorized inspection or disclosure with respect to which such defendant is found liable or the sum of the actual damages sustained by the plaintiff as a result of such unauthorized inspection or disclosure plus in the case of a willful inspection or disclosure which is the result of gross negligence, punitive damages, plus the costs of the action. The penalties are prescribed by IRCs 7213A and 7431 and set forth at 26 CFR 301.6103(n)-1.
- (3) Additionally, it is incumbent upon the contractor to inform its officers and employees of the penalties for improper disclosure imposed by the Privacy Act of 1974, 5 U.S.C. 552a. Specifically, 5 U.S.C. 552a(i)(1), which is made applicable to contractors by 5 U.S.C. 552a(m)(1), provides that any officer or employee of a contractor, who by virtue of his/her employment or official position, has possession of or access to agency records which contain individually identifiable information, the disclosure of which is prohibited by the Privacy Act or regulations established thereunder, and who knowing that disclosure of the specific material is so prohibited, willfully discloses the material in any manner to any person or agency not entitled to receive it, shall be guilty of a misdemeanor and fined not more than \$5,000.
- (4) Granting a contractor access to FTI must be preceded by certifying that each individual understands the agency's security policy and procedures for safeguarding IRS information. Contractors must maintain their authorization to access FTI through annual recertification. The initial certification and recertification must be documented and placed in the agency's files for review. As part of the certification and at least annually afterwards, contractors must be advised of the provisions of IRCs 7431, 7213, and 7213A (see Exhibit 4, Sanctions for Unauthorized Disclosure, and Exhibit 5, Civil Damages for Unauthorized Disclosure). The training provided before the initial certification and

annually thereafter must also cover the incident response policy and procedure for reporting unauthorized disclosures and data breaches. (See Section 10) For both the initial certification and the annual certification, the contractor must sign, either with ink or electronic signature, a confidentiality statement certifying their understanding of the security requirements.

III. INSPECTION

The IRS and the Agency, with 24 hour notice, shall have the right to send its inspectors into the offices and plants of the contractor to inspect facilities and operations performing any work with FTL under this contract for compliance with requirements defined in IRS Publication 1075. The IRS' right of inspection shall include the use of manual and/or automated scanning tools to perform compliance and vulnerability assessments of information technology (IT) assets that access, store, process or transmit FTL.

CONTRACT LANGUAGE FOR TECHNOLOGY SERVICES

I. PERFORMANCE

In performance of this contract, the contractor agrees to comply with and assume responsibility for compliance by his or her employees with the following requirements:

- (1) All work will be done under the supervision of the contractor or the contractor's employees.
- (2) The contractor and the contractor's employees with access to or who use FTI must meet the background check requirements defined in IRS Publication 1075.
- (3) Any return or return information made available in any format shall be used only for the purpose of carrying out the provisions of this contract. Information contained in such material will be treated as confidential and will not be divulged or made known in any manner to any person except as may be necessary in the performance of this contract. Disclosure to anyone other than an officer or employee of the contractor will be prohibited.
- (4) All returns and return information will be accounted for upon receipt and properly stored before, during, and after processing. In addition, all related output will be given the same level of protection as required for the source material.
- (5) The contractor certifies that the data processed during the performance of this contract will be completely purged from all data storage components of his or her computer facility, and no output will be retained by the contractor at the time the work is completed. If immediate purging of all data storage components is not possible, the contractor certifies that any IRS data remaining in any storage component will be safeguarded to prevent unauthorized disclosures.
- (6) Any spoilage or any intermediate hard copy printout that may result during the processing of IRS data will be given to the agency or his or her designee. When this is not possible, the contractor will be responsible for the destruction of the spoilage or any intermediate hard copy printouts and will provide the agency or his or her designee with a statement containing the date of destruction, description of material destroyed, and the method used.
- (7) All computer systems receiving, processing, storing or transmitting FTI must meet the requirements defined in IRS Publication 1075. To meet functional and assurance requirements, the security features of the environment must provide for the managerial, operational, and technical controls. All security features must be available and activated to protect against unauthorized use of and access to Federal Tax Information.
- (8) No work involving Federal Tax Information furnished under this contract will be subcontracted without prior written approval of the IRS.
- (9) The contractor will maintain a list of employees authorized access. Such list will be provided to the agency and, upon request, to the IRS reviewing office.
- (10) The agency will have the right to void the contract if the contractor fails to provide the safeguards described above.
- (10) (Include any additional safeguards that may be appropriate.)

II. CRIMINAL/CIVIL SANCTIONS

- (1) Each officer or employee of any person to whom returns or return information is or may be disclosed will be notified in writing by such person that returns or return information disclosed to such officer or employee can be used only for a purpose and to the extent authorized herein, and that further disclosure of any such returns or return information for a purpose or to an extent unauthorized herein constitutes a felony punishable upon conviction by a fine of as much as \$5,000 or imprisonment for as long as 5 years, or both, together with the costs of prosecution. Such person shall also notify each such officer and employee that any such unauthorized further disclosure of returns or return information may also result in an award of civil damages against the officer or employee in an amount not less than \$1,000 with respect to each instance of unauthorized disclosure. These penalties are prescribed by IRCs 7213 and 7431 and set forth at 26 CFR 301.6103(n)-1.
- (2) Each officer or employee of any person to whom returns or return information is or may be disclosed shall be notified in writing by such person that any return or return information made available in any format shall be used only for the purpose of carrying out the provisions of this contract. Information contained in such material shall be treated as confidential and shall not be divulged or made known in any manner to any person except as may be necessary in the performance of the contract. Inspection by or disclosure to anyone without an official need-to-know constitutes a criminal misdemeanor punishable

upon conviction by a fine of as much as \$1,000 or imprisonment for as long as 1 year, or both, together with the costs of prosecution. Such person shall also notify each such officer and employee that any such unauthorized inspection or disclosure of returns or return information may also result in an award of civil damages against the officer or employee [United States for Federal employees] in an amount equal to the sum of the greater of \$1,000 for each act of unauthorized inspection or disclosure with respect to which such defendant is found liable or the sum of the actual damages sustained by the plaintiff as a result of such unauthorized inspection or disclosure plus in the case of a willful inspection or disclosure which is the result of gross negligence, punitive damages, plus the costs of the action. These penalties are prescribed by IRC 7213A and 7431 and set forth at 26 CFR 301.6103(n)-1.

(3) Additionally, it is incumbent upon the contractor to inform its officers and employees of the penalties for improper disclosure imposed by the Privacy Act of 1974, 5 U.S.C. 552a. Specifically, 5 U.S.C. 552a(i)(1), which is made applicable to contractors by 5 U.S.C. 552a(m)(1), provides that any officer or employee of a contractor, who by virtue of his/her employment or official position, has possession of or access to agency records which contain individually identifiable information, the disclosure of which is prohibited by the Privacy Act or regulations established thereunder, and who knowing that disclosure of the specific material is prohibited, willfully discloses the material in any manner to any person or agency not entitled to receive it, shall be guilty of a misdemeanor and fined not more than \$5,000.

(4) Granting a contractor access to FTI must be preceded by certifying that each individual understands the agency's security policy and procedures for safeguarding IRS information. Contractors must maintain their authorization to access FTI through annual recertification. The initial certification and recertification must be documented and placed in the agency's files for review. As part of the certification and at least annually afterwards, contractors must be advised of the provisions of IRCs 7431, 7213, and 7213A (see *Exhibit 4, Sanctions for Unauthorized Disclosure*, and *Exhibit 5, Civil Damages for Unauthorized Disclosure*). The training provided before the initial certification and annually thereafter must also cover the incident response policy and procedure for reporting unauthorized disclosures and data breaches. (See Section 10) For both the initial certification and the annual certification, the contractor must sign, either with ink or electronic signature, a confidentiality statement certifying their understanding of the security requirements.

III. INSPECTION

The IRS and the Agency, with 24 hour notice, shall have the right to send its inspectors into the offices and plants of the contractor to inspect facilities and operations performing any work with FTI under this contract for compliance with requirements defined in IRS Publication 1075. The IRS' right of inspection shall include the use of manual and/or automated scanning tools to perform compliance and vulnerability assessments of information technology (IT) assets that access, store, process or transmit FTI. On the basis of such inspection, corrective actions may be required in cases where the contractor is found to be noncompliant with



STATE OF MICHIGAN ENTERPRISE PROCUREMENT

Department of Technology, Management, and Budget

525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **5**

to

Contract Number **071B6600020**

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
	248-449-4902
	dennis_lauderback@compaid.com
	*****0878

STATE	Program Manager	Steve Wensko	DTMB-IT
		517-335-1084	
		wenskos@Michigan.gov	
	Contract Administrator	Malu Natarajan	DTMB
		(517) 284-7030	
		natarajanm@michigan.gov	

CONTRACT SUMMARY				
VENDOR MANAGED SERVICES (VMS) FOR INFORMATION TECHNOLOGY STAFF AUGMENTATION; STATEWIDE				
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW	
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021	
PAYMENT TERMS		DELIVERY TIMEFRAME		
		N/A		
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
<input type="checkbox"/> P-Card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
MINIMUM DELIVERY REQUIREMENTS				
N/A				
DESCRIPTION OF CHANGE NOTICE				
OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		June 30, 2021
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$164,840,000.00	\$25,000,000.00	\$189,840,000.00		
DESCRIPTION				
Effective September 12, 2017, Ad Board approved \$25,000,000.00 funding for Statewide Staff Augmentation for Information technology projects to be added to the contract. All other terms, conditions, specifications, and pricing remain the same. Per agency request, DTMB Procurement agreement, and State Administrative Board approval on 9/12/2017.				



STATE OF MICHIGAN ENTERPRISE PROCUREMENT

Department of Technology, Management, and Budget
525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number 4
to
Contract Number 071B6600020

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
	248-449-4902
	Dennis_lauderback@compaid.com
	*****0878

STATE	Program Manager	Steve Wensko	DTMB
		517-335-1084	
		wenskoss@Michigan.gov	
	Contract Administrator	Terry Mead	DTMB
		(517) 284-7035	
		meadt@michigan.gov	

CONTRACT SUMMARY				
DESCRIPTION: Vendor Managed Services (VMS) for Information Technology Staff Augmentation; Statewide				
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW	
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021	
PAYMENT TERMS		DELIVERY TIMEFRAME		
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
MINIMUM DELIVERY REQUIREMENTS				
DESCRIPTION OF CHANGE NOTICE				
OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		
CURRENT VALUE		VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE	
\$164,840,000.00		\$ 0.00	\$164,840,000.00	
DESCRIPTION: Effective September 28, 2016, this Contract is amended to add the attached revised Exhibit C, (CAI, Michigan Rate Card, Version 3) and Exhibit D, (Job Titles and Descriptions, Version 3) which replaces in whole the existing Exhibit C and Exhibit D in the Contract. This change notice in effect adds the Program Manager rate and job description to the Contract. All other terms, conditions, specifications, and pricing remain the same, per Contractor and Agency agreement, DTMB Procurement approval.				

Exhibit C: CAI Michigan Rate Card - Version 3

Job Category	Job Title	Skill Level	Not to Exceed Bill Rate
Applications	Programmer Analyst	Analyst 1	\$70.77
		Analyst 2	\$83.89
		Analyst 3	\$91.53
		Analyst 4	\$96.93
		Analyst 5	\$98.21
		Analyst 6	\$114.71
	Programmer	Programmer 1	\$66.58
		Programmer 2	\$69.93
		Programmer 3	\$79.63
		Programmer 4	\$92.74
		Programmer 5	\$97.75
		Programmer 6	\$114.54
	Software Test Analyst	Analyst 1	\$41.79
		Analyst 2	\$46.87
		Analyst 3	\$57.85
		Analyst 4	\$59.56
		Analyst 5	\$61.12
	Technical Writer	Technical Writer 1	\$45.71
		Technical Writer 2	\$48.34
		Technical Writer 3	\$60.33
	Business Analyst	Analyst 1	\$57.75
		Analyst 2	\$60.41
		Analyst 3	\$73.03
		Analyst 4	\$83.29
		Analyst 5	\$93.35
	System Analyst	Analyst 1	\$66.58
		Analyst 2	\$69.93
		Analyst 3	\$76.50
		Analyst 4	\$89.40
		Analyst 5	\$96.86
		Analyst 6	\$109.34
	Software Solutions Architect		\$112.30
	Geographic Information Systems	Geospatial Projects Manager	\$112.88
		Analyst	\$106.24
		Specialist I	\$75.25
		Specialist II	\$87.85
		Technician Trainee	\$70.77
		Technician I	\$75.25
		Technician II	\$79.65
		Technician III	\$83.89
	Graphic Designer	Graphic Designer 1	\$48.25
		Graphic Designer 2	\$52.55
	Mobile Specialist	Mobile Specialist 1	\$176.81
		Mobile Specialist 2	\$212.17

Version 3

Exhibit C: CAI Michigan Rate Card - Version 3

Job Category	Job Title	Skill Level	Not to Exceed Bill Rate
Applications	Web Application Developer	Web Application Developer 1	\$65.84
		Web Application Developer 2	\$70.20
	Webmaster	Webmaster 1	\$66.57
		Webmaster 2	\$71.64
Customer/Technical Support	Help Desk	Help Desk 1	\$39.04
		Help Desk 2	\$45.01
		Help Desk 3	\$50.70
	Technical Support	Technical Support 1	\$56.02
		Technical Support 2	\$63.85
		Technical Support 3	\$71.96
	Infrastructure Solutions Architect	Infrastructure Solutions Architect 1	\$80.95
		Infrastructure Solutions Architect 2	\$85.46
		Infrastructure Solutions Architect 3	\$98.59
		Infrastructure Solutions Architect 4	\$122.08
		Infrastructure Solutions Architect 5	\$129.61
	System Administrator	System Administrator 1	\$62.41
		System Administrator 2	\$72.49
		System Administrator 3	\$80.93
Data Management	Database Architect	Database Architect 1	\$80.48
		Database Architect 2	\$83.40
		Database Architect 3	\$89.49
		Database Architect 4	\$105.80
	Data Warehouse Architect	Data Warehouse Architect 1	\$84.74
		Data Warehouse Architect 2	\$104.41
		Data Warehouse Architect 3	\$107.30
	Database Administrator	Database Administrator 1	\$65.76
		Database Administrator 2	\$81.76
		Database Administrator 3	\$91.69
		Database Administrator 4	\$95.86
		Database Administrator 5	\$104.12
Governance	IT Governance Analyst		\$139.15
	IT Procurement Analyst		\$72.64
IT Management Services	Business Continuity Planner		\$106.45
	Business Process Reengineering		\$116.64
	Enterprise Architect		\$148.52
	IT Strategist		\$129.70
	IT Auditor	I.T. Auditor 1	\$53.43
		I.T. Auditor 2	\$58.45
		I.T. Auditor 3	\$76.06
		I.T. Auditor 4	\$85.00
		I.T. Auditor 5	\$89.81
	IT Trainer		\$68.92
	IT Sourcing Consultant	IT Sourcing Consultant 1	\$106.34
		IT Sourcing Consultant 2	\$120.17

Version 3

Exhibit C: CAI Michigan Rate Card - Version 3

Job Category	Job Title	Skill Level	Not to Exceed Bill Rate
IT Security	IT Security Analyst	IT Security Analyst 1	\$64.94
		IT Security Analyst 2	\$76.78
		IT Security Analyst 3	\$80.06
	IT Security Architect	IT Security Architect 1	\$79.11
		IT Security Architect 2	\$83.04
	Security Auditor		\$133.69
Project Management	Program Manager		\$156.90
	Project Manager	Project Manager 1	\$118.21
		Project Manager 2	\$122.89
		Project Manager 3	\$127.57
	Project Coordinator		\$50.10
Telecommunications and Computer Networking	Network Administrator	Network Administrator 1	\$57.13
		Network Administrator 2	\$62.36
		Network Administrator 3	\$67.16
	Network Architect	Network Architect 1	\$68.11
		Network Architect 2	\$76.21
		Network Architect 3	\$94.39
	Network Engineer	Network Engineer 1	\$62.29
		Network Engineer 2	\$68.11
		Network Engineer 3	\$81.02
		Network Engineer 4	\$92.71
	Public Safety Consultant		\$87.52
	Radio Engineer		\$115.67

Version 3

Exhibit D: Job Titles and Descriptions

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16. Graphic Designer	17
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Customer/Technical Support	19
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21. Technical Support	21
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Exhibit D: Job Titles and Descriptions

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Exhibit D: Job Titles and Descriptions

APPLICATIONS

1. Programmer Analyst

- Plans, develops, tests, and documents computer programs, applying knowledge of programming techniques and computer systems. Evaluates user request for new or modified program, such as for financial or human resource management systems, clinical research trial results, statistical study of traffic patterns, or analyzing and developing specifications for bridge design, to determine feasibility, cost and time required, compatibility with current system, and computer capabilities. Consults with user to identify current operating procedures and clarify program objectives. Formulates plan outlining steps required to develop program, using methodologies such as structured analysis and design or object-oriented development.
- Work involves assisting in analyzing systems outlines to develop programs for computer applications, writing solution programs, documenting the methods and procedures used in program development, and testing and correcting programs. Works under moderate supervision with limited latitude for the use of initiative and independent judgment. Develops block diagrams and machine logic flowcharts to represent operations and data flow for applications.
- Captures requirements using industry standard development frameworks and tools. Designs reports, forms and letters along with computer terminal screen displays to accomplish goals of user request. Reviews screens, reports, forms and letters designs with users. Converts project specifications, using industry standard tools, such as object-oriented tools and code generation, into sequence of detailed instructions and logical steps for coding into language processable by computer, applying knowledge of computer programming techniques and computer languages.
- Enters program codes into computer system. Enters commands into computer to run and test program. Reads computer printouts or observes display screen to detect syntax or logic errors during program test, or uses diagnostic software to detect errors. Replaces, deletes, or modifies codes to correct errors. Analyzes, reviews and alters program to increase operating efficiency or adapt to new requirements. Writes documentation to describe program development, logic, coding, and corrections. Writes manual for users to describe installation and operating procedures. Assists users to solve operating problems. Recreates steps taken by user to locate source of problem and rewrites program to correct errors. May use computer-aided software tools in each stage of system development. May train users to use program. May oversee installation of hardware and software. May provide technical assistance to program users. May install and test program at user site. May monitor performance of program after implementation. May specialize in developing programs for business or technical applications.

Programmer Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment

Exhibit D: Job Titles and Descriptions

Programmer Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Programmer Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 5	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer Analyst 6	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

Exhibit D: Job Titles and Descriptions

2. Programmer

- Converts data from project specifications and statements of problems and procedures to create or modify computer programs. Prepares, or receives detailed specifications to describe sequence of steps that program must follow and input, output, and logical operations involved. Analyzes specifications, applying knowledge of computer capabilities, subject matter, and symbolic logic. Confers with supervisor and representatives of departments concerned with program to resolve questions of program intent, data input, output requirements, and inclusion of internal checks and controls. Converts detailed specifications to language processable by computer. Enters program codes into computer system. Inputs test data into computer. Observes computer monitor screen to interpret program operating codes. Corrects program errors, using methods such as modifying program or altering sequence of program steps. May prepare computer block diagrams and machine logic flowcharts for detailed coding of problems, and provides for the documentation of programming work.
- Writes instructions to guide operating personnel during production runs. Analyzes, reviews, and rewrites programs to increase operating efficiency or to adapt program to new requirements. Compiles and writes documentation of program development and subsequent revisions. May assist computer operator to resolve problems in running computer program. May work with System Analyst to obtain and analyze project specifications. May direct and coordinate work of others to write, test, and modify computer programs. Work involves writing programs to solve problems, documenting the methods and procedures used in program development, and testing and correcting programs. Work involves analyzing system outlines to develop programs for computer applications; writing solution programs; May train others. Works under general supervision with limited latitude for the use of initiative and independent judgment. Analyzes proposed computer applications in terms of equipment requirements and capabilities. Assists in developing solutions to software-related problems. May assist in the generation or installation of systems software.
- Prepares test data. May assist in writing and maintaining functional and technical specifications. Experience in computer programming work. Knowledge of the principles, practices, and techniques of computer programming and systems analysis, of computer operations procedures and systems, and of computer programming languages. Skill in the use of computer equipment. Ability to design programs and systems architecture; to prepare program specifications; to code, test, and debug computer programs; to interpret technical information relating to computer programming and other areas of data processing; and to communicate effectively.

Programmer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Programmer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

Programmer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 5	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer 6	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

3. Software Test Analyst

- Develops, publishes, and implements test plans. Writes and maintains test automation. Evaluates, recommends, and implements automated test tools and strategies. Develops, maintains, and upgrades automated test scripts and architectures for application products. Also writes, implements, and reports status for system test cases for testing. Analyzes test cases and provides regular progress reports. Participates in the testing process through test review and analysis, test witnessing and certification of software.

Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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Analyst 2	
Years of Experience	4-7 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>

Analyst 3	
Years of Experience	7-10 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and</p>

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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Analyst 4	
Years of Experience	11-14 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>

Analyst 5	
Years of Experience	15 or more years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and</p>

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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4. Technical Writer

- Develops and maintains user and technical documentation and project process documentation for Application Teams. Understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. Provides expertise on technical concepts of applications and /or user groups and structuring procedures in a logical sequence, due to a broad understanding of the applications. Writes a variety of technical articles, reports, brochures, and/or manuals for documentation for a wide range of uses. May be responsible for coordinating the display of graphics and the production of the document.
- Develop, enhance, and maintain user documentation for multiple applications including documentation required for the operations provider. Develop on-line source documentation as appropriate. Maintain documentation libraries and subscription lists. Identify, create, revise, and maintain documentation and templates. Ensure appropriate control access/use of documentation materials. Maintain application and user documentation. Ensure messages and terminology is consistent across all written materials. Research and complete documentation service requests. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Follow quality standards. Ability to work in a team environment. Strong communication skills; both written and spoken.
- Composes technical documents, manuals, bulletins, brochures, publications, training manuals, and special reports. Organizes and coordinates the composition of material and drafting of forms suitable for reproduction. Reviews and edits prepared material and illustrations. Develops and refines material for publication in journals and periodicals. Prepares informational material for release to the mass media. Works with agency staff in the development of formats, graphics, and the layout of publications. Assists agency staff in preparing and refining material for speeches and other public presentations. May research product design, capabilities, and compatibility ranges.
- May oversee the writing, editing, publishing, and distribution of specification documents. May review various resources and prepare analyses or summaries. May train others. Experience in technical writing, journalism, or communications work. Knowledge of the techniques and methods of planning, organizing, and writing various types of materials; of research methodology; and of departmental policies, procedures, and regulations. Skill in the use of office equipment. Ability to conduct research; to compose, review, illustrate, and edit technical documents, materials, and reports; to communicate effectively; and to train others.

Exhibit D: Job Titles and Descriptions

Technical Writer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Writer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Technical Writer 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

5. Business Analyst

- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Experienced with business process reengineering and identifying new applications of technology to business problems to make business more effective. Familiar with industry standard (including Legacy, Core, and Emerging technologies), business process mapping, and reengineering. Prepares solution options, risk identification, and financial analyses such as cost/benefit, ROI, buy/build, etc. Writes detailed description of user needs, program functions, and steps required to develop or modify computer programs.
- Prepare and document Functional and Technical Specifications for reporting and data warehouse work. Assist with business warehouse/intelligence support and enhancements. Develops RFPs. Assist in deployment and management of end-user reporting tools and platforms. Work with IT and business project teams to understand reporting and data warehousing requirements and propose solutions. Document and provide knowledge transfer to the rest of the Enterprise Reporting Team for all solutions.
- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Familiar with relational database concepts, and client-server concepts. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a project manager. A certain degree of creativity and latitude is required.

Exhibit D: Job Titles and Descriptions

Business Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Business Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Business Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 5	
Years of Experience	16 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Exhibit D: Job Titles and Descriptions

6. System Analyst

- Understands business objectives and problems, identifies alternative solutions, performs studies and cost/benefit analysis of alternatives. Analyzes user requirements, procedures, and problems to automate processing or to improve existing computer system: Confers with personnel of organizational units involved to analyze current operational procedures, identify problems, and learn specific input and output requirements, such as forms of data input, how data is to be summarized, and formats for reports. Writes detailed description of user needs, program functions, and steps required to develop or modify computer program. Reviews computer system capabilities, specifications, and scheduling limitations to determine if requested program or program change is possible within existing system.
- Studies existing information processing systems to evaluate effectiveness and develops new systems to improve production or specifications as required. Prepares specifications to detail operations to be performed by equipment and computer programs and operations to be performed by personnel in system. Conducts studies pertaining to development of new information systems to meet current and projected needs. Plans and prepares technical reports, memoranda, and instructional manuals as documentation of program development. Upgrades system and corrects errors to maintain system after implementation. May assist computer programmer in resolution of work problems related to project specifications, or programming. May direct and coordinate work of others to develop, test, install, and modify programs.
- Provides technical assistance and support for applications and hardware problems and for information sharing with external entities in a customer service environment. Provides field coordination and planning for the effective use of management information systems. Determines operational, technical, and support requirements for the location, installation, operation, and maintenance of various office equipment and systems. Prepares charts, diagrams, tables, and flowcharts. Details input and output record formats for computer programs. Assists in formulating logical descriptions of problems and devising optimum solutions. Assists in the design, development, and maintenance of various computer applications. May provide support and make recommendations for information technology systems processes associated with software technology planning, development, implementation, system security, and interfaces.
- Graduation from an accredited four-year college or university with major course work in computer science, computer information systems, or management information systems is generally preferred. Knowledge of the limitations and capabilities of computer systems and of the techniques used in the design of non-automated systems, of information technology equipment, of applicable programming languages, of computer hardware and software, of computer operating systems, of writing program code, and of automated mapping. Ability to analyze systems and procedures, to write and revise standards and procedures, to communicate effectively, and to train others.

System Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

System Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with

Exhibit D: Job Titles and Descriptions

	considerable latitude for the use of initiative and independent judgment.
System Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.
System Analyst 4	
Years of Experience	10 or more years of experience in the field.
Job Description	Advanced experience in the field.
System Analyst 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals.
System Analyst 6	
Years of Experience	14 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals. Works independently and cooperatively with management and stakeholders.

7. Software Solutions Architect

Solutions Architect	
Years of Experience	5 or more years of experience in the field.
Job Description	Lead and manage the design, implementation and delivery of system and software architecture designs, strategies and quality assurance plans. Design, prototype, develop and implement to achieve business results for the client. Experienced expert able to lead and deliver solutions using object-oriented, service-oriented architecture, and n-tier architectures. Adopt, develop, and execute a robust software development lifecycle, using industry best practices. Follows both the State and industry best practices for software engineering. - Leads in the development of long term technology strategy and planning for the entire organization leveraging existing and acquiring new resources. Leads and actively participates on project teams, clarifying business needs and requirements, performing analysis, design, development, integration, and maintenance of systems across

Exhibit D: Job Titles and Descriptions

	the enterprise. Willing and able to engage with other internal organizations to maximize delivery capabilities and provide value to clients. Participates and leads the development of delivery approach, and labor and cost estimates. Manage projects or tasks using the State and industry project delivery methodologies and best practices. Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.
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8. Geospatial Projects Manager

Geospatial Projects Manager	
Years of Experience	A minimum of three years of professional experience is required in Geographical Information System (GIS), cartography, CADD, or a related field. A minimum of three years of professional experience as a project manager for geospatial projects is required.
Job Description	Lead and direct cross-functional teams to deliver complex geospatial projects within the constraints of schedule, budget and scope. Assess desired outcomes and identify user requirements and needs. Design geospatial solutions, including geo-database schema, system requirements, system configuration and application functional requirements. Develop and obtain approval of project plans according to accepted practices and procedures. Integrate resources and develop additional resources to facilitate, manage and execute geospatial projects. Facilitate stakeholder communications, project reporting, and project oversight. Manage project closeout and the development of operations and support plans for geospatial data and application maintenance. Provide technical oversight and develop standards for geospatial data and applications.

9. Geographic Information System Analyst

Geographic Information System Analyst	
Years of Experience	A minimum of two years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing complex spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial basemap information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

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10. Geographic Information System Specialist 1

Geographic Information System Specialist 1	
Years of Experience	Two (2) years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

11. Geographic Information System Specialist 2

Geographic Information System Specialist 2	
Years of Experience	3-4 years of experience in the field or in a related area.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

12. Geographic Information System Technician Trainee

Geographic Information System Technician Trainee	
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Exhibit D: Job Titles and Descriptions

Years of Experience	One year of professional experience related to GIS, cartography, CADD, or a related field, or a minimum of six undergraduate credit hours in GIS, cartography or CADD.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

13. Geographic Information System Technician I

Geographic Information System Technician I	
Years of Experience	A minimum of two (2) years of successful experience at the equivalent of the GIS Trainee level.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

14. Geographic Information System Technician II

Geographic Information System Technician II	
Years of Experience	A minimum of three (3) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

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15. Geographic Information System Technician III

Geographic Information System Technician III	
Years of Experience	A minimum of four (4) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

16. Graphic Designer

Graphic Designer 1	
Years of Experience	Less than five years industry experience.
Job Description	Ability to assemble and create images for use with electronic and print publishing. Strong understanding of visual identifies and application of logos and identity marks.
Graphic Designer 2	
Years of Experience	5-7 years industry experience.
Job Description	Advanced experience in the use of various design software and technologies; advanced understanding of electronic design standards and techniques.

Exhibit D: Job Titles and Descriptions

17. Mobile Specialist

- The Mobile Specialist serves in many capacities, including Developer, Engineer, Technical Architect, and Analyst for Mobile Projects. The Mobile Specialist often guides and mentors the technical team in all phases of the SDLC including requirement validation, detail design, development, and implementation.

Mobile Specialist 1	
Years of Experience	4 year college degree or equivalent technical study.
Job Description	<ul style="list-style-type: none"> Serves as the Designer, Developer and/or Engineer on Mobile Projects. Meets with end users and technical staff of all types to gather business and system requirements Develops and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects. Develops standards, repeatable processes, and reusable components Assists in project planning, including developing of timelines, composition of technical teams, and leveling of resources. Mentors technical team leads and team members on Department processes and standards to promote consistency and improve productivity. Assists in the development and review of technical deliverables on projects.

Mobile Specialist 2	
Years of Experience	4 year college degree or equivalent technical study.
Job Description	<ul style="list-style-type: none"> Serves as the Lead Architect/Designer/Developer /Engineer on Mobile Projects. Meets with end users and technical staff of all types to gather business and system requirements. Proposes comprehensive solutions based on business and technical requirements Architects, designs, develops, and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects. Develops standards, repeatable processes, and reusable components Leads project planning, including developing of timelines, composition of technical teams, and leveling of resources. Mentors and manages technical team leads and team members on Department processes and standards to promote consistency and improve productivity. Leads the development and review of technical deliverables on projects.

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18. Web Application Developer

Web Application Developer 1	
Years of Experience	Five years industry experience.
Job Description	Perform specialized programming and technical work for website and Internet development.

Web Application Developer 2	
Years of Experience	5-7 years industry experience.
Job Description	Perform advanced programming and technical development for website and Internet development

19. Webmaster

Webmaster 1	
Years of Experience	Five years industry experience.
Job Description	Experience maintaining multiple websites. Responsibilities include publishing, examining traffic patterns and transactions, and maintaining usability standards.

Webmaster 2	
Years of Experience	More than five years of industry experience.
Job Description	Advanced experience maintaining multiple websites; examining traffic patterns and transactions; testing for multiple platforms; maintaining usability standards and security standards as they relate to the sites; and the ability to coordinate among content managers and developers.

CUSTOMER/TECHNICAL SUPPORT

20. Help Desk

- Provide technical assistance to computer system users on a variety of issues. Identifies, researches, and resolves technical problems. Responds to telephone calls, email and personnel requests for technical support. Documents, tracks, and monitors the problem to ensure a timely resolution. Has knowledge of commonly used concepts, practices, and procedures within a particular field. Answer questions or

Exhibit D: Job Titles and Descriptions

resolve computer problems for clients in person, via telephone or from remote location. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.

- Provide service and preventive maintenance activities on terminals, printers, personal computers, etc. Basic knowledge of electrical/mechanical principles and basic electronics. Read and comprehend technical service manuals and publications. Knowledge of basic mathematics to read and understand various gauges, meters, and measurement devices. Able to diagnose and repair products by replacing worn or broken parts, and making technical adjustments. Makes appropriate use of reference publications and diagnostic aids in resolving technical problems. Strong communication skills.
- Assist in coordination of changes, upgrades and new products, ensuring systems shall operate correctly in current and future environment. Provide accurate and complete answers to general use and administrative environment questions in a timely manner. Implement shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Ability to work in a team environment.

Help Desk 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Help Desk 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Help Desk 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Exhibit D: Job Titles and Descriptions

21. Technical Support

- Maintains, analyzes, troubleshoots, and repairs computer systems, hardware, and computer peripherals. Documents, maintains, upgrades or replaces hardware and software systems. Supports and maintains user account information including rights, security, and systems groups. Performs basic operation, monitoring, installation, trouble shooting, relocations, or maintenance of communications equipment. Identifies and resolves basic communications problems. Prepares or assists in the preparation of service record documentation. Shows awareness of standards and regulatory requirements related to assigned tasks.
- Assists in monitoring and providing assistance on the use and interface of systems, subsystems, and software applications. May be responsible for accessing data from and transferring data to various local, state, or federal databases. May assist in the review and recommendation of the procurement and inventory of information resources hardware or software. May write and update personal computer and mainframe application programs. Experience in automated data processing systems. Knowledge of the practices, principles, and techniques of computer operations, of information systems, of computer software and hardware, and of information security policies and procedures. Skill in the use and support of personal computers, in the use of applicable programs and systems, and in troubleshooting information systems. Ability to operate information technology systems, to communicate effectively, and to train others.
- Provides assistance in the design, development, and maintenance of various system applications. Provides technical assistance and support for applications and hardware problems. Installs, maintains, moves, and assists in testing and upgrading new and existing hardware/software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on system efficiency and utilization. May be responsible for accessing data from and transferring data to various local, state, or federal databases.
- Installs, maintains, moves, and assists in testing and upgrading new and existing hardware and software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Develops procedure manuals. Develops and makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on systems efficiency and utilization. May supervise the work of others.

Technical Support 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Support 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

Technical Support 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

22. Infrastructure Solutions Architect

- Must be proficient at the techniques that go into the formulation of architectures, including requirements discovery and analysis, application of abstraction, formulation of solution context, solution alternatives identification and assessment, technology selection, and architectural configuration. Extensive understanding and experience in technology areas for Mainframe and Distributed platforms, networking, databases, High Availability/Disaster Recovery, and IT security.
- Ability to work closely with client/application architects, senior managers, and project managers to design and assist with the implementation of the solutions infrastructure related components. Demonstrated ability to work independently and complete assigned project responsibilities under limited supervision. Experience and skills in prevailing industry architecture and engineering methodologies such as ITIL. Knowledge of and experience with a broad range of application servers, web servers, messaging servers, database servers, and related technologies. Able to analyze business requirements and define solutions to address complex business needs. Experience in web infrastructure design and operations including IP, HTTP, HTTPS, FTP, load balancing, clustering, failover, monitoring, diagnostics, performance tuning, etc. Possess high aptitude for problem-solving and trouble-shooting.

Infrastructure Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Infrastructure Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Infrastructure Architect 3	
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Exhibit D: Job Titles and Descriptions

Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Infrastructure Architect 4	
Years of Experience	10-12 years of experience.
Job Description	Advanced experience in architecting infrastructure solutions including proven experience with infrastructure integration.

Infrastructure Architect 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Includes descriptions detailed earlier as well as experience in architecting advanced infrastructure solutions which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

23. System Administrator

- The System Administrator (SA) is responsible for effective provisioning, installation/configuration, operation, and maintenance of computer hardware and software and related infrastructure. This individual participates in technical research and development to enable continuing innovation within the infrastructure. This individual ensures that system hardware, operating systems, software systems, and related procedures adhere to State policies, standards, and guidelines. Responsibilities include systems administration engineering and provisioning, operations and support, maintenance and research and development to ensure continual innovation. Install new / rebuild existing servers and configure hardware, peripherals, services, settings, directories, storage, etc. in accordance with standards and project/operational requirements. Perform daily system monitoring, verifying the integrity and availability of all hardware, server resources, systems and key processes, reviewing system and application logs, and verifying completion of scheduled jobs such as backups. Perform regular security monitoring to identify any possible intrusions. Perform daily backup operations, ensuring all required file systems and system data are successfully backed up to the appropriate media, recovery tapes or disks are created, and media is recycled and sent off site as necessary. Perform regular file archival and purge as necessary. Create, change, and delete user accounts per request. Provide Tier III/other support per request from various constituencies. Investigate and troubleshoot issues. Diagnose and recover from hardware or software failures. Coordinate and communicate with impacted constituencies. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software that supports GIS infrastructure applications or Asset Management applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required. Maintain data center environmental and monitoring equipment. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software or Asset Management

Exhibit D: Job Titles and Descriptions

applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required.

System Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

System Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

System Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

DATA MANAGEMENT

24. Database Architect

- Designs and builds relational databases. Develops strategies for data acquisitions, archive recovery, and implementation of a database. Must be able to design, develop and manipulate database management systems, data warehouses and multidimensional databases. Requires a depth and breadth of database knowledge that shall help with formal design of relational databases and provides insight into strategic data manipulation. Responsible for making sure an organization's strategic goals are optimized through the use of enterprise data standards. This frequently involves creating and maintaining a centralized registry of metadata. Capable of performing the role of a database administrator, if needed.

Database	
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Exhibit D: Job Titles and Descriptions

Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Database Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Database Architect 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Architect 4	
Years of Experience	12 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

25. Data Warehouse Architect

- Designs, implements and supports data warehousing. Implements business rules via stored procedures, middleware, or other technologies. Defines user interfaces and functional specifications. Responsible for verifying accuracy of data, and the maintenance and support of the data warehouse. Knowledge of data warehouse end-to-end implementation processes, from business requirement logical modeling, physical database design, ETL, end-user tools, database, SQL, performance tuning. Demonstrated problem resolution skills with team of persons, and strong leadership with implementation team Experience in data warehouse design and data modeling (both relational and dimensional) and development and maintenance of multi-dimensional data models. Development experience in implementation of data warehousing utilizing RDBMS. Understanding of data warehouse Metadata concepts, tools and different data

Exhibit D: Job Titles and Descriptions

warehouse methodologies. Expertise in SQL and proficiency in database tuning techniques. Responsible for the ongoing architecture and design of the data warehouse, data mart, and reporting environments. Develop strategies for flexibility and scalability, and define the future technical architecture direction for the business intelligence reporting physical environment.

- Responsible for proper selection of appropriate hardware, software, tools and system lifecycle techniques for the different components of the end-to-end data warehouse architecture including ETL, metadata, data profiling software, database platform, performance monitoring, reporting and analytic tools. Defining and documenting the technical architecture of the data warehouse, including the physical components and their functionality. Setting or enforcing standards and overall architecture for data warehouse systems. Monitoring the data warehousing industry and assisting in establishing the organization's data warehousing strategy and section of strategic warehousing tools and techniques. Ensuring compatibility of the different components of the DW architecture and ensuring alignment with broader IT strategies and goals. Ability to educate the project teams on the standards and architecture of each component of the data warehouse architecture. Very strong written and oral communication skills, including some presentation skills.

Data Warehouse Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Data Warehouse Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Data Warehouse Architect 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

26. Database Administrator

- Responsible for data analysis and database management. Involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Knowledge of the utilities and production tools used for data storage management

Exhibit D: Job Titles and Descriptions

to support the Application Team. Coordinates physical changes to computer databases; codes, tests, and implements physical database, applying knowledge of data base management system. Designs logical and physical databases reviews description of changes to database design to understand how changes to be made affect physical data base (how data is stored in terms of physical characteristics, such as location, amount of space, and access method).

- Establishes physical database parameters. Uses structured query language (SQL) to define database objects using database definition language (DDL) and control access to database objects using data control language (DCL). Language descriptions and specifies identifiers of database to database management system or directs others in coding database descriptions. Calculates optimum values for database parameters, such as amount of computer memory to be used by database, following manuals and using calculator. Specifies user access level for each segment of one or more data items, such as insert, replace, retrieve, or delete data. Specifies which users can access data bases and what data can be accessed by user. Tests and corrects errors, and refines changes to database.
- Enters SQL to create production data base. Uses database utility programs and 3rd party utilities to monitor database performance, such as distribution of records and amount of available memory. Directs programmers and analysts to make changes to data base management system. Reviews and corrects programs. Answers user questions. Confers with coworkers to determine impact of data base changes on other systems and staff cost for making changes to data base. Modifies data base programs to increase processing performance, referred to as performance tuning. Workers typically specialize in one or more types of data base management systems. Providing assistance in the planning, development, maintenance, and monitoring of integrated database systems, and ensuring that the conceptual and design phases of new applications are consistent with the structural parameters within the database environment.
- Evaluates users' requests for new data elements and systems, incorporates them into the existing shared data environment, and provides technical assistance. Coordinates the use of data to ensure data integrity and control redundancy, loads databases, and reorganizes as needed. Performs data modeling and prototyping. Performs logical and physical data modeling, designs relational database models, and creates physical data models from logical data models. Performs security recovery procedures. Determines and implements database search strategies and storage requirements. Maintains data dictionary ensuring uniformity of definitions and sets standards for use of data dictionary. Monitors database performance and recommends efficiency improvements. Creates test database environment for applications section, including the creation of necessary libraries and procedures.
- Executes the procedures necessary to save, retrieve, and recover databases from hardware and software failures within established procedures. Assists with determining, implementing, and enhancing standards on database security and with monitoring agency disaster recovery procedures and systems. Assists with the installation of database software and with analyzing, designing, and implementing databases. Assists in benchmarking and threshold testing of databases and with establishing and controlling necessary database security. Assists in the selection of database management software. Experience in computer systems analysis or computer programming work.
- Knowledge of the principles, practices, and techniques of computer programming and systems design; of computer operations, systems, and procedures; of project control and cost estimating techniques; of computer programming languages; of data processing flowcharting techniques; of database structures and theories; and of current database technologies.

Database Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Exhibit D: Job Titles and Descriptions

Database Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Database Administrator 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 4	
Years of Experience	12 - 14 years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 5	
Years of Experience	15 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

GOVERNANCE

27. IT Procurement Analyst

- Considerable knowledge of principles and practices of IT procurement including automated procurement systems and tools, budget monitoring/maintenance, file and records management, statistical report development, and related bookkeeping/governmental accounting/fiscal procedures.

Exhibit D: Job Titles and Descriptions

- Effective oral and written communication skills; strong computer skills including a high level of proficiency with MS Office, databases, spreadsheets, and automated financial systems; proven ability to maintain divisional inventory and to establish effective working relationships with both internal and external vendors and personnel.
- Demonstrated ability to analyze data, develop statistical reports, reconcile records, and provide customer service at all levels; significant experience in IT procurement including, but not limited to, software and hardware licenses; experience administering state contracts.
- Degree in information technology, business, a related field, or an equivalent combination of education and/or training/experience; demonstrated competencies in customer service, problem solving, organizational and negotiation skills.

IT Procurement Analyst	
Years of Experience	A minimum of four years of experience required in the following areas: IT procurement experience, purchasing of software/hardware, negotiation. A minimum of two years of experience required in problem solving. A minimum of four years of experience in an accounting-related field highly desired.
Job Description	Will be responsible for a wide range of information technology procurements including IT goods and services through a variety of purchasing options; follows procurement guidelines, selects appropriate procurement method, processes and maintains procurement requests and invoices through automated accounting systems; reconciles vendor inquiries and discrepancies; participates in pre-bid conferences as needed. Will also perform administrative and fiscal tasks, accounts payable and receivable, and IT software inventory; will compile financial data and review/analyze for budget formulation; develop and maintain numerous fiscal and/or procurement related spreadsheets; and perform related functions as required.

28. IT Governance Analyst

- Works within IT Project Governance to provide oversight, direction and guidance/consultation for IT projects from project request submission through project close-out and post-implementation review. As a governance liaison, works with project managers to ensure all aspects of project management disciplines and ensures compliance with agency specific and State project management and project governance policies, procedures, standards and guidelines have been followed. Reviews and validates project deliverables to ensure information accuracy, thoroughness, completeness and compliance. Ensures all projects have a valid project plan that maintains scope, tasks, schedules, estimates, and status, and that information is accurately disseminated to IT management. Directs corrective actions in any area where performance falls below objectives.
- Assists with the development, promulgation, implementation and regular updates of IT Project Management and Systems Development standards, policies, and guidelines and any other governance policies and procedures needed for the overall IT governance framework. Ensures compliance with all policies and procedures in the execution of technology projects. Monitor the progress of technology projects and provide quick and accurate responses to IT Management as to status, issues and risks of those projects. Serve as liaison between IT management, project managers and SOM. Monitor and support the management of the division's technology portfolio comprised of projects, systems, data and tools. Provide mentoring, coaching, training and on-boarding for project managers in the areas of project management tools, standards, policies, and procedures. Train and mentor new members of the IT Project Governance team as needed.
- Initiate and conduct ongoing and regular IT Policy, Process, Procedure, and Standard reviews to ensure technology and governance best practices are incorporated into the agency's set of procedures and improve business and IT compliance with legislative and regulatory policies which impact IT deliverables. Assist in the preparation of reports and materials for regularly scheduled project and program portfolio reviews with IT CIO, IT Managers and PM's.

Exhibit D: Job Titles and Descriptions

IT Governance Analyst	
Years of Experience	10 years of experience in the field
Job Description	Ensure projects have adequate project management and oversight structures and processes that will enable the success of the project. Verifies and validates project status reports. Assists with the training and implementation of new agency and/or COV project policies, standards, guidelines and procedures introduced. Assists with assessment of project management training needs, schedules classes as needed, or provides one on one project consulting. Reviews project documentation including project initiation documents such as the project charter, budget, schedule, cost benefit analysis, etc. throughout the project lifecycle until the end of the project including the project closeout report. Recommends approval of documents to AITR and Director. Attends project review and steering committee meetings for all projects for which he or she is governance liaison.

IT MANAGEMENT SERVICES

29. Business Continuity Planner

Business Continuity Planner	
Years of Experience	5 or more years
Job Description	Provides specialized expertise in business continuity planning, project management and problem analysis and resolution. Participates in major project assignments to: assist business partners in resolving business issues related to work area (business function), recovery planning and recovery plan development / enhancements. Capitalizes on business opportunities to refine processes to mitigate exposure during disruptions of service, and possibly, improve day-to-day operations. Facilitates and coordinates the development of work area (business function) business continuity plans for business units. Responsibilities include, but are not limited to, the following: assist business units with assessment of potential business impact, definition of critical, time-sensitive functions, design, development, and documentation of business continuity plans, recommend recovery strategies and options, and assist with the implementation of recovery solutions, coordinate business continuity plan exercises, develop schedules for training / awareness for business partner associates, coordinate development of business unit schedules for annual business continuity documentation maintenance and update, exercises, and independent review and validation, report the business continuity status of business units to senior management, provide expertise and support to management and business functional areas, as requested, when a disruption occurs.

30. Business Process Reengineering

Business Process	
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Exhibit D: Job Titles and Descriptions

Reengineering	
Years of Experience	5 or more years
Job Description	<p>This position applies process improvement and re-engineering methodologies and principles to conduct process modernization projects. Additional duties may include activity and data modeling, developing modern business methods, identifying best practices, and creating and assessing performance measurements. Providing group facilitation, interviewing, training, and provides additional forms of knowledge transfer. Serves as a key coordinator between multiple project teams to ensure enterprise wide integration of re-engineering efforts.</p> <p>Additional Responsibilities: Design workflow for purchasing software, collect and analyze statistics/metrics for software purchases, identify gaps in all associated processes and risks, establish memorandum of understanding (MOU's) where required, maintain SOP's for all processes, and support the client at customer meetings.</p>

31. Enterprise Architect

Enterprise Architect	
Years of Experience	5 or more years
Job Description	<p>this position works across Application Development, Service Delivery and Infrastructure to identify, research, discuss, design, and implement key enterprise architecture standards. Other responsibilities include: Research, design, document, build, and pilot prioritized topics for standards. Manage the list of potential standards and work with the application development management to prioritize efforts. Work closely with Development, Infrastructure, and Service Delivery teams to understand their needs and ensure the best enterprise standard is implemented. Work closely with development teams to pilot and prove out the standard. Drive the identification, development and implementation of key new standards in areas such as: Performance Testing, Security, Event Management, Web UI Framework, .NET Design Standards, Application To Application Communication, Caching, etc. Propose new enterprise standards based on business need, IT need and technology advances. Assist development teams to implement the standards into business applications. Investigate new technology and techniques that should be developed into an agency enterprise architecture standard.</p> <p>Lead key enterprise architectural design projects as necessary. Operate as business savvy technical leader across the organization. Influence development teams to design high-quality technical solutions that fit the Enterprise Architecture and standards. Educate application development managers, developers, and business analyst on State Enterprise Architecture Standards.</p>

32. IT Strategist

IT Strategist	
Years of Experience	5 or more years

Exhibit D: Job Titles and Descriptions

Job Description	Supports top management in IT strategy formulation, IT strategic plans execution, strategic process improvements, and communication of IT strategies to all stakeholders. Analyze business performance, industry trends, existing or new regulatory requirements and their impact on IT operations; make recommendations on alternative courses of action, including risk assessment, capital investment, and acquisitions needed to align IT strategy with agency strategic plan. Requires advanced knowledge of strategic planning concepts and frameworks, business issues and concepts, research methodology, general management and financial analysis. Additionally, requires good interaction skills with senior management, with ability to articulate and defend recommendations made.
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33. IT Auditor

IT Auditor 1	
Years of Experience	0-2 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 2	
Years of Experience	2-4 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 3	
Years of Experience	4-6 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk

Exhibit D: Job Titles and Descriptions

	management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.
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IT Auditor 4	
Years of Experience	6-8 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 5	
Years of Experience	8+ years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

34. IT Trainer

IT Trainer	
Years of Experience	0-2 years
Job Description	Develop an agency-wide training plan. Coordinate IT strategic planning process to determine the department's training requirements through communications with staff throughout the agency. Identify existing training that meets the requirements and provide a gap analysis of courses to develop in house. Develop curriculum and training plan. Develop evaluation and monitoring methods to ensure quality training. Develop short video training. Produce written documents with clearly organized thoughts using proper English sentence construction, punctuation, and grammar.

Exhibit D: Job Titles and Descriptions

35. IT Sourcing Consultant

IT Sourcing Consultant 1	
Years of Experience	5+ years
Job Description	Position requires the ability to work independently as the team leader in the development and execution of sourcing strategies for assigned projects, assisting customers in solving IT business problems. This role will function to lead the sourcing process, through creation of the solicitation documents, evaluation of proposals and in execution of agreed upon negotiations strategy with selected suppliers. Leads evaluation and execution of risk mitigation strategies and establishes solid contracts that are in the long-term best interest of the customer. Has responsibility for managing customer expectations for project deliverables through effective and timely communications. Conducts a post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.

IT Sourcing Consultant 2	
Years of Experience	10+ years
Job Description	Position requires a proven ability to lead development and execution of complex sourcing strategies for assigned projects and consulting with customers to solve IT business problems. Conducts meaningful market research and works with business owners to develop sourcing scope, timelines and deliverables. This role will function as the leader of cross-functional teams through the sourcing process, in the evaluation of proposals, conducting and managing the negotiations process with selected suppliers. Has responsibility for proactively managing customer expectations for project deliverables through effective and timely communications to various levels of senior management. Identifies and manages contractual risks and establishes firm contracts that are in the long-term best interest of the customer. Conduct post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.

IT SECURITY

36. IT Security Analyst

- Monitor and advise on information security issues related to the systems and workflow at an agency to ensure the internal IT security controls for an agency are appropriate and operating as intended. Coordinate and execute IT security related projects for the agency. Coordinate response to information security incidents. Develop and publish Information Security policies, procedures, standards and guidelines based on knowledge of best practices and compliance with State IT Security policies, standards, and guidelines..
- Conduct campus-wide data classification assessment and security audits and manage remediation plans. Collaborate with IT management, Internal Audit, and SOM to manage security vulnerabilities. Create, manage and maintain user security awareness. Conduct security research and keeps abreast of latest security issues.

Exhibit D: Job Titles and Descriptions

- Prepares IT security documentation, including department policies and procedures, agency notifications, Web content, and alerts.

IT Security Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

IT Security Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

IT Security Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

37. IT Security Architect

IT Security Architect 1	
Years of Experience	3+ years of experience in security architecture 9+ years of experience in information security 9+ years of experience working with computer systems 9+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware
Job Description	Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying State IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture.

Exhibit D: Job Titles and Descriptions

	<p>Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills.</p> <p>Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.</p>
IT Security Architect 2	
Years of Experience	<p>5+ years of experience in security architecture</p> <p>11+ years of experience in information security</p> <p>11+ years of experience working with computer systems</p> <p>11+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware</p>
Job Description	<p>Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying State IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture.</p> <p>Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills.</p> <p>Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.</p>

38. IT Security Auditor

IT Security Auditor	
Years of Experience	15 or more years with IT security and audit experience
Job Description	Advanced knowledge of security standards and progressive experience performing security audits.

Exhibit D: Job Titles and Descriptions

PROJECT MANAGEMENT

39. Program Manager

- Provides project control support and coordinates the work of the PCO staff implementing solutions to meet the customer requirements and supports the customer's on-going system engineering life-cycle processes. Responsible for supporting all project delivery work in accordance with required methodology (such as the State of Michigan's State Unified Information Technology Environment (SUITE) methodology), and following all standard project management industry standards such as PMI's framework.
- Coordinates and controls the end to end process of capturing all key project artifacts, including but not limited to: business cases, project charters, baselined project schedules, project management plans, change requests, status reports, lessons learned. May require consistent utilization of the State of Michigan's SUITE methodology and Project Portfolio Management (PPM) tool.
- Raises identified issues and risks to the appropriate senior management level including the Project Management Office (PMO) for action inclusive of description of the issue, comprehensive analysis of options and recommendation for remediation.
- Manages portfolio of projects' execution to ensure conformity to established budgets, timelines and scope.
- Works with the stakeholders, including the PMO to facilitate project governance effectiveness through weekly status reporting, project/portfolio data, regular governance meetings, etc.

Program Manager 1	
Years of Experience	5+ years of recent experience in managing IT projects (preferably within a government environment) 3-5 years of experience in successfully managing the establishment and operations of a fully functioning Project Control Office
Job Description	Experience in successfully managing Information Technology (IT) projects (full project life cycle) whose budget was greater than \$10,000,000 (excluding hardware/software costs) and whose timeline was greater than 3 years. Experience in successfully managing a PCO for complex projects (including multiple stakeholders, PCO staff, multiple vendors, data conversions and multiple technologies). Documented experience in successfully managing a PCO/PCO for complex projects (including multiple stakeholders, PCO staff, multiple vendors, data conversions and multiple technologies). Documented experience in performing Project Management, Quality Management, or other critical functions within complex Information Technology projects (preferably with budgets greater than \$10,000,000 and multi-phase, multiyear implementations). Professional certification in Project Management, such as Project Management Professional (PMP) certification from the Project Management Institute.

40. Project Manager

- Designs, plans, and coordinates work teams. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex

Exhibit D: Job Titles and Descriptions

application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable.

- May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project.

Project Manager 1	
Years of Experience	Minimum 2 years of experience as a Project Manager.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 2	
Years of Experience	Minimum 4 years of experience as a Project Manager.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 3	
Years of Experience	Minimum 5 years of experience as a Project Manager.
Job Description	Advanced experience managing programs of projects, complex projects or multiple projects. Demonstrated and advanced understanding of project management methodologies. Relies on experience and judgment to plan and accomplish goals. A significant degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

41. Project Coordinator

Project Coordinator	
Years of Experience	Minimum 2 years of experience as a Project Coordinator
Job Description	The Project Coordinator shall provide day-to-day coordination of project tasks. The project coordinator maintains version control and provides administrative support for project management information system. Prior experience of large project administration. Ability to communicate at all levels of an organization and third parties. Experience with similar scale roles and organizations. The project coordinator is task focused. Works under the direction of the project manager and reports to a project manager.

TELECOMMUNICATIONS AND COMPUTER NETWORKING

42. Network Administrator

- Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software. Monitor network to ensure network availability to all system users and perform necessary maintenance to support network availability. May supervise other network support and client server specialists and plan, coordinate, and implement network security measures. Coordinate the development, implementation, and maintenance of a local area network or wide area network. Maintains the network's physical and logical structures, including network connections. Maintains network support software, analyzes user support statistics, and recommends appropriate measures. Installs, tests, and maintains network hardware and software. Prepares and analyzes statistics on network utilization and availability. Prepares training courses and provides user support and training in the use of available hardware, software, and utilities. Performs tuning and capacity planning activities to enhance the performance of the network resources.
- Assist in the development, implementation, maintenance, and monitoring of a local area network or wide area network. Works under close supervision with minimal latitude for the use of initiative and independent judgment. Performs procedures for backup, recovery, and archival of files stored on the network. Communicates with vendors, users, management, and network programming staff. Serves as contact for remote network locations to obtain clarification of problems and to identify solutions or corrective actions. Assists in preparing training courses and providing user support and training in the use of available hardware, software, and utilities. Assists in maintaining the local area network or wide area network, cable and hub installations, and inventories. Conducts product evaluations of upgraded or new hardware and software—identifying strengths, weaknesses, and potential benefits to the agency—and recommends enhancements to network facilities.
- Assists in maintaining the network's physical and logical structures and in installing and testing hardware and software. Assists in performance tuning and capacity planning activities to enhance the performance of the network resources and in maintaining network support software. Assists in or conducts product evaluations of upgraded or new hardware and software and identifies strengths, weaknesses, and potential benefits to the agency. Assists in maintaining the operating system and security software utilized on the network, including the addition of new users to the network and establishment of rights and privileges. Experience in local or wide area network work. Knowledge of network facilities and data processing techniques; of personal computer hardware and software; of network operating system and security software; and of performance monitoring and capacity management tools.

Network	
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Exhibit D: Job Titles and Descriptions

Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

43. Network Architect

- Participates in designing and developing the network to ensure that it is secure, reliable, and robust; implements and maintains network management servers that assist the agency in managing, monitoring, and securing the network.
- Develops and implements detection activities to test network vulnerability to intrusion by hostile individuals or groups; participates in detecting, investigating, documenting, and reporting actual or potential network security violations, intrusions, or other inappropriate use.
- Designs backbone infrastructure, network facilities, wide area networks, local area network, wireless and telecommunication networks to provide reliable Internet access, remote access to information technology services (ITS), network security, and high performance networking.
- Evaluates security products and tests security systems performance; assists in planning, implementing, and testing disaster recovery procedures; participates in making formal risk assessments related to network security.
- Certification in areas related to network management and security preferred (CNE, MCSE, MSCE+1, CISA, CCNA, CCNP, CCIE, CCSA, CCSE, CCSE-PLUS, Cisco Security Specialist).
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Exhibit D: Job Titles and Descriptions

Network Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Architect 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

44. Network Engineer

- Responsible for installing networking technologies and supporting networks. Assesses existing network configurations and makes recommendations based on product specifications. Configures equipment and software to meet business needs, trains others on the solution, and documents the solution for ongoing support. Functions as part of a team on larger projects, or individually provides the services on support visits or smaller projects. Provides technical support and assists with the design of network solutions.
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Network Engineer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent

Exhibit D: Job Titles and Descriptions

	judgment.
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Network Engineer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Engineer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Network Engineer 4	
Years of Experience	12 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

45. Public Safety Consultant

Public Safety Communications Consultant	
Years of Experience	Extensive knowledge of public safety communications and enhanced 9-1-1 systems. Knowledge of current 9-1-1 industry trends in technology architecture, microcomputers, networking, and the Internet/Worldwide Web.
Job Description	Performs systems analysis, design, documentation, and implementation of complex public safety communications projects. These projects may include needs analyses, staffing studies, consolidation plans, equipment assessments and planning, budget preparation and forecasting, performance reporting/analysis and other related supporting the operation of public safety answering points and first responders.

46. Radio Engineer

Radio Engineer	
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Exhibit D: Job Titles and Descriptions

Years of Experience	Considerable experience in voice, data and video systems. Training in electronics is required. Advanced technical experience in the design of voice, data, video and wireless/radio systems and services. FCC General Radio Telephone license or Amateur Radio License highly desirable. Certification in public procurement would be desirable. Advanced knowledge of complex communications systems; business management practices and principles.
Job Description	Conducts the review, analysis and design of current and proposed voice, data and video communications, both wire line and wireless, also develop engineering plans and networks for state agencies and institutions. Performs research to develop recommendations for enhancements, expansions and/or consolidations of voice, data and video communications, using wire line and wireless equipment, facilities and services. Engineer system/network migration details toward sharing of integrated services, while laying the foundation of Open System Interconnections. Assist in the coordination, engineering and processing of FCC licenses. Educate and keeps abreast of FCC Land Mobile Radio (LMR) rules, policies, legal rulings and ongoing spectrum issues—analyzes results and impacts.



STATE OF MICHIGAN ENTERPRISE PROCUREMENT

Department of Technology, Management, and Budget
525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **3**
to
Contract Number **071B6600020**

CONTRACTOR	COMPUTER AID, INCORPORATED
	1390 Ridgeview Drive
	Allentown, PA 18104
	Dennis Lauderback
	248-449-4902
	Dennis_lauderback@compaid.com
	*****0878

STATE	Program Manager	Wensko, Steve	DTMB
		517-335-1084	
		wenskosc@Michigan.gov	
	Contract Administrator	Terry Mead	DTMB
		(517) 284-7035	
		meadt@michigan.gov	

CONTRACT SUMMARY				
DESCRIPTION: Vendor Managed Services (VMS) for Information Technology Staff Augmentation; Statewide				
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW	
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021	
PAYMENT TERMS		DELIVERY TIMEFRAME		
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
P-card Direct Voucher (DV) <input type="checkbox"/> Other			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
MINIMUM DELIVERY REQUIREMENTS				
DESCRIPTION OF CHANGE NOTICE				
OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		Click here to enter a date.
CURRENT VALUE		VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE	
\$164,840,000.00		\$ 0.00	\$164,840,000.00	
DESCRIPTION: Effective June 23, 2016, the following items are added to the Participating Addendum of this contract.				
1. Drug Testing language is added to Section 3. d., of the Participating Addendum. (see attachment Drug Testing)				
2. e-Verify language is added to Section 3. d., of the Participating Addendum. (see attachment e-Verify)				
3. Exhibit L, Key Personnel has been fully restated adding the Account Managers names. (see attached Exhibit L, Version 2)				
All other terms, conditions, specifications and pricing remain the same. Per contractor and agency agreement, DTMB Procurement approval.				

Drug Testing

On a case-by-case basis, the State may request that Supplier and Subcontractors initiate a drug screen on any Supplier and/or Subcontractor personnel. The results shall be used solely to determine the eligibility of Supplier and/or Subcontractor personnel to work within State facilities or on State systems. If provided to the State, results of drug screens will be promptly returned to Supplier, and will be treated as Confidential Information. Supplier and/or Subcontractor must utilize U.S. Department of Health and Human Services and/or Substance Abuse and Mental Health Services Administration (SAMHSA) Certified Laboratories for specimen testing and reporting services. Drug Testing will screen for Prohibited Drugs (defined below). Supplier and/or Subcontractor will present attestation of satisfactory completion of such tests. Supplier and/or Subcontractor is responsible for all costs and expenses associated with drug screens.

For purposes of this Section, “Prohibited Drugs” are defined as any of the following that are not prescribed by a physician or that are not included in over-the-counter medicines: (i) Cannabinoids (THC, Marijuana); (ii) Cocaine; (iii) Phencyclidine (PCP); (iv) Amphetamines (including methamphetamine); and (v) Opiates (codeine, morphine, heroin, oxycodone). Supplier and/or Subcontractor personnel may be disqualified to provide services if they fail to submit to such a test for Prohibited Drugs or their screening shows a verified positive result for Prohibited Drugs without a proper prescription.

e-Verify

The State may require that the Contractor and/or Sub-contractor utilize e-Verify employment eligibility verification of resources selected for engagement in order to comply with contractual requirements. Contractor and/or Sub-contractor will be responsible for all costs associated with the usage of e-Verify.

Exhibit L: Contractor Key Personnel

Implementation Project Manager: Mike Park

Mike Park will serve as the Implementation Project Manager for the State of Michigan program. Mike has 18 years of experience as a Transition Manager and served as our Implementation Manager for the New Jersey, Iowa, Ohio, Virginia, Arkansas and North Carolina MSP implementations.

Contract Manager: Ellen Sigl

Ellen Sigl will be the Contract Manager for the State of Michigan. Ellen has been in a leadership role in our MSP Practice for 11 years. She has 18 years of IT experience and has been managing and overseeing our many MSP accounts. She is intimately familiar with the successful policies implemented under our MSP contracts and provides executive oversight to all of the Account Management teams. She has been certified by Staffing Industry Analysts as a Certified Contingent Workforce Professional (CCWP).

Account Managers (2): Trent Vondrasek, Elijah Beckwith

CAI will maintain an on-site Account Management team, made up of two individuals. These individuals will be hired during the first quarter of contract award and they will work on site in Lansing Michigan.

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET
PROCUREMENT

525 W. ALLEGAN STREET
 LANSING, MI 48933

P.O. BOX 30026
 LANSING, MI 48909

CHANGE NOTICE NO. 2
 to
 CONTRACT NO. 071B6600020
 between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF CONTRACTOR	PRIMARY CONTACT	EMAIL
Computer Aid, Incorporated 1390 Ridgeview Drive Allentown PA, 18104	Dennis Lauderback	Dennis_lauderback@compaid.com
	PHONE	CONTRACTOR'S TAX ID NO. (LAST FOUR DIGITS ONLY)
	248-449-4902	*****0878

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
PROGRAM MANAGER / CCI	DTMB	Wensko, Steve	517-335-1084	wenskos@Michigan.gov
CONTRACT ADMINISTRATOR	DTMB	Terry Mead	517-284-7035	meadt@michigan.gov

CONTRACT SUMMARY			
DESCRIPTION: Vendor Managed Services (VMS) For Information Technology Staff Augmentation; Statewide			
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021
PAYMENT TERMS		DELIVERY TIMEFRAME	
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
P-card	Direct Voucher (DV)	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS			

DESCRIPTION OF CHANGE NOTICE				
EXERCISE OPTION?	LENGTH OF OPTION	EXERCISE EXTENSION?	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		
CURRENT VALUE		VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE	
\$164,840,000.00		\$ 0.00	\$164,840,000.00	
DESCRIPTION: Effective March 24, 2016, this contract is hereby amended to add the attached Sub-Contractor specific Insurance Requirements. . All other terms, conditions, specifications, and pricing remain the same, per Contractor and Agency agreement, DTMB Procurement approval.				

Sub-Contractor Insurance Requirements. Sub-Contractor must maintain the insurances identified below and is responsible for all deductibles. All required insurance must: (a) protect the State from claims that may arise out of, are alleged to arise out of, or result from Sub-Contractor's performance; (b) be primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State; and (c) be provided by a company with an A.M. Best rating of "A" or better, and a financial size of VII or better.

Required Limits	Additional Requirements
Commercial General Liability Insurance	
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence Limit \$1,000,000 Personal & Advertising Injury Limit \$2,000,000 General Aggregate Limit \$2,000,000 Products/Completed Operations	Sub-Contractor must have their policy endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds using endorsement CG 20 10 11 85, or both CG 20 10 07 04 and CG 20 37 07 04.
Umbrella or Excess Liability Insurance	
<u>Minimal Limits:</u> \$5,000,000 General Aggregate	Sub-Contractor must have their policy endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds.
Automobile Liability Insurance	
<u>Minimal Limits:</u> \$1,000,000 Per Occurrence	
Workers' Compensation Insurance	
<u>Minimal Limits:</u> Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
Employers Liability Insurance	
<u>Minimal Limits:</u> \$500,000 Each Accident \$500,000 Each Employee by Disease \$500,000 Aggregate Disease.	
Privacy and Security Liability (Cyber Liability) Insurance	
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence \$1,000,000 Annual Aggregate	Sub-Contractor must have their policy: (1) endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds; and (2) cover information security and privacy liability, privacy notification costs, regulatory defense and penalties, and website media content liability.
Professional Liability (Errors and Omissions) Insurance	
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence \$1,000,000 Annual Aggregate	

If any of the required policies provide **claims-made** coverage, the Sub-Contractor must: (a) provide coverage with a retroactive date before the effective date of the contract or the beginning of Contract Activities; (b) maintain coverage and provide evidence of coverage for at least three (3) years after completion of the Contract Activities; and (c) if coverage is canceled or not renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, Sub-Contractor must purchase extended reporting coverage for a minimum of three (3) years after completion of work.

Require that subcontractors maintain the required insurances contained in this Section; notify the Contract Administrator within 5 business days if any insurance is cancelled; and waive all rights against the State for damages covered by insurance. Failure to maintain the required insurance does not limit this waiver.

This Section is not intended to and is not be construed in any manner as waiving, restricting or limiting the liability of either party for any obligations under this Contract (including any provisions hereof requiring Sub-Contractor to indemnify, defend and hold harmless the State).

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET
PROCUREMENT

525 W. ALLEGAN STREET
LANSING, MI 48933

P.O. BOX 30026
LANSING, MI 48909

CHANGE NOTICE NO. 1
to
CONTRACT NO. 071B6600020
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR	PRIMARY CONTACT	EMAIL
Computer Aid, Incorporated 1390 Ridgeview Drive Allentown PA, 18104	Dennis Lauderback	Dennis_lauderback@compaid.com
	PHONE	CONTRACTOR'S TAX ID NO. (LAST FOUR DIGITS ONLY)
	248-449-4902	*****0878

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
PROGRAM MANAGER / CCI	DTMB	Wensko, Steve	517-335-1084	wenskos@Michigan.gov
CONTRACT ADMINISTRATOR	DTMB	Terry Mead	(517) 284-7035	meadt@michigan.gov

CONTRACT SUMMARY			
DESCRIPTION: Vendor Managed Services (VMS) For Information Technology Staff Augmentation; Statewide			
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February 8, 2016	June 30, 2021	0 - 0 Year	June 30, 2021
PAYMENT TERMS		DELIVERY TIMEFRAME	
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
P-card Direct Voucher (DV) <input type="checkbox"/> Other			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS			

DESCRIPTION OF CHANGE NOTICE				
EXERCISE OPTION?	LENGTH OF OPTION	EXERCISE EXTENSION?	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		
CURRENT VALUE		VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE	
\$164,840,000.00		\$ 0.00	\$164,840,000.00	
DESCRIPTION: Effective 3/11/2016, this contract is amended to add the attached revised Exhibit C,(CAI Michigan Rate Card), Version 2, and Exhibit D, (Job Titles and Descriptions), Version 2, which replaces in whole the existing Exhibit C and Exhibit D in the Contract. All other terms, conditions, specifications, and pricing remain the same, per Contractor and Agency agreement, DTMB Procurement approval.				

Exhibit C: CAI Michigan Rate Card

Job Category	Job Title	Skill Level	Not to Exceed Bill Rate
Applications	Programmer Analyst	Analyst 1	\$70.77
		Analyst 2	\$83.89
		Analyst 3	\$91.53
		Analyst 4	\$96.93
		Analyst 5	\$98.21
		Analyst 6	\$114.71
	Programmer	Programmer 1	\$66.58
		Programmer 2	\$69.93
		Programmer 3	\$79.63
		Programmer 4	\$92.74
		Programmer 5	\$97.75
		Programmer 6	\$114.54
	Software Test Analyst	Analyst 1	\$41.79
		Analyst 2	\$46.87
		Analyst 3	\$57.85
		Analyst 4	\$59.56
		Analyst 5	\$61.12
	Technical Writer	Technical Writer 1	\$45.71
		Technical Writer 2	\$48.34
		Technical Writer 3	\$60.33
	Business Analyst	Analyst 1	\$57.75
		Analyst 2	\$60.41
		Analyst 3	\$73.03
		Analyst 4	\$83.29
		Analyst 5	\$93.35
	System Analyst	Analyst 1	\$66.58
		Analyst 2	\$69.93
		Analyst 3	\$76.50
		Analyst 4	\$89.40
		Analyst 5	\$96.86
	Geographic Information Systems	Analyst 6	\$109.34
		Software Solutions Architect	\$112.30
		Geospatial Projects Manager	\$112.88
		Analyst	\$106.24
		Specialist I	\$75.25
		Specialist II	\$87.85
		Technician Trainee	\$70.77
		Technician I	\$75.25
		Technician II	\$79.65
		Technician III	\$83.89
	Graphic Designer	Graphic Designer 1	\$48.25
		Graphic Designer 2	\$52.55
	Mobile Specialist	Mobile Specialist 1	\$176.81
		Mobile Specialist 2	\$212.17

Exhibit C: CAI Michigan Rate Card

Job Category	Job Title	Skill Level	Not to Exceed Bill Rate
Applications	Web Application Developer	Web Application Developer 1	\$65.84
		Web Application Developer 2	\$70.20
	Webmaster	Webmaster 1	\$66.57
		Webmaster 2	\$71.64
Customer/Technical Support	Help Desk	Help Desk 1	\$39.04
		Help Desk 2	\$45.01
		Help Desk 3	\$50.70
	Technical Support	Technical Support 1	\$56.02
		Technical Support 2	\$63.85
		Technical Support 3	\$71.96
	Infrastructure Solutions Architect	Infrastructure Solutions Architect 1	\$80.95
		Infrastructure Solutions Architect 2	\$85.46
		Infrastructure Solutions Architect 3	\$98.59
		Infrastructure Solutions Architect 4	\$122.08
		Infrastructure Solutions Architect 5	\$129.61
	System Administrator	System Administrator 1	\$62.41
		System Administrator 2	\$72.49
		System Administrator 3	\$80.93
Data Management	Database Architect	Database Architect 1	\$80.48
		Database Architect 2	\$83.40
		Database Architect 3	\$89.49
		Database Architect 4	\$105.80
	Data Warehouse Architect	Data Warehouse Architect 1	\$84.74
		Data Warehouse Architect 2	\$104.41
		Data Warehouse Architect 3	\$107.30
	Database Administrator	Database Administrator 1	\$65.76
		Database Administrator 2	\$81.76
		Database Administrator 3	\$91.69
		Database Administrator 4	\$95.86
		Database Administrator 5	\$104.12
Governance	IT Governance Analyst		\$139.15
	IT Procurement Analyst		\$72.64
IT Management Services	Business Continuity Planner		\$106.45
	Business Process Reengineering		\$116.64
	Enterprise Architect		\$148.52
	IT Strategist		\$129.70
	IT Auditor	I.T. Auditor 1	\$53.43
		I.T. Auditor 2	\$58.45
		I.T. Auditor 3	\$76.06
		I.T. Auditor 4	\$85.00
		I.T. Auditor 5	\$89.81
	IT Trainer		\$68.92
	IT Sourcing Consultant	IT Sourcing Consultant 1	\$106.34
		IT Sourcing Consultant 2	\$120.17

Exhibit C: CAI Michigan Rate Card

Job Category	Job Title	Skill Level	Not to Exceed Bill Rate
IT Security	IT Security Analyst	IT Security Analyst 1	\$64.94
		IT Security Analyst 2	\$76.78
		IT Security Analyst 3	\$80.06
	IT Security Architect	IT Security Architect 1	\$79.11
		IT Security Architect 2	\$83.04
	Security Auditor		\$133.69
Project Management	Project Manager	Project Manager 1	\$118.21
		Project Manager 2	\$122.89
		Project Manager 3	\$127.57
	Project Coordinator		\$50.10
Telecommunications and Computer Networking	Network Administrator	Network Administrator 1	\$57.13
		Network Administrator 2	\$62.36
		Network Administrator 3	\$67.16
	Network Architect	Network Architect 1	\$68.11
		Network Architect 2	\$76.21
		Network Architect 3	\$94.39
	Network Engineer	Network Engineer 1	\$62.29
		Network Engineer 2	\$68.11
		Network Engineer 3	\$81.02
		Network Engineer 4	\$92.71
	Public Safety Consultant		\$87.52
	Radio Engineer		\$115.67

Exhibit D: Job Titles and Descriptions

Applications	3
1. Programmer Analyst	3
2. Programmer	5
3. Software Test Analyst	6
4. Technical Writer	9
5. Business Analyst	10
6. System Analyst	12
7. Software Solutions Architect	13
8. Geospatial Projects Manager	14
9. Geographic Information System Analyst	14
10. Geographic Information System Specialist 1	15
11. Geographic Information System Specialist 2	15
12. Geographic Information System Technician Trainee	15
13. Geographic Information System Technician I	16
14. Geographic Information System Technician II	16
15. Geographic Information System Technician III	17
16. Graphic Designer	17
17. Mobile Specialist	18
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19. Webmaster	19
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20. Help Desk	19
21. Technical Support	21
22. Infrastructure Solutions Architect	22
23. System Administrator	23
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27. IT Procurement Analyst	28
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Exhibit D: Job Titles and Descriptions

30.	Business Process Reengineering	30
31.	Enterprise Architect	31
32.	IT Strategist	31
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35.	IT Sourcing Consultant	34
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36.	IT Security Analyst	34
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41.	Network Administrator	39
42.	Network Architect	40
43.	Network Engineer	41
44.	Public Safety Consultant	42
45.	Radio Engineer	42

Exhibit D: Job Titles and Descriptions

APPLICATIONS

1. Programmer Analyst

- Plans, develops, tests, and documents computer programs, applying knowledge of programming techniques and computer systems. Evaluates user request for new or modified program, such as for financial or human resource management systems, clinical research trial results, statistical study of traffic patterns, or analyzing and developing specifications for bridge design, to determine feasibility, cost and time required, compatibility with current system, and computer capabilities. Consults with user to identify current operating procedures and clarify program objectives. Formulates plan outlining steps required to develop program, using methodologies such as structured analysis and design or object-oriented development.
- Work involves assisting in analyzing systems outlines to develop programs for computer applications, writing solution programs, documenting the methods and procedures used in program development, and testing and correcting programs. Works under moderate supervision with limited latitude for the use of initiative and independent judgment. Develops block diagrams and machine logic flowcharts to represent operations and data flow for applications.
- Captures requirements using industry standard development frameworks and tools. Designs reports, forms and letters along with computer terminal screen displays to accomplish goals of user request. Reviews screens, reports, forms and letters designs with users. Converts project specifications, using industry standard tools, such as object-oriented tools and code generation, into sequence of detailed instructions and logical steps for coding into language processable by computer, applying knowledge of computer programming techniques and computer languages.
- Enters program codes into computer system. Enters commands into computer to run and test program. Reads computer printouts or observes display screen to detect syntax or logic errors during program test, or uses diagnostic software to detect errors. Replaces, deletes, or modifies codes to correct errors. Analyzes, reviews and alters program to increase operating efficiency or adapt to new requirements. Writes documentation to describe program development, logic, coding, and corrections. Writes manual for users to describe installation and operating procedures. Assists users to solve operating problems. Recreates steps taken by user to locate source of problem and rewrites program to correct errors. May use computer-aided software tools in each stage of system development. May train users to use program. May oversee installation of hardware and software. May provide technical assistance to program users. May install and test program at user site. May monitor performance of program after implementation. May specialize in developing programs for business or technical applications.

Programmer Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment

Exhibit D: Job Titles and Descriptions

Programmer Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Programmer Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 5	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer Analyst 6	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

Exhibit D: Job Titles and Descriptions

2. Programmer

- Converts data from project specifications and statements of problems and procedures to create or modify computer programs. Prepares, or receives detailed specifications to describe sequence of steps that program must follow and input, output, and logical operations involved. Analyzes specifications, applying knowledge of computer capabilities, subject matter, and symbolic logic. Confers with supervisor and representatives of departments concerned with program to resolve questions of program intent, data input, output requirements, and inclusion of internal checks and controls. Converts detailed specifications to language processable by computer. Enters program codes into computer system. Inputs test data into computer. Observes computer monitor screen to interpret program operating codes. Corrects program errors, using methods such as modifying program or altering sequence of program steps. May prepare computer block diagrams and machine logic flowcharts for detailed coding of problems, and provides for the documentation of programming work.
- Writes instructions to guide operating personnel during production runs. Analyzes, reviews, and rewrites programs to increase operating efficiency or to adapt program to new requirements. Compiles and writes documentation of program development and subsequent revisions. May assist computer operator to resolve problems in running computer program. May work with System Analyst to obtain and analyze project specifications. May direct and coordinate work of others to write, test, and modify computer programs. Work involves writing programs to solve problems, documenting the methods and procedures used in program development, and testing and correcting programs. Work involves analyzing system outlines to develop programs for computer applications; writing solution programs; May train others. Works under general supervision with limited latitude for the use of initiative and independent judgment. Analyzes proposed computer applications in terms of equipment requirements and capabilities. Assists in developing solutions to software-related problems. May assist in the generation or installation of systems software.
- Prepares test data. May assist in writing and maintaining functional and technical specifications. Experience in computer programming work. Knowledge of the principles, practices, and techniques of computer programming and systems analysis, of computer operations procedures and systems, and of computer programming languages. Skill in the use of computer equipment. Ability to design programs and systems architecture; to prepare program specifications; to code, test, and debug computer programs; to interpret technical information relating to computer programming and other areas of data processing; and to communicate effectively.

Programmer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Programmer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

Programmer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 5	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer 6	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

3. Software Test Analyst

- Develops, publishes, and implements test plans. Writes and maintains test automation. Evaluates, recommends, and implements automated test tools and strategies. Develops, maintains, and upgrades automated test scripts and architectures for application products. Also writes, implements, and reports status for system test cases for testing. Analyzes test cases and provides regular progress reports. Participates in the testing process through test review and analysis, test witnessing and certification of software.

Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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Analyst 2	
Years of Experience	4-7 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>

Analyst 3	
Years of Experience	7-10 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and</p>

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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Analyst 4	
Years of Experience	11-14 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>

Analyst 5	
Years of Experience	15 or more years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and</p>

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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4. Technical Writer

- Develops and maintains user and technical documentation and project process documentation for Application Teams. Understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. Provides expertise on technical concepts of applications and /or user groups and structuring procedures in a logical sequence, due to a broad understanding of the applications. Writes a variety of technical articles, reports, brochures, and/or manuals for documentation for a wide range of uses. May be responsible for coordinating the display of graphics and the production of the document.
- Develop, enhance, and maintain user documentation for multiple applications including documentation required for the operations provider. Develop on-line source documentation as appropriate. Maintain documentation libraries and subscription lists. Identify, create, revise, and maintain documentation and templates. Ensure appropriate control access/use of documentation materials. Maintain application and user documentation. Ensure messages and terminology is consistent across all written materials. Research and complete documentation service requests. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Follow quality standards. Ability to work in a team environment. Strong communication skills; both written and spoken.
- Composes technical documents, manuals, bulletins, brochures, publications, training manuals, and special reports. Organizes and coordinates the composition of material and drafting of forms suitable for reproduction. Reviews and edits prepared material and illustrations. Develops and refines material for publication in journals and periodicals. Prepares informational material for release to the mass media. Works with agency staff in the development of formats, graphics, and the layout of publications. Assists agency staff in preparing and refining material for speeches and other public presentations. May research product design, capabilities, and compatibility ranges.
- May oversee the writing, editing, publishing, and distribution of specification documents. May review various resources and prepare analyses or summaries. May train others. Experience in technical writing, journalism, or communications work. Knowledge of the techniques and methods of planning, organizing, and writing various types of materials; of research methodology; and of departmental policies, procedures, and regulations. Skill in the use of office equipment. Ability to conduct research; to compose, review, illustrate, and edit technical documents, materials, and reports; to communicate effectively; and to train others.

Exhibit D: Job Titles and Descriptions

Technical Writer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Writer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Technical Writer 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

5. Business Analyst

- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Experienced with business process reengineering and identifying new applications of technology to business problems to make business more effective. Familiar with industry standard (including Legacy, Core, and Emerging technologies), business process mapping, and reengineering. Prepares solution options, risk identification, and financial analyses such as cost/benefit, ROI, buy/build, etc. Writes detailed description of user needs, program functions, and steps required to develop or modify computer programs.
- Prepare and document Functional and Technical Specifications for reporting and data warehouse work. Assist with business warehouse/intelligence support and enhancements. Develops RFPs. Assist in deployment and management of end-user reporting tools and platforms. Work with IT and business project teams to understand reporting and data warehousing requirements and propose solutions. Document and provide knowledge transfer to the rest of the Enterprise Reporting Team for all solutions.
- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Familiar with relational database concepts, and client-server concepts. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a project manager. A certain degree of creativity and latitude is required.

Exhibit D: Job Titles and Descriptions

Business Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Business Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Business Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 5	
Years of Experience	16 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

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6. System Analyst

- Understands business objectives and problems, identifies alternative solutions, performs studies and cost/benefit analysis of alternatives. Analyzes user requirements, procedures, and problems to automate processing or to improve existing computer system: Confers with personnel of organizational units involved to analyze current operational procedures, identify problems, and learn specific input and output requirements, such as forms of data input, how data is to be summarized, and formats for reports. Writes detailed description of user needs, program functions, and steps required to develop or modify computer program. Reviews computer system capabilities, specifications, and scheduling limitations to determine if requested program or program change is possible within existing system.
- Studies existing information processing systems to evaluate effectiveness and develops new systems to improve production or specifications as required. Prepares specifications to detail operations to be performed by equipment and computer programs and operations to be performed by personnel in system. Conducts studies pertaining to development of new information systems to meet current and projected needs. Plans and prepares technical reports, memoranda, and instructional manuals as documentation of program development. Upgrades system and corrects errors to maintain system after implementation. May assist computer programmer in resolution of work problems related to project specifications, or programming. May direct and coordinate work of others to develop, test, install, and modify programs.
- Provides technical assistance and support for applications and hardware problems and for information sharing with external entities in a customer service environment. Provides field coordination and planning for the effective use of management information systems. Determines operational, technical, and support requirements for the location, installation, operation, and maintenance of various office equipment and systems. Prepares charts, diagrams, tables, and flowcharts. Details input and output record formats for computer programs. Assists in formulating logical descriptions of problems and devising optimum solutions. Assists in the design, development, and maintenance of various computer applications. May provide support and make recommendations for information technology systems processes associated with software technology planning, development, implementation, system security, and interfaces.
- Graduation from an accredited four-year college or university with major course work in computer science, computer information systems, or management information systems is generally preferred. Knowledge of the limitations and capabilities of computer systems and of the techniques used in the design of non-automated systems, of information technology equipment, of applicable programming languages, of computer hardware and software, of computer operating systems, of writing program code, and of automated mapping. Ability to analyze systems and procedures, to write and revise standards and procedures, to communicate effectively, and to train others.

System Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

System Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with

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	considerable latitude for the use of initiative and independent judgment.
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System Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

System Analyst 4	
Years of Experience	10 or more years of experience in the field.
Job Description	Advanced experience in the field.

System Analyst 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals.

System Analyst 6	
Years of Experience	14 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals. Works independently and cooperatively with management and stakeholders.

7. Software Solutions Architect

Solutions Architect	
Years of Experience	5 or more years of experience in the field.
Job Description	Lead and manage the design, implementation and delivery of system and software architecture designs, strategies and quality assurance plans. Design, prototype, develop and implement to achieve business results for the client. Experienced expert able to lead and deliver solutions using object-oriented, service-oriented architecture, and n-tier architectures. Adopt, develop, and execute a robust software development lifecycle, using industry best practices. Follows both the State and industry best practices for software engineering. • Leads in the development of long term technology strategy and planning for the entire organization leveraging existing and acquiring new resources. Leads and actively participates on project teams, clarifying business needs and requirements, performing analysis, design, development, integration, and maintenance of systems across

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	the enterprise. Willing and able to engage with other internal organizations to maximize delivery capabilities and provide value to clients. Participates and leads the development of delivery approach, and labor and cost estimates. Manage projects or tasks using the State and industry project delivery methodologies and best practices. Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.
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8. Geospatial Projects Manager

Geospatial Projects Manager	
Years of Experience	A minimum of three years of professional experience is required in Geographical Information System (GIS), cartography, CADD, or a related field. A minimum of three years of professional experience as a project manager for geospatial projects is required.
Job Description	Lead and direct cross-functional teams to deliver complex geospatial projects within the constraints of schedule, budget and scope. Assess desired outcomes and identify user requirements and needs. Design geospatial solutions, including geo-database schema, system requirements, system configuration and application functional requirements. Develop and obtain approval of project plans according to accepted practices and procedures. Integrate resources and develop additional resources to facilitate, manage and execute geospatial projects. Facilitate stakeholder communications, project reporting, and project oversight. Manage project closeout and the development of operations and support plans for geospatial data and application maintenance. Provide technical oversight and develop standards for geospatial data and applications.

9. Geographic Information System Analyst

Geographic Information System Analyst	
Years of Experience	A minimum of two years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing complex spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial basemap information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

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10. Geographic Information System Specialist 1

Geographic Information System Specialist 1	
Years of Experience	Two (2) years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

11. Geographic Information System Specialist 2

Geographic Information System Specialist 2	
Years of Experience	3-4 years of experience in the field or in a related area.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

12. Geographic Information System Technician Trainee

Geographic Information System Technician Trainee	
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Years of Experience	One year of professional experience related to GIS, cartography, CADD, or a related field, or a minimum of six undergraduate credit hours in GIS, cartography or CADD.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

13. Geographic Information System Technician I

Geographic Information System Technician I	
Years of Experience	A minimum of two (2) years of successful experience at the equivalent of the GIS Trainee level.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

14. Geographic Information System Technician II

Geographic Information System Technician II	
Years of Experience	A minimum of three (3) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

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15. Geographic Information System Technician III

Geographic Information System Technician III	
Years of Experience	A minimum of four (4) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

16. Graphic Designer

Graphic Designer 1	
Years of Experience	Less than five years industry experience.
Job Description	Ability to assemble and create images for use with electronic and print publishing. Strong understanding of visual identifies and application of logos and identity marks.

Graphic Designer 2	
Years of Experience	5-7 years industry experience.
Job Description	Advanced experience in the use of various design software and technologies; advanced understanding of electronic design standards and techniques.

Exhibit D: Job Titles and Descriptions

17. Mobile Specialist

- The Mobile Specialist serves in many capacities, including Developer, Engineer, Technical Architect, and Analyst for Mobile Projects. The Mobile Specialist often guides and mentors the technical team in all phases of the SDLC including requirement validation, detail design, development, and implementation.

Mobile Specialist 1	
Years of Experience	4 year college degree or equivalent technical study.
Job Description	<ul style="list-style-type: none">• Serves as the Designer, Developer and/or Engineer on Mobile Projects.• Meets with end users and technical staff of all types to gather business and system requirements• Develops and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects.• Develops standards, repeatable processes, and reusable components• Assists in project planning, including developing of timelines, composition of technical teams, and leveling of resources.• Mentors technical team leads and team members on Department processes and standards to promote consistency and improve productivity.• Assists in the development and review of technical deliverables on projects.

Mobile Specialist 2	
Years of Experience	4 year college degree or equivalent technical study.
Job Description	<ul style="list-style-type: none">• Serves as the Lead Architect/Designer/Developer /Engineer on Mobile Projects.• Meets with end users and technical staff of all types to gather business and system requirements.• Proposes comprehensive solutions based on business and technical requirements• Architects, designs, develops, and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects.• Develops standards, repeatable processes, and reusable components• Leads project planning, including developing of timelines, composition of technical teams, and leveling of resources.• Mentors and manages technical team leads and team members on Department processes and standards to promote consistency and improve productivity.• Leads the development and review of technical deliverables on projects.

Exhibit D: Job Titles and Descriptions

18. Web Application Developer

Web Application Developer 1	
Years of Experience	Five years industry experience.
Job Description	Perform specialized programming and technical work for website and Internet development.

Web Application Developer 2	
Years of Experience	5-7 years industry experience.
Job Description	Perform advanced programming and technical development for website and Internet development

19. Webmaster

Webmaster 1	
Years of Experience	Five years industry experience.
Job Description	Experience maintaining multiple websites. Responsibilities include publishing, examining traffic patterns and transactions, and maintaining usability standards.

Webmaster 2	
Years of Experience	More than five years of industry experience.
Job Description	Advanced experience maintaining multiple websites; examining traffic patterns and transactions; testing for multiple platforms; maintaining usability standards and security standards as they relate to the sites; and the ability to coordinate among content managers and developers.

CUSTOMER/TECHNICAL SUPPORT

20. Help Desk

- Provide technical assistance to computer system users on a variety of issues. Identifies, researches, and resolves technical problems. Responds to telephone calls, email and personnel requests for technical support. Documents, tracks, and monitors the problem to ensure a timely resolution. Has knowledge of commonly used concepts, practices, and procedures within a particular field. Answer questions or

Exhibit D: Job Titles and Descriptions

resolve computer problems for clients in person, via telephone or from remote location. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.

- Provide service and preventive maintenance activities on terminals, printers, personal computers, etc. Basic knowledge of electrical/mechanical principles and basic electronics. Read and comprehend technical service manuals and publications. Knowledge of basic mathematics to read and understand various gauges, meters, and measurement devices. Able to diagnose and repair products by replacing worn or broken parts, and making technical adjustments. Makes appropriate use of reference publications and diagnostic aids in resolving technical problems. Strong communication skills.
- Assist in coordination of changes, upgrades and new products, ensuring systems shall operate correctly in current and future environment. Provide accurate and complete answers to general use and administrative environment questions in a timely manner. Implement shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Ability to work in a team environment.

Help Desk 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Help Desk 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Help Desk 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Exhibit D: Job Titles and Descriptions

21. Technical Support

- Maintains, analyzes, troubleshoots, and repairs computer systems, hardware, and computer peripherals. Documents, maintains, upgrades or replaces hardware and software systems. Supports and maintains user account information including rights, security, and systems groups. Performs basic operation, monitoring, installation, trouble shooting, relocations, or maintenance of communications equipment. Identifies and resolves basic communications problems. Prepares or assists in the preparation of service record documentation. Shows awareness of standards and regulatory requirements related to assigned tasks.
- Assists in monitoring and providing assistance on the use and interface of systems, subsystems, and software applications. May be responsible for accessing data from and transferring data to various local, state, or federal databases. May assist in the review and recommendation of the procurement and inventory of information resources hardware or software. May write and update personal computer and mainframe application programs. Experience in automated data processing systems. Knowledge of the practices, principles, and techniques of computer operations, of information systems, of computer software and hardware, and of information security policies and procedures. Skill in the use and support of personal computers, in the use of applicable programs and systems, and in troubleshooting information systems. Ability to operate information technology systems, to communicate effectively, and to train others.
- Provides assistance in the design, development, and maintenance of various system applications. Provides technical assistance and support for applications and hardware problems. Installs, maintains, moves, and assists in testing and upgrading new and existing hardware/software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on system efficiency and utilization. May be responsible for accessing data from and transferring data to various local, state, or federal databases.
- Installs, maintains, moves, and assists in testing and upgrading new and existing hardware and software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Develops procedure manuals. Develops and makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on systems efficiency and utilization. May supervise the work of others.

Technical Support 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Support 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

Technical Support 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

22. Infrastructure Solutions Architect

- Must be proficient at the techniques that go into the formulation of architectures, including requirements discovery and analysis, application of abstraction, formulation of solution context, solution alternatives identification and assessment, technology selection, and architectural configuration. Extensive understanding and experience in technology areas for Mainframe and Distributed platforms, networking, databases, High Availability/Disaster Recovery, and IT security.
- Ability to work closely with client/application architects, senior managers, and project managers to design and assist with the implementation of the solutions infrastructure related components. Demonstrated ability to work independently and complete assigned project responsibilities under limited supervision. Experience and skills in prevailing industry architecture and engineering methodologies such as ITIL. Knowledge of and experience with a broad range of application servers, web servers, messaging servers, database servers, and related technologies. Able to analyze business requirements and define solutions to address complex business needs. Experience in web infrastructure design and operations including IP, HTTP, HTTPS, FTP, load balancing, clustering, failover, monitoring, diagnostics, performance tuning, etc. Possess high aptitude for problem-solving and trouble-shooting.

Infrastructure Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Infrastructure Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Infrastructure Architect 3	
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Exhibit D: Job Titles and Descriptions

Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Infrastructure Architect 4	
Years of Experience	10-12 years of experience.
Job Description	Advanced experience in architecting infrastructure solutions including proven experience with infrastructure integration.

Infrastructure Architect 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Includes descriptions detailed earlier as well as experience in architecting advanced infrastructure solutions which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

23. System Administrator

- The System Administrator (SA) is responsible for effective provisioning, installation/configuration, operation, and maintenance of computer hardware and software and related infrastructure. This individual participates in technical research and development to enable continuing innovation within the infrastructure. This individual ensures that system hardware, operating systems, software systems, and related procedures adhere to State policies, standards, and guidelines. Responsibilities include systems administration engineering and provisioning, operations and support, maintenance and research and development to ensure continual innovation. Install new / rebuild existing servers and configure hardware, peripherals, services, settings, directories, storage, etc. in accordance with standards and project/operational requirements. Perform daily system monitoring, verifying the integrity and availability of all hardware, server resources, systems and key processes, reviewing system and application logs, and verifying completion of scheduled jobs such as backups. Perform regular security monitoring to identify any possible intrusions. Perform daily backup operations, ensuring all required file systems and system data are successfully backed up to the appropriate media, recovery tapes or disks are created, and media is recycled and sent off site as necessary. Perform regular file archival and purge as necessary. Create, change, and delete user accounts per request. Provide Tier III/other support per request from various constituencies. Investigate and troubleshoot issues. Diagnose and recover from hardware or software failures. Coordinate and communicate with impacted constituencies. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software that supports GIS infrastructure applications or Asset Management applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required. Maintain data center environmental and monitoring equipment. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software or Asset Management

Exhibit D: Job Titles and Descriptions

applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required.

System Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

System Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

System Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

DATA MANAGEMENT

24. Database Architect

- Designs and builds relational databases. Develops strategies for data acquisitions, archive recovery, and implementation of a database. Must be able to design, develop and manipulate database management systems, data warehouses and multidimensional databases. Requires a depth and breadth of database knowledge that shall help with formal design of relational databases and provides insight into strategic data manipulation. Responsible for making sure an organization's strategic goals are optimized through the use of enterprise data standards. This frequently involves creating and maintaining a centralized registry of metadata. Capable of performing the role of a database administrator, if needed.

Database	
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Exhibit D: Job Titles and Descriptions

Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Database Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Database Architect 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Architect 4	
Years of Experience	12 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

25. Data Warehouse Architect

- Designs, implements and supports data warehousing. Implements business rules via stored procedures, middleware, or other technologies. Defines user interfaces and functional specifications. Responsible for verifying accuracy of data, and the maintenance and support of the data warehouse. Knowledge of data warehouse end-to-end implementation processes, from business requirement logical modeling, physical database design, ETL, end-user tools, database, SQL, performance tuning. Demonstrated problem resolution skills with team of persons, and strong leadership with implementation team Experience in data warehouse design and data modeling (both relational and dimensional) and development and maintenance of multi-dimensional data models. Development experience in implementation of data warehousing utilizing RDBMS. Understanding of data warehouse Metadata concepts, tools and different data

Exhibit D: Job Titles and Descriptions

warehouse methodologies. Expertise in SQL and proficiency in database tuning techniques. Responsible for the ongoing architecture and design of the data warehouse, data mart, and reporting environments. Develop strategies for flexibility and scalability, and define the future technical architecture direction for the business intelligence reporting physical environment.

- Responsible for proper selection of appropriate hardware, software, tools and system lifecycle techniques for the different components of the end-to-end data warehouse architecture including ETL, metadata, data profiling software, database platform, performance monitoring, reporting and analytic tools. Defining and documenting the technical architecture of the data warehouse, including the physical components and their functionality. Setting or enforcing standards and overall architecture for data warehouse systems. Monitoring the data warehousing industry and assisting in establishing the organization's data warehousing strategy and section of strategic warehousing tools and techniques. Ensuring compatibility of the different components of the DW architecture and ensuring alignment with broader IT strategies and goals. Ability to educate the project teams on the standards and architecture of each component of the data warehouse architecture. Very strong written and oral communication skills, including some presentation skills.

Data Warehouse Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Data Warehouse Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Data Warehouse Architect 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

26. Database Administrator

- Responsible for data analysis and database management. Involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Knowledge of the utilities and production tools used for data storage management

Exhibit D: Job Titles and Descriptions

to support the Application Team. Coordinates physical changes to computer databases; codes, tests, and implements physical database, applying knowledge of data base management system. Designs logical and physical databases reviews description of changes to database design to understand how changes to be made affect physical data base (how data is stored in terms of physical characteristics, such as location, amount of space, and access method).

- Establishes physical database parameters. Uses structured query language (SQL) to define database objects using database definition language (DDL) and control access to database objects using data control language (DCL). Language descriptions and specifies identifiers of database to database management system or directs others in coding database descriptions. Calculates optimum values for database parameters, such as amount of computer memory to be used by database, following manuals and using calculator. Specifies user access level for each segment of one or more data items, such as insert, replace, retrieve, or delete data. Specifies which users can access data bases and what data can be accessed by user. Tests and corrects errors, and refines changes to database.
- Enters SQL to create production data base. Uses database utility programs and 3rd party utilities to monitor database performance, such as distribution of records and amount of available memory. Directs programmers and analysts to make changes to data base management system. Reviews and corrects programs. Answers user questions. Confers with coworkers to determine impact of data base changes on other systems and staff cost for making changes to data base. Modifies data base programs to increase processing performance, referred to as performance tuning. Workers typically specialize in one or more types of data base management systems. Providing assistance in the planning, development, maintenance, and monitoring of integrated database systems, and ensuring that the conceptual and design phases of new applications are consistent with the structural parameters within the database environment.
- Evaluates users' requests for new data elements and systems, incorporates them into the existing shared data environment, and provides technical assistance. Coordinates the use of data to ensure data integrity and control redundancy, loads databases, and reorganizes as needed. Performs data modeling and prototyping. Performs logical and physical data modeling, designs relational database models, and creates physical data models from logical data models. Performs security recovery procedures. Determines and implements database search strategies and storage requirements. Maintains data dictionary ensuring uniformity of definitions and sets standards for use of data dictionary. Monitors database performance and recommends efficiency improvements. Creates test database environment for applications section, including the creation of necessary libraries and procedures.
- Executes the procedures necessary to save, retrieve, and recover databases from hardware and software failures within established procedures. Assists with determining, implementing, and enhancing standards on database security and with monitoring agency disaster recovery procedures and systems. Assists with the installation of database software and with analyzing, designing, and implementing databases. Assists in benchmarking and threshold testing of databases and with establishing and controlling necessary database security. Assists in the selection of database management software. Experience in computer systems analysis or computer programming work.
- Knowledge of the principles, practices, and techniques of computer programming and systems design; of computer operations, systems, and procedures; of project control and cost estimating techniques; of computer programming languages; of data processing flowcharting techniques; of database structures and theories; and of current database technologies.

Database Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Exhibit D: Job Titles and Descriptions

Database Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Database Administrator 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 4	
Years of Experience	12 - 14 years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 5	
Years of Experience	15 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

GOVERNANCE

27. IT Procurement Analyst

- Considerable knowledge of principles and practices of IT procurement including automated procurement systems and tools, budget monitoring/maintenance, file and records management, statistical report development, and related bookkeeping/governmental accounting/fiscal procedures.

Exhibit D: Job Titles and Descriptions

- Effective oral and written communication skills; strong computer skills including a high level of proficiency with MS Office, databases, spreadsheets, and automated financial systems; proven ability to maintain divisional inventory and to establish effective working relationships with both internal and external vendors and personnel.
- Demonstrated ability to analyze data, develop statistical reports, reconcile records, and provide customer service at all levels; significant experience in IT procurement including, but not limited to, software and hardware licenses; experience administering state contracts.
- Degree in information technology, business, a related field, or an equivalent combination of education and/or training/experience; demonstrated competencies in customer service, problem solving, organizational and negotiation skills.

IT Procurement Analyst	
Years of Experience	A minimum of four years of experience required in the following areas; IT procurement experience, purchasing of software/hardware, negotiation. A minimum of two years of experience required in problem solving. A minimum of four years of experience in an accounting-related field highly desired.
Job Description	Will be responsible for a wide range of information technology procurements including IT goods and services through a variety of purchasing options; follows procurement guidelines, selects appropriate procurement method, processes and maintains procurement requests and invoices through automated accounting systems; reconciles vendor inquiries and discrepancies; participates in pre-bid conferences as needed. Will also perform administrative and fiscal tasks, accounts payable and receivable, and IT software inventory; will compile financial data and review/analyze for budget formulation; develop and maintain numerous fiscal and/or procurement related spreadsheets; and perform related functions as required.

28. IT Governance Analyst

- Works within IT Project Governance to provide oversight, direction and guidance/consultation for IT projects from project request submission through project close-out and post-implementation review. As a governance liaison, works with project managers to ensure all aspects of project management disciplines and ensures compliance with agency specific and State project management and project governance policies, procedures, standards and guidelines have been followed. Reviews and validates project deliverables to ensure information accuracy, thoroughness, completeness and compliance. Ensures all projects have a valid project plan that maintains scope, tasks, schedules, estimates, and status, and that information is accurately disseminated to IT management. Directs corrective actions in any area where performance falls below objectives.
- Assists with the development, promulgation, implementation and regular updates of IT Project Management and Systems Development standards, policies, and guidelines and any other governance policies and procedures needed for the overall IT governance framework. Ensures compliance with all policies and procedures in the execution of technology projects. Monitor the progress of technology projects and provide quick and accurate responses to IT Management as to status, issues and risks of those projects. Serve as liaison between IT management, project managers and SOM. Monitor and support the management of the division's technology portfolio comprised of projects, systems, data and tools. Provide mentoring, coaching, training and on-boarding for project managers in the areas of project management tools, standards, policies, and procedures. Train and mentor new members of the IT Project Governance team as needed.
- Initiate and conduct ongoing and regular IT Policy, Process, Procedure, and Standard reviews to ensure technology and governance best practices are incorporated into the agency's set of procedures and improve business and IT compliance with legislative and regulatory policies which impact IT deliverables. Assist in the preparation of reports and materials for regularly scheduled project and program portfolio reviews with IT CIO, IT Managers and PM's.

Exhibit D: Job Titles and Descriptions

IT Governance Analyst	
Years of Experience	10 years of experience in the field
Job Description	Ensure projects have adequate project management and oversight structures and processes that will enable the success of the project. Verifies and validates project status reports. Assists with the training and implementation of new agency and/or COV project policies, standards, guidelines and procedures introduced. Assists with assessment of project management training needs, schedules classes as needed, or provides one on one project consulting. Reviews project documentation including project initiation documents such as the project charter, budget, schedule, cost benefit analysis, etc. throughout the project lifecycle until the end of the project including the project closeout report. Recommends approval of documents to AITR and Director. Attends project review and steering committee meetings for all projects for which he or she is governance liaison.

IT MANAGEMENT SERVICES

29. Business Continuity Planner

Business Continuity Planner	
Years of Experience	5 or more years
Job Description	Provides specialized expertise in business continuity planning, project management and problem analysis and resolution. Participates in major project assignments to: assist business partners in resolving business issues related to work area (business function), recovery planning and recovery plan development / enhancements. Capitalizes on business opportunities to refine processes to mitigate exposure during disruptions of service, and possibly, improve day-to-day operations. Facilitates and coordinates the development of work area (business function) business continuity plans for business units. Responsibilities include, but are not limited to, the following: assist business units with assessment of potential business impact, definition of critical, time-sensitive functions, design, development, and documentation of business continuity plans, recommend recovery strategies and options, and assist with the implementation of recovery solutions, coordinate business continuity plan exercises, develop schedules for training / awareness for business partner associates, coordinate development of business unit schedules for annual business continuity documentation maintenance and update, exercises, and independent review and validation, report the business continuity status of business units to senior management, provide expertise and support to management and business functional areas, as requested, when a disruption occurs.

30. Business Process Reengineering

Business Process	
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Exhibit D: Job Titles and Descriptions

Reengineering	
Years of Experience	5 or more years
Job Description	<p>This position applies process improvement and re-engineering methodologies and principles to conduct process modernization projects. Additional duties may include activity and data modeling, developing modern business methods, identifying best practices, and creating and assessing performance measurements. Providing group facilitation, interviewing, training, and provides additional forms of knowledge transfer. Serves as a key coordinator between multiple project teams to ensure enterprise wide integration of re-engineering efforts.</p> <p>Additional Responsibilities: Design workflow for purchasing software, collect and analyze statistics/metrics for software purchases, identify gaps in all associated processes and risks, establish memorandum of understanding (MOU's) where required, maintain SOP's for all processes, and support the client at customer meetings.</p>

31. Enterprise Architect

Enterprise Architect	
Years of Experience	5 or more years
Job Description	<p>This position works across Application Development, Service Delivery and Infrastructure to identify, research, discuss, design, and implement key enterprise architecture standards. Other responsibilities include: Research, design, document, build, and pilot prioritized topics for standards. Manage the list of potential standards and work with the application development management to prioritize efforts. Work closely with Development, Infrastructure, and Service Delivery teams to understand their needs and ensure the best enterprise standard is implemented. Work closely with development teams to pilot and prove out the standard. Drive the identification, development and implementation of key new standards in areas such as:, Performance Testing, Security, Event Management, Web UI Framework, .NET Design Standards, Application To Application Communication, Caching, etc. Propose new enterprise standards based on business need, IT need and technology advances. Assist development teams to implement the standards into business applications. Investigate new technology and techniques that should be developed into an agency enterprise architecture standard.</p> <p>Lead key enterprise architectural design projects as necessary. Operate as business savvy technical leader across the organization. Influence development teams to design high-quality technical solutions that fit the Enterprise Architecture and standards. Educate application development managers, developers, and business analyst on State Enterprise Architecture Standards.</p>

32. IT Strategist

IT Strategist	
Years of Experience	5 or more years

Exhibit D: Job Titles and Descriptions

Job Description	Supports top management in IT strategy formulation, IT strategic plans execution, strategic process improvements, and communication of IT strategies to all stakeholders. Analyze business performance, industry trends, existing or new regulatory requirements and their impact on IT operations; make recommendations on alternative courses of action, including risk assessment, capital investment, and acquisitions needed to align IT strategy with agency strategic plan. Requires advanced knowledge of strategic planning concepts and frameworks, business issues and concepts, research methodology, general management and financial analysis. Additionally, requires good interaction skills with senior management, with ability to articulate and defend recommendations made.
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33. IT Auditor

IT Auditor 1	
Years of Experience	0-2 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 2	
Years of Experience	2-4 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 3	
Years of Experience	4-6 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk

Exhibit D: Job Titles and Descriptions

	management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.
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IT Auditor 4	
Years of Experience	6-8 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 5	
Years of Experience	8+ years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

34. IT Trainer

IT Trainer	
Years of Experience	0-2 years
Job Description	Develop an agency-wide training plan. Coordinate IT strategic planning process to determine the department's training requirements through communications with staff throughout the agency. Identify existing training that meets the requirements and provide a gap analysis of courses to develop in house. Develop curriculum and training plan. Develop evaluation and monitoring methods to ensure quality training. Develop short video training. Produce written documents with clearly organized thoughts using proper English sentence construction, punctuation, and grammar.

Exhibit D: Job Titles and Descriptions

35. IT Sourcing Consultant

IT Sourcing Consultant 1	
Years of Experience	5+ years
Job Description	Position requires the ability to work independently as the team leader in the development and execution of sourcing strategies for assigned projects, assisting customers in solving IT business problems. This role will function to lead the sourcing process, through creation of the solicitation documents, evaluation of proposals and in execution of agreed upon negotiations strategy with selected suppliers. Leads evaluation and execution of risk mitigation strategies and establishes solid contracts that are in the long-term best interest of the customer. Has responsibility for managing customer expectations for project deliverables through effective and timely communications. Conducts a post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.

IT Sourcing Consultant 2	
Years of Experience	10+ years
Job Description	Position requires a proven ability to lead development and execution of complex sourcing strategies for assigned projects and consulting with customers to solve IT business problems. Conducts meaningful market research and works with business owners to develop sourcing scope, timelines and deliverables. This role will function as the leader of cross-functional teams through the sourcing process, in the evaluation of proposals, conducting and managing the negotiations process with selected suppliers. Has responsibility for proactively managing customer expectations for project deliverables through effective and timely communications to various levels of senior management. Identifies and manages contractual risks and establishes firm contracts that are in the long-term best interest of the customer. Conduct post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.

IT SECURITY

36. IT Security Analyst

- Monitor and advise on information security issues related to the systems and workflow at an agency to ensure the internal IT security controls for an agency are appropriate and operating as intended. Coordinate and execute IT security related projects for the agency. Coordinate response to information security incidents. Develop and publish Information Security policies, procedures, standards and guidelines based on knowledge of best practices and compliance with State IT Security policies, standards, and guidelines..
- Conduct campus-wide data classification assessment and security audits and manage remediation plans. Collaborate with IT management, Internal Audit, and SOM to manage security vulnerabilities. Create, manage and maintain user security awareness. Conduct security research and keeps abreast of latest security issues.

Exhibit D: Job Titles and Descriptions

- Prepares IT security documentation, including department policies and procedures, agency notifications, Web content, and alerts.

IT Security Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

IT Security Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

IT Security Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

37. IT Security Architect

IT Security Architect 1	
Years of Experience	3+ years of experience in security architecture 9+ years of experience in information security 9+ years of experience working with computer systems 9+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware
Job Description	Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying State IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture.

Exhibit D: Job Titles and Descriptions

	<p>Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills.</p> <p>Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.</p>
IT Security Architect 2	
Years of Experience	<p>5+ years of experience in security architecture</p> <p>11+ years of experience in information security</p> <p>11+ years of experience working with computer systems</p> <p>11+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware</p>
Job Description	<p>Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying State IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture.</p> <p>Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills.</p> <p>Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.</p>

38. IT Security Auditor

IT Security Auditor	
Years of Experience	15 or more years with IT security and audit experience
Job Description	Advanced knowledge of security standards and progressive experience performing security audits.

Exhibit D: Job Titles and Descriptions

PROJECT MANAGEMENT

39. Project Manager

- Designs, plans, and coordinates work teams. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable.
- May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project.

Project Manager 1	
Years of Experience	Minimum 2 years of experience as a Project Manager.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 2	
Years of Experience	Minimum 4 years of experience as a Project Manager.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with

Exhibit D: Job Titles and Descriptions

	considerable latitude for the use of initiative and independent judgment.
Project Manager 3	
Years of Experience	Minimum 5 years of experience as a Project Manager.
Job Description	Advanced experience managing programs of projects, complex projects or multiple projects. Demonstrated and advanced understanding of project management methodologies. Relies on experience and judgment to plan and accomplish goals. A significant degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

40. Project Coordinator

Project Coordinator	
Years of Experience	Minimum 2 years of experience as a Project Coordinator
Job Description	The Project Coordinator shall provide day-to-day coordination of project tasks. The project coordinator maintains version control and provides administrative support for project management information system. Prior experience of large project administration. Ability to communicate at all levels of an organization and third parties. Experience with similar scale roles and organizations. The project coordinator is task focused. Works under the direction of the project manager and reports to a project manager.

TELECOMMUNICATIONS AND COMPUTER NETWORKING

41. Network Administrator

- Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software. Monitor network to ensure network availability to all system users and perform necessary maintenance to support network availability. May supervise other network support and client server specialists and plan, coordinate, and implement network security measures. Coordinate the development, implementation, and maintenance of a local area network or wide area network. Maintains the network's physical and logical structures, including network connections. Maintains network support software, analyzes user support statistics, and recommends appropriate measures. Installs, tests, and maintains network hardware and software. Prepares and analyzes statistics on network utilization and availability. Prepares training courses and provides user support and training in the use of available hardware, software, and utilities. Performs tuning and capacity planning activities to enhance the performance of the network resources.
- Assist in the development, implementation, maintenance, and monitoring of a local area network or wide area network. Works under close supervision with minimal latitude for the use of initiative and independent judgment. Performs procedures for backup, recovery, and archival of files stored on the network. Communicates with vendors, users, management, and network programming staff. Serves as contact for remote network locations to obtain clarification of problems and to identify solutions or corrective actions. Assists in preparing training courses and providing user support and training in the use of available hardware, software, and utilities. Assists in maintaining the local area network or wide area network, cable and hub installations, and inventories. Conducts product evaluations of upgraded or new hardware and software—identifying strengths, weaknesses, and potential benefits to the agency—and recommends enhancements to network facilities.
- Assists in maintaining the network's physical and logical structures and in installing and testing hardware and software. Assists in performance tuning and capacity planning activities to enhance the performance of the network resources and in maintaining network support software. Assists in or conducts product evaluations of upgraded or new hardware and software and identifies strengths, weaknesses, and potential benefits to the agency. Assists in maintaining the operating system and security software utilized on the network, including the addition of new users to the network and establishment of rights and privileges. Experience in local or wide area network work. Knowledge of network facilities and data processing techniques; of personal computer hardware and software; of network operating system and security software; and of performance monitoring and capacity management tools.

Network	
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Exhibit D: Job Titles and Descriptions

Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

42. Network Architect

- Participates in designing and developing the network to ensure that it is secure, reliable, and robust; implements and maintains network management servers that assist the agency in managing, monitoring, and securing the network.
- Develops and implements detection activities to test network vulnerability to intrusion by hostile individuals or groups; participates in detecting, investigating, documenting, and reporting actual or potential network security violations, intrusions, or other inappropriate use.
- Designs backbone infrastructure, network facilities, wide area networks, local area network, wireless and telecommunication networks to provide reliable Internet access, remote access to information technology services (ITS), network security, and high performance networking.
- Evaluates security products and tests security systems performance; assists in planning, implementing, and testing disaster recovery procedures; participates in making formal risk assessments related to network security.
- Certification in areas related to network management and security preferred (CNE, MCSE, MSCE+1, CISA, CCNA, CCNP, CCIE, CCSA, CCSE, CCSE-PLUS, Cisco Security Specialist).
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Exhibit D: Job Titles and Descriptions

Network Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Architect 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

43. Network Engineer

- Responsible for installing networking technologies and supporting networks. Assesses existing network configurations and makes recommendations based on product specifications. Configures equipment and software to meet business needs, trains others on the solution, and documents the solution for ongoing support. Functions as part of a team on larger projects, or individually provides the services on support visits or smaller projects. Provides technical support and assists with the design of network solutions.
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Network Engineer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent

Exhibit D: Job Titles and Descriptions

	judgment.
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Network Engineer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Engineer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Network Engineer 4	
Years of Experience	12 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

44. Public Safety Consultant

Public Safety Communications Consultant	
Years of Experience	Extensive knowledge of public safety communications and enhanced 9-1-1 systems. Knowledge of current 9-1-1 industry trends in technology architecture, microcomputers, networking, and the Internet/Worldwide Web.
Job Description	Performs systems analysis, design, documentation, and implementation of complex public safety communications projects. These projects may include needs analyses, staffing studies, consolidation plans, equipment assessments and planning, budget preparation and forecasting, performance reporting/analysis and other related supporting the operation of public safety answering points and first responders.

45. Radio Engineer

Radio Engineer	
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Exhibit D: Job Titles and Descriptions

Years of Experience	Considerable experience in voice, data and video systems. Training in electronics is required. Advanced technical experience in the design of voice, data, video and wireless/radio systems and services. FCC General Radio Telephone license or Amateur Radio License highly desirable. Certification in public procurement would be desirable. Advanced knowledge of complex communications systems; business management practices and principles.
Job Description	Conducts the review, analysis and design of current and proposed voice, data and video communications, both wire line and wireless, also develop engineering plans and networks for state agencies and institutions. Performs research to develop recommendations for enhancements, expansions and/or consolidations of voice, data and video communications, using wire line and wireless equipment, facilities and services. Engineer system/network migration details toward sharing of integrated services, while laying the foundation of Open System Interconnections. Assist in the coordination, engineering and processing of FCC licenses. Educate and keeps abreast of FCC Land Mobile Radio (LMR) rules, policies, legal rulings and ongoing spectrum issues--analyzes results and impacts.

STATE OF MICHIGAN
 DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET
 PROCUREMENT

525 W. ALLEGAN STREET
 LANSING, MI 48203

P.O. BOX 30028
 LANSING, MI 48203

NOTICE OF CONTRACT NO. 071B6600020


between
 THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF CONTRACTOR	PRIMARY CONTACT	EMAIL
Computer Aid, Inc.	Dennis Lauderback	Dennis_lauderback@comp aid.com
1390 Ridgeview Drive	PHONE	VENDOR TAX ID # (LAST FOUR DIGITS ONLY)
Allentown, PA 18104	248-449-4902	0878

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
PROGRAM MANAGER	DTMB	Steve Wensko	517-335-1084	wenskos@michigan.gov
CONTRACT ADMINISTRATOR	DTMB Procurement	Terry Mead	517-284-7035	meadt@michigan.gov

CONTRACT SUMMARY			
DESCRIPTION:			
Vendor Managed Services (VMS) for Information Technology Staff Augmentation; Statewide			
INITIAL TERM	EFFECTIVE DATE	INITIAL EXPIRATION DATE	AVAILABLE OPTIONS
5 Years, 5 Months	02/08/2016	06/30/2021	No Options
PAYMENT TERMS	F.O.B.	SHIPPED TO	
Net 45	N/A	N/A	
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS			
N/A			
MISCELLANEOUS INFORMATION			
This contract is for Vendor Managed Services (VMS) for handling the temporary IT staffing needs for the Department of Technology Management and Budget (DTMB)			
ESTIMATED CONTRACT VALUE AT TIME OF EXECUTION		\$164,840,000.00	

For the Contractor:



Ernest Dianastasis,
Contract Administrator
Computer Aid, Inc.

10 FEB 2016

Date

For the State:



Bill Pemble,
IT Division Director
State of Michigan

2/11/16

Date

**PARTICIPATING ADDENDUM FOR
INFORMATION TECHNOLOGY STAFF AUGMENTATION SERVICES**

This Participating Addendum (this "Participating Addendum") is made as of February 4, 2016 ("Effective Date"), by and between Computer Aid, Inc. ("Contractor"), whose address is 1390 Ridgeview Drive Allentown, PA 18104 and the State of Michigan, Department of Management, Technology and Budget ("DTMB") on behalf of the State of Michigan and all eligible public entities and cooperative purchasing members within the State of Michigan (collectively, the "State")

WHEREAS, pursuant to MCL 18.1261, the State may enter into cooperative purchasing agreements with one or more other states for the purchase of goods and services;

WHEREAS, the Commonwealth of Virginia awarded a contract to Contractor for Information Technology Staff Augmentation Services, Contract # VA-130620-CAI, in accordance with its laws and statutes governing competitive procurements, which contract is attached hereto as **Exhibit A** and made a part hereof (the "Contract");

WHEREAS, DTMB's Chief Procurement Officer has determined that it is in best interest of the State to enter into this Participating Addendum with Contractor for Information Technology Staff Augmentation Services under the terms of the Contract, except as expressly modified by this Participating Addendum; and

WHEREAS, the parties seek to enter into this Participating Addendum to memorialize the terms of their contractual relationship;

NOW THEREFORE, for good and valuable consideration, the parties to this Participating Addendum hereby agree as follows:

1. Term

The term of this Participating Addendum shall be effective from the Effective Date through June 30, 2021, unless earlier terminated.

2. Scope of Services

- a. Contractor shall provide to the State the supply and delivery of Information Technology Staff Augmentation Services governed by the terms and conditions set forth under the Contract, except as expressly modified by this Participating Addendum and the Exhibits to this Participating Addendum.

b. The State reserves the right to add additional job titles and SOW engagements, as it deems appropriate, via a written amendment to this Participating Addendum, in accordance with the Contract.

c. The Go Live date for the State to begin utilizing the Participating Addendum is April 4, 2016.

3. Modifications to Contract

The Contract shall be modified as follows:

a. All references to "VITA" or the "Commonwealth of Virginia," whether contained in the Contract or its attachments, shall be replaced with the "State of Michigan."

b. Any and all references to the "Code of Virginia," whether contained in the Contract or its attachments, shall be deleted in their entirety.

c. The following new Subsection D shall be added to Section 6 of the Contract:

D. Assignment and Removal

The State has the right to recommend and approve in writing the initial assignment, as well as any proposed reassignment or replacement, of any Key Personnel. Before assigning an individual to any Key Personnel position, Supplier and Subcontractor will notify the State of the proposed assignment, introduce the individual to the State's Project Manager, and provide the State with a resume and any other information about the individual reasonably requested by the State. The State reserves the right to interview the individual before granting written approval. In the event the State finds a proposed individual unacceptable, the State will provide a written explanation including reasonable detail outlining the reasons for the rejection.

Supplier must provide the following Key Personnel:

1. An implementation project manager ("**Implementation Project Manager**") who will oversee the project during its implementation. The Implementation Project Manager is subject to the State's interview and approval.
2. Two individuals (each, an "**Account Representative**") who will be responsible for the day to day activities related to this Contract throughout its term, and will act as on-site points of contact for the State. The Account Representatives are subject to the State's interview and approval.
3. A Contract Manager ("**Contract Manager**"). The duties of the Supplier's Contract Manager shall include but not be limited to: (i) supporting the

management of the Contract, (ii) facilitating dispute resolution, and (iii) advising the State of performance under the terms and conditions of this Contract.

The State reserves the right to require a change in any of Supplier's and Subcontractor's Key Personnel if the assigned individual is not, in the reasonable opinion of the State, adequately serving the needs of the State.

In accordance with the terms of the applicable engagement, Supplier and Subcontractor will not remove any Key Personnel from their assigned roles without the prior written consent of the State. Supplier's or Subcontractor's removal of Key Personnel without the prior written consent of the State is an unauthorized removal ("Unauthorized Removal"). An Unauthorized Removal does not include replacing Key Personnel for reasons beyond the reasonable control of Supplier or Subcontractor, including illness, disability, leave of absence, FMLA, personal emergency circumstances, resignation, or a for cause termination of the Key Personnel's employment.

It is further acknowledged that an Unauthorized Removal of Supplier's Key Personnel will interfere with the timely and proper completion of the applicable engagement, to the loss and damage of the State, and that it would be impracticable and extremely difficult to fix the actual damage sustained by the State as a result of any Unauthorized Removal. Therefore, Supplier and the State agree that in the case of any Unauthorized Removal, Supplier will issue to the State a credit amount of \$25,000.00 per individual (each, an "Unauthorized Removal Credit").

Supplier acknowledges and agrees that any Unauthorized Removal Credits assessed under this Section: (i) are a reasonable estimate of and compensation for the anticipated or actual harm to the State that may arise from the Unauthorized Removal, which would be impossible or very difficult to accurately estimate; and (ii) may, at the State's option, be credited or set off against any fees or other charges payable to Supplier under this Contract.

- d. The first two paragraphs of Section 23 of the Contract are deleted in their entirety and replaced with the following:

Supplier and Subcontractors must adhere to all State standards and policies as described within the comprehensive listing of the State's standards and policies at http://www.michigan.gov/dtmb/0,4568,7-150-56355_56579_56755---,00.html, or a successor URL(s), as are pertinent to Supplier's operation.

To the extent that Supplier or Subcontractors have access to the State's computer system, Supplier and Subcontractors must comply with the State's Acceptable Use Policy, see http://michigan.gov/cybersecurity/0,1607,7-217-34395_34476---,00.html. All Supplier and Subcontractor personnel will be required, in writing, to agree to the

State's Acceptable Use Policy before accessing the State's system. The State reserves the right to terminate Supplier's and Subcontractors' access to the State's system if a violation occurs.

Upon request, Supplier and Subcontractors must perform background checks on all employees prior to their assignment. The scope is at the discretion of the State and documentation must be provided as requested. Supplier and Subcontractor are responsible for all costs associated with the requested background checks. The State, in its sole discretion, may also perform background checks.

Supplier shall immediately notify the State of any Breach of Unencrypted and Unredacted Personal Information, as those terms are defined in Michigan's Identity Theft Protection Act, MCL 445.61 *et seq.* and other personal identifying information, such as insurance data or date of birth, provided by the State to Supplier. Supplier shall provide the State the opportunity to participate in the investigation of the Breach and to exercise control over reporting the unauthorized disclosure, to the extent permitted by law.

- e. Section 22 is deleted in its entirety and replaced with the following:

4. Insurance Type	Additional Requirements
Commercial General Liability Insurance	
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence Limit \$1,000,000 Personal & Advertising Injury Limit \$2,000,000 General Aggregate Limit \$2,000,000 Products/Completed Operations <u>Deductible Maximum:</u> \$50,000 Each Occurrence	Supplier must have their policy endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds using endorsement CG 20 10 11 85, or both CG 2010 07 04 and CG 2037 07 0.
Umbrella or Excess Liability Insurance	
<u>Minimal Limits:</u> \$5,000,000 General Aggregate	Supplier must have their policy endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insured.

Automobile Liability Insurance	
<u>Minimal Limits:</u> \$1,000,000 Per Occurrence	
Workers' Compensation Insurance	
<u>Minimal Limits:</u> Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
Employers Liability Insurance	
<u>Minimal Limits:</u> \$500,000 Each Accident \$500,000 Each Employee by Disease \$500,000 Aggregate Disease.	
X Privacy and Security Liability (Cyber Liability) Insurance	
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence \$1,000,000 Annual Aggregate	Supplier must have their policy: (1) endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds; and (2) cover information security and privacy liability, privacy notification costs, regulatory defense and penalties, and website media content liability.
Professional Liability (Errors and Omissions) Insurance	
<u>Minimal Limits:</u> \$3,000,000 Each Occurrence \$3,000,000 Annual Aggregate <u>Deductible Maximum:</u> \$500,000 Per Loss	

If any of the required policies provide claims-made coverage, the Supplier must: (a) provide coverage with a retroactive date before the effective date of the contract or the

beginning of services; (b) maintain coverage and provide evidence of coverage for at least three (3) years after completion of the services; and (c) if coverage is canceled or not renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, Supplier must purchase extended reporting coverage for a minimum of three (3) years after completion of services.

Supplier must: (a) provide insurance certificates to the State, containing the agreement or purchase order number, at Contract formation and within 20 calendar days of the expiration date of the applicable policies; (b) require that Subcontractors maintain the required insurances contained in this Section; (c) notify the State within 5 business days if any insurance is cancelled; and (d) waive all rights against the State for damages covered by insurance. Failure to maintain the required insurance does not limit this waiver.

This Section is not intended to and is not be construed in any manner as waiving, restricting or limiting the liability of either party for any obligations under this Contract (including any provisions hereof requiring Supplier to indemnify, defend and hold harmless the State).

- f. Subsection D of Section 26 of the Contract is deleted in its entirety and replaced with the following:

D. Governing Law

This Contract is governed, construed, and enforced in accordance with Michigan law, excluding choice-of-law principles, and all claims relating to or arising out of this Contract are governed by Michigan law, excluding choice-of-law principles. Any dispute arising from this Contract must be resolved in the Michigan Court of Claims. Supplier consents to venue in Ingham County, and waives any objections, such as lack of personal jurisdiction or *forum non conveniens*. Supplier must appoint agents in Michigan to receive service of process.

- g. Subsection E of Section 26 of the Contract is deleted in its entirety and replaced with the following:

E. Dispute Resolution

The parties will endeavor to resolve any Contract dispute in accordance with this provision. The dispute will be referred to the parties' respective Contract Managers. Such referral must include a description of the issues and all supporting documentation. The parties must submit the dispute to a senior executive if unable to resolve the dispute within 15 business days. The parties will continue performing while a dispute is being resolved, unless the dispute precludes performance. A dispute involving payment does not preclude performance.

Litigation to resolve the dispute will not be instituted until after the dispute has been elevated to the parties' senior executive and either party concludes that resolution is unlikely, or fails to respond within 15 business days. The parties are not prohibited from instituting formal proceedings: (a) to avoid the expiration of statute of limitations period; (b) to preserve a superior position with respect to creditors; or (c) where a party makes a determination that a temporary restraining order or other injunctive relief is the only adequate remedy. This Section does not limit the State's right to terminate the Contract.

- h. Subsection O of Section 26 of the Contract is deleted in its entirety and replaced with the following:

O. Right of Audit

The State, at its expense, or its designee may audit Supplier to verify compliance with this Contract. Supplier must retain, and provide to the State or its designee and the auditor general upon request, all financial and accounting records related to the Contract through the term of the Contract and for 4 years after the latter of termination, expiration, or final payment under this Contract or any extension ("Audit Period"). If an audit, litigation, or other action involving the records is initiated before the end of the Audit Period, Supplier must retain the records until all issues are resolved.

Within 10 calendar days of providing notice, the State and its authorized representatives or designees have the right to enter and inspect Supplier's premises or any other places where Services are being performed, and examine, copy, and audit all records related to this Contract. Supplier must cooperate and provide reasonable assistance. If any financial errors are revealed, the amount in error must be reflected as a credit or debit on subsequent invoices until the amount is paid or refunded. Any remaining balance at the end of the Contract must be paid or refunded within 45 calendar days.

This Section applies to Supplier, any parent, affiliate, or subsidiary organization of Supplier, and any Subcontractor that performs services in connection with this Contract.

- i. The following Sections or Attachments to the Contract shall not apply to the Contractor's agreement with the State of Michigan.
- Section 17 – Reporting
 - Section 26(B) – Incorporated Contractual Provisions
 - IT Staff Augmentation User Guide
 - Attachment A: Process Flows

- Attachment E: Resumes
- Exhibit B: Service Level Agreements
- Exhibit D: SOW Template
- Exhibit E: Change Order/Request Template
- Exhibit F: Job Rate Cards/Pricing
- Exhibit G: Implementation Plan
- RFP Appendix E: Job Titles and Skill Categories
- RFP CAI Cost Proposal
- RPP Appendix G: Cost Matrix and Area Definitions
- RFP CAI Disadvantaged Business Proposal
- RFP Appendix H: Current Contract Utilization
- RFP Appendix J: Trade Secret/Confidential Proprietary Information Notice

5. Compensation and Ordering

- a. Pricing shall be set in accordance with the Contract. The rates shall be at the terms set forth in Exhibit C. The rates set forth in Exhibit C reflect a Contractor service fee of 4%, in addition to a DTMB administration fee of 1%.
- b. VA-130620-CAI must be shown on all Purchase Orders issued against this Participating Addendum.
- c. As of April 4, 2016, new resource engagements will be added under this Participating Addendum at the applicable rate listed in Exhibit C. Existing engagements under CONTRACT NO. 071B2200246 (that wish to continue) will remain with CONTRACT NO. 071B2200246 until they have exhausted their hours or until September 30, 2016, whichever comes first. After September 30, 2016, if the State wishes to continue to service an existing engagement, it will apply the applicable rate listed in Exhibit C.
- d. Contractor will pay its Subcontractors within 45 days of receiving an approved invoice. Contractor will not wait to receive payment from the State before issuing payment to Subcontractors except in those instances where the State is experiencing payment delays greater than 90 days due to a budget impasse or similar events resulting in open ended payment delays.
- e. Correct invoices shall be due and payable to Contractor by the State, in accordance with the State's standard payment procedure as specified in 1984 Public Act No. 279, MCL 17.51 et seq., within 45 days after receipt, provided the State determines that the invoice was properly rendered. Payments will be paid no more than monthly.

- f. The State will only disburse payments through Electronic Funds Transfer (EFT). Contractor must register with the State at <http://www.michigan.gov/cpexpress> to receive electronic fund transfer payments. If Contractor does not register, the State is not liable for failure to provide payment.
- g. Travel time will not be reimbursed by the State, and the State will not pay for any travel expenses, including hotel, mileage, meals, parking, etc.
- h. No overtime premiums will be paid to Contractor for work which is performed after normal business hours (8:00 am local time - 5:00 pm local time) in order to complete a task on time, unless otherwise agreed to in writing in advance by the State. The State will not pay holiday pay for State holidays or administrative pay for days when State offices are forced to close. The State and the Contractor will comply with all applicable federal and State laws and regulations pertaining to overtime in the performance of this Contract.

6. Administrative Fee and Reporting

Contractor must pay an administrative fee of 1% on all payments made to Contractor under the Contract including transactions with the State (including its departments, divisions, agencies, offices, and commissions), MIDEAL members, and other states (including governmental subdivisions and authorized entities). Administrative fee payments must be made by check payable to the State of Michigan and mailed to:

Department of Technology, Management and Budget
Financial Services – Cashier Unit
Lewis Cass Building
320 South Walnut St.
P.O. Box 30681
Lansing, MI 48909

7. Primary Contacts

- a. The State's primary contact for this Participating Addendum is as follows (the "State Program Manager"):

Name: Steve Wensko
Participating Entity Name: State of Michigan DTMB Agency Services
101 East Hillsdale, Lansing, MI 48933
Telephone: (517) 335-1084
E-mail: wenskoss@michigan.gov

- b. The State's purchasing and contract administration contact for this Participating Addendum is as follows (the "State Contract Administrator"):

Name: Terry Mead
Participating Entity Name: State of Michigan DTMB Procurement
Address: 525 West Allegan, Lansing, MI 48913
Telephone: (517) 284-7035
E-mail: meadt@michigan.gov

- c. Contractor's primary contact for this Participating Addendum is as follows:

Name: Dennis Lauderback
Contractor: Computer Aid, Inc.
Address: 100 MainCentre – Suite 17, Northville, MI 48167
Telephone: 248-449-4902
Fax: (717) 651 3229
E-mail: dennis_lauderback@compaid.com

- d. All State purchase orders are to be issued directly to:

Name: Linda Leiby
Contractor: Computer Aid, Inc.
Address: 470 Friendship Road, Suite 300, Harrisburg, PA 17111-2103
Telephone: (717) 651 3080
Fax: (717) 651 -3182
Email: Linda leiby@compaid.com

8. Miscellaneous

- a. Existing resource engagements will remain with CONTRACT NO. 071B2200246 until they have exhausted their hours or until September 30, 2016, whichever comes first. After September 30, 2016, existing resource engagements (that wish to continue) will be transitioned over to this Participating Addendum.
- b. Contractor shall deliver training materials tailored to the State during the Discovery Session under the Project Implementation Plan (Exhibit K). Training materials will be complete prior to the agency and supplier Peoplefluent training sessions, and shall be attached to this Participating Addendum as Exhibit I.
- c. Contractor shall develop final process flows tailored to the State during the Discovery Session under the Project Implementation Plan (Exhibit K). Process flows will be complete prior to the agency and supplier Peoplefluent training sessions, and shall be incorporated into Exhibit F of this Participating Addendum.
- d. The Contractor shall not be held to Virginia's Small Women and Minority (SWAM) business goal.
- e. This Participating Addendum is governed, construed, and enforced in accordance with Michigan law, excluding choice-of-law principles, and all claims relating to or arising out of this Participating Addendum are governed by Michigan law, excluding choice-of-law principles. Any dispute arising from this Participating Addendum must be resolved in the Michigan Court of Claims. Contractor consents to venue in Ingham County, and waives any objections, such as lack

of personal jurisdiction or *forum non conveniens*. Contractor must appoint agents in Michigan to receive service of process.

- c. All publicity and/or public announcements pertaining to this Participating Addendum shall be approved by the State prior to release.
- d. Contractor will supply quarterly reports covering purchases under this agreement in a format mutually agreed to by the parties.
- e. This Participating Addendum together with its Exhibits, set forth the entire agreement between the parties and supersede all previous communications, representations or agreements, whether oral or written, with respect to the subject matter hereof. Terms and conditions inconsistent with, contrary or in addition to the terms and conditions of this Participating Addendum together with its Exhibits shall not be added to or incorporated into this Participating Addendum by any subsequent purchase order, invoice, or otherwise, and any such attempts to add or incorporate such terms and conditions are hereby rejected. The terms and conditions of the Participating Addendum and its Exhibits shall prevail and govern in the case of any such inconsistent or additional terms. In the event of any conflict between the terms of the Participating Addendum and the Contract, the terms of this Participating Addendum shall prevail.
- f. Under the Elliott-Larsen Civil Rights Act, 1976 PA 453, MCL 37.2101, *et seq.*, and the Persons with Disabilities Civil Rights Act, 1976 PA 220, MCL 37.1101, *et seq.*, Contractor and its Subcontractors agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, or mental or physical disability. Breach of this covenant is a material breach of this Contract.
- g. Under 1980 PA 278, MCL 423.321, *et seq.*, the State must not award a contract or subcontract to an employer whose name appears in the current register of employers failing to correct an unfair labor practice compiled under MCL 423.322. This information is compiled by the United States National Labor Relations Board. A contractor of the State, in relation to the contract, must not enter into a contract with a subcontractor, manufacturer, or supplier whose name appears in this register. Under MCL 423.324, the State may void any contract if, after award of the contract, the contractor as an employer or the name of the subcontractor, manufacturer or supplier of the contractor appears in the register.
- h. No term or provision of this Participating Addendum shall be deemed waived and no breach excused; unless such waiver or consent shall be in writing and signed by an individual authorized to so waive or consent. Any consent by either party to, or waiver of a breach by the other whether expressed or implied, shall not constitute a consent to, waiver of, or excuse for, any other breach or any subsequent breach, except as may be expressly provided in the waiver or consent.
- i. This Participating Addendum may not be amended or modified except by written agreement executed by authorized representatives of each party.
- j. The parties hereto agree that this Participating Addendum may be executed in counterpart, each original signed page to become part of the original document.

- k. The Contractor shall provide all necessary account management resources to support the use of the Contract by the State.
- l. The Contractor, unless directly involved in assisting the State in the development, formulation, and/or drafting of an RFP for the State, will not be excluded from submitting proposals in response to that RFP.
- m. The following Exhibits are hereby incorporated in and made a part of this Participating Addendum:
- Exhibit A: Contract # VA-130620-CAI
 - Exhibit B: Service Level Agreements
 - Exhibit C: CAI Michigan Rate Card
 - Exhibit D: Michigan Job Titles and Descriptions
 - Exhibit E: Communications Plan
 - Exhibit F: Competitive Workflow Process
 - Exhibit G: Round 2 Workflow Process
 - Exhibit H: Backfill Process
 - Exhibit I: Agency Training Guide
 - Exhibit J: Performance Based Tiering
 - Exhibit K: Project Implementation Plan and Deliverables Milestones
 - Exhibit L: Key Personal

IN WITNESS WHEREOF, authorized representatives of Computer Aid, Inc. and the State have executed this Participating Addendum to be effective as of the Effective Date.

For the State

Name:

Bill Pemble

Title:

Bill Pemble

Date:

IT Procurement
2/11/16

For Computer Aid, Inc.

Name:

Ernest J. Diastasis

Title:

MANAGING DIRECTOR

Date:

10 FEB 2016



Commonwealth of Virginia
Virginia Information Technologies Agency

IT CONTINGENT LABOR SERVICES

MANDATORY USE CONTRACT

Date: October 27, 2015

Contract #: VA-130620-CAI

Authorized User: All public bodies, including VITA, as defined by §2.2-4301 and referenced by §2.2-4304 of the *Code of Virginia*. Authorized Users shall include private institutions of higher education that are listed at <http://www.cicv.org/Our-Colleges/Profiles.aspx>. In addition, Authorized Users shall also include public entities located outside of Virginia which have executed a Participating Addendum with the Supplier to utilize this contract.

Contractor: Computer Aid Inc.
5516 Falmouth Street
Suite 302
Richmond, VA 23230

FIN: 23-2180878

Contact Person: Cindy Sullivan
Office: 804-288-2139
Fax: 804-288-4358
Email: Cynthia.Sullivan@compaid.com

Term: June 20, 2013 – June 30, 2018

Pricing: Exhibit F

Payment: Net 30 days

For Additional Information, Please Contact:

Technical Information:
Supply Chain Management
Virginia Information Technologies Agency

Sonia Hicks
Phone: 804-416-6177
E-Mail: sonia.hicks@vita.virginia.gov
Fax: 804-416-6361

NOTES: Individual Commonwealth of Virginia employees are not authorized to purchase equipment or services for their personal use from this Contract.

For updates, please visit our Website at <http://www.vita.virginia.gov/procurement/contracts.cfm>

CONTRACT # VA-130620-CAI
CONTRACT CHANGE LOG

[illegible]

**MODIFICATION #7
TO
CONTRACT NUMBER VA-130620-CAI
BETWEEN THE
COMMONWEALTH OF VIRGINIA
AND
COMPUTER AID INC.**

This MODIFICATION #7 is an agreement between the Virginia Information Technologies Agency (hereinafter referred to as "VITA"), pursuant to 2.2-2012 of the Code of Virginia, on behalf of the Commonwealth of Virginia, and Computer Aid, Inc. ("CAI" or "Supplier.") to modify Contract Number VA-130620-CAI. ("Contract") This Modification and any attachments thereto is, upon execution by VITA and Supplier, incorporated into and made an integral part of the Contract.

The purpose of this Modification is to document both parties' agreement to the following:

1. Exhibit F to Contract Number VA-130620-CAI is replaced in its entirety by Exhibit F attached hereto.
2. Attachment I to Exhibit F which is referenced in Modification #1 to this contract is deleted in its entirety.
3. Attachment 2 to Exhibit F which is referenced in Modification #5 to this contract is deleted in its entirety.
4. Exhibit C which is attached to Modification #2 to this contract is amended as follows:

The following paragraph on pp.12-13 of Exhibit C entitled Section Number 13. General Provisions. Section A. Relationship Between Supplier and Subcontractor..is deleted in its entirety:

13. GENERAL PROVISIONS

A. Relationship between Supplier and Subcontractor

Subcontractor has no authority to contract for Supplier in any way to bind, to commit Supplier to any agreement of any kind, or to assume any liabilities of any nature in the name of or on behalf of Supplier. Under no circumstances shall Subcontractor or any of its employees, hold itself out as or be considered an agent or an employee of Supplier and Supplier shall have any duty to provide or maintain any insurance or other employee benefits on behalf of Subcontractor or its employees. Subcontractor represents and warrants that it is an independent contractor for purposes of federal, state and local employment taxes and agrees that Supplier is not responsible to collect or withhold any federal, state or local employment taxes, including, but not limited to,

income tax withholding and social security contributions, for Subcontractor. Subcontractor shall immediately pay all taxes lawfully imposed upon it with respect to this Contract or any Services provided pursuant to this Contract.

5. The following paragraph replaces the above deleted paragraph in Exhibit C of Modification #2:

13. GENERAL PROVISIONS

A. Relationship between Supplier and Subcontractor

Subcontractor has no authority to contract for Supplier in any way to bind, to commit Supplier to any agreement of any kind, or to assume any liabilities of any nature in the name of or on behalf of Supplier. Under no circumstances shall Subcontractor or any of its employees, hold itself out as or be considered an agent or an employee of Supplier and Supplier shall not have any duty to provide or maintain any insurance or other employee benefits on behalf of Subcontractor or its employees. Subcontractor represents and warrants that it is an independent contractor for purposes of federal, state and local employment taxes and agrees that Supplier is not responsible to collect or withhold any federal, state or local employment taxes, including, but not limited to, income tax withholding and social security contributions, for Subcontractor.

Subcontractor shall immediately pay all taxes lawfully imposed upon it with respect to this Contract or any Services provided pursuant to this Contract.

The foregoing is the complete and final expression of the parties' agreement to modify Contract VA-130620-CAI. Contract VA-130620-CAI cannot be modified, except by a writing signed by a duly authorized representative of both parties.

ALL OTHER TERMS AND CONDITIONS OF CONTRACT VA-130620-CAI REMAIN UNCHANGED.

PERSONS SIGNING THIS CONTRACT MODIFICATION ARE AUTHORIZED REPRESENTATIVES OF EACH PARTY TO THE CONTRACT AND ACKNOWLEDGE THAT EACH PARTY AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS CONTRACT.

Executed as of the last date set forth by the undersigned authorized representatives of VITA and Supplier.

Computer Aid, Inc.

BY: SZ / 1fl. - < 'J (R " -

NAME: 0" - " S C oo.; V C..y

TITLE: /Jt., 7 # 'j

DATE: / 0 - / < j 0 />

Commonwealth of Virginia

BY: Shirley L. ...

NAME: ft', p L... ? , PW

TITLE: 1). o ,

DATE: lt> / z.o / 15

MODIFICATION #6
TO
CONTRACTNUMBER VA-130620-CAI
BETWEEN THE
COMMONWEALTH OF VIRGINIA
AND
COMPUTER AID INC.

This MODIFICATION #6 is an agreement between the Virginia Information Technologies Agency (hereinafter referred to as "VITA"), pursuant to 2.2-2012 of the *Code of Virginia*, on behalf of the Commonwealth of Virginia, and Computer Aid, Inc. ("CAI" or "Supplier") to modify Contract Number VA-130620-CAI, ("Contract"). This Modification and any attachments thereto is, upon execution by VITA and Supplier, incorporated into and made an integral part of the Contract.

The purpose of this Modification is to document both parties' agreement to the following:

1. In Modification #1 to Contract No. VA-130620-CAI, the parties agreed that this agreement can be used by other public entities outside of Virginia provided those entities execute a Participating Addendum that incorporates the terms and conditions of this contract. Such participating addendum:
 - a. May include additional terms that are required by the law of the state or locality or any law governing cooperative purchasing agreements.
 - b. May include new, mutually agreed upon terms that clarify ordering procedures specific to that participating entity.

In the event that the participating entity requests additional terms and conditions that may increase costs to Supplier, the Supplier, may, upon agreement, adjust its pricing up or down accordingly. These costs may include the following:

- a. State and local taxes
- b. Unemployment and workers compensation fees
- c. E-commerce satisfaction fees
- d. Costs associated with any additional terms and conditions that are mutually agreed upon.

Supplier's pricing for all non-Virginia public entities shall be firm and fixed for the initial term of the Contract. After the initial term of the Contract, if the Contract is renewed by the Commonwealth, the Supplier's pricing may be adjusted based on

market conditions only with the mutual agreement of both the Supplier and the purchasing non-Virginia entity.

2. Supplier agrees to only execute Participating Addendums with public entities located outside of the Commonwealth of Virginia.
3. Accordingly, use of this cooperatively procured contract by public entities outside of Virginia and authorized by individual entities' statutes may be subject to the approval of the respective Chief Procurement Official of the public entity. Issues of interpretation and eligibility for participation are solely under the authority of the Chief Procurement Official of the public entity.
4. Any Participating Addendum between Supplier and a public entity outside of Virginia will be co-terminus with this contract and any extensions thereto.
5. The Supplier agrees to provide a monthly report of sales by Supplier pursuant to each Participating Addendum. Supplier agrees to provide the monthly report of sales which is attached to this modification and which is entitled "Attachment #1 – Report of Sales of Participating Addendums" to the Commonwealth by the 10th day of the following month for which sales are being reported. Supplier also agrees to provide any other reports that may be required by the Commonwealth.
6. A Participating Addendum executed between the Supplier and any public entity outside of Virginia shall apply only in the jurisdiction of the Participating entity which has executed the Addendum.
7. Supplier agrees to payment of a fee to the Commonwealth of .25% of all monthly sales made by the Supplier pursuant to each and every Participating Addendum executed between Supplier and a public entity outside of the Commonwealth under this contract. Such fees are to be submitted to the Commonwealth with the Report of Sales of Participating Addendums as referenced above.
8. In Modification #4 to this Contract, the definition of "Authorized Users" was replaced with the following language:

C. Authorized Users

All public bodies, including VITA as defined by §2.2-4301 and referenced by 2.2-4304 of the *Code of Virginia*. Authorized Users shall include private institutions of higher education chartered in Virginia and granted tax-exempt status under §501(C)

(3) of the Internal Revenue Code. A list of the private institutions eligible to use this contract can be found at: <http://www.cicv.org/Our-Colleges/Profiles.aspx>.

In this Modification, the parties agree to delete the above definition of "Authorized Users" and replace that definition with the following:

C. Authorized Users

All public bodies, including VITA as defined by §2.2-430I and referenced by §2.2-4304 of the *Code of Virginia*. Authorized Users shall include private institutions of higher education that are listed at <http://www.cicv.org/Our-Colleges/Profiles.aspx>. In addition, Authorized Users shall also include public entities located outside of Virginia which have executed a Participating Addendum with the Supplier to utilize this Contract.

9. In Modification #4 to this Contract, Section 5 "Rights to Work Product" was replaced in its entirety by the following language:

5. RIGHTS TO WORK PRODUCT

If Authorized User is a state agency, board, commission, or other quasi-political entity of the Commonwealth of Virginia or other body referenced in Title 2.2 of the Code of Virginia, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with the Commonwealth. If Authorized User is a locality, municipality, school, school system, college, university, local board, local commission, or local quasi-political entity, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with that public body. If Authorized User is a private institution of higher education which is chartered in Virginia and granted tax-exempt status under §501(c)(3) of the Internal Revenue Code., any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with that private institution.

In this modification, the parties agree to delete Section 5 "Rights to Work Product" contained within Modification #4 (above) and replace it in its entirety with the following:

5. Rights to Work Product

If Authorized User is a state agency, board, commission, or other quasi-political entity of the Commonwealth of Virginia or other body referenced in Title 2.2 of the Code of Virginia, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with the Commonwealth. If Authorized User is a locality, municipality, school, school system, college, university,

local board, local commission, or local quasi-political entity, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with that public body. If Authorized User is a private institution of higher education which is listed at <http://www.civ.org/Our-Colleges/Profiles.aslxx>, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with that private institution. If the Authorized User is a public entity outside of Virginia which has executed a Participating Addendum with the Supplier to utilize this contract, any license to pre-existing work shall be held by, and all rights in, title to and ownership of Work Product shall vest with that public entity or as agreed to between Supplier and such public entity in the Participating Addendum.

The foregoing is the complete and final expression of the parties' agreement to modify Contract VA-130620-CAI. Contract VA-130620-CAI cannot be modified, except by a writing signed by a duly authorized representative of both parties.

ALL OTHER TERMS AND CONDITIONS OF CONTRACT NUMBER VA-130620-CAI REMAIN UNCHANGED.

PERSONS SIGNING THIS CONTRACT MODIFICATION ARE AUTHORIZED REPRESENTATIVES OF EACH PARTY TO THIS CONTRACT AND ACKNOWLEDGE THAT EACH PARTY AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS CONTRACT.

Executed as of the last date set forth by the undersigned authorized representatives of VITA and Supplier.

Computer Aid, Inc.

BY: [Signature]
 NAME: J4/Wf/...J (Dorv-if
 TITLE: J1c ;;-r.C" J,vu
M
 DATE: ilr, ... <do/,,,-

Commonwealth of Virginia
 BY: [Signature]
 NAME: Philip L. Piper
 TITLE: "P12- OZ-, Sc.. 1
 DATE: JUNE 30, 2015

MODIFICATION #5
TO
CONTRACT NUMBER VA-130620-CAI
BETWEEN THE
COMMONWEALTH OF VIRGINIA
AND
COMPUTER AID INC.

This MODIFICATION #5 is an agreement between the Virginia Information Technologies Agency (hereinafter referred to as "VITA"), pursuant to 2.2-2012 of the Code of Virginia, on behalf of the Commonwealth of Virginia, and Computer Aid, Inc. ("CAI" or "Supplier") to modify Contract Number VA-130620-CAI, ("Contract"). This Modification and any attachments thereto is, upon execution by VITA and Supplier, incorporated into and made an integral part of the Contract.

The purpose of this Modification is to document both parties' agreement to the following:

1. Exhibit F Job Rate Cards/Pricing is modified by deleting the table which contains the Region 1 and Region 2 Bill Rates which begins with "Job Category" and replacing with the Job Rate Card attached hereto and labeled as Attachment 2 to Exhibit F.
2. The parties agree to delete Section B of Appendix B, which starts with "CAI" in its entirety.
3. Section B of Appendix B is replaced in its entirety with the following:

Section B.

"As part of its continuing efforts to support the Commonwealth in utilizing SWaM firms, CAI hereby commits to the following:

- Provide a robust subcontractor network that includes SWaM firms so that agencies and other Authorized Users have access to qualified resources from SWaM firms.

- Encourage agencies and other Authorized Users to consider SWaM firms and to leverage open competition where SWaM firms have historically outperformed non-SWaM subcontractors
- A comprehensive program which provides opportunity, outreach, coaching, training and mentoring of all small businesses.
- Provide support to encourage SWaM participation in the program.
- Participate in matchmaking event for SWaM vendors;
- Work with the Department of Small Business and Supplier Diversity (DSBSD) to identify and assist new SWaM subcontractors.
- Hold workshops/webinars to inform SWaM suppliers on how to effectively compete for IT staffing opportunities within the Commonwealth;
- Provide quarterly Peoplefluent training
- Bi-annual Staff Augmentation training for subcontractors
- Provide SWaM on-boarding calls and other support

CAI also agrees that it will include a detailed list of all efforts to recruit and utilize SWaM firms under the contract in its Quarterly Business Review and Report.

The foregoing is the complete and final expression of the parties' agreement to modify Contract VA-130620-CAI. Contract VA-130620-CAI cannot be modified, except by a writing signed by a duly authorized representative of both parties.

ALL OTHER TERMS AND CONDITIONS OF CONTRACT NUMBER VA-130620-CAI REMAIN UNCHANGED.

PERSONS SIGNING THIS CONTRACT MODIFICATION ARE AUTHORIZED REPRESENTATIVES OF EACH PARTY TO THIS CONTRACT AND ACKNOWLEDGE THAT EACH PARTY AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS CONTRACT.

Executed as of the last date set forth by the undersigned authorized representatives of VITA and Supplier.

Computer Aid, Inc.

BY: James P. Cooney
NAME: James P. Cooney
TITLE: Managing Director
DATE: March 20, 2015

Commonwealth of Virginia
BY: Philip H. Pickett
NAME: Philip H. Pickett
TITLE: 1st Vice President
DATE: 3/20/15

MODIFICATION # 4

TO

CONTRACT NUMBER VA-130620-CAI

BETWEEN THE

COMMONWEALTH OF VIRGINIA

AND

COMPUTER AID INC.

This MODIFICATION #4 is an agreement between the Virginia Information Technologies Agency (hereinafter referred to as "VITA"), pursuant to 2.2-2012 of the Code of Virginia, on behalf of the Commonwealth of Virginia, and Computer Aid, Inc. ("CAI" or "Supplier") to modify Contract Number VA-130620-CAI, ("Contract"). This Modification and any attachments thereto is, upon execution by VITA and Supplier, incorporated into and made an integral part of the Contract.

The purpose of this Modification is to document both parties' agreement to the following:

1. On P. 5 of Contract Number VA-130620-CAI, the definition of "Authorized Users" is deleted in its entirety and replaced with the following:

C. Authorized Users

All public bodies, including VITA, as defined by §2.2-4301 and referenced by §2.2-4304 of the Code of Virginia. Authorized Users also include private institutions of higher education chartered in Virginia and granted tax-exempt status under §501(c)(3) of the Internal Revenue Code. A list of the private institutions eligible to use this contract can be found at: <http://www.cicv.org/Our-Colleges/Profiles.aspx>.

2. On p. 11 of Contract Number VA-130620 under No. 5, entitled "Rights to Work Product", the following paragraph is deleted in its entirety:

5. RIGHTS TO WORK PRODUCT

If Authorized User is a state agency, board, commission, or other quasi-political entity of the Commonwealth of Virginia or other body referenced in Title 2.2 of the Code of Virginia, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with the Commonwealth. If Authorized User is a locality, municipality,

school system, college, university, local board, local commission, or local quasi-political entity, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with that public body.

3. On p. 11 of Contract Number VA-130620, Section 5 "Rights to Work Product", the following replaces the above deleted language in its entirety:

5. RIGHTS TO WORK PRODUCT

If Authorized User is a state agency, board, commission, or other quasi-political entity of the Commonwealth of Virginia or other body referenced in Title 2.2 of the Code of Virginia, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with the Commonwealth. If Authorized User is a locality, municipality, school, school system, college, university, local board, local commission, or local quasi-political entity, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with that public body. If Authorized User is a private institution of higher education which is chartered in Virginia and granted tax-exempt status under §501(c)(3) of the Internal Revenue Code, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with that private institution.

4. In Exhibit "B" to Contract Number VA-130620, delete the following row from Exhibit B located at the top of p. 2, in its entirety as follows:

Percentage of Candidates Interviewed	Measures quality of candidates presented	60 0/0	Number of candidates requested to interview/total number of candidates sent to hiring manager	Month
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The foregoing is the complete and final expression of the parties' agreement to modify Contract VA-130620-CAJ. Contract VA-130620-CAJ cannot be modified, except by a writing signed by a duly authorized representative of both parties.

ALL OTHER TERMS AND CONDITIONS OF CONTRACT NUMBER VA130620-CAJ REMAIN UNCHANGED.

PERSONS SIGNING THIS CONTRACT MODIFICATION ARE AUTHORIZED REPRESENTATIVES OF EACH PARTY TO THIS CONTRACT AND ACKNOWLEDGE THAT EACH PARTY AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS CONTRACT.

Executed as of the last date set forth by the undersigned authorized representatives of VITA and Supplier.

Computer Aid, Inc.

BY: tf'-.w/

NAME: 41' .s ? , Co #€.' /

TITLE: 4

DATE: 1/.../o/f

Commonwealth of Virginia
BY: Philip L. Pappert

NAME: ...p L P...tJpPc:-

TITLE: ...f 4thc;-y.. t

DATE: Lfu:Jud / d of\$-

**MODIFICATION #3
TO
CONTRACT NUMBER VA-130620-CAI
BETWEEN THE
COMMONWEALTH OF VIRGINIA
AND
COMPUTER AID INC.**

This MODIFICATION #3 is an agreement between the Virginia Information Technologies Agency (hereinafter referred to as "VITA"), pursuant to 2.2-2012 of the Code of Virginia, on behalf of the Commonwealth of Virginia, and Computer Aid, Inc. ("CAI" or "Supplier") to modify Contract Number VA-130620-CAI, ("Contract"). This Modification and any attachments thereto is, upon execution by VITA and Supplier, incorporated into and made an integral part of the Contract.

The purpose of this Modification is to document both parties' agreement to the following:

1. Exhibit "C" to Contract Number VA-130620-CAI, Section 5 "Rights to Work Product" is deleted in its entirety as follows:

Work Product

Supplier and Subcontractor each acknowledge that performance of this Contract may result in Work Product(s). Subcontractor agrees that it shall promptly and fully disclose to Supplier any and all Work Product generated, conceived, reduced to practice or learned by Subcontractor or any of its employees, either solely or jointly with others, during the term or performance of this Contract, which in any way relates to the applicable order or SOW attached thereto. Subcontractor further agrees that neither Subcontractor nor any of Subcontractors's employees, contractors, agents or subcontractors, nor any party claiming through Subcontractor or Subcontractor's employees, shall, other than in the performance of this Contract, make use of or disclose to others any proprietary information relating to the Work Product. All Services performed hereunder shall include delivery of all Work Product source code, object code, executables, and documentation. Subcontractor agrees that Supplier shall have the right to require Subcontractor to provide a copy of the most recent object or source code to Supplier's customer at any and all times.

Ownership

Subcontractor agrees that, whether or not the Services are considered "works made for hire" or an employment to invent, all Work Product discovered, created or developed under this Contract shall be and shall remain the sole and exclusive property of the Supplier. Except as specifically set forth in writing and signed by both Supplier and Subcontractor, Subcontractor agrees that the Supplier shall have all

rights with respect to any Work Product discovered, created or developed under this Contract without regard to the origin of the Work Product.

If and to the extent that Subcontractor may, under applicable law, be entitled to claim any ownership interest in the Work Product, Subcontractor hereby irrevocably transfers, grants, conveys, assigns and relinquishes exclusively to the Supplier any and all right, title and interest it now has or may hereafter acquire in and to the Work Product under patent, copyright, trade secret and trademark law in perpetuity or for the longest period otherwise permitted by law. If any moral rights are created, Subcontractor waives such rights in the Work Product. Subcontractor further agrees as to the Work Product to assist the Supplier in every reasonable way to obtain and, from time to time, enforce patents, copyrights, and other rights and protection, and in protecting trade secrets, with respect to such Work Product, and to that end, Subcontractor and its employees shall execute all documents for use in applying for and obtaining such patents, copyrights, and other rights and protection with respect to such Work Product, as the Supplier may reasonably request, together with any assignments thereof to the Supplier in obtaining and enforcing such rights shall continue beyond the termination of this Contract.

Pre-existing Work

If and to the extent that any pre-existing rights are embodied or reflected in the Service Deliverables, Subcontractor hereby grants to the Supplier an irrevocable, perpetual, non-exclusive, worldwide, royalty-free right and license to (i) use, modify, transmit, execute, reproduce, display, perform, distribute copies of and prepare derivative works based upon such pre-existing rights and any derivative works thereof, and (ii) authorize others to do any or all of the foregoing. It is expressly understood that "perpetual" license rights shall commence upon delivery of the Service Deliverables and shall exist in perpetuity unless otherwise terminated in accordance with the applicable provisions of the Contract.

2. Exhibit C" to Contract Number VA-130620-CAI, Section 5 "Rights to Work Product" the following replaces the above deleted language in its entirety:

Work Product

Supplier and Subcontractor each acknowledge that performance of this Contract may result in Work Product(s). Subcontractor agrees that it shall promptly and fully disclose to Supplier's customer any and all Work Product generated, conceived, reduced to practice or learned by Subcontractor or any of its employees, either solely or jointly with others, during the term or performance of this Contract, which in any way relates to the applicable order or SOW attached thereto. Subcontractor further agrees that neither Subcontractor nor any of Subcontractors's employees, contractors, agents or subcontractors, nor any party claiming through Subcontractor or Subcontractor's employees, shall, other than in the performance of this Contract, make use of or disclose to others any proprietary information relating to the Work Product. All Services performed hereunder shall include delivery of all Work

Product source code, object code, executables, and documentation. Subcontractor agrees that Supplier's customer shall have the right to require Subcontractor to provide a copy of the most recent object or source code to Supplier's customer at any and all times.

Ownership

Subcontractor agrees that, whether or not the Services are considered "works made for hire" or an employment to invent, all Work Product discovered, created or developed under this Contract shall be and shall remain the sole and exclusive property of Supplier's customer. Except as specifically set forth in writing and signed by both Supplier's customer and Subcontractor, Subcontractor agrees that Supplier's customer shall have all rights with respect to any Work Product discovered, created or developed under this Contract without regard to the origin of the Work Product.

If and to the extent that Subcontractor may, under applicable law, be entitled to claim any ownership interest in the Work Product, Subcontractor hereby irrevocably transfers, grants, conveys, assigns and relinquishes exclusively to Supplier's customer any and all right, title and interest it now has or may hereafter acquire in and to the Work Product under patent, copyright, trade secret and trademark law in perpetuity or for the longest period otherwise permitted by law. If any moral rights are created, Subcontractor waives such rights in the Work Product. Subcontractor further agrees as to the Work Product to assist Supplier's customer in every reasonable way to obtain and, from time to time, enforce patents, copyrights, and other rights and protection, and in protecting trade secrets, with respect to such Work Product, and to that end, Subcontractor and its employees shall execute all documents for use in applying for and obtaining such patents, copyrights, and other rights and protection with respect to such Work Product, as Supplier's customer may reasonably request, together with any assignments thereof to Supplier's customer in obtaining and enforcing such rights shall continue beyond the termination of this Contract.

Pre-existing Work

If and to the extent that any pre-existing rights are embodied or reflected in the Service Deliverables, Subcontractor hereby grants to Supplier's customer an irrevocable, perpetual, non-exclusive, worldwide, royalty-free right and license to (i) use, modify, transmit, execute, reproduce, display, perform, distribute copies of and prepare derivative works based upon such pre-existing rights and any derivative works thereof, and (ii) authorize others to do any or all of the foregoing. It is expressly understood that "perpetual" license rights shall commence upon delivery of the Service Deliverables and shall exist in perpetuity unless otherwise terminated in accordance with the applicable provisions of the Contract.

3. Section 10(B) entitled "Liability", the following language shall be deleted in its entirety:

B. Liability

Subcontractor's liability to the Supplier under this Contract for breach of this Contract's confidentiality, security, or indemnification provisions shall be limited to the greater of two (2) times the value of the applicable Statement of Work or \$2,000,000. Subcontractor's liability to the Supplier under this Contract shall, for breach of this Contract by Subcontractor, if the breach arises from any intentional, willful, or negligent act or omission of any employee, agent, or subcontractor of Subcontractor or if the damages are based on bodily injury, death, or damage to real property or tangible personal property be limited to (2) two times the annual value of the Supplier's MSA Contract with VITA. The limitation shall apply on a per-incident basis, it being understood that multiple losses stemming from the same root cause constitute a single incident.

EXCEPT FOR CLAIMS COVERED BY THE ABOVE DOLLAR LIMITATION, NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES UNDER THIS CONTRACT, INCLUDING (WITHOUT LIMITATION) LOSS OF PROFIT, INCOME OR SAVINGS, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

4. The following Section 10(B) entitled "Liability" replaces the above language in its entirety:

B. Liability

Subcontractor's liability to the Supplier under this Contract for breach of this Contract's confidentiality, security, or indemnification provisions shall be limited to two (2) times the value of the order or the applicable Statement of Work. Subcontractor's liability to the Supplier under this Contract shall, for breach of this Contract by Subcontractor, if the breach arises from any negligent act or omission of any employee, agent or subcontractor of Subcontractor shall be limited to two (2) times the value of the order or applicable Statement of Work. Subcontractor's liability to the Supplier under this Contract shall, for breach of this Contract by Subcontractor, if the breach arises from any intentional, willful, or gross negligent act or gross negligent omission of any employee, agent, or subcontractor of Subcontractor or if the damages are based on bodily injury, death, or damage to real property or tangible personal property be limited to two (2) times the annual value of the Supplier's MSA Contract with VITA. The limitation shall apply on a per-incident basis, it being understood that multiple losses stemming from the same root cause constitute a single incident.

EXCEPT FOR CLAIMS COVERED BY THE ABOVE DOLLAR LIMITATION, NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES UNDER THIS CONTRACT, INCLUDING (WITHOUT

LIMITATION) LOSS OF PROFIT, INCOME OR SAVINGS, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

5. Section 4(B) entitled "Statement of Work (SOW)" the following language is deleted in its entirety.

B. Statement of Work (SOW)

AU Services shall be performed at the times and locations set forth in the applicable SOW. All Subcontractor Services provided by a subcontractor shall be performed at the rates set forth in an order or SOW executed by the Authorized User. In furtherance of compliance, invoicing and auditing requirements, for time and materials type SOWs, which must have prior approval by VITA, Subcontractor personnel shall maintain daily time reports of hours and tasks performed which shall be submitted or made available for inspection by the ordering Authorized User upon forty eight (48) hours advance written notice. Unless the Authorized User issues a written authorization for a time and materials type SOW, any SOW shall be of a fixed price type but may, with the written approval of VITA, contain a cost-reimbursable line item(s) for pre-approved travel expenses.

All Services shall be performed at the rates, times and locations set forth in the applicable SOW. In furtherance of compliance, invoicing and auditing requirements, all personnel performing services under an SOW issued under this contract shall maintain daily time records of hours and tasks performed, which shall be submitted or made available for inspection by VITA or any authorized user upon forty-eight (48) hours advance written notice. Any total dollar amounts or not-to-exceed limitations appearing in an SOW shall be considered reasonably accurate estimates. All changes to the Services to be provided must be described in a written change request (template provided as Exhibit E) which includes any appropriate adjustments to the SOW. Either Party to an SOW may issue a change request that will be subject to written approval of the other Party before it becomes part of this Contract. An SOW from an Authorized User may contain additional terms and conditions; however, to the extent that the terms and conditions of the Authorized User's order are inconsistent with the terms and conditions of this Contract or any modification thereto, the terms of this Contract shall supersede. In no event shall any SOW or any modification thereto require the Supplier to perform any work beyond the scope of this Contract.

An SOW may designate certain of Supplier's personnel as Key Personnel or Project Managers. Supplier's obligations with respect to Key Personnel and Project Managers shall be described in the applicable SOW. Failure of Supplier to perform in accordance with such obligations may be deemed a default of this Contract.

An SOW may be written as follows:

Fixed Price Type

A Fixed Price type SOW should be used when the Authorized User's requirements can be set forth in sufficient detail as to allow for a fixed price to be

developed. A Fixed Price type SOW may include cost-reimbursable line items for such expenses as travel and materials. A Fixed Price type SOW should include Deliverables and a milestone payment schedule associated with such Deliverables.

Time and Materials Type

A Time and Materials type SOW should be used when the Authorized User's requirements are not sufficiently defined as to allow for a fixed price to be developed. A Time and Material type SOW shall list the Services to be performed by labor category of personnel, and, for each labor category: a) the number of hours allocated thereto, b) the hourly rate, and c) an extended price. A Time and Materials SOW shall contain a Not to Exceed funding limitation. Supplier shall not be obligated to incur costs in excess of such limitation, and the Authorized User shall not be obligated to reimburse Supplier for costs in excess of such limitation.

The provisions of the Virginia Department of General Services, Division of Purchases and Supply Vendor's Manual shall not apply to this Contract or any order or SOW issued hereunder. Any modification to an SOW that extends the period of performance beyond one (1) year or increases the value of such SOW above US\$100,000 shall, absent the prior written approval of VITA, be voidable by VITA, in its sole discretion. If an SOW is voided by VITA, such SOW shall no longer be binding on either Party and all obligations with respect to such SOW shall expire. [Note: period of performance may be shorter than one (1) year, but not greater, and dollar values may be lower than \$100,000 but not greater.]

An Authorized User and Supplier may enter into an ordering agreement pursuant to this Contract. To the extent that such ordering agreement, or any order or SOW issued hereunder, include any terms and conditions inconsistent with the terms and conditions of this Contract, such terms and conditions shall be of no force and effect.

6. The following Section 4(B) entitled "Statement of Work (SOW)" replaces the above language in its entirety:

B. Statement of Work (SOW)

All Services shall be performed at the times and locations set forth in the applicable SOW. All Subcontractor Services provided by a subcontractor shall be performed at the rates set forth in an order executed by the Authorized User. In furtherance of compliance, invoicing and auditing requirements, for time and materials type SOWs (which must have prior written approval by VITA), Subcontractor personnel shall maintain daily time reports of hours and tasks performed which shall be submitted or made available for inspection by the ordering Authorized User upon forty eight (48) hours advance written notice. Unless VJTA issues a written authorization for a time and materials type SOW, any SOW shall be of a fixed price type but may, with the written approval of VITA, contain a cost-reimbursable line item(s) for pre-approved travel expenses.

All Services shall be performed at the rates, times and locations set forth in the applicable SOW. In furtherance of compliance, invoicing, and auditing requirements, all personnel performing services under an SOW issued under this contract shall maintain daily time records of hours and tasks performed, which shall be submitted or made available for inspection by VITA or any authorized user upon forty-eight (48) hours advance written notice. Any total dollar amounts or not-to-exceed limitations appearing in an SOW shall be considered reasonably accurate estimates. All changes to the Services to be provided must be described in a written change request (template provided as Exhibit E) which includes any appropriate adjustments to the SOW. Either Party to an SOW may issue a change request that will be subject to written approval of the other Party before it becomes part of this Contract. An SOW or order from an Authorized User may contain additional terms and conditions; however, to the extent that the terms and conditions of the Authorized User's order or SOW are inconsistent with the terms and conditions of this Contract or any modification thereto, the terms of this Contract shall supersede. In no event shall any order or SOW or any modification thereto require the Supplier to perform any work beyond the scope of this Contract.

An SOW may designate certain of Supplier's personnel as Key Personnel or Project Managers. Supplier's obligations with respect to Key Personnel and Project Managers shall be described in the applicable SOW. Failure of Supplier to perform in accordance with such obligations may be deemed a default of this Contract.

An SOW may be written as follows:

Fixed Price Type

A Fixed Price type SOW should be used when the Authorized User's requirements can be set forth in sufficient detail as to allow for a fixed price to be developed. A Fixed Price type SOW may include cost-reimbursable line items for such expenses as travel and materials. A Fixed Price type SOW should include Deliverables and a milestone payment schedule associated with such Deliverables.

Time and Materials Type

A Time and Materials type SOW, which requires prior written approval by VITA, should be used when the Authorized User's requirements are not sufficiently defined as to allow for a fixed price to be developed. A Time and Material type SOW shall list the Services to be performed by labor category of personnel, and, for each labor category: a) the number of hours allocated thereto, b) the hourly rate, and c) an extended price. A Time and Materials SOW shall contain a Not to Exceed funding limitation. Supplier shall not be obligated to incur costs in excess of such limitation, and the Authorized User shall not be obligated to reimburse Supplier for costs in excess of such limitation.

The provisions of the Virginia Department of General Services, Division of Purchases and Supply Vendor's Manual shall not apply to this Contract or any order or SOW issued hereunder.

VITA may, in its sole discretion void any SOW between Supplier and an Authorized User. If an SOW is voided by VITA, such SOW shall no longer be binding on either Party and all obligations with respect to such SOW shall expire.

An Authorized User and Supplier may enter into an ordering agreement pursuant to this Contract. To the extent that such ordering agreement, or any order or SOW issued hereunder, include any terms and conditions inconsistent with the terms and conditions of this Contract, such terms and conditions shall be of no force and effect.

The foregoing is the complete and final expression of the parties' agreement to modify Contract VA-130620-CAI. Contract VA-130620-CAI cannot be modified except by a writing signed by a duly authorized representative of both parties.

ALL OTHER TERMS AND CONDITIONS OF CONTRACT NUMBER VA-130620-CAI REMAIN UNCHANGED.

PERSONS SIGNING THIS CONTRACT MODIFICATION ARE AUTHORIZED REPRESENTATIVES OF EACH PARTY TO THIS CONTRACT AND ACKNOWLEDGE THAT EACH PARTY AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS CONTRACT.

Executed as of the last date set forth by the undersigned authorized representatives of VITA and Supplier.

Computer Aid, Inc.

BY: 

NAME: James P. Cooney 

TITLE: Managing Director _____

____ DATE: January 22, 2014 _____

Commonwealth of Virginia

BY: 

NAME: PHILIP L. PIPERT

TITLE: '})Qe.c... O, \$,C..JV\

DATE: 1/23/14

MODIFICATION # 2
TO
CONTRACT NUMBER VA-130620-CAI
BETWEEN THE
COMMONWEALTH OF VIRGINIA
AND
COMPUTER AID INC.

This MODIFICATION #2 is an agreement between the Virginia Information Technologies Agency (hereinafter referred to as "VITA"), pursuant to 2.2-2012 of the Code of Virginia, on behalf of the Commonwealth of Virginia, and Computer Aid, Inc. ("CAI" or "Supplier") to modify Contract Number VA-130620-CAT, ("Contract"). This Modification and any attachments thereto is, upon execution by VITA and Supplier, incorporated into and made an integral part of the Contract.

The purpose of this Modification is to document both parties' agreement to the following:

Exhibit "C" to Contract Number VA-130620-CAI is replaced in its entirety by Exhibit "C" attached hereto.

The foregoing is the complete and final expression of the parties' agreement to modify Contract VA-130620-CAI. Contract VA-130620-CAI cannot be modified, except by a writing signed by a duly authorized representative of both parties.

ALL OTHER TERMS AND CONDITIONS OF CONTRACT VA-130620-CAI REMAIN UNCHANGED.

PERSONS SIGNING THIS CONTRACT MODIFICATION ARE AUTHORIZED REPRESENTATIVES OF EACH PARTY TO THIS CONTRACT AND ACKNOWLEDGE THAT EACH PARTY AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS CONTRACT.

Executed as of the last date set forth by the undersigned authorized representatives of VITA and Supplier.

Computer Aid, Inc.

BY:

NAME:

TITLE:

DATE:

BY: Philip L. P. [Signature]
NAME: Philip L. P. [Signature]
TITLE: 1)cu::c .r oa. , 5LJ.,\.

Commonwealth of Virginia

BY:

NAME:

TITLE:

DATE:

J 0 / 15 }) 3

**MODIFICATION #1
TO
CONTRACT NUMBER VA-130620-CAI
BETWEEN THE
COMMONWEALTH OF VIRGINIA
AND
COMPUTER AID INC.**

This MODIFICATION #1 is an agreement between the Virginia Information Technologies Agency (hereinafter referred to as "VITA"), pursuant to 2.2-2012 of the Code of Virginia, on behalf of the Commonwealth of Virginia, and Computer Aid, Inc. ("CAI" or "Supplier") to modify Contract Number VA-130620-CAI, ("Contract"). This Modification and any attachments thereto is, upon execution by VITA and Supplier, incorporated into and made an integral part of the Contract.

The purpose of this Modification is to document both parties' agreement to the following:

1. Supplier agrees that its direct employees will not provide staff augmentation services or Statement of Work (SOW) service under this Contract unless specifically authorized by VITA in writing. VITA will make this determination on a case by case basis.
2. **Transition of SOWs to Contract Number VA-130620 ("Contract")**
Authorized Users of the Contract acknowledge that subcontractors providing services under active Statements of Work issued under master contract number VA-051123-CAI ("Old Contract") and which remain unchanged (no change order has been executed) will need to continue and complete those services past the expiration date of the Old Contract (12/31/13). Authorized Users also acknowledge that the terms and conditions of the Old Contract will continue to apply to those Statements of Work being completed under the Old Contract until all deliverables are accepted and final payment is made.

Exhibit L to Contract Number VA-130620-CAI ("New Contract") lists current Statements of Work that were originally executed under the Old Contract but which, upon agreement, have been modified by a change order. Those listed Statements of Work will be hereby incorporated into the New Contract and governed by the terms and conditions of the New Contract as of the effective date of the change order in the SOW.

The transition process as shown in the SOW Transition Process Workflow (attached hereto and made a part hereof and marked as Schedule "A") will be followed by the Supplier to execute change orders and maintain service to

authorized users from the Old Contract to the new master contract number VA-130620-CAI ("New Contract").

3. This contract is a cooperatively procured contract under §2.2-4304 of the *Code of Virginia*. Accordingly, the parties agree that this agreement can be used by other public entities outside of Virginia provided those entities execute a participating Addendum that incorporates the terms and conditions of this contract. Such participating addendum:

- a. May include additional terms that are required by the law of the state or locality or any law governing cooperative purchasing agreements.
- b. May include new, mutually agreed upon terms that clarify ordering procedures specific to that participating entity.

In the event that the participating entity requests additional terms and conditions that may increase costs to Supplier, the Supplier, may, upon agreement, adjust its pricing up or down accordingly. These costs may include the following:

- a. State and local taxes
- b. Unemployment and workers compensation fees
- c. E-commerce satisfaction fees
- d. Costs associated with any additional terms and conditions that are mutually agreed upon.

Supplier's pricing for all non-Virginia public entities shall be firm and fixed for the initial term of the Contract. After the initial term of the Contract, if the Contract is renewed by the Commonwealth, the Supplier's pricing may be adjusted based on market conditions only with the mutual agreement of both the Supplier and the purchasing non-Virginia entity.

4. EXHIBIT "F"JOB RATE CARDS TITLES AND DESCRIPTION" to the Contract is amended to add the Job Rate Card and Job Descriptions attached hereto as Attachment I to Exhibit F across all regions. Upon execution of this modification, the new job descriptions and rates will be incorporated by CAI into the Peoplefluent VMS tool for use by the Commonwealth.

The foregoing is the complete and final expression of the parties' agreement to modify Contract VA-130620-CAI. Contract VA-130620-CAI cannot be modified, except by a writing signed by a duly authorized representative of both parties.

ALL OTHER TERMS AND CONDITIONS OF CONTRACT VA-130620-CAI REMAIN UNCHANGED.

PERSONS SIGNING THIS CONTRACT MODIFICATION ARE AUTHORIZED REPRESENTATIVES OF EACH PARTY TO THIS CONTRACT AND ACKNOWLEDGE THAT EACH PARTY AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS CONTRACT.

Executed as of the last date set forth by the undersigned authorized representatives of VITA and Supplier.

Computer Aid, Inc.

BY:

NAME: /L/6J 7 tOO/Ytf/

TITLE:)... /1 /J.- I

DATE: / tJ -,Jo()/-3

Commonwealth of Virginia

BY:

NAME: , □ f' l-· 1ff R.T

TITLE: 1) cR., &Jv\

DATE: 10/8/13



IT Contingent Labor Managed Service Provider Information Technology Services Contract

Between

The Virginia Information Technologies Agency

On behalf of

The Commonwealth of Virginia

And

Computer Aid, Inc.

INFORMATION TECHNOLOGY SERVICES CONTRACT

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INFORMATION TECHNOLOGY SERVICES CONTRACT

THIS INFORMATION TECHNOLOGY SERVICES CONTRACT ("Contract") is entered into by and between the Virginia Information Technologies Agency (VITA) pursuant to §2.2-2012 of the Code of Virginia and on behalf of the Commonwealth of Virginia (hereinafter referred to as "VITA"), and Computer Aid, Inc. ("Supplier"), a corporation headquartered at 1390 Ridgeview Drive, Allentown, PA 18104 to be effective as of June 20, 2013 ("Effective Date").

1. PURPOSE AND SCOPE

This Contract sets forth the terms and conditions under which Supplier shall provide Managed IT Staff Augmentation and IT Statement of Work Services ("Services") to the Authorized Users. Exhibit G documents additional specific details and a timetable by which Supplier will provide such Services.

2. DEFINITIONS

A. Acceptance

Successful performance of the Services at the location designated in the applicable Statement of Work, or completed and successful Acceptance testing in conformance with the Requirements in the applicable requisition as determined by the Authorized User in the applicable Statement of Work.

B. Agent

Any third party independent agent of any Authorized User.

C. Authorized Users

All public bodies, including VITA, as defined by §2.2-4301 and referenced by §2.2-4304 of the Code of Virginia.

D. Confidential Information

Any confidential or proprietary information of a Party that is disclosed in any manner, including oral or written, graphic, machine readable or other tangible form, to any other Party in connection with or as a result of discussions related to this Contract or any order or SOW issued hereunder, and which at the time of disclosure either (i) is marked as being "Confidential" or "Proprietary", (ii) is otherwise reasonably identifiable as the confidential or proprietary information of the disclosing Party, or (iii) under the circumstances of disclosure should reasonably be considered as confidential or proprietary information of the disclosing Party.

E. Deliverable

The tangible embodiment of the Subcontractor Services performed by the Subcontractor, including the development or creation of Work Product, performed or provided by the Subcontractor as provided by the Supplier in the applicable Statement of Work.

F. Supplier Deliverable

Means the tangible embodiment of the Contract Services performed or provided by a subcontractor.

G. Party

Supplier, VITA, or any Authorized User.

H. Related Deliverable

Deliverable identified, specified and mutually agreed upon in the SOW as having interdependencies with another Deliverable within the same SOW.

I. Requirements

The functional, performance, operational, compatibility, Acceptance testing criteria and other parameters and characteristics of the Service(s) and Deliverables as set forth in Exhibit A and the applicable Statement of Work and such other parameters, characteristics, or performance standards that may be agreed upon in writing by the Parties.

J. Service

Any work performed or service provided, including provision to the Authorized User of any Deliverable, by Supplier under this Contract. Service includes the discovery, creation, or development of Work Product, if any.

K. Statement of Work (SOW)

Any document in substantially the form of Exhibit D (describing the deliverables, due dates, assignment duration and payment obligations for a specific project, engagement, or assignment for which Supplier shall be providing Services to an Authorized User), which, upon signing by both Parties, shall be deemed a part of this Contract. A Statement of Work means any incorporated, attached or subsequent document to an order which, upon acceptance by the Supplier in response thereto, shall be deemed a part of the Contract, and which describes the Deliverables, due dates, assignment duration and payment obligations for a specific project, engagement, or assignment for which Subcontractor shall be providing Subcontractor Services.

L. Subcontractor

Any entity with which Supplier has entered a subcontractor contract, Exhibit C, to provide the resources to perform the various Subcontractor Services required during the term of the Contract.

M. Subcontractor Service

Any work performed or service provided, including any Deliverable described in the applicable order or SOW attached thereto, by a Subcontractor for an Authorized User.

N. Supplier

The prime contractor responsible for managing a base of Subcontractors who provide the resources to perform the various Services required during the term of the Contract.

O. RESERVED

P. VITA

Virginia Information Technologies Agency, an agency of the Commonwealth of Virginia pursuant to Chapter 20 (§§2.2-2005 et seq.) of the Code of Virginia.

Q. Contract Data

Limited to all contract management data, information, text, drawings and other materials embodied in any electronic, optical, magnetic or tangible medium that is: (i) provided to Supplier by VITA or any Authorized User in connection with the Services or Subcontractor Services provided by Supplier; (ii) obtained, processed or produced by Supplier in connection with the Services or Subcontractor Services provided by Supplier (e.g. configuration data loaded onto equipment that Supplier maintains as part of the Services and Subcontractor Services provided to VITA and any Authorized User, inventory data maintained by Supplier, administrator passwords used by Supplier in the maintenance of VITA equipment).

R. Work Product

Inventions, combinations, machines, methods, formulae, techniques, processes, improvements, software designs, computer programs, strategies, specific computer-related know-how, data and original works of authorship (collectively, the "Work Product") discovered, created, or developed by Supplier, or jointly by Supplier and an Authorized User(s) in the performance of this Contract. Work Product shall not include configuration of software.

3. TERM AND TERMINATION

A. Contract Term

This Contract is effective and legally binding as of the Effective Date and, unless terminated as provided for in this section, shall continue to be effective and legally binding through June 30, 2018. VITA, in its sole discretion, may extend this Contract for up to three (3) additional one (1) year periods after the expiration of the initial term. VITA will issue a written notification to the Supplier stating the extension period, not less than thirty (30) days prior to the expiration of any current term. Performance of an order or SOW issued during the term of this Contract may

survive the expiration of the term of this Contract, in which case all terms and conditions required for the operation of such order or SOW shall remain in full force and effect until Services pursuant to such order or SOW have met the final Acceptance criteria of the applicable Authorized User.

B. Termination for Convenience

VITA may terminate this Contract, in whole or in part, or any order or SOW issued hereunder, in whole or in part, or an Authorized User may terminate an order or SOW, in whole or in part, upon not less than thirty (30) days prior written notice at any time for any reason.

C. Termination for Breach or Default

VITA shall have the right to terminate this Contract, in whole or in part, or any order or SOW issued hereunder, in whole or in part, or an Authorized User may terminate an order or SOW, in whole or in part, for breach and/or default of Supplier. Supplier shall be deemed in breach and/or default in the event that Supplier fails to meet any material obligation set forth in this Contract or in any order or SOW issued hereunder.

If VITA deems the Supplier to be in breach and/or default, VITA shall provide Supplier with notice of breach and/or default and allow Supplier fifteen (15) days to cure the breach and/or default. If Supplier fails to cure the breach as noted, VITA may immediately terminate this Contract or any order or SOW issued hereunder, in whole or in part. If an Authorized User deems the Supplier to be in breach and/or default of an order or SOW, such Authorized User shall provide Supplier with notice of breach and/or default and allow Supplier fifteen (15) days to cure the breach and/or default. If Supplier fails to cure the breach and/or default as noted, such Authorized User may immediately terminate its order or SOW, in whole or in part. Any such termination shall be deemed a Termination for Breach or a Termination for Default. In addition, if Supplier is found by a court of competent jurisdiction to be in violation of or to have violated 31 USC 1352 or if Supplier becomes a party excluded from Federal Procurement and Nonprocurement Programs, VITA may immediately terminate this Contract, in whole or in part, for breach. VITA shall provide written notice to Supplier of such termination and Supplier shall provide written notice to VITA if Supplier is charged with violation of 31 USC 1352 or if federal debarment proceedings are instituted against Supplier.

Supplier's consistent or recurring failure to meet the agreed-upon service levels will be considered to be a material breach of the Contract as described in this section.

D. Termination for Non-Appropriation of Funds

All payment obligations under this Contract are subject to the availability of legislative appropriations at the federal, state, or local level, for this purpose. In the event of non-appropriation of funds, irrespective of the source of funds, for the items under this Contract, VITA may terminate any order or SOW, in whole or in part, or an Authorized User may terminate its order or SOW, in whole or in part, for those goods or services for which funds have not been appropriated. Written notice will be provided to the Supplier as soon as possible after legislative action is completed.

Termination by Supplier will not be considered.

E. Effect of Termination

Upon termination, neither the Commonwealth, nor VITA, nor any Authorized User shall have any future liability except for Deliverables accepted by the Authorized User or Services rendered by Supplier and accepted by the Authorized User prior to the termination date.

In the event of a Termination for Breach or Termination for Default, Supplier shall accept return of any Deliverable that was not accepted by the Authorized User(s), and Supplier shall refund any monies paid by any Authorized User for such Deliverable, and all costs of de-installation and return of Deliverables shall be borne by Supplier.

F. Transition of Services

Prior to or upon expiration or termination of this Contract and at the request of VITA, Supplier shall provide all assistance as VITA or an Authorized User may reasonably require to transition Services to any other supplier with whom VITA or such Authorized User contracts for provision of

services identical or similar to the Services provided by Supplier pursuant to this Contract. This obligation may extend beyond expiration or termination of the Contract for a period not to exceed six (6) months. In the event of a termination for breach and/or default of Supplier, Supplier shall provide such assistance at no charge or fee to VITA or any Authorized User; otherwise, Supplier shall provide such assistance at the hourly rate or a charge agreed upon by Supplier and VITA or an Authorized User.

G. Contract Kick-Off Meeting

Within 30 days of Contract award, Supplier may be required to attend a contract orientation meeting, along with the VITA contract manager/administrator, the VITA and/or other CoVA Agency project manager(s) or authorized representative(s), technical leads, VITA representatives for SWaM and Sales/IFA reporting, as applicable, and any other significant stakeholders who have a part in the successful performance of this Contract. The purpose of this meeting will be to review all contractual obligations for both parties, all administrative and reporting requirements, and to discuss any other relationship, responsibility, communication and performance criteria set forth in the Contract. The Supplier may be required to have its assigned account manager as specified in Section 6.0 of this contract and a representative from its contracts department in attendance. The time and location of this meeting will be coordinated with Supplier and other meeting participants by the VITA contract manager.

H. Contract Closeout

Prior to the contract's expiration date, Supplier may be provided contract close out documentation and shall complete, sign and return to VITA Supply Chain Management within 30 days of receipt. This documentation may include, but not be limited to: Patent/Royalty Certificate, Tangible Property/Asset Certificate, Escrow Certificate, SWaM Reports Completion Certificate, Sales Reports/IFA Payments Completion Certificate, Final Payment Certificate, data files in electronic format that incorporate order history for all engagements, subcontractor name and contacts. Supplier is required to process these as requested to ensure completion of close-out administration and to maintain a positive performance reputation with the Commonwealth of Virginia. Any closeout documentation not received within 30 days of Supplier's receipt of our request will be documented in the contract file as Supplier non-compliance. Supplier's non-compliance may affect any pending payments due the Supplier, including final payment, until the documentation is returned.

4. SERVICES

A. Nature of Services and Engagement

Supplier is an independent contractor engaged to provide IT staff augmentation services and IT Statement of Work (SOW) services, including but not limited to management of the staff augmentation system and management of the Subcontractor base.

B. Statement of Work (SOW)

All Services shall be performed at the times and locations set forth in the applicable SOW. All Subcontractor Services provided by a subcontractor shall be performed at the rates set forth in an order executed by the Authorized User. In furtherance of compliance, invoicing, and auditing requirements, for time and materials type SOWs (which must have prior written approval by VITA), Subcontractor personnel shall maintain daily time reports of hours and tasks performed which shall be submitted or made available for inspection by the ordering Authorized User upon forty eight (48) hours advance written notice. Unless VITA issues a written authorization for a time and materials type SOW, any SOW shall be of a fixed price type but may, with the written approval of VITA, contain a cost-reimbursable line item(s) for pre-approved travel expenses.

All Services shall be performed at the rates, times and locations set forth in the applicable SOW. In furtherance of compliance, invoicing, and auditing requirements, all personnel performing services under an SOW issued under this contract shall maintain daily time records of hours and tasks performed, which shall be submitted or made available for inspection by VITA or any authorized user upon forty-eight (48) hours advance written notice. Any total dollar amounts or not-to-exceed limitations appearing in an SOW shall be considered reasonably accurate

estimates. All changes to the Services to be provided must be described in a written change request (template provided as Exhibit E) which includes any appropriate adjustments to the SOW. Either Party to an SOW may issue a change request that will be subject to written approval of the other Party before it becomes part of this Contract. An SOW from an Authorized User may contain additional terms and conditions; however, to the extent that the terms and conditions of the Authorized User's order are inconsistent with the terms and conditions of this Contract or any modification thereto, the terms of this Contract shall supersede. In no event shall any SOW or any modification thereto require the Supplier to perform any work beyond the scope of this Contract.

An SOW may designate certain of Supplier's personnel as Key Personnel or Project Managers. Supplier's obligations with respect to Key Personnel and Project Managers shall be described in the applicable SOW. Failure of Supplier to perform in accordance with such obligations may be deemed a default of this Contract.

An SOW may be written as follows:

i.) Fixed Price Type

A Fixed Price type SOW should be used when the Authorized User's requirements can be set forth in sufficient detail as to allow for a fixed price to be developed. A Fixed Price type SOW may include cost-reimbursable line items for such expenses as travel and materials. A Fixed Price type SOW should include Deliverables and a milestone payment schedule associated with such Deliverables.

ii.) Time and Materials Type

A Time and Materials type SOW, which requires prior written approval by VITA, should be used when the Authorized User's requirements are not sufficiently defined as to allow for a fixed price to be developed. A Time and Material type SOW shall list the Services to be performed by labor category of personnel, and, for each labor category: a) the number of hours allocated thereto, b) the hourly rate, and c) an extended price. A Time and Materials SOW shall contain a Not to Exceed funding limitation. Supplier shall not be obligated to incur costs in excess of such limitation, and the Authorized User shall not be obligated to reimburse Supplier for costs in excess of such limitation.

The provisions of the Virginia Department of General Services, Division of Purchases and Supply Vendor's Manual shall not apply to this Contract or any order or SOW issued hereunder. Any modification to an SOW that extends the period of performance beyond one (1) year or increases the value of such SOW above US\$100,000 shall, absent the prior written approval of VITA, be voidable by VITA, in its sole discretion. If an SOW is voided by VITA, such SOW shall no longer be binding on either Party and all obligations with respect to such SOW shall expire. [Note: period of performance may be shorter than one (1) year, but not greater, and dollar values may be lower than \$100,000 but not greater.]

An Authorized User and Supplier may enter into an ordering agreement pursuant to this Contract. To the extent that such ordering agreement, or any order or SOW issued hereunder, include any terms and conditions inconsistent with the terms and conditions of this Contract, such terms and conditions shall be of no force and effect.

C. Performance of Services

Supplier shall provide personnel qualified to perform the Services required by any SOW issued hereunder. If any individual provided by Supplier fails to perform at an acceptable level of achievement of Requirements within a reasonable length of time, not exceed ten (10) business days, such Authorized User shall have the right to request that Supplier immediately remove such individual from performing on the SOW and replace such individual with a more qualified individual. For a time and materials type SOW, Authorized User may withhold payment for any hours billed by Supplier for such individual's performance of the Services. Any disputes arising from the foregoing shall be resolved in accordance with the Dispute Resolution section of this Contract.

D. Authorized Users Responsibilities

Unless otherwise agreed in writing in the SOW, the Authorized User will provide, as required, access to project documentation and to any technical manuals and references during the normal performance of duties. If work is to be performed by Supplier at Authorized User's location, Authorized User shall also provide proper working facilities and consumable supplies commensurate with the task(s) to be performed.

E. Change Orders

All changes to the Services to be provided pursuant to any given SOW must be described in a written change request (template provided as Exhibit E), which includes any appropriate adjustments to the SOW. Either Party to an SOW may issue a change request that will be subject to written approval of the other Party before it becomes part of this Contract. In no event shall any SOW or any modification thereto require the Supplier or any of Supplier's Subcontractors to perform any work beyond the scope of this Contract.

F. Acceptance

Service(s) shall be deemed accepted when the Authorized User determines that such Service(s) meets the Requirements set forth in the applicable order or SOW. If applicable, Supplier shall be responsible for ensuring that any individual Deliverable functions properly with any other Related Deliverable provided pursuant to the same SOW. Should a previously Accepted Deliverable require further modification in order to work properly with any other Related Deliverable, Supplier shall be responsible for all costs associated with such modification.

Authorized User shall commence Acceptance testing within ten business (10) days, or within such other period as set forth in the applicable SOW, after receipt of the Service. Acceptance testing will be no longer than thirty (30) days, or such longer period as may be agreed in writing between Authorized User and Supplier, for each Deliverable or for the first instance of each Service type set forth in Exhibit D. Supplier agrees to provide to the Authorized User such assistance and advice as the Authorized User may reasonably require, at no additional cost, during such Acceptance testing. Authorized User shall provide to Supplier written notice of Acceptance upon completion of installation and successful Acceptance testing. Should Authorized User fail to provide Supplier written notice of successful or unsuccessful Acceptance testing within five business (5) days following the Acceptance testing period, the Service shall be deemed Accepted.

G. Cure Period

Supplier shall correct any non-conformities identified hereunder and shall thereafter re-submit such previously non-conforming Service or Deliverable for re-testing within seven (7) business days of the appropriate Authorized User's written notice of non-conformance, or as otherwise agreed between such Authorized User and Supplier. In the event that Supplier fails to deliver a Service or Deliverable which meets the Requirements, the Authorized User may, in its sole discretion: (i) reject the Service or Deliverable in its entirety and recover amounts previously paid hereunder for Services or Deliverables that are identified and specified and mutually agreed upon in the SOW as having interdependencies with the non-conforming Service or Deliverable; (ii) issue a "partial Acceptance" of the Service or Deliverable with an equitable adjustment in the price to account for such deficiency; or (iii) conditionally accept the applicable Service or Deliverable while reserving its right to revoke Acceptance if timely correction is not forthcoming. Failure of a Service or a Deliverable to meet, in all material respects, the specifications and performance standards after the second set of acceptance tests may constitute cause to terminate the SOW for services provided as a Subcontractor Service, or constitute a default by the supplier for services provided solely by Supplier. Notwithstanding the foregoing, VITA or the Authorized User shall be entitled to pursue any other remedies that are available to it under this Contract and at law or in equity.

For services provided under a SOW, if the Authorized User rejects the Service or Deliverable in its entirety, the Authorized User may seek to recover amounts previously paid to Supplier for such Service or Deliverable. In such event, Supplier, upon providing written notification to the Subcontractor providing such Service or Deliverable, may collect those amounts from the

Subcontractor. If, after a period of 60 days from the date of such written notification to subcontractor, Supplier is only able to collect less than the amount of such Service or Deliverable, then VITA or the Authorized User agrees to accept such amount in payment from Supplier while Supplier agrees to assign, in whole and in part, all actions, at law and otherwise, to VITA and/or the Authorized User to collect such amounts from the subcontractor. No other remedies available to the Authorized User under the SOW or this Contract or any modification thereto shall be affected.

H. Training and Documentation

Any training or documentation necessary for VITA and/or the Authorized User to have full benefit of the Services shall be deemed included in the scope of this Contract unless expressly excluded.

I. Warranty Period

90 days from Acceptance of the Deliverable, or such longer period as may be agreed to in the applicable SOW.

J. Use of Deliverables

Supplier grants to each ordering Authorized User a worldwide, royalty free, perpetual license to use, reproduce, display, distribute copies of, and prepare derivative works of the Deliverables to or for (i) Authorized User's internal purposes, (ii) Authorized User's client agencies within Commonwealth, (iii) third parties who have signed appropriate confidentiality agreements, and (iv) governmental or regulatory bodies as required by law or regulation. It is expressly understood that "perpetual" license rights shall commence upon delivery of the Service Deliverables to the Authorized User and shall exist in perpetuity.

5. RIGHTS TO WORK PRODUCT

If Authorized User is a state agency, board, commission, or other quasi-political entity of the Commonwealth of Virginia or other body referenced in Title 2.2 of the Code of Virginia, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with the Commonwealth. If Authorized User is a locality, municipality, school, school system, college, university, local board, local commission, or local quasi-political entity, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of Work Product shall vest with that public body.

A. Work Product

VITA and Supplier each acknowledge that performance of this Contract may result in Work Product. The Parties shall document all Work Product specifications and such specifications shall be made an incorporated Exhibit to this Contract. Supplier agrees that it shall promptly and fully disclose to the Commonwealth or the Authorized User any and all Work Product generated, conceived, reduced to practice or learned by Supplier or any of its employees, either solely or jointly with others, during the term or performance of this Contract, which in any way relates to the business of the Commonwealth, VITA, or any Authorized User. Supplier further agrees that neither Supplier nor any of Supplier's employees, contractors, agents or subcontractors, nor any party claiming through Supplier or Supplier's employees, shall, other than in the performance of this Contract, make use of or disclose to others any proprietary information relating to the Work Product. All Services performed hereunder shall include delivery of all Work Product source code, object code, executables, and documentation. Supplier shall at no time deny access to the Work Product, regardless of form, by the Commonwealth or the Authorized User. Supplier agrees that it shall require all Subcontractors, pursuant to Exhibit C, to promptly and fully disclose to the ordering Authorized User any and all Work Product generated, conceived, reduced to practice or learned by Subcontractor or any of its employees, either solely or jointly with others, during the term of this Contract, which in any way relates to the business of the Authorized User.

B. Ownership

Supplier agrees that, whether or not the Services are considered "works made for hire" or an employment to invent, all Work Product discovered, created or developed under this Contract shall be and shall remain the sole and exclusive property of the Commonwealth of Virginia and its assigns or the Authorized User and its assigns. Except as specifically set forth in writing and

signed by both VITA and Supplier, or Authorized User and Supplier, Supplier agrees that the Commonwealth or the Authorized User shall have all rights with respect to any Work Product discovered, created or developed under this Contract by Supplier or any Subcontractor without regard to the origin of the Work Product.

If and to the extent that Supplier or any Subcontractor may, under applicable law, be entitled to claim any ownership interest in the Work Product, Supplier and/or any of Supplier's Subcontractors hereby irrevocably transfers, grants, conveys, assigns and relinquishes exclusively to the Commonwealth or the Authorized User any and all right, title and interest it now has or may hereafter acquire in and to the Work Product under patent, copyright, trade secret and trademark law in perpetuity or for the longest period otherwise permitted by law. If any moral rights are created, Supplier and/or any of Supplier's Subcontractors waives such rights in the Work Product. Supplier and/or any of Supplier's Subcontractors further agrees as to the Work Product to assist the Commonwealth or the Authorized User in every reasonable way to obtain and, from time to time, enforce patents, copyrights, and other rights and protection, and in protecting trade secrets, with respect to such Work Product, and to that end, Supplier and its employees and Subcontractors shall execute all documents for use in applying for and obtaining such patents, copyrights, and other rights and protection with respect to such Work Product, as the Commonwealth or the Authorized User may reasonably request, together with any assignments thereof to the Commonwealth or the Authorized User or entities designated by the Commonwealth or the Authorized User. The Supplier's, its employees and its Subcontractor's obligations to assist VITA and/or Authorized Users in obtaining and enforcing such rights shall continue beyond the termination of this Contract.

The Supplier agrees and will require all Subcontractors to agree that neither Supplier, Subcontractor, Subcontractor's employees, nor any party claiming through Supplier, Subcontractor or Subcontractor's employees, shall, other than in the performance of this Contract, make use of or disclose to others any proprietary information relating to the Work Product.

All Subcontractor Services performed hereunder shall include delivery of all source and object code and all executables and documentation. The Supplier agrees that it shall require all Subcontractors, pursuant to Exhibit C to provide the ordering Authorized User a copy of the most recent source code upon completion of the SOW or as specified as a deliverable in the SOW.

C. Ownership of Intellectual Property

Supplier represents and warrants that it is the sole and exclusive owner, or has the right to use, all Supplier's deliverables, measurement and benchmarking tools, templates, methodologies, questionnaires, Supplier-proprietary research and copyrighted material and Supplier data (collectively, "Supplier's Intellectual Property") that are used in the course of performing consulting Services, provided that Supplier's Intellectual Property was owned or licensed by Supplier prior to the effective date of this Contract or was developed, licensed, or obtained at Supplier's expense.

Supplier may, in the course of executing a SOW discover, create, or develop Work Product. All Work Product discovered, created or developed under any SOW issued hereunder shall be and remain the sole property of the Commonwealth and/or any authorized user and its assigns. Except as specifically set forth in writing and signed by both the authorized user and Supplier, Supplier agrees that the Authorized User shall have all rights with respect to any Work Product discovered, created or developed under this Contract without regard to the origin of the Work Product.

If and to the extent that Supplier may, under applicable law, be entitled to claim any ownership interest in the Work Product, Supplier hereby transfers, grants, conveys, assigns and relinquishes exclusively to the Authorized User or Commonwealth any and all right, title and interest it now has or may hereafter acquire in and to the Work Product under patent, copyright, trade secret and trademark law in perpetuity or for the longest period otherwise permitted by law. If any moral rights are created, Supplier waives such rights in the Work Product. Supplier further agrees as to the Work Product to assist the Authorized User in every reasonable way to obtain and, from time

to time, enforce patents, copyrights, trade secrets and other rights and protection relating to the Work Product, and to that end, Supplier and its subcontractors or employees shall execute all documents for use in applying for and obtaining such patents, copyrights, trade secrets and other rights and protection with respect to such Work Product, as the Authorized User may reasonable request, together with any assignments thereof to the Authorized User or entities designated by it. Supplier's and its employees' obligations to assist the Authorized User in obtaining and enforcing such rights shall continue beyond the termination of this Contract or any SOW issued hereunder.

The Supplier hereby agrees that, notwithstanding anything else in this Contract, in the event of any breach of this Contract by VITA or any Authorized User, the Supplier's remedy shall not include any right to rescind, otherwise revoke, or invalidate the provisions of this Section. Similarly, no termination of the Contract by VITA, or a termination of any SOW by an Authorized User, shall have the effect of rescinding the provisions of this Section.

With the exception of the foregoing, Supplier shall retain sole and exclusive ownership of Supplier's Intellectual Property.

D. Pre-existing Work

If and to the extent that any pre-existing rights are embodied or reflected in the Service Deliverables, Supplier and any of its Subcontractors hereby grants to the Commonwealth or the Authorized User an irrevocable, perpetual, non-exclusive, worldwide, royalty-free right and license to (i) use, modify, transmit, execute, reproduce, display, perform, distribute copies of and prepare derivative works based upon such pre-existing rights and any derivative works thereof, and (ii) authorize others to do any or all of the foregoing. It is expressly understood that "perpetual" license rights shall commence upon delivery of the Service Deliverables and shall exist in perpetuity unless otherwise terminated in accordance with the applicable provisions of the Contract.

E. Return of Materials

Upon termination of this Contract, Supplier shall immediately return to VITA or the appropriate Authorized User all copies, in whatever form, of any and all Confidential Information, Work Product and other properties provided by VITA or such Authorized User, which are in Supplier's possession, custody or control.

6. SUPPLIER PERSONNEL AND RESPONSIBILITIES

A. Selection and Management of Supplier Personnel

Supplier shall take such steps as may be necessary to ensure that all Supplier personnel performing Services under this Contract are competent and knowledgeable of the contractual arrangements and the applicable orders and SOWs between Authorized User and Supplier. Supplier shall be solely responsible for the conduct of its employees, agents, and Subcontractors, including all acts and omissions of such employees, agents, and Subcontractors, and shall ensure that such employees and subcontractors comply with the appropriate Authorized User's site security, information security and personnel conduct rules, as well as applicable federal, state and local laws, including export regulations. Authorized User reserves the right to require the immediate removal from such Authorized User's premises of any employee, Subcontractor or agent of Supplier whom such Authorized User believes has failed to comply or whose conduct or behavior is unacceptable or unprofessional or results in a security or safety breach.

Supplier agrees to have full time (Richmond metro area) local resources dedicated to the support of this Contract at all times during the term of this contract.

B. Supplier Personnel Supervision

Supplier acknowledges that Supplier, or any of its agents, contractors, or subcontractors, is and shall be the employer of Supplier personnel, and shall have sole responsibility to supervise, counsel, discipline, review, evaluate, set the pay rates of, provide (to the extent required by law) health care and other benefits for, and terminate the employment of Supplier personnel. Neither VITA nor an Authorized User shall have any such responsibilities for Supplier or Subcontractor personnel.

C. Key Personnel

An SOW may designate certain of Subcontractor's personnel as Key Personnel or Project Managers. Supplier and/or Subcontractor's obligations with respect to Key Personnel and Project Managers shall be described in the applicable SOW. Failure of Supplier or Subcontractor to perform in accordance with such obligations may be deemed a default of this Contract or of the applicable SOW.

7. REPRESENTATIONS AND WARRANTY OF SERVICES AND SUBCONTRACTOR SERVICES

With respect to the right to the Services provided by Supplier and the Subcontractor Services, Supplier represents and warrants the following:

A. Ownership

Supplier has the right to provide the services, including Deliverables, without violating or infringing any law, rule, regulation, copyright, patent, trade secret or other proprietary right of any third party.

B. Performance

All Services and Subcontractor Services shall be performed with care, skill and diligence, consistent with or above applicable professional standards consistently recognized in its profession, and Supplier shall be responsible for the professional quality, technical accuracy, completeness and coordination of all plans, information, specification, computer programs, software, Deliverables, Subcontractor Services and Services furnished under this Contract.

The Services shall meet or exceed the Solution Requirements.

The Services and Subcontractor Services shall be performed in a professional manner.

C. Subcontractors

Supplier represents and warrants that any authorized subcontractors performing the Services shall perform the Services in accordance with the warranties set forth in this Contract and the SOW. The Supplier will be (i) responsible for all work performed by subcontractors, (ii) will be responsible for Subcontractors compliance with the Contract and (iii) guarantee the performance of any services provided by the Supplier's subcontractors (including but not limited to liability for all subcontractors adherence with all technical and operational specifications.) The Supplier will be responsible for payment of its subcontractors and will indemnify VITA against any claims resulting from Supplier's failure to pay.

If an order or SOW issued pursuant to this Contract is supported in whole or in part with federal funds, Supplier shall not subcontract any Services pursuant to such order or SOW to any subcontractor that is a party excluded from Federal Procurement and Nonprocurement Programs. In no event shall Supplier subcontract any Services to any subcontractor which is debarred by the Commonwealth of Virginia or which owes back taxes to the Commonwealth and has not made arrangements with the Commonwealth for payment of such back taxes.

All Subcontractor Personnel performing Services under this Contract will have a W-2 or 1099 relationship to the Subcontractor, or be no more than one relationship layer removed from the Subcontractor.

8. SUPPLIER TO SUBMIT ANNUAL OPERATIONAL PLAN

Supplier agrees to complete an operational plan (refer to Exhibit G, Attachments 1 and 2) for submission to VITA each year which shall address the following:

- i.) Activities to market the contract to other public bodies and localities.
- ii.) Quarterly updating and improvements in supplier portal and website and other communication media to improve marketing and information to other public bodies and localities.
- iii.) Development of a strategy to improve senior level operations and executive level reporting.
- iv.) Schedule for VMS training needed for new users, Authorized Users, version updating and maintenance.

- v.) Improvements to senior level reporting as well as updates to Authorized Users, managers and resource handbooks.

Supplier will meet with VITA personnel responsible for managing the contract for an annual planning session prior to the submission of the first operational plan and prior to each subsequent updated annual plan.

9. POLICIES AND PROCEDURES GUIDE

Within 30 days of the effective date of the Contract, Supplier will provide VITA will a policy and procedures guide that describes how the Supplier and VITA will work together and how services are to be delivered. The guide will provide process diagram details, working activities, interface points with VITA and Supplier deliverables. Updated versions of the guide will be provided by Supplier to VITA and all Authorized Users every 6 months during the terms of the Contract.

10. REQUIRED MEETINGS WITH VITA

Supplier will conduct regular meetings with VITA, customer advisory groups and senior management. The meetings will include:

- i.) Quarterly business reviews of trends, performance, labor market data, subcontractor performance, supplier performance to SLA, improvement plans and activities.
- ii.) Monthly progress meetings to review and discuss program on program initiatives and challenges
- iii.) Weekly operations meeting to review current status of engagements

11. SERVICE LEVEL AGREEMENT CREDITS

Supplier agrees to identify and calculate all credits due for outages, performance failures or failure to meet any service level. All service levels will be computed on a monthly basis. Supplier will ensure that all credits due VITA are provided automatically without requiring VITA to submit a claim or request, and are clearly identified on the credit note to which they are posted (including specifically identifying on the credit note the outage to which the service credit applies.). Service credits will be issued no later than 60 days after such outage or failure to meet such service level occurs. The Service Level Agreements will be reviewed monthly by VITA and the Supplier to identify any issues that may need immediate attention and may be reviewed again during the quarterly meetings between VITA and the Supplier. Supplier will be allowed a 60 day grace period during the implementation phase of the contract to ramp up services, without scoring on any of the performance metrics in the Service Level Agreements (SLAs). Supplier will begin measuring the service levels immediately after completion of implementation and migration, beginning with the next calendar quarter, or 60 days thereafter, whichever is longer.

12. CONTRACT DATA

The following requirements pertain to all Contract Data:

A. Correcting Errors and Inaccuracies

At Supplier's expense, Supplier shall promptly correct any errors or inaccuracies in the Contract Data that are caused by Supplier or Supplier's subcontractors.

B. Secure Retention of Contract Data

During the term of any agreement between VITA and the Supplier (including during any period of transition assistance) Supplier shall maintain a copy of all Contract Data and shall make secure back-ups of the Contract Data on a regular basis.

If, due to an act or omission of Supplier, any Contract Data is corrupted, lost or sufficiently degraded as to be unusable, the Supplier will, at its sole cost and expense, as soon as reasonably practicable and so far as it is reasonably capable, carry out such remedial action as is required to restore the Contract Data as VITA may reasonably require.

C. Return of VITA Data

At any time during the term of the Contract, at VITA's request, Supplier shall provide VITA with a copy of the Contract Data in the format requested by VITA. Upon termination or expiration of the Contract the Supplier must return all Contract Data to VITA or to VITA's nominated agent in the format requested by VITA. The Supplier will provide reasonable assistance to VITA or to VITA's nominated agent in order to transition the responsibilities with respect to the use of and maintenance of the Contract Data back to VITA or to VITA's nominated agent as required.

13. RESERVED

14. GENERAL WARRANTY

With respect to the Services provided by Supplier, Supplier represents and warrants the following:

A. Ownership

Supplier has the right to provide the Services, including Deliverables, without violating or infringing any law, rule, regulation, copyright, patent, trade secret or other proprietary right of any third party.

B. Supplier's Viability

Supplier warrants that it has the financial capacity to perform and continue to perform its obligations under this Contract; that Supplier has no constructive or actual knowledge of an actual or potential legal proceeding being brought against Supplier that could materially adversely affect performance of this Contract; and that entering into this Contract is not prohibited by any contract, or order by any court of competent jurisdiction.

C. Supplier's Past Experience

Supplier warrants that the Services have been successfully performed for a non-related third-party without significant problems due to the Services or Supplier.

D. Performance

All Supplier Services and all Subcontractor Services shall be performed with care, skill and diligence, consistent with or above applicable professional standards currently recognized in its profession, and Supplier shall be responsible for the professional quality, technical accuracy, completeness and coordination of all plans, information, specifications, Deliverables and Services furnished under this Contract;

Services pursuant to a particular Request for Proposal ("RFP"), quote, or Request for Quote (RFQ), and any associated Deliverables shall be fit for the particular purposes specified by VITA in the RFP and in this Contract and, if applicable, by the Authorized User requesting such quote or issuing such RFQ, and Supplier is possessed of superior knowledge with respect to the Services and Deliverables and is aware that all Authorized Users are relying on Supplier's skill and judgment in providing the Services and Deliverables;

The Services and Deliverables shall meet or exceed the Requirements and shall be performed in a professional manner;

The Supplier warrants that the documentation which Supplier is required to provide under this Contract shall be sufficient in detail and content to allow a user, possessing sufficient technical knowledge, to understand fully the software or other Deliverables without reference to any other materials or information.

E. Performance Service Standards and Remedies

Supplier will meet or exceed the Service levels detailed in Exhibit B attached hereto. In the event Supplier fails to meet the Service levels, Supplier agrees to the following remedies:

A discussion will take place between Supplier representatives and the VITA contract manager. Supplier will be given a warning and a plan will be developed to improve on the problem areas within thirty (30) days.

If a second monthly review occurs with minimal or no improvement in the problem areas, Supplier will be placed on Probation, and Supplier will be given two (2) months to improve their overall service score.

If a third monthly review with below-threshold score occurs within the two (2) month probationary period, the Supplier will be required to give a one percent (1%) rebate on the month's revenue back to each Authorized User which has provided revenue to Supplier.

If a fourth below-threshold score occurs within the next three (3) months, Supplier will be required to provide a three percent (3%) rebate on the month's revenue back to each Authorized User which has provided revenue to Supplier, and the Contract may be terminated by VITA.

F. Malicious Code

Supplier agrees that it will commit its Subcontractor to using best efforts through quality assurance procedures to ensure that there are no computer viruses or undocumented features in any of the media or means used to deliver the Services. Supplier will commit that its Subcontractors have used the best available means to scan any media on which Deliverables are provided to the Authorized User.

G. Limited Warranty Period and Remedy

During the Warranty Period, Supplier warrants that the Deliverables do not contain any material errors and shall conform to the Requirements outlined in the SOW. Supplier shall correct all errors at no additional cost to any Authorized User. If Supplier is unable to make the Deliverable conform, in all material respects, to the SOW Requirements within ten (10) days, or a time period mutually agreed upon or specified in the SOW, following written notification by an Authorized User, Supplier shall, at such Authorized User's request, accept return of such Deliverable and any other Related Deliverable(s) from the same SOW rendered unusable, and return all monies paid by such Authorized User for the non-conforming Deliverable and such other Related Deliverable(s) rendered unusable. For Subcontractor Services, return of monies to the Authorized User will occur within 10 days of receipt by Supplier of monies returned by subcontractor(s) for the non-conforming deliverables. Supplier will only be responsible for reimbursing the Authorized User such amounts as Supplier has received from the subcontractor(s) for the non-conforming deliverables.

THE OBLIGATIONS OF SUPPLIER UNDER THIS GENERAL WARRANTY SECTION ARE MATERIAL. SUPPLIER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY CONCERNING MERCHANTABILITY OR FITNESS FOR ANY OTHER PARTICULAR PURPOSE.

15. TRAINING AND DOCUMENTATION

Any training or documentation necessary for an Authorized User to have full benefit of the Subcontractor Services shall be deemed included in the scope of the applicable order or SOW unless expressly excluded.

16. ORDERS AND COMPENSATION

A. Order

Supplier is required to accept any order placed by an Authorized User through the eVA electronic procurement website portal (<http://www.eva.virginia.gov/>). eVA is the Commonwealth of Virginia's e-procurement system. State agencies, as defined in §2.2-2006 of the Code of Virginia, shall order through eVA. All other Authorized Users are encouraged to order through eVA, but may order through the following means:

- i.) Purchase Order (PO): An official PO form issued by an Authorized User.

This ordering authority is limited to issuing orders for the Services available under this Contract. Under no circumstances shall any Authorized User have the authority to modify this Contract. An order from an Authorized User may contain additional terms and conditions; however, to the

extent that the terms and conditions of the Authorized User's order are inconsistent with the terms and conditions of this Contract, the terms of this Contract shall supersede.

Notwithstanding the foregoing, Supplier shall not accept any order from an Authorized User if such order is to be funded, in whole or in part, by federal funds and if, at the time the order is placed, Supplier is not eligible to be the recipient of federal funds as may be noted on any of the Lists of Parties Excluded from Federal Procurement and Nonprocurement Programs.

ALL CONTRACTUAL OBLIGATIONS UNDER THIS CONTRACT IN CONNECTION WITH AN ORDER PLACED BY ANY AUTHORIZED USER ARE THE SOLE OBLIGATION OF SUCH AUTHORIZED USER AND NOT THE RESPONSIBILITY OF VITA UNLESS SUCH AUTHORIZED USER IS VITA.

B. Purchase Price and Price Protection

Exhibit F sets forth the fees and the appropriate Commonwealth discounts. Supplier's management fees shall not increase and discounts shall not decrease for a period of not less than two (2) years from the Effective Date. Thereafter, no such increase shall exceed the lesser of three percent (3%) or the annual increase in the Consumer Price Index for All Urban Consumers (CPI-U), U.S. City Average, All Items, not seasonally adjusted, as published by the Bureau of Labor Statistics of the Department of Labor (<http://www.bls.gov/cpi/home.htm>), for the effective date of the increase compared with the same index one (1) year prior. Any such change in price shall be submitted in writing in accordance with the above and shall not become effective for sixty (60) days thereafter. Supplier shall demonstrate the added value for any requested price increase. Any such change in price shall be submitted to VITA in writing in accordance with the above and shall not become effective for sixty (60) days thereafter. Semi-annually, the resource rates set forth in Exhibit F shall be checked against the applicable market index, or other applicable industry data, and the prices in Exhibit F shall be appropriately adjusted to ensure continued price competitiveness, if required. Supplier agrees to offer price reductions to ensure compliance with the Competitive Pricing Section.

C. Purchase Payment Terms and Invoice Procedures

Supplier is responsible for the accuracy of its billing information. Supplier agrees not to issue invoices hereunder until Services have been performed or milestones have met Acceptance criteria. Charges for Services accepted more than ninety (90) days prior to receipt of a valid invoice may not be paid, except in accordance with a milestone payment schedule. Should Supplier repeatedly over bill Authorized User, Authorized User may assess a one percent (1%) charge for the amount over billed for each month that such overbilling continues.

If there are any disputed items, the appropriate Authorized User shall pay all undisputed charges and promptly notify Supplier in writing of any disputed amount. Supplier shall thereupon review its records, and, if it does not concur with such Authorized User, provide such Authorized User with documentation to support the charge. If such charges remain in dispute, such dispute shall be resolved in accordance with the Dispute Resolution section of this Contract. In the absence of the Supplier's written evidence identifying the merit of the disputed amounts, Authorized User may not pay the disputed amounts and may consider the matter concerning the specific identified amounts closed. All payment terms are net 30 days after Acceptance.

For an SOW with a period of performance not expected to exceed one (1) month, Supplier shall remit each invoice to the "bill-to" address provided with the SOW promptly after all Deliverables or Services have been accepted and in accordance with the milestone payment schedule, if any, in the applicable SOW. For a time and material type SOW with a period of performance expected to exceed one (1) month, Supplier shall submit invoices to the ordering Authorized User monthly in arrears, unless otherwise specified in such SOW. For a fixed price type SOW, Supplier shall invoice in accordance with the milestone payment schedule, if any, in the applicable SOW; if such SOW does not include a milestone payment schedule, Supplier shall invoice after all Deliverables or Services have been accepted by the ordering Authorized User.

Supplier will not be required to honor Credit card payments.

Invoices issued by the Supplier shall identify at a minimum:

- i). Deliverable or Service type, or project milestone, and description
- ii). Quantity, charge and extended pricing for each Deliverable and/or Service item or milestone; or, for a time and materials type order, the name(s) of the assigned employee(s), the hourly rate(s), and the number of hours worked;
- iii). Applicable SOW date
- iv). This Contract number and the applicable order number
- v). Supplier's Federal Employer Identification Number (FEIN).

ALL CONTRACTUAL OBLIGATIONS UNDER THIS CONTRACT IN CONNECTION WITH AN SOW PLACED BY ANY AUTHORIZED USER ARE THE SOLE OBLIGATION OF SUCH AUTHORIZED USER AND NOT THE RESPONSIBILITY OF VITA UNLESS SUCH AUTHORIZED USER IS VITA.

D. Reimbursement of Expenses

If allowable pursuant to an Authorized User's SOW, such Authorized User shall pay, or reimburse Supplier, for all reasonable and actual travel-related expenses for greater than thirty (30) miles from portal to portal incurred by Supplier during the relevant period; provided, however, that such Authorized User shall only be liable to pay for Supplier's travel-related expenses, including transportation, meals, lodging and incidental expenses, that have been authorized by such Authorized User in advance and which will be reimbursable by such Authorized User at the then-current per diem amounts as published by the Virginia Department of Accounts (<http://www.doa.virginia.gov/>, or a successor URL(s)).

All reimbursed expenses will be billed to the Authorized User on a pass-through basis without any markup by Supplier. At Authorized User's request, Supplier shall provide copies of receipts for all travel expenses over US\$20.00.

E. Overtime Policy

No overtime premiums will be paid by Supplier for work which is performed under normal business hours (8:00 a.m. local time – 5:00 p.m. local time) in order to complete a task on time, unless otherwise agreed to in writing in advance by Authorized User.

17. REPORTING

Supplier is required to submit to VITA the following monthly reports:

- i.) Report of Sales; and
- ii.) Small Business Subcontracting Report

These reports must be submitted using the instructions found at the following URL:

<http://www.vita.virginia.gov/scm/default.aspx?id=97>

Failure to comply with all reporting requirements may result in default of the Contract.

Suppliers are encouraged to review the site periodically for updates on Supplier reporting.

18. STEERING COMMITTEE

In order to facilitate mutually beneficial contractual relationships with suppliers, VITA has procedures for establishing a steering committee ("Steering Committee"), consisting of senior management personnel, including personnel involved in the contractual relationship, from VITA and Supplier.

Roles of the Steering Committee include but are not limited to a) identifying potential issues which may arise during the performance of a contract, b) discussing and assigning roles and responsibilities, c) establishing methods for quickly resolving potential disputes, d) setting rules for communication and decision making, e) monitoring and measuring the business relationship between the parties, and f) acting as a final decision board for escalated problems.

A meeting of the Steering Committee is intended to be a forum for brainstorming and sharing ideas, emphasizing respect, cooperation, and access, with the end goal of developing relationships to avoid conflict. A facilitator may, but is not required to, conduct a meeting of the Steering Committee.

A Steering Committee for this Contract will be formed at VITA's option. Meetings may be held at any time during the Contract term, should VITA, at its sole discretion, determine that a meeting(s) would be beneficial to the contractual relationship, and Supplier agrees to participate in such meeting(s). In addition, Supplier may at any time submit a written request to VITA for a meeting of the Steering Committee, which VITA will not unreasonably deny.

Supplier shall ensure the availability of the appropriate personnel to meet with the VITA contract management team. Additional Steering Committee meetings involving representatives from VITA, the Supplier, and an Authorized User may be required prior to or during performance on any specific Statement of Work issued pursuant to this Contract.

19. COMPETITIVE PRICING

Supplier warrants and agrees that each of the charges, economic or product terms or warranties granted pursuant to this Contract are comparable to or better than the equivalent charge, economic or product term or warranty being offered to any commercial or government customer of Supplier. If Supplier enters into any arrangements with another customer of Supplier to provide Services under more favorable prices, as the prices may be indicated on Supplier's current U.S. and International price list or comparable document, then this Contract shall be deemed amended as of the date of such other arrangements to incorporate those more favorable prices, and Supplier shall immediately notify VITA of such change.

20. CONFIDENTIALITY

A. Treatment and Protection

Each Party shall (i) hold in strict confidence all Confidential Information of any other Party, (ii) use the Confidential Information solely to perform or to exercise its rights under this Contract, and (iii) not transfer, display, convey or otherwise disclose or make available all or any part of such Confidential Information to any third-party. However, an Authorized User may disclose the Confidential Information as delivered by Supplier to subcontractors, contractors or agents of such Authorized User that are bound by non-disclosure contracts with such Authorized User. Each Party shall take the same measures to protect against the disclosure or use of the Confidential Information as it takes to protect its own proprietary or confidential information (but in no event shall such measures be less than reasonable care).

B. Exclusions

The term "Confidential Information" shall not include information that is:

- i). in the public domain through no fault of the receiving Party or of any other person or entity that is similarly contractually or otherwise obligated;
- ii). obtained independently from a third-party without an obligation of confidentiality to the disclosing Party and without breach of this Contract;
- iii). developed independently by the receiving Party without reference to the Confidential Information of the other Party; or
- iv). required to be disclosed under The Virginia Freedom of Information Act (§§2.2-3700 et seq. of the Code of Virginia) or similar laws or pursuant to a court order.

C. Return or Destruction

Upon the termination or expiration of this Contract or upon the earlier request of the disclosing Authorized User, Supplier shall (i) at its own expense, (a) promptly return to the disclosing Authorized User all tangible Confidential Information (and all copies thereof except the record required by law) of the disclosing Authorized User, or (b) upon written request from the disclosing Authorized User, destroy such Confidential Information and provide the disclosing Authorized User with written certification of such destruction, and (ii) cease all further use of the Authorized User's Confidential Information, whether in tangible or intangible form.

VITA or the Authorized User shall retain and dispose of Supplier's Confidential Information in accordance with the Commonwealth of Virginia's records retention policies or, if Authorized User

is not subject to such policies, in accordance with such Authorized User's own records retention policies.

D. Confidentiality Statement

All Supplier personnel, contractors, agents, and subcontractors performing Services pursuant to this Contract shall be required to sign a confidentiality statement or non-disclosure agreement.

Any violation of such statement or agreement shall be deemed a breach of this Contract and may result in termination of the Contract or any order or SOW issued hereunder.

21. LIABILITY AND INDEMNIFICATION

A. Indemnification

Supplier agrees to indemnify, defend and hold harmless the Commonwealth, VITA, any Authorized User, their officers, directors, agents and employees (collectively, "Commonwealth's Indemnified Parties") from and against any and all losses, damages, claims, demands, proceedings, suits and actions, including any related liabilities, obligations, losses, damages, assessments, fines, penalties (whether criminal or civil), judgments, settlements, expenses (including attorneys' and accountants' fees and disbursements) and costs (each, a "Claim" and collectively, "Claims"), incurred by, borne by or asserted against any of Commonwealth's Indemnified Parties to the extent such Claims in any way relate to, arise out of or result from: (i) any intentional or willful conduct or negligence of any employee, agent, or subcontractor of Supplier, (ii) any act or omission of any employee, agent, or subcontractor of Supplier, (iii) breach of any representation, warranty or covenant of Supplier contained herein, (iv) any defect in the Deliverables or the Services, or (v) any actual or alleged infringement or misappropriation of any third party's intellectual property rights by any of the Deliverables or Services. Selection and approval of counsel and approval of any settlement shall be accomplished in accordance with all applicable laws, rules and regulations. For state agencies the applicable laws include §§ 2.2-510 and 2.2-514 of the Code of Virginia. In all cases the selection and approval of counsel and approval of any settlement shall be satisfactory to the Commonwealth.

In the event that a Claim is commenced against any of Commonwealth's Indemnified Parties alleging that use of any Deliverable or that the provision of Services under this Contract infringes any third party's intellectual property rights and Supplier is of the opinion that the allegations in such Claim in whole or in part are not covered by this indemnification provision, Supplier shall immediately notify VITA and the affected Authorized User(s) in writing, via certified mail, specifying to what extent Supplier believes it is obligated to defend and indemnify under the terms and conditions of this Contract. Supplier shall in such event protect the interests of the Commonwealth's Indemnified Parties and secure a continuance to permit VITA and the affected Authorized User(s) to appear and defend their interests in cooperation with Supplier as is appropriate, including any jurisdictional defenses VITA or the affected Authorized User(s) may have.

In the event of a Claim pursuant to any actual or alleged infringement or misappropriation of any third party's intellectual property rights by any of the Services or Deliverables, and in addition to all other obligations of Supplier in this Section, Supplier shall at its expense, either (a) procure for all Authorized Users the right to continue use of such infringing Services or Deliverables; or (b) replace or modify such infringing Services or Deliverables with non-infringing deliverables or services satisfactory to VITA. And in addition, Supplier shall provide any Authorized User with comparable temporary replacement deliverables and services, or reimburse VITA or any Authorized User for the reasonable costs incurred by VITA or such Authorized User in obtaining alternative deliverables and services in the event such Authorized User cannot use the affected Deliverable or benefit from the affected Services. If Supplier cannot accomplish any of the foregoing within a reasonable time and at commercially reasonable rates, then Supplier shall accept the return of the infringing Services or Deliverables, along with any other Services or Deliverables rendered unusable by any Authorized User as a result of the infringing Services or Deliverables, and refund the price paid to Supplier for such Services and Deliverables.

B. Liability

Supplier's liability to the Commonwealth under this Contract for breach of this Contract's confidentiality, security, or indemnification provisions shall be limited to the greater of two (2) times the value of the applicable Statement of Work or \$2,000,000. Supplier's liability to the Commonwealth under this Contract shall, for breach of this Contract by Supplier, if the breach arises from any intentional, willful, or negligent act or omission of any employee, agent, or subcontractor of Supplier or if the damages are based on bodily injury, death, or damage to real property or tangible personal property be limited to (2) two times the annual value of the Contract. The limitation shall apply on a per-incident basis, it being understood that multiple losses stemming from the same root cause constitute a single incident.

EXCEPT FOR CLAIMS COVERED BY THE ABOVE DOLLAR LIMITATION, NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES UNDER THIS CONTRACT, INCLUDING (WITHOUT LIMITATION) LOSS OF PROFIT, INCOME OR SAVINGS, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

22. INSURANCE

In addition to the insurance coverage required by law as specified in the URL identified in the Incorporated Contractual Provisions section of this Contract, Supplier shall carry errors and omissions insurance coverage in the amount of \$1,000,000 per occurrence.

23. SECURITY COMPLIANCE

Supplier agrees to comply with all provisions of the then-current Commonwealth of Virginia security procedures, published by the Virginia Information Technologies Agency (VITA) and which may be found at (<http://www.vita.virginia.gov/library/default.aspx?id=537#securityPSGs>) or a successor URL(s), as are pertinent to Supplier's operation. Supplier further agrees to comply with all provisions of the relevant Authorized User's then-current security procedures as are pertinent to Supplier's operation and which have been supplied to Supplier by such Authorized User. Supplier shall also comply with all applicable federal, state and local laws and regulations. For any individual Authorized User location, security procedures may include but not be limited to: background checks, records verification, photographing, and fingerprinting of Supplier's employees or agents. Supplier may, at any time, be required to execute and complete, for each individual Supplier employee or agent, additional forms which may include non-disclosure agreements to be signed by Supplier's employees or agents acknowledging that all Authorized User information with which such employees and agents come into contact while at the Authorized User site is confidential and proprietary. Any unauthorized release of proprietary or Personal information by the Supplier or an employee or agent of Supplier shall constitute a breach of its obligations under this Section and the Contract.

Supplier shall immediately notify VITA and Authorized User, if applicable, of any Breach of Unencrypted and Unredacted Personal Information, as those terms are defined in Virginia Code 18.2-186.6, and other personal identifying information, such as insurance data or date of birth, provided by VITA or Authorized User to Supplier. Supplier shall provide VITA the opportunity to participate in the investigation of the Breach and to exercise control over reporting the unauthorized disclosure, to the extent permitted by law.

Supplier shall indemnify, defend, and hold the Commonwealth, VITA, the Authorized User, their officers, directors, employees and agents harmless from and against any and all fines, penalties (whether criminal or civil), judgments, damages and assessments, including reasonable expenses suffered by, accrued against, or charged to or recoverable from the Commonwealth, VITA, the Authorized User, their officers, directors, agents or employees, on account of the failure of Supplier to perform its obligations pursuant this Section.

24. BANKRUPTCY

If Supplier becomes insolvent, takes any step leading to its cessation as an going concern, fails to pay its debts as they become due, or ceases business operations continuously for longer than fifteen (15) business days, then VITA may immediately terminate this Contract on notice to Supplier unless

Supplier immediately gives VITA adequate assurance of the future performance of this Contract. If bankruptcy proceedings are commenced with respect to Supplier, and if this Contract has not otherwise terminated, then VITA may suspend all further performance of this Contract until Supplier assumes this Contract and provides adequate assurance of performance thereof or rejects this Contract pursuant to Section 365 of the Bankruptcy Code or any similar or successor provision, it being agreed by the Parties that this is an executory contract. Any such suspension of further performance by VITA pending Supplier's assumption or rejection shall not be a breach of this Contract and shall not affect VITA's right to pursue or enforce any of its rights under this Contract or otherwise.

25. IMPORT/EXPORT

In addition to compliance by Supplier with all export laws and regulations, VITA requires that any data deemed "restricted" or "sensitive" by either federal or state authorities, must only be collected, developed, analyzed, or otherwise used or obtained by persons or entities working within the boundaries of the United States.

26. GENERAL PROVISIONS

A. Relationship Between VITA and Authorized User and Supplier

Supplier has no authority to contract for VITA or any Authorized User or in any way to bind, to commit VITA or any Authorized User to any agreement of any kind, or to assume any liabilities of any nature in the name of or on behalf of VITA or any Authorized User. Under no circumstances shall Supplier, or any of its employees, hold itself out as or be considered an agent or an employee of VITA or any Authorized User, and neither VITA nor any Authorized User shall have any duty to provide or maintain any insurance or other employee benefits on behalf of Supplier or its employees. Supplier represents and warrants that it is an independent contractor for purposes of federal, state and local employment taxes and agrees that neither VITA nor any Authorized User is responsible to collect or withhold any federal, state or local employment taxes, including, but not limited to, income tax withholding and social security contributions, for Supplier. Any and all taxes, interest, or penalties (including but not limited to any federal, state, or local withholding or employment taxes, and any penalties related to health care or employee benefits laws) that are imposed, assessed, or levied as a result of this Contract or Services performed pursuant to this Contract shall be paid or withheld by Supplier or, if assessed against and paid by VITA or any Authorized User, shall be reimbursed by Supplier upon demand by VITA or such Authorized User.

B. Incorporated Contractual Provisions

The then-current contractual provisions at the following URL are mandatory contractual provisions, required by law or by VITA, and that are hereby incorporated by reference: <http://www.vita.virginia.gov/uploadedFiles/SCM/StatutorilyMandatedTsandCs.pdf>

The contractual claims provision §2.2-4363 of the Code of Virginia and the required eVA provisions at <http://www.vita.virginia.gov/uploadedFiles/SCM/eVATsandCs.pdf> are also incorporated by reference.

The then-current terms and conditions in documents posted to the aforementioned URLs are subject to change pursuant to action by the legislature of the Commonwealth of Virginia, change in VITA policy, or the adoption of revised eVA business requirements. If a change is made to the terms and conditions, a new effective date will be noted in the document title. Supplier is advised to check the URLs periodically.

C. Compliance with the Federal Lobbying Act

Supplier's signed certification of compliance with 31 USC 1352 (entitled "Limitation on use of appropriated funds to influence certain Federal Contracting and financial transactions") or by the regulations issued from time to time there under (together, the "Lobbying Act") is incorporated as Exhibit K hereto.

D. Governing Law

This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia without regard to that body of law controlling choice of law. Any and all litigation shall be brought in the circuit courts of the Commonwealth of Virginia. The English language version of this Contract prevails when interpreting this Contract. The United Nations Convention on Contracts for the International Sale of Goods and all other laws and international treaties or conventions relating to the sale of goods are expressly disclaimed. UCITA shall apply to this Contract only to the extent required by §59.1-501.15 of the Code of Virginia.

E. Dispute Resolution

In accordance with §2.2-4363 of the Code of Virginia, Contractual claims, whether for money or other relief, shall be submitted in writing to the public body from whom the relief is sought no later than sixty (60) days after final payment; however, written notice of the Supplier's intention to file such claim must be given to such public body at the time of the occurrence or beginning of the work upon which the claim is based. Pendency of claims shall not delay payment of amounts agreed due in the final payment. The relevant public body shall render a final decision in writing within thirty (30) days after its receipt of the Supplier's written claim.

The Supplier may not invoke any available administrative procedure under §2.2-4365 of the Code of Virginia nor institute legal action prior to receipt of the decision of the relevant public body on the claim, unless that public body fails to render its decision within thirty (30) days. The decision of the relevant public body shall be final and conclusive unless the Supplier, within six (6) months of the date of the final decision on the claim, invokes appropriate action under §2.2-4364, Code of Virginia or the administrative procedure authorized by §2.2-4365, Code of Virginia.

Upon request from the public body from whom the relief is sought, Supplier agrees to submit any and all contractual disputes arising from this Contract to such public body's alternative dispute resolution (ADR) procedures, if any. Supplier may invoke such public body's ADR procedures at any time and concurrently with any other statutory remedies prescribed by the Code of Virginia.

In the event of any breach by a public body, Supplier's remedies shall be limited to claims for damages and Prompt Payment Act interest and, if available and warranted, equitable relief, all such claims to be processed pursuant to this Section. In no event shall Supplier's remedies include the right to terminate any license or support services hereunder.

F. Advertising and Use of Proprietary Marks

Supplier shall not use the name of VITA or any Authorized User's name or refer to VITA or any Authorized User, directly or indirectly, in any press release or formal advertisement without receiving prior written consent of VITA or such Authorized User. In no event may Supplier use a proprietary mark of VITA or an Authorized User without receiving the prior written consent of VITA or the Authorized User.

G. Notices

Any notice required or permitted to be given under this Contract shall be in writing and shall be deemed to have been sufficiently given if delivered in person, or if deposited in the U.S. mails, postage prepaid, for mailing by registered, certified mail, or overnight courier service addressed to:

- i). To VITA and to Supplier, if Supplier is incorporated in the Commonwealth of Virginia, to the addresses shown on the signature page.
- ii). To Supplier, if Supplier is incorporated outside the Commonwealth of Virginia, to the Registered Agent registered with the Virginia State Corporation Commission.

Pursuant to Title 13.1 of the Code of Virginia, VITA or Supplier may change its address for notice purposes by giving the other notice of such change in accordance with this Section.

Administrative contract renewals, modifications or non-claim related notices are excluded from the above requirement. Such written and/or executed contract administration actions may be processed by the assigned VITA and Supplier points of contact for this Contract and may be given in person, via U.S. mail, courier service or electronically

H. No Waiver

Any failure to enforce any terms of this Contract shall not constitute a waiver.

I. Assignment

This Contract shall be binding upon and shall inure to the benefit of the permitted successors and assigns of VITA and Supplier. Supplier may not assign, subcontract, delegate or otherwise convey this Contract or any of its rights and obligations hereunder, to any entity without the prior written consent of VITA, and any such attempted assignment or subcontracting without consent shall be void. VITA may assign this Contract to any entity, so long as the assignee agrees in writing to be bound by the all the terms and conditions of this Contract.

If any law limits the right of VITA or Supplier to prohibit assignment or nonconsensual assignments, the effective date of the assignment shall be thirty (30) days after the Supplier gives VITA prompt written notice of the assignment, signed by authorized representatives of both the Supplier and the assignee. Any payments made prior to receipt of such notification shall not be covered by this assignment.

J. Captions

The captions are for convenience and in no way define, limit or enlarge the scope of this Contract or any of its Sections.

K. Severability

Invalidity of any term of this Contract, in whole or in part, shall not affect the validity of any other term. VITA and Supplier further agree that in the event such provision is an essential part of this Contract, they shall immediately begin negotiations for a suitable replacement provision.

L. Survival

The provisions of this Contract regarding License, Rights to Work Products, Warranty, Confidentiality, Liability and Indemnification, and the General Provisions shall survive the expiration or termination of this Contract.

M. Force Majeure

No Party shall be responsible for failure to meet its obligations under this Contract if the failure arises from causes beyond the control and without the fault or negligence of the non-performing Party. If any performance date under this Contract is postponed or extended pursuant to this section for longer than thirty (30) calendar days, VITA, by written notice given during the postponement or extension, may terminate Supplier's right to render further performance after the effective date of termination without liability for that termination, and in addition an Authorized User may terminate any order or SOW affected by such postponement or delay.

N. Remedies

The remedies set forth in this Contract are intended to be cumulative. In addition to any specific remedy, VITA and all Authorized Users reserve any and all other remedies that may be available at law or in equity.

O. Right to Audit

VITA reserves the right to audit those Supplier records that relate to the Services rendered or the amounts due Supplier for such Services under this Contract. VITA's right to audit shall be limited as follows:

- i). Three (3) years from Service performance date; and
- ii). Performed at Supplier's premises, during normal business hours at mutually agreed upon times.

The Supplier shall not have the right to audit, or require to have audited, VITA or any Authorized User.

P. Offers of Employment

During the first twelve (12) months of the Contract, should Supplier hire an employee of an Authorized User who has substantially worked on any project covered by this Contract without

prior written consent, the Supplier shall be billed for fifty percent (50%) of the employee's annual salary in effect at the time of termination.

Q. Contract Administration

Supplier agrees that at all times during the term of this Contract an account executive, at Supplier's senior management level, shall be assigned and available to VITA. Supplier reserves the right to change such account executive upon reasonable advance written notice to VITA.

R. Entire Contract

The following Exhibits, including all subparts thereof, are attached to this Contract and are made a part of this Contract for all purposes:

- i). Exhibit A Requirements
- ii). Exhibit B Service Level Agreements (SLAs)
- iii). Exhibit C Subcontractor Services Agreement Mandatory Terms and Conditions for Subcontractor Agreements
- iv). Exhibit D Statement of Work (SOW) Template
- v). Exhibit E Change Order/Request Template
- vi). Exhibit F Job Rate Cards/ Pricing
- vii). Exhibit G Implementation Plan
- viii). Exhibit H Reserved
- ix). Exhibit I Reserved
- x). Exhibit J Reserved
- xi). Exhibit K Federal Lobbying Certificate

S. Order of Precedence


This Contract, its Exhibits, all orders and any prior NOA constitute the entire agreement between the Parties and supersedes any and all previous representations, understandings, discussions or agreements between VITA and Supplier as to the subject matter hereof. This Contract may only be amended by an instrument signed by VITA and Supplier. In the event of a conflict, the following order of precedents shall apply:

The Contract; Exhibit C, Subcontractor Services Agreement Mandatory Terms and Conditions for Subcontractor Agreements; Exhibit G, Implementation Plan; Exhibit B, Service Level Agreements; Exhibit F, Job Rate Cards/Pricing; Exhibit A, Requirements.

VITA and Supplier each acknowledge that it has had the opportunity to review this Contract and to obtain appropriate legal review if it so chose.

Executed as of the last date set forth below by the undersigned authorized representatives of VITA and Supplier.

(Name of Supplier)

By: 
(Signature)
Name: Nif? tloJH€Y
(Print)
Title: 'hu-r., -

VITA


By: 
(Signature)
Name: tt7. 4... h p t... r.
(Print)
Title: CIO

EXHIBIT A REQUIREMENTS
CONTRACT NUMBER VA-130620-CAI
BETWEEN
VIRGINIA INFORMATION TECHNOLOGIES AGENCY
AND
COMPUTER AID, INC.

Exhibit A is hereby incorporated into and made an integral part of Contract Number VA-130620-CAI (“Contract”) between the Virginia Information Technologies Agency (“VITA” or “Commonwealth” or “State”) and Computer Aid, Inc. (“Supplier”).

In the event of any discrepancy between this Exhibit A and the Contract, the provisions of the Contract shall control

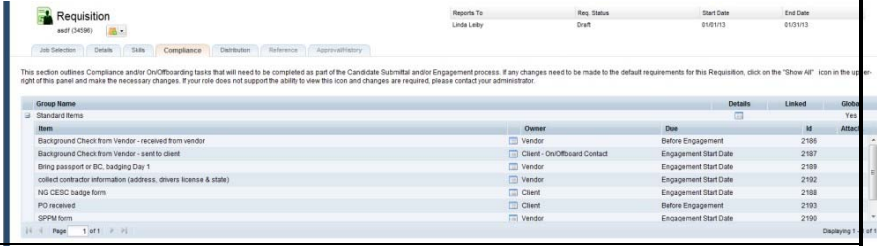
A. A. Staff Augmentation Services

Staff Augmentation Services			
	Requirements	A	B
1.	Does your solution support the full lifecycle solution from subcontractor enrollment in the program to continuous improvement initiatives? If yes, please describe in detail.	Y	<p>Our solution supports the full lifecycle of both hourly staff augmentation and Statement of Work (SOW) requisitions.</p> <p>Please refer to Attachment A: Process Flows for a complete description of both processes.</p> <p>CAI uses metrics about the process captured through the VMS tool to measure and report performance. These metrics are the basis for measuring improvement. Examples of these metrics are found in Attachment B: Performance Reports.</p>
2.	Is your solution a vendor neutral solution (meaning that the MSP and VMS provider will not push orders to itself or give an unfair advantage to any subcontractor in the placement of any staff augmentation order or SOW engagement)? If yes, please provide details on how you ensure that competition is available?	Y	<p>Our VMS provider, Peoplefluent, will not be a vendor in the network. No orders will be pushed to them, and they will not have the ability to win placements under this contract.</p> <p>There are situations when, we believe, allowing CAI to place contractors under this program makes good business sense. Please see K. Other Value Added Services, beginning on page 103, for a discussion on this proposed option.</p> <p>CAI maintains an open vendor network, and proposes to create a</p>

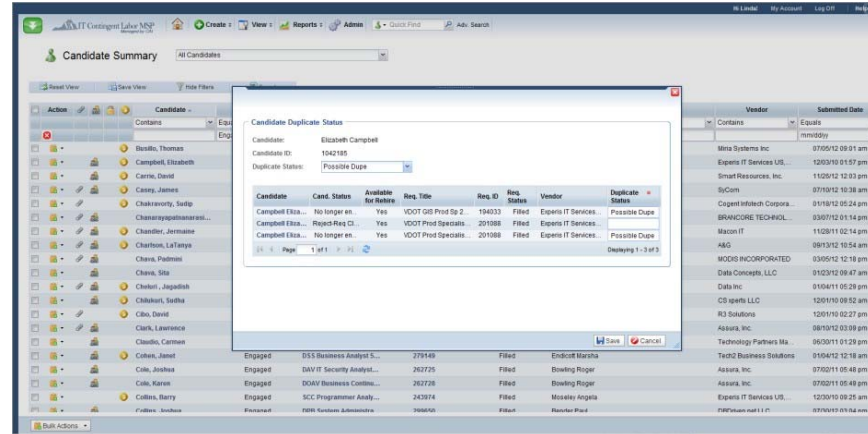
Staff Augmentation Services			
	Requirements	A	B
			<p>Tiered vendor approach, which allows all vendors who meet our onboarding criteria to participate in the network responding to the staff augmentation needs of COVA. Since there is no fee to join our networks, firms with smaller revenue streams have as much ability to participate and compete in the ITCL contract as large vendors.</p> <p>When Agency Hiring Managers review résumés within Peoplefluent, they are unable to see the name of the vendor who submitted the candidate. In addition, all candidate résumés must be submitted using the CAI standard résumé template which is available to all vendors on our vendor portal. These processes ensure that competition is fair because the hiring manager is selecting candidates based on skills and rates and not on biases regarding the vendors who submitted the resource.</p> <p>When a requirement is released to the vendor network via Peoplefluent, it is released or made available for candidate submission based on a Tiering structure. All vendors in the corresponding Tier receive the email announcing the availability of the requirement at the same time through the automated release process within Peoplefluent. All announcements regarding requirements, such as our weekly requirement status update, is delivered to all of the vendors at the same time. No vendor is given a “heads up” in order to have an advantage over another vendor.</p> <p>At the time of implementation we will work with VITA to review Virginia-specific criteria for vetting suppliers for the Virginia-specific network; based on Attachment A: Process Flows..</p> <p>We follow a consistent, neutral screening process for vendors; i.e., we apply the same selection criteria to all, and we use the same contract and rate card for all subcontractors. This is a critical success factor, because all vendors know they receive equal treatment. CAI maintains a contract portal for each state which contains all of the onboarding details for any vendor interested in joining the network. With this new contract, we will continue to use the portal developed for the Commonwealth, updating it with any changes resulting from the new contract. See www.smsa.compaid.com.</p>

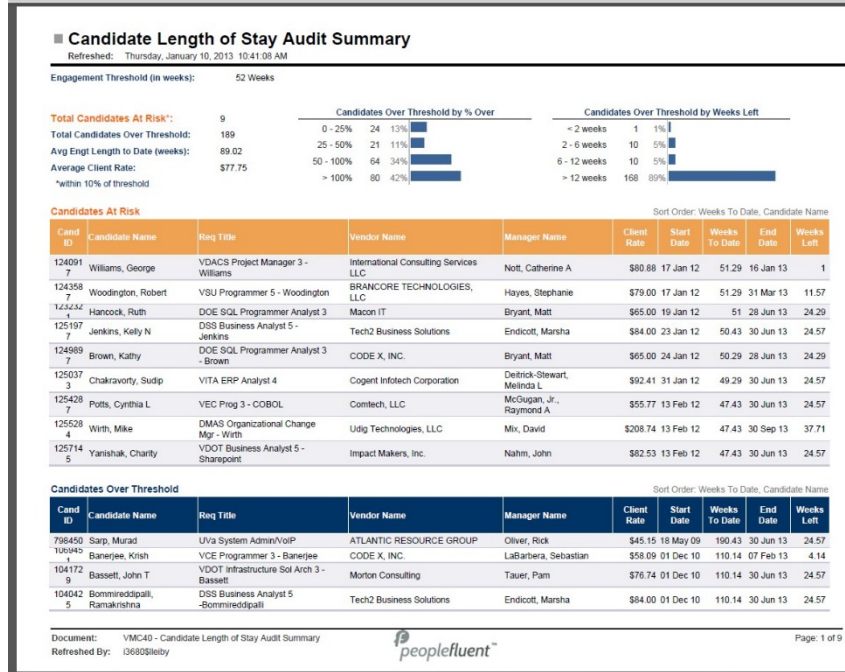
Staff Augmentation Services			
	Requirements	A	B
			<p>The basic criteria for entrance in the network include:</p> <ul style="list-style-type: none"> ■ In order to participate, the vendor must not be prohibited from doing business within the Commonwealth and as part of the onboarding, CAI checks the vendor against published vendor disbarment lists. ■ Each vendor must sign a subcontractor agreement with CAI. In addition they must provide copies of their W-9, all required insurance certificates, and marketing literature. As part of the onboarding process, each firm signs-off on the fixed rate vendor card. Each vendor receives the same fixed rates for each of the positions listed on the rate card. This enables fair competition across the supplier base. <p>CAI releases all in-process requirements to the vendor network, based on tiering methodology. Vendors have four business days to respond with candidate profiles that meet the requisition's requirements.</p> <p>CAI attempts to support fair competition by 1) coaching the Agency Managers to use the process as-is, and not name resources or companies; 2) supporting a no-contact program where vendors do not need to sell services to agencies because they can see them through the MSP, and have opportunity to bid; 3) having vendors upload résumés using the CAI template, not their own letterhead; and 4) restricting vendor's name from the requisition in Peoplefluent.</p>
3.	Does your solution facilitate the requisition process from initial composition through review/approval to subcontractor posting, selection, engagement, on-boarding, invoicing and off-boarding? If yes, please describe in detail.	Y	<p>Our solution encompasses the entire requisition process, plus consultative account management services prior to requisition entry as well as throughout the engagement, and value-added services.</p> <p>CAI has a local account management team that spends time with the agencies, VITA, and the vendor community. We work with the agencies on current and upcoming requisitions, and also on maintaining their current CAI contractors by being available for issue resolution, PO extensions and budget review, and all performance related issues. We work with the vendor community by enrolling vendors, coaching SWaM vendors, providing feedback on performance, and holding training sessions. Our Account Managers (AMs) work to fulfill requisitions by screening candidates and working through our</p>

Staff Augmentation Services			
	Requirements	A	B
			<p>Process Flow for fulfillment. Our MSP Operations team manages support activities such as PO Audit, Help Desk calls, vendor enrollment, and finalizing engagement details in Peoplefluent when an engagement is completed.</p> <p>Please refer to Attachment A: Process Flows for the details on how our solution facilitates the requisition process.</p> <p>Please see K. Other Value Added Services, beginning on page 103, for a discussion of the elements of our solution that go beyond the requisition process.</p>
4.	<p>Does your solution provide on and off boarding services for remote locations? Describe how you provide these services for remote locations.</p>	Y	<p>Yes. Although Richmond, VA, is the primary location for most Commonwealth IT needs, we do currently support many locations outside of Richmond. VDOT consistently has needs in its northern Virginia offices, and universities who utilize the program are often outside Richmond. Of the 397 current engagements, 47 are outside of Richmond.</p> <p>The onboarding process is similar to Richmond-based onboarding, while paying careful attention to any agency-specific background screening requirements that need to be coordinated, and providing contacts for issue escalation. CAI proposes building agency-specific onboarding/offboarding checklists that also accommodate instructions for remote activity by using the new Compliance Manager feature of Peoplefluent.</p> <p>The Peoplefluent VMS Compliance Manager module can assist with managing position-specific documentation, certifications, and onboarding/offboarding tasks. Configurable tasks can be assigned in the form of a workflow in the Compliance Manager module. Tasks that are created can have corresponding alerts, which are entirely configurable to time-based events. Dashboard analytics are also available for these tasks.</p>

Staff Augmentation Services			
	Requirements	A	B
			 <p>Figure 1: Sample Checklist Using Compliance Manager in Peoplefluent</p> <p>Note: A larger version of this screen shot is provided in Attachment C: Peoplefluent VMS.</p> <p>We suggest using this feature when VDOT badges expire. Currently, VDOT issues badges for a one year term, and CAI receives notification when the badge has expired. We propose populating an item within this engagement that will alert us that an action is required when the badge is about to expire.</p> <p>Currently for remote locations, the Hiring Manager will typically take lead on onboarding steps, such as badging and introduction. Should a performance issue arise, CAI will coordinate the best way to handle communications and return of equipment, in conjunction with the hiring manager, vendor, and agency security and/or human resources (HR) if needed.</p> <p>CAI will implement the Compliance Manager Functionality in order to track onboarding and offboarding tasks. The Compliance Manager configuration can replace “paper” checklists and can generate email notifications and alerts when items are due or need to be renewed.</p>
5.	Does your solution support recording and tracking by cost center, by agency and by location individual resources? If yes, please describe in detail.	Y	<p>Each requisition record includes the cost center, purchasing agency, and the work locations of individual resources. This configurability of the application allows us to track and record by cost center, agency, and location. Data is able to be filtered and reported via any organization parameter that is captured. We utilize this information in tracking, alerts to spending limits, and invoicing. We are able to produce reports with data that is specific to each agency which enables them to manage their unique business requirements. For example,</p>

Staff Augmentation Services			
	Requirements	A	B
			<p>each month we deliver a time detail report to VDOT which provides one page per engaged resource with their timesheet detail for the month. VDOT places this document in each resource's file for auditing purposes.</p> <p>Please see Attachment C: Peoplefluent VMS for screen shots showing fields that capture this information.</p>
6.	Does your solution support recording and tracking by budget and accounting data?	Y	<p>As part of the requisition process, we capture the cost center and budget from the Purchase Order that corresponds to the requisition. We use this information not only in invoicing, but also to:</p> <ul style="list-style-type: none"> ■ Monitor Purchase Order spend based on approved timesheets ■ Limit approvals according to budget considerations or by organizational structure ■ Send alerts when budget limitations are nearly reached, and engagement duration is nearing completion ■ Produce reports such as Engagement Budgeted Hours by Vendor ■ Produce Quarterly Report content <p>Peoplefluent also allows a resource to track time/spend against multiple funding sources through timesheet projects. This enables an agency to monitor spend against specific accounting codes, Purchase Order line items, grant funding, etc.</p> <p>For example, VITA needed to track hours for specific projects funded under the same Purchase Order and Line Items for multiple resources. CAI added the codes provided by VITA to the timesheet projects that the resources were engaged against. The resources were able to itemize their time under these specific codes; the agency was able to review and approve the timesheets with the project code breakdown; and CAI was able to provide VITA reports which enabled them to track the spend against each individual project.</p>
7.	Does your solution support tracking service duration by individual resources between	Y	Peoplefluent VMS is configured to track the tenure of specific individuals across engagements. This will allow for tracking and

Staff Augmentation Services			
	Requirements	A	B
	engagements? If yes, please describe in detail.		<p>reporting on Virginia tenure of individuals as well as tenure within a particular agency. The engagement history of each resource can be viewed directly within the VMS application, as shown in Figure 2.</p>  <p>Figure 2: Tenure Tracking of an Individual</p> <p>We are also able to track duration between engagements through our reporting and analytics, as shown in Figure 3.</p>

Staff Augmentation Services				
	Requirements	A	B	
			 <p>Figure 3: Candidate Length of Stay Report</p> <p>Note: Larger versions of these images can be found in Attachment C: Peoplefluent VMS.</p>	
8.	Does your solution support tracking service duration by individual resources between different customer agencies? If yes, please describe in detail.	Y	<p>Peoplefluent VMS is configured to track the tenure of specific individuals across engagements. This will allow for tracking and reporting on Virginia tenure of individuals across agencies as well as tenure within a particular agency. The work history of each engaged resource is stored within the VMS, which includes details specific to each agency a resource worked with under the contract. The analytics referenced in question 7 (directly above) can be utilized to track tenure to include instances where a resource is engaged at different agencies.</p>	
9.	Does your solution have the ability to electronically generate monthly invoice,	Y	<p>CAI utilizes the integration provided via Peoplefluent VMS to download approved timesheet data into our Microsoft Dynamics financial system.</p>	

Staff Augmentation Services			
	Requirements	A	B
	(one per customer, per resource, and per cost center), that details all charges by project and PO and by cost center?		<p>The timesheet detail is segregated by Agency, Purchase Order number, Line Item, and resource; this allows us to generate an invoice with as much detail and summarization as specified by each agency for each particular Purchase Order. These invoices can be emailed directly to any specified agency representative.</p> <p>CAI also has the ability to generate a time file that can be uploaded to an agency's financial system, if desired. Electronic timesheet/invoice files are successfully being processed in our MSP contracts with the State of Arkansas and the State of Iowa. Peoplefluent also provides integration capability to financial systems, including Ariba. If desired by the Commonwealth, the requirements for timesheet file generation will be documented during implementation and a separate project plan will be created for this process.</p>
10	Does your solution include support? If yes, do you provide 24 hours per day / 7 days a week support for your solution? (At a minimum include: Days/Hours of Coverage, Expected Resolution Thresholds, Help Desk Support Levels (Tiered), Escalation Model, and Reporting.)	Yes	<p>Your first line of support is our local account team that is dedicated to this account. During normal business hours, they can be reached for support on the contract, tool, and other MSP-related questions.</p> <p>CAI's MSP Operations administrators provide Level 1 support for any help desk calls, logging and tracking issues, and questions from both Virginia and vendor users. Having provided support under all of our MSP contracts, they have extensive expertise in all procedures related to these contracts.</p> <p>They are able to answer general questions on how to utilize the contract, but escalate to the local AMs as necessary. The team also has deep experience with the Peoplefluent VMS tool and is able to answer "how to" questions related to the use of the tool from the agency, vendor, and candidate perspectives. They are capable of providing <i>ad hoc</i> training over the phone when needed, i.e., talking to the user and walking him/her through a process. Some common help desk requests are:</p> <ul style="list-style-type: none"> ■ Password resets ■ Timesheet corrections ■ Guidance on entering requisitions ■ Addressing Peoplefluent VMS problems

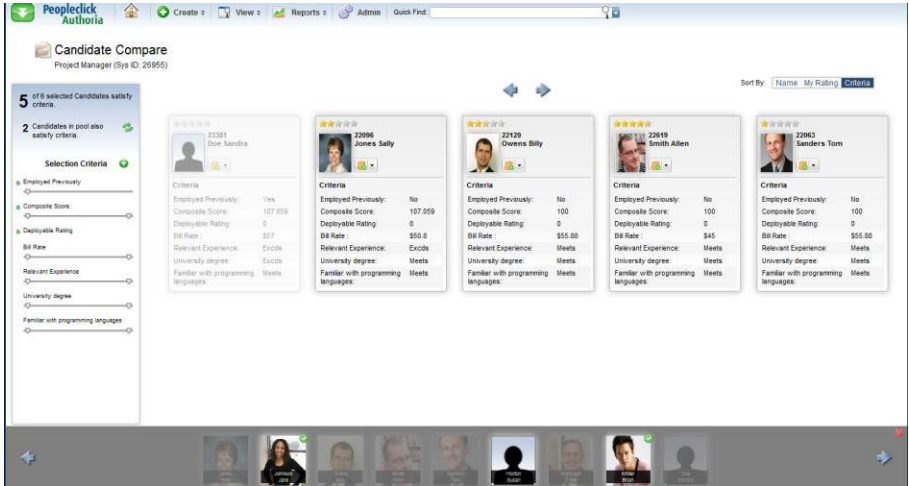
Staff Augmentation Services			
	Requirements	A	B
			<ul style="list-style-type: none"> ■ Responding to report requests ■ Completing user setups ■ Providing training <p>Access to the Help Desk is available 24x7. CAI provides unlimited support calls to our MSP Help Desk. CAI provides live help desk support 8:00 a.m. to 5:00 p.m. We will continue to utilize the phone numbers established under our current contract. Our MSP Program Office help desk utilizes a toll free number (800-635-5138) and a local Virginia number (804-288-4246) as well as a dedicated email address (VAITCL_Help@compaid.com) and fax (804-288-4358). In addition, our CAI Account Management team is available via local Virginia telephone numbers. All of these means of communication are available to the user community so that CAI can assist with every aspect of the procurement lifecycle.</p> <p>During normal business hours, the question/issue will be received by our Level 1 support team who will log and classify the issue within our issue tracking system. Level 1 will either address the issue/question themselves or escalate to Level 2 support. Outside of normal business hours for critical issues, the requestor will be directed to Level 2 support (CAI) or Level 3 (Peoplefluent). The CAI MSP help desk also has the VMS provider help desk at its disposal for assistance with issues and questions regarding the tool itself.</p> <p>CAI utilizes a help desk call tracking system called MSP Service Desk. Using it, we can report on types of calls, escalated calls, and issues with this system.</p>
11	Can you provided a detailed workflow map of the end-user steps necessary to submit a request, receive acknowledgement, review resumes, select candidate, monitor time reporting, and request monthly/weekly business report? If so please include a copy.	Y	We have provided a detailed workflow in Attachment A: Process Flows .
12	Will you arrange for a pre-employment national, regional and local background	Y	Yes, CAI's account management team works with the agencies to document the background check requirements for each position and

Staff Augmentation Services			
	Requirements	A	B
	check for each resource that will have access to Commonwealth work tasks, facilities, systems or operations either through on-site access or through remote access? If yes, please describe the process.		<p>uses the VMS tool to track the corresponding documents and credentials for each resource and engagement.</p> <p>The national, regional, and local background check is required by the Commonwealth and reveals any prior convictions for a resource. It is our experience that many agencies require customized background screening criteria, so we work with each agency to clarify what comprises passing criteria. Background checks are performed after selection, but before engagement.</p> <p>Enrolled vendors will be required to use eVerify to validate the eligibility for engagement for each of the resources selected for engagement.</p> <p>Our vendors are contractually bound to complete background screenings on their resources including a check with eVerify, and sending the results to the CAI AM for review. The background results are securely stored, but easily accessible by the hiring manager through Peoplefluent, and can be stored with the resource's information within Peoplefluent, if desired.</p> <p>Onboarding does not normally continue if the background check report is missing. Contained within our onboarding process is the validation of the completed background checks and any other required checks.</p> <p>We customize background checks by agency requirement, while still making sure compliance with the Program is met. An example of customized background check is at VDOT. Once a candidate is identified, our AM emails VDOT's designated security team that manages the fingerprinting and copying the vendor, as an introduction of the candidate that will begin work. The email contains important start information (location, date). A date is scheduled to have the candidate fingerprinted, and the candidate must arrive with a check for \$37 to complete the transaction. CAI is contacted for resolution if issues arise during any step.</p>
13	Do you have experience conducting background checks? If yes, please describe.	Y	In our current process, standard background screening is performed by the vendor prior to a candidate being able to begin an engagement, and includes a national criminal background check (covering felonies, misdemeanors, and the sex offender registry). This is the standard baseline qualification to begin assignment under the program. Certain

Staff Augmentation Services			
	Requirements	A	B
			<p>agencies require varied background screenings, and CAI works with the agency to meet these guidelines. Examples are VDOT, SCC, TAX, the Governor's office, agencies near the Governor's complex, and VSP.</p> <p>As a company, CAI has experience conducting background checks as CAI's Human Resources department performs background checks on all employees, utilizing e-Verify.</p>
14	Does your solution include providing written confirmation that the background checks have been conducted prior to the on-boarding of any resource?	Y	<p>As part of contractor onboarding procedures, CAI requests a national criminal background check be provided by the vendor prior to a candidate being able to begin an engagement. The vendor submits a copy of this background check for validation to the CAI AM. CAI reviews it to ensure that it is an acceptable screening and that there are no issues. CAI alerts the agency that the screening has been received and is acceptable, and the contractor is cleared to begin assignment.</p> <p>Through Peoplefluent's Compliance Manager functionality, we are also able to flag the background check information on the engagement details by marking it as complete along with the date of completion.</p> <p>Some agencies require written confirmation (ex. VITA) and CAI submits a signed document as part of onboarding.</p>
15	Certain public bodies may have additional background or security checks required before entry to government buildings or access to information is granted. Does your solution including arranging for additional background or security checks based on individual customer requirements? If yes, please describe how they will be provided.	Y	<p>Yes, CAI will utilize agency-specific onboarding checklists. In this case, the checklist will include the appropriate background checks and notification prior to access being granted. Again, CAI will require the vendor to provide the required background and/or security checks. The vendor will submit them; CAI will verify/review, and then notify the hiring agency.</p> <p>CAI will implement the Compliance Manager Functionality in order to track onboarding and offboarding tasks. The Compliance Manager configuration can replace "paper" checklists and can generate email notifications and alerts when items are due or need to be renewed.</p>
16	Does your solution include periodically refreshing the job titles to reflect changes in the demand for services? If yes, please describe.	Y	<p>CAI performs a salary survey on all contract job titles every six months. We review the data returned, as it matches up to our contract delivery and needs, and report on our findings during our Quarterly Reviews. In addition, if we find that an additional job title is needed to fulfill agency needs, or that a particular job title is not utilized at all, we will make</p>

Staff Augmentation Services			
	Requirements	A	B
			<p>recommendations for modification of the contract job titles.</p> <p>Please refer to Attachment B: Performance Reports to see an example of a Quarterly Report that includes the results of a periodic job title/salary review.</p>
17	Does your solution provide all job titles and levels as defined in Attachment 1 (Found in Exhibit F, Attachment 1 of the Contract)?	Y	<p>CAI provides all job titles and levels as defined in <i>Attachment 1</i> to the Request for Proposal (RFP). Our solution is flexible and we can modify the in-scope job titles and levels within our implementation period, if necessary.</p>
18	Does your solution include tracking and reporting on the performance of staff augmentation resources? If yes, please describe in detail.	Y	<p>Within five days of the start of a selected candidate, CAI will check with the Agency Hiring Manager to perform the first assessment of the resource's work quality. We understand that even these early performance checks serve as a quality measure to successful engagement.</p> <p>Our performance survey is auto-generated through Peoplefluent, and can be configured to accommodate varied scheduling. Currently we send 30-day and end-of-engagement surveys to the hiring manager.</p> <p>When a contracted resource's engagement is completed, the Hiring Manager is prompted to complete the final evaluation of the candidate's performance within the VMS tool. The tool has a survey function that allows managers to do an electronic evaluation of the individual contingent staff.</p> <p>This survey allows both ranked (numerical) responses as well as free-form text. This enables us to accumulate statistics relatively easily, while also allowing for textual input. Our AMs read all comments, as well as the compiled results. Our focus is on using the surveys to improve both our performance as the MSP and, where appropriate, the performance of the individual staff and vendors.</p> <p>It is possible to flag an individual as "not to be re-hired," if directed by Virginia. When candidates are submitted by suppliers, this flag will appear on the individual's information and our AMs will not pursue this candidate for engagement with the Commonwealth. This information is retained and is reported upon as part of our status reports.</p>

Staff Augmentation Services			
	Requirements	A	B
19	Does your solution include the ability to customize job descriptions? If yes, please describe in detail.	Y	<p>The ability to add skills specific to each particular Agency requirement is critical functionality needed within VMS in order to ensure the resource selected for the engagement is able to meet the needs for that particular opening. The Peoplefluent VMS application provides several ways to customize each individual job description.</p> <p>The Requisition entered by the Agency Hiring Manager has three sections for describing the required experience and skills of candidates. They are: Short Description, Long Description, and Required Skills.</p> <p>When the Agency Hiring Manager begins a Requisition, he/she chooses a job title from the State's list of job titles. The template serves as the starting point from which the Hiring Manager can add, delete, or edit descriptive information. CAI builds these templates during Transition/Implementation. The hiring manager then builds upon the pre-populated information to create a requisition which has the detailed skills required for a resource to successfully fill the opening, such as "5 years of JAVA EE required," "Experience with Weblogic 10 highly desired," etc. These customized job descriptions then become the basis for the candidate screening and selection of the best resource.</p>
20	Does your solution include candidate ranking? If yes, please describe the methodologies utilized.	Y	<p>Peoplefluent VMS supports candidate ranking and compare functionality (see Figure 4). Candidate compare expands candidate screening and reviews well beyond deployable ratings and composite scores. Candidates are reviewed side by side initially using the default criteria, or each reviewer can apply their own set of criteria. Available review criteria are based on overall configuration and can vary based on requisition settings.</p> <p>Candidates can be compared/ranked using individual required/desired skills, composite scores, configured rates, global skills, previous client employment indicators, screening indicators, vendor, and My Star Rating. My Star Rating is a new rating applied via Candidate Compare that is visible only to the logged-in user. It is a way to rate the candidate by using stars. It can also signify the candidate has been properly reviewed.</p> <p>The CAI AM can use this candidate ranking/comparison when determining the best three to five candidates to forward to the Agency</p>


Staff Augmentation Services			
	Requirements	A	B
			<p>Hiring Manager. The Agency Hiring Manager, in turn, can also use this functionality to compare the candidates forwarded to him/her.</p>  <p>Figure 4: Side-by-Side Comparison of Candidates</p> <p>Note: A larger version of this image can be found in Attachment C: Peoplefluent VMS.</p>
21	Does your solution provide automation of the interview process? If yes, please describe in detail.	Y	<p>For sourcing and engaging contingent workers, Peoplefluent VMS does offer interview scheduling capabilities. Peoplefluent VMS utilizes an internal scheduling component. Depending on the client's configuration, clients will use one of two types of interview scheduling:</p> <ul style="list-style-type: none"> ■ Request an interview through candidate comments. The supplier will input their response to the interview request in the text box. CAI will be notified of this interview request through an automated email. CAI then contacts the vendor and works to coordinate the interview which can be done via phone, in person, or via a web interview. ■ Schedule an interview through the advanced interview scheduling tool. This tool allows users to provide more details and track history when managing interviews.

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			<p>Suppliers will select candidates identified for interviews, and then simply choose whether to accept or reject the interview option.</p> <p>Throughout the interview process, the CAI AM provides feedback regarding the interview to the vendors, and then moves to take next steps.</p>
22	Does your solution provide business rule flexibility unique to individual customer need? If yes, please describe.	Y	<p>The Peoplefluent VMS workflow is configurable by clients. The application workflow configuration is modeled on our experience and best practices obtained over many years of implementing the system. It therefore looks to enforce the optimum workflow, or slight variations of, that each individual agency can use.</p> <p>Workflow tasks such as requisition approval workflows, reporting metrics, and invoicing can be configured to each agency's specific needs. For example, VITA must approve each requisition which falls under the Exception category. We will configure the approval workflow so these requirements are routed for approval within Peoplefluent.</p> <p>Through the use of Peoplefluent's Compliance Manager, we are able to configure onboarding and offboarding workflow tasks specific to each unique requisition.</p> <p>Peoplefluent VMS also supports a full range of email notifications and actions based on configurable workflow events in the process. Users receive informative notices of actions and directions on what to do next. Secure hot links within the notifications bring the user directly to the page requiring action.</p>
23	Does your solution ensure that a resource will not begin work until they have successfully passed the required background checks? If yes, please explain.	Y	<p>As part of contractor onboarding procedures, CAI requests a national criminal background check be provided by the vendor prior to a candidate being able to begin an engagement. The vendor submits a copy of this background check for validation. CAI reviews it to ensure that it is an acceptable screening and that there are no issues. CAI alerts the agency that the screening has been received and is acceptable, and the contractor is cleared to begin assignment. A contractor is not able to begin assignment until all onboarding steps have been completed, and CAI approves the acceptable start date. The Compliance Manager functionality actually prohibits engaging a</p>

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			candidate if a background check is a required onboarding item.

Figure 5: Section 5 Responses to Staff Augmentation Services

B. B. Statement of Work Services

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1.	Does your solution support the full lifecycle solution from subcontractor enrollment in the program to continuous improvement initiatives? If yes, please describe in detail.	Y	<p>Our solution supports the full lifecycle solution SOW Services, from subcontractor enrollment in the program to continuous improvement initiatives. Not only does our solution support SOWs, CAI has been providing SOW services to the Commonwealth since January 2010. We offer a mature SOW program with fully documented workflows and processes.</p>  <p>Figure 6: The SOW Requisition Process</p> <p>The SOW process includes the following phases:</p> <ul style="list-style-type: none"> ■ Service Requests, when the Authorized User (requestor/Agency) recognizes the need for IT services beyond staff augmentation, and, after determining the procurement method, works with the CAI AM to prepare the Statement of Requirements (SOR) document. ■ Requisition Review, when the SOR is reviewed and entered into Peoplefluent as an SOW requisition.

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			<ul style="list-style-type: none"> ■ Release Requisition, when the SOW requisition is released to the network of vendors who have been prequalified to respond to the designated specialty area. This includes the bid preparation time when CAI assists in responding to bidders' questions, and hosts and facilitates pre-bid conference calls, if desired. ■ SOW Submission, as the participating vendors submit their responses to the SOW requisition, they enter milestones, deliverables, and pricing into Peoplefluent. ■ SOW Review, when Authorized Users review the submissions and determine the best solution, negotiating with the vendors if necessary. ■ Award Decision, once the vendor and Authorized User have an agreed upon SOW and pricing, the revisions are entered into Peoplefluent, and the CAI AM works with the vendor to ensure that the SOW and Peoplefluent records are accurate and complete. The CAI AM notifies all bidders of the award decision. ■ Engagement, when participants follow a defined process to engage the project, including background checks, access to buildings and systems, and staffing processes. Beginning with this new program, CAI will participate in an engagement kickoff meeting for each project. In this meeting, CAI will review the following: <ul style="list-style-type: none"> ■ requirements for project communication and status reporting ■ agency points of contact for contract administration, project management, and deliverable signoff ■ agency and CAI process and requirements for deliverable submissions, reviews, and signoff

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			<ul style="list-style-type: none"> ■ resource planning issues and agency/CAI requirements for notification and approval of project resource changes ■ CAI's role in project oversight ■ Process for initiation and processing of Change Requests ■ Resource onboarding requirements/background checks <p>■ Project, when work begins on the project, and continues as deliverables are completed, approved, and paid. If changes to milestones are needed, the Change Request Process is followed.</p> <p>■ Finalization, when the project is closed out, final approvals and payments are made, and a defined process is followed for offboarding project team members. The CAI AM finalizes and closes out the project in Peoplefluent, while the Authorized User closes the PO.</p> <p>CAI plans to implement the Compliance Manager Functionality in order to track onboarding and offboarding tasks. The Compliance Manager configuration can replace "paper" checklists and can generate email notifications and alerts when items are due or need to be renewed.</p> <p>Please refer to Attachment A: Process Flows for a complete description of both processes.</p> <p>CAI uses metrics about the process captured through the VMS tool to measure and report on SOW program performance. These metrics include:</p> <ul style="list-style-type: none"> ■ Bidding cycle: SOR release date to vendor proposal response deadline ■ Decision cycle: Vendor response deadline to project engagement ■ Full engagement cycle: SOR release date to project

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			<p>initiation</p> <ul style="list-style-type: none"> ■ Agency payment cycle: agency payment to CAI ■ CAI payment cycle: CAI payment to subcontractors <p>In addition, CAI captures program and vendor feedback from agency SOW users via a Customer Satisfaction Survey that is completed at the conclusion of every project.</p> <p>These metrics and customer feedback are the basis for measuring performance and driving continuous improvement initiatives.</p> <p>Examples of these metrics are found in Attachment C: Peoplefluent VMS and in Attachment D: Sample Reports.</p>
2.	Is your solution a vendor neutral solution (meaning that the MSP and VMS provider will not push orders to itself or give an unfair advantage to any subcontractor in the placement of any staff augmentation order or SOW engagement)? If yes, please provide details on how you ensure that competition is available?	Y	<p>Our VMS provider, Peoplefluent, will not be a vendor in the network. No orders will be pushed to them, and they will not have the ability to win SOWs under this contract.</p> <p>There are situations when, we believe, allowing CAI to respond to SOWs under this program makes good business sense. Please see K. Other Value Added Services, beginning on page 103, for a discussion on this proposed option.</p> <p>CAI's solution is vendor neutral for both staff augmentation and SOW services. CAI manages a network of vendors who serve as our subcontractors and participate in the program by responding to the staff augmentation and SOW needs of COVA.</p> <p>CAI uses a rigorous qualification process for vetting firms who wish to enroll in the SOW portion of the program. Our quality control process makes sure that firms have the capability and experience in successfully executing against fixed price deliverable contracts. We propose to follow the process in place now, allowing for some modification during implementation to tighten entrance criteria, as desired by VITA.</p> <p>We follow a consistent and objective qualification process for vendors. All vendors complete the same qualification questionnaire and are required to provide the same level of supporting documentation (i.e., financial statements, D&B report, insurance docs, etc.). We apply the</p>

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			<p>same qualification criteria to all, and we use the same contract for all approved SOW subcontractors. This is a critical success factor, because all vendors know they receive equal treatment.</p> <p>Once a vendor has joined the SOW network, they are invited to respond to all SOW requisitions corresponding to the IT specialty areas and tiers for which they qualify. Each vendor receives notification of the release of the SOW requisition at the same time; no one is given a "heads up." If an agency requests the services of a specific vendor, they must complete the ITCL Exception form to justify this request. This exception process is extremely important as it ensures that vendors are truly receiving a fair chance on all SOW opportunities that are released for competition.</p> <p>To ensure coverage for COVA across multiple IT areas, CAI's SOW vendor network includes companies providing services across a wide range of IT specialty areas. CAI performs regular reviews of vendor performance and response rates with the Commonwealth to ensure the network is sufficient to meet COVA's needs. CAI also ensures SWaM vendors are represented for each of the Project Categories to ensure the Commonwealth can meet their SWaM goals for SOW work.</p> <p>For SOW opportunities, CAI requests that vendors reply to as many SOWs as possible within the categories that they are approved to bid. CAI forwards <u>all</u> compliant SOW responses to the agency, further ensuring vendor neutrality. The agency makes the award decision based on their determination of "best solution."</p>
3.	Does your solution support statement of work fixed price agreements? If yes, please describe.	Y	<p>CAI has over two years of experience delivering fixed price SOW engagements through the MSP process for Virginia. As detailed earlier, our SOW process fully supports fixed price engagements. Our SOR and SOW templates are written with the expressed goal of helping the agencies define scope, and the templates include required definition of fixed price milestones and deliverables. Our VMS system readily supports fixed price engagements via submission and approval of fixed price deliverables, and via milestone-based reporting and invoicing. CAI itself has 25+ years of experience providing fixed price IT engagements, and both our corporate and local account management teams have a firm understanding of the specific</p>

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			challenges of delivering and managing fixed bid work. This knowledge allows us to offer many value-added services to the Commonwealth.
4.	Does your solution include any other type of Statement of Work based engagements? If yes, please describe.	Y	Beyond supporting Fixed Price engagements on an SOW, Peoplefluent VMS also supports the ability to manage/track the resources that are working on the project. This allows for T&M or T&M-with-a-cap SOW pricing. Resources can be managed for various reasons: 1) compliance, 2) reporting on hours worked but not actually invoicing those hours, or 3) invoicing based on timesheets and expenses approved in the system.
5.	Does your solution include SOW subcontractor qualification, enrollment and maintenance? If yes, please describe.	Y	<p>As part of the current VA ITCL contract, CAI developed an in-depth vendor qualification process to determine which firms can be relied upon to successfully complete SOW projects through the contract. CAI follows these steps to qualify vendors:</p> <ul style="list-style-type: none"> ■ We developed a standardized Request for Information (RFI) to gather company information, financial information, personnel details, and firm experience from any vendor wishing to qualify for the SOW vendor network. ■ The questionnaire provides a fair and objective evaluation process in which all vendors are given equal consideration. ■ Responses are reviewed and evaluated by CAI's team of senior level project managers, legal staff, and accounting management. Firms are scored on the four criteria. ■ CAI developed a tiering structure based on the firms' project experience and financial capacity. Tier 1 firms are pre-qualified to bid SOWs with estimated budgets up to \$300K, Tier 2 firms are pre-qualified to bid up to \$800K, and Tier 3 firms are pre-qualified to bid on SOWs with an estimated value of up to \$2M. ■ The vendor network is reviewed at least twice annually, and CAI holds open enrollment periods at least once annually. CAI maintains performance metrics on suppliers

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			<p>and reports them to VITA on a quarterly basis.</p> <p>Additional qualification criteria for approved SOW vendors includes:</p> <ul style="list-style-type: none"> ■ In order to participate, the vendor must not be prohibited from doing business within the Commonwealth and as part of the onboarding, CAI checks the vendor against published vendor disbarment lists. ■ Each vendor must sign a subcontractor agreement with CAI. In addition they must provide copies of their W-9, all required insurance certificates, and marketing literature. <p>Additional details on this process, including the questionnaire used in evaluating SOW vendors, are presented in Attachment A: Process Flows.</p>
6.	Does your solution offer Statement of Requirements (SOR) templates? If yes, please describe your process for creating and maintaining the templates.	Y	<p>Yes, our solution provides both an SOR and an SOW template; both are currently in use for the VA ITCL contract. The SOR document is used by the agencies to define and document their project needs. The SOW template is conversely used by the vendors in documenting their solution and responding to requirements. CAI built these templates based on our firm's 30+ years experience in information technology.</p> <p>In our first two years delivering SOW services to the Commonwealth, it became increasingly evident that the agency users were challenged in providing the required level of detailed scope for fixed price work. While we believe the current SOR template includes the appropriate topic areas, the template contains free form sections that give the agency wide latitudes in providing the requested information. In an effort to provide better tools to agency users, we will make the recommended changes to the SOR template to include more specific questions, checkboxes, and/or drop down menus aimed at defining scope at a more detailed level. We recommend adding a new template addendum required specifically for application development projects which ensures even greater scope detail.</p> <p>We have provided the following list of potential template modifications only as examples meant to illustrate the types of detailed questions that will be added. We recommend working with agency users (specifically VDOT) and VITA in developing a revised SOR template and</p>

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			<p>corresponding SOW template during Phase 2 Implementation.</p> <p><u>Project History and Business Need:</u> Add specific questions to this section of the template to better define the project goals.</p> <ul style="list-style-type: none"> ■ What led the agency to this need? ■ What does the agency hope to accomplish as a result of this project? Are there specific performance expectations or requirements? ■ Describe the current technical infrastructure that is relevant to this project. ■ Does this SOW represent a small project within a larger agency project? If so, are there schedule and/or other dependencies? ■ Are there other project or third party contingencies that need to be considered? ■ How will the agency determine project success? <p><u>Project Management and Organizational Structure:</u> Add questions to this section of the SOR requesting agency to better determine project management responsibilities.</p> <ul style="list-style-type: none"> ■ Provide specific persons responsible for the following agency obligations: <ul style="list-style-type: none"> ■ Project management ■ Contract administration ■ Deliverable reviews and signoff ■ Infrastructure support (if applicable) <p><u>Scope of Work:</u> Ensure better definition of scope by providing a more detailed outline in this section of the SOR. Drill down in this section by asking users to break out delivery areas and provide more specific details on required tasks, deliverables, and acceptance criteria. Recommended outline:</p> <ul style="list-style-type: none"> ■ Scope Overview

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			<ul style="list-style-type: none"> ■ Scope Detail by Task <ul style="list-style-type: none"> ■ Task objective ■ Specific activities required by Supplier ■ Agency role/obligations in accomplishing this task ■ Required deliverables for this task ■ Acceptance criteria for each required deliverable ■ What project tasks are NOT included in the Supplier's scope of work? <p><u>Project Schedule:</u> Add questions to this section of the SOR to further define project schedule.</p> <ul style="list-style-type: none"> ■ Is there a clear understanding of the project timeline or is the provided schedule just an agency estimate? If the latter, can the Supplier propose an alternate delivery schedule? ■ What are the consequences if the dates you've provided aren't met? ■ What is the agency's role in meeting those dates? <p><u>Training and Knowledge Transfer:</u> Add questions to this section of the SOR to better define the training and knowledge transfer requirements.</p> <ul style="list-style-type: none"> ■ Will the Supplier be required to provide formal training? If so, provide details relating to the following: <ul style="list-style-type: none"> ■ Does the agency require classroom or web training? ■ Define the number of training sessions. ■ Define the number of training participants. ■ Define the specific training deliverables and acceptance criteria.

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			<ul style="list-style-type: none"> ■ Are there any other requirements for knowledge transfer? <p>Application Development SOR Addendum: This addendum to the SOR will be required for all application development projects and will include questions relating to each phase of the development lifecycle.</p> <p><u>Requirements/Design</u></p> <ul style="list-style-type: none"> ■ Are the functional requirements fully defined and documented? ■ If not, what assumptions should the Supplier make about the level of effort required to complete the requirements? ■ Are there resources within the business who will be responsible for working with the Supplier to determine requirements? If so, explain. Will these resources be readily available for meetings? ■ Are the technical requirements/design fully defined and documented? ■ What specific requirements and design documents will the agency require as deliverables? What are the acceptance criteria for each of these documents (i.e., specific formats or agency templates that must be used)? <p><u>Development</u></p> <ul style="list-style-type: none"> ■ Will Supplier development occur onsite within agency environment or offsite in Supplier's own development environment? ■ Will Supplier be required to follow any specific development methodologies or processes? If so, explain. ■ If code is developed in Supplier's environment, what are the requirements/processes to migrate code into the agency's environment? ■ Are there any contingencies for Northrup Grumman

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			<p>responsibilities that need to be taken into consideration? If so, explain impact on process and/or timeframes.</p> <ul style="list-style-type: none"> ■ Outside of the code delivery, what other deliverables will be required for this phase? Provide list of deliverables and acceptance criteria for each. <p><u>Testing</u></p> <ul style="list-style-type: none"> ■ Does the project require testing at varying phases or only prior to implementation? Explain. ■ Is system testing required? Define agency and Supplier responsibilities. What are the specific deliverables and acceptance criteria? ■ Is integration testing required? Define agency and Supplier responsibilities. What are the specific deliverables and acceptance criteria? ■ Is performance testing required? Define agency and Supplier responsibilities. What are the specific deliverables and acceptance criteria? ■ Is user acceptance testing required? Define agency and supplier responsibilities: <ul style="list-style-type: none"> ■ Who will develop the test plan and test scripts? If Supplier, define specific formats required and/or other acceptance criteria. ■ Will more than one round of UAT be required? If so, explain. ■ What agency users will be involved in conducting UAT? Are there any special considerations for scheduling these resources? ■ Are there specific requirements for UAT session timeframes?
7.	Does your solution include providing ongoing assistance to customers	Y	CAI's SOW solution includes a deep hands-on approach to working with agency users. CAI's AMs heavily assist customers throughout the

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	<p>completing the SOR? If yes, please describe.</p>		<p>entire SOW lifecycle, including:</p> <ul style="list-style-type: none"> ■ Conduct meetings and/or calls with new agency users for program introduction. ■ Provide coaching on SOW process and use of contract/contractual obligations. ■ Prior to developing the SOR, work with the customer in determining whether a staff augmentation or SOW requisition is warranted to meet the customer's needs. ■ Work with agency in completing the SOR template to ensure completeness and accurate statement of requirements. This historically has included multiple discussions, CAI's redlining of the SOR document, and assistance writing the document if necessary. This requires CAI's educating/coaching on scope definition, agency vs. vendor obligations, contractual issues, etc. ■ Guide agency/make recommendations for use of pre-bid conference calls, vendor orals, or negotiations. ■ Conduct regular and proactive check-ins with agency users on project updates and overall program satisfaction. ■ CAI's Help Desk is available to assist with the use of Peoplefluent as well. <p style="text-align: right;">(i) The following provides additional information relating to our AM's high level of support to both agency customers and SOW vendors throughout the phases of an SOW requisition.</p> <p style="text-align: right;">(ii) Inception Phase</p> <ul style="list-style-type: none"> ■ Work with agencies to create the SOW requisition in Peoplefluent.

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			<ul style="list-style-type: none"> ■ Make necessary changes in Peoplefluent, then approve/release the SOR to vendors in the appropriate Tier. <p style="text-align: right;">(iii) Bidding Phase</p> <ul style="list-style-type: none"> ■ Address general SOW questions from vendors. ■ Compile formal questions from vendors and forward them to the agency for response and/or further discussion. ■ Post Q&A documents in Peoplefluent. ■ Host and facilitate pre-bid conference calls. ■ Communicate requisition updates and/or changes to vendors via email. ■ Cursory review of all SOW responses; provide coaching as necessary to vendors who aren't using the template correctly or have failed to represent a clearly documented solution. ■ Send award notifications to all responding vendors via email. ■ Provide post-award feedback to losing vendors. <p style="text-align: right;">(iv) Engagement Phase</p> <ul style="list-style-type: none"> ■ Review the winning SOW for: <ul style="list-style-type: none"> ■ contractual issues ■ scope issues (reviewing from both the agency and the vendor perspectives) ■ Reach out to the agency to discuss any concerns or to clarify their intentions. ■ Hold conference calls with vendors to discuss issues and/or changes, or redline the document and send it back for review and discussion.

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			<ul style="list-style-type: none"> ■ Upload redline and final versions into Peoplefluent and notify the agency for final review and acceptance. ■ Execution of SOW documents (same process for SOWs and Change Requests): <ul style="list-style-type: none"> ■ Execute the SOW with the agency (requires frequent communication between the agency and the MSP team) ■ Execute Cover Letter with vendor (via email) ■ Coordinate and complete background checks with vendor as necessary (liaison with VDOT Security Office). <div style="text-align: right;">(v) Project Phase (Contract Administration)</div> ■ Maintain ongoing contact with engaged vendors to check on project status, issues, and concerns. ■ Address concerns/problem solve/escalate with agencies as required. ■ Milestone tracking reports; monitoring deliverables. ■ Advise/coach agencies and vendors re: when change requests are needed. ■ Redline or write Change Requests to ensure contractual issues are covered and scope issues are clear. ■ Execute Change Requests with Agencies and Vendors. ■ Contact agencies for required PO changes. ■ Track all Change Requests on the master spreadsheet; report to VITA on 1st of each month. ■ SOW Terminations: advise on contractual obligations related to terminations, negotiate price changes related to terminations.

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			<ul style="list-style-type: none"> ■ Track agency deliverable approvals in PF and follow up as necessary. ■ Email Customer Satisfaction Surveys to agencies at the closure of every SOW. ■ Add survey information to the CAI's master repository of survey data. ■ Track sent surveys for receipt/following up as necessary. ■ Record scores on master spreadsheet upon receipt of completed survey.
8.	Does your solution include tracking customer acceptance of SOW deliverables and Milestones? If yes, describe in detail.	Y	<p>As the project progresses, the vendor will complete milestone deliverables and expect payment. After completing the deliverable for a milestone, the vendor will mark the milestone completed within Peoplefluent. Although this is most likely known, this officially notifies the Customer that the vendor believes the milestone deliverable has been completed. If the Customer agrees and approves the milestone deliverable(s), he/she marks the milestone 'Approved' in Peoplefluent.</p> <p>The approval of a milestone in Peoplefluent initiates the payment tasks. A Peoplefluent Report produces the data for CAI to produce the invoice to the Customer. Peoplefluent also notifies the vendor that the milestone has been approved, and the vendor invoices CAI for their milestone payment, per the milestone payment schedule submitted and accepted with the SOW response.</p> <p>Invoices are paid and work continues until all the milestones have been completed. When the vendor believes that the entire project is completed, the Project Complete (final milestone) is marked complete. When the Customer approves the Project Complete milestone, the process for final invoicing including holdback, if any, is initiated. This also initiates the project closeout process within Peoplefluent.</p> <p>Business Objects reporting is also used to track the status of milestones. These milestone reports are delivered to VITA and to individual agencies so they can monitor the deliverables.</p> <p>The process flow for these tasks is presented in Attachment A:</p>

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			Process Flows.
9.	Does your solution track subcontractor performance under the SOW including meeting milestones, deliverables and customer satisfaction?	Y	<p>Vendor performance is reported through a series of performance reports via the Peoplefluent VMS Business Intelligence Platform, which can be run at any time. As noted elsewhere in this response, such reports include Milestone Tracking, late deliverables, SOW process cycle times, and vendor response rates.</p> <p>In addition, Customer Satisfaction surveys are sent to the agency manager at close of each engagement. This data is used for our internal SOW review periods, where we make sure we have enough and adequate vendors for each project category. It also provides feedback on CAI's performance which drives continuous improvement initiatives. Agency users are asked to return the completed Customer Satisfaction Surveys to both CAI and VITA.</p>
10.	Does your solution provide alerts and or reports of past due milestones and deliverables?	Y	<p>A milestone tracking report is automatically generated and delivered via email to the CAI AM as well as the Agency Project Sponsor(s). This report lists all of the milestones for each SOW as well as their status based on the milestone delivery date agreed to in the SOW project plan. The report contains alerts to highlight those milestones which are past due.</p> <p>A sample of this report is included in Attachment D: Sample Reports.</p> <p>In addition to the milestone report, VDOT currently uploads the milestone data for their SOWs via an Excel spreadsheet generated through Peoplefluent. They are then able to track their SOW milestones in their own project tracking system.</p>
11.	Does your solution record and track by cost center, by agency and by location? If yes, please describe.	Y	<p>Peoplefluent includes standard reports, and CAI has developed additional reports that track SOW requisitions by cost center, agency, and location. The configurability of the application allows users to track and record data by cost center, agency, and location. Data is able to be filtered and reported via any organization parameter that is captured.</p> <p>Samples of the Monthly Milestone Report and the Milestone Schedule Report are included in Attachment D: Sample Reports.</p>

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1 2.	Does your solution record and track by budget and accounting data? If yes, please describe.	Y	<p>As part of the SOW requisition process, we capture the cost center and budget from the Purchase Order that corresponds to the SOW requisition. We use this information not only in invoicing, but also to:</p> <ul style="list-style-type: none"> ■ Monitor Purchase Order spend based on approved milestones ■ Process change requests when additional milestones need to be added or modified ■ Provide Quarterly Report content
1 3.	Does your solution have the ability to electronically generate invoice, (one per milestone), that details all charges by project and PO and by cost center? If yes, please describe.	Y	<p>Our solution generates an invoice after the customer has verified that a deliverable marked "Complete" by the supplier has been satisfactorily delivered by approving a vendor submitted milestone via Peoplefluent. That invoice includes the Agency name, PO Number, PO Line Item, and approved milestones associated with the invoice. The invoice, along with copies of the approved milestones from Peoplefluent, are emailed to the agency contact unless the agency indicates that delivery via regular mail is preferred.</p>
1 4.	Does your solution allow unique user(s) business rules and regulations to be embedded in the workflow? If yes, please describe.	Y	<p>The VMS workflow is configurable and can be modified to accommodate varied needs specific to each agency.</p> <p>CAI has the ability to add custom fields in order to track items which are important to the Commonwealth. For example, adding a flag to a requisition to indicate an ARRA funded engagement allows the Commonwealth to track the spend and activity tied to ARRA funding. Unlimited custom fields are available to track similar types of legislations and regulations.</p> <p>Our solution also accommodates unique requirements in processes due to government regulation, such as variable requirements for: citizenship, DUI check for DMV, tax record checks, and classification of resources (e.g., H1B, 1099s).</p> <p>Under the new program, CAI will enhance our onboarding checklists by detailing each agency's unique requirements. CAI will implement the Compliance Manager Functionality in order to track onboarding and offboarding tasks. The Compliance Manager configuration can replace "paper" checklists and can generate email notifications and alerts when</p>

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			<p>items are due or need to be renewed.</p> <p>CAI has the ability to modify the requisition release workflow for each unique requisition to allow for distribution to a specific group of vendors. If an agency requests to utilize a SWaM only firm in an effort to meet SWaM spend goals, we have the capability to send the requirement out to only SWaM certified firms, as designated in Peoplefluent.</p>
1 5.	<p>Does your solution include support? If yes, do you provide 24 hours per day / 7 days a week support for your solution? (At a minimum include: Days/Hours of Coverage, Expected Resolution Thresholds, Help Desk Support Levels (Tiered), Escalation Model, and Reporting.)</p>	Y	<p>The support offered for SOW requisitions is the same as that for staff augmentation.</p> <p>Your first line of support is our local account team who are dedicated to this account. During normal business hours, they can be reached for support on the contract, tool, and other MSP-related questions.</p> <p>CAI's MSP Operations administrators provide Level 1 support for any help desk calls, logging and tracking issues, and questions from both Virginia and vendor users. Having provided support under all of our MSP contracts, they have extensive expertise in all procedures related to these contracts.</p> <p>They are able to answer general questions on how to utilize the contract, but escalate to the local AMs as necessary. The team also has deep experience with the Peoplefluent VMS tool and is able to answer "how to" questions related to the use of the tool from the agency, vendor, and candidate perspectives. They are capable of providing <i>ad hoc</i> training over the phone when needed, i.e., talking to the user and walking him/her through a process. Some common help desk requests are:</p> <ul style="list-style-type: none"> ■ Password resets ■ Timesheet corrections ■ Guidance on entering requisitions ■ Addressing Peoplefluent VMS problems ■ Responding to report requests ■ Completing user setups ■ Providing training <p>Access to the Help Desk is available 24x7. CAI provides unlimited</p>

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			<p>support calls to our MSP Help Desk. CAI provides live help desk support 8:00 a.m. to 5:00 p.m. We will continue to utilize the phone numbers established under our current contract. Our MSP Program Office help desk utilizes a toll free number (800-635-5138) and a local Virginia number (804-288-4246) as well as a dedicated email address (VAITCL_Help@compaid.com) and fax (804-288-4358). In addition, our CAI Account Management team is available via local Virginia telephone numbers. All of these means of communication are available to the user community so that CAI can assist with every aspect of the procurement lifecycle.</p> <p>During normal business hours, the question/issue will be received by our Level 1 support team who will log and classify the issue within our issue tracking system. Level 1 will either address the issue/question themselves or escalate to Level 2 support. Outside of normal business hours for critical issues, the requestor will be directed to Level 2 support (CAI) or Level 3 (Peoplefluent). The CAI MSP help desk also has the VMS provider help desk at its disposal for assistance with issues and questions regarding the tool itself.</p> <p>CAI utilizes a help desk call tracking system called MSP Service Desk. Using it, we can report on types of calls, escalated calls, and issues with this system.</p>
1 6.	Can you provided a detailed workflow map of the end-user steps necessary to submit a request, receive acknowledgement, review resumes, select candidate, monitor time reporting, and request monthly/weekly business report? If so please include a copy.	Y	Please see the detailed workflow map of the SOW process provided in Attachment A: Process Flows .
1 7.	Will you arrange for a pre-employment national, regional and local background check for each resource that will have access to Commonwealth work tasks, facilities, systems or operations either through on-site access or through remote access? If yes, please describe the	Y	<p>Yes, CAI's account management team works with the agencies to document the background check requirements for each position and uses the VMS tool to track the corresponding documents and credentials for each resource and engagement.</p> <p>The national, regional, and local background check is required by the Commonwealth and reveals any prior convictions for a resource. It is our experience that many agencies require customized background</p>

Statement of Work Services			
	Requirements	A	B
	process.		<p>screening criteria, so we work with each agency to clarify what comprises passing criteria. Background checks are performed after selection, but before engagement.</p> <p>Onboarding does not normally continue if the background check report is missing. Contained within our onboarding process is the validation of the completed background checks and any other required checks.</p>
1 8.	Do you have experience conducting background checks? If yes, please describe.	Y	<p>Prior to a candidate being able to begin an engagement, for standard background screening, CAI currently obtains from the vendor a national criminal background check (covering felonies, misdemeanors, and the sex offender registry). This is the standard baseline qualification to begin assignment under the program. Certain agencies require varied background screenings, and CAI works with the agency to meet these guidelines. Examples are VDOT, TAX, and VSP.</p> <p>As a company, CAI has experience conducting background checks as CAI's Human Resources department performs background checks on all employees.</p>
1 9.	Does your solution include providing written confirmation that the background checks have been conducted prior to the on-boarding of any resource?	Y	<p>As part of contractor onboarding procedures, CAI requests a national criminal background check be provided by the vendor prior to a candidate being able to begin an engagement. The vendor submits a copy of this background check for validation. CAI reviews to ensure that it is an acceptable screening and that there are no issues. CAI alerts the agency that the screening has been received and is acceptable, and the contractor is cleared to begin work on the project. Some agencies require written confirmation (ex. VITA) and CAI submits a signed document as part of onboarding.</p>
2 0.	Certain public bodies may have additional background or security checks required before entry to government buildings or access to information is granted. Does your solution including arranging for additional background or security checks based on individual customer requirements? If yes, please describe how will these be provided?	Y	<p>Yes, under the new program, CAI will utilize agency-specific onboarding checklists. In this case, the checklist will include the appropriate background checks and notification for the agency prior to access being granted. Again, CAI will require the vendor to provide the required background and/or security checks. The vendor will submit them; CAI will verify/review, and then notify the hiring agency.</p>

Statement of Work Services			
	Requirements	A	B
2 1.	Does your solution ensure that a resource will not begin work until they have successfully passed the required background checks? If yes, please explain.	Y	CAI AMs strictly follow the onboarding checklists, all of which include background checks. Under the new program, CAI will develop onboarding checklists for each agency, so that tasks such as additional background checks are included. As a rule, we will not complete the onboarding process without an acceptable background check. In the event that a vendor needs to replace personnel during project delivery, they will be required to send notification to CAI prior to the change to ensure time to complete the background checks. These onboarding tasks and requirements will be reviewed by CAI in detail at a project kickoff meeting for each SOW engagement.

Figure 7: Responses to Statement of Work Services

C. C. Vendor Management System (VMS)

Vendor Management System			
	Requirements	A	B
1.	Do you agree to provide the VMS application for all customers from an independent third party? If yes, please describe in detail including the names and versions of the VMS and other software application(s) included in your solution and a high level diagram illustrating how the application is architected. Please include the platform/language the system code is written in and the type of database(s) supported by the application.	Y	<p>Peoplefluent VMS 6.0.x will be used as the technology platform. The application is offered via a Software as a Service (SaaS) model and accessible via a supported web browser. The Peoplefluent VMS application is built on core Microsoft technologies. The architecture is multi-tiered and is extended with XML throughout the logical tiers. XML is utilized for all intra-object communication. The application can be generally divided into four layers: a presentation layer, a page logic layer, a business logic layer, and a data services layer. An architecture diagram of the Peoplefluent VMS is included in Attachment C: Peoplefluent VMS.</p> <p>The presentation layer uses Microsoft ASP.NET pages to deliver content to the user. JavaScript is used for all client side processing and the application runs without session or state for optimal load balancing. The presentation layer relies heavily on the page logic layer to avoid extensive processing at the script layer. The returned XML from the page logic layer is parsed with XSLTs and the result set presented to the user.</p> <p>Within the page logic layer, each ASP.NET page utilizes a corresponding page logic object. It is responsible for all communication to the required business entity and business logic components that are required for a given transaction. The page logic layer communicates up to the display layer and down to the business logic layer.</p> <p>The business logic layer is written in .NET. This layer is further comprised of business entity objects and business logic objects that act on these business entities. For example, candidate and engagement will be business entities. A business logic component will know how to engage a candidate. The business logic layer communicates up to the page logic layer and down to the data services layer. The data services layer is written in .NET. All application database transactions are controlled and managed using .NET architecture.</p>
2.	Does your solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in accordance with the following standard	N	While the VMS application is not currently 508 compliant, Peoplefluent has made accessibility improvements with several of their products. The Peoplefluent VMS product team is keenly aware of the importance of accessibility to their clients and users relative to Section 508

Vendor Management System			
	Requirements	A	B
	<p>regarding IT Accessibility and 508 Compliance:</p> <p>http://www.vita.virginia.gov/uploadedFiles/Library/AccessibilityStandard_GOV103-00_Eff_11-04-05.pdf</p> <p>(Refer to www.section508.gov and www.access-board.gov for further information)</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal: (The VPAT template is located in APPENDIX C of the Accessibility Standard (GOV103-00)).</p> <p>If no, does your solution/application/product provide alternate accessibility functionality? Please describe.</p>		<p>(Electronic and Information Technology Accessibility Standards, 36 C.F.R. § 1194) of the Rehabilitation Act of 1973 (29 U.S.C.A. § 794d) and the Web Content Accessibility Guidelines 2.0 (WCAG 2.0).</p> <p>Plans to bring the Peoplefluent into ADA Compliance are under discussion. Current compliance levels match those found in similar VMS software.</p> <p>CAI's local Account Management team is ready and willing to assist any users who need in person, one-on-one assistance in utilizing the ITCL contract and using the Peoplefluent VMS application in fulfilling their project needs.</p>
3.	<p>Does your solution comply with all current COV ITRM Policies and Standards, as applicable, found at: http://www.vita.virginia.gov/library/default.aspx?id=537.</p> <p>If proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>	Y	<p>Peoplefluent's security infrastructure, standards, policies, and procedures are modeled from several industry data security and privacy standards such as OWASP, ISO-17799, HIPAA, and SANS best practices. To prevent unauthorized access or disclosure, maintain data accuracy, and ensure the appropriate use of Personal Information, Peoplefluent has adopted appropriate physical, electronic, and managerial procedures to safeguard and secure the Personal Information we process. We follow generally accepted industry standards to protect the personal information submitted to us, both during transmission and once we receive it.</p> <p>Peoplefluent undergoes SSAE16 audits of our RMS and VMS systems annually and has been found compliant for both. Our solutions are also hosted in a SSAE16 audited Internet data center.</p>
4.	Is the proposed VMS application a web-	Y	Peoplefluent VMS is a 100% web-based application and accessed via a supported browser such as Internet Explorer, Google Chrome, Safari,

Vendor Management System			
	Requirements	A	B
	based application?		and Firefox.
5.	Is VITA, on behalf of the Commonwealth, able to acquire the license from the VMS provider directly on its own behalf? Please explain.	Y	Under our contract, CAI holds the license with Peoplefluent. However should the Commonwealth desire it, a license can be obtained directly from Peoplefluent.
6.	Do you have an established relationship to the VMS provider? If yes, please describe.		CAI has been in a partnership with Peoplefluent since 2004, utilizing the Peoplefluent VMS application in support of MSP contracts with multiple State clients. In addition, Linda Leiby (MSP Operations Manager) is a member of the Peoplefluent Client Advisory Board where she is able to provide input on Peoplefluent's VMS technology roadmap.
7.	Does your solution integrate both the SOW and Staff Augmentation functions in the VMS? If yes, please explain how the VMS supports the staff augmentation processes and the SOW processes.	Y	<p>Peoplefluent's VMS technology platform will enable integration with your contingent workforce, be it through traditional staff augmentation or project services (SOW). Peoplefluent VMS has a "Project Procurement" feature that provides you another option for requirement creation and management with your vendor audience. Project-based activities are defined as tasks that are outsourced to the clients' vendor community which will be paid by one or more of the following methods: milestone completion, % complete, time & materials, etc. Both options are available in one integrated solution but are separated enough not to negatively impact a user who is only interested in one of the solutions. Vendors can be configured so they are only able to receive Staff Aug requirements, SOW requirements, or both.</p> <p>Reporting metrics specific to Staff Augmentation and SOW can be produced as well as combined so that users can see the full breadth of the use of the contract for the Commonwealth or a specific agency.</p>
8.	Is there any part of the Staff Augmentation or SOW functions that are not supported by the tool (e.g. customer satisfaction surveys; group resumes submission, etc.)? If yes, please explain.	Y	Customer satisfaction surveys are currently available for Staff Augmentation within Peoplefluent, and will be available for SOW in 2013.
9.	Does your solution include change management processes related to VMS? If yes, please describe how version changes	Y	Peoplefluent uses an Agile development methodology. Agile methodology prioritizes features and capabilities while also permitting the ability to be reactive to emerging market and client requirements.

Vendor Management System			
	Requirements	A	B
	and/or upgrades are tested and implemented.		<p>Agile concepts including “sprints” and “iterations” are used by groups organized into engineering “scrums” to confirm the right release cadence and tempo as well as identify situations where extra capacity has become available or where project risks are emerging. Each “scrum” has a “scrum leader” who is responsible for overall synchronicity and cadence of releases.</p> <p>The Peoplefluent Product Management, Engineering, and Operation teams follow this process to release new versions to clients:</p> <ul style="list-style-type: none"> ■ Identification: Product Management team members create “story cards” defining features in Rally which is a 3rd party tracking system. ■ Definition: Story cards are defined to support the business relevance of the intended feature as well as the design intentions from a software engineering standpoint. ■ Testing: Quality assurance test plans are derived directly from these story cards which define accurately how the product will “work as designed.” ■ Confirmation: Test plans are set up in standard and repeatable fashion with QA serving in a decision-making capacity related to release readiness based on test plan results. ■ Release: Following release from QA, the new maintenance or major release is delivered to the Operations team who run through a series of documented steps to apply the release to client production and staging environments. Quality Assurance is built into the Agile process and definition of test cases (and direct involvement of quality engineers) is part of the “scrum process.” The following quality measures are in place for all releases: <ul style="list-style-type: none"> ■ “Story cards” serve as a foundation for test plans that simulate real-world product usage. ■ Quality engineers run tests throughout the development process.

Vendor Management System			
	Requirements	A	B
			<ul style="list-style-type: none"> ■ Source code practices prevent engineering check-in of code that includes errors that would “break the build.” ■ Test automation is in place to run in parallel to testing conducted by quality engineers. ■ A “code freeze” date is established in advance of release after which new elements are not introduced into source code unless approved through an escalated override procedure. <p>The organization’s Quality Assurance lead approves release to the Operations team which conducts an additional set of quality and hardening steps before applying the new release to client environments.</p>
10	Does the VMS provide workflow management (e.g. automated alerts of requisition and/or time sheet approval)? If yes, please describe in detail including any workflow that requires human intervention.	Y	<p>Peoplefluent VMS supports a full range of email notifications and actions based on configurable triggers in the process. Users receive informative notices of actions and directions on what to do next. Hot links within the notifications bring the user directly to the page requiring action, further enhancing productivity. Each user in the approval chain can make individual comments and approve or reject the requirement — and Peoplefluent VMS keeps a historical log.</p> <p>For example, the level of control Peoplefluent VMS provides over approvals ensures that your company’s processes are followed in the most efficient manner incorporating alerts and notifications. The workflow can be tailored to distribute requirements prior to approval, or requirements can be distributed only after approval of a purchase order.</p> <p>The approval process can be tailored based on the level or number of approvals required — or users can manually define an approval chain:</p> <ul style="list-style-type: none"> ■ Define the highest level of authority needed to complete an approval ■ Limit approvals according to budget considerations or by organizational structure ■ Select an alternate approver (delegate) for workflows and

Vendor Management System			
	Requirements	A	B
			<p>for time/expense approvals</p> <ul style="list-style-type: none"> ■ Set up engagement approvals during requirement creation or candidate placement <p>Email Approvals are also supported for timesheets allowing a user to provide feedback without logging into the application.</p>
11	Does your solution include a help desk to assist with VMS related issues? If yes, please describe, including how users would submit issues, and support hours.	Y	<p>The CAI Operations team provides a Level 1 help desk to all users. A user may call the helpdesk at our toll free number (800-635-5138) during normal business hours between 8:00 a.m. and 5:00 p.m. to submit an issue or request assistance in using the VMS application. A user may also send an email to our help desk at VAITCL_Help@compaid.com at any time. Our Operations team members are experts in the processes and workflows specific to Virginia. They will either answer the question themselves, or escalate the issue to the appropriate person. The team also has a direct line to Peoplefluent for any application related issues that they must resolve.</p>
12	Does the VMS application address security? Please provide details on the level of security inherent in the VMS. (Provide an attachment to detail the levels of security inherent in your application)	Y	<p>Authentication rules and standards include three layers of login authentication: unique userid, password, and unique organization id. Initial user groups (called "regions") are tailored during implementation. Post-implementation, user groups and their regional access privileges are maintained by your system administrator within each user's account profile. Organizational hierarchies are also configured within requirement classes enabling support for a broad range of organizational structures. Peoplefluent VMS can integrate to an HRIS system to load organizational structure into our application to avoid redundant organization structure maintenance. This creates an intuitive interface with which to manage complex organization structures.</p> <p>Peoplefluent provides a high level of definition to both a user's role as well as their individual responsibilities. The user role provides the overall framework for application access and authority. However, in addition to the role, the individual user can have different responsibilities such as MSP rights, proxy time sheet entry, time/expense approval, and so forth. As a result, VITA can determine within the application the level of security and authority to meet varying roles.</p> <p>Control rules and logon ids are managed by your system administrator</p>

Vendor Management System			
	Requirements	A	B
			<p>users.</p> <p>It is also important to note that the application and data center are reviewed against SSAE-16 standards.</p> <p>Please see Attachment C: Peoplefluent VMS.</p>
13	Does your solution protect against your system being compromised. If yes, please explain the warranty provided.	Y	<p>The solution includes advanced security features and practices to protect the confidentiality and integrity of client data and the privacy of individual candidates. Login to the Peoplefluent application utilizes a three-tier security model that requires the user to provide an org id (unique to your organization), as well as a unique userID and password. Passwords are encrypted and stored in the client database.</p> <p>Client data is stored within a shared database structure which is logically divided into organizational units. Client data is separated through SQL security and database schema for the VMS application.</p> <p>Peoplefluent is SSAE-16 audited for VMS, which includes the review and validation all security policies and procedures.</p> <p>Peoplefluent hosts its solutions in a world-class SAS 70 Type II compliant Internet Data Center in Lithia Springs, GA. The SAVVIS AT1 Data Center is designed to meet the stringent demands of Enterprise customers for Power Management, Heating/ Ventilation/Air Conditioning (HVAC), Fire Suppression, Seismic Engineering, Physical Security, and Tier 1 Internet connectivity.</p> <p>The solution includes advanced security features and practices to protect the confidentiality and integrity of client data and the privacy of individual candidates. Warranty detail will be discussed during contract negotiation and governed by the Master Agreement and Service Level Agreement.</p>

Vendor Management System			
	Requirements	A	B
14	Does your solution provide hosting of the VMS? If yes, please describe your data center in detail.	Y	<p>Peoplefluent hosts Peoplefluent VMS in a world-class SSAE-16 audited SAVVIS Internet Data Center in Lithia Springs, GA. The data center selects multiple primary Internet backbone network providers on diverse local access facilities for the hosting facility. The facility leverages established preferred provider relationships with major Tier 1 network providers for connectivity.</p> <p>Checkpoint SPLAT (NGX) firewall clusters are utilized for front-end security of the application environment. These firewalls are administrated and monitored as a managed service with 24/7/365 “eyes on screen” monitoring. Checkpoint SPLAT (NGX) firewall clusters are utilized to separate the back-end data processing networks and the DMZ networks of the RMS application environment. These firewalls are managed by the Peoplefluent Production Security Team. A Checkpoint (NGX) firewall cluster is used to control access between the corporate and production networks. These firewalls are managed by the Peoplefluent Security Team.</p>
15	Will the VMS be hosted on hardware and software platforms dedicated for CoVA's sole use? If not what further steps do you take to protect each of your customer's data from access by other customers?	Y	<p>Client data is stored within a shared database structure which is logically divided into organizational units. Client data is separated through SQL security and database schema for the VMS application. Authentication rules and standards include three layers of login authentication: unique userid, password, and unique organization id.</p>

Figure 8: Responses to Vendor Management System (VMS)

D. D. Talent Management

		Talent Management	
	Requirements	A	B
1.	Does your service ensure timely access to high quality talent that meets customer needs? If yes, how do you ensure that CoVA has access to the best candidates the market can offer?	Y	<p>Our solution is built on managing to Service Level Agreements (SLAs) that focus on the accuracy and timely delivery of high quality talent. Our success rate for Fill Rate is exceptionally high.</p> <p>A strong supply chain is a critical success factor in any MSP program. Since CAI, as the MSP, will not respond to any of the requirements posted by COVA, we absolutely rely on our network of vendors to provide their strongest candidates to support Virginia endeavors. We support our vendors by mentoring them on their placements, meeting with them one-on-one, and providing them with feedback on their submissions and placement history. Vendors want to be part of our network because they understand that our network is accessible and fair to all participants. CAI has the ability to limit the number of candidates submitted by vendors; per requisition.</p> <p>Maintaining a full and fully primed pipeline is an exercise in trend analysis, supplier communications, vendor outreach, and active recruiting of new suppliers. We follow a consistent screening process for vendors, i.e., we apply the same selection criteria to all, and we use the same contract for all subcontractors. This is a critical success factor, because all vendors know they receive equal treatment. The rate card from vendors to CAI is public knowledge, as is the contract. As part of contract flow-down, we ensure that the vendor community understands its obligations to the COVA and to the contract. Our screening protocol also includes a process to confirm that the vendor is not prohibited from doing work for COVA.</p> <p>All these practices are designed to support a network that will deliver high quality resources within the required timeframes.</p>
2.	Does your solution validate that the candidates can provide the needed skills requested by the customer? Please explain and describe your screening process.	Y	<p>The review and validation of candidates' experience, skills, education, and employment history is part of our AMs' responsibilities.</p> <p>When a vendor submits a candidate for a requisition, there is a series of check boxes or input fields for affirmation of key data, such as the skills the candidate possesses and his/her availability. The vendor must respond to each required and desired skill and note the candidate's years of experience in each one.</p>

Talent Management			
	Requirements	A	B
			<p>The Peoplefluent VMS provides a display of the candidates with scoring for comparison and ranking. The overall score is broken down by skill/certification matching. All requested information is listed, i.e., skill sets, certifications, years of experience, and availability dates.</p> <p>Candidates who do not have a résumé attached to their profile in the Peoplefluent VMS tool will be rejected.</p> <p>The CAI AM reviews the candidate submissions and calls the candidates to validate the information provided by the submitting vendor. It is our experience that validating the candidate by phone is the best method of determining the accuracy of his/her skill, interest, availability, and vendor representation. By speaking with the candidate, we are able to deliver a higher quality of available and interested resources to COVA. We are also able to reject all candidates deemed not ready for assignment for any reason, such as issues with communication, location of assignment, traveling for interviews, and vendor representation. This process enables us to provide the Virginia Hiring Manager with a set of pre-qualified, available candidates ready for interview and selection. This is an important quality control aspect of our solution which saves time for Virginia managers.</p> <p>The AM documents the results of the screening in Peoplefluent VMS and forwards the best candidates to the Agency Hiring Manager for review.</p>
3.	Does your solution utilize strategies to address labor and/or skills shortages? Please explain how and describe your experience.	Y	<p>CAI AMs work closely with agencies to learn about upcoming requests. We then provide that information to the vendor community so that they can begin recruiting and preparing for those requisitions. Virginia has some challenging skills sets to obtain. Our local account management team is consistently reaching out to vendors, asking for concentrated focus on certain requisitions, and getting their feedback on market recruiting.</p> <p>In the past, we have leveraged a vendor network base that has a broad span of contractors and skill sets. When a particularly challenging combination of skills and experience is needed, we can take advantage of the open enrollment and bring on a supplier who has the right resources, such as emerging mobile technologies.</p>

Talent Management			
	Requirements	A	B
			<p>CAI proposes working with VITA to develop additional mechanisms for providing the hard-to-find labor and accommodating shortages. Two ideas are:</p> <ul style="list-style-type: none"> ■ Tiering: CAI proposes to reduce the core performing vendor tier, without jeopardizing the “open” network benefits. Tier 1 will be SWaM vendors and several high performing non-SWaM vendors. These vendors will receive all competed requirements first. We will still allow open enrollment for vendors, but they will join the network at a higher level tier (i.e., Tier 2), and not necessarily see all available requirements, but will be available to fulfill needs where we needed to cast a very wide net. We will structure the remaining Tiers as desired by COVA to meet the demand of all skills needed within the program, and to promote performance monitoring of vendors. ■ Special Exemption: The following requirement will be implemented only after a written request from VITA. <p>Adding a ‘special exception,’ much like the exceptional process for Named Resources, for Hard-to-Find resources that will enable CAI to place its own employees when the vendor network fails to supply viable candidates. In several other MSP state programs that CAI manages, CAI has the capacity to place contractors under the contract, in specific, well defined, approved instances. Each program varies, and for Virginia, we propose utilizing CAI’s internal recruiting team to:</p> <ul style="list-style-type: none"> ■ source challenging, difficult to find resources where the vendor network is coming up with few options for resource selection. CAI will open the requirement up to our recruiting team to also source candidates, or pull from our internal IT consulting teams. ■ place consulting resource to oversee or assist with delivery. Examples would be business analysts,

Talent Management			
	Requirements	A	B
			<p>architects, or project managers to assist with SOW client demand.</p> <ul style="list-style-type: none"> ■ assist with employment related issues where a contactor needs VISA sponsorship, and their vendor is unable to process. CAI will step in to employ the resource in order to have business continuity for the agency. <p>The real solution to maintaining a ready supply of qualified IT resources lies in balancing supply and demand. This narrative describes our approach to ensuring a steady supply of high-quality resources for any level of Virginia demand.</p> <p>Anticipating Demand</p> <p>Demand can rise and fall, of course, and we use our extended repository of metrics to evaluate all aspects of utilization. For example, we analyzed the unusually high demand for “Senior Consultant” labor in Pennsylvania in 2009 and recommended reconfiguring the category into five discrete job titles, resulting in savings estimated at \$1.1 million. When we implemented the first major Microsoft .NET application in the Commonwealth in 2004, .NET skills were scarce and costly; from our review of labor utilization in recent years, we know it is now more commonplace, leading to our recommendation to adjust rates down.</p> <p>Our account team will work closely with the agencies and monitor Virginia standards and strategic plans to forecast demand and changing technology skill requirements. The analyzed and confirmed information is then communicated to the vendor community to assist them in developing the pipeline of resources. In addition, our State Government technical support staff supports the Account Management team by noting emerging trends based on RFP, RFI, and request for quote (RFQ) procurements, as well as monitoring technical trade publications for emerging technologies. This is a significant value-add of having an IT firm manage the contract, in contrast to a less-technical firm.</p> <p>As part of normal SLA monitoring, we evaluate and report on contract usage by multiple dimensions, e.g., agency, vendor, job category.</p>

	Requirements	A	B
			<p>Historic usage by job title will be part of the quarterly SLA report to Virginia. We evaluate these metrics by quarter, region, and year to identify specific trends; we also monitor them across all MSP accounts, particularly those in close proximity to Virginia. This is one method of projecting potential requirements based on historical demand.</p> <p>Supplier Pipeline</p> <p>Maintaining a full and fully primed pipeline is an exercise in trend analysis, supplier communications, vendor outreach, and active recruiting of new suppliers. Our proposal represents a strong supply chain capable of responding to all job titles, levels, and requirements shown in the RFP.</p> <p>Balancing Supply and Demand</p> <p>We balance supply and demand by establishing market or near-market rates so that the full network will have more than sufficient capacity to meet the client's requirements. If bill rates are too low, the Commonwealth will be competing with the larger market of IT users, i.e., commercial firms with similar IT requirements.</p> <p>We will respond to these market dynamics as we have in our other MSP accounts, i.e., by remaining abreast of emerging technologies and requirements and preparing our suppliers for them. For example, we currently send an email to all Virginia suppliers each week describing the status of recent requisitions (Open, Filled, etc.) and, more importantly, preparing them for soon-to-be-released requisitions. We will work hand-in-glove with Virginia to help ensure that wage rates reflect market realities.</p> <p>Laws of Supply and Demand</p> <p>Traditional rules of supply and demand will impact the contract. We stay ahead of the demand curve by following industry trends and pro-actively meeting with multiple Virginia clients and suppliers. We stay ahead of the supply curve by preparing our vendor network to respond to current and future demand.</p>

Talent Management			
	Requirements	A	B
			<p>We are highly confident in the ability of our future vendor network to respond to all Virginia requisitions across the life of the contract.</p> <p>Much of the management of supply and demand is described in our Quarterly Reports. Please see Attachment B: Performance Reports for examples of our recommendations.</p>
4.	Is your service able to support of variety of diverse customers? If yes, explain how you can provide services to diverse set of customers and meet each customer's unique requirements (approval, billing, etc.).	Y	<p>Over the last six years, CAI has engaged contractors across 83 agencies for the Commonwealth, both executive and non-executive. Of those, 29 are diverse, i.e., non-Executive agencies. We have filled 203 engagements for these diverse VA entities. Across all of our other MSP contracts, we have placed 456 contracted resources for 20 disparate agencies, ranging from institutions of higher education, to local quasi-government associations.</p> <p>Although the process framework of our solution is flexible, it still provides a strong core guideline for usage. With it, we are able to meet the variety of demands for agencies under the Governor, and all the other agencies and quasi-government entities not under the Governor. Each has its own financial systems, purchase order process, and approval chains. Once we meet with a new agency to understand and outline their full lifecycle process, we can match it to our standard process and conform to areas that differ, while maintaining consistency under our contract.</p> <p>Our current contract has 15-20% of our requisitions from agencies not under the Governor. These are the irregular requests, and we can and do customize our services to accommodate them.</p> <p>The data within Peoplefluent is segregated by agency which allows us to configure Peoplefluent specific to executive agencies such as VITA and VDOT or counties such as Arlington and Henrico.</p>
5.	Occasionally, the customer has need for highly specialized skill sets or personnel with special certifications that are not routinely available. Does your solution include fulfilling this need? If yes, describe the process you use to fill a request that for such specialized skill.	Y	<p>The MSP offering is set up to deliver any IT skill set that the state requires, and the industry provides technology and trained resources for delivery.</p> <p>The process is the same as described above in our response to Talent Management requirement 3 (page 48).</p> <p>We illustrate with a current example: COVA needs an SOA Architect</p>

Talent Management			
	Requirements	A	B
			<p>that must be a US citizen (most US citizens with these skills are not contingent). We will follow same process, i.e., enter the requisition and get a PO. However, our AM works closely with the agency and the vendor community to align potential resources in advance if possible. Our AM is able to connect with a known IBM-local partner, who had a local SOA resource available, and get that vendor reengaged in the program. The AM assists the vendor in renewing their insurance certification, coaches them through the invoicing and Peoplefluent time entry, resulting in their first start under the program.</p> <p>We can also release the requisition to all vendors at the same time to maximize response time. If the need is known in advance, we give vendors a heads-up so that they can start recruiting. Vendors in network submit candidates; CAI AMs screen and forward the best three to five candidates.</p> <p>This situation is a special exception, where we suggest allowing - with proper control - CAI to fill a requisition. Because CAI is a full service IT firm, we will be able to place one of our employees who is not contingent in the hard-to-find slot.</p>
6.	Does your solution provide a technical screen of candidates? If yes, please describe.	Y	<p>Our AMs conduct a phone interview with the top ranking candidates. He/she contacts the candidate to confirm specific contents on the résumé. This is the most critical step because our AMs, who all have a technical/consultative/IT staffing background, can use their experience and knowledge to critically evaluate a candidate's overall fit over the phone.</p> <p>When the AM conducts the screening, this score is one tool he or she uses. The AM uses his or her overall industry knowledge during a phone call with the candidate to validate the accuracy of the résumé against the requirement along with the candidate's responses to technical questions. In other words, our AMs filter out candidates and firms who overstate their qualifications while assessing a candidate's suitability for placement.</p>
7.	Do you ensure that only available candidates are submitted in response to a work request? If yes, please describe how	Y	<p>Vendors must own the responsibility of submitting appropriate candidates, i.e., available, with skills matching the requirements, and possessing experience that matches the job title. In theory, all candidates submitted into Peoplefluent should be acceptable</p>

Talent Management			
	Requirements	A	B
	you accomplish this.		<p>candidates. The CAI AM verbally screens each candidate forwarded to the agency, as part of an in-process requisition. Part of the AM validation screen is the candidate's interest level, skill match, and timing for availability, considering other opportunities they are currently interviewing for, and in some cases, the end date of their current engagement. If a candidate is no longer available, the vendor is directed to update the candidate's status in Peoplefluent, thus alerting everyone that the candidate will not be considered.</p>
8.	Do you have a procedure to address replacement coverage for no shows or cancellations? If yes, what procedures are in place to protect the customers' if/when this occurs?	Y	<p>We propose the same process we currently use in VA:</p> <p>"If a resource begins work for a particular agency, and the agency determines within the first weeks (five business days) that the resource does not have the skills or capabilities necessary to complete the job as requested in the original requisition, the agency may request that the resource be replaced immediately, and COVA shall not pay for the work conducted by the unacceptable resource. COVA shall also require that the replacement resource be provided at no charge for the first five days of work after replacing an inadequate resource."</p> <p>In addition, CAI has added tracking fields to the candidate detail screen for internal use, and CAI will provide additional reporting. We use these fields to track interview and assignment start behavior:</p> <ul style="list-style-type: none"> ■ Interview Requested But Candidate Declined? (CAI Use Only) ■ Interview Scheduled But Candidate Didn't Show? (CAI Use Only) ■ Offer Made But Candidate Declined? (CAI Use Only) ■ Offer Accepted But Candidate Doesn't Start Assignment? (CAI Use Only)
9.	Do you have a process to ensure that the stated skills of the resource match their actual capabilities? If yes, please explain the process.	Y	<p>There is an alarming trend of inflation of skills on résumés, particularly in VMS cities.</p> <p>Within our current process, we will work to combat this by increased sensitivity to the issue, increased screening, and by recording instances in the vendor's performance records. We propose for this new contract that we include a vendor performance score on accurate representation</p>

Talent Management			
	Requirements	A	B
			<p>of candidates.</p> <p>However, a more proactive approach is to involve the candidate in the process and their job destiny. We propose to alter the Right to Represent form to add a sentence that states: "The information presented in my résumé is an accurate representation of my professional experience."</p>
10	Does your solution include methods to ensure that the resources proposed in a SOW are available and able to complete the project?	Y	<p>For this new contract, CAI proposes enhancing the SOW process to provide additional focus on project staffing. Currently, as part of agency negotiation with a chosen provider, the agency reviews resource planning.</p> <p>We propose that our AM joins the kick-off meeting or a separate onboarding session at the project startup for the SOW. This onboarding step will outline the resource plan for each SOW. We will plan for timely and complete background checks, SOW milestone and contract term review, and validating the resource plan.</p>

Figure 9: Responses to Talent Management

E. E. Subcontractor Management

Subcontractor Management			
	Requirements	A	B
1.	Does your solution provide subcontractors who will perform the work for the Commonwealth? If yes, please explain whether these subcontractors will be provided from your existing subcontractors utilized in other accounts or whether they will be solicited specifically for the Commonwealth.	Y	<p>CAI has large existing subcontractor base that is currently providing all engagement and SOW project services to COVA. We propose to continue to use our existing subcontractor network, making any modifications to the Tiering structure as determined during Implementation. CAI's solution promotes fair competition amongst small, minority, and local businesses. In fact, the current ITIL vendor network includes approximately 49% Virginia-based firms.</p> <p>Our network has been developed to suit the needs of Virginia, and while some of the suppliers may be in our other MSP vendor networks, requisitions go out only to those suppliers qualified for the COVA network.</p>
2.	The selected supplier is expected to act as the prime contractor of all IT staff augmentation and SOW services for CoVA. All resulting orders, SOW's, and payments would be between the Commonwealth and the MSP. Do you agree to serve as the prime contractor in your solution and be accountable for the performance of your subcontractors?	Y	CAI accepts this stipulation.
3.	VITA has defined a set of minimum terms and conditions that need to be included in any agreement with your subcontractors. Do your subcontractor agreements ensure that the subcontractors will comply with VITA's minimum terms and conditions?	Y	<p>All of the enrolled suppliers contracted to provide Staff Augmentation services or SOW Services will be contractually bound to the minimum standards detailed by VITA. For instance, each of the suppliers will agree to use eVerify to guarantee work eligibility for each of their engaged resources, and they will all agree to carry errors and omission insurance for the term of their service in the Virginia Supplier network.</p> <p>CAI will publish a supplier-facing web portal to serve as a repository for all of the enrollment materials and sub-agreements. Through the term of the contract the web portal will be updated to include addendums to the sb-agreements or changes to the MSA, for instance.</p> <p>CAI proposes modifications to the Staff Augmentation subcontractor agreement provided with this RFP. They are detailed in the Contracts section, as directed. We also propose continuing to use the current SOW Subcontractor Agreement, with small modifications.</p>

Subcontractor Management			
	Requirements	A	B
			It, too, is provided in full in the Contracts section.
4.	Do you have the ability to manage subcontractor relationships? Describe your experiencing managing staffing subcontractors, including how you manage subcontractors to meet the business needs of the users (understanding the requisitions or SOR's, pricing, efficiently on-boarding, etc.)	Y	<p>CAI has managed subcontractor relationships for 20+ years, and since 2004 in the MSP realm.</p> <p>We manage our subcontractors legally through subcontractor agreements (SAs). We utilize unique SAs for each MSP contract.</p> <p>We also provide oversight and mentoring to our subcontractors to assist them in their overall management, e.g., best practices for recruiting and presenting candidates. We hold routine vendor/supplier training events that provide, among other constructs:</p> <ul style="list-style-type: none"> ■ Best practices for recruiting ■ Upcoming needs from the Commonwealth ■ Use of the Peoplefluent VMS tool ■ Process reviews ■ Changes in pricing, if applicable ■ Onboarding requirements and techniques <p>We send out weekly requirement notification on the status of open requisitions.</p> <p>Because of the deep local experience of our Account Management team augmented by long standing professional careers in IT and Staffing, our AMs truly mentor and coach new vendors, new companies, and companies that have no COVA or MSP/VMS experience how to be successful within this model.</p>
5.	Do you have a standard approach to subcontractor selection? If yes, please describe how do you select the optimal mix of subcontractors? Explain the tactics would you suggest in assessing the optimal mix of subcontractors on an on-going basis.	Y	<p>As always, we welcome Commonwealth direction and input on vendor selection and tiering decisions for both staff augmentation and for SOW-based requisitions.</p> <p>You will find that our vendor network model provides vendors with an equal opportunity to compete and to grow as a business. This encourages small and minority business participation by lowering the barriers to entry.</p> <p>Our experience is that, once CAI is awarded an MSP contract, vendors</p>

Subcontractor Management			
	Requirements	A	B
			<p>contact us to be part of our network. Additionally, we hold vendor meetings during Implementation and throughout the contract to attract and support new vendors in the network.</p> <p>In Virginia, we will continue to utilize the existing network of vendors that is in place.</p> <p>We offer the preferred MSP model for Vendors. CAI's vendors have experience working in many other "MSP" models with other commercial companies. Most often we hear that our vendors have minimal success in these other models due to lack of feedback, communications, or partnership with the managing firm. CAI views our vendor network as critical business partners and we maintain an open line of communication with them. We provide weekly feedback on open requisitions. As a result of this partnering approach, CAI's vendors demonstrate a real commitment to the program which translates into speed, accuracy, and quality service back to the Commonwealth.</p> <p>CAI's model includes a proactive vendor outreach program that:</p> <ul style="list-style-type: none"> ■ Supports local, regional, statewide, or national candidates in order to meet customer demands while motivating vendors to place a high priority on the Commonwealth's business ■ Is built on experience mentoring the vendor network on how to change their business models to be most effective under the contract <p>Our vendor enrollment criteria for Staff Augmentation vendors is outlined on the ITCL program's public portal (http://smsa.compaid.com). Checklists and agreements for enrollment are listed so that vendors can preview the information to determine if they can meet the minimum guidelines for enrollment. We have included this document for your reference in Attachment A: Process Flows.</p> <p>CAI limits the enrollment criteria for vendors for SOW services to meet pre-defined guidelines of companies capable of providing fixed-price project deliverables. We conduct an in-depth evaluation of vendors to determine which firms can be relied upon to successfully complete</p>

Subcontractor Management			
	Requirements	A	B
			<p>SOW projects through the contract, and for the Commonwealth.</p> <p>We plan to begin the new contract utilizing the approved SOW firms that are currently identified and in place. At least once yearly, we will hold an open enrollment period, where a questionnaire will be sent to vendors who have communicated an interest in becoming an SOW vendor or who we've identified will be a good partner for the program. CAI developed a standardized questionnaire that focused on the following four key areas:</p> <ul style="list-style-type: none"> ■ Company Information such as years in business, certifications, D&B score, etc. ■ Financial Information based on financial statements and legal actions ■ Personnel Details such as number of staff, placements, training programs, turnover, experience in deliverables-based work, etc. ■ Firm Experience in the following 15 specialty areas: <ul style="list-style-type: none"> Application Development Business Continuity Planning Business Process Re-engineering Enterprise Content Mgmt. Information Security IT Strategic Planning Project Management Radio Engineering Services Back Office Solutions Business Intelligence Enterprise Architecture GIS IT Infrastructure IV&V Public Safety Communications
6.	Do you have an established process for tracking and measuring subcontractor performance in submitting and placing quality candidates and providing effective SOW solutions? If yes, please describe the process and include a list of key performance indicators currently used for measuring subcontractor performance in your customers' contingent workforce	Y	<p>In addition to tracking vendor credentials in the VMS tool, we use the underlying metrics from our VMS tool to show vendor responsiveness as a measure of performance. When meeting with vendors one-on-one, we show them their own "dashboard," using it to discuss their performance. A sample dashboard with simulated data appears in Figure 10.</p>

Subcontractor Management																																																																																																								
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	programs.			<table><tr><th colspan="5">VENDOR DASHBOARD</th></tr><tr><td>XYZ Company</td><td></td><td></td><td>Grand Total Engaged: 3</td><td>3.85</td></tr><tr><td></td><td></td><td></td><td>Tier1 Engaged: 3</td><td>100.00</td></tr><tr><td></td><td></td><td></td><td>Tier2 Engaged: 0</td><td>0.00</td></tr><tr><td></td><td></td><td></td><td>Tier3 Engaged: 0</td><td>0.00</td></tr><tr><td></td><td></td><td></td><td>Tier4 Engaged: 0</td><td>0.00</td></tr><tr><td>Total Requirements</td><td>43</td><td></td><td>Grand Total Submitted: 78</td><td></td></tr><tr><td>Total Engagements</td><td>3</td><td></td><td>Grand Total Unique Submittals: 65</td><td>83.33</td></tr><tr><td>Total DBE Engagements</td><td>3</td><td>100.00%</td><td>Grand Total Submitted Round 1: 74</td><td>94.87</td></tr><tr><td></td><td></td><td></td><td>Grand Total Submitted Day 1: 70</td><td>89.74</td></tr><tr><td></td><td></td><td></td><td>Grand Total Submitted Day 2: 3</td><td>3.85</td></tr><tr><td></td><td></td><td></td><td>Grand Total Submitted Day 3: 1</td><td>1.28</td></tr><tr><td></td><td></td><td></td><td>Grand Total Forwarded: 15</td><td>19.23</td></tr><tr><td></td><td></td><td></td><td>Tier1 Forwarded: 15</td><td>100.00</td></tr><tr><td></td><td></td><td></td><td>Tier2 Forwarded: 0</td><td>0.00</td></tr><tr><td></td><td></td><td></td><td>Tier3 Forwarded: 0</td><td>0.00</td></tr><tr><td></td><td></td><td></td><td>Tier4 Forwarded: 0</td><td>0.00</td></tr><tr><td></td><td></td><td></td><td>Avg Score: 107.66</td><td></td></tr><tr><td></td><td></td><td></td><td>Grand Total Candidates < 100%: 14</td><td>17.95</td></tr><tr><td></td><td></td><td></td><td>Grand Total Candidates >= 100%: 64</td><td>82.05</td></tr></table>	VENDOR DASHBOARD					XYZ Company			Grand Total Engaged: 3	3.85				Tier1 Engaged: 3	100.00				Tier2 Engaged: 0	0.00				Tier3 Engaged: 0	0.00				Tier4 Engaged: 0	0.00	Total Requirements	43		Grand Total Submitted: 78		Total Engagements	3		Grand Total Unique Submittals: 65	83.33	Total DBE Engagements	3	100.00%	Grand Total Submitted Round 1: 74	94.87				Grand Total Submitted Day 1: 70	89.74				Grand Total Submitted Day 2: 3	3.85				Grand Total Submitted Day 3: 1	1.28				Grand Total Forwarded: 15	19.23				Tier1 Forwarded: 15	100.00				Tier2 Forwarded: 0	0.00				Tier3 Forwarded: 0	0.00				Tier4 Forwarded: 0	0.00				Avg Score: 107.66					Grand Total Candidates < 100%: 14	17.95				Grand Total Candidates >= 100%: 64	82.05
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			<p>Figure 10: Sample Vendor Dashboard</p> <p>CAI provides transparency into the details of contract performance in our quarterly reviews and by publishing results like these on the public portal. There are several standard reports and processes we have created to give us the data needed to manage vendor activity:</p> <ul style="list-style-type: none">■ Performance Survey: For Staff Augmentation we send out a survey at periodic intervals for manager feedback on contractor performance. For SOWs we send out a performance survey at the end of the project to assess overall satisfaction of the vendor and the success of the project.■ Staff Augmentation Vendor Performance Dashboard: This report is part of our Quarterly Review, and is also posted on our Program Portal for public access. Important data to view as part of this report is vendor activity in the areas of total submission count, engagement count, total																																																																																																					

Subcontractor Management			
	Requirements	A	B
			<p>candidates forwarded to manager for review, and four-day window submission count. If we determine that re-Tiering is something that will benefit the program, this existing report can be modified to capture the data needed for performance review and Tiering review.</p> <p>■ Bi-Yearly SOW Review: We hold enrollment opportunities periodically for SOW vendors (i.e., once yearly) but review the current state of vendor coverage bi-yearly. This is an internal review where we ensure that all SOWs released had the coverage goal of submittals, and that we have enough vendors for each category and the appropriate vendors for each category.</p>
7.	<p>Do you have an established process for communicating feedback to subcontractors on their ability to meet the customer's business requirements? If yes, please explain the process and how it impacts the program.</p>	Y	<p>As described above, we develop a "dashboard" of performance metrics for each subcontractor, which we share with them on a periodic or as-needed basis.</p> <p>We find that this feedback is enlightening to new vendors, and it is the basis of our supplier mentoring. We use it to demonstrate areas for improvement and offer best practices for correcting deficiencies.</p> <p>We hold periodic vendor training, where we discuss best practices for vendor success and discuss key elements of COVA culture to promote successful activity.</p> <p>Our Account management team is very "hands-on" in working with our vendors to provide specific feedback on submittals, resources, future anticipated openings, and performance. Our team accepts invitations weekly with vendors, either in person or via conference, to assist them in delivery needs for the Program.</p> <p>We also provide these metrics to the Commonwealth in our Quarterly Reports, providing full transparency into the vendor/supplier base and their responsiveness.</p> <p>Comments can be added to the candidate details page within Peoplefluent that is viewable by the vendor. If a candidate is rejected after submission, the CAI AM or Agency Hiring Manager can add comments detailing the specific reasons for the rejection. In addition, candidate evaluations can be made viewable to the vendors. All of</p>

Subcontractor Management			
	Requirements	A	B
			these options provide direct feedback to the vendors on their candidate submittals.
8.	Does your solution include safeguards to insure impartiality when recruiting and referring resources? If yes, please describe.	Y	<p>Within Peoplefluent, the vendor/supplier is not viewable when the candidates are forwarded to the agency; only an indicator of SWaM vendor is visible. This is a configurable option which can be modified if the Commonwealth would desire to change direction on this approach.</p> <p>Vendors are instructed to not place résumés on their own letterhead or template; we provide a neutral CAI letterhead format for all vendors to use.</p> <p>We maintain a no-contact program. That is, vendors will not pass résumés to managers directly. All activity will come through the MSP program to be considered an In-Process Requisition.</p> <p>We give as much time as possible to the vendors to ensure that we have the best candidates possible within SLA. Then we rank and score the candidates using Peoplefluent. We screen and interview the top candidates. In doing so, we capture interview/screening notes that can be seen; this promotes transparency to the screen process. The outcomes of our process are:</p> <ul style="list-style-type: none"> ■ Impartiality ■ Transparency
9.	Do you have a range of subcontractors are you able to effectively manage within a customer program? Please explain the range, specify the highest number of subcontractors currently engaged for a single customer and describe any constraints.	Y	<p>CAI's MSP Program is staffed and available to meet the Commonwealth's needs for subcontractor management. Currently we are managing over 400 vendors, at a program level, within the VA ITCL Program. Virginia's MSP Program is the largest subcontractor network that we currently have in place, under one program. However at a practice level, our MSP Services Organization is managing over 800 subcontractors across our MSP Programs. We have the ability to scale up or down from our current state of support.</p> <p>We would like the opportunity to discuss with the state how to most effectively manage very large and growing open vendor network programs. CAI is also open to managing a smaller network of vendors and building a vendor performance management program around the network to include tiering and performance metrics. Depending on the</p>

Subcontractor Management			
	Requirements	A	B
			size of the network, our Performance Management capabilities will differ.
10	Do you have a process to address when a resource "job shops" between subcontractors before their assignment is completed? If yes, please explain the communications plan to alert the customer and what actions would be taken to prevent a disruption of service.	Y	<p>In our solution, this visibility and control are provided by the MSP, CAI. We include safeguards (data captured, checklists, flags) so that we do not submit a candidate, or approve a candidate who is moving between agencies without agency/manager approval on both ends.</p> <p>If we find that a resource is changing vendors, we take an advisory role; after all, we cannot mandate who a person works for. We do advise them, discussing non-compete clauses that may be in effect in their current contracts, and asking them to finish their current agreement. If we have knowledge that the resource is changing employers, we always make this known to the current vendor.</p>
11	Do you have a process to address the situation when you learn that a subcontractor is recruiting any other subcontractor's resources? If yes, please explain the process.	Y	<p>This type of predatory recruiting can be disruptive to service and the practice is strongly discouraged. We use the following process to discourage the practice of predatory recruiting.</p> <p>When an AM learns of the potential for a predatory situation, he or she contacts the engaged resource to gather details of the situation. The AM will tell the resource that CAI will contact their firm and ask for outreach to the employee. In the event the employee is simply hoping to "swap" employers, CAI counsels the employee as to the legal risk and tells him or her that CAI doesn't allow this activity. If the resource is having problems with his or her current employer, the AM gathers details of those problems. For instance, a resource may have a payment delay or a contract dispute with the current employer. The AM can seek guidance from CAI Human resources, legal, or immigration attorneys for advice on resolution.</p> <p>The AM then contacts the representing firm and requests outreach to the resource which enables the firm resolve the situation with their employee. The AM will also request that CAI be kept apprised.</p> <p>In most instances this mediation resolves the issue and maintains service for the engaged resources. In some instances, the situation is not resolved and CAI will need to intervene in greater depth. For those instances we propose program enhancements to include a performance tracking field in the vendor master file to record a history</p>

Subcontractor Management			
	Requirements	A	B
			<p>of predatory recruiting. We can then use this criteria in subcontractor performance reporting.</p> <p>In addition, a non-solicitation clause will be added to the sub-agreement that prohibits the hiring of resources performing service under the program.</p>
12	Does your solution reveal whether a resource is a W2 or 1099? Please describe.	Y	<p>This field is a required field for the vendor to complete when submitting a candidate. We track this information about resources. It is a field on the individual's detail screen. Because we capture this information, we are also able to report on it, if/when needed.</p>
13	Do you have a process to ensure continuity of operations in the event a subcontractor must be removed from the program for any reason? If yes, please explain the process.	Y	<p>In rare instances, a firm must be removed from the program. An example of a situation involved a mid-sized firm that closed operations overnight, apparently due to a criminal charge in the State of New York. This firm held engagements across several states. The CAI Account Management team contacted all employees to verify the situation and worked with each of them to locate new employers who will meet their needs from the standpoint of employment agreements. In some special situations, CAI became the employer. These situations were resolved with no disruption to state service in any of the affected programs. In the following months the CAI legal team worked with each resource to recoup any lost wages for their time of service.</p> <p>For these instances, CAI observes the issue escalation plan and relies on CAI legal counsel as well as immigration attorneys and Human Resources for legal, fair, and equitable resolutions that maintain service to the Commonwealth.</p>
14	Do you have a process to ensure continuity of operations in the event a subcontractor's resource must be removed from the program for any reason? If yes, please explain the process.	Y	<p>CAI accepts that at times, contractors must be removed from the program. CAI's AMs have experience in handling these situations. We like to learn about performance related issues as soon as possible so that we can work together on the best contingency plan. Through Peoplefluent, we release a performance survey to the hiring manager at 30 days after engagement begins, as a checkpoint to the contractor's performance. We also release performance surveys at end of engagements.</p> <p>Agencies are encouraged to call CAI as soon as they believe a contractor will need to be removed. We can determine if the need is</p>

Subcontractor Management			
	Requirements	A	B
			immediate, and work out timing of notification, badge/equipment return, and agency permission shut down. If the need is immediate, we will discuss how critical the role is to the agency, if an existing resource can provide services, or if we need to backfill. We can determine how quickly the backfill needs to happen and can fulfill as a standard process or we can fulfill as an Urgent need. If the timing is not immediate, we can look for a replacement to bridge services prior to release of the current contractor.
15	Does your solution ensure that the resources which were originally committed to an SOW remain on the project and complete all deliverables? If yes, please explain.	No	<p>Unfortunately, CAI cannot control the movement of subcontractor resources.</p> <p>We recognize that this can be disruptive to a project. In this new contract, CAI pledges to increase focus on project resource planning. CAI will emphasize the importance of and reinforce commitment through participation in project kickoffs and reviews of resourcing plans.</p>

Figure 11: Responses to Subcontractor Management

F. F. Government Environment

Government Environment			
	Requirements	A	B
1.	Do you have experience providing MSP services in a Government environment? If, yes please explain.	Y	<p>CAI has been providing MSP services to state government on an enterprise-wide level since 2004. To date, we have eight state MSP accounts: PA, VA, NJ, ME, IA, OH, DE, and AR. Our experience affords our clients the following advantages:</p> <ul style="list-style-type: none"> ■ We have experience filling even the hardest-to-find combinations of skills and experience. To date, across all contracts, we have filled 16,287 requisitions. ■ We have experience managing, supporting, and working with suppliers. Across all contracts, our networks include 937 suppliers. ■ We are strongly committed to, understand, and manage to meet government's targeted business requirements. Since our first contract started in Pennsylvania, we have achieved aggressive targeted business requirements; we have processes and network participants in place that, together with our Account Management, make a positive impact on those segments of business within your state. ■ We have <i>government</i> experience in filling project based orders through the MSP process. CAI successfully developed and implemented your process for fulfilling Project Based Orders under our current IT Contingent Labor contract with COVA. Since its inception in the winter of 2010, we have filled 99 Project Based Orders for the Commonwealth. ■ Our solution includes a large vendor network. Not only does this afford us the ability to fill all requests within the SLA, it also promotes a fair, vendor-neutral environment in which small businesses can effectively compete against very large suppliers, reducing the barriers to entry. We also have experience in qualifying vendors for project-based work, in order to maintain a network of strong suppliers skilled in delivering on deliverables-based SOWs.

Government Environment			
	Requirements	A	B
			<p>A large vendor network, and a network where we can add vendors, is important within VITA in the event that managers request a vendor perform work that is emerging in technology or is very specific to the nature of their agency, or is a legacy product.</p> <ul style="list-style-type: none"> ■ We have seasoned, dedicated AMs who have years of experience within the government environment. Not only are they capable of reviewing requisitions, screening candidates, and managing on- and offboarding, but they are themselves IT professionals who understand the special requirements and pressures of government service. ■ Our MSP Operations staff serves all our government clients, and no others. Therefore, they are intimately knowledgeable of invoicing and reporting requirements in the government environment. ■ We achieve our SLAs. All of our MSP contracts include SLAs, and our processes and methods are finely tuned to meet even the most aggressive of SLAs. Within State Government, having a consistent and achievable method to validate goals and performance levels is important when Programs are very public, and at times high profile. ■ Our proven implementation experts have participated in all of our statewide MSP implementations, again, with experience in government policies and procedures that are addressed during new contract implementations. We have experience implementing state policy efficiently and effectively. ■ Our VMS tool, Peoplefluent, is best-in-class, continually improved, and easy to use. The application is easily configured to capture data surrounding important legislative measures, such as ARRA reporting. We are able to configure the system so resources are logging time against specific funding sources which is critical when an

Government Environment			
	Requirements	A	B
			agency needs to track their federal funding or grant monies.
2.	Do you have an established process to respond to legislative, Governor's office, and oversight groups such as auditors and media? If yes, please describe the process. If you have a staff member assigned to such inquiries detail their experience responding to such inquiries.	Y	<p>In our eight years of experience in providing MSP services to statewide enterprise, we have had occasions where we were asked to respond to legislative, Governor's office, or other government oversight groups.</p> <p>Our Program Executive Account Manager (EAM) responds immediately to these requests. The request is escalated to our MSP Director, Ellen Sigl, and either she or our EAM meets with the client. In most cases, they craft responses or speak on behalf of the client. In fact, part of the EAM's employment responsibility to CAI is committing to media responses, both in behavior and speech.</p> <p>As you can see by our organization chart (see Section 6: CAI Profile), our MSP practice is aligned within our Government Services Practice. This affords our MSP management the collective experience of these practitioners in supporting government entities. Our operations management and HR groups are also deeply familiar with government requests on a daily basis.</p> <p>Examples: Cindy Sullivan, our Program Executive Account Manager, was contacted by the Richmond Times Dispatch for comment during the Program Rate Reduction Request in 2009. We did not respond, upon direction. In another instance, Cindy Sullivan contributed, as requested, in the IT Staff Augmentation Operational Review Committee Report that was sponsored by DHRM in 2008.</p>
3.	Does your solution support the needs of a large number of stakeholders? If yes, please describe.	Y	Under our current MSP contract with COVA, we have supported the needs of 83 unique agencies and entities. Across all of our other MSP contracts, we support 237 unique agencies and entities. When we look across our COVA customer base, we see executive, higher education, and non-executive clients with varying technology needs, varying locality support, as well as security variances. Even across executive branch agencies, we encounter the same support needs.
4.	Does your solution support the Commonwealth's small, woman-owned and minority-owned (SWaM) initiative? If yes, please describe your efforts to support	Y	Yes, since the inception of our original SMSA contract with VITA, we have supported the Commonwealth's SWaM initiatives. Our record (Figure 12) speaks for itself.

Government Environment																			
	Requirements	A	B																
	SWaM and disabled veteran businesses.		<div><h3>SWaM Utilization</h3><table><caption>SWaM Utilization Data (Estimated)</caption><thead><tr><th>Year</th><th>Utilization (%)</th></tr></thead><tbody><tr><td>2006</td><td>70.00</td></tr><tr><td>2007</td><td>75.00</td></tr><tr><td>2008</td><td>75.00</td></tr><tr><td>2009</td><td>70.00</td></tr><tr><td>2010</td><td>50.00</td></tr><tr><td>2011</td><td>60.00</td></tr><tr><td>2012</td><td>65.00</td></tr></tbody></table><p>Figure 12: SWaM Content in Virginia</p><p>or this new contract, we have the ability to include Disabled Veteran-owned businesses, as a certification check, and preferred vendor signiation if so desired by VITA.</p></div>	Year	Utilization (%)	2006	70.00	2007	75.00	2008	75.00	2009	70.00	2010	50.00	2011	60.00	2012	65.00
Year	Utilization (%)																		
2006	70.00																		
2007	75.00																		
2008	75.00																		
2009	70.00																		
2010	50.00																		
2011	60.00																		
2012	65.00																		
5.	Does your solution support the needs of government to be fair, open, competitive and transparent? If yes, please describe.	Y	<p>ur processes and methods clearly support government’s needs for:</p> <p>Fair and Competitive</p> <p>Our vendor network promotes fair competition. It allows small businesses to compete on even ground with large firms that have greater resources.</p> <p>Our vendors all work under the same pricing – which is readily available to them. This promotes competition on a different level – quality and responsiveness.</p> <p>And at the appropriate levels, our tool shields the vendor from the view of decision makers, so that placements are based on qualifications, skills, and experience – not the firm providing the resources.</p>																

Government Environment			
	Requirements	A	B
			<p>■ Open and Transparent</p> <p>CAI's commitment to capturing metrics and reporting performance with them opens all aspects of our ITCL contract to the government and its citizens. Additionally, we provide a public-facing portal for the contract that all participants - from resources to vendors, CAI, Virginia agencies, and VITA - can all access to see the legal contracts, pricing, processes, and contacts. We welcome requests for reports on any of the information contained within our purview.</p>
6.	Do you have experience supporting legislative changes that require immediate adjustments to the program? If yes, please describe.	Y	<p>In 2009 we supported a program-wide rate reduction in response to a request from the Governor's office. The Commonwealth was able to see immediate savings when CAI accepted the 10 percent discount request from the Chief of Staff, and was able to offer rapid savings that equated to over \$800,000 in the first six months after the discount went into effect.</p> <p>Over the years, the Governor's office has had other initiatives that CAI has supported, and made modifications to the program to support. Telework is supported under the program as approved by hiring managers, as is Kaine's Executive Order 33 to promote agency SWaM spend of a goal of 40%.</p> <p>CAI participated, as requested, in the IT Staff Augmentation Operational Review Committee Report that was sponsored by DHRM in 2008.</p>
7.	Will your solution support legislative changes that require immediate adjustments to the program?	Y	Yes, with proper implementation planning.

Figure 13: Responses to Government Environment

G. G. Account Management

Account Management			
	Requirements	A	B
1.	Does the account executive that would be responsible for CoVA's program have a minimum of 5 years of large account MSP experience? Please describe.	Y	Our Program Account Executive, Cindy Sullivan, has more than 16 years experience as an IT EAM, much of it in Virginia, and nearly five of them spent on the VITA ITCL account. Her résumé appears in Attachment E: Résumés .
2.	Would local Richmond area personnel be provided to manage the ITCL services throughout the life of the contract? If yes, please describe the staffing plan.	Y	<p>Our local account management team is dedicated solely to the VITA ITCL contract. While supported by our MSP Operations and senior management in Harrisburg, our account management team is located in Richmond now, and will continue to maintain the office under this new contract. They are:</p> <ul style="list-style-type: none"> ■ Cynthia Sullivan, Program Executive Account Manager ■ Patricia Bowler, Account Manager ■ Christy Butcher, Account Manager ■ Additional, To-Be-Hired local Account Manager <p>Administrative support is provided by Rebecca Newman who is part of the MSP Operations group in Harrisburg, PA.</p> <p>Their résumés appear in Attachment E: Résumés.</p>
3.	Will VITA have the ability to accept or reject the proposed senior account executive?	Y	As always, VITA has the option of meeting with, interviewing, and approving or rejecting any of our account management team.
4.	Will you agree to replace the local staff if VITA, in its reasonable judgment, determines that the individual is not fulfilling the job responsibilities?	Y	While we believe that VITA is satisfied with our local staff, we will defer to VITA's judgment should a performance issue arise regarding one of our local staff members.
5.	Do the senior account executive duties include:	Y	Cindy Sullivan is ultimately responsible for CAI's performance on this account, including:
5. a)	Ensuring placement of qualified resources that meet the needs of the requisition or Statement of Requirements,	Y	Placement of qualified resources to meet staff augmentation or SOW requirements,
5.	Serving as a key point of contact for VITA	Y	Serving as a the key point of contract for VITA and all other public

Account Management			
	Requirements	A	B
b)	and all other public bodies,		entities,
5. c)	Ensuring a high quality level of service,	Y	Managing to meet and exceed our aggressive service levels that lead to high quality service,
5. d)	Interfacing as an issue escalation catalyst, resolving problems and proactively,	Y	Acting proactively as liaison and intermediary in issue escalation and resolution,
5. e)	Addressing cost savings and optimization opportunities across CoVA,	Y	Continually looking to improve service and reduce costs to the Commonwealth,
5. f)	Deciding on changes to program and policies to ensure contract services remain effective and efficient.	Y	And managing the program policies and procedures for effectiveness, efficiency, and continual improvement.
6.	Are you providing similar services to other clients in Richmond and/or other areas in Virginia? If yes, how will you ensure CoVA has access to the best candidates in these areas?	N	<p>VITA is our primary client in Virginia; and we have no other MSP accounts in Virginia. We provide staff augmentation services to World Bank on a smaller scale, and that account is managed outside the Government Services practice, and not by the VA ITCL account team.</p> <p>We have a dedicated account management team who focuses only on this contract, and will continue to do so. They act daily to ensure that agency needs are fulfilled. The vendor network that is assembled for the VA ITCL contract is also program-centric to support just this contract, with their emphasis on VA needs.</p>
7.	Does your account team receive training to understand the needs of CoVA's specific culture, business requirements and relationships?	Y	<p>CAI provides new Account Manager training to any AMs joining our MSP teams. We conduct weekly team meetings in which informal and formal knowledge transfer takes place. Each AM meets one-on-one with the Program Executive Account Manager; these meetings are designed to bolster the AM's understanding of business requirements, COVA requirements, contract review, and offer opportunities for improving service.</p> <p>Inherent in the fact that we have a team dedicated to working solely on this contract is our team's ability to become intimately familiar with COVA needs.</p>
8.	Do you measure your account team's performance? If so please describe the methods used.	Y	The contract SLAs are how we measure CAI's performance. In other words, the performance of our Account Management Team is directly tied to the SLA and business objectives, not to revenue or profit.

Account Management			
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			<p>Hence we maintain very specific metrics on the AMs and their effect on the SLA components affected by their work. We also have manager-specific and overall team metrics on the results of requisitions, i.e., terminations, resignations, etc. These are part of the account "Dashboard," which presents the various metrics on each person and on the total account. Reviewing the metrics on a monthly basis enables us to focus attention, where needed, on any issues relating to the team's performance.</p> <p>Finally, we conduct electronic surveys throughout the life of the contract. We propose to do them annually. Our account managers are measured on:</p> <ul style="list-style-type: none"> ■ Knowledge of Staff Augmentation Policies and Procedures ■ Understanding of Technical Environment ■ Effectiveness in Properly Categorizing Job Descriptions ■ Accessibility and Responsiveness to Calls and Emails ■ Submitting Qualified Candidates to Job Requisition(s) ■ Overall Account Manager Performance
9.	Do you keep customers informed of industry direction and trends? If yes, please describe how you will keep VITA informed.	Y	<p>CAI conducts Program Quarterly Review Meetings to our customer in which we present and discuss industry trends. CAI also:</p> <ul style="list-style-type: none"> ■ Attends NASCIO ■ Attends local events like COVITS, Richmond Technology Council events, DMBE events ■ Shares their Deep IT industry understanding of Richmond, VA climate ■ Meets weekly with vendors, IT COVA managers, candidates, and stays current with IT happenings ■ Reviews ERI data twice annually and compares the results to the current wage rate data that is the core of the rate card ■ Shares Information learned from CAI's other state MSP

Account Management			
	Requirements	A	B
			<p>Programs</p> <p>A copy of a recent Quarterly Report is included in Attachment B: Performance Reports.</p>
10	Does your solution provide ongoing customer communication? If yes, please describe the process and frequency.	Y	<p>Our Program Executive Account Manager spends a day each week in the VITA office. This offers opportunity for communication between your program management and ours. In addition, all of our AMs are available in person, via email, or by phone to respond to customer inquiries. This is one of the primary reasons for maintaining our local AM team. We also have scheduled Quarterly Reviews, as well as ad-hoc calls/meetings where VITA and CAI discuss current topics, issues to resolve, and pending initiatives.</p> <p>Communication to the vendor community is also critical. A weekly requirement status update is sent via Peoplefluent to all vendors providing details on the open requirements as well as upcoming requirements. This allows the vendors the opportunity to change the focus of their efforts based on these updates.</p>
11	Does your solution offer training and/or coaching to customers? If yes, please explain what is provided.	Y	<p>Our solution offers training and coaching to Virginia customers and vendors. As part of implementation, and periodically throughout the year, CAI offers training, either in-class or via webinar, on the use of the contract and on the VMS tool.</p> <p>Our AMs and Help Desk personnel are also available to provide informal one-on-one training to customers and vendors.</p> <p>We also offer vendor sessions to enlighten their staff on the use of the contract and VMS tool.</p> <p>For formal training, we develop, maintain, and provide user guides, customized for the VITA contract.</p>
12	Does your solution include ensuring that customers have effectively defined their requirements and deliverables in their SOR's? If so, describe how this is accomplished.	Y	<p>Our AMs meet with Virginia customers to discuss their project needs regularly - both projects that are active and engaged and new projects that are about to be bid. We often spend a great deal of time assisting the agency upfront with completion of the SOR. The goal is to use the SOR template to capture information as thoroughly as possible, to provide vendors enough info to be able to provide a fixed price bid.</p> <p>With VITA's assistance, CAI has created an SOR template that</p>

Account Management			
	Requirements	A	B
			<p>agencies use as a starting point to use the SOW program. This template is populated, by the agency, with details of their project need. The template is then sent to the CAI AM for review and edit. In most instances, the CAI AM assists the agency at this point, clearly defining aspects of their project. The goal is to have a clearly defined SOR so that once released, vendors can easily understand the project need and respond with a clear solution and fixed pricing. CAI hires AMs that are tenured in professional business skills and knowledgeable of general information technologies and IT service delivery. Our AMs that handle the SOW program have additional training in this line of business. Our AMs can assist in asking project-centric questions that will allow the agency to gather and document additional information that may have been omitted.</p> <p>Since CAI is an IT Services Company, we have a secondary offering available to VITA. Not included with our standard MSP offering, and in addition to the deep Account Management services we currently deliver, we will provide IT Business Analyst skills and personnel, IT Project Managers, and Architects to assist agencies define requirements for their upcoming projects. These services are typically performed through engagements in the Staff Augmentation program at the request of the agency and they may be a full time engagement.</p> <p>For more on this value-add, please see our response to K.1 beginning on page 103.</p>
13	Do you have a plan to manage turnover in the account team? If yes, please describe.	Y	<p>In the event that an account manager or administrator leaves the dedicated team, our shared service model of MSP practice is employed immediately to ensure limited to no change in service levels. We have 'virtual' account managers whose services are shared among our MSP clients to accommodate the peaks and valleys inherent in this industry. We will, in this case, utilize these account managers until the local position will be backfilled.</p> <p>In the event an AM exits the team unexpectedly, the EAM will step into the role, with the support of the virtual account team, to fill the gap until a replacement is hired and trained. In the event the EAM exits the team unexpectedly, the MSP Director or another EAM from another state MSP Program will fill the role until a replacement is identified.</p>

Account Management			
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			<p>The CAI EAM and our MSP Director interview candidates frequently, and keep an ongoing pipeline of desirable AM local candidate possibilities. This is useful for planned changeover, or immediate hiring needs. Our EAM has deep local expertise and knows the talented resources in the local area, and is consistently scanning the marketplace for possible team fits.</p> <p>CAI does maintain a Succession Plan for critical positions. We will enact that plan should the Program EAM position be open.</p>
14	Does your solution include outreach and marketing support? If yes, please explain.	Y	<p>Vendor Outreach</p> <p>CAI has an open door policy for suppliers; our network is currently open to all who meet minimum business qualifications. This is not a matter of opening the door and waiting for them to come, however. We actively pursue vendors across all of our MSP contracts, encourage them to enroll in more than one state, and help them leverage resources across the “global” supply chain.</p> <p>As an example, we have had to actively recruit engineering firms as suppliers for the emerging CADD/GIS positions as well as firms who can provide SOA expertise.</p> <p>Marketing Support</p> <p>CAI has also provided support for the marketing of the MSP services. We have conducted customer meetings for government entities other than agencies under the Governor’s control to demonstrate the advantages of utilizing the contract. We have provided collateral for VITA and other clients to use in communicating and marketing the MSP contracts. CAI will continue to provide these services as part of our overall Account Management.</p> <p>As part of both vendor outreach and marketing support, CAI Account Management attends and supports many events, such as COVITS, minority business events for DMBE, the local Richmond technology council, Richtech, and state level technology conferences. We ensure availability to localities to provide consultation in using the contract, such as Chesterfield County, the City of Richmond, and City of Suffolk.</p>
15	Do you have a defined escalation path for	Y	The COVA is seeking an MSP vendor to manage all business and HR

Account Management		
Requirements	A	B
<p>customers to escalate issues and problems? If yes, please explain.</p>		<p>issues associated with IT staff augmentation, and we understand our role in resolving all issues with minimal need for direct Virginia involvement. One of our primary objectives in managing the contract is thus to prevent issues from arising by intercepting them before they occur, or to plan mitigation to minimize their impact. Nonetheless, performance, personnel, and other issues related to contract labor can and do arise. When issues impact the performance of a selected candidate, CAI's Program EAM works with all parties to resolve the issue with as little impact on the agency as possible.</p> <p>This narrative describes our escalation plan for the contract. CAI participants include the AM assigned to the agency, our Program EAM, and his/her management. Other participants in issue resolution are the MSP Operations team, including the MSP Help Desk. Our entire team is available to VITA for issue resolution at any time.</p> <p>Background</p> <p>CAI has gained extensive and in-depth experience administering MSP contracts in multiple states over the past eight years, and we leverage our lessons learned across all accounts. Our extended management team is in weekly communication via teleconference, enabling all team members to share any unusual issues that occur related to staffing, e.g., co-employment, legal, performance, or other HR issues. Many of these occur fully in the background, i.e., without state involvement. When performance issues require us to remove an individual, we coordinate with his/her employer as well as the agency to minimize the drama associated with staff removal. We occasionally intervene between individuals and their employers such as cases where the vendor is late making payroll. The reality of managing a supply chain of labor is that human beings are a special type of "commodity," requiring a different type of management than printers, paper, or office supplies. Our objective in resolving issues is to minimize disruption to the agencies involved, thus allowing them to focus their attention on tasks related to the mission of their organization.</p> <p>We currently process three types of issues, described below. For each type, the narrative describes the participants, CAI (and other) involvement, and how we record and report resolution. We also</p>

Account Management																																							
	Requirements	A	B																																				
			<p>analyze trends in these types of issues as part of quality improvement and implement process changes where appropriate.</p> <p>Issue Escalation Plan</p> <p>The escalation process varies depending on the user and the type of issue. For any issues associated with the VMS tool itself, i.e., software-specific issues, the user starts with the MSP Help Desk, either via telephone or email. For this kind of issue, users include State and vendor management, as well as individual contract staff who are working onsite at agency offices.</p> <p>For issues unrelated to the software, we have defined separate escalation paths for Virginia users and for vendor suppliers; this is due to the nature of the business model. For issues related to a requisition or to the performance of the individual contract resource, the Virginia Hiring Manager normally contacts his/her designated AM via telephone or email.</p> <p>We escalate unusual issues to the Commonwealth at the discretion of the CAI Program EAM and CAI Executive Sponsor. Figure 14 shows the escalation path for each type of issue.</p> <table> <tr> <th></th><th>AGENT</th><th>TASK/RESOLUTION</th><th>NOTIFICATION</th></tr> <tr> <td colspan="4">SOFTWARE ISSUES</td></tr> <tr> <td>1</td><td>MSP Help Desk</td><td>Provide explanation on the phone or by email.</td><td>Verbally or via email.</td></tr> <tr> <td>2</td><td>MSP Operations Manager</td><td>Review issue, explain resolution to Help Desk.</td><td>Normally verbally; via print if updating process documentation.</td></tr> <tr> <td>3</td><td>Peoplefluent VMS Help Desk</td><td>Research/resolve issue, explain to Operations Manager.</td><td>Email and/or telephone.</td></tr> <tr> <td colspan="4">AGENCY ISSUES</td></tr> <tr> <td>1</td><td>CAI Account Manager</td><td>Work with individual staff to resolve issues; remove/replace if necessary; review invoice.</td><td>Verbally or via email.</td></tr> <tr> <td>2</td><td>MSP Operations Manager</td><td>If labor- or billing-related, research and review data.</td><td>Email, normally with attachments. Verbally or via email, possibly</td></tr> <tr> <td>3</td><td>CAI Executive Account Manager</td><td>Discuss issue with all parties, possibly including MSP managers at other accounts for advice on similar issues.</td><td>including meeting in person; additional updates to process documentation if changes occur.</td></tr> </table>		AGENT	TASK/RESOLUTION	NOTIFICATION	SOFTWARE ISSUES				1	MSP Help Desk	Provide explanation on the phone or by email.	Verbally or via email.	2	MSP Operations Manager	Review issue, explain resolution to Help Desk.	Normally verbally; via print if updating process documentation.	3	Peoplefluent VMS Help Desk	Research/resolve issue, explain to Operations Manager.	Email and/or telephone.	AGENCY ISSUES				1	CAI Account Manager	Work with individual staff to resolve issues; remove/replace if necessary; review invoice.	Verbally or via email.	2	MSP Operations Manager	If labor- or billing-related, research and review data.	Email, normally with attachments. Verbally or via email, possibly	3	CAI Executive Account Manager	Discuss issue with all parties, possibly including MSP managers at other accounts for advice on similar issues.	including meeting in person; additional updates to process documentation if changes occur.
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Account Management							
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			4	CAI Executive Sponsor	Discuss issue with all parties, possibly including Executive sponsors at VITA.	Personal meeting with Virginia stakeholders.	
			VENDOR ISSUES				
			1	MSP Help Desk	Provide explanation by phone, email, fax, or U.S. mail.	Verbally or in print via email, fax, or U.S. mail.	
			2	CAI Account Manager	Review issue and discuss with vendor, if necessary.	Normally verbally; via print if updating process documentation.	
			3	CAI Executive Account Manager	Research issue and discuss with vendor, if appropriate.	Via email and/or telephone.	
			4	CAI Executive Sponsor	Discuss with staff; intervene with vendor if necessary.	Via email and/or telephone.	
			Figure 14: Issue Escalation Plan				
CAI will develop a web based issue form to comply with the above escalation process.							
Examples							
We have a proven track record in resolving issues effectively and quickly. Standard business issues are addressed in the following manner:							
<ul style="list-style-type: none">■ Invoice issues, for Finance, are resolved in two business days■ Operations requests, such as providing an ad-hoc report, are completed within two business days, but typically on the same day as the request■ Timesheet issues are resolved on the same business day■ Contractor performance issues are resolved by the AM on the same business day■ Double submittal disputes by a vendor are resolved on the same business day■ Questions from Hiring Managers are responded to within two to four hours■ For contractor claims not paid by vendor, the investigation							

Account Management			
	Requirements	A	B
			<p>begins within one business day and is resolved as quickly as possible</p> <ul style="list-style-type: none"> ■ Vendor payment issues are escalated to the EAM the same day and resolved within one to two business days ■ Contractor HR/Performance issue is escalated within one day ■ SOW Vendor Performance is resolved within one day ■ Any request from Supply Chain Management (SCM) or a COVA Executive receives immediate attention from the EAM <p>The following are actual examples of how we resolved issues. These examples demonstrate our real, live, hands-on experience in resolving a wide variety of issues facing an MSP:</p> <ul style="list-style-type: none"> ■ SCM requested an Operation Plan. The Executive AM and VITA worked together to identify items, tasks, and initiatives to be included in the plan for the upcoming fiscal year. Once the items were identified and the draft was complete, CAI's EAM escalated it to the MSP Director and Managing Director of State Government. Delivery of stated tasks were confirmed, and the EAM built a draft calendar with the delivery timeline, working with subject matter experts (HR, Operations, SOW team) to ensure a reasonable delivery schedule. A final draft was then presented to VITA for final review and approval. ■ Background Check Issues. Our CAI AM occasionally receives background checks from vendors with questionable items listed. She escalates the issue to the EAM. If needed, the EAM seeks a second opinion from CAI's HR team. A decision is made either that the contractor can or cannot be hired, and the AM alerts the vendor and the Agency Hiring Manager of the decision. This entire cycle is completed within one business day.

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16	Will you provide regularly scheduled contract review meetings? If yes, please describe the elements and issues that are included in these discussions.	Y	<p>■ Unsatisfactory SOW Deliverable. An Agency Manager may call with a complaint that the vendor has marked a deliverable complete, but the Manager is not satisfied with the work product. CAI's SOW AM works with the agency to discuss the problem, and then talks to the vendor. If the issue is large or requires mitigation, the issue is escalated to the EAM for advice and assistance. A plan is determined and the team moves forward to resolution. If the issue is alarming or cannot be resolved, CAI's MSP Practice management is notified of the risk, and they participate in finding a suitable resolution for the agency. CAI will continue to meet with the VITA and other program stakeholders on a quarterly basis, or upon request, onsite in Richmond. In these meetings we will review contract utilization, MSP performance metrics, industry best practices, performance of the supplier network, market trends, and other business and strategic issues that affect the contract. Through our Quarterly Report, we will present our analysis of contract issues, and any relevant practices from our other state clients. This is also a time to conduct a performance checkpoint and make recommendations for improvement.</p> <p>CAI will produce the quarterly report in the format of Microsoft PowerPoint slides, Business Objects reports, and/or a full narrative document. A sample of a recent Quarterly Report is supplied in Attachment B: Performance Reports.</p> <p>Representative topics of the quarterly report can include any of those listed in Figure 15.</p>
			<p style="text-align: center;">Contract Utilization</p> <p>Job/Levels/Skills Review most-requested titles across agency usage and evaluate how they align (or do not align) with Virginia strategy. For example, some agencies may utilize contractor staff primarily for programming, while others will utilize a variety of Senior level resources. Review the usage of the exception category to determine trends in usage.</p> <p>Named Resources If desired, we will support Virginia oversight of contract usage of named resources; over the life of the contract, we propose to evaluate its use to determine trends and present recommendations.</p>

Account Management																																		
	Requirements	A	B																															
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17	Does your solution include an annual planning and objective setting process? If so, please describe.	Y	CAI performs an annual planning session of the VA ITCL Program in January, to review and set team goals for the dedicated Program team. In July, CAI and VITA prepare an Operational Plan that builds a framework for items we'd like to accomplish and commit focus to in the new fiscal year. This Operational Plan is prepared by VITA's SCM manager and CAI's EAM.																															
18	Does your solution ensure customer satisfaction? If yes, please describe how	Y	The CAI account team reviews and analyzes the results of the three separate online surveys for trends and areas for improvement. These																															

Account Management			
	Requirements	A	B
	you measure the customer's satisfaction, and provide examples from other accounts.		<p>fall into three categories:</p> <ul style="list-style-type: none"> ■ Staff Augmentation <ul style="list-style-type: none"> ■ An online survey form is sent after the first month of an engagement. This survey provides information on early detection of issues with misplaced resources. ■ An online survey form is sent after the end of an engagement. This survey measures how well the resource performed, which is an indication of a good skills match, quality of work delivered, and customer satisfaction with the hiring process. ■ Annual Performance Survey <p>This survey is sent to Peoplefluent Agency users, to provide feedback on the overall program. Sample of past questions asked were on topics such as: how many résumés received is most beneficial, how many interviews desirable prior to making decision, days to receive résumés adequate (Round 1).</p> ■ SOW <p>A survey is sent to the agency at the end of the project engagement, once all billing is finalized, to receive feedback on the vendor performance, program feedback, and overall ease of use of the SOW program.</p> <p>CAI proposes adding a survey that will also go out to vendors to inquire about their experiences using the program, if the information received on the SOR matched the end project deliverable, and overall success in providing SOW services to the Commonwealth.</p> <p>All issues related to performance and client satisfaction are in turn reviewed, monitored, and reported as necessary.</p>

Figure 16: Responses to Account Management

H. H. Continuous Improvement and Risk Reduction

Continuous Improvement and Risk Reduction			
	Requirements	A	B
1.	Does your solution include analysis and recommendations of ways the Commonwealth can reduce independent contractor risks? If yes, please describe.	Y	<p>By using an MSP to manage the broad range of agency needs, supplier base, and contingent laborers, the state is taking a strong step in reducing independent contractor risks. By allowing all contractors to work through the program, and through CAI, the state is limiting Independent contractor risk.</p> <p>CAI has vendor qualifications that must be met prior to enrollment into our program. These qualifications include a W-9, subcontractor agreement, and insurance certification all adding layers of protection for engagement.</p> <p>With assistance from VITA, CAI can create additional language and communications to our vendor community on independent contractor compliancy issues and definitions. This Independent Compliance policy will be updated as industry and program changes occur.</p>
2.	Does your solution assist CoVA in identifying and quantifying cost savings? If yes, please explain.	Y	<p>During the Quarterly Business Review, CAI will meet with COVA stakeholders and review the purchasing trends within the program, the most current wage data built according to the methodology, the performance of the vendor networks including levels of candidate submissions, and SLAs. We'll also discuss the quality of service as it relates to the metrics, review agency feedback on the program, and assess the Account Management feedback on candidate quality. Each of these elements will be evaluated and discussed to make a judgment on the health of the program.</p> <p>Cost savings can be identified by examining enterprise-wide purchasing trends, and identifying patterns that will show the need for more specific job categories. Those categories can be added to the program and in most cases the rate will be tailored to the position and technology and offer a savings.</p> <p>Examples of this kind of reporting are presented in Attachment B: Performance Reports.</p>
3.	Does your solution assist CoVA in identifying and quantifying process improvements? If yes, please explain.	Y	<p>Although the core framework for our program does not change often (VMS tool selection, service offerings), there are monthly modifications that occur to the delivery within our program. These changes are due to constant and consistent process review with the intent to improve</p>

			<p>operations.</p> <p>The MSP team holds a weekly meeting to review and document issues and needs within the program. A core agenda is documented each weekly meeting, and is updated as changes are made to the program to meet the desired outcomes. Changes needed are also identified and documented from Quarterly Reviews, survey responses, and Operational Review preparation. Lessons learned are captured from all major events, to promote efficiency and improvements that can be shared across our MSP practice. Examples of ongoing process improvement:</p> <ul style="list-style-type: none"> ■ SLA review ■ ERI rate review ■ Peoplefluent: system upgrades, program-level configuration changes, field name changes & additions, new and existing reporting capabilities, data extraction ■ MSP Operations ■ Program Delivery <p>For example, CAI was interested in tracking particular vendor activity, i.e., requests for interviews that were not able to be confirmed and starts that were not confirmed. We were able to quickly modify some open fields in Peoplefluent to capture our notes on the topic, enabling us to begin looking at trends and vendor activity. This need was identified and completed within two days.</p>
4.	Does your solution assist CoVA in detecting fraudulent activity occurring in the program? If yes, please explain.	Y	<p>By having an enterprise viewpoint of workforce management, particularly both staff augmentation and SOW, the MSP can view vendor and contractor activity at a program level. This allows for tight process controls and management of enrollment activity, engagement activity, time entry, invoicing, and budget control.</p> <p>The history of all transactions is stored and reportable via Peoplefluent. CAI is able to monitor trends through this data monitoring.</p> <p>An instance of fraudulent activity could be:</p> <ul style="list-style-type: none"> ■ history of named requests for vendor/agency ■ time entry: contractors billing on multiple engagements

			<p>across staff augmentation and/or SOW deliverables. CAI can view all time viewed by contractor name, across the program. This means that if a resource is providing services at multiple agencies, but billing high numbers of hours daily/weekly, we can flag this and request clarification from the contractor/vendor.</p> <ul style="list-style-type: none"> ■ vendors inflating candidate's skills and/or experience
5.	Does your solution include disclosure of resource wage rate? If yes, please describe how that data is captured and maintained.	Y	<p>The below requirement will be implemented only after a written request from VITA.</p> <p>CAI's rate methodology relies on localized wages. That data can be made available to stakeholders and agency users as estimates on what resources are typically paid for specific positions.</p> <p>Actual wage data for an individual resource will be reported through Peoplefluent at the time of candidate submission. While we do not use this field now, it is a field that is available; we will need to configure Peoplefluent to use it during implementation.</p>

Figure 17: Responses to Continuous Improvement and Risk Reduction

I. I. Reporting

Reporting			
	Requirements	A	B
1.	Does your solution include user access to data and reporting, including ad hoc user reporting? Please describe, including any business analytical tools provided.	Y	<p>Peoplefluent VMS includes a Business Intelligence Platform, powered by Business Objects Xi, a market leader in analytics.</p> <p>There is no restriction on capability - users take advantage of advanced editing capabilities to modify existing reports or to create new reports through ad hoc reporting for themselves or to be shared throughout the organization. While creating, sharing, presenting, and distributing mission critical information, users can leverage a variety of intuitive, fast, and user-friendly reporting capabilities, including:</p> <ul style="list-style-type: none"> ■ Portal interface to share and present data ■ Easy modifications to report result set ■ User-based calculations and aggregations ■ Printer-friendly reports ■ Advanced graphical presentation in 2D and 3D format ■ Advanced filtering and sorting ■ Excel export capability ■ Prompted reports for specified results <p>Unlike other VMS applications whose reporting is based on an overnight backup of production data, the reporting database within Peoplefluent VMS is a copy of production data, updated in near real-time. All contract data is available – no data is archived.</p> <p>This narrative discusses reporting from the standpoint of standard reports and ad hoc reporting, as well as CAI-internal reports used to manage the contract. Samples of many reports are separately attached in Attachment C: Peoplefluent VMS and Attachment D: Sample Reports.</p> <p>Standard Reports</p> <p>Over the past eight years, CAI has augmented a number of standard reports for automatic delivery to agency users under our MSP contracts, and these are available to Virginia. The tables below list the</p>

Reporting																																											
	Requirements	A	B																																								
			<p>most frequently used reports needed by our agencies for analysis and reporting; several of them can be directly executable as ad hoc reports.</p> <table><tr><th>AGENCY REPORTS</th><th>DESCRIPTION/USAGE</th></tr><tr><td colspan="2">STANDARD AGENCY REPORTS</td></tr><tr><td>Active Requisitions Report by Agency</td><td>Lists active requisitions as of run date for an agency.</td></tr><tr><td>Active Vendor List for Agencies</td><td>Lists all active vendors and their TSB status.</td></tr><tr><td>Engagements by Agency Report</td><td>Lists engaged candidates as of run date for agency.</td></tr><tr><td>Invoice Summary by Agency Report</td><td>Used to validate CAI invoice for a specified agency.</td></tr><tr><td>PO Limit Audit Report</td><td>Tracks remaining spend on PO for an agency.</td></tr><tr><td>Spend by Agency Report</td><td>Lists spend by PO for an agency for a time period.</td></tr><tr><td>Timesheet Detail Report</td><td>Lists all timesheets for a specified week and highlights those still needing approval.</td></tr></table> <p>Figure 18: Standard Agency Reports List</p> <table><tr><td></td><td></td></tr><tr><td>Average Bill Rates</td><td>Tracks the bill rates.</td></tr><tr><td>Average Candidate Submittals</td><td>Tracks the number of submittals for the prior year, six months, and three months.</td></tr><tr><td>Average Time to Fill</td><td>Tracks the time it takes to fill a position from when it was sent to the vendor network.</td></tr><tr><td>DBE - Engagements by Month</td><td>Tracks number of DBE candidates engaged.</td></tr><tr><td>Engagement - Candidate Statistics</td><td>Provides statistics on engaged candidates - when submitted, score, time to hire.</td></tr><tr><td>Length of Engagement</td><td>Tracks the tenure of engagements.</td></tr><tr><td>Active Vendor List for Specified State</td><td>Lists the number of vendors whose home office is a specified state.</td></tr></table> <p>Figure 19: Trends Report List</p> <table><tr><th>ACCOUNT MANAGER REPORTS</th><th>DESCRIPTION/USAGE</th></tr><tr><td colspan="2">ACCT MANAGER REPORTS</td></tr><tr><td>Active Requisitions Report</td><td>Lists all details of all active requisitions.</td></tr></table>	AGENCY REPORTS	DESCRIPTION/USAGE	STANDARD AGENCY REPORTS		Active Requisitions Report by Agency	Lists active requisitions as of run date for an agency.	Active Vendor List for Agencies	Lists all active vendors and their TSB status.	Engagements by Agency Report	Lists engaged candidates as of run date for agency.	Invoice Summary by Agency Report	Used to validate CAI invoice for a specified agency.	PO Limit Audit Report	Tracks remaining spend on PO for an agency.	Spend by Agency Report	Lists spend by PO for an agency for a time period.	Timesheet Detail Report	Lists all timesheets for a specified week and highlights those still needing approval.			Average Bill Rates	Tracks the bill rates.	Average Candidate Submittals	Tracks the number of submittals for the prior year, six months, and three months.	Average Time to Fill	Tracks the time it takes to fill a position from when it was sent to the vendor network.	DBE - Engagements by Month	Tracks number of DBE candidates engaged.	Engagement - Candidate Statistics	Provides statistics on engaged candidates - when submitted, score, time to hire.	Length of Engagement	Tracks the tenure of engagements.	Active Vendor List for Specified State	Lists the number of vendors whose home office is a specified state.	ACCOUNT MANAGER REPORTS	DESCRIPTION/USAGE	ACCT MANAGER REPORTS		Active Requisitions Report	Lists all details of all active requisitions.
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Reporting				
	Requirements	A	B	
			Candidate Evaluations	Summarizes Peoplefluent VMS evaluations entered for engaged candidates.
			Candidate Internal Comments	Lists comments input in Peoplefluent VMS for a candidate.
			Chase Report - Detail	Shows active requisitions and candidates submitted.
			Chase Report - Summary	Summarizes active requisitions; no candidate detail.
			Roll Off Report	Lists candidates with engagements ending within 30 days.
			Dashboard – Vendor	Details of vendor activity: submittals, placements, scoring.
			Engaged Candidate Report	Lists current engaged candidates and engagement details.
			Engaged Candidates by Agency (PO Detail)	Lists current engaged candidates and their PO detail.
			Engagement Budgeted Hours by Vendor	Shows the hours budgeted for engaged candidates for a specified vendor.
			Engagement End Dates Based on Hours Remaining	Shows engagement end date based on remaining hours rather than the actual end date.
			Engagements by Candidate with spend	Lists the spend by candidate on an engagement.
			Engagements by Vendor	Summarizes engagements by vendor.
			Requested Skills	Lists all requisitions which contained a specified skill.
Figure 20: Account Manager Reports List				
			MSP OPERATIONS	DESCRIPTION/USAGE
			Timesheet - By Vendor	Details the approved timesheets for a specified vendor's candidate for a specified period of time.
			Active Vendor List	Lists the active vendors summarized by Tier.
			Agency - Spend & Engagement Totals	Spend and number of engagements by agency.
			Agency & Vendor Totals For Dashboard	Used to update weekly internal dashboard reports with usage by agencies and vendors.
			Budget Spend by Requisition ID	Provides the exact spend for a specified requisition.
			Candidate Corpsys Job Information	Used to validate accounting codes between CAI accounting systems and Peoplefluent VMS.

Reporting																																									
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Figure 21: Custom Peoplefluent VMS Reports Developed for Our Clients

Figure 21: Custom Peoplefluent VMS Reports Developed for Our Clients

Reporting			
	Requirements	A	B
			SOW REPORTING
			DESCRIPTION/USAGE
			VA SOW Milestone Tracking
			Details the status of the milestones associated with each active project, including due dates. Overdue milestones are highlighted.
			VA SOW Milestone Tracking Dump
			Excel file with milestone data which is used to upload to agencies' project tracking systems.
			Outstanding Milestone Approvals
			Reports on any milestones that have been submitted by the vendor but have not yet been approved by the agency. The CAI Account Manager uses this report to follow up with the agency to ensure there is not an issue with the milestone.
			Approved Milestones
			Reports on all milestones that had been approved in the previous week. CAI Operations uses this report to ensure all approved milestones were invoiced in a timely manner.

Figure 22: Milestone Tracking Reports

Ad-Hoc Reporting

Peoplefluent VMS utilizes the SAP Business Objects XI (BOXI) software. The reporting database is a copy of production data, updated in near real-time. It serves as a repository for all contract data, available for extended analysis, data mining, and SLA reporting. All contract data is available – no data is archived. All requirement, candidate, engagement, and timesheet history is stored within Peoplefluent VMS and is available for reporting.

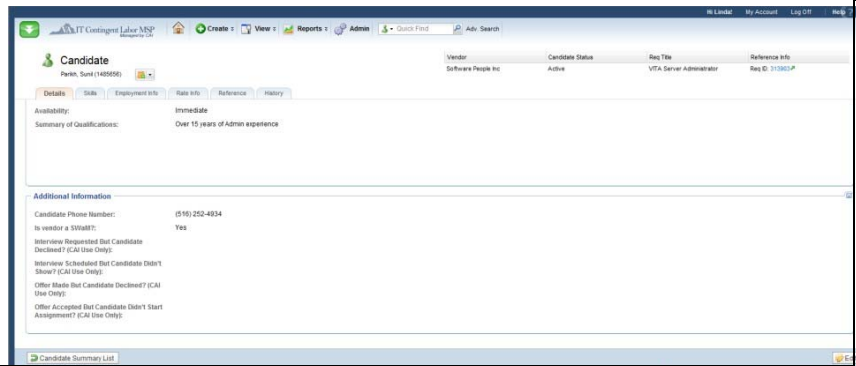
Ad-hoc reports can be delivered in multiple formats, including Microsoft Excel files, portable document format (PDF) files, or in comma-separated values (CSV). Reports can be scheduled for automatic delivery to the Virginia agency or run as needed. Virginia agency users also have direct access to BOXI to execute reports and create new ones.

We are also happy to develop additional reports for any Virginia executive or agency, based on changing requirements. For example, our most recently added report was created in response to requirements for separately reporting requisitions funded through the American Recovery and Reinvestment Act (ARRA).

Reporting			
	Requirements	A	B
			In addition to the Ad-hoc reporting available via Business Objects, data extracts can be done directly from the summary data list pages with the application. For example, a hiring manager can view all of his/her engaged resources on the Candidate Summary page and export that data to an Excel spreadsheet for further data analysis.
2.	Does your solution generate program performance reports that supports service level agreements? If yes please describe.	Y	<p>Performance reports are generated for our quarterly reviews, or they can be generated upon request. These reports focus on SLAs, presenting performance against the SLAs for those engagements and requirements bound to the agreements. They will also include a listing of those requirements designated by the Commonwealth as exempt from the SLA measurements.</p> <p>We run weekly and monthly Reports that are used for internal management of the program to include: weekly dashboard of activity, chase report that shows all SA requirements, Milestone Tracking Report, PO Audit report, and ITCL Summary Report.</p> <p>Samples of a recent Quarterly Report and other performance reports are included in Attachment B: Performance Reports.</p>
3.	Does your solution generate subcontractor performance reports? If yes, please describe.	Y	<p>We refer to these reports as Network Performance. They are a presentation of dashboards and analysis of the supplier performance and awards by tier including the performance of Virginia-based suppliers. These reports also include discussion of vendor enrollment for periods where the enrollment was open.</p> <p>Samples of these reports can be found in Attachment B: Performance Reports.</p>
4.	Does your solution generate past due milestone reports? If yes, please describe.	Y	<p>A Weekly Milestone Tracking report is delivered each week to the CAI AMs. The report includes alerts on any milestones which are past due. The EAM and the AMs meet to discuss the results of this report, and actions and escalation needed. A sample of this report can be found in Attachment D: Sample Reports.</p>
5.	Does your solution provide alerts? If yes, please describe the capabilities.	Y	<p>Peoplefluent VMS supports a full range of alerts and actions based on configurable triggers in the process. Users receive informative notices of actions and directions on what to do next. Hot links within the notifications bring the user directly to the page requiring action, further</p>

Reporting			
	Requirements	A	B
			enhancing productivity.
6.	Does your solution provide reports on resource utilization? If yes, please describe.	Y	<p>CAI developed our PO Audit report in order to track the utilization of each engaged resource. This report enables the CAI AM and Operations team to track the remaining spend and engagement end date for each resource. There are alerts on the report which highlight any resource who is nearing the limit on the funding from their Purchase Order or who is nearing the end date of the engagement. With this information the AM is able to proactively work with the agency to secure more funding or confirm disengagement details.</p> <p>Various other ITCL specific reports have been developed which give executive level insight into the contract utilization across all agencies. Top agency, vendor, and job title spend are just some of the data that is provided to our VA executive sponsors for complete transparency into the usage of the contract. A favorite report that is heavily used is our Weekly VA ITCL Requirement Summary Report; it provides a program level snapshot of open, engaged, and completed engagements across both Staff Augmentation and SOW.</p> <p>A sample of these reports can be found in Attachment D: Sample Reports.</p>
7.	Does your solution provide expense reimbursements reports? If yes, please describe.	Y	<p>Expenses are only reimbursable to resources under the contract when submitted in Peoplefluent and then approved by an agency user. The process is similar to timesheet approval and to that extent, similar type reporting is available. Extracts can pulled directly from the Expense Summary Page and exported to Excel. More detailed reporting on expenses can be done via the Business Objects Reporting tool.</p> <p>A sample of this report can be found in Attachment D: Sample Reports.</p>
8.	Does your solution provide trending reports? If yes, please describe including level of detail.	Y	<p>Effective financial management and control requires business intelligence capabilities that go beyond transaction reporting alone and enable in-depth analyses such as spend forecasts, budget modeling/projections, vendor competitiveness, and examination of transactions processed outside of the defined control objectives. Trending of spend by job titles enables the Commonwealth to analyze needs for changes in their technology. Trending in resource usage by</p>

	Requirements	Reporting	
		A	B
			<p>agencies enables the Commonwealth to analyze their use of contingent labor and possibly implement changes in hiring policies. Trending in engagement lengths enables the Commonwealth to analyze possible co-employment issues. Trending in resource attrition enables CAI to provide suggestions in changes to the rate cards. All of this trend reporting and more can all be accomplished through the Business Objects reporting capabilities.</p> <p>A sample of these reports, such as the ITCL Dashboard, can be found in Attachment D: Sample Reports.</p>
9.	Does your solution provide measurement of key performance indicators (if yes please provide details for each), such as:	Y	<p>The key performance indicators measured include our SLAs as well as customer satisfaction, and vendor performance indicators. Please refer to Exhibit B to the Contract for a listing, definitions, and methods of measurement of our proposed SLAs.</p> <p>We utilize Business Objects reporting to produce our SLA metrics to ensure CAI is meeting all of our contractual obligations as well as other reporting tools to measure satisfaction.</p> <p>The ability to easily add custom fields to Peoplefluent VMS allows CAI to capture the data that is needed to measure the current KPIs under the contract as well as to easily measure new KPIs.</p>
9. a)	Customer Satisfaction (e.g. sponsor and subcontractor ratings),	Y	Resource satisfaction is measured through candidate surveys completed by hiring managers within Peoplefluent as well as the trending of performance removal statistics.
9. b)	Quality (e.g. measuring the % of resources that do not show up for work, % of resources who do not show up for interview, % of hiring managers trained for the staff aug and SOW process),	Y	These data points are all captured within Peoplefluent and are reportable.

Reporting			
	Requirements	A	B
			 <p>Figure 23: Candidate Quality</p> <p>Note: A larger image can be found in Attachment C: Peoplefluent VMS.</p>
9. c)	Delivery (e.g. Staff aug and SOW total cycle time, timeliness of reporting),	Y	All transactions are date/time stamped which enables reporting on various cycle time metrics.
9. d)	Audit Compliance (e.g. audits of compliance with screening, background checks, proof of insurance, time card accuracy).	Y	<p>The Peoplefluent VMS Compliance Manager module will assist the Commonwealth with risk management and mitigation for the contingent workforce, allowing for management of position-specific documentation, certifications and onboarding/offboarding tasks.</p> <p>Configurable tasks can be assigned to the suppliers in the form of a workflow in the Compliance Manager module. Tasks that are created can have corresponding alerts, which are entirely configurable to time-based events. Dashboard analytics are available for these tasks. Each task can have its own characteristics including due date, owner, task name, status, date conducted, date completed, expiration of requirement date, certification number, valid locations fields, pass/fail, comments, and alerts. Alerts can also be sent out multiple times, such as upon candidate submittal, five days prior to start, 10 days post hire, etc.</p> <p>All alerts, notifications, and task needs can be sent, tracked, and maintained in the system. Everything from tracking equipment assignments and security clearance through screening and qualification</p>

	Reporting		
	Requirements	A	B
			requirements can be automated and controlled to ensure you are protecting your company's assets and brand while ensuring that your contractors and consultants are productive from day one.

Figure 24: Responses to Reporting

J. J. Pricing Methodology

The pricing of resources to CoVA should reflect the market price for labor based on the skills, experience, market supply and demand conditions at the time of each engagement. The MSP is expected to develop the subcontractor network that will provide the resources and implement processes that ensure the maximum benefit to the Commonwealth from competition among its subcontractors. The basis for the staff augmentation engagement is a not to exceed rate card for each job classification and experience level.

Pricing Methodology		
	Requirements	A B
1.	Does your solution provide a supplier-funded, market based pricing model? If yes, please describe the structure of your pricing model, including the market labor index. Please explain how you ensure that the pricing reflects the current market labor rate for IT skills.	<p>CAI's bill rates are based on industry metrics, scientifically derived, and supported by years of market experience. We have used extensive wage metrics from the Economic Research Institute (ERI) to develop our separately submitted pricing, and based on how well it has performed in the past eight years we are confident in the accuracy of our pricing model and our ability to deliver high-quality resources to the State within our proposed timeframes. The approach to pricing is a critical success factor for maximizing the results toward a steady supply of qualified resources to COVA.</p> <p>CAI uses salary data from ERI as a means of determining baseline wages. The ERI is an independent research firm whose algorithms and data have been in use for the past 30 years; it does not offer consulting services, i.e., it has no self-directed incentive for modifying its metrics. In over eight years of government MSP service, we have found the ERI data to be extremely accurate for estimating salaries by position description and geographic location.</p> <p>CAI then determines the vendor rate by deriving the markup on the wage rate that covers all costs and obligations that any employers must pay prior to calculating a profit. In developing a subcontractor markup for the contract, we created a formula to cover their payroll costs, employee benefits, contract expenses, and modest pre-tax profit. This becomes the rate per hour that the vendors are paid for their selected resources. Unlike other MSP programs, the vendor receives 100% of the CAI vendor rate with no reductions made to their invoices.</p> <p>It is upon this vendor rate, or labor rate per hour, that the MSP service fee is applied and becomes the bill rate to COVA. The MSP service fee covers the cost of doing business for CAI. These are reasonable costs for doing business, such as our own labor costs as well as administrative fees for the VMS tool.</p> <p>CAI analyzes the ERI data and makes recommendations to COVA regarding increases or decreases to the contract rates. The final</p>

Pricing Methodology			
	Requirements	A	B
			decision on changes to rates rests with the Commonwealth; CAI adheres to those decisions. We will continue to conduct these reviews on a frequency acceptable to the Commonwealth.
2.	Does your solution include rate cards? If yes, please explain how the rate cards are developed so that CoVA can attract quality resources.	Y	<p>Our rate card is supplied in Exhibit F to the Contract.</p> <p>The largest component of IT labor is the wage/salary paid to the individual. By ensuring that the wage rate is accurate, we can be confident that the candidates are being paid appropriate wages and are less likely to resign to take another position for more money.</p> <p>CAI uses salary data from ERI as a means of determining baseline costs. The ERI is an independent research firm whose algorithms and data have been in use for the past 30 years; it does not offer consulting services, i.e., it has no self-directed incentive for modifying its metrics. Based upon our experience in multiple states, we have found the ERI data to be extremely accurate for estimating salaries by position description and geographic location.</p> <p>ERI data covers over 5,800 jobs that have been studied over time, many since 1967. Analyses are derived from millions of data points gathered from digitized public records including the US SEC, OCR of US IRS returns, ERI Salary Survey's patented online surveys (78 U.S. industries in five countries), and licensed UK, Canadian, and U.S. salary surveys and datasets. This data is more accurate than the salary calculators on Internet job sites; those sites are publishing candidates' desired salaries, including commercial contract benefits and bonuses.</p> <p>The ERI model allows for extremely complex stratification for wage data, appropriate for the multiple job categories required by the Commonwealth of Virginia under this contract. It is updated quarterly for each U.S. metropolitan area, including Richmond and Northern Virginia. For any job category, it breaks down local wages by percentile (10th through 90th) and years of experience. This is the core data we use for all our MSP services, including any pricing changes over the life of a contract. Our clients need an accurate, unbiased means of detecting and acknowledging changes to the wages that are the basis for an MSP contract; the ERI provides it.</p>

Pricing Methodology			
	Requirements	A	B
			<p>In addition to utilizing local wage data to build the reliable, best-value pricing, the Commonwealth will realize additional savings by standardizing the workflow. During implementation, CAI will work with VITA make any adjustments to align the candidate recruiting process with the procurement process. Aligning this process to insure the job requirements are fully approved and funded before the positions are released to the vendor network results in a greater success rate in placements, since the candidate won't have to wait for the funding to be approved before starting work. Vendors, too, will have the assurance that positions released through the process will be filled in the candidate's window of availability because funding and approvals are in place.</p> <p>Because CAI is performing quality control on each job requirement and phone screening each candidate, the Commonwealth managers need only perform the technical interviews to find the candidate that is the best match for the position. They don't need to work with individual vendors, negotiate contracts, scope individual job requirements for each vendor, find résumés, manage the response, screen candidates, and hope to find a selected candidate while the candidate is still available. The Account Management screening process not only serves a crucial quality control function but it also streamlines the process for COVA managers and provides time savings for the Commonwealth.</p>
3.	Do you have an established process to update rate cards? If yes, what factors would cause a rate to change? Please explain the process for rate card adjustments.	Y	<p>Because we utilize specific eDOT job classifications, number of years experience, and percentiles for each rate, we are able to construct a rate comparison each quarter when the wage data from ERI is updated. While we perform quarterly comparisons, we typically present these comparisons to VITA every six months, or upon demand.</p> <p>If our wage rate comparison shows a significant shift, either up or down, in the wages upon which rates are based, we will include our findings and recommendations in our quarterly review. If COVA chooses to follow our recommendations, we will work with you to follow change control for this contract, and we will amend our rates within Peoplefluent and on the contract portal. We will prepare and send communications of the changes to the vendor network, all with the</p>

Pricing Methodology			
	Requirements	A	B
			<p>appropriately coordinated timing.</p> <p>There have been occasions when our clients have asked us to make adjustments in rates, or to add job titles, to accommodate changing resource needs. In this case, we research ERI, establish a basis for the prevailing wage rate and build our rates on it. We will then make the recommendations to the client, and follow the rest of the tasks described in the previous paragraph.</p>
4.	Does your solution support fixed price SOW? Please explain your pricing model and how you ensure competitive pricing.	Y	<p>For COVA, CAI is currently providing full service MSP SOW support for fixed priced SOWs. Peoplefluent supports this line of business. CAI proposes to charge a fee for MSP related tasks that is embedded in the cost of the project. CAI's AM, after working with the agency to complete the SOR template, releases the SOR to the approved vendors for bid, and forwards the SOW responses to the agency at the end of the bid cycle for the Agency Manager to review. This SOW template is built to ensure that vendors must respond with bids that are fixed priced, deliverables based only. Currently, our program only allows for fixed priced project delivery.</p> <p>We have an internal goal to receive three responses per in-process SOW released, to provide the agency with several bids to review. This promotes competition, and gives the agency several solution options from which to choose. We have received as many as eight responses on a bid.</p>
5.	Does your solution support time and materials SOW? Please explain the pricing model and how you ensure competitive pricing.	Y	<p>The below requirement will be implemented only after a written request from VITA.</p> <p>Our Solution includes a business process where agencies can issue SOW Requisitions to a pre-qualified network of suppliers who respond with Statements of Work to perform the fixed price work at competitive pricing.</p> <p>The agency retains full control over the selection of the winning supplier and retains the authority to select the most price competitive response.</p> <p>The Suppliers include the MSP fee in their pricing and the MSP fee consists of a fixed percentage that includes the cost of Peoplefluent as</p>

Pricing Methodology			
	Requirements	A	B
			<p>well as the administrative fees associated with administrative oversight insurance the risk associated of the MSP.</p> <p>We can adapt the process within the Peoplefluent SOW function to allow for timesheet submittal and T&M SOWs.</p>
6.	Do you have experience using the proposed pricing methodology for other customers? If yes, please describe how the rates fluctuated and how often changes are made.	Y	<p>We use the process of deriving wage rates for all of our MSP contracts; all of our rates are based on ERI data, with a markup for vendor expenses and CAI's overhead.</p> <p>What differs from contract to contract are the specific eDOT codes, years experience, and percentiles used for each contract's unique job titles. With our model, we can be flexible to meet the variances in supply and demand for each client while following a well-tuned, empirical process in each case.</p>
7.	Do you currently use different pricing methodologies for other customers? If yes, please explain the other models and include why you chose the proposed model over other options.	Y	<p>The MSP pricing methodology used in our State Government programs is common to each of our eight states; but the elements of the methodology vary to produce the best value for each of the individual programs.</p> <p>For instance, the State of Maine relies on a regional blend of wage rates as the basis for their rate card, because their "local" market includes several different localities. The MSP fee includes similar elements in each program but those elements are adjusted to match volumes and program levels.</p> <p>The proposed model has performed successfully over more than 9,000 engagements across eight states. It has enabled savings for programs with savings mandates and it has afforded strong supplier participation, particularly across small and local businesses. Our time-tested pricing methodology has proven flexible enough to meet market demands across economic changes, as well as changes in candidate supply and demand. Over time and across eight programs, this methodology has supported delivery within SLA compliance as well as high customer satisfaction ratings.</p>
8.	Do you have a formal process for performing benchmarking of current market conditions for candidate availability	Y	CAI compares the base wage rates used to derive our rates to the client on a quarterly basis. We track rate data and monitor trends based on these quarterly comparisons.

	Pricing Methodology		
	Requirements	A	B
	and rates? If yes, please describe.		

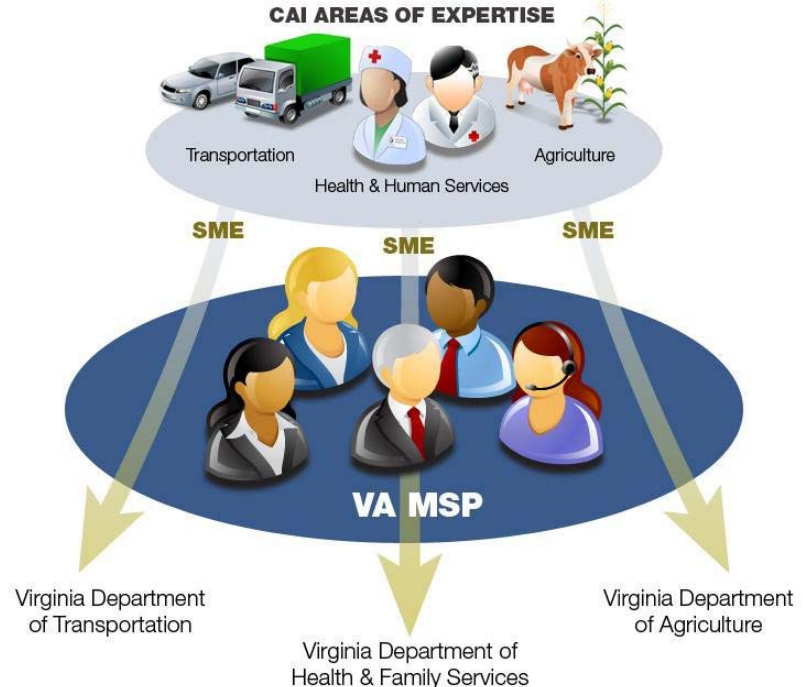
Figure 25: Responses to Pricing Methodology

K. Other Value Added Services

Other Value Added Services			
	Requirements	A	B
1.	Does your solution include the ability to expand MSP services to include a broader range of IT solution services? If yes, please describe in detail explaining the specific service offerings available and how they could be incorporated into this program.	Y	<p>In order to include a range of IT solutions services broader than the scope of this program, CAI proposes the following service offerings:</p> <ul style="list-style-type: none"> ■ Bundled Services. CAI is open to discussing how we will bundle services that go beyond merely supplying IT labor under our program. For instance, if VITA has other contracts to promote, and a customer will utilize CAI's services, hosting, or maintenance from another vehicle, we will assist in bridging those contracts and bundling the offerings. ■ Adding Non-IT Job Titles. Our MSP model is directly extendible to labor categories outside of IT. We simply directly map the non-IT titles listed to externally accredited job descriptions and associated labor metrics within ERI. This mapping confirms our ability to supply non-IT labor to the Commonwealth at the prices we quote; this is responsible business practice on our part. Our pricing model is the same proven model we have successfully followed since 2004 to fill over 9,000 IT requisitions across all MSP contracts. Within the IT classifications, our model currently utilizes fewer than 100 of the 4,700 industry-standard job categories available. It is the logical vehicle for institutionalizing procurement of additional kinds of temporary labor, e.g., office workers, medical support staff, highway construction workers, etc. <p>If you desire to extend this contract to other areas of contingent labor, we will follow a special implementation plan. Basically, we need to perform most of the tasks of our original implementation, to some extent, with the exception of configuring the Peoplefluent VMS tool for Virginia; that will have been done. The timeframe and thus the extent to which we follow the other tasks - such as creating an expanded vendor network supplying the new class of contingent labor, training both the new</p>

Other Value Added Services			
	Requirements	A	B
			vendors and the new agency users, developing a new rate card using the same methodology that we have for this contract, and loading the appropriate data into the VMS tool - is dependent upon the disparity between the new job titles and the IT titles. For instance, adding administrative positions will not be difficult to implement, as many of the IT vendors will also supply these positions, so the effect of bringing on new vendors to staff the requisitions will be minimal. On the other hand, if the Commonwealth were to implement the use of this contract to hire contingent medical/laboratory personnel, the implementation will take up to seven weeks.
2.	Are there circumstances that would require the MSP to provide resources directly to the customer? If yes, please describe situations where this could be required and explain what processes and controls will be in place to ensure transparency and competition.	Y	<p>CAI recognizes that there are special circumstances when it will enhance our ability to deliver quality resources and meet SLAs. Toward that end, we propose the following:</p> <ul style="list-style-type: none"> ■ Special Exception Contractor Placement. There are situations when, we believe, allowing CAI to place contractors under this program makes good business sense. With proper approvals, verifying the special needs, some examples of those mutually beneficial situations are: <ul style="list-style-type: none"> ■ A need to payroll contractors in need of a transition, either from another contract vehicle; from a vendor that no longer wants to participate in the program; or to remove the contract from a vendor/contractor relationship that is no longer working, e.g., the vendor goes out of business or is no longer paying on time. Allowing CAI to technically 'employ' the contracted resources in these instances will provide business continuity for the client. ■ CAI will assist a resource whose ability to stay on the job is being jeopardized by visa renewal. CAI has the availability to process/sponsor visas. If CAI were permitted, in this situation, to employ that resource, CAI will assist by transferring the visa sponsorship to our organization.

Other Value Added Services			
	Requirements	A	B
			<ul style="list-style-type: none"> ■ CAI is available to fill very hard to fill positions (Messaging, SOA). Should our vendor network not be supplying the viable candidates with the skill level required for a very difficult to fill position, CAI can request our internal team of recruiters to focus their efforts on sourcing for resources. Also since CAI is an IT firm, we may have resources internally, as employees, who will fulfill the role. ■ SOW Project Support. The SOW program has been morphing and evolving since we went live with this service in 2010, and we are still assessing how our customers best want to utilize the service and what we can do to be of most support to them. One service gap that we can identify, at times, a higher level of individualized SOW support. For instance: <ul style="list-style-type: none"> ■ The need to have IT business analysis skills available to assist the agency with scoping their project, and defining the requirements of their project. ■ A higher level of Project Management support to oversee the CAI SOWs actively engaged in some of our larger agencies that utilize SOW services. <p>CAI is available to discuss the supply of Project Management support, Business Analysts, and Architects as additional add-on services to our MSP SOW program.</p> <ul style="list-style-type: none"> ■ Providing Subject Matter Expertise. CAI is an IT consulting company, and has many subject matter experts (SMEs) within our Government Division. CAI would like the ability to offer our deep Transportation, Health/Human Services, and Agriculture State Government expertise to COVA, through our contract vehicle, as needed and approved. <p>Our concept of how we can better serve the Commonwealth, utilizing the MSP contract to provide</p>

Other Value Added Services			
	Requirements	A	B
			<p>subject matter expertise in our industry verticals, is depicted in Figure 26.</p>  <p>Figure 26: CAI Can Offer Subject Matter Expertise to Virginia Agencies</p> <p>CAI is not asking to compete with vendors on in-process staff augmentation or SOW requisitions, but to provide services as they arise or are requested by COVA. We will do this through a special exception process, that will get VITA approval, and have full visibility and transparency.</p> <p>For example, VDOT is a large agency, and large customer of CAI. Currently we only provide services to VDOT as they procure IT labor through the ITCL contract. As our</p>

Other Value Added Services			
	Requirements	A	B
			<p>SOW program grows at VDOT, CAI and VDOT may find it beneficial to enhance CAI's service level to support VDOT managers and their use and management of the ITCL program. For instance, CAI has a transportation practice with IT and Transportation professional experts who work across the United States on projects. We may find scenarios where these transportation/IT experts will be utilized and paid for by VDOT to solve business problems.</p> <p>These circumstances and exceptional solutions all carry with them the assumption that, like all our other program activities, there will be full transparency, and proper COVA approval.</p>

Figure 27: Responses to Other Value Added Services

L. L. Implementation

Implementation			
	Requirements	A	B
1.	Have you successfully implemented a new program in a 6-8 month timeframe? If yes, what were the primary factors contributing to a successful implementation?	Y	<p>We implemented our original SMSA contract within four weeks. Our standard implementation timeframe is four to eight weeks with Go-Live being the point at which a hiring manager can submit a requisition in Peoplefluent.</p> <p>The primary factors contributing to a successful implementation are:</p> <ul style="list-style-type: none"> ■ A time-tested implementation plan and process ■ A seasoned government-experienced team of implementation experts ■ Effective communications ■ Experience in transitioning vendors and their resources from the former contract to the new procurement vehicle ■ An easily configurable VMS tool ■ An experienced training team using training materials that are customized to the client ■ Support from Commonwealth executive sponsors who have the authority to make decisions on processes and configurations
2.	Does your solution include implementation and migration support? If yes, please describe your project management methodology and provide a proposed project plan for implementing the activities outlined in this Section 5.	Y	<p>As the incumbent, our plan is different from what you will see when implementing a new MSP contract. While performing the typical tasks of configuring the new job titles and rate cards, CAI will be focusing on changes to processes which will bring even more efficiencies and transparency to the ITCL contract. CAI has the advantage of being able to continually manage the old contract while working on the tasks to implement the changes brought about by the new contract. There will be no knowledge transfer needed between MSP suppliers as our current team will be intimately involved in the new contract.</p> <p>We will have an implementation team which is comprised of our Implementation Manager (Mike Park), Executive Account Manager (Cindy Sullivan), our MSP Director (Ellen Sigl), and our MSP Operations Manager (Linda Leiby), along with our Virginia CAI Account Managers and CAI Operations staff. We will follow the PMI Project Management Methodology:</p> <ul style="list-style-type: none"> ■ Initiating – The CAI implementation team will meet with the COVA Executive Sponsors to discuss and finalize the timeline and tasks for implementation including the expectations of support and participation from the Commonwealth of Virginia. ■ Planning and Design – CAI will hold workshops and discovery meetings with the

Implementation			
	Requirements	A	B
			<p>COVA Executive Sponsors to understand their goals for the new contract as well as workshops with the agency users to review the current and future state of the contract. Tasks such as the new Tiering structure will be defined and agreed upon. All changes identified during the Planning and Design step will need to receive signoff from the COVA Executive Sponsors before they will be implemented.</p> <ul style="list-style-type: none"> ■ Executing – CAI will implement the contractual terms identified in the contract (new job titles, new rate card, etc.) as well as those changes which were signed off by the COVA Executive Sponsors. The CAI team will also complete training sessions for agency and vendor users. <p>CAI will develop and maintain an Agency User Guide to describe the process for individuals using the ITCL program. It will describe the contract in general, when it is to be used, user roles, and the process for using the contract.</p> <ul style="list-style-type: none"> ■ Monitoring and Controlling – CAI's Implementation Manager, Mike Park, will perform the project management tasks to ensure the implementation remains on schedule as well as managing all communications needed regarding the new contract. Should the scope be deeper than anticipated, e.g., involving eVA integration, then CAI will utilize one of our seasoned IT Implementation Managers (e.g., Mike Park) to oversee the details of a highly technical IT project. ■ Closing – The COVA executive sponsors will be given the opportunity to review and accept all changes under the new contract.
3.	Do you have a planned approach to transition support for SOW and staff augmentation work? Please describe, including how you ensure performance of the engagements.	Y	Our work plan for transitioning to the new contract gives first priority to retaining the employers of the nearly 400 currently seated IT staff and 41 active SOW projects with minimal disruption to their hiring agencies. These people perform work that is mission-critical to their respective agencies, and we will make every effort to transition their employer directly into the new contract; this will ensure absolute continuity of support for the agencies.
4.	Does your solution include an implementation team?	Y	We will have an implementation team which is comprised of our Implementation Manager (Mike Park), Executive Account Manager (Cindy Sullivan), our MSP Director (Ellen Sigl), and our MSP Operations Manager (Linda Leiby), along with our Virginia CAI Account Managers and CAI

Implementation			
	Requirements	A	B
	If yes please describe the team, including: number of personnel, roles, responsibilities, and duration of involvement in implementation.		Operations staff. All will be involved throughout the life of implementation with the actual duration being driven by the tasks assigned to them. For example, the AMs will have limited involvement in the implementation, instead focusing on the day-to-day support of the contract. However, they will participate in tasks like the agency workgroups and training sessions.
5.	Is your proposed implementation team comprised of different personnel than the ongoing account management team? Please explain.	Y	Our implementation team is comprised of: <ul style="list-style-type: none"> ■ Implementation Manager (Mike Park) ■ MSP Director (Ellen Sigl) ■ MSP Operations Manager (Linda Leiby) ■ CAI Operations staff
6.	Will VITA have the ability to accept or reject members of the implementation team?	Y	As always, VITA has the option of meeting with, interviewing, and approving or rejecting any of our implementation team.
7.	Will you agree to replace the implementation team if VITA, in its reasonable judgment, determines that a team member is not fulfilling the job responsibilities?	Y	We will defer to VITA's judgment should a performance issue arise regarding one of implementation team members.
8.	Will you provide executive-level resources to VITA during implementation? If yes, please describe their level of engagement, availability and	Y	Cindy Sullivan, our Executive Account Manager, will have day-to-day, direct involvement in the execution of the implementation of the new contract. Ellen Sigl, our MSP Director, will be available to participate in all meetings with the COVA Executive Sponsors, and will have general oversight over the implementation. Jim Cooney, Director of State Government, will be a point of escalation, and will also be available to resolve any issues in a timely manner. CAI's standard is to hire senior level resources throughout the Program, as required to fulfill the level of service in which we commit. Once CAI and VITA agree on the implementation plan and tasks, we will align the correct CAI resources to the project.

Implementation			
	Requirements	A	B
	frequency of communications.		
9.	Do you have a defined escalation path for resolution of issues during implementation? If yes, please explain.	Y	All questions, concerns, and/or issues will first be directed to Cindy Sullivan, our Executive Account Manager. She will be on the ground in Richmond daily, and her full attention will be on delivery under the program and implementation tasks. She has a direct line of communication with both Ellen Sigl and Jim Cooney, as needed, to resolve issues. If there are contractual issues that she is unable to resolve, she will escalate to Ellen Sigl, CAI MSP Director. If further escalation is needed, Jim Cooney, CAI Director of State Government, will provide resolution.
10.	Does your implementation plan include and please describe if yes:	Y	With the exception of the transition of data from the current VMS (since this is not required for CAI's implementation), our implementation plan includes all of the following requirements. While we do have an implementation plan to transition to the new program, CAI's transition will be smoother and far less disruptive than any other bidder's implementation.
10. a)	Sessions with agency representatives to finalize their particular resource requirements and unique business rules and systems,	Y	As the incumbent, CAI has the unique understanding of the present state of the contract and some of the "pain points" some of the agency managers are experiencing. CAI will hold workshops and discovery meetings with COVA Executive Sponsors to understand their goals for the new contract as well as workshops with the agency users to review the current and future state of the contract. We can utilize our current knowledge to help guide the Commonwealth on the best ways to achieve new goals and process improvements. These will be accomplished by configuring new functionality in Peoplefluent as well as implementing new processes.
10. b)	Time to modify/standardize the job titles and descriptions,	Y	While the RFP has a defined list of job titles and descriptions, CAI's vast experience with implementing MSP contracts with numerous states, including the Commonwealth of Virginia, has shown us that changes are often needed to those contractual job titles. We will review and finalize the job titles and descriptions during the Initiating and Planning and Design steps of the implementation plan.
10. c)	Engage and enroll subcontractors into the subcontractor network,	Y	CAI will make all necessary changes to our subcontractor agreements and then perform outreach to all the vendors in our current Virginia networks (both Staff Augmentation and SOW) to reenroll them under the new contract. Special attention will be given to those vendors who hold Staff Augmentation or SOW engagements under the current contract to ensure they are reenrolled in a timely fashion to minimize work disruption for those resources. As part of the vendor reenrollment, CAI will implement any new agreed upon Tiering changes.
10. d)	Transition current resources,	Y	Our work plan for transitioning to the new contract gives first priority to retaining the employers of the nearly 400 currently seated IT staff and 41 active SOW projects with minimal disruption to their hiring agencies. These people perform work that is mission-critical to their respective agencies, and we will

Implementation			
	Requirements	A	B
			<p>make every effort to transition their employer directly into the new contract; this will ensure absolute continuity of support for the agencies. Our proposed plan is to allow the current resources to “run out” their existing Purchase Orders under the current contract after which they will be transitioned to the new contract.</p> <p>If awarded the contract by May 1, we will be able to build the fully agreed upon job descriptions and rate card into Peoplefluent, and have the new rate card available for end of fiscal year transition, if desired. Based on this timing, at a minimum, we’ll have the new contract descriptions and rates available for all new engagements requested beginning July 1, 2013. A decision on the timing for transition of the existing engaged resources will depend upon contract award date, because we’ll have approximately 285 (of about 400) contractors whose engagements are set to end on June 30, 2013, that will need extensions. We will need to begin working with agencies on those decisions by the last week of May 2013 in order to have this large task completed by end of June 2013. Options to the agencies will (1) extend the resource under the new contract rate card effective July 1, 2013; or (2) in order to ensure no break in services, extend the resource under the old contract for a term no longer than six months (ending December 31, 2013). If we do not transition contractors needing extensions by July 1, 2013, then we will plan to transition contractors as their POs expire, moving forward.</p> <p>The job descriptions will be similar. The changes will occur in the rate card and the matrix; currently we have legacy, core, and mission critical rates; the new contract will only have core rates. We will complete a mapping exercise where we map the current contractor categorization to the new contracted rate card, and will make recommendations for new categorization.</p>
10. e)	the integration (as needed) and roll-out of the VMS,	Y	CAI will continue to use Peoplefluent as their VMS under the new contract. This is a great advantage to the Commonwealth as it provides complete metrics of all requirements and SOWs processed with CAI since we first implemented in 2006. Implementation under the new contract will include the configuration of new functionality and workflow changes identified and agreed upon during the Initiating and Planning and Design steps of the implementation plan.
10. f)	transitioning data from existing systems to your VMS,	Y	As the incumbent, and since CAI will continue to utilize Peoplefluent as our VMS, no transitioning of data is needed. This is a significant advantage to VITA.
10. g)	implementing VITA's and CoVA's business rules,	Y	COVA and VITA look to this type of contract to provide efficiencies, transparency into contract usage, and insight into trends. CAI will work with the COVA Executive Sponsors and VITA during the Initiating and Planning and Design steps to identify new or changed business rules and goals. We will also gather that the same information from the agencies during the workshops we will hold with them during implementation.

Implementation			
	Requirements	A	B
10. h)	a communication plan to all customers and suppliers,	Y	<p>Communication is one of the critical success factors of any MSP implementation. All parties - Executives, Agency users, Vendors, resources – need to have a clear understanding of what is occurring during the implementation and the timelines associated with implementation tasks. CAI has an established Communication Plan which we have successfully followed in our MSP client implementations. We will work with VITA to customize this plan to meet their communication requirements. Communications include announcements via email, announcements via portals and websites, webinars, and in person meetings and presentations.</p> <p>We have included a sample plan in Attachment H: Communications Plan. This plan coordinates with a typical “new” implementation, but it is a good example to demonstrate our established communications and experience in driving the communications. We will customize this document for the actual implementation of the new program.</p>
10. i)	Training for all customers,	Y	<p>The final weeks of the implementation plan will include training for both agency users and vendors. Training will consist of distribution of training guides, webinars, and hands-on training regarding the workflow of the contract and use of the Peoplefluent VMS application. The number of training sessions needed and training logistics will be determined during the Initiating and Planning and Design steps.</p>
10. j)	the process to gather each customer's specific billing requirements and ensure your solution can comply with all customer needs,	Y	<p>Since we have been successfully supporting the billing requirements of the Commonwealth agencies since 2006, we will take advantage of the agency workshops to review the billing processes with the agency representatives to ensure CAI is meeting their expectations. We will document and implement any changes requested by the agencies.</p>
11.	Do you have a completed proposed implementation plan for this program including milestones, timelines, and responsibilities? If yes please include a copy.	Y	<p>Our implementation plan is offered in Exhibit G to the Contract.</p>

INTRODUCTION

Computer Aid, Inc. (CAI), in support of its contract with Virginia Information Technologies Agency (VITA), is seeking qualified subcontractors to compete for deliverable-based, fixed price Statement of Work (SOW) subcontracts for IT projects with a maximum SOW value of \$2 million in the following Specialty Areas:

- | | |
|---|---|
| <input type="checkbox"/> Application Development | <input type="checkbox"/> Information Security |
| <input type="checkbox"/> Business Continuity Planning | <input type="checkbox"/> IT Infrastructure |
| <input type="checkbox"/> Business Intelligence | <input type="checkbox"/> IT Strategic Planning |
| <input type="checkbox"/> Business Process Reengineering | <input type="checkbox"/> Project Management |
| <input type="checkbox"/> Enterprise Architecture | <input type="checkbox"/> Public Safety Communications |
| <input type="checkbox"/> Enterprise Content Management | <input type="checkbox"/> Radio Engineering Services |
| <input type="checkbox"/> Back Office Solutions | <input type="checkbox"/> IV&V Services |
| <input type="checkbox"/> Geographical Information Systems | |

Your company is invited to complete this Subcontractor Qualification Questionnaire, and, if selected, to compete with other qualified subcontractors for the opportunity to respond to SOW requisitions under the CAI IT Contingent Labor (ITCL) Contract in your Specialty Area(s).

Please note: All subcontractors, if selected, must provide CAI with a signed Subcontractor Agreement and the required documentation outlined in the *Criteria for Joining* document on the <http://smsa.compaid.com> Web site, prior to being permitted to respond to a SOW requisition.

CAI ITCL CONTRACT COMPONENTS

The CAI ITCL Contract is comprised of two separate programs:

1. **Staff Augmentation of IT temporary resources**
2. **SOW Deliverables-based, Fixed Price Projects**

The purpose of this Subcontractor Qualification Process is to solicit qualified participants for the SOW Deliverables-based, Fixed Price Projects program. If your company wishes to participate in the Staff Augmentation program, please refer to the <http://smsa.compaid.com> Web site for details.

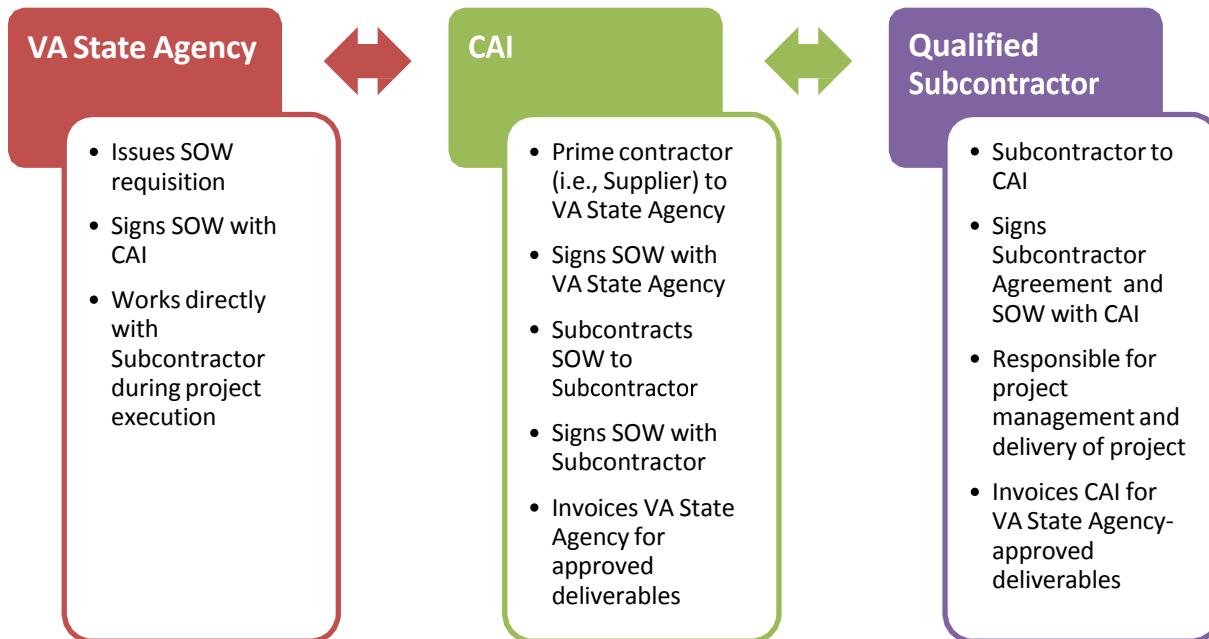
SOW DELIVERABLES-BASED, FIXED PRICE PROJECTS PROGRAM

Unlike Staff Augmentation time and materials (T&M) requisitions, where VA State Agencies seek hourly, temporary IT resources to augment Agency staff, the SOW Deliverables-based, Fixed Price Projects program enables VA State Agencies to engage qualified subcontractors, who have proven experience in delivering end-to-end IT projects in a Specialty Area(s).

Characteristics of the SOW Deliverables-based, Fixed Price Projects program include:

- The SOW is the contractual document that defines the scope, schedule, fixed price, deliverables and payment schedule for a specific project
- Projects are priced and bid for a fixed cost (i.e., work is not performed on an hourly rate basis)
- Projects must be completed in a specific timeframe as defined in the SOW
- The Subcontractor is solely responsible for the overall project management and delivery of the defined project within the specified timeframe
- The Subcontractor submits completed SOW-defined deliverable artifacts (e.g., technical or requirements documents, reports, source code) to the owning Agency per the payment schedule in the SOW. Each project deliverable has a fixed price.
- The Subcontractor invoices CAI for each deliverable after receiving the owning Agency's approval, and CAI then invoices the owning Agency.

The contractual VA State Agency / CAI / Subcontractor relationship under the SOW Deliverables-based, Fixed Price Projects program is depicted below.



SUBCONTRACTOR QUALIFICATION PROCESS

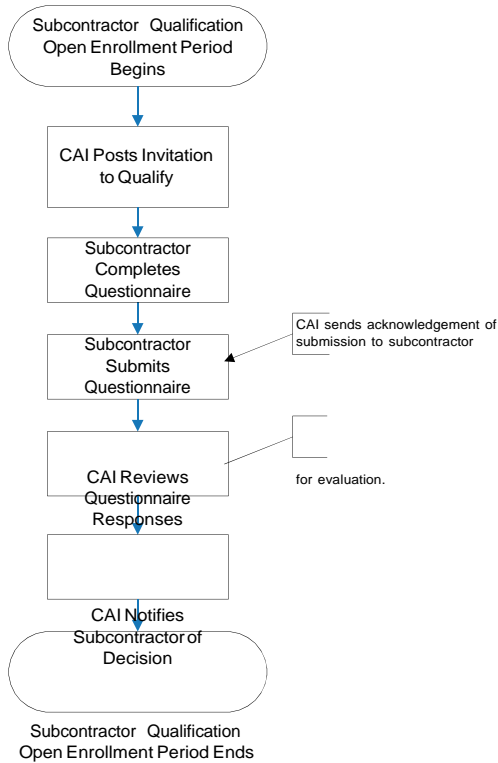
The purpose of the Subcontractor Qualification Process, illustrated below, is to evaluate your company's capabilities to provide SOW deliverable-based, fixed price IT services to the Commonwealth in your specified Specialty Area(s).

Please complete all sections of the questionnaire for the Specialty Area(s) that represents your company's core competencies. Leave the Specialty Areas blank for which you are not attempting to qualify. Only subcontractors, who have a proven track record for successfully delivering deliverable-based, fixed price IT projects, will be considered for SOW opportunities.

Complete the Subcontractor Submission Checklist in Appendix A then sign and submit your **completed** Subcontractor Qualification Questionnaire to CAI at VAITCLSOW@compaid.com by **April 30, 2012**.

CAI will review your Subcontractor Qualification Questionnaire responses and communicate the results to you by **June 5, 2012**.

Subcontractor Qualification Process Flow



SELECTION CRITERIA

The Subcontractor Qualification Questionnaire is broken down into the following criteria for evaluation:

- General Information
- Financial Information
- Personnel
- Project Experience

CAI will evaluate each Subcontractor Qualification Questionnaire based on:

Completeness	Have all the questions been thoroughly answered?
Depth of Experience	Do the referenced projects demonstrate the subcontractor's ability to provide deliverable-based, fixed price IT services in the designated Specialty Area(s)?
Financial Stability	Is the subcontractor a viable, financially stable business partner?
Staff Expertise	Does the subcontractor have the ability to staff projects with skilled resources in the designated Specialty Area(s)?

SUBCONTRACTOR QUALIFICATION OPEN ENROLLMENT PERIOD

The Subcontractor Qualification Open Enrollment Period begins on **March 26, 2012** and will close on **April 30, 2012**. Your company can submit the requested information anytime during the Subcontractor Qualification Open Enrollment Period.

If you have any questions, please contact Christy Butcher, CAI Senior Account Manager, at (804)288-4320 or Sue Flaxman, CAI Senior Account Manager, at (717) 651-3126.

EXHIBIT C

SUBCONTRACTOR SERVICES AGREEMENT MANDATORY TERMS AND CONDITIONS FOR SUBCONTRACTOR AGREEMENTS

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SUBCONTRACTOR SERVICES AGREEMENT MANDATORY TERMS AND CONDITIONS FOR SUBCONTRACTOR AGREEMENTS

THIS INFORMATION TECHNOLOGY SERVICES CONTRACT ("Contract") is entered into by and between _____ ("the Supplier"), and _____ ("Subcontractor") located at _____, [address] to be effective as of _____ 20__ ("Effective Date").

1. PURPOSE AND SCOPE

Supplier has entered into Contract No. VA- 130620-CAI, a Master Services Agreement ("MSA") with the Virginia Information Technologies Agency ("VITA") for the provision of staff augmentation and statement of work services. This Contract sets forth the terms and conditions under which Subcontractor shall provide services ("Services") pursuant to this agreement in accordance with specific orders or Statements of Work attached hereto.

2. DEFINITIONS

A. Acceptance

Successful performance of the Services at the location designated in the applicable order or Statement of Work, or completed and successful Acceptance testing in conformance with the Requirements as determined by the Authorized User order or in the applicable Statement of Work.

B. Authorized Users

All public bodies, including VITA, as defined by §2.2-4301 and referenced by §2.2-4304 of the Code of Virginia. Authorized Users are the Supplier's customers.

C. Confidential Information

Any confidential or proprietary information of a Party that is disclosed in any manner, including oral or written, graphic, machine readable or other tangible form, to any other Party in connection with or as a result of discussions related to this Contract or any order or SOW issued hereunder, and which at the time of disclosure either (i) is marked as being "Confidential" or "Proprietary", (ii) is otherwise reasonably identifiable as the confidential or proprietary information of the disclosing Party, or (iii) under the circumstances of disclosure should reasonably be considered as confidential or proprietary information of the disclosing Party.

D. Deliverable

The tangible embodiment of the Services, including the development or creation of Work Product, performed or provided by Supplier as identified in the applicable Statement of Work.

E. Party

Subcontractor or Supplier.

F. Related Deliverable

Deliverable identified, specified and mutually agreed upon in the SOW as having interdependencies with another Deliverable within the same SOW

G. Requirements

The functional, performance, operational, compatibility, Acceptance testing criteria and other parameters and characteristics of the Service(s) and Deliverables as set forth in the applicable Statement of Work and such other parameters, characteristics, or performance standards that may be agreed upon in writing by the Parties.

H. Service

Any work performed or service provided, including provision to the Authorized User of any Deliverable, by Supplier under this Contract. Service includes the discovery, creation, or development of Work Product, if any.

I. Subcontractor Service

Any work performed or service provided, including any Deliverable prescribed in the applicable order or SOW attached thereto, by Subcontractor under this Contract.

J. Statement of Work (SOW)

A SOW means any document which, upon signing by both Parties, shall be deemed a part of this Contract, and which describes the deliverables, due dates, assignment duration and payment obligations for a specific project, engagement or assignment for which Subcontractor shall be providing Services.

K. Subcontractor

Includes any individual who is an employee, sub-contractor or independent contractor of Subcontractor who is assigned by Subcontractor to perform Services under this Contract.

L. Work Product

Inventions, combinations, machines, methods, formulae, techniques, processes, improvements, software designs, computer programs, strategies, specific computer-related know-how, data and original works of authorship (collectively, the "Work Product") discovered, created, or developed by Subcontractor, or jointly by Subcontractor and an Authorized User(s) in the performance of this Contract. Work Product shall not include configuration of software.

3. TERM AND TERMINATION

Either Party may terminate this Contract, in whole or in part, upon not less than thirty (30) days prior written notice at any time for any reason, provided however that if Subcontractor is providing Services at the time of such notice, the Contract shall terminate at the later of (i) the date of termination specified in such notice, or (ii) the first date that Subcontractor is no longer providing Services pursuant to this Contract.

Either party may submit any contractual dispute to mediation for resolution according to the terms of the Dispute Resolution Section.

Supplier shall have the right to terminate this Contract, in whole or in part, or any order or SOW issued hereunder, in whole or in part for breach and/or default of Subcontractor. Subcontractor shall be deemed in breach and/or default in the event that Subcontractor fails to meet any material obligation set forth in this Contract or in any order or SOW issued hereunder.

If Supplier deems the Subcontractor to be in breach and/or default, Supplier shall provide Subcontractor with notice of breach and/or default and allow Subcontractor fifteen (15) days to cure the breach and/or default. If Subcontractor fails to cure the breach as noted, Supplier may immediately terminate this Contract or any order or SOW issued hereunder, in whole or in part. Any such termination shall be deemed a Termination for Breach or a Termination for Default. Subcontractor's consistent or recurring failure to meet the agreed-upon service levels will be considered to be a material breach of the Contract as described in this section. In the event of a Termination for Breach or Termination for Default, Subcontractor shall accept return of any Deliverable that was not accepted and shall refund any monies paid for such Deliverable, and all costs of de-installation and return of Deliverables shall be borne by Subcontractor.

Supplier may terminate any order or SOW issued hereunder, in whole or in part, in the event that Supplier's customer provides notice of termination to Supplier. In this event, the effective date of the termination will be consistent with the termination date specified in the notice provided by Supplier's customer.

4. SERVICES

A. Nature of Services and Engagement

Subcontractor is an independent contractor engaged to perform certain Services, including but not limited to consulting, installation and/or support activities as set forth in any order or SOW attached thereto.

B. Statement of Work (SOW)

All Services shall be performed at the times and locations set forth in the applicable order or SOW and at the rates specified therein. All changes in the scope of Service must be described in a written change request, which includes an appropriate adjustment to the price, delivery dates or both. Any authorized Services beyond the scope of an order or applicable SOW attached thereto shall be performed at the hourly rates set forth in the SOW, unless otherwise agreed in writing by the Parties.

In furtherance of compliance, invoicing, and auditing requirements Subcontractor personnel shall maintain daily time reports of hours and tasks performed which shall be submitted as required by Supplier.

An SOW may designate certain of Supplier's personnel as Key Personnel or Project Managers. Supplier's obligations with respect to Key Personnel and Project Managers shall be described in the applicable SOW. Failure of Supplier to perform in accordance with such obligations may be deemed a default of this Contract.

C. Performance of Services

Subcontractor shall provide personnel qualified to perform the Services required by any SOW issued hereunder. If any individual provided by Subcontractor fails to perform at an acceptable level of achievement of Requirements within a reasonable length of time, which shall not exceed ten (10) business days, the Supplier shall have the right to request that Subcontractor immediately remove such individual from performing on the SOW and replace such individual with a more qualified individual. Supplier may withhold payment for any hours billed by Subcontractor for such individual's performance of the Services. Any disputes arising from the foregoing shall be resolved in accordance with the Dispute Resolution section of this Contract.

D. Change Orders

All changes to the Services to be provided pursuant to any given SOW must be described in a written change request (template provided as an Exhibit hereto), which includes any appropriate adjustments to the SOW. Either Party to an SOW may issue a change request that will be subject to written approval of the other Party before it becomes part of this Contract.

E. Acceptance

Service(s) shall be deemed accepted when the Supplier's customer determines that such Service(s) meets the Requirements set forth in the applicable order or SOW. If applicable, Subcontractor shall be responsible for ensuring that any individual Deliverable functions properly with any other Related Deliverable provided pursuant to the same SOW. Should a previously Accepted Deliverable require further modification in order to work properly with any other Related Deliverable, Subcontractor shall be responsible for all costs associated with such modification. Supplier's customer shall commence Acceptance testing within ten business (10) days, or within such other period as set forth in the applicable SOW, after receipt of the Service. Acceptance testing will be no longer than thirty (30) days, or such longer period as may be agreed in writing. Supplier and Subcontractor, for each Deliverable Subcontractor agrees to provide to the Supplier's customer such assistance and advice as the Supplier's customer may reasonably require, at no additional cost, during such Acceptance testing. Supplier shall provide to Subcontractor written notice of Acceptance upon completion of installation and successful Acceptance testing. Should Supplier, or Supplier's customer on the Supplier's behalf, fail to provide Subcontractor written notice of successful or unsuccessful Acceptance testing within five business (5) days following the Acceptance testing period, the Service shall be deemed Accepted.

F. Cure Period

Subcontractor shall correct any non-conformities identified hereunder and shall thereafter re-submit such previously non-conforming Service or Deliverable for re-testing within seven (7) business days of the appropriate written notice of non-conformance, or as otherwise agreed between such Supplier and Subcontractor. In the event that Subcontractor fails to deliver a Service or Deliverable which meets the Requirements, the Supplier may, in its sole discretion:

(i) reject the Service or Deliverable in its entirety and recover amounts previously paid hereunder for Services or Deliverables that are identified and specified and mutually agreed upon in the SOW as having interdependencies with the non-conforming Service or Deliverable; (ii) issue a "partial Acceptance" of the Service or Deliverable with an equitable adjustment in the price to account for such deficiency; or (iii) conditionally accept the applicable Service or Deliverable while reserving its right to revoke Acceptance if timely correction is not forthcoming. Failure of a Service or a Deliverable to meet, in all material respects, the specifications and performance standards after the second set of acceptance tests may constitute cause to terminate the SOW or constitute a default by the Subcontractor. Notwithstanding the foregoing, Supplier shall be entitled to pursue any other remedies that are available to it under this Contract and at law or in equity. For services provided under a SOW, if the Supplier rejects the Service or Deliverable in its entirety, the Supplier may seek to recover amounts previously paid to Subcontractor for such Service or Deliverable.

G. Warranty Period

90 days from Acceptance of the Deliverable, or such longer period as may be agreed to in the applicable SOW.

H. Use of Deliverables

Subcontractor grants to Supplier a worldwide, royalty free, perpetual license to use, reproduce, display, distribute copies of, and prepare derivative works of the Deliverables to or for (i) Supplier's customer's internal purposes, (ii) Supplier's customer's agencies within the Commonwealth of Virginia, (iii) third parties who have signed appropriate confidentiality agreements, and (iv) governmental or regulatory bodies as required by law or regulation. It is expressly understood that "perpetual" license rights shall commence upon delivery of the Service Deliverables to the Supplier and shall exist in perpetuity.

5. RIGHTS TO WORK PRODUCT

A. Work Product

Supplier and Subcontractor each acknowledge that performance of this Contract may result in Work Product(s). Subcontractor agrees that it shall promptly and fully disclose to Supplier any and all Work Product generated, conceived, reduced to practice or learned by Subcontractor or any of its employees, either solely or jointly with others, during the term or performance of this Contract, which in any way relates to the applicable order or SOW attached thereto.

Subcontractor further agrees that neither Subcontractor nor any of Subcontractor's employees, contractors, agents or subcontractors, nor any party claiming through Subcontractor or Subcontractor's employees, shall, other than in the performance of this Contract, make use of or disclose to others any proprietary information relating to the Work Product. All Services performed hereunder shall include delivery of all Work Product source code, object code, executables, and documentation. Subcontractor agrees that Supplier shall have the right to require Subcontractor to provide a copy of the most recent object or source code to Supplier's customer at any and all times.

B. Ownership

Subcontractor agrees that, whether or not the Services are considered "works made for hire" or an employment to invent, all Work Product discovered, created or developed under this Contract shall be and shall remain the sole and exclusive property of the Supplier. Except as specifically set forth in writing and signed by both Supplier and Subcontractor, Subcontractor agrees that the Supplier shall have all rights with respect to any Work Product discovered, created or developed under this Contract without regard to the origin of the Work Product.

If and to the extent that Subcontractor may, under applicable law, be entitled to claim any ownership interest in the Work Product, Subcontractor hereby irrevocably transfers, grants, conveys, assigns and relinquishes exclusively to the Supplier any and all right, title and interest it now has or may hereafter acquire in and to the Work Product under patent, copyright, trade secret and trademark law in perpetuity or for the longest period otherwise permitted by law. If any

moral rights are created, Subcontractor waives such rights in the Work Product. Subcontractor further agrees as to the Work Product to assist the Supplier in every reasonable way to obtain and, from time to time, enforce patents, copyrights, and other rights and protection, and in protecting trade secrets, with respect to such Work Product, and to that end, Subcontractor and its employees shall execute all documents for use in applying for and obtaining such patents, copyrights, and other rights and protection with respect to such Work Product, as the Supplier may reasonably request, together with any assignments thereof to the Supplier in obtaining and enforcing such rights shall continue beyond the termination of this Contract.

C. Pre-existing Work

If and to the extent that any pre-existing rights are embodied or reflected in the Service Deliverables, Subcontractor hereby grants to the Supplier an irrevocable, perpetual, non-exclusive, worldwide, royalty-free right and license to (i) use, modify, transmit, execute, reproduce, display, perform, distribute copies of and prepare derivative works based upon such pre-existing rights and any derivative works thereof, and (ii) authorize others to do any or all of the foregoing. It is expressly understood that "perpetual" term rights shall commence upon delivery of the Service Deliverables and shall exist in perpetuity unless otherwise terminated in accordance with the applicable provisions of the Contract.

6. SUBCONTRACTOR PERSONNEL

A. Selection and Management of Subcontractor Personnel

Subcontractor shall take such steps as may be necessary to ensure that all Subcontractor personnel performing Services under this Contract are competent and knowledgeable of the contractual arrangements and the applicable SOW attached thereto, between Supplier and Subcontractor. Subcontractor shall be solely responsible for the conduct of its employees, agents, and subcontractors, including all acts and omissions of such employees, agents, and subcontractors, and shall ensure that such employees and subcontractors comply with the appropriate work site security, information security and personnel conduct rules, as well as applicable federal, state and local laws, including export regulations. Supplier reserves the right to require the immediate removal from such work site of any personnel believed to have failed to comply or whose conduct or behavior is unacceptable or unprofessional or results in a security or safety breach.

All Subcontractor Personnel performing Services under this Contract will have a W-2 or 1099 relationship to the Subcontractor, or be no more than one relationship layer removed from the Subcontractor.

B. Subcontractor Personnel Supervision

Subcontractor and Supplier acknowledge that Subcontractor shall be and is the sole employer of Subcontractor personnel, and shall have sole responsibility to supervise, counsel, discipline, review, evaluate, set the pay rates of, provide (to the extent required by law) health care and other benefits for, and terminate the employment of Subcontractor personnel. Subcontractor warrants that it is and shall be the only entity to provide consideration to Subcontractor personnel pursuant to this Contract. Supplier shall have no responsibility to provide oversight, supervision, benefits, guarantees of employment, etc. for subcontractor personnel.

7. REPRESENTATIONS AND WARRANTY OF SUBCONTRACTOR

A. Ownership

Subcontractor has the right to provide the Services, including Deliverables, without violating or infringing any law, rule, regulation, copyright, patent, trade secret or other proprietary right of any third party.

B. Performance

- i). All Services shall be performed with care, skill and diligence, consistent with or above applicable professional standards currently recognized in its profession, and Subcontractor shall be responsible for the professional quality, technical accuracy, completeness and

coordination of all plans, information, specifications, Deliverables and Services furnished under this Contract;

- ii). The Services and Deliverables shall meet or exceed the requirements contained in any applicable order or SOW attached thereto;
- iii). The Services shall be performed in a professional manner;
- iv). Subcontractor warrants that the documentation which Subcontractor is required to provide under this Contract shall be sufficient in detail and content to allow a user, possessing sufficient technical knowledge, to understand fully the software or other Deliverables without reference to any other materials or information.

C. Limited Warranty and Remedy

During the Warranty Period Subcontractor warrants that the Deliverables do not contain any material errors and shall conform to the Requirements outlined in the SOW. Subcontractor shall correct all errors at no additional cost. If Subcontractor is unable to make the Deliverable conform, in all material respects, to the SOW Requirements within ten (10) days, or a time period mutually agreed upon or specified in the SOW, following written notification by Supplier, Subcontractor shall, at Supplier's request, accept return of such Deliverable and any other Related Deliverable(s) from the same SOW rendered unusable, and return all monies paid by Supplier for the non-conforming Deliverable and such other Related Deliverable(s) rendered unusable.

D. Malicious Code

Subcontractor agrees to use best efforts through quality assurance procedures to ensure that there are no computer viruses or undocumented features in any of the media or means used to deliver the Services. Subcontractor will use the best available means to scan any media on which Deliverables are provided to the Authorized User.

THE OBLIGATIONS OF SUBCONTRACTOR UNDER THIS SECTION ARE MATERIAL. SUBCONTRACTOR MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY CONCERNING MERCHANTABILITY OR FITNESS FOR ANY OTHER PARTICULAR PURPOSE.

8. ORDERS AND COMPENSATION

A. Work Request Fulfillment Process

Any and all Services provided pursuant to this Contract must be pursuant to a written order or SOW attached thereto, and such order or SOW must incorporate by reference all the terms and conditions contained in this Contract.

B. Fees and Payment

1. Payment terms are 30 days net payment from receipt of valid invoice for hourly based work performed as time and materials Staff Augmentation. An invoice is not considered valid until the hours reported have been approved within the VMS.
 - a. Subcontractor shall prepare and submit invoices based on approved time in the Peoplefluent VMS system for the previous calendar month. Subcontractor employee must enter time into the Peoplefluent VMS system on a weekly basis or as directed by the Supplier. In the event of a conflict between the invoice and the time entered on VMS, the approved time entered on VMS shall prevail.
 - b. Supplier shall use its best efforts to pay all properly prepared and submitted invoices within 30 calendar days from the date of receipt of such invoice by the Subcontractor. Supplier reserves the right to withhold payment until receipt of payment from the customer. The Supplier will notify the agency and the Subcontractor, in writing, of Supplier's intention to withhold payment and the reason.
 - c. Subcontractor shall pay their subcontractors within the same time frames and terms as noted in Section B.1 above.

2. Payment terms are seven days from the receipt of payment from Client, and receipt of valid invoice for fixed – price work performed as a fixed price SOW. An invoice is not considered valid until the milestones are approved within the VMS.

- a. Supplier shall use its best efforts to invoice the Client within seven (7) days from the receipt of a valid invoice from the Subcontractor. The Supplier will use commercially reasonable efforts to enforce payment from the Client.
- b. Notwithstanding, Supplier shall not be relieved of its obligation to pay Subcontractor if the Commonwealth's refusal to issue payment is based upon Supplier's failure to timely or properly invoice the Commonwealth.

Subcontractor understands and agrees that under no circumstances shall the Supplier be responsible for any sum(s) of money owed or owing to subcontractor for services rendered in the event that, for any reason or for no reason, the Customer denies to, refuses to, or is unable to pay the Supplier.

C. Taxes

Subcontractor shall be responsible for the payment of all taxes incurred by it as a result of this Agreement.

D. Overtime

No overtime premiums will be paid by Supplier for work which is performed under normal business hours (8:00 a.m. local time – 5:00 p.m. local time) in order to complete a task on time, unless otherwise agreed to in writing in advance by the Supplier and the Supplier's customer.

E. Reimbursement of Expenses

Subcontractor will only be reimbursed for such travel-related expenses, including transportation, meals, lodging and incidental expenses, which have been authorized by the Supplier, and the Supplier's customer in advance. For executive branch agencies, expenses will be reimbursable to Subcontractor at the then-current per diem amounts as published by the Virginia Department of Accounts (<http://www.doa.virginia.gov/>, or a successor URL(s)). For other public bodies, expense reimbursement will be governed by the Authorized User's travel policies.

9. CONFIDENTIALITY

A. Treatment and Protection

Each Party shall (i) hold in strict confidence all Confidential Information of any other Party, (ii) use the Confidential Information solely to perform or to exercise its rights under this Contract, and (iii) not transfer, display, convey or otherwise disclose or make available all or any part of such Confidential Information to any third-party. However, a Subcontractor may disclose the Confidential Information directly related to Services provided pursuant to this Contract as delivered by or through Supplier to Subcontractor personnel that are bound by a non-disclosure agreement with each Subcontractor. Each Party shall take the same measures to protect against the disclosure or use of the confidential information as it takes to protect its own proprietary or confidential information as it takes to protect its own proprietary or confidential information (but in no event shall such measures be less than reasonable care.)

B. Exclusions

The term "Confidential Information" shall not include information that is:

- i). in the public domain through no fault of the receiving Party or of any other person or entity that is similarly contractually or otherwise obligated;
- ii). obtained independently from a third-party without an obligation of confidentiality to the disclosing Party and without breach of this Contract;
- iii). developed independently by the receiving Party without reference to the Confidential Information of the other Party; or

- iv). required to be disclosed under The Virginia Freedom of Information Act (§§22-3700 et seq. of the Code of Virginia) or similar laws or pursuant to a court order.

C. Return or Destruction

Upon the termination or expiration of this Contract or upon the earlier request of the disclosing Party, the receiving party shall (i) at its own expense, (a) promptly return to the disclosing which may be Supplier's customer all tangible Confidential Information (and all copies thereof except the record required by law) of the disclosing party, or (b) upon written request from the disclosing party, destroy such Confidential Information and provide the disclosing party with written certification of such destruction, and (ii) cease all further use of the other party's Confidential Information, whether in tangible or intangible form.

D. Confidentiality Statement

All Subcontractor personnel, contractors, agents, and subcontractors performing Services pursuant to this Contract may be required to sign a confidentiality statement or non-disclosure agreement. Any violation of such statement or agreement shall be deemed a breach of this Contract and may result in termination of the Contract or any order or SOW issued hereunder.

10. INDEMNIFICATION AND LIABILITY

A. Indemnification

Subcontractor agrees to indemnify, defend and hold harmless Supplier their officers, directors, agents and employees ("Supplier's Indemnified Parties") from and against any and all third party claims, demands, proceedings, suits and actions, including any related liabilities, obligations, losses, damages, assessments, fines, penalties (whether criminal or civil), judgments, settlements, expenses (including attorneys' and accountants' fees and disbursements) and costs (each, a "Claim" and collectively, "Claims"), incurred by, borne by or asserted against any of Supplier's Indemnified Parties to the extent such Claims in any way relate to, arise out of or result from: (i) any intentional or willful conduct or negligence of any employee, agent, or subcontractor of Subcontractor, (ii) any act or omission of any employee, agent, or subcontractor of Subcontractor, (iii) breach of any representation, warranty or covenant of Subcontractor contained herein, (iv) any defect in the Deliverables or the Services, or (v) any actual or alleged infringement or misappropriation of any third party's intellectual property rights by any of the Deliverables or Services.

In the event of a Claim pursuant to any actual or alleged infringement or misappropriation of any third party's intellectual property rights by any of the Services or Deliverables, and in addition to all other obligations of Subcontractor in this Section, Subcontractor shall at its expense, either (a) procure for Supplier the right to continue use of such infringing Services or Deliverables; or (b) replace or modify such infringing Services or Deliverables with non-infringing deliverables or services satisfactory to Supplier. And in addition, Subcontractor shall provide Supplier with comparable temporary replacement deliverables and services, or reimburse Supplier for the reasonable costs incurred by Supplier in obtaining alternative deliverables and services in the event Supplier cannot use the affected Deliverable or benefit from the affected Services. If Subcontractor cannot accomplish any of the foregoing within a reasonable time and at commercially reasonable rates, then Subcontractor shall accept the return of the infringing Services or Deliverables, along with any other Services or Deliverables rendered unusable by any of Supplier's customers as a result of the infringing Services or Deliverables, and refund the price paid to Subcontractor for such components.

B. Liability

Subcontractor's liability to the Supplier under this Contract for breach of this Contract's confidentiality, security, or indemnification provisions shall be limited to the greater of two (2) times the value of the applicable Statement of Work or \$2,000,000. Subcontractor's liability to the Supplier under this Contract shall, for breach of this Contract by Subcontractor, if the breach arises from any intentional, willful, or negligent act or omission of any employee, agent, or

subcontractor of Subcontractor or the damages are based on bodily injury, death, or damage to real property or tangible personal property be limited to (2) two times the annual value of the Suppliers MSA Contract with VITA. The limitation shall apply on a per-incident basis, it being understood that multiple losses stemming from the same root cause constitute a single incident.

EXCEPT FOR CLAIMS COVERED BY THE ABOVE DOLLAR LIMITATION, NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES UNDER THIS CONTRACT, INCLUDING (WITHOUT LIMITATION) LOSS OF PROFIT, INCOME OR SAVINGS, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

11. SECURITY COMPLIANCE

Subcontractor agrees to require all Subcontractor personnel to comply with all provisions of Supplier's then current security procedures for each applicable work location and as are pertinent to Subcontractor's operation and have been supplied to Subcontractor by Supplier and further agrees to comply with all applicable federal, state and local laws. Subcontractor shall indemnify, defend and hold Supplier, its officers, directors, employees and agents harmless from and against any and all fines, penalties (whether criminal or civil), judgments, damages and assessments including reasonable expenses suffered by, accrued against, or charged to or recovered from Supplier, its officers, directors, agents or employees, on account of the failure of Subcontractor to perform its obligations pursuant to this Section.

12. INSURANCE

Subcontractor shall purchase and maintain insurance for protection from claims under the Worker's Compensation Act and other statutory employee benefit provisions, which are applicable in Virginia.

- i). Commercial General Liability - \$1,000,000 per occurrence. Commercial General Liability is to include bodily injury and property damage, personal injury and advertising injury, products and completed operations coverage. The Commonwealth of Virginia must be named as an additional insured and so endorsed on the policy.
- ii). Workers' Compensation - Statutory requirements and benefits. Coverage is compulsory for employers of three or more employees, to include the employer. Contractors who fail to notify the Commonwealth of increases in the number of employees that change their workers' compensation requirements under the Code of Virginia during the course of the contract shall be in noncompliance with the contract.
- iii). Employer's Liability - \$100,000.
- iv). Further, Subcontractor shall maintain errors and omissions coverage in the minimum amount of \$1,000,000. All of Subcontractor's policies shall be with a company rated A- or better by AM Best and SMSA Supplier shall be named as an additional insured. If the total contract dollar amount of all active fixed price SOWs awarded to your company exceeds \$1,000,000, you will need to increase your E&O coverage to equal that amount.

Subcontractor shall submit a Certificate of Insurance to Supplier evidencing the required insurance coverage and stating that thirty (30) days prior written notice must be given to Supplier before cancellation of the policy.

13. GENERAL PROVISIONS

A. Relationship between Supplier and Subcontractor

Subcontractor has no authority to contract for Supplier in any way to bind, to commit Supplier to any agreement of any kind, or to assume any liabilities of any nature in the name of or on behalf of Supplier. Under no circumstances shall Subcontractor or any of its employees, hold itself out as or be considered an agent or an employee of Supplier and Supplier shall have any duty to provide or maintain any insurance or other employee benefits on behalf of Subcontractor or its employees. Subcontractor represents and warrants that it is an independent contractor for

purposes of federal, state and local employment taxes and agrees that Supplier is not responsible to collect or withhold any federal, state or local employment taxes, including, but not limited to, income tax withholding and social security contributions, for Subcontractor. Subcontractor shall immediately pay all taxes lawfully imposed upon it with respect to this Contract or any Services provided pursuant to this Contract.

B. Incorporated Contractual Provisions

The then-current contractual provisions at the following URL are mandatory contractual provisions, required by law or by VITA, and that are hereby incorporated by reference: <http://www.vita.virginia.gov/uploadedFiles/SCM/StatutorilyMandatedTsandCs.pdf>

The contractual claims provision §22-4363 of the Code of Virginia and the required eVA provisions at <http://www.vita.virginia.gov/uploadedFiles/SCM/eVATsandCs.pdf> are also incorporated by reference.

The then-current terms and conditions in documents posted to the aforereferenced URLs are subject to change pursuant to action by the legislature of the Commonwealth of Virginia, change in VITA policy, or the adoption of revised eVA business requirements. If a change is made to the terms and conditions, a new effective date will be noted in the document title. Subcontractor is advised to check the URLs periodically.

Notwithstanding the foregoing, any and all terms contained in the MSA that relate to or refer to the Subcontractor are incorporated herein by reference. The MSA can be located at <http://www.vita.virginia.gov>, see Contract No. VA-130620-CAI.

C. Governing Law

This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia without regard to that body of law controlling choice of law. Any and all litigation shall be brought in the circuit courts of the Commonwealth of Virginia. The English language version of this Contract prevails when interpreting this Contract. The United Nations Convention on Contracts for the International Sale of Goods and all other laws and international treaties or conventions relating to the sale of goods are expressly disclaimed. UCITA shall apply to this Contract only to the extent required by §59.1-501.15 of the Code of Virginia.

D. Dispute Resolution

In the event that the Parties have any dispute, disagreement or cause of action (each, hereinafter, a "Dispute") arising pursuant to this Contract or any order or SOW attached thereto, the aggrieved party shall first try in good faith to resolve such dispute with the other Party before instituting any legal action with respect to such Dispute. If such informal efforts are unsuccessful, the Parties shall thereafter submit such dispute to non-binding mediation in accordance with the terms of this Section. Upon institution of any mediation (actual or constructive) the aggrieved Party shall promptly give notice to the other Party that it desires to mediate the Dispute. The aggrieved Party shall cooperate for a period of 90 days (or such shorter period as is necessary to avoid material financial harm to it or avoid prejudicing the enforceability of any of its legal rights) from the date that such notice is mailed (determined by postmark) to the other Party. Such mediation shall be administered by mutual agreement of the Parties, or in the absence of such mutual agreement, by the American Arbitration Association under its Commercial Mediation Procedures. In the event that such Dispute is not resolved to the satisfaction of the aggrieved Party within the time period contemplated above, then the aggrieved Party shall be free to engage in any legal process that it deems appropriate with respect to such Dispute. The foregoing shall not be implied to limit any response that the aggrieved Party may make in response to any lawsuit or other action initiated by the other Party.

In the event of any breach by Supplier, Subcontractor's remedies shall be limited to claims for damages and Prompt Payment Act interest and, if available and warranted, equitable relief, all such claims to be processed pursuant to this Section. In no event shall Subcontractor's remedies include the right to terminate any license or support services hereunder.

E. Notices

Any notice required or permitted to be given under this Contract shall be in writing and shall be deemed to have been sufficiently given if delivered in person, or if deposited in the U.S. mails, postage prepaid, for mailing by registered, certified mail, or overnight courier service addressed to the addressees shown on the signature page. Either party may change its address for notice purposes by giving the other Party notice of such change in accordance with this Section.

F. No Waiver

Any failure to enforce any terms of this Contract shall not constitute a waiver.

G. Assignment

This Contract shall be binding upon and shall inure to the benefit of the permitted successors and assigns of each party thereto. Subcontractor may not assign, subcontract, delegate or otherwise convey this Contract or any of its rights and obligations hereunder, to any entity without the prior written consent of Supplier and any such attempted assignment or subcontracting without consent shall be void.

If any law limits the right of the Parties to prohibit assignment or nonconsensual assignments, the effective date of the assignment shall be thirty (30) days after the Subcontractor gives Supplier prompt written notice of the assignment, signed by authorized representatives of both the Subcontractor and the assignee. Any payments made prior to receipt of such notification shall not be covered by this assignment.

H. Captions

The captions are for convenience and in no way define, limit or enlarge the scope of this Contract or any of its Sections.

I. Severability

Invalidity of any term of this Contract, in whole or in part, shall not affect the validity of any other term. The Parties further agree that in the event such provision is an essential part of this Contract, they shall immediately begin negotiations for a suitable replacement provision.

J. Survival

The provisions of this Contract regarding License, Rights to Work Products, Warranty, Confidentiality, Liability and Indemnification, and the General Provisions shall survive the expiration or termination of this Contract.

K. Force Majeure

Neither Party shall be responsible for failure to meet its obligations under this Contract if the failure arises from causes beyond the control and without the fault or negligence of the non-performing Party. If any performance date under this Contract is postponed or extended pursuant to this section for longer than thirty (30) calendar days, Supplier by written notice given during the postponement or extension may terminate Subcontractor's right to render further performance after the effective date of termination without liability for that termination.

L. Remedies

The remedies set forth in this Contract are intended to be cumulative. In addition to any specific remedy, Supplier reserves any and all other remedies that may be available at law or in equity.

M. Right to Audit

Supplier reserves the right to audit those Subcontractor records that relate to the Services rendered or the amounts due Subcontractor for such Services under this Contract, as well as all applicable tax records related to local, state and federal taxes owed for Services provided under the Contract. Supplier's right to audit shall be limited as follows:

- i). Performed at Subcontractor's premises, during normal business hours at mutually agreed upon times; and
- ii). Excludes access to Subcontractor cost information.
- ii). No longer than 3 years from service performance date.

N. Entire Contract

This Contract and any prior NOA constitute the entire agreement between the Parties and supersedes any and all previous representations, understandings, discussions or agreements between Supplier and Subcontractor as to the subject matter thereof. This Contract may only be amended by an instrument in writing signed by Supplier and Subcontractor.

Supplier and Subcontractor each acknowledge that it has had the opportunity to review this Contract with its legal counsel.

Executed as of the last date set forth below by the undersigned authorized representatives of Supplier and Subcontractor.

(Name of Subcontractor)

Supplier - Computer Aid

By: _____

(Signature)

Name: _____

(Print)

Title: _____

Date: _____

Address for Notice:

Attention: _____

By: _____

(Signature)

Name: _____

(Print)

Title: _____

Date: _____

Address for Notice:

Attention: _____

EXHIBIT K: CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

- i). No Federal appropriated funds have been paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee or an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.
- ii). If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- iii). The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and Contracts under grants, loans and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Signature :

James P. Cooney

Printed Name:

JAMES P. COONEY

Organization:

Computer Aid, Inc.

Date:

June 5, 2013

Exhibit B: Service Level Agreements

There are two separate Service Level Agreements (SLA) outlined in the tables below. Table B-1 applies to Contractor's performance, and Table B-2 applies Subcontractor's performance. However, Contractor is fully responsible for the performance of itself and its Subcontractors as specified under this SLA. Remedies for failure to meet the SLAs is outlined at the end of this Exhibit.

Table B-1 – Contractor SLA

- These SLA's apply to job requirements released under the contract.
- They do not apply to engagements that transition from other contracts.

Performance Standard	Description	Performance Target	Calculation	Frequency
Resume Submittal Response Time	Measures response time from receipt of request to delivery of candidate resumes	92%	Average number of requisitions which received first batch review within four business days	Quarterly
Round One Fill Rate	Measures ability to satisfactorily fulfill request with first round of resumes submitted to requestor (top 3-5 candidates)	92%	Total number of filled positions resulting from the first round of resumes/total number of requisitions filled	Quarterly

Exhibit B: Service Level Agreements

Performance Standard	Description	Performance Target	Calculation	Frequency
Resource Dismissal	Measures number of resources dismissed due to inadequate resource performance	5% or lower	Number of turnovers (due to inadequate performance)/ total number of resources engaged through end of the quarter including SLA exempt resources	Quarterly
Accurate Billing	Monthly invoice is complete and correct, submitted on time	99%	Number of invoices accepted by agency / total number of invoices	Quarterly
Customer Satisfaction	For staff augmentation online survey provided after first quarter engagement of resources and annually thereafter and at conclusion of work assignment. For SOW engagements, on-line survey provided at end of the SOW.	100%	Online survey provided after first quarter of engagement, annually, and at conclusion of work assignment	Quarterly
System Availability	VMS is available to hiring managers and subcontractors	99%	Measured 24/7 with exception of announced down times	Monthly

Exhibit B: Service Level Agreements

Performance Standard	Description	Performance Target	Calculation	Frequency
Resource Quality	Measures quality of resources submitted to manager. Resumes need to meet technical requirements.	99% or higher	Number of resumes meeting technical requirements in PeopleFluent score submitted to manager / Total numbers of resumes submitted to manager.	Quarterly
Contractor Satisfaction Survey	Contractor will conduct satisfaction survey to measure agency satisfaction with VMS performance.	80%	Number of satisfactory responses / total number of responses	Biannually

Table B-2 – Subcontractor SLA

Exhibit B: Service Level Agreements

- These SLA's will be applied to Michigan's tiering structure.
- These SLA's apply to job requirements released under the contract.
- They do not apply to engagements that transition from other contracts.

Performance Standard	Description	Performance Target	Calculation	Frequency
Percentage of timesheets submitted on time	Timesheets will be submitted to the State for approval by defined deadline	95%	Average number of timesheets submitted by deadline/total number of engaged resources	Monthly
Resource Dismissal	Measures number of resources dismissed due to inadequate resource performance	5% or lower	Number of turnovers (due to inadequate performance)/total number of resources	Quarterly
Attrition Rate	Measures resource turnover due to unplanned situations that are not caused by the State of Michigan, excluding inadequate performance, death, serious illness, etc.	5% or lower	Number of unplanned turnovers within the quarter / total number of resources engaged through end of the quarter including SLA exempt resources	Quarterly

Exhibit B: Service Level Agreements

Performance Standard	Description	Performance Target	Calculation	Frequency
Candidates Interviewed	Measures the number of candidates who fulfill interview requests	80%	Number of candidates interviewed/total number of candidates requested for interview	Quarterly
Candidates fulfilling offers of engagement/failure to start	Measures the number of candidates who start engagements after offer acceptance Measures false starts	95%	Number of candidates starting engagements/total number of candidates accepting offers of engagement	Quarterly

Remedies for Failure to Meet SLA

Contractor, by itself or through its Subcontractors, will meet or exceed the service levels detailed in the tables above. In the event Contractor or its Subcontractors fail to meet the service levels, Contractor agrees to the following remedies:

- A discussion will take place between Contractor representatives and the State Program Manager. Contractor will be given a warning and a plan will be developed to improve on the problem areas within thirty (30) days.
- If a second review occurs in which the Contractor fails to meet the service levels the Contractor will be placed on Probation, and Contractor will be given two (2) review periods to improve its overall service score. If a third review with below-threshold score occurs within the two (2) month probationary period, the Contractor will be required to give a one percent (1%) rebate

Exhibit B: Service Level Agreements

on the month's revenue back to the State. If a fourth below-threshold score occurs within the next three (3) months, Contractor will be required to provide a three percent (3%) rebate on the month's revenue back to the State, and the Contract may be terminated for cause by the State.

- Contractor agrees to identify and calculate all credits due for outages, performance failures or failure to meet any service level. All service levels will be computed on the basis detailed in the tables above. Contractor will ensure that all credits due the State are provided automatically without requiring the State to submit a claim or request, and are clearly identified on the credit note to which they are posted (including specifically identifying on the credit note the failure to which the service credit applies.). Service credits will be issued no later than 60 days after such failure to meet a service level occurs. The SLAs will be reviewed quarterly by the State and the Contractor to identify any issues that may need immediate attention. Contractor will be allowed a 60 day grace period during the implementation phase of the Contract to ramp up services, without scoring on any of the performance metrics in the SLAs. Contractor will begin measuring the service levels immediately after completion of implementation and migration, beginning with the next calendar quarter, or 60 days thereafter, whichever is longer.

Exhibit C: CAI Michigan Rate Card

Job Category	Job Title	Skill Level	Not to Exceed Bill Rate
Applications	Programmer Analyst	Analyst 1	\$52.53
		Analyst 2	\$58.40
		Analyst 3	\$75.71
		Analyst 4	\$82.37
		Analyst 5	\$97.28
		Analyst 6	\$115.48
	Programmer	Programmer 1	\$57.21
		Programmer 2	\$66.50
		Programmer 3	\$74.84
		Programmer 4	\$83.55
		Programmer 5	\$96.55
		Programmer 6	\$114.34
	Software Test Analyst	Analyst 1	\$41.90
		Analyst 2	\$47.00
		Analyst 3	\$51.86
		Analyst 4	\$59.89
		Analyst 5	\$72.87
	Technical Writer	Technical Writer 1	\$37.47
		Technical Writer 2	\$40.96
		Technical Writer 3	\$49.62
	Business Analyst	Analyst 1	\$47.50
		Analyst 2	\$55.18
		Analyst 3	\$64.37
		Analyst 4	\$76.60
		Analyst 5	\$86.20
	System Analyst	Analyst 1	\$50.66
		Analyst 2	\$53.27
		Analyst 3	\$65.78
		Analyst 4	\$78.54
		Analyst 5	\$91.38
		Analyst 6	\$105.43
	Software Solutions Architect		\$108.54
	Intelligent Transportation Systems Specialist		\$55.99
	ERP Analyst	ERP Analyst 1	\$74.62
		ERP Analyst 2	\$86.20
		ERP Analyst 3	\$104.06
		ERP Analyst 4	\$113.12
		ERP Analyst 5	\$133.03
	ERP Developer	ERP Developer 1	\$90.49
		ERP Developer 2	\$106.77
		ERP Developer 3	\$117.64
		ERP Developer 4	\$126.70
		ERP Developer 5	\$148.41
	ERP Database Administrator	ERP Database Administrator 1	\$65.51
		ERP Database Administrator 2	\$75.51
		ERP Database Administrator 3	\$93.29
		ERP Database Administrator 4	\$108.48
		ERP Database Administrator 5	\$134.31
	ERP Project Manager	ERP Project Manager 1	\$121.22
		ERP Project Manager 2	\$131.16
		ERP Project Manager 3	\$148.57

Exhibit C: CAI Michigan Rate Card

Job Category	Job Title	Skill Level	Not to Exceed Bill Rate
Applications	Geographic Information Systems	Geospatial Projects Manager	\$87.23
		Analyst	\$80.28
		Specialist I	\$58.40
		Specialist II	\$69.36
		Technician Trainee	\$47.27
		Technician I	\$51.47
		Technician II	\$54.25
		Technician III	\$55.94
	Graphic Designer	Graphic Designer 1	\$40.41
		Graphic Designer 2	\$48.57
	Mobile Specialist	Mobile Specialist 1	\$123.01
		Mobile Specialist 2	\$147.98
	Website Developer	Website Developer 1	\$55.05
		Website Developer 2	\$59.18
	Webmaster	Webmaster 1	\$58.25
		Webmaster 2	\$60.57
Customer/Technical Support	Help Desk	Help Desk 1	\$32.67
		Help Desk 2	\$37.62
		Help Desk 3	\$42.41
	Technical Support	Technical Support 1	\$46.93
		Technical Support 2	\$53.62
		Technical Support 3	\$60.46
	Infrastructure Solutions Architect	Infrastructure Solutions Architect 1	\$69.80
		Infrastructure Solutions Architect 2	\$77.09
		Infrastructure Solutions Architect 3	\$85.17
		Infrastructure Solutions Architect 4	\$96.20
		Infrastructure Solutions Architect 5	\$108.89
	System Administrator	System Administrator 1	\$55.05
		System Administrator 2	\$60.89
		System Administrator 3	\$68.73
Data Management	Database Architect	Database Architect 1	\$73.87
		Database Architect 2	\$82.59
		Database Architect 3	\$90.01
		Database Architect 4	\$103.81
	Data Warehouse Architect	Data Warehouse Architect 1	\$87.60
		Data Warehouse Architect 2	\$99.69
		Data Warehouse Architect 3	\$108.90
	Database Administrator	Database Administrator 1	\$54.63
		Database Administrator 2	\$68.14
		Database Administrator 3	\$76.40
		Database Administrator 4	\$86.80
		Database Administrator 5	\$103.32
Governance	IT Governance Analyst		\$108.73
	IT Procurement Analyst		\$56.02
IT Management Services	Business Continuity Planner		\$82.62
	Business Process Reengineering		\$98.03
	Enterprise Architect		\$123.01
	IT Strategist		\$96.20
	IT Auditor	I.T. Auditor 1	\$43.62
		I.T. Auditor 2	\$47.80
		I.T. Auditor 3	\$62.46
		I.T. Auditor 4	\$69.93
		I.T. Auditor 5	\$79.63
	IT Trainer		\$74.30

Exhibit C: CAI Michigan Rate Card

Job Category	Job Title	Skill Level	Not to Exceed Bill Rate
IT Management Services	IT Sourcing Consultant	IT Sourcing Consultant 2	\$106.47
		IT Sourcing Consultant 3	\$120.36
IT Security	IT Security Analyst	IT Security Analyst 1	\$70.20
		IT Security Analyst 2	\$77.59
		IT Security Analyst 3	\$83.09
	IT Security Architect	IT Security Architect 1	\$92.36
		IT Security Architect 2	\$99.45
	Security Auditor		\$114.62
Project Management	Project Manager	Project Manager 1	\$65.62
		Project Manager 2	\$76.60
		Project Manager 3	\$88.41
		Project Manager 4	\$104.24
		Project Manager 5	\$112.21
	Project Lead	Project Lead 1	\$70.76
		Project Lead 2	\$80.13
	Project Coordinator		\$36.41
Telecommunications and Computer Networking	Network Administrator	Network Administrator 1	\$46.46
		Network Administrator 2	\$60.93
		Network Administrator 3	\$65.66
Telecommunications and Computer Networking	Network Architect	Network Architect 1	\$69.50
		Network Architect 2	\$79.38
		Network Architect 3	\$93.43
	Network Engineer	Network Engineer 1	\$50.79
		Network Engineer 2	\$55.65
		Network Engineer 3	\$66.32
		Network Engineer 4	\$90.37
	Public Safety Consultant		\$58.87
	Radio Engineer		\$73.17

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Exhibit D: Job Titles and Descriptions

APPLICATIONS

1. Programmer Analyst

- Plans, develops, tests, and documents computer programs, applying knowledge of programming techniques and computer systems. Evaluates user request for new or modified program, such as for financial or human resource management systems, clinical research trial results, statistical study of traffic patterns, or analyzing and developing specifications for bridge design, to determine feasibility, cost and time required, compatibility with current system, and computer capabilities. Consults with user to identify current operating procedures and clarify program objectives. Formulates plan outlining steps required to develop program, using methodologies such as structured analysis and design or object-oriented development.
- Work involves assisting in analyzing systems outlines to develop programs for computer applications, writing solution programs, documenting the methods and procedures used in program development, and testing and correcting programs. Works under moderate supervision with limited latitude for the use of initiative and independent judgment. Develops block diagrams and machine logic flowcharts to represent operations and data flow for applications.
- Captures requirements using industry standard development frameworks and tools. Designs reports, forms and letters along with computer terminal screen displays to accomplish goals of user request. Reviews screens, reports, forms and letters designs with users. Converts project specifications, using industry standard tools, such as object-oriented tools and code generation, into sequence of detailed instructions and logical steps for coding into language processable by computer, applying knowledge of computer programming techniques and computer languages.
- Enters program codes into computer system. Enters commands into computer to run and test program. Reads computer printouts or observes display screen to detect syntax or logic errors during program test, or uses diagnostic software to detect errors. Replaces, deletes, or modifies codes to correct errors. Analyzes, reviews and alters program to increase operating efficiency or adapt to new requirements. Writes documentation to describe program development, logic, coding, and corrections. Writes manual for users to describe installation and operating procedures. Assists users to solve operating problems. Recreates steps taken by user to locate source of problem and rewrites program to correct errors. May use computer-aided software tools in each stage of system development. May train users to use program. May oversee installation of hardware and software. May provide technical assistance to program users. May install and test program at user site. May monitor performance of program after implementation. May specialize in developing programs for business or technical applications.

Programmer Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment

Exhibit D: Job Titles and Descriptions

Programmer Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Programmer Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, may lead and direct the work of others, a wide degree of creativity and latitude is expected.

Programmer Analyst 5	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer Analyst 6	
Years of Experience	Advanced experience in the IT industry and as a programmer analyst
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

Exhibit D: Job Titles and Descriptions

2. Programmer

- Converts data from project specifications and statements of problems and procedures to create or modify computer programs. Prepares, or receives detailed specifications to describe sequence of steps that program must follow and input, output, and logical operations involved. Analyzes specifications, applying knowledge of computer capabilities, subject matter, and symbolic logic. Confers with supervisor and representatives of departments concerned with program to resolve questions of program intent, data input, output requirements, and inclusion of internal checks and controls. Converts detailed specifications to language processable by computer. Enters program codes into computer system. Inputs test data into computer. Observes computer monitor screen to interpret program operating codes. Corrects program errors, using methods such as modifying program or altering sequence of program steps. May prepare computer block diagrams and machine logic flowcharts for detailed coding of problems, and provides for the documentation of programming work.
- Writes instructions to guide operating personnel during production runs. Analyzes, reviews, and rewrites programs to increase operating efficiency or to adapt program to new requirements. Compiles and writes documentation of program development and subsequent revisions. May assist computer operator to resolve problems in running computer program. May work with System Analyst to obtain and analyze project specifications. May direct and coordinate work of others to write, test, and modify computer programs. Work involves writing programs to solve problems, documenting the methods and procedures used in program development, and testing and correcting programs. Work involves analyzing system outlines to develop programs for computer applications; writing solution programs; May train others. Works under general supervision with limited latitude for the use of initiative and independent judgment. Analyzes proposed computer applications in terms of equipment requirements and capabilities. Assists in developing solutions to software-related problems. May assist in the generation or installation of systems software.
- Prepares test data. May assist in writing and maintaining functional and technical specifications. Experience in computer programming work. Knowledge of the principles, practices, and techniques of computer programming and systems analysis, of computer operations procedures and systems, and of computer programming languages. Skill in the use of computer equipment. Ability to design programs and systems architecture; to prepare program specifications; to code, test, and debug computer programs; to interpret technical information relating to computer programming and other areas of data processing; and to communicate effectively.

Programmer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Programmer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

Programmer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Programmer 5	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry.

Programmer 6	
Years of Experience	Advanced experience in the IT industry and as a programmer.
Job Description	Includes descriptions detailed earlier as well as programmer analyst experience in specialized IT technologies which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

3. Software Test Analyst

- Develops, publishes, and implements test plans. Writes and maintains test automation. Evaluates, recommends, and implements automated test tools and strategies. Develops, maintains, and upgrades automated test scripts and architectures for application products. Also writes, implements, and reports status for system test cases for testing. Analyzes test cases and provides regular progress reports. Participates in the testing process through test review and analysis, test witnessing and certification of software.

Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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Analyst 2	
Years of Experience	4-7 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>

Analyst 3	
Years of Experience	7-10 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and</p>

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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Analyst 4	
Years of Experience	11-14 years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>

Analyst 5	
Years of Experience	15 or more years of experience in the field.
Job Description	<p>Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines: Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and</p>

Exhibit D: Job Titles and Descriptions

	<p>efficiently.</p> <p>Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines. Recommends program improvements or corrections to programmers. Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards. Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors. Identifies differences between establishment standards and user applications and suggests modifications to conform to standards. Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs. Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation. Writes documentation to describe program evaluation, testing, and correction. May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures. May train software program users.</p>
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4. Technical Writer

- Develops and maintains user and technical documentation and project process documentation for Application Teams. Understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. Provides expertise on technical concepts of applications and /or user groups and structuring procedures in a logical sequence, due to a broad understanding of the applications. Writes a variety of technical articles, reports, brochures, and/or manuals for documentation for a wide range of uses. May be responsible for coordinating the display of graphics and the production of the document.
- Develop, enhance, and maintain user documentation for multiple applications including documentation required for the operations provider. Develop on-line source documentation as appropriate. Maintain documentation libraries and subscription lists. Identify, create, revise, and maintain documentation and templates. Ensure appropriate control access/use of documentation materials. Maintain application and user documentation. Ensure messages and terminology is consistent across all written materials. Research and complete documentation service requests. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Follow quality standards. Ability to work in a team environment. Strong communication skills; both written and spoken.
- Composes technical documents, manuals, bulletins, brochures, publications, training manuals, and special reports. Organizes and coordinates the composition of material and drafting of forms suitable for reproduction. Reviews and edits prepared material and illustrations. Develops and refines material for publication in journals and periodicals. Prepares informational material for release to the mass media. Works with agency staff in the development of formats, graphics, and the layout of publications. Assists agency staff in preparing and refining material for speeches and other public presentations. May research product design, capabilities, and compatibility ranges.
- May oversee the writing, editing, publishing, and distribution of specification documents. May review various resources and prepare analyses or summaries. May train others. Experience in technical writing, journalism, or communications work. Knowledge of the techniques and methods of planning, organizing, and writing various types of materials; of research methodology; and of departmental policies, procedures, and regulations. Skill in the use of office equipment. Ability to conduct research; to compose, review, illustrate, and edit technical documents, materials, and reports; to communicate effectively; and to train others.

Exhibit D: Job Titles and Descriptions

Technical Writer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Writer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Technical Writer 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

5. Business Analyst

- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Experienced with business process reengineering and identifying new applications of technology to business problems to make business more effective. Familiar with industry standard (including Legacy, Core, and Emerging technologies), business process mapping, and reengineering. Prepares solution options, risk identification, and financial analyses such as cost/benefit, ROI, buy/build, etc. Writes detailed description of user needs, program functions, and steps required to develop or modify computer programs.
- Prepare and document Functional and Technical Specifications for reporting and data warehouse work. Assist with business warehouse/intelligence support and enhancements. Develops RFPs. Assist in deployment and management of end-user reporting tools and platforms. Work with IT and business project teams to understand reporting and data warehousing requirements and propose solutions. Document and provide knowledge transfer to the rest of the Enterprise Reporting Team for all solutions.
- Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Familiar with relational database concepts, and client-server concepts. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a project leader or manager. A certain degree of creativity and latitude is required.

Exhibit D: Job Titles and Descriptions

Business Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Business Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Business Analyst 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 4	
Years of Experience	12-15 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Business Analyst 5	
Years of Experience	16 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Exhibit D: Job Titles and Descriptions

6. System Analyst

- Understands business objectives and problems, identifies alternative solutions, performs studies and cost/benefit analysis of alternatives. Analyzes user requirements, procedures, and problems to automate processing or to improve existing computer system: Confers with personnel of organizational units involved to analyze current operational procedures, identify problems, and learn specific input and output requirements, such as forms of data input, how data is to be summarized, and formats for reports. Writes detailed description of user needs, program functions, and steps required to develop or modify computer program. Reviews computer system capabilities, specifications, and scheduling limitations to determine if requested program or program change is possible within existing system.
- Studies existing information processing systems to evaluate effectiveness and develops new systems to improve production or specifications as required. Prepares specifications to detail operations to be performed by equipment and computer programs and operations to be performed by personnel in system. Conducts studies pertaining to development of new information systems to meet current and projected needs. Plans and prepares technical reports, memoranda, and instructional manuals as documentation of program development. Upgrades system and corrects errors to maintain system after implementation. May assist computer programmer in resolution of work problems related to project specifications, or programming. May direct and coordinate work of others to develop, test, install, and modify programs.
- Provides technical assistance and support for applications and hardware problems and for information sharing with external entities in a customer service environment. Provides field coordination and planning for the effective use of management information systems. Determines operational, technical, and support requirements for the location, installation, operation, and maintenance of various office equipment and systems. Prepares charts, diagrams, tables, and flowcharts. Details input and output record formats for computer programs. Assists in formulating logical descriptions of problems and devising optimum solutions. Assists in the design, development, and maintenance of various computer applications. May provide support and make recommendations for information technology systems processes associated with software technology planning, development, implementation, system security, and interfaces.
- Graduation from an accredited four-year college or university with major course work in computer science, computer information systems, or management information systems is generally preferred. Knowledge of the limitations and capabilities of computer systems and of the techniques used in the design of non-automated systems, of information technology equipment, of applicable programming languages, of computer hardware and software, of computer operating systems, of writing program code, and of automated mapping. Ability to analyze systems and procedures, to write and revise standards and procedures, to communicate effectively, and to train others.

System Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

System Analyst 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with

Exhibit D: Job Titles and Descriptions

	considerable latitude for the use of initiative and independent judgment.
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System Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

System Analyst 4	
Years of Experience	10 or more years of experience in the field.
Job Description	Advanced experience in the field.

System Analyst 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals.

System Analyst 6	
Years of Experience	14 or more years of experience in the field.
Job Description	Proven experience with complex concepts, practices, and procedures within the IT industry. Relies on advanced experience and judgment to plan and accomplish goals. Works independently and cooperatively with management and stakeholders.

7. Software Solutions Architect

Solutions Architect	
Years of Experience	5 or more years of experience in the field.
Job Description	Lead and manage the design, implementation and delivery of system and software architecture designs, strategies and quality assurance plans. Design, prototype, develop and implement to achieve business results for the client. Experienced expert able to lead and deliver solutions using object-oriented, service-oriented architecture, and n-tier architectures. Adopt, develop, and execute a robust software development lifecycle, using industry best practices. Follows both the Commonwealth and industry best practices for software engineering. - Leads in the development of long term technology strategy and planning for the entire organization leveraging existing and acquiring new resources. Leads and actively participates on project teams, clarifying business needs and requirements, performing analysis, design, development, integration, and maintenance of

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	systems across the enterprise. Willing and able to engage with other internal organizations to maximize delivery capabilities and provide value to clients. Participates and leads the development of delivery approach, and labor and cost estimates. Manage projects or tasks using the Commonwealth and industry project delivery methodologies and best practices. Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.
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8. Intelligent Transportation Systems Specialist

Intelligent Transportation Systems (ITS) Specialist	
Years of Experience	5 or more years of experience in the field
Job Description	<p>Design, plan, manage, and implement, and review Intelligent Transportation Systems (ITS) and Transportation/Traffic Management Centers. Participate in the design, layout, modification, and fabrication of the ITS components used in the Commonwealth transportation infrastructure; recommend ITS equipment specifications; assist in developing operating procedures for ITS devices; read diagrams, blueprints, manuals, and specifications for new installations and continual maintenance of ITS devices; make corrections to schematics and blueprints; assist contractors and other agencies with installation of new devices and system expansion.</p> <p>Make independent technical decisions in the course of day to day activities.</p> <p>Design, lead and participate in complex field and bench testing procedures on a variety of ITS equipment, such as closed circuit television systems, traffic system control units, trailblazer signs, dynamic message signs, radio communication facilities, conflict monitors, incident detection systems, load switches, inductive vehicle detection systems, power service assemblies, and others; test, troubleshoot, and repair ITS equipment to component level of micro processing systems; maintain and service a variety of test and repair equipment.</p> <p>Train assigned staff in proper work methods and techniques and in the set up and use of equipment.</p> <p>Document all ITS devices in the freeway and arterial infrastructure.</p> <p>Assist Traffic Management Center staff within the center as needed with the operation of the ITS facilities.</p>

9. ERP Analyst

ERP Analyst 1	
Years of Experience	0-2
Job Description	Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. Customizes and configures workflow to allow the integration of client/server applications. Tests ERP layout to ensure the system is meeting corporate needs. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Typically reports to a supervisor or manager.

Exhibit D: Job Titles and Descriptions

ERP Analyst 2	
Years of Experience	2-4
Job Description	Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. Customizes and configures workflow to allow the integration of client/server applications. Tests ERP layout to ensure the system is meeting corporate needs. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision. A certain degree of creativity and latitude is required. Typically reports to a supervisor or manager

ERP Analyst 3	
Years of Experience	4-6
Job Description	Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. Customizes and configures workflow to allow the integration of client/server applications. Tests ERP layout to ensure the system is meeting corporate needs. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Analyst 4	
Years of Experience	6-8
Job Description	Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. Customizes and configures workflow to allow the integration of client/server applications. Tests ERP layout to ensure the system is meeting corporate needs. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Analyst 5	
Years of Experience	8+
Job Description	Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program. Customizes and configures workflow to allow the integration of client/server applications. Tests ERP layout to ensure the system is meeting corporate needs. May require a bachelor's degree. Familiar with a variety of the

Exhibit D: Job Titles and Descriptions

	field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.
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10.ERP Developer

ERP Developer 1	
Years of Experience	2-4
Job Description	Reviews, analyzes, and modifies the programming systems including encoding, testing, and debugging to support an organization's Enterprise Resource Planning (ERP) applications. Ensures that software can be completely integrated into the ERP system. Designs new modules to improve system efficiency. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Developer 2	
Years of Experience	4-6
Job Description	Reviews, analyzes, and modifies the programming systems including encoding, testing, and debugging to support an organization's Enterprise Resource Planning (ERP) applications. Ensures that software can be completely integrated into the ERP system. Designs new modules to improve system efficiency. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Developer 3	
Years of Experience	6-8
Job Description	Reviews, analyzes, and modifies the programming systems including encoding, testing, and debugging to support an organization's Enterprise Resource Planning (ERP) applications. Ensures that software can be completely integrated into the ERP system. Designs new modules to improve system efficiency. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

ERP Developer 4	
Years of Experience	8-10

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Job Description	Reviews, analyzes, and modifies the programming systems including encoding, testing, and debugging to support an organization's Enterprise Resource Planning (ERP) applications. Ensures that software can be completely integrated into the ERP system. Designs new modules to improve system efficiency. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.
ERP Developer 5	
Years of Experience	10+
Job Description	Reviews, analyzes, and modifies the programming systems including encoding, testing, and debugging to support an organization's Enterprise Resource Planning (ERP) applications. Ensures that software can be completely integrated into the ERP system. Designs new modules to improve system efficiency. May require a bachelor's degree. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. May lead and direct the work of others. A wide degree of creativity and latitude is expected. Typically reports to a supervisor or manager.

11. ERP Database Administration

ERP Database Administrator 1	
Years of Experience	1-3
Job Description	Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company's Enterprise Resource Planning (ERP) database. Implements data models and database designs, data access and table maintenance codes; resolves ERP database performance issues, database capacity issues, replication, and other distributed data issues. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a manager. A certain degree of creativity and latitude is required.

ERP Database Administrator 2	
Years of Experience	3-5
Job Description	Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company's Enterprise Resource Planning (ERP) database. Implements data models and database designs, data access and table maintenance codes; resolves ERP database performance issues, database capacity issues, replication, and other distributed data issues. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on experience and judgment to

Exhibit D: Job Titles and Descriptions

	plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a manager. A certain degree of creativity and latitude is required.
ERP Database Administrator 3	
Years of Experience	5-7
Job Description	Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company's Enterprise Resource Planning (ERP) database. Implements data models and database designs, data access and table maintenance codes; resolves ERP database performance issues, database capacity issues, replication, and other distributed data issues. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a manager. A certain degree of creativity and latitude is required.
ERP Database Administrator 4	
Years of Experience	7-10
Job Description	Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company's Enterprise Resource Planning (ERP) database. Implements data models and database designs, data access and table maintenance codes; resolves ERP database performance issues, database capacity issues, replication, and other distributed data issues. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a manager. A certain degree of creativity and latitude is required.
ERP Database Administrator 5	
Years of Experience	10+
Job Description	Administers, maintains, develops and implements policies and procedures for ensuring the security and integrity of the company's Enterprise Resource Planning (ERP) database. Implements data models and database designs, data access and table maintenance codes; resolves ERP database performance issues, database capacity issues, replication, and other distributed data issues. May require a bachelor's degree. Familiar with standard concepts, practices, and procedures within a particular field. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a manager. A certain degree of creativity and latitude is required.

Exhibit D: Job Titles and Descriptions

12. ERP Project Manager

ERP Project Manager 1	
Years of Experience	1-7
Job Description	<p>Develops, plans, and implements the Enterprise Resource Planning (ERP) system. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable. May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project. Project Managers are required to be qualified under the Commonwealth of Virginia Qualification Standards for IT Project Managers.</p> <p>http://www.vita.virginia.gov/oversight/projects/default.aspx?id=589</p>

ERP Project Manager 2	
Years of Experience	8-10
Job Description	<p>Develops, plans, and implements the Enterprise Resource Planning (ERP) system. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and</p>

Exhibit D: Job Titles and Descriptions

	<p>ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable. May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project. Project Managers are required to be qualified under the Commonwealth of Virginia Qualification Standards for IT Project Managers.</p> <p>http://www.vita.virginia.gov/oversight/projects/default.aspx?id=589</p>
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ERP Project Manager 3	
Years of Experience	11+
Job Description	<p>Develops, plans, and implements the Enterprise Resource Planning (ERP) system. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable. May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns</p>

Exhibit D: Job Titles and Descriptions

	responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project. Project Managers are required to be qualified under the Commonwealth of Virginia Qualification Standards for IT Project Managers. http://www.vita.virginia.gov/oversight/projects/default.aspx?id=589
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13. Geospatial Projects Manager

Geospatial Projects Manager	
Years of Experience	A minimum of three years of professional experience is required in Geographical Information System (GIS), cartography, CADD, or a related field. A minimum of three years of professional experience as a project manager for geospatial projects is required.
Job Description	Lead and direct cross-functional teams to deliver complex geospatial projects within the constraints of schedule, budget and scope. Assess desired outcomes and identify user requirements and needs. Design geospatial solutions, including geo-database schema, system requirements, system configuration and application functional requirements. Develop and obtain approval of project plans according to accepted practices and procedures. Integrate resources and develop additional resources to facilitate, manage and execute geospatial projects. Facilitate stakeholder communications, project reporting, and project oversight. Manage project closeout and the development of operations and support plans for geospatial data and application maintenance. Provide technical oversight and develop standards for geospatial data and applications.

14. Geographic Information System Analyst

Geographic Information System Analyst	
Years of Experience	A minimum of two years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing complex spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial basemap information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

Exhibit D: Job Titles and Descriptions

15. Geographic Information System Specialist 1

Geographic Information System Specialist 1	
Years of Experience	Two (2) years of professional experience is required in GIS, cartography, CADD, or a related field.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

16. Geographic Information System Specialist 2

Geographic Information System Specialist 2	
Years of Experience	3-4 years of experience in the field or in a related area.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites) in addition to performing simple spatial analyses. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a “consultant” to internal customers during their use, development and quality assessment of spatial databases.

17. Geographic Information System Technician Trainee

Geographic Information System Technician Trainee	
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Exhibit D: Job Titles and Descriptions

Years of Experience	One year of professional experience related to GIS, cartography, CADD, or a related field, or a minimum of six undergraduate credit hours in GIS, cartography or CADD.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata forms and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

18. Geographic Information System Technician I

Geographic Information System Technician I	
Years of Experience	A minimum of two (2) years of successful experience at the equivalent of the GIS Trainee level.
Job Description	Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data.

19. Geographic Information System Technician II

Geographic Information System Technician II	
Years of Experience	A minimum of three (3) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

Exhibit D: Job Titles and Descriptions

20. Geographic Information System Technician III

Geographic Information System Technician III	
Years of Experience	A minimum of four (4) years of professional experience in GIS, cartography, CADD, or a related field.
Job Description	Perform specialized technical work in support of complex GIS applications. Implement geo-databases, establish recovery plans, and monitor geo-database performance. Write programs and develop user interfaces, menus, and macro-level commands to meet user needs in addition to performing simple spatial analyses and producing reports according to customer specifications. Assist in the development of geographic information systems that create, maintain, or leverage geospatial base-map information. Conduct geographic information system (GIS) program activities, utilizing GIS hardware and software to produce maps, spatial databases and thematic data (such as wetlands, road centerlines, cadastre, and historic sites). Create, adjust, correct, convert and distribute base maps and thematic data. Digitize and maintain spatial databases; document procedures, validate data for accuracy and completeness, complete approved metadata and produce maps of the resulting information. Evaluate information and data from outside sources to determine the quality of the data. Act as a "consultant" to internal customers during their use, development and quality assessment of spatial databases.

21. Graphic Designer

Graphic Designer 1	
Years of Experience	Less than five years industry experience.
Job Description	Ability to assemble and create images for use with electronic and print publishing. Strong understanding of visual identifies and application of logos and identity marks.
Graphic Designer 2	
Years of Experience	5-7 years industry experience.
Job Description	Advanced experience in the use of various design software and technologies; advanced understanding of electronic design standards and techniques.

Exhibit D: Job Titles and Descriptions

22. Mobile Specialist

- The Mobile Specialist serves in many capacities, including Developer, Engineer, Technical Architect, and Analyst for Mobile Projects. The Mobile Specialist often guides and mentors the technical team in all phases of the SDLC including requirement validation, detail design, development, and implementation.

Mobile Specialist	
Years of Experience	4 year college degree or equivalent technical study.
Job Description	<ul style="list-style-type: none">Serves as the Designer, Developer and/or Engineer on Mobile Projects.Meets with end users and technical staff of all types to gather business and system requirementsDevelops and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects.Develops standards, repeatable processes, and reusable componentsAssists in project planning, including developing of timelines, composition of technical teams, and leveling of resources.Mentors technical team leads and team members on Department processes and standards to promote consistency and improve productivity.Assists in the development and review of technical deliverables on projects.

23. Website Developer

Website Developer 1	
Years of Experience	Five years industry experience.
Job Description	Perform specialized programming and technical work for website and Internet development.

Website Developer 2	
Years of Experience	5-7 years industry experience.
Job Description	Perform advanced programming and technical development for website and Internet development

24. Webmaster

Webmaster 1	
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Exhibit D: Job Titles and Descriptions

Years of Experience	Five years industry experience.
Job Description	Experience maintaining multiple websites. Responsibilities include publishing, examining traffic patterns and transactions, and maintaining usability standards.
Webmaster 2	
Years of Experience	More than five years of industry experience.
Job Description	Advanced experience maintaining multiple websites; examining traffic patterns and transactions; testing for multiple platforms; maintaining usability standards and security standards as they relate to the sites; and the ability to coordinate among content managers and developers.

CUSTOMER/TECHNICAL SUPPORT

25. Help Desk

- Provide technical assistance to computer system users on a variety of issues. Identifies, researches, and resolves technical problems. Responds to telephone calls, email and personnel requests for technical support. Documents, tracks, and monitors the problem to ensure a timely resolution. Has knowledge of commonly used concepts, practices, and procedures within a particular field. Answer questions or resolve computer problems for clients in person, via telephone or from remote location. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.
- Provide service and preventive maintenance activities on terminals, printers, personal computers, etc. Basic knowledge of electrical/mechanical principles and basic electronics. Read and comprehend technical service manuals and publications. Knowledge of basic mathematics to read and understand various gauges, meters, and measurement devices. Able to diagnose and repair products by replacing worn or broken parts, and making technical adjustments. Makes appropriate use of reference publications and diagnostic aids in resolving technical problems. Strong communication skills.
- Assist in coordination of changes, upgrades and new products, ensuring systems shall operate correctly in current and future environment. Provide accurate and complete answers to general use and administrative environment questions in a timely manner. Implement shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors. Communicate accurate and useful status updates. Manage and report time spent on all work activities. Ability to work in a team environment.

Help Desk 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-

Exhibit D: Job Titles and Descriptions

	established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.
Help Desk 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.
Help Desk 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

26. Technical Support

- Maintains, analyzes, troubleshoots, and repairs computer systems, hardware, and computer peripherals. Documents, maintains, upgrades or replaces hardware and software systems. Supports and maintains user account information including rights, security, and systems groups. Performs basic operation, monitoring, installation, trouble shooting, relocations, or maintenance of communications equipment. Identifies and resolves basic communications problems. Prepares or assists in the preparation of service record documentation. Shows awareness of standards and regulatory requirements related to assigned tasks.
- Assists in monitoring and providing assistance on the use and interface of systems, subsystems, and software applications. May be responsible for accessing data from and transferring data to various local, state, or federal databases. May assist in the review and recommendation of the procurement and inventory of information resources hardware or software. May write and update personal computer and mainframe application programs. Experience in automated data processing systems. Knowledge of the practices, principles, and techniques of computer operations, of information systems, of computer software and hardware, and of information security policies and procedures. Skill in the use and support of personal computers, in the use of applicable programs and systems, and in troubleshooting information systems. Ability to operate information technology systems, to communicate effectively, and to train others.
- Provides assistance in the design, development, and maintenance of various system applications. Provides technical assistance and support for applications and hardware problems. Installs, maintains, moves, and assists in testing and upgrading new and existing hardware/software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on system efficiency and utilization. May be responsible for accessing data from and transferring data to various local, state, or federal databases.
- Installs, maintains, moves, and assists in testing and upgrading new and existing hardware and software. Reviews and recommends procurement of information technology equipment. Maintains the necessary security controls over software. Develops procedure manuals. Develops and makes presentations and briefings for training sessions. Prepares briefings, reports, and evaluations on systems efficiency and utilization. May supervise the work of others.

Exhibit D: Job Titles and Descriptions

Technical Support 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Technical Support 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Technical Support 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

27. Infrastructure Solutions Architect

- Must be proficient at the techniques that go into the formulation of architectures, including requirements discovery and analysis, application of abstraction, formulation of solution context, solution alternatives identification and assessment, technology selection, and architectural configuration. Extensive understanding and experience in technology areas for Mainframe and Distributed platforms, networking, databases, High Availability/Disaster Recovery, and IT security.
- Ability to work closely with client/application architects, senior managers, and project managers to design and assist with the implementation of the solutions infrastructure related components. Demonstrated ability to work independently and complete assigned project responsibilities under limited supervision. Experience and skills in prevailing industry architecture and engineering methodologies such as ITIL. Knowledge of and experience with a broad range of application servers, web servers, messaging servers, database servers, and related technologies. Able to analyze business requirements and define solutions to address complex business needs. Experience in web infrastructure design and operations including IP, HTTP, HTTPS, FTP, load balancing, clustering, failover, monitoring, diagnostics, performance tuning, etc. Possess high aptitude for problem-solving and trouble-shooting.

Infrastructure Architect 1	
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Exhibit D: Job Titles and Descriptions

Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Infrastructure Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Infrastructure Architect 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Infrastructure Architect 4	
Years of Experience	10-12 years of experience.
Job Description	Advanced experience in architecting infrastructure solutions including proven experience with infrastructure integration.

Infrastructure Architect 5	
Years of Experience	12 or more years of experience in the field.
Job Description	Includes descriptions detailed earlier as well as experience in architecting advanced infrastructure solutions which may not be widely used or are new to the industry, including the ability to mentor other staff in the use of the specialty technologies and make recommendations on the use of the specialty technologies and integration within the organization's architecture.

Exhibit D: Job Titles and Descriptions

28. System Administrator

- The System Administrator (SA) is responsible for effective provisioning, installation/configuration, operation, and maintenance of computer hardware and software and related infrastructure. This individual participates in technical research and development to enable continuing innovation within the infrastructure. This individual ensures that system hardware, operating systems, software systems, and related procedures adhere to Commonwealth policies, standards, and guidelines. Responsibilities include systems administration engineering and provisioning, operations and support, maintenance and research and development to ensure continual innovation. Install new / rebuild existing servers and configure hardware, peripherals, services, settings, directories, storage, etc. in accordance with standards and project/operational requirements. Perform daily system monitoring, verifying the integrity and availability of all hardware, server resources, systems and key processes, reviewing system and application logs, and verifying completion of scheduled jobs such as backups. Perform regular security monitoring to identify any possible intrusions. Perform daily backup operations, ensuring all required file systems and system data are successfully backed up to the appropriate media, recovery tapes or disks are created, and media is recycled and sent off site as necessary. Perform regular file archival and purge as necessary. Create, change, and delete user accounts per request. Provide Tier III/other support per request from various constituencies. Investigate and troubleshoot issues. Diagnose and recover from hardware or software failures. Coordinate and communicate with impacted constituencies. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software that supports GIS infrastructure applications or Asset Management applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required. Maintain data center environmental and monitoring equipment. Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary. Upgrade and configure system software or Asset Management applications per project or operational needs. Maintain operational, configuration, or other procedures. Perform periodic performance reporting to support capacity planning. Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required.

System Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

System Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Exhibit D: Job Titles and Descriptions

System Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

DATA MANAGEMENT

29. Database Architect

- Designs and builds relational databases. Develops strategies for data acquisitions, archive recovery, and implementation of a database. Must be able to design, develop and manipulate database management systems, data warehouses and multidimensional databases. Requires a depth and breadth of database knowledge that shall help with formal design of relational databases and provides insight into strategic data manipulation. Responsible for making sure an organization's strategic goals are optimized through the use of enterprise data standards. This frequently involves creating and maintaining a centralized registry of metadata. Capable of performing the role of a database administrator, if needed.

Database Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Database Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Database Architect 3	
Years of Experience	8-11 years of experience in the field or in a related area.

Exhibit D: Job Titles and Descriptions

Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.
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Database Architect 4	
Years of Experience	12 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

30. Data Warehouse Architect

- Designs, implements and supports data warehousing. Implements business rules via stored procedures, middleware, or other technologies. Defines user interfaces and functional specifications. Responsible for verifying accuracy of data, and the maintenance and support of the data warehouse. Knowledge of data warehouse end-to-end implementation processes, from business requirement logical modeling, physical database design, ETL, end-user tools, database, SQL, performance tuning. Demonstrated problem resolution skills with team of persons, and strong leadership with implementation team Experience in data warehouse design and data modeling (both relational and dimensional) and development and maintenance of multi-dimensional data models. Development experience in implementation of data warehousing utilizing RDBMS. Understanding of data warehouse Metadata concepts, tools and different data warehouse methodologies. Expertise in SQL and proficiency in database tuning techniques. Responsible for the ongoing architecture and design of the data warehouse, data mart, and reporting environments. Develop strategies for flexibility and scalability, and define the future technical architecture direction for the business intelligence reporting physical environment.
- Responsible for proper selection of appropriate hardware, software, tools and system lifecycle techniques for the different components of the end-to-end data warehouse architecture including ETL, metadata, data profiling software, database platform, performance monitoring, reporting and analytic tools. Defining and documenting the technical architecture of the data warehouse, including the physical components and their functionality. Setting or enforcing standards and overall architecture for data warehouse systems. Monitoring the data warehousing industry and assisting in establishing the organization's data warehousing strategy and section of strategic warehousing tools and techniques. Ensuring compatibility of the different components of the DW architecture and ensuring alignment with broader IT strategies and goals. Ability to educate the project teams on the standards and architecture of each component of the data warehouse architecture. Very strong written and oral communication skills, including some presentation skills.

Data Warehouse Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Exhibit D: Job Titles and Descriptions

Data Warehouse Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Data Warehouse Architect 3	
Years of Experience	8 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

31. Database Administrator

- Responsible for data analysis and database management. Involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Knowledge of the utilities and production tools used for data storage management to support the Application Team. Coordinates physical changes to computer databases; codes, tests, and implements physical database, applying knowledge of data base management system. Designs logical and physical databases reviews description of changes to database design to understand how changes to be made affect physical data base (how data is stored in terms of physical characteristics, such as location, amount of space, and access method).
- Establishes physical database parameters. Uses structured query language (SQL) to define database objects using database definition language (DDL) and control access to database objects using data control language (DCL). Language descriptions and specifies identifiers of database to database management system or directs others in coding database descriptions. Calculates optimum values for database parameters, such as amount of computer memory to be used by database, following manuals and using calculator. Specifies user access level for each segment of one or more data items, such as insert, replace, retrieve, or delete data. Specifies which users can access data bases and what data can be accessed by user. Tests and corrects errors, and refines changes to database.
- Enters SQL to create production data base. Uses database utility programs and 3rd party utilities to monitor database performance, such as distribution of records and amount of available memory. Directs programmers and analysts to make changes to data base management system. Reviews and corrects programs. Answers user questions. Confers with coworkers to determine impact of data base changes on other systems and staff cost for making changes to data base. Modifies data base programs to increase processing performance, referred to as performance tuning. Workers typically specialize in one or more types of data base management systems. Providing assistance in the planning, development, maintenance, and monitoring of integrated database systems, and ensuring that the conceptual and design phases of new applications are consistent with the structural parameters within the database environment.
- Evaluates users' requests for new data elements and systems, incorporates them into the existing shared data environment, and provides technical assistance. Coordinates the use of data to ensure data integrity and control redundancy, loads databases, and reorganizes as needed. Performs data modeling and prototyping. Performs logical and physical data modeling, designs relational database models, and creates physical data models from logical data models. Performs security recovery procedures. Determines and implements database

Exhibit D: Job Titles and Descriptions

search strategies and storage requirements. Maintains data dictionary ensuring uniformity of definitions and sets standards for use of data dictionary. Monitors database performance and recommends efficiency improvements. Creates test database environment for applications section, including the creation of necessary libraries and procedures.

- Executes the procedures necessary to save, retrieve, and recover databases from hardware and software failures within established procedures. Assists with determining, implementing, and enhancing standards on database security and with monitoring agency disaster recovery procedures and systems. Assists with the installation of database software and with analyzing, designing, and implementing databases. Assists in benchmarking and threshold testing of databases and with establishing and controlling necessary database security. Assists in the selection of database management software. Experience in computer systems analysis or computer programming work.
- Knowledge of the principles, practices, and techniques of computer programming and systems design; of computer operations, systems, and procedures; of project control and cost estimating techniques; of computer programming languages; of data processing flowcharting techniques; of database structures and theories; and of current database technologies.

Database Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Database Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Database Administrator 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 4	
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Exhibit D: Job Titles and Descriptions

Years of Experience	12 - 14 years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Database Administrator 5	
Years of Experience	15 or more years of experience in the field
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

GOVERNANCE

32. IT Procurement Analyst

- Considerable knowledge of principles and practices of IT procurement including automated procurement systems and tools, budget monitoring/maintenance, file and records management, statistical report development, and related bookkeeping/governmental accounting/fiscal procedures.
- Effective oral and written communication skills; strong computer skills including a high level of proficiency with MS Office, databases, spreadsheets, and automated financial systems; proven ability to maintain divisional inventory and to establish effective working relationships with both internal and external vendors and personnel.
- Demonstrated ability to analyze data, develop statistical reports, reconcile records, and provide customer service at all levels; significant experience in IT procurement including, but not limited to, software and hardware licenses; experience administering state contracts in eVA or equivalent automated systems
- Degree in information technology, business, a related field, or an equivalent combination of education and/or training/experience; demonstrated competencies in customer service, problem solving, organizational and negotiation skills.

IT Procurement Analyst	
Years of Experience	A minimum of four years of experience required in the following areas; IT procurement experience, purchasing of software/hardware, negotiation. A minimum of two years of experience required in problem solving. A minimum of four years of experience in an accounting-related field highly desired.
Job Description	Will be responsible for a wide range of information technology procurements including IT goods and services through a variety of purchasing options; follows procurement guidelines, selects appropriate procurement method, processes and maintains procurement requests and invoices through automated accounting systems; reconciles vendor inquiries and discrepancies; participates in pre-bid conferences as needed. Will also perform administrative and fiscal tasks, accounts payable and receivable, and IT software inventory; will compile financial data and review/analyze for budget formulation; develop and maintain numerous fiscal and/or procurement related spreadsheets; and perform related functions as required. Knowledge of

Exhibit D: Job Titles and Descriptions

	the Virginia Procurement Act and the eVA system very helpful.
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33. IT Governance Analyst

- Works within IT Project Governance to provide oversight, direction and guidance/consultation for IT projects from project request submission through project close-out and post-implementation review. As a governance liaison, works with project managers to ensure all aspects of project management disciplines and ensures compliance with agency specific and Commonwealth project management and project governance policies, procedures, standards and guidelines have been followed. Reviews and validates project deliverables to ensure information accuracy, thoroughness, completeness and compliance. Ensures all projects have a valid project plan that maintains scope, tasks, schedules, estimates, and status, and that information is accurately disseminated to IT management. Directs corrective actions in any area where performance falls below objectives.
- Assists with the development, promulgation, implementation and regular updates of IT Project Management and Systems Development standards, policies, and guidelines and any other governance policies and procedures needed for the overall IT governance framework. Ensures compliance with all policies and procedures in the execution of technology projects. Monitor the progress of technology projects and provide quick and accurate responses to IT Management as to status, issues and risks of those projects. Serve as liaison between IT management, project managers and VITA. Monitor and support the management of the division's technology portfolio comprised of projects, systems, data and tools. Provide mentoring, coaching, training and on-boarding for project managers in the areas of project management tools, standards, policies, and procedures. Train and mentor new members of the IT Project Governance team as needed.
- Initiate and conduct ongoing and regular IT Policy, Process, Procedure, and Standard reviews to ensure technology and governance best practices are incorporated into the agency's set of procedures and improve business and IT compliance with legislative and regulatory policies which impact IT deliverables. Assist in the preparation of reports and materials for regularly scheduled project and program portfolio reviews with IT CIO, IT Managers and PM's.

IT Governance Analyst	
Years of Experience	10 years of experience in the field
Job Description	Ensure projects have adequate project management and oversight structures and processes that will enable the success of the project. Verifies and validates project status reports. Assists with the training and implementation of new agency and/or COV project policies, standards, guidelines and procedures introduced. Assists with assessment of project management training needs, schedules classes as needed, or provides one on one project consulting. Reviews project documentation including project initiation documents such as the project charter, budget, schedule, cost benefit analysis, etc. throughout the project lifecycle until the end of the project including the project closeout report. Recommends approval of documents to AITR and Director. Attends project review and steering committee meetings for all projects for which he or she is governance liaison.

Exhibit D: Job Titles and Descriptions

IT MANAGEMENT SERVICES

34. Business Continuity Planner

Business Continuity Planner	
Years of Experience	5 or more years
Job Description	<p>Provides specialized expertise in business continuity planning, project management and problem analysis and resolution. Participates in major project assignments to: assist business partners in resolving business issues related to work area (business function), recovery planning and recovery plan development / enhancements. Capitalizes on business opportunities to refine processes to mitigate exposure during disruptions of service, and possibly, improve day-to-day operations. Facilitates and coordinates the development of work area (business function) business continuity plans for business units. Responsibilities include, but are not limited to, the following: assist business units with assessment of potential business impact, definition of critical, time-sensitive functions, design, development, and documentation of business continuity plans, recommend recovery strategies and options, and assist with the implementation of recovery solutions, coordinate business continuity plan exercises, develop schedules for training / awareness for business partner associates, coordinate development of business unit schedules for annual business continuity documentation maintenance and update, exercises, and independent review and validation, report the business continuity status of business units to senior management, provide expertise and support to management and business functional areas, as requested, when a disruption occurs.</p>

35. Business Process Reengineering

Business Process Reengineering	
Years of Experience	5 or more years
Job Description	<p>This position applies process improvement and re-engineering methodologies and principles to conduct process modernization projects. Additional duties may include activity and data modeling, developing modern business methods, identifying best practices, and creating and assessing performance measurements. Providing group facilitation, interviewing, training, and provides additional forms of knowledge transfer. Serves as a key coordinator between multiple project teams to ensure enterprise wide integration of re-engineering efforts.</p> <p>Additional Responsibilities: Design workflow for purchasing software, collect and analyze statistics/metrics for software purchases, identify gaps in all associated processes and risks, establish memorandum of understanding (MOU's) where required, maintain SOP's for all processes, and support the client at customer meetings.</p>

Exhibit D: Job Titles and Descriptions

36. Enterprise Architect

Enterprise Architect	
Years of Experience	5 or more years
Job Description	<p>This position works across Application Development, Service Delivery and Infrastructure to identify, research, discuss, design, and implement key enterprise architecture standards. Other responsibilities include: Research, design, document, build, and pilot prioritized topics for standards. Manage the list of potential standards and work with the application development management to prioritize efforts. Work closely with Development, Infrastructure, and Service Delivery teams to understand their needs and ensure the best enterprise standard is implemented. Work closely with development teams to pilot and prove out the standard. Drive the identification, development and implementation of key new standards in areas such as:, Performance Testing, Security, Event Management, Web UI Framework, .NET Design Standards, Application To Application Communication, Caching, etc. Propose new enterprise standards based on business need, IT need and technology advances. Assist development teams to implement the standards into business applications. Investigate new technology and techniques that should be developed into an agency enterprise architecture standard.</p> <p>Lead key enterprise architectural design projects as necessary. Operate as business savvy technical leader across the organization. Influence development teams to design high-quality technical solutions that fit the Enterprise Architecture and standards. Educate application development managers, developers, and business analyst on Commonwealth Enterprise Architecture Standards.</p>

37. IT Strategist

IT Strategist	
Years of Experience	5 or more years
Job Description	<p>Supports top management in IT strategy formulation, IT strategic plans execution, strategic process improvements, and communication of IT strategies to all stakeholders. Analyze business performance, industry trends, existing or new regulatory requirements and their impact on IT operations; make recommendations on alternative courses of action, including risk assessment, capital investment, and acquisitions needed to align IT strategy with agency strategic plan. Requires advanced knowledge of strategic planning concepts and frameworks, business issues and concepts, research methodology, general management and financial analysis. Additionally, requires good interaction skills with senior management, with ability to articulate and defend recommendations made.</p>

38. IT Auditor

IT Auditor 1	
Years of Experience	0-2 years

Exhibit D: Job Titles and Descriptions

Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.
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IT Auditor 2	
Years of Experience	2-4 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Works under immediate supervision. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 3	
Years of Experience	4-6 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

IT Auditor 4	
Years of Experience	6-8 years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree.

Exhibit D: Job Titles and Descriptions

	Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.
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IT Auditor 5	
Years of Experience	8+ years
Job Description	Audits information systems, platforms, and operating procedures in accordance with established corporate standards for efficiency, accuracy and security. Evaluates IT infrastructure in terms of risk to the organization and establishes controls to mitigate loss. Determines and recommends improvements in current risk management controls and implementation of system changes or upgrades. May require a bachelor's degree. Has knowledge of commonly-used concepts, practices, and procedures within a particular field. Relies on pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment. Typically reports to a supervisor or manager.

39. IT Trainer

IT Trainer	
Years of Experience	0-2 years
Job Description	Develop an agency-wide training plan. Coordinate IT strategic planning process to determine the department's training requirements through communications with staff throughout the agency. Identify existing training that meets the requirements and provide a gap analysis of courses to develop in house. Develop curriculum and training plan. Develop evaluation and monitoring methods to ensure quality training. Develop short video training. Produce written documents with clearly organized thoughts using proper English sentence construction, punctuation, and grammar.

40.IT Sourcing Consultant

IT Sourcing Consultant 2	
Years of Experience	5+ years
Job Description	Position requires the ability to work independently as the team leader in the development and execution of sourcing strategies for assigned projects, assisting customers in solving IT business problems. This role will function to lead the sourcing process, through creation of the solicitation documents, evaluation of proposals and in execution of agreed upon negotiations strategy with selected suppliers. Leads evaluation and execution of risk mitigation strategies and establishes solid contracts that are in the long-term best interest of the customer. Has responsibility for managing customer expectations for project deliverables through effective and timely communications. Conducts a post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.

Exhibit D: Job Titles and Descriptions

IT Sourcing Consultant 3	
Years of Experience	10+ years
Job Description	Position requires a proven ability to lead development and execution of complex sourcing strategies for assigned projects and consulting with customers to solve IT business problems. Conducts meaningful market research and works with business owners to develop sourcing scope, timelines and deliverables. This role will function as the leader of cross-functional teams through the sourcing process, in the evaluation of proposals, conducting and managing the negotiations process with selected suppliers. Has responsibility for proactively managing customer expectations for project deliverables through effective and timely communications to various levels of senior management. Identifies and manages contractual risks and establishes firm contracts that are in the long-term best interest of the customer. Conduct post-project lessons learned reviews with the customers to promote knowledge transfer and customer satisfaction.

IT SECURITY

41. IT Security Analyst

- Monitor and advise on information security issues related to the systems and workflow at an agency to ensure the internal IT security controls for an agency are appropriate and operating as intended. Coordinate and execute IT security related projects for the agency. Coordinate response to information security incidents. Develop and publish Information Security policies, procedures, standards and guidelines based on knowledge of best practices and compliance with Commonwealth IT Security policies, standards, and guidelines..
- Conduct campus-wide data classification assessment and security audits and manage remediation plans. Collaborate with IT management, Internal Audit, and VITA to manage security vulnerabilities. Create, manage and maintain user security awareness. Conduct security research and keeps abreast of latest security issues.
- Prepares IT security documentation, including department policies and procedures, agency notifications, Web content, and alerts.

IT Security Analyst 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

IT Security Analyst 2	
Years of	4-7 years of experience in the field or in a related area.

Exhibit D: Job Titles and Descriptions

Experience	
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

IT Security Analyst 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

42. IT Security Architect

IT Security Architect 1	
Years of Experience	<p>3+ years of experience in security architecture</p> <p>9+ years of experience in information security</p> <p>9+ years of experience working with computer systems</p> <p>9+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware</p>
Job Description	<p>Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying Commonwealth IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture.</p> <p>Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills.</p> <p>Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.</p>

IT Security Architect 2	
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Exhibit D: Job Titles and Descriptions

Years of Experience	<p>5+ years of experience in security architecture</p> <p>11+ years of experience in information security</p> <p>11+ years of experience working with computer systems</p> <p>11+ years of experience working with network software and hardware, data or voice as well as experience with open and proprietary software and hardware</p>
Job Description	<p>Establish the target security/infrastructure architecture. Author corresponding requirements, including definition of dependencies on infrastructure consolidation efforts. Define Security/Information Assurance requirements (and dependencies). Specify key architectural aspects of the architecture view, and identify other aspects that need definition. Other duties include researching best practices for reuse, applying Commonwealth IT Security and industry standards, and defining the transformation approach that transitions the current architecture to the target architecture.</p> <p>Experience working with current and emerging information security technologies and development methodologies. Bachelor's degree in computer science, management information systems, or related field preferred. Good analytical and creative problem solving skills.</p> <p>Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.</p>

43. IT Security Auditor

IT Security Auditor	
Years of Experience	15 or more years with IT security and audit experience
Job Description	Advanced knowledge of security standards and progressive experience performing security audits.

PROJECT MANAGEMENT

44. Project Manager

- Designs, plans, and coordinates work teams. Follows standard project management industry practices such as the PMI's framework. Understands business and technical objectives of a project and works closely with project sponsor. Creates project charter and work plan and tracks budget and schedule progress via appropriate metrics. Establishes project organization and methodologies and defines roles and responsibilities. Documents risks and develops mitigation plans. Manages scope. Creates and implements a communication plan. Builds an effective team, assigns tasks to team members, and evaluates outcomes. Negotiates resources. Communicates to stakeholders and project sponsor. Identifies, tracks, and ensures resolution of issues and removal of barriers. Provides technical support to project team members. Handles complex application features and technical designs. Designs and implements the components required for complex application features. Generally manages a group of applications system analysts. Relies on experience and judgment to plan and accomplish goals. Professional certification is highly desirable.

Exhibit D: Job Titles and Descriptions

- May require specific PC, workstation, operating system, application or platform skills. Provides overall direction to the formulation, development, implementation, and delivery of a project. Exercises management responsibility over the achievement of performance, revenue, and profit objectives of a project and its contracts. Ensures that the project plan maintains tasks, schedules, estimates, and status, and disseminates information to team members and customers. Creates a structure and organization for the management of a complex environment with emphasis on quality, productivity, and consistency. Directs corrective actions in any area where performance falls below objectives. Arranges for the assignment of responsibility to other supporting facilities, business areas, and support functions, and monitors their performance. Self-directed and independent. Responsible for the coordination and completion of projects. Oversees all aspects of projects. Sets deadlines, assigns responsibilities, and monitors and summarizes progress of project. Prepares reports for upper management regarding status of project.
- Project Managers are required to be qualified under the Commonwealth of Virginia Qualification Standards for IT Project Managers.
<http://www.vita.virginia.gov/oversight/projects/default.aspx?id=589>

Project Manager 1	
Years of Experience	1 to 7 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Project Manager 2	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 3	
Years of Experience	11-14 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 4	
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Exhibit D: Job Titles and Descriptions

Years of Experience	15 or more years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Project Manager 5	
Years of Experience	More than 15 years of experience in the field or in a related area.
Job Description	Advanced experience managing complex projects or multiple projects; Demonstrated and advanced understanding of project management methodologies.

45. Project Lead

- The Project Lead shall have day to day responsibility for management of a project team, providing technical team leadership on complex projects. They are responsible for program design, coding, testing, debugging, documentation and support. They shall have full technical knowledge of all phases of applications systems analysis and programming. There may be multiple phases of the project for which they have responsibility. This person shall manage day-to-day execution of design, development, testing and implementation activities; actively encourage and facilitate communication between the business analysts, development, and QA teams; and ensure that system requirements are documented, complete, accurate and approved.
- This person shall ensure formal design reviews are held regularly for each iteration or code cycle and work with program leadership team to establish and manage the project iteration and release cycles and attend release planning meetings. This person shall manage development activities and coordinate technical and application components with other Commonwealth projects and applications; ensure that appropriate system support and maintenance documentation is complete, which includes support documentation for Help Desk support and maintenance staff. This person shall also review release notes for accuracy, and reports to the Project Manager and works with the Project Manager to determine project resource requirements.

Project Lead 1	
Years of Experience	1 to 7 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Project Lead 2	
Years of	8 or more years of experience in the field or in a related area.

Exhibit D: Job Titles and Descriptions

Experience	
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

46. Project Coordinator

Project Coordinator	
Years of Experience	2 or more years of experience in the field or in a related area.
Job Description	The Project Coordinator shall provide day-to-day coordination of project tasks. The project coordinator maintains version control and provides administrative support for project management information system. Prior experience of large project administration. Ability to communicate at all levels of an organization and third parties. Experience with similar scale roles and organizations. The project coordinator is task focused. Works under the direction of the project manager or project lead and reports to a project manager or project lead.

TELECOMMUNICATIONS AND COMPUTER NETWORKING

47. Network Administrator

- Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software. Monitor network to ensure network availability to all system users and perform necessary maintenance to support network availability. May supervise other network support and client server specialists and plan, coordinate, and implement network security measures. Coordinate the development, implementation, and maintenance of a local area network or wide area network. Maintains the network's physical and logical structures, including network connections. Maintains network support software, analyzes user support statistics, and recommends appropriate measures. Installs, tests, and maintains network hardware and software. Prepares and analyzes statistics on network utilization and availability. Prepares training courses and provides user support and training in the use of available hardware, software, and utilities. Performs tuning and capacity planning activities to enhance the performance of the network resources.
- Assist in the development, implementation, maintenance, and monitoring of a local area network or wide area network. Works under close supervision with minimal latitude for the use of initiative and independent judgment. Performs procedures for backup, recovery, and archival of files stored on the network. Communicates with vendors, users, management, and network programming staff. Serves as contact for remote network locations to obtain clarification of problems and to identify solutions or corrective actions. Assists in preparing training courses and providing user support and training in the use of available hardware, software, and utilities. Assists in maintaining the local area network or wide area network, cable and hub installations, and inventories. Conducts product evaluations of upgraded or new hardware and software—identifying strengths, weaknesses, and potential benefits to the agency—and recommends enhancements to network facilities.
- Assists in maintaining the network's physical and logical structures and in installing and testing hardware and software. Assists in performance tuning and capacity planning activities to enhance the performance of the network resources and in maintaining network support software. Assists in or conducts product evaluations of upgraded or new hardware and software and identifies strengths,

Exhibit D: Job Titles and Descriptions

weaknesses, and potential benefits to the agency. Assists in maintaining the operating system and security software utilized on the network, including the addition of new users to the network and establishment of rights and privileges. Experience in local or wide area network work. Knowledge of network facilities and data processing techniques; of personal computer hardware and software; of network operating system and security software; and of performance monitoring and capacity management tools.

Network Administrator 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Administrator 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Administrator 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

48. Network Architect

- Participates in designing and developing the network to ensure that it is secure, reliable, and robust; implements and maintains network management servers that assist the agency in managing, monitoring, and securing the network.
- Develops and implements detection activities to test network vulnerability to intrusion by hostile individuals or groups; participates in detecting, investigating, documenting, and reporting actual or potential network security violations, intrusions, or other inappropriate use.
- Designs backbone infrastructure, network facilities, wide area networks, local area network, wireless and telecommunication networks to provide reliable Internet access, remote access to information technology services (ITS), network security, and high performance networking.
- Evaluates security products and tests security systems performance; assists in planning, implementing, and testing disaster recovery procedures; participates in making formal risk assessments related to network security.

Exhibit D: Job Titles and Descriptions

- Certification in areas related to network management and security preferred (CNE, MCSE, MSCE+1, CISA, CCNA, CCNP, CCIE, CCSA, CCSE, CCSE-PLUS, Cisco Security Specialist).
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Network Architect 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Architect 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Architect 3	
Years of Experience	8 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

49. Network Engineer

- Responsible for installing networking technologies and supporting networks. Assesses existing network configurations and makes recommendations based on product specifications. Configures equipment and software to meet business needs, trains others on the solution, and documents the solution for ongoing support. Functions as part of a team on larger projects, or individually provides the services on support visits or smaller projects. Provides technical support and assists with the design of network solutions.
- Requires experience in the technical services and support field as well as experience in network administration (DHCP, DNS, routers, firewall, etc.)

Network	
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Exhibit D: Job Titles and Descriptions

Engineer 1	
Years of Experience	1 to 3 years of experience in the field or in a related area.
Job Description	Has knowledge of commonly used concepts, practices, and procedures within a particular field. Relies on instructions and pre-established guidelines to perform the functions of the job. Primary job functions do not typically require exercising independent judgment.

Network Engineer 2	
Years of Experience	4-7 years of experience in the field or in a related area.
Job Description	Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. A certain degree of creativity and latitude is required. Works under limited supervision with considerable latitude for the use of initiative and independent judgment.

Network Engineer 3	
Years of Experience	8-11 years of experience in the field or in a related area.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

Network Engineer 4	
Years of Experience	12 or more years of experience in the field.
Job Description	Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

50. Public Safety Consultant

Public Safety Communications Consultant	
Years of Experience	Extensive knowledge of public safety communications and enhanced 9-1-1 systems. Knowledge of current 9-1-1 industry trends in technology architecture, microcomputers, networking, and the Internet/Worldwide Web.
Job Description	Performs systems analysis, design, documentation, and implementation of complex public safety communications projects. These projects may include needs analyses, staffing studies, consolidation plans, equipment assessments and planning, budget preparation and forecasting, performance reporting/analysis and other related supporting the operation of public safety

Exhibit D: Job Titles and Descriptions

	answering points and first responders.
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51. Radio Engineer

Radio Engineer	
Years of Experience	Considerable experience in voice, data and video systems. Training in electronics is required. Advanced technical experience in the design of voice, data, video and wireless/radio systems and services. FCC General Radio Telephone license or Amateur Radio License highly desirable. Certification in public procurement would be desirable. Advanced knowledge of complex communications systems; business management practices and principles.
Job Description	Conducts the review, analysis and design of current and proposed voice, data and video communications, both wire line and wireless, also develop engineering plans and networks for state agencies and institutions. Performs research to develop recommendations for enhancements, expansions and/or consolidations of voice, data and video communications, using wire line and wireless equipment, facilities and services. Engineer system/network migration details toward sharing of integrated services, while laying the foundation of Open System Interconnections. Assist in the coordination, engineering and processing of FCC licenses. Educate and keeps abreast of FCC Land Mobile Radio (LMR) rules, policies, legal rulings and ongoing spectrum issues--analyzes results and impacts.



IT Contingent Labor MSP

Managed by CAI

STATE OF MICHIGAN

DEPARTMENT OF TECHNOLOGY
MANAGEMENT AND BUDGET

IT Contingent Labor Program Name

Communications Plan DRAFT

December 18, 2015

DRAFT

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Introduction

Computer Aid, Inc. (CAI) is pleased to present this Project Communication Plan as part of the implementation of the **DTMB IT Supplemental Contingent Labor contract**. Our goal is to ensure that State personnel and Suppliers are prepared for the changes that result from this contract's implementation. Effective communications will smooth the transition to the new contract for both State personnel and incumbent Suppliers.

The purpose of this document is to ensure that implementation plans and changes are effectively communicated to all users of the Contingent Labor contract. Successful completion of the activities within this Communication Plan will ensure that all impacted parties are aware of the IT Contingent Labor implementation and seated resource transition – its implications and timelines. These parties include cabinet-level directors, State information managers, State procurement managers, hiring managers, and affiliate Suppliers.

This plan documents the process for communicating with project stakeholders in an effective and efficient manner. Its general purpose is to raise awareness and understanding of the project throughout its lifecycle. In this plan we describe the timely and consistent distribution of project information to the project governance teams, management, and stakeholders to keep them enthused, informed and engaged.

Commented [MT(1): Still not sure where we are going with the name

TARGET GROUPS

This section describes the stakeholder groups to which communications will be targeted and how those communications will be directed at each group's needs.

State Personnel

We refer to any manager who employs temporary IT staff as a State hiring manager. The members of this group will be intimately involved in the use of the IT Contingent Labor contract, the process, and PeopleFluent, the VMS software. State hiring managers are key users of the contract.

State hiring managers will receive communications targeted to State management. This group will also have the opportunity to learn the process on a more granular level.

Suppliers

Suppliers are also stakeholders in the implementation of the new IT Contingent Labor contract. Suppliers will receive communications targeted to IT resource suppliers. The Supplier group can be subdivided into Incumbent Suppliers and New Suppliers.

Incumbent Suppliers

The Incumbent Suppliers have resources that will be transitioning to the new contract. It has been our experience that this group of Suppliers is often concerned about their role in an IT Contingent Labor contract. We suggest separate introductory sessions with the incumbent Suppliers so that we can thoroughly address these concerns. However, all written communications and messages will be consistent with those disseminated to new Suppliers.

New Suppliers

New suppliers will include suppliers recommended by State managers who can provide the capability to support new technologies, and companies who had previously served as subcontractors to larger suppliers. New Suppliers will want to know how they can become part of the Supplier network. We will offer them the opportunity to learn how the contingent labor program works, how to use the software, how to join the network, and how they can benefit from being part of the Supplier network. All written communications and messages will be consistent with those disseminated to Incumbent Suppliers.

COMMUNICATIONS TIMELINE

As essential aspect of communication is its timing. In order to describe the timing of the initial communications involved in the State IT Contingent Labor implementation, we provide the timeline depicted below followed by a brief discussion of the communications points.

For purposes of discussion, we begin our timeline on January 128, 2016. We understand that the start date is subject to change. The number and configuration of the sessions will be determined through discussions with the State.

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Communication Task	DATE	Location
Send Announcement to State Personnel and offer invitation to introductory sessions RSVP Deadline: State Personnel must respond by to reserve space and materials for their introductory sessions.	1/12/16	
Send Announcement to Suppliers and offer invitation to introductory supplier session. It is important to time this as closely as possible with the dissemination of information to the State personnel.	1/12/16	
Conduct State Introductory Sessions	2/11/16 During the week of February 8	Please refer to the options described in the State Communications section of this plan found on pages 5 and 6.
Conduct Supplier Introductory Sessions	3/2/2016? During the week of February 8	Please refer to the options described in the Supplier Communications section of this plan found on page 8.
Conduct State PeopleFluent Training Sessions	Week of 3/14/2016-29	Via Citrix?
Conduct Supplier PeopleFluent Training Sessions	Week of 3/14/2016-29	Vias Citrix webinar
Complete Initial Communications: This last function is a placeholder in the timeline for any follow-up communications that are warranted as a result of the previous three weeks.		

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Commented [EKS3]: Exact date pending location .

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STATE-SPECIFIC COMMUNICATIONS

This section describes the communications plan targeted to the State personnel.

Step 1: Announcement

This is the first official communication from DTMB to State personnel informing them of the change in procurement vehicle and inviting them to participate in the introductory sessions that CAI will provide as part of the implementation.

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Content

The announcement is a brief statement that alerts the recipients to the change in contract and its benefits. This brief overview is followed by an invitation to the introductory session(s) where the State personnel can learn the details of the benefits and processes, scope, and other pertinent facts about the upcoming changes. A draft of the announcement is included in Appendix A of this document.

The announcement may have attachments, if desired, such as the Contract Fact Sheet found in Appendix B, the State Process Guidelines found in Appendix C, the job titles, the contract rates, etc.

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Timing

The announcement should be sent as soon as the arrangements are made for the introductory sessions. One week's lead time is recommended.

Distribution

The announcement will be issued by the contract manager and will be sent via email to all State personnel deemed appropriate.

Step 2: Introductory Sessions

The introductory sessions offer State personnel the opportunity to learn how the IT Contingent Labor contract works. These sessions are critical to a successful implementation.

Because the State personnel are somewhat diverse in their involvement with IT Contingent Labor, we offer the following options for delivery of the introductory sessions.

Method	Description	Advantages	Disadvantages
Send En Masse	Offer the introductory session to all interested State personnel in one session.	The clearest advantage to this option is the swift start. All participants receive the same message at the same time.	One large meeting tends to inhibit dialog and questions, especially business-specific questions. In addition, it is more difficult to schedule a single meeting for which all key participants are

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			available. Space availability may also be a concern.
Cross Business Area by Role/Position.	Conduct separate sessions for participants in the same role within business areas	The advantage of this option is that the message can be tailored to the audience.	A disadvantage to this option may be that one business area may have different processes from another.
By Agency or Business Area	Arrange Business specific with the procurement managers and hiring managers for each of the large agencies individually. Smaller agencies may be logically grouped into one or several meetings.	This option offers the most open forum for dialog and questions/answers specific to the internal processes. Agency -specific meetings also present an opportunity for granular discussion about transition at the same time.	May require more meetings and increase the implementation timeline

Session Content

The introductory session presents an overview of the contract, introduces CAI, describes the contingent labor process and stresses the benefits of this new contract. The presentation can be fine-tuned depending upon the audience to stress higher-level aspects or 'how-to' details.

The introductory session agenda is:

- **Review Program Changes**
- **Time and Materials Staff Augmentation and Statement of Work**
- **Fixed price Statements of Work**
- **Roles and Responsibilities**
- **Review Supplier Enrollment**
- **Implementation Timeline**
- **Transition Discussion**
- **Discussion**

Step 3: Ongoing Communications

This section describes the ongoing communications targeted to State personnel.

Quarterly Meetings and Reports

As part of the IT Contingent Labor contract, CAI will produce quarterly reports and present them each quarter to high-level management stakeholders. These reports include trends in strategic staffing that affect the contract, focus on performance service level agreements, and optionally include wage rate updates and customer satisfaction survey results.

Periodic Personnel Meetings

The CAI team will hold periodic meetings with State personnel, either in groups or on an individual basis, to discuss State needs and issues. These will be meetings held on a schedule and based on the needs of each group of State personnel. These meetings focus on the

assistance that our team can provide in finding the best qualified resources for State requirements. In preparation for these meetings, State personnel can request reports based on the data collected in PeopleFluent.

Ad-Hoc Meetings and Reports

Throughout the life of the contract, stakeholders may request ad-hoc meetings and/or reports on a specific topic. The CAI account team will respond by meeting with stakeholders, providing reports and/or materials as needed. We will use lessons learned and best practices from our other programs to aid stakeholders when appropriate.

Contract Websites

As part of the contract, contract materials, and training guides will be made available through a CAI-maintained web portal specifically for your state. For instance, the Virginia supplier web site is found at: <http://vaitcl.compaid.com>. CAI will create a similar web portal for the Michigan program.

SUPPLIER-SPECIFIC COMMUNICATIONS

This section describes the communications plan for the Suppliers currently doing business with Michigan as well as those who have the potential to do business through this new contract.

Step 1: Announcement

While the State introductory sessions are being held, the State will issue an announcement to Suppliers. This announcement is most effective if it is issued shortly after State personnel become familiar with the contract and transition process.

The Supplier announcement introduces the new contract and invites the Suppliers to the introductory sessions that will be held for them. Like the State announcement, it will list the location, date and time for the introductory sessions and will request an RSVP. A sample Supplier announcement is included in Appendix E.

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Step 2: Introductory Sessions

Similar to the State introductory sessions, there are options to consider for conducting the introductory sessions for Suppliers. They are described here.

Method	Description	Advantages	Disadvantages
Send En Masse	Offer the introductory session to all interested suppliers session.	The clearest advantage to this option is the swift start. All participants receive the same message at the same time.	This method doesn't allow for a separate session for incumbent suppliers who will have different questions.
Two groups: Incumbents and all others.	Offer two introductory sessions.	The advantage of this option is that the message can be tailored to the audience.	No specific disadvantage

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Content

The Supplier introductory sessions emphasize the benefits of becoming part of the open Supplier network utilized in the IT Contingent Labor contract. While the agenda is very similar to that of the State sessions, the material is presented from the Suppliers' point of view. We stress results in other states using the CAI-managed IT Contingent Labor contracts to demonstrate the success that can be realized by Suppliers who actively participate and take advantage of the services that the CAI account team has to offer.

The introductory session agenda:

- [Review Program Changes](#)
- [Time and Materials Staff Augmentation and Statement of Work](#)
- [Deliverables Based Statements of Work](#)
- [Roles and Responsibilities](#)
- [Review Subcontractor Enrollment](#)
- [Implementation Timeline](#)
- [Discussion](#)

Step 3: Ongoing Communications

Mentoring and Coaching

The CAI team offers mentoring and coaching to any Supplier in the network. Our experience throughout all CAI-managed contingent labor contracts has shown that this form of communication is very helpful in improving the ability of Suppliers to provide quality resources and compete effectively.

Weekly Requisition Updates

On a weekly basis, all Suppliers receive an email from CAI's team providing a current status of all open requisitions. This announcement, sent through PeopleFluent, helps our Supplier network to manage their business and their support of this contract. In addition to providing a status on current open requisitions, the update also provides insight into future projects, opportunities, requisitions, etc.

The details of the update include requisition numbers and titles, their status, and actions taken. An example of a weekly update appears in the accompanying image.

Our Suppliers tell us that the weekly update is an extremely valuable tool for their success.

APPENDIX A: STATE ANNOUNCEMENT

The following announcement can be tailored for the Michigan program users.

Dear _____,

In order to better meet the staff augmentation demands of our agencies, ensure faster placement of quality resources and continue our savings goals, the State has determined that it is in the best interest of the State of Michigan to transition its Staff Augmentation program from Acro Service Corporation to Computer Aid, Inc. (CAI), and on April 4th, 2016, CAI will begin service as the **Managed Service Provider** for temporary IT staffing for the state of Michigan.

This change of providers comes after great diligence and significant industry research into various IT contingent labor models and providers. CAI has served as a **Managed Service Provider** for eight states for more than ten years, and is able to leverage this experience in order to build a program that will streamline the procurement process for IT contingent labor. Additionally, CAI has maintained a Michigan presence since 1991, and is a Michigan-based business in full compliance with the requirements of MCL 18.1268.

Specifically, our new program will be modeled after the Virginia IT Contingent Labor program. This program has successfully served participating agencies and cooperatives in the Commonwealth of Virginia for many years. The VA contract also provides the opportunity for Michigan agencies to utilize qualified subcontractors for fixed-price Statement of Work (SOW) projects. CAI will provide an on-site team to assist contract users with meeting their IT needs.

The transition and implementation will occur on the following timeline:

- Implementation will begin on January 8th, 2016
- The new program will be live for new requirements on April 4th, 2016
 - No new suppliers will be enrolled under Acro after this date
 - No new job requirements will be released under Acro after this date
- All existing engagements will be transitioned into the new program either upon the by October 1, 2016

CAI will soon be in touch to discuss the configuration of the new process, agency users, and the seamless transition of all of your engaged resources.

Acro has been notified of this change and a formal announcement will soon be posted. We understand this announcement will spark conversations and rumors surrounding the change; please direct all inquiries and concerns related to this change to Whitnie Zucker (contact).

We will be in close contact with more information as we work through the implementation and transition. Thank you for your partnership and we look forward to continued service.

(Close Letter)

APPENDIX D: STATE TRANSITION GUIDE

In any large strategic sourcing effort the success of the program is largely dependent upon sponsorship on every level, from the CIO to the hiring manager. This sponsorship must be unwavering even when receiving push back from agencies and incumbent Suppliers. In our experience, when incumbent Suppliers realized exceptions were not going to be made, the “noise” died down considerably. When agencies realized that key Supplier resources that they relied upon could still be available if the Supplier would agree to become part of the Supplier network, seated resources were transitioned successfully.

Consistency in approach can be achieved by communicating early and often about the changes provided by implementing the IT Contingent Labor Contract. A consistent approach to transition will minimize the “demand” for exceptions from both the State and the Supplier community. It is important to know that news of exceptions spreads rapidly through agencies and Suppliers alike. Some will view this exception as their “template” to circumvent the process and get their own exception approved. It is necessary to have a consistent and standard approach to transition and communicate the approach so that this does not occur.

State agencies and incumbent Suppliers may hold the same concerns. However, unwavering Executive level commitment to this project, one that provides tax dollar savings to the public and continues to provide cost effective Contingent Labor resources to agencies, will demonstrate a significant commitment to the overall welfare of the state’s economy and business climate.

By following the seven steps outlined below, State agencies will experience a seamless transition:

1. Communicate the strategy for transition

Establish a firm transition strategy, and announce this as a milestone to project success and project completion. Existing Suppliers and impacted agencies will know early on that this transition activity is a natural progression of the overall project implementation and supported by project executives. All project communication should reinforce transition activity as a discrete and expected step for project success.

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2. Identify all resources that will be transitioned

The State must compile a list of existing Contingent Labor resources currently working in each State under any contractual vehicle that the State has authorized agencies to utilize to procure IT Contingent Labor resources. This should include:

- The resource’s name,
- Hourly rate,
- End date or # of hours remaining on the current PO,
- State Manager name and phone number,
- Company Name, address, phone number,
- Company contact person name, and
- Any sub-contractor arrangement information that may apply.

This information will be used to initiate conversation with the Supplier and ultimately bring the Supplier/seated resource into the network so that their work inside the State may continue uninterrupted.

3. Map current job titles to the contract job titles

Working side by side, CAI staff and State Hiring Managers will evaluate the current job that each seated resource provides and then map that job to a job title provided under the new contract. Once identified, the rate is clearly communicated to all involved.

Our scientific cost metrics have proven to determine fair market value rates. The IT Contingent Labor Contract job descriptions provide the fair market value basis for rate determination. Assuming the incumbent Supplier is paying their employee fair market value for their skills, the cost model is designed to give the higher percentage of profit to the incumbent, not CAI.

4. Discuss transition details with incumbent Suppliers

The State can communicate directly with each resource's Supplier company, compelling them to allow the seated resource to transition into the new contract by joining the Supplier network. This allows the seated resource to continue the good work that they have already begun in the State and provides for the State's business continuity.

CAI staff will also work directly with the Supplier company to bring them into the open Supplier network.

The strength of the open Supplier network cannot be overstated when transitioning incumbent Suppliers. If an incumbent Supplier is resisting transition, they will quickly see that there is an open network of Suppliers ready to replace them with resources that are equally and sometimes better qualified for the job. There will be incumbent Suppliers who will work tirelessly to convince the State managers that they will not be able to find qualified candidates under the new rates, but the open Supplier network proves them wrong every time.

5. Submit a Purchase Order (PO) for each resource

It is imperative that the State recognizes that each seated resource requires a PO be submitted and approved so that automated transition can occur through PeopleFluent.

6. Once PO is approved, enter transition into PeopleFluent

After it is determined that the seated resource's Supplier company is "in-network" ("in-network" means that the Supplier company has signed the agreement with CAI and has accepted the new contract job description and rate structure), and a PO is submitted and approved, CAI will enter a requisition into the PeopleFluent tool for the State so that the seated resource can transition.

7. Receive Supplier acceptance of PeopleFluent requisition

The Supplier can go into PeopleFluent and accept the "Transition Requisition" for the seated resource, which then completes the administrative activity involved in transitioning the contractual authority for the seated resource's work to the new contract.

APPENDIX E: SUPPLIER ANNOUNCEMENT

This announcement can be used to announce the program change to the Supplier community and invite them to the introductory sessions.

To Information Technology Contingent Labor Suppliers:

The State of Michigan's Department of Technology, Management and Budget (DTMB) and Computer Aid, Inc. (CAI) are pleased to announce the State of Michigan's new strategic sourcing contract for Information Technology Contingent Labor. This program is anticipated to go live on April 4th, and it will be available to all branches of State Government procuring contracts that are administered by DTMB. (Please note: any contracts that are currently in place for IT Contingent Labor will continue through their current expiration dates and/or budget. Extensions will take place under the new contract)

CAI will be the contract's **Managed Service Provider (MSP)** for the new program, responsible for the oversight of the Contingent Labor process, including the following:

- Sourcing and Supplier response management
- Initial candidate evaluation and validation
- Interview facilitation
- On-boarding
- Invoicing

You are receiving this letter either because your organization has been providing IT resources under the Acro IT Staff Augmentation contract, or because your company was identified as a potential supplier for the new program.

CAI fully supports Michigan's initiatives to help provide every business with the maximum opportunity to succeed under the procurement process, and we encourage all Suppliers to participate for IT positions that will be available through this new contract. Interested Suppliers can join at any time, and the enrollment process is quite simple.

CAI will be conducting contract orientation sessions for interested business partners on ADD DATE. There will be two sessions; the first will be from TIME, and the second will be from TIME. These sessions will take place in XXXX, located at XXXXX, XXXX, Michigan, XXXXX.

Pre-registration is mandatory due to limited seating. To reserve your seat, please send your reservation request to the CAI's **MSP** Helpdesk at MSP_VendorMgmt@compaid.com or call 1-800-635-5138.

Once CAI receives your request, CAI will send you a packet of information with specific instructions on becoming a business partner for this contract. It will also contain information on upcoming training sessions and webinars for the web-based tool that will be used to view opportunities and submit candidates. If you are unable to attend orientation, but are still interested in joining the network, please send your request to the aforementioned Helpdesk email address.

Please address all your pre-meeting questions to MSP_VendorMgmt@compaid.com. We look forward to working with you under this new program.

Sincerely,

<Insert Name and Title>

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APPENDIX F: INCUMBENT SUPPLIERS' TRANSITION GUIDE

This document outlines the process we will follow for transitioning all resources who will be working past the contract's anticipated go-live date, April 4th. We believe this policy will allow for a seamless transition, with little or no impact on your organization's work with the state. We value your historical relationship with the State and we sincerely look forward to your participation in this new contract.

If the resource is a long term resident of the State, the question of transitioning the contractor will be raised to State management and human resources to determine if co-employment is an issue. If the resource is not going to be transitioned, the State may be able to hire a Contingent Labor resource before the incumbent's contract is terminated so that knowledge transfer can occur. If this is the case, we will replace the incumbent resource with a new candidate through the open Supplier network. Ultimately, the State can choose to hire the contractor into the State on a full time basis.

If an incumbent Supplier elects to be an active participant in CAI's Supplier network, and it agrees to the terms and conditions and rates as set forth in CAI's Subcontractor Agreement, its resource will be transitioned as engagement budgets are run down. A new PO will be created by the State in order to migrate the resource to the CAI contract. The resource will be engaged in the following manner:

- A CAI Account Manager will enter the requirement into PeopleFluent and send it to just to the incumbent Supplier
- The incumbent Supplier will submit the resource against that requirement
- CAI will engage the resource

If an incumbent Supplier elects not to participate in the CAI Supplier network, any State utilizing the Supplier's resources will need to fill the positions using the IT Contingent Labor contract. The following two options are available:

- If the resource wishes to stay at the State, they have the option of joining with another Supplier from the Supplier network. If this is the case, the Transition Process listed above will be used for the new Supplier.
- If the resource does not want to continue service or is not able to leave the subcontractor, a new resource will need to be acquired through the Supplier network. In these instances, the following process will be followed:
 - The State hiring manager must acquire a new PO
 - The hiring manager will enter the requirement into PeopleFluent
 - A CAI Account Manager will release the requirement to the Supplier network
 - Suppliers will submit their candidates
 - A CAI Account Manager will forward qualified candidates to the hiring manager
 - The hiring manager will conduct interviews and determine which candidate to engage
 - The CAI account Manager will engage the candidate

Exhibit F: Competitive Workflow Process

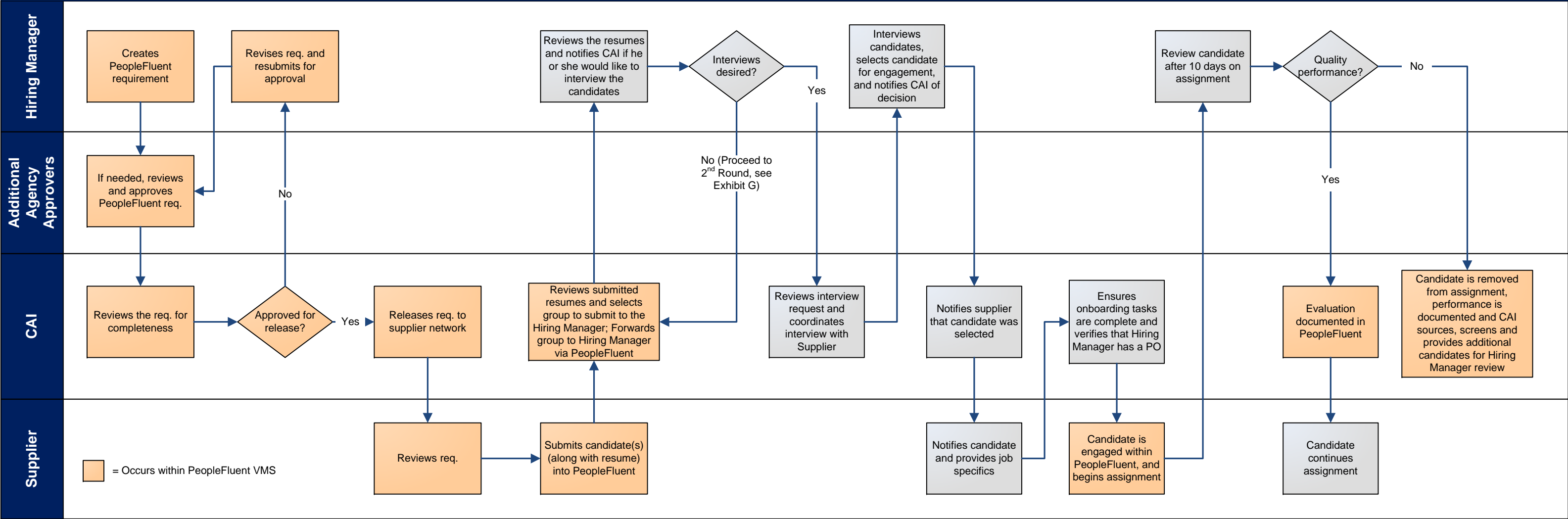


Exhibit G: Round 2 Workflow Process

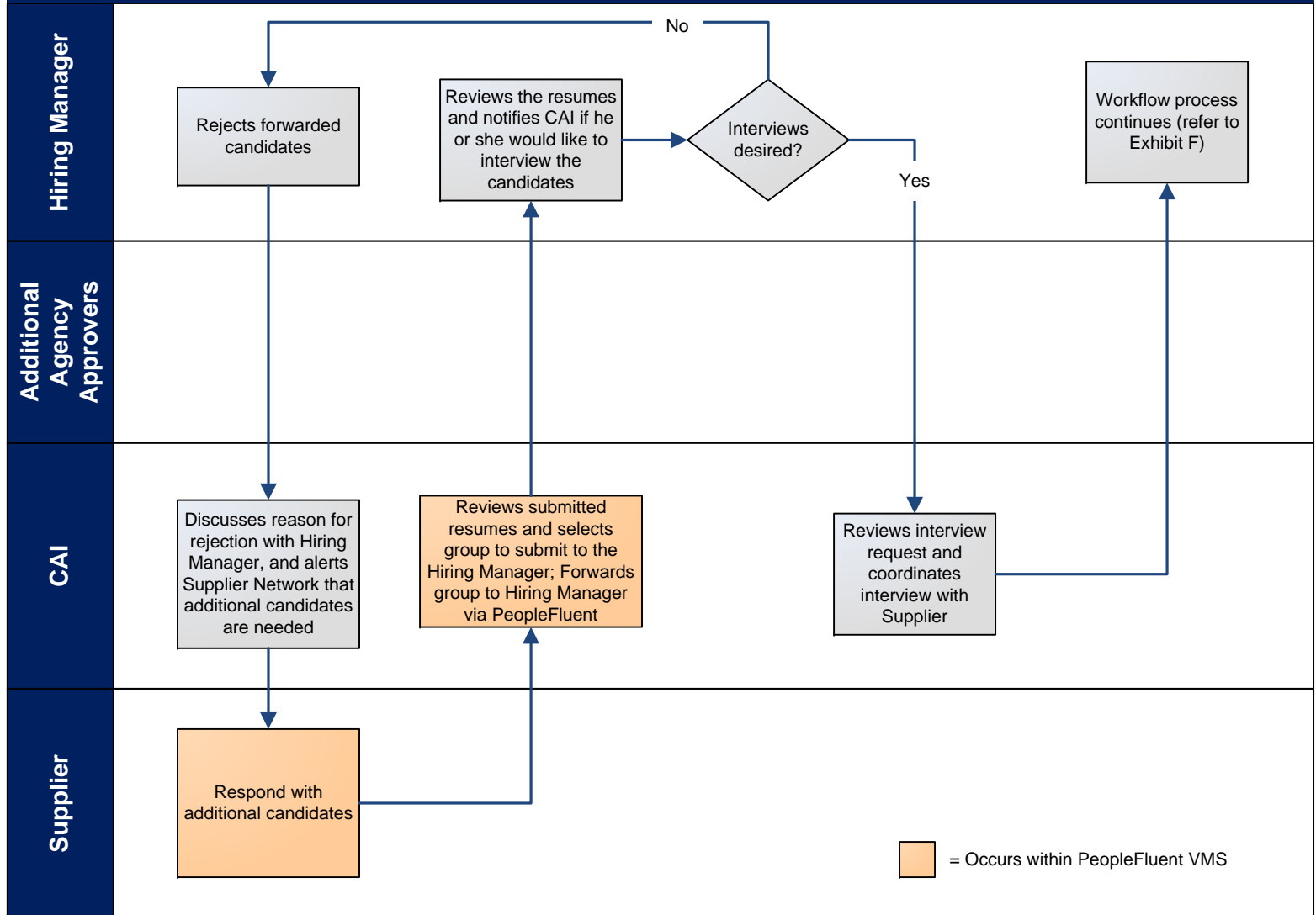


Exhibit H: Backfill Process

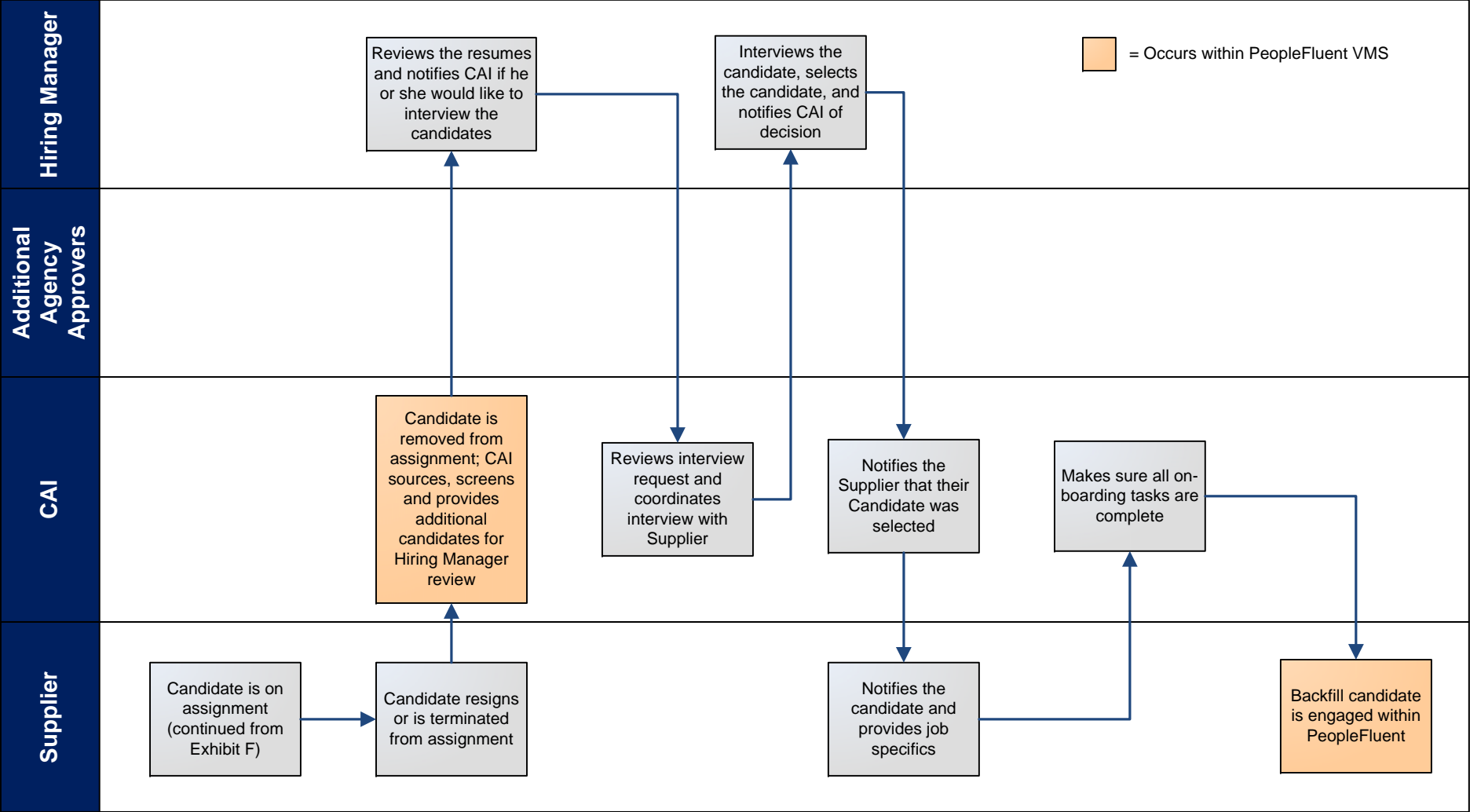
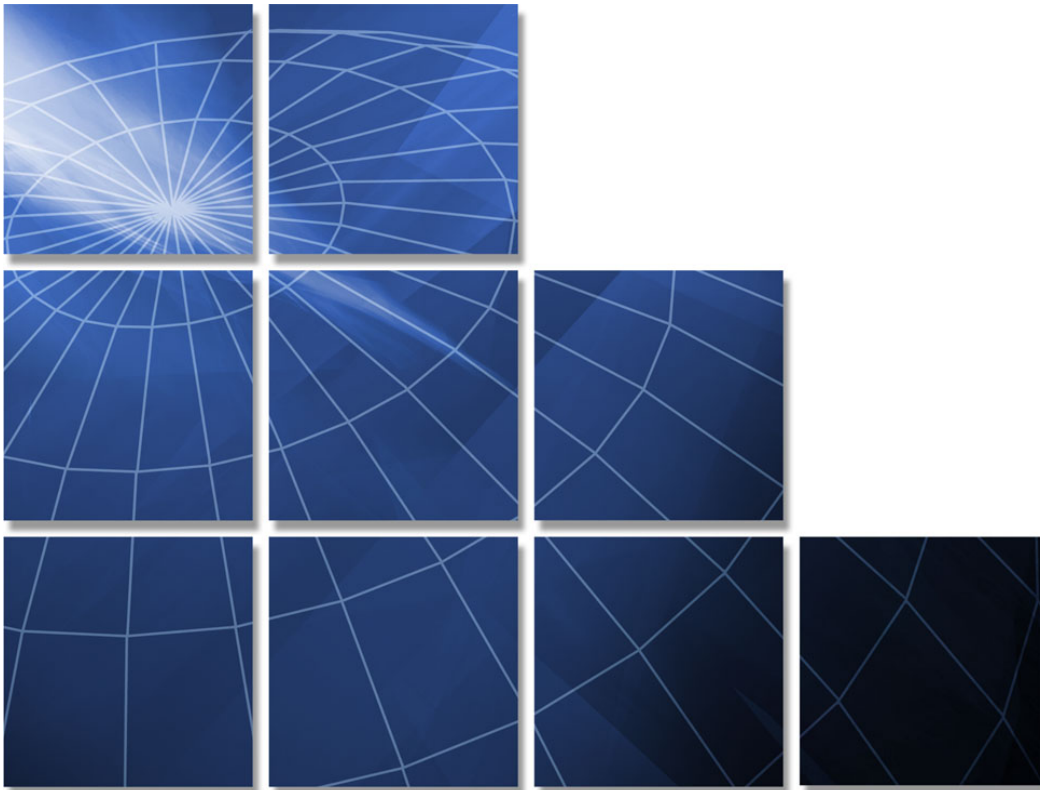


Exhibit I. Sample Agency Training Guide



Commonwealth of Virginia IT Contingent Labor (ITCL) Contract



**Agency Peoplefluent Training Guide –
Hourly, Time and Materials (T&M) Resources**

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LOGIN INFORMATION

This training guide details the web-based requisitioning system known as Peoplefluent and how it's used to procure and manage hourly, time and materials (T&M) IT staff augmentation resources under the Virginia IT Contingent Labor Contract. This guide covers various stages of the requisitioning process, including:

- Tool navigation
- Requisition creation and approval
- Candidate/response review and selection
- Timesheet and expense approval
- Engagement evaluation

Please feel free to use this page to record your personalized login information.

Peoplefluent Login Information

URL: https://vms.peopleclick.com

User Name: _____

Password: _____

Org ID: i3680

NAVIGATING THROUGH THE SYSTEM

This section provides you with a high-level overview of Peoplefluent.

Login

- Open internet browser
- Enter appropriate URL
- Enter login Information

Please note: When you enter the site for the first time, you will need to sign-off on a Software Service Agreement. After your initial log-in, you won't need to do this again.

The screenshot shows the Peoplefluent login interface. At the top left is the Peoplefluent logo. The main heading is "Please enter your Username and password below." Below this are three input fields: "Username:" with the value "hiring1", "Password:" with masked characters "*****", and "Organization Key:" with masked characters "*****". A "Login" button with a green circular arrow icon is positioned below the Organization Key field. To the right of the password field is a link labeled "Forgot password?". Several callout boxes provide instructions: one points to the "Login" button stating "Enter your login info here and click on the 'Login' button. When you login to the system the first time, you will need to change your password."; another points to the "Forgot password?" link stating "If you can't remember your password, click [here](#) to have Peoplefluent send you a new password via email. Be sure to check your Spam filter, as the new password email may end up there."; a third points to the "Forgot password?" link stating "Click [here](#) to view the Peoplefluent Service Agreement you will need to sign-off on when you login to the system for the first time."; and a fourth points to the footer stating "Click [here](#) to go to Peoplefluent's website." The footer contains links for "Help", "Service Agreement", "Peoplefluent", and "About VMS", along with copyright information: "© Copyright Peoplefluent, Inc. All Rights Reserved." and a link for "ABOUT SSL CERTIFICATES".

Accessing Key Sections of the System

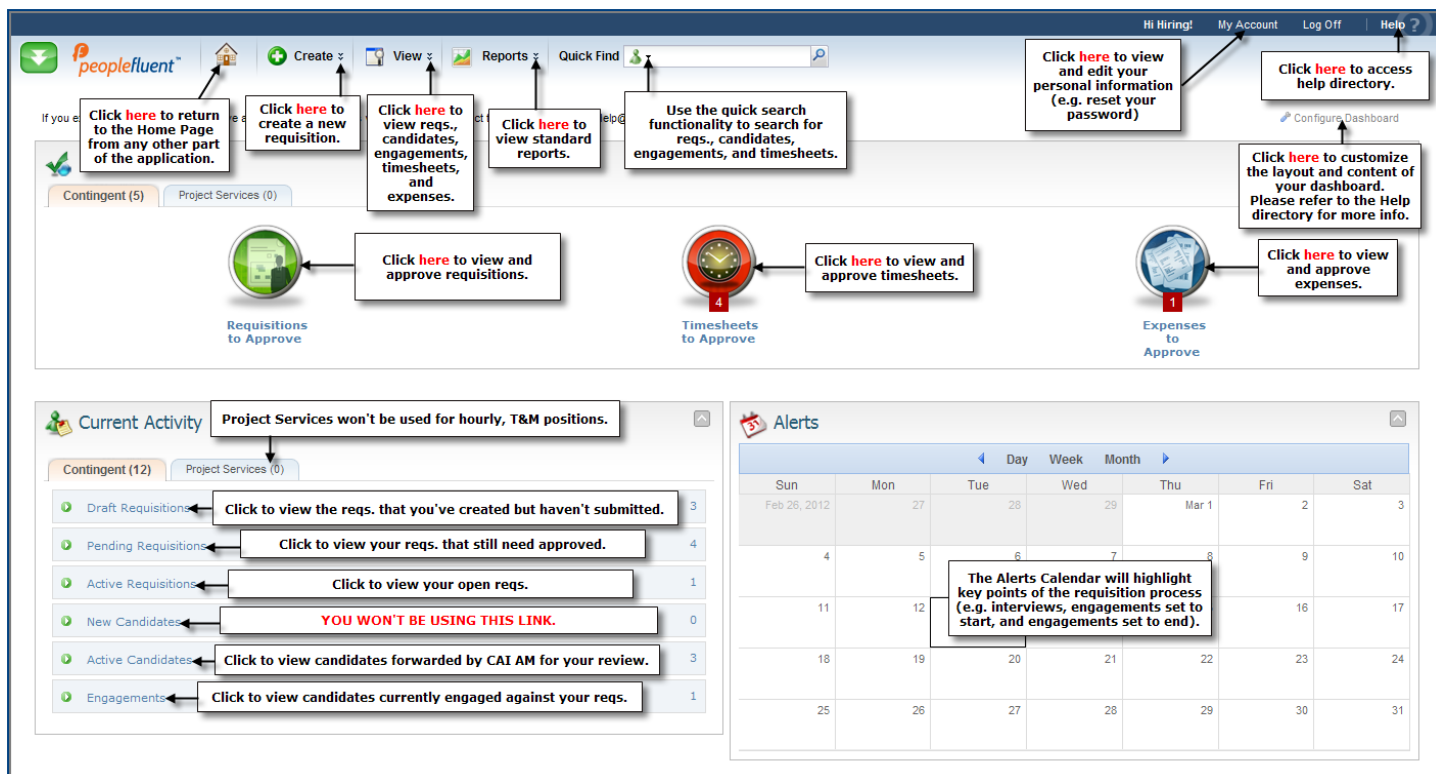
The following section highlights five main areas of the Peoplefluent system used for requisitioning hourly, T&M resources under this contract:

- Home Page
- Requisitions (Requirements)
- Candidates
- Timesheets
- Expenses

Home Page

This is the main page of the system, and it's the first you'll see after logging into the system. Also known as the dashboard, you can initiate the following tasks from the Home Page:

- View or edit your user information
- Enter a new requisition
- Access your active reqs.
- Review reqs. that may need your approval
- View candidates that have been submitted to your reqs.
- Search for reqs., candidates, and timesheets
- View reports

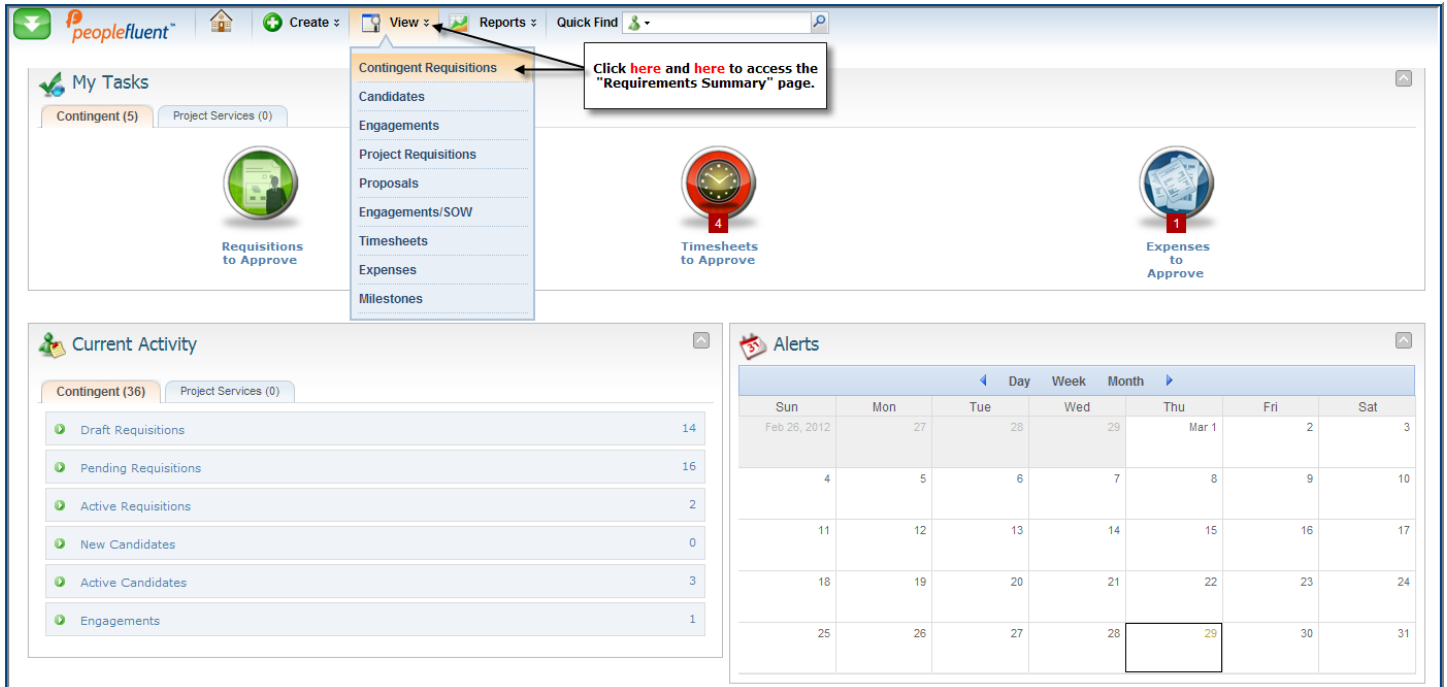


The screenshot shows the Peoplefluent Home Page with various navigation links and sections. Callouts provide instructions for each:

- Top Navigation:**
 - Home: Click here to return to the Home Page from any other part of the application.
 - Create: Click here to create a new requisition.
 - View: Click here to view reqs., candidates, engagements, timesheets, and expenses.
 - Reports: Click here to view standard reports.
 - Quick Find: Use the quick search functionality to search for reqs., candidates, engagements, and timesheets.
 - My Account: Click here to view and edit your personal information (e.g. reset your password).
 - Help: Click here to access help directory.
- Dashboard Widgets:**
 - Requisitions to Approve: Click here to view and approve requisitions.
 - Timesheets to Approve: Click here to view and approve timesheets.
 - Expenses to Approve: Click here to view and approve expenses.
- Current Activity:**
 - Project Services won't be used for hourly, T&M positions.
 - Draft Requisitions: Click to view the reqs. that you've created but haven't submitted.
 - Pending Requisitions: Click to view your reqs. that still need approved.
 - Active Requisitions: Click to view your open reqs.
 - New Candidates: YOU WON'T BE USING THIS LINK.
 - Active Candidates: Click to view candidates forwarded by CAI AM for your review.
 - Engagements: Click to view candidates currently engaged against your reqs.
- Alerts Calendar:**
 - The Alerts Calendar will highlight key points of the requisition process (e.g. interviews, engagements set to start, and engagements set to end).

Requisition Summary Page

The following screen shots illustrate how to access the **Requisition Summary Page** and summarize the main points of the page.



Navigation Menu:

- Contingent Requisitions (highlighted)
- Candidates
- Engagements
- Project Requisitions
- Proposals
- Engagements/SOW
- Timesheets
- Expenses
- Milestones

Summary Cards:

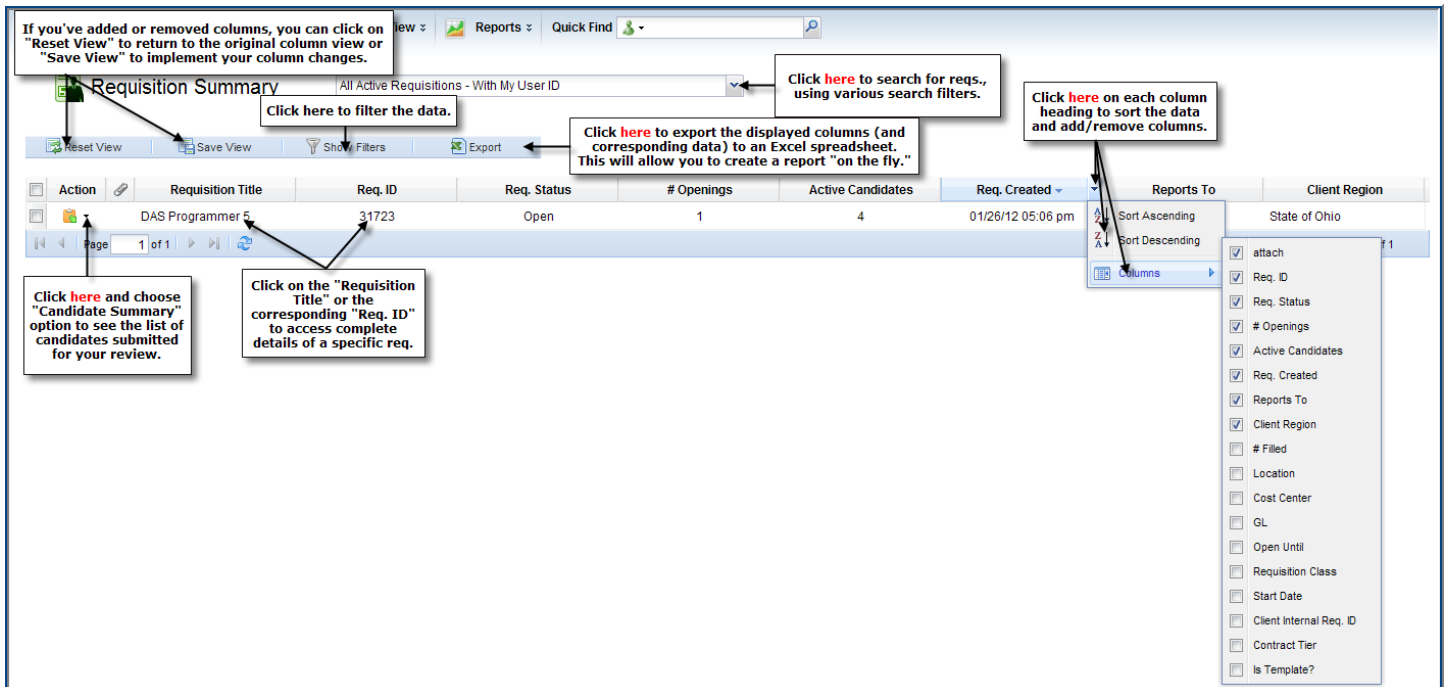
- Requisitions to Approve (5)
- Timesheets to Approve (4)
- Expenses to Approve (1)

Current Activity:

Activity	Count
Draft Requisitions	14
Pending Requisitions	16
Active Requisitions	2
New Candidates	0
Active Candidates	3
Engagements	1

Alerts:

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Feb 26, 2012	27	28	29	Mar 1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31



Annotations:

- Reset View:** If you've added or removed columns, you can click on "Reset View" to return to the original column view or "Save View" to implement your column changes.
- Search:** Click here to search for reqs., using various search filters.
- Export:** Click here to export the displayed columns (and corresponding data) to an Excel spreadsheet. This will allow you to create a report "on the fly."
- Filter:** Click here to filter the data.
- Sort:** Click here on each column heading to sort the data and add/remove columns.
- Candidate Summary:** Click here and choose "Candidate Summary" option to see the list of candidates submitted for your review.
- Requisition Details:** Click on the "Requisition Title" or the corresponding "Req. ID" to access complete details of a specific req.

Table Columns:

Action	Requisition Title	Req. ID	Req. Status	# Openings	Active Candidates	Req. Created	Reports To	Client Region
	DAS Programmer 5	31723	Open	1	4	01/26/12 05:06 pm	State of Ohio	1

Sort Options:

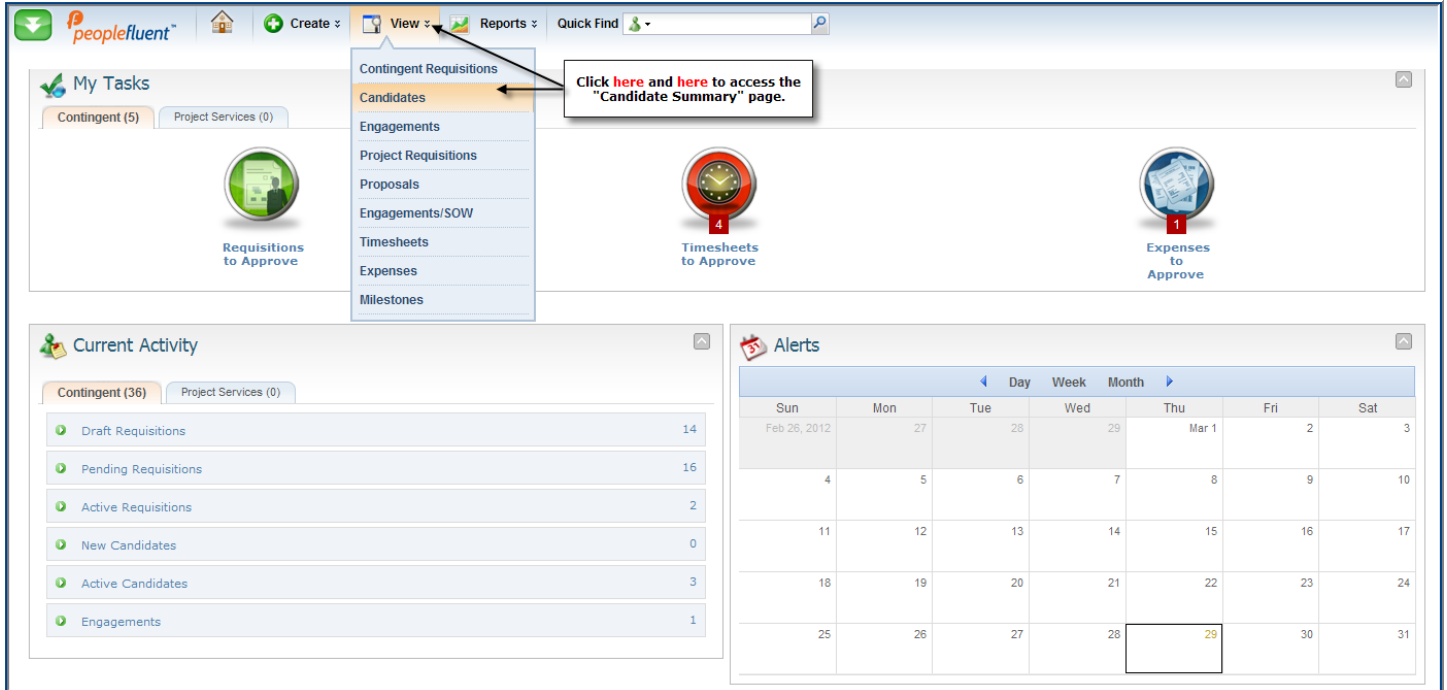
- Sort Ascending
- Sort Descending

Columns List:

- ☒ attach
- ☒ Req. ID
- ☒ Req. Status
- ☒ # Openings
- ☒ Active Candidates
- ☒ Req. Created
- ☒ Reports To
- ☒ Client Region
- ☐ # Filled
- ☐ Location
- ☐ Cost Center
- ☐ GL
- ☐ Open Until
- ☐ Requisition Class
- ☐ Start Date
- ☐ Client Internal Req. ID
- ☐ Contract Tier
- ☐ Is Template?

Candidate Summary Page

The following screen shots illustrate how to access the **Candidate Summary Page** and summarize the main points of the page.



My Tasks

- Contingent (5)
- Project Services (0)

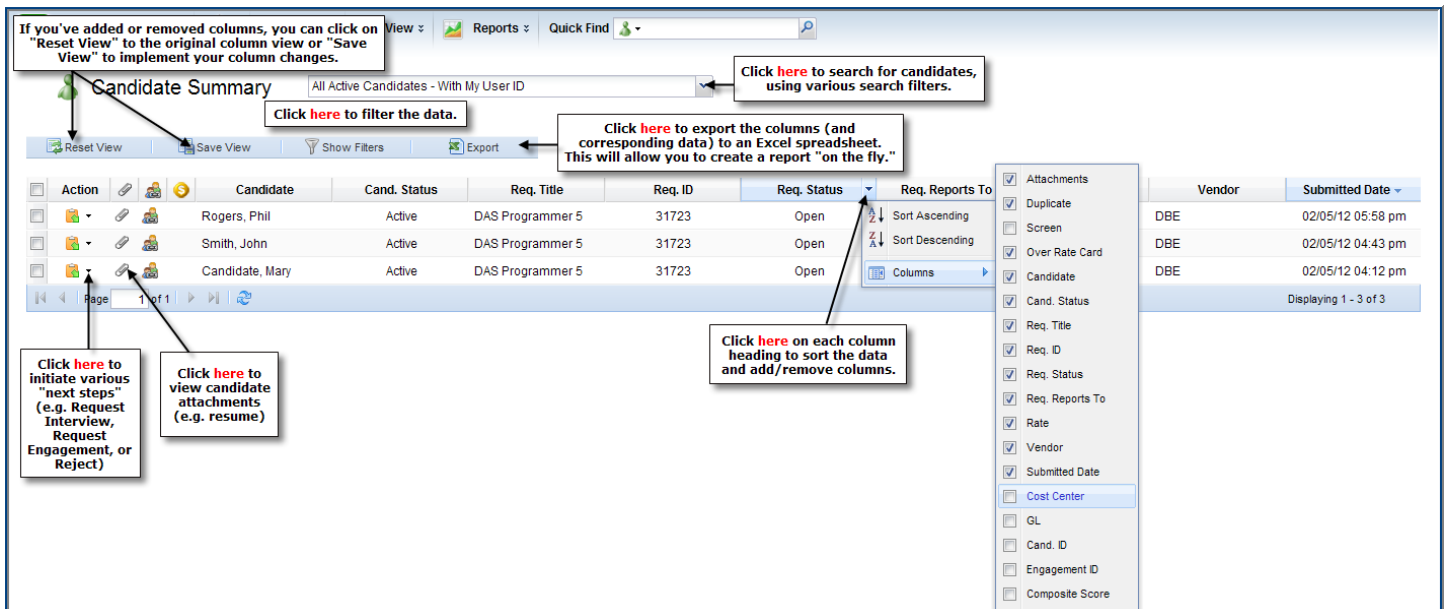
Current Activity

- Contingent (36)
- Project Services (0)

Activity	Count
Draft Requisitions	14
Pending Requisitions	16
Active Requisitions	2
New Candidates	0
Active Candidates	3
Engagements	1

Alerts

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Feb 26, 2012	27	28	29	Mar 1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31



Candidate Summary

All Active Candidates - With My User ID

Annotations:

- Reset View:** If you've added or removed columns, you can click on "Reset View" to the original column view or "Save View" to implement your column changes.
- Search:** Click here to search for candidates, using various search filters.
- Export:** Click here to export the columns (and corresponding data) to an Excel spreadsheet. This will allow you to create a report "on the fly."
- Filter:** Click here to filter the data.
- Sort:** Click here on each column heading to sort the data and add/remove columns.
- Attachments:** Click here to initiate various "next steps" (e.g. Request Interview, Request Engagement, or Reject).
- Attachments:** Click here to view candidate attachments (e.g. resume).

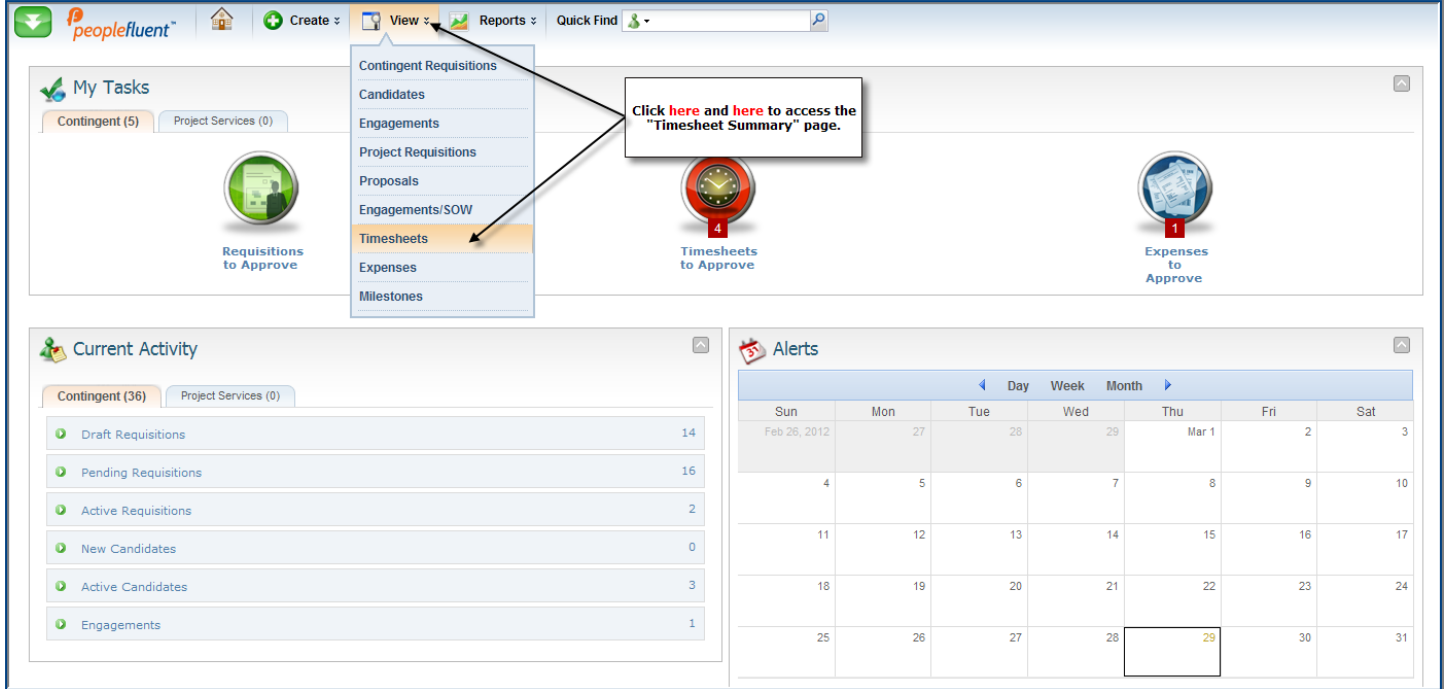
Action	Candidate	Cand. Status	Req. Title	Req. ID	Req. Status	Req. Reports To	Vendor	Submitted Date
	Rogers, Phil	Active	DAS Programmer 5	31723	Open		DBE	02/05/12 05:58 pm
	Smith, John	Active	DAS Programmer 5	31723	Open		DBE	02/05/12 04:43 pm
	Candidate, Mary	Active	DAS Programmer 5	31723	Open		DBE	02/05/12 04:12 pm

Page 1 of 1

Displaying 1 - 3 of 3

Timesheet Summary Page

The following screen shots illustrate how to access the **Timesheet Summary Page** and summarize the main points of the page. This page enables you to view and approve timesheets for the engaged candidates' timesheets for whom you have approval authority.



My Tasks

Contingent (5) | Project Services (0)

Requisitions to Approve

Timesheets

Expenses to Approve

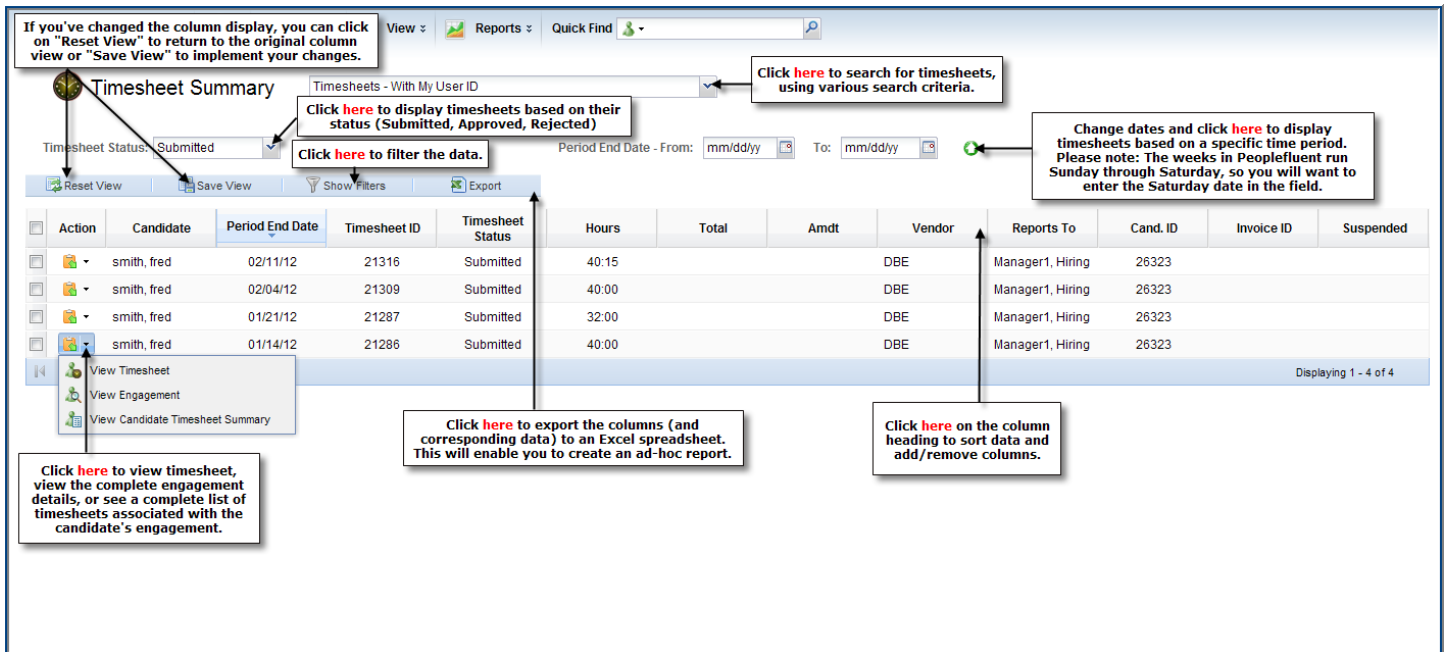
Current Activity

Contingent (36) | Project Services (0)

- Draft Requisitions: 14
- Pending Requisitions: 16
- Active Requisitions: 2
- New Candidates: 0
- Active Candidates: 3
- Engagements: 1

Alerts

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Feb 26, 2012	27	28	29	Mar 1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31



Timesheet Summary

Timesheets - With My User ID

Click here to search for timesheets, using various search criteria.

Click here to display timesheets based on their status (Submitted, Approved, Rejected)

Click here to filter the data.

Change dates and click here to display timesheets based on a specific time period. Please note: The weeks in Peoplefluent run Sunday through Saturday, so you will want to enter the Saturday date in the field.

Period End Date - From: mm/dd/yy To: mm/dd/yy

Reset View | Save View | Show Filters | Export

Action	Candidate	Period End Date	Timesheet ID	Timesheet Status	Hours	Total	Amdt	Vendor	Reports To	Cand. ID	Invoice ID	Suspended
View Timesheet	smith, fred	02/11/12	21316	Submitted	40:15			DBE	Manager1, Hiring	26323		
View Engagement	smith, fred	02/04/12	21309	Submitted	40:00			DBE	Manager1, Hiring	26323		
View Candidate Timesheet Summary	smith, fred	01/21/12	21287	Submitted	32:00			DBE	Manager1, Hiring	26323		
	smith, fred	01/14/12	21286	Submitted	40:00			DBE	Manager1, Hiring	26323		

Click here to view timesheet, view the complete engagement details, or see a complete list of timesheets associated with the candidate's engagement.

Click here to export the columns (and corresponding data) to an Excel spreadsheet. This will enable you to create an ad-hoc report.

Click here on the column heading to sort data and add/remove columns.

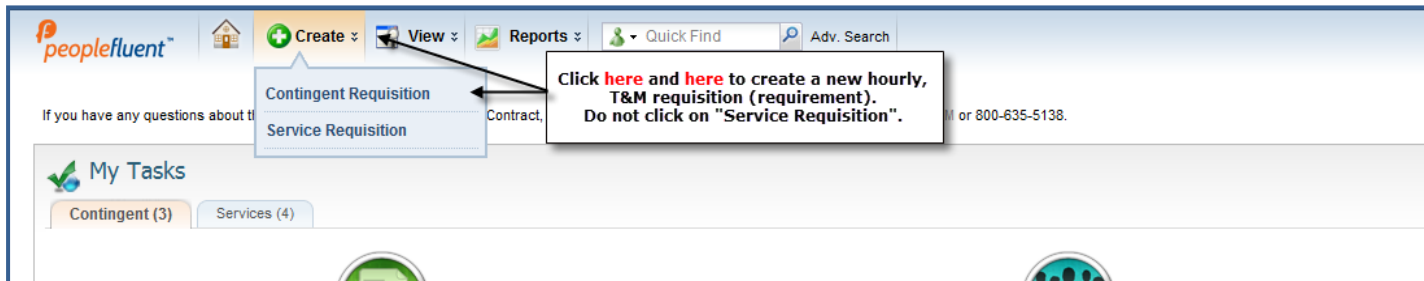
Displaying 1 - 4 of 4

ENTERING A REQUISITION

The following pages detail the workflow Hiring Managers must follow in order to fulfill a staff augmentation requirement (requisition) under this contract.

Initiate a New Requisition

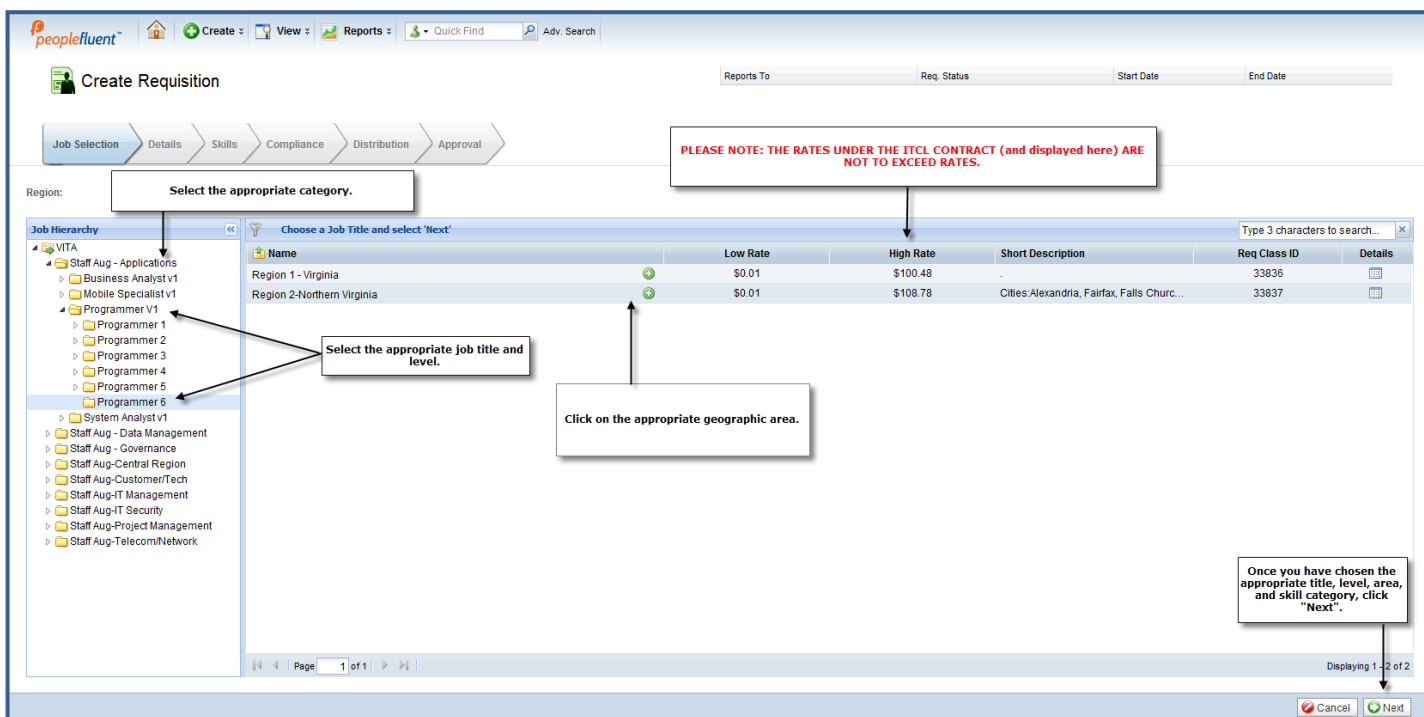
After discussing the need with the CAI Account Manager and all appropriate internal users, you will need to enter your requisition into Peoplefluent.



Select the Job Title, Area, and Skill Category


There are four levels to a req. class that must be selected when creating your requisition:


- Job Category (e.g. Applications, Data Management, Project Management)
- Position (Refer to **Job Titles and Descriptions** document for more details)
- Experience Level
- Economic Area



Enter the Details

After you select the req. class, you can now begin creating your need. Some information is pre-populated depending on the requisition.

 **Create Requisition**
Reports To: _____
Req. Status: _____
Start Date: _____
End Date: _____

Job Selection 

Details

Skills

Compliance

Approval

The Progress Bar tells you where you currently are in the req. creation process.
 If a section is checked, that means it's complete.
 If it's highlighted, that's the section you're currently completing.
 If it's gray with no check mark, that's a section that still needs completed.

Entry Instructions

Please review all information prior to submittal. Any changes after submittal must be handled by your designated CAI representative.

Requisition Details

PLEASE COMPLETE ALL FIELDS WITH A RED DOT.

The default requisition class values have been copied to this requisition.

Requisition Class: SAAPPS : PROG1 : PROG6 : Region 1 - Virginia Region Name: _____

Use default values from req class template: ☒

Title/Role: • Enter your title for this req. Please be sure to keep the job title and add your agency name/acronym to the beginning.

Number of positions to be filled.

No. of Openings: •

Start Date: • Choose the anticipated start date for the assignment.

No New Submittals After: •

Max Submittals by Vendor: Per Opening

APR NBR:

Workspace Address: • Enter the physical address for the primary work location.

Account Manager: • Do not change. CAI will change, as needed.

Expenses Reimbursed?: • Denote if expenses are reimbursable (Select Yes or No).

SLA Exempt: • Do not change. CAI will complete and change, as needed.

Priority: • Do not change. CAI will complete and change, as needed.


Agency Interview Type: • Choose the interview type (e.g. In Person Only, Both Phone and In Person, Webcam, etc.)


Named Resource/Vendor: • Enter the selected resource/vendor. USE ONLY WITH AITR PERMISSION.

No. Filled: •

End Date: • Choose the anticipated end date for the assignment.

The number of submittals per vendor is now limited to two.

 **Create Requisition**
Reports To: _____
Status: _____
Start Date: _____
End Date: _____

Job Selection 

Details

Skills

Compliance

Approval

Rate Information

Rate Structure used: Straight Time RS

Bill Range:

Bill Rate Low: \$ 0.01 USD Per Hour

Bill Rate High: \$ 66.14 USD Per Hour

Not To Exceed Bill Rate: \$ 66.14 USD Per Hour

Do Not Allow Submission Above Maximum Bill Rate: No

Hourly High Bill Rate: \$ USD Calculate

Current Budget:


Rate	# of Openings	Work Hours/Units per Week	Duration (Weeks)	Estimated Budget	Estimated Hours
\$66.14 USD	x 1	x 40	x 13	= \$34392.80 USD	520
Total:					520


Click [here](#), and when the pop-up box appears, key in the bill rate you will pay CAI for this resource (Please note that this is a not to exceed rate), the hours per day, the days per week, and click on the **Save** button at the bottom of the box.

Once you have done the Calculation, the estimated budget will automatically populate. If you need to change the budget, do so by changing the number of hours or by adjusting the Estimate Budget field itself.

Exhibit I – Sample Agency PeopleFluent Training Guide

9

 **Create Requisition**
Reports To
Status
Start Date
End Date

Job Selection 

Details

Skills

Compliance

Approval

Requisition Description

Engagement Type: Contract ☒ Keep this box checked.

Short Description: Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected. 172/254

Complete Description:

Years of Experience:
12 to 15 years of experience in the field or in a related area

Job Description:
Relies on experience and judgment to plan and accomplish goals, independently performs a variety of complicated tasks, a wide degree of creativity and latitude is expected.

•Converts data from project specifications and statements of problems and procedures to create or modify computer 3117/10000


Enter a high-level overview of your opportunity.


Please note the character limit.


Enter specific assignment details. This should describe a "day in the life" of the person who will be working in this position.

Please note the character limit.

Contact Information
0/10000


Client Contact: hiring1, h  Please do not change this field.

Req. Owner: hiring1, h 

Reports To: hiring1, h 


This field will automatically default to the agency to which you're associated. You do not have to change; however, if a change is needed click on the magnifying glass to select a new agency.

Client Information

Work Location: Virginia (Region 1) 






GL: Enter the GL number for this requisition.

Location will automatically default to your region. Click on the magnifying glass if you need to change the default location.

Cost Center: VITA 


Project: Enter project name, as you wish.

Click "Next" if you have completed everything in its entirety or "Save as Draft". DO NOT HIT "SUBMIT NOW" UNTIL YOU'VE COMPLETED EVERY STEP OF THE PROCESS.

 Cancel
 Previous
 Save as Draft
 Submit Now
 Next

Enter Skills and Ask Questions

Use this section to list all the required/desired skills for the requisition and create any questions you would like the vendor/candidate to answer.


Create Requisition
 VDOT Programmer 4 (286080)

Reports To: Hiring 1
 Status: Draft
 Start Date: 04/01/12
 End Date: 06/30/12

Job Selection ✓
Details ✓
Skills ✓
Compliance
Approval

Required / Desired Skills

The default requisition class values have been copied to this requisition.

Remove	Skill	Required / Desired	Amount	of Experience
<input type="checkbox"/>	Software Development experience	Required	12	Years
<input type="checkbox"/>	.Net	Required	6	Years
<input type="checkbox"/>	SQL Server	Required	6	Years

List all the skills you would like the candidate to possess.

Note if each skill is "Required", "Desired", or "Nice to Have", and then note the amount of experience required for each skill, if applicable.

Certification and Screening Criteria

Questions

Click [here](#) to add more rows.

Remove	Description
<input type="checkbox"/>	Are you willing to work weekends?

Click [here](#) to go back to the previous step in the process.

Click [here](#) to save and complete at a later date.

DO NOT CLICK HERE.

Click [here](#) to continue on to the next step.

If you'd like to remove a skill, click on the check box associated with the skill, and when you go on to next step, it will be removed.

If your position requires a background check, you can add it as a Required Skill, you can ask them in the form of the question, or you can add it to the Certification and Screening Criteria. As is the case with the other parts of this section, you would add a row, enter the requirement, choose "Yes" from the "Y/N" drop-down box, and select Show to "Vendor and Client".

If you'd like to remove a question, click on the check box associated with the question, and when you go on to next step, it will be removed.

Click [here](#) to go back to the previous step in the process.

Click [here](#) to save and complete at a later date.

DO NOT CLICK HERE.

Click [here](#) to continue on to the next step.

Previous
Save as Draft
Submit Now
Next

Enter Compliance Requirements

This section will list all the required items that the candidate must provide, and the timeframes in which they must be provided.

Create Requisition
VITA - Programmer (37655)

[Job Selection](#) ✓
 [Details](#) ✓
 [Skills](#) ✓
 [Compliance](#) ✓
 [Approval](#)

Reports To	Req. Status	Start Date	End Date
hiring1	Draft	12/01/13	06/30/14

This section outlines Compliance and/or On/Offboarding tasks that will need to be completed as part of the Candidate Submittal and/or Engagement process.

Selected	Group Name	Details	Linked	Global
<input checked="" type="checkbox"/>	Certifications			No
<input checked="" type="checkbox"/>	PM Certification Through VITA	<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div> Item PM Certification Through VITA </div> <div> Owner Vendor </div> <div> Due Candidate Submittal </div> <div> Id 2781 </div> <div> Attach. </div> </div>		

Page 1 of 1

Displaying 1 - 1 of 1

If this box is checked, vendor will be required to provide or acknowledge the selected item.

This shows the time that the required item is due.

Click **here** to go back to the previous step in the process.

Click **here** to save and complete at a later date.

DO NOT CLICK HERE.

Click **here** to continue on to the next step.

Previous
Save as Draft
Submit Now
Next

Enter Justification and Submit for Approval

Once you have entered the necessary justification for entering this requisition and click the **Submit** button, the requisition will go to the approver for sign-off.

The screenshot displays the 'Create Requisition' form for 'VDOT Programmer 4 (286080)'. The navigation bar includes 'Create', 'View', 'Reports', and 'Quick Find'. The form is currently in the 'Approval' step, indicated by a blue arrow. The 'Reports To' is 'Hiring 1', 'Status' is 'Draft', 'Start Date' is '04/01/12', and 'End Date' is '06/30/12'. The 'Job Selection', 'Details', 'Skills', and 'Compliance' steps are marked as complete with green checkmarks.

Internal Approval Request

Instructions: Please enter any additional information necessary to your CAI ITCL Account Manager for their final review.

Assigned Approver Name	Approval Level
Approver 1	Final Approver

Justification Comment: Please approve, as this resource is critical to the success of this project.

76/1000

add_new_attachment

action	Attachment Type	Description	File Name	Created By	Created Date

Previous Save as Draft Submit

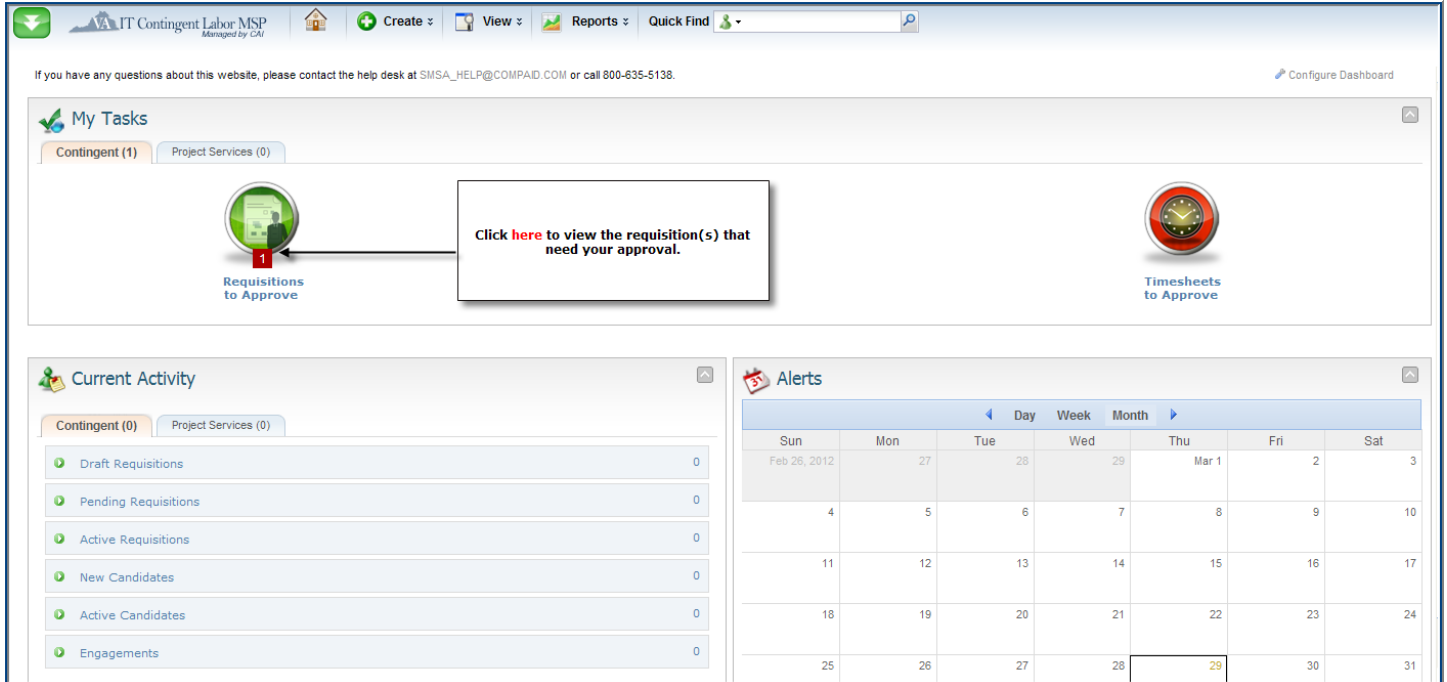
Callouts:

- This section tells you who will be approving your requisition next, whether it be another internal user within the Commonwealth or the CAI Account Manager.
- Please note the character limit.
- Provide detailed justification as to why this req. should be approved.
- Click **here** to add any attachments that will help get the req. approved. When the pop-up window appears, choose the Attachment Type from the drop-down box (Justification doc), enter brief description of the attachment, browse for the file, and click **Submit** at the bottom of the drop-down box.
- Once you have entered all the Justification information, click **Submit** to send for approval.

APPROVING A REQUISITION

If you're designated as an approver responsible for reviewing and signing-off on the requisition before it's released to the CAI Account Manager, you'll receive a Peoplefluent email notification informing you that a requisition is awaiting your approval. Within the email, you can click on the link that will take you directly to the requisition that requires your approval.

You can also access the Peoplefluent requisition by logging in and navigating the system in the following manner.

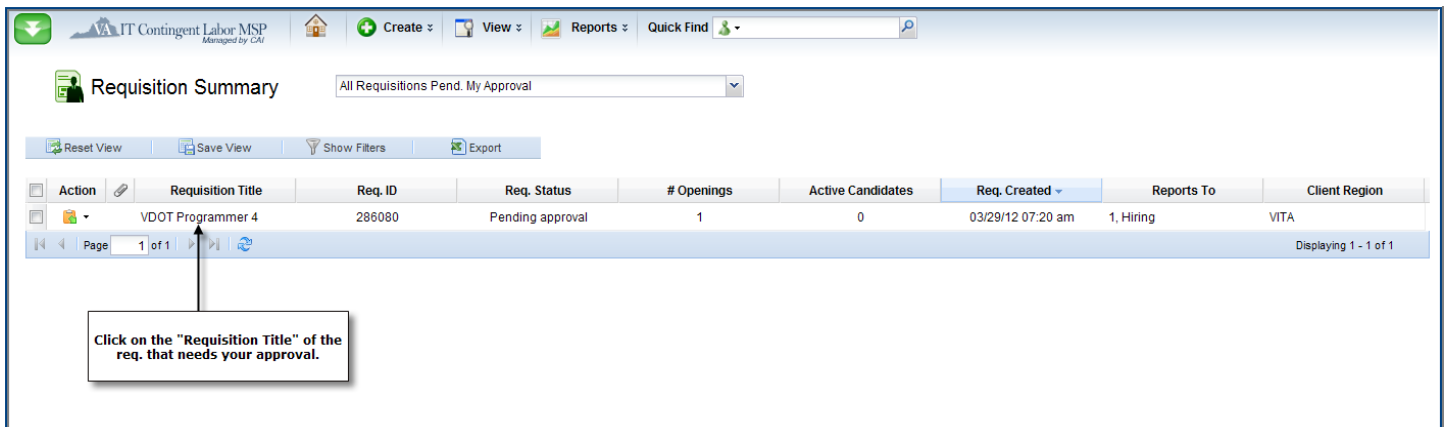


The dashboard shows the 'My Tasks' section with a 'Contingent (1)' tab selected. A callout box points to the 'Requisitions to Approve' icon, stating: 'Click [here](#) to view the requisition(s) that need your approval.'

The 'Current Activity' section shows a list of tasks for 'Contingent (0)' and 'Project Services (0)':

Task	Count
Draft Requisitions	0
Pending Requisitions	0
Active Requisitions	0
New Candidates	0
Active Candidates	0
Engagements	0

The 'Alerts' section shows a calendar for February 2012, with the 29th highlighted.



The 'Requisition Summary' page shows a table of requisitions. A callout box points to the 'Requisition Title' column, stating: 'Click on the "Requisition Title" of the req. that needs your approval.'

Action	Requisition Title	Req. ID	Req. Status	# Openings	Active Candidates	Req. Created	Reports To	Client Region
	VDOT Programmer 4	286080	Pending approval	1	0	03/29/12 07:20 am	1, Hiring	VITA

The page shows 'Page 1 of 1' and 'Displaying 1 - 1 of 1'.

Job Selection Details Skills Compliance Candidates Distribution Reference Approval/History

Requisition Details

Requisition Class: SAAPPS : PROGV1 : PROG6 : Region 1 - Virginia Title/Role: VITA - Programmer 6 Req. Status: Pending approval No. of Openings: 1 Start Date: 01/01/14 No New Submittals After: Max Submittals by Vendor: 2 Per Opening APR NBR: Worksite Address: Richmond Account Manager: Bowler, Patricia Expenses Reimbursed?: No SLA Exempt: No Priority: Normal Agency Interview Type: In Person Only Named Resource/Vendor:	Region Name: Virginia Information Technology Agency Region Description: No. Filled: 0 End Date: 06/30/14
--	---

Review the Details tab for complete information on the requisition, including:

- Assignment logistics
- Start and end date
- Rate and budget information
- Complete assignment description
- Contact information

Rate Information

Rate Structure used: Straight Time RS

Bill Range:

Bill Rate Low:	\$ 0.01	USD	Per Hour
Bill Rate High:	\$ 100.48	USD	Per Hour
Hourly High Bill Rate:	\$ 100.48	USD	

Current Budget:

Job Selection Details Skills Compliance Candidates Distribution Reference Approval/History

This section outlines Compliance and/or On/Offboarding tasks that will need to be completed as part of the Candidate Submittal and/or Engagement process.

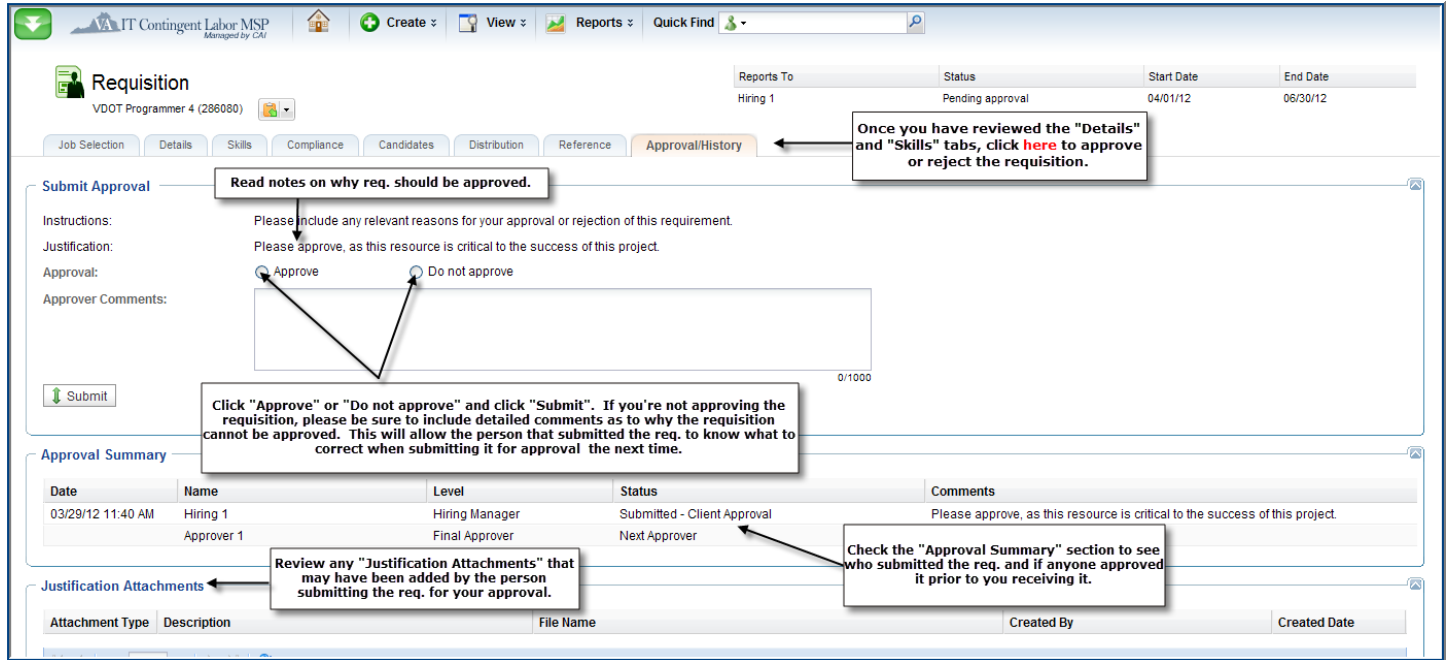
Group Name	Details	Linked	Global										
General Onboarding Items	No												
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f0f0f0;"> <th style="text-align: left;">Item</th> <th style="text-align: center;">Owner</th> <th style="text-align: center;">Due</th> <th style="text-align: center;">Id</th> <th style="text-align: center;">Attach.</th> </tr> </thead> <tbody> <tr> <td>PM Certification Through VITA</td> <td style="text-align: center;">Vendor</td> <td style="text-align: center;">Candidate Submittal</td> <td style="text-align: center;">2781</td> <td></td> </tr> </tbody> </table>	Item	Owner	Due	Id	Attach.	PM Certification Through VITA	Vendor	Candidate Submittal	2781				
Item	Owner	Due	Id	Attach.									
PM Certification Through VITA	Vendor	Candidate Submittal	2781										

Page: 1 of 1
Displaying 1 - 1 of 1

Review the Compliance tab and ensure that any required items are included.

Requisition Summary List
Print Edit

Once you have reviewed the information, go to the **Approval/History** tab, as illustrated below.



Requisition
VDOT Programmer 4 (286080)

Reports To: Hiring 1 | Status: Pending approval | Start Date: 04/01/12 | End Date: 06/30/12

Job Selection | Details | Skills | Compliance | Candidates | Distribution | Reference | **Approval/History**

Submit Approval

Instructions: Please include any relevant reasons for your approval or rejection of this requirement.
Justification: Please approve, as this resource is critical to the success of this project.

Approval: ☒ Approve ☐ Do not approve

Approver Comments:

Approval Summary

Date	Name	Level	Status	Comments
03/29/12 11:40 AM	Hiring 1	Hiring Manager	Submitted - Client Approval	Please approve, as this resource is critical to the success of this project.
	Approver 1	Final Approver	Next Approver	

Justification Attachments

Attachment Type	Description	File Name	Created By	Created Date
-----------------	-------------	-----------	------------	--------------

Callouts:

- Read notes on why req. should be approved.
- Once you have reviewed the "Details" and "Skills" tabs, click **here** to approve or reject the requisition.
- Click "Approve" or "Do not approve" and click "Submit". If you're not approving the requisition, please be sure to include detailed comments as to why the requisition cannot be approved. This will allow the person that submitted the req. to know what to correct when submitting it for approval the next time.
- Review any "Justification Attachments" that may have been added by the person submitting the req. for your approval.
- Check the "Approval Summary" section to see who submitted the req. and if anyone approved it prior to you receiving it.

If the Requisition is **rejected** at any point in the approval chain, the Hiring Manager will be sent an email indicating the rejection. The Hiring Manager can then make corrections to the requisition and resubmit for approvals.

If the Requisition is **approved**, it will go onto the next approver in the approval chain.

Ultimately, all requisitions will be reviewed and approved by the designated CAI Account Manager who will do a final review of the requisition to ensure it is clear and complete before sending it to the vendor network for competition.

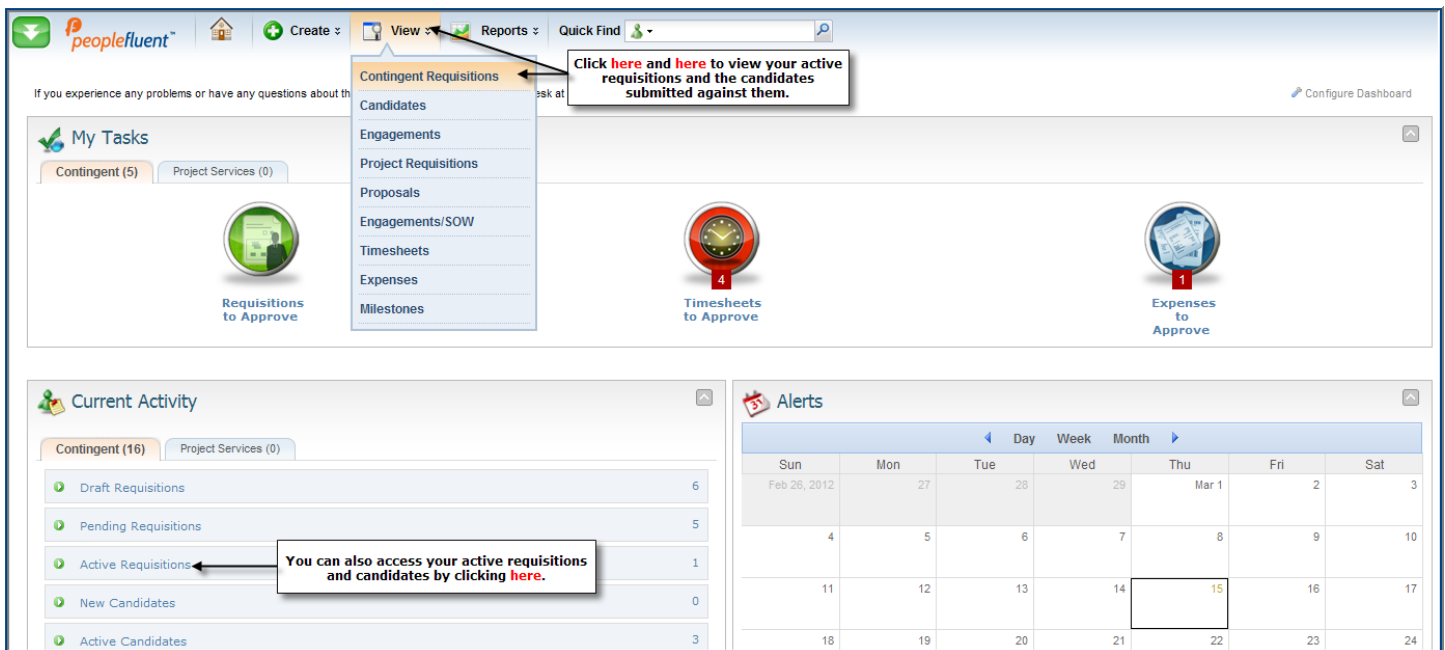
SELECTING YOUR CANDIDATE

Once the requisition is released to the Vendor network and candidates are submitted, the CAI Account Manager (AM) is responsible for screening the vendor network's candidates that are submitted against your requisition. The CAI AM examines the information provided for each candidate and reviews the score that has been calculated by the candidate responses in the **Required/Desired** section of Peoplefluent. In addition, the CAI AM compares the responses against the resume to make sure they match.

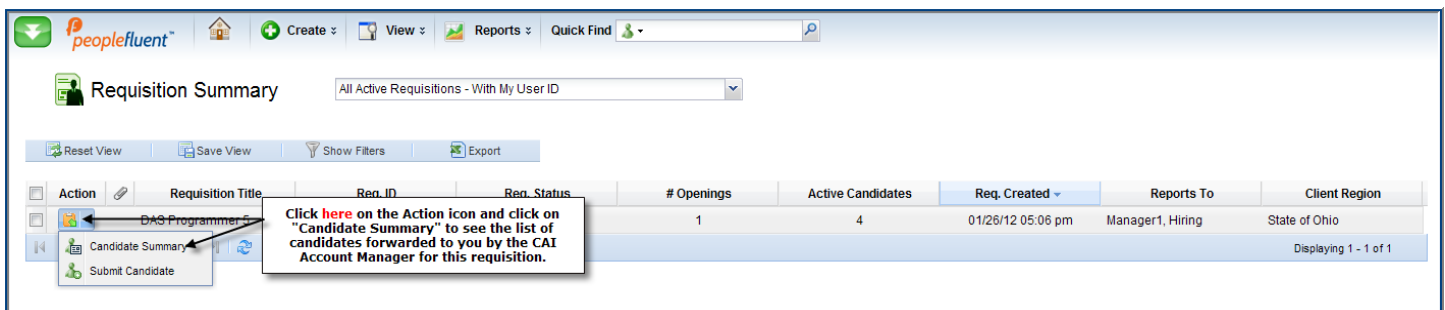
If the CAI AM feels the candidate has the necessary skills, he or she will call the candidate to do an initial screening of the candidate's qualifications. If the CAI AM still feels the candidate is a match for the position, the candidate will be forwarded to you via Peoplefluent.

Access the Candidates

When a candidate is forwarded for your review, you'll receive an automatic email notification from Peoplefluent. Within the email, you can click on a link that will take you directly to the candidate's detail page. You can also access all candidates forwarded against your requisition by navigating through Peoplefluent in the following manner.



The screenshot shows the Peoplefluent dashboard. At the top, there is a navigation bar with 'View' and 'Reports' dropdown menus. A callout box points to the 'View' dropdown, stating: "Click [here](#) and [here](#) to view your active requisitions and the candidates submitted against them." Below this, a 'Contingent Requisitions' dropdown menu is open, showing options like 'Candidates', 'Engagements', 'Project Requisitions', 'Proposals', 'Engagements/SOW', 'Timesheets', 'Expenses', and 'Milestones'. On the left, 'My Tasks' shows 'Contingent (5)' and 'Project Services (0)'. Below this are three circular icons: 'Requisitions to Approve', 'Timesheets to Approve' (with a '4' badge), and 'Expenses to Approve' (with a '1' badge). The 'Current Activity' section on the left shows a list of tasks: 'Draft Requisitions' (6), 'Pending Requisitions' (5), 'Active Requisitions' (1), 'New Candidates' (0), and 'Active Candidates' (3). A callout box points to 'Active Requisitions', stating: "You can also access your active requisitions and candidates by clicking [here](#)." On the right, there is an 'Alerts' calendar view for February 2012.



The screenshot shows the 'Requisition Summary' page in Peoplefluent. At the top, there is a dropdown menu set to 'All Active Requisitions - With My User ID'. Below this are buttons for 'Reset View', 'Save View', 'Show Filters', and 'Export'. A table lists requisitions with columns: 'Action', 'Requisition Title', 'Req. ID', 'Req. Status', '# Openings', 'Active Candidates', 'Req. Created', 'Reports To', and 'Client Region'. The first row shows a requisition for 'DAS Programmer' with 1 opening and 4 active candidates, created on 01/26/12 at 05:06 pm, reported to 'Manager1, Hiring', and in the 'State of Ohio' region. A callout box points to the 'Action' icon in the first row, stating: "Click [here](#) on the Action icon and click on 'Candidate Summary' to see the list of candidates forwarded to you by the CAI Account Manager for this requisition." Below the table, it says 'Displaying 1 - 1 of 1'.

Compare the Candidates

Once you've accessed the list of candidates submitted against your requisition, you can choose to compare the candidates' skills and experience, as illustrated in the following screen shot.

Requisition
DAS Programmer 5 (31723)

Reports To: Hiring Manager1 | Status: Open | Start Date: 04/01/12 | End Date: 12/31/12

Job Selection | Details | Skills | Compliance | **Candidates** | Distribution | Reference | Approval/History

Reset View | Save View | Show Filters | Export

Action	Candidate	Cand. Status	Req. Title	Req. ID	Req. Status	Req. Reports To	Rate	Vendor	Submitted Date
<input checked="" type="checkbox"/>	Rogers, Phil	Active	DAS Programmer 5	31723	Open	Manager1 Hiring		DBE	02/05/12 05:58 pm
<input checked="" type="checkbox"/>	Smith, John	Active	DAS Programmer 5	31723	Open	Manager1 Hiring		DBE	02/05/12 04:43 pm
<input checked="" type="checkbox"/>	Candidate, Mary	Active	DAS Programmer 5	31723	Open	Manager1 Hiring		DBE	02/05/12 04:12 pm

Page 1 of 1 | Displaying 1 - 3 of 3

Requisition Summary List | Bulk Actions | **Compare Candidates**

Click the check boxes next to each of the candidates you would like to compare.

Once you've selected the candidates you would like to compare, click [here](#).

After clicking on the "Compare Candidates" link, you'll be directed to a page that matches the candidates side-by-side, based on various criteria including:

- Composite Score (System-assigned score based on responses to Required/Desired Skills)
- Each required/desired skill listed on the requisition and the candidate response
- Previous employment (Did the candidate work for the Commonwealth before)

The following screen shot highlights the various parts of the Candidate Compare page.

Candidate Compare
DAS Programmer 5 (31723)

Click [here](#) to go back to the Candidate Summary or view the requisition.

This screen represents a typical Candidate Compare screen.

3 of 3 selected Candidates satisfy criteria.
0 Candidates in pool also satisfy criteria.

Selection Criteria: Composite Score, Deployable Rating, Employed Previously, My Star Rating

Click [here](#) to add (or remove) selection criteria to the "Candidate Compare". You can also rearrange the order of the criteria. Please note: Once you add or remove criteria, your changes will carry over to the next time you access the "Candidate Compare" section for this requisition.

You can reduce the candidate pool by adjusting each of these bars.

Sort By: Name | My Rating | **Criteria**

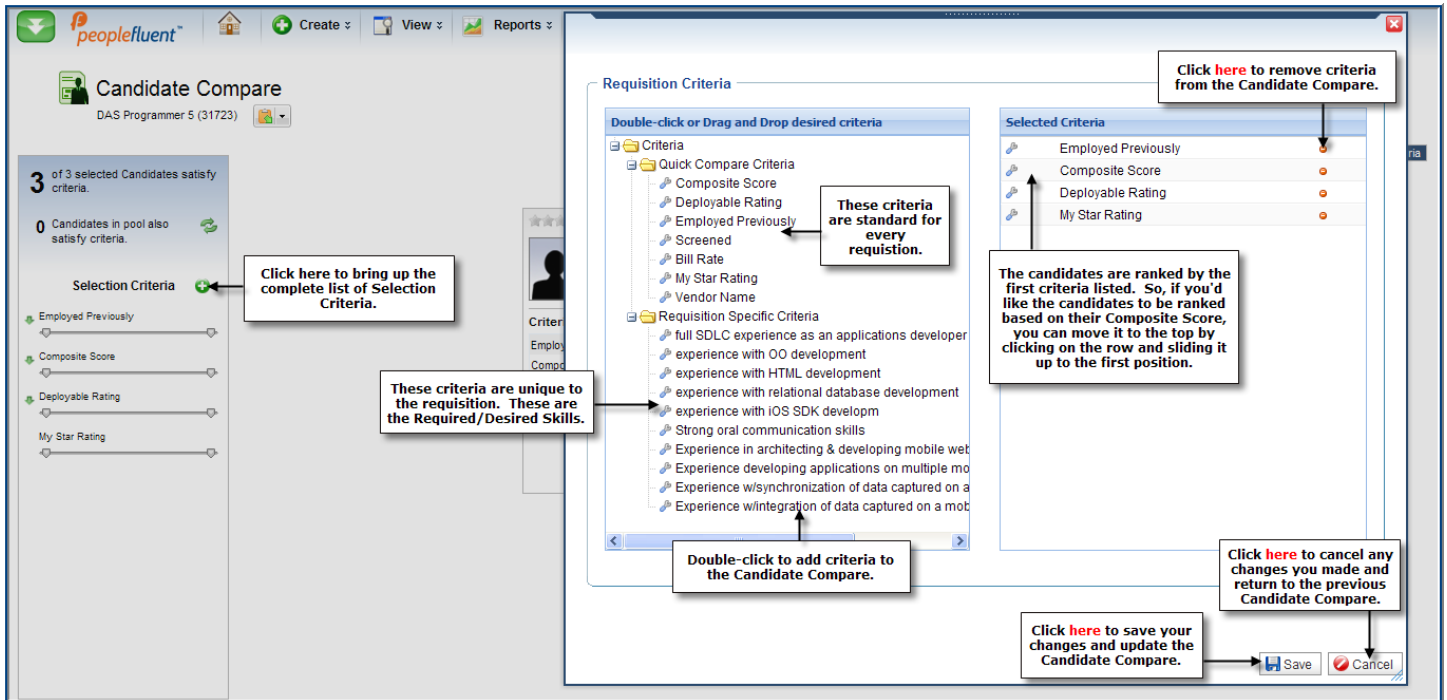
You can sort (rank) the candidates by Name (Alphabetical Order) or Criteria (It will rank the candidates based on their response to the first criteria listed).

Composite Score is the system-assigned score given to the candidate, based on responses to the Required/Desired skills listed on the requisition.

The candidate ranking goes left to right, with the top candidate on the left.

Candidate	Composite Score	Deployable Rating	Employed Previously
26472 Rogers, Phil	118.644	10	No
26432 Candidate, Mary	105.085	10	Yes
26452 Smith, John	100	10	No

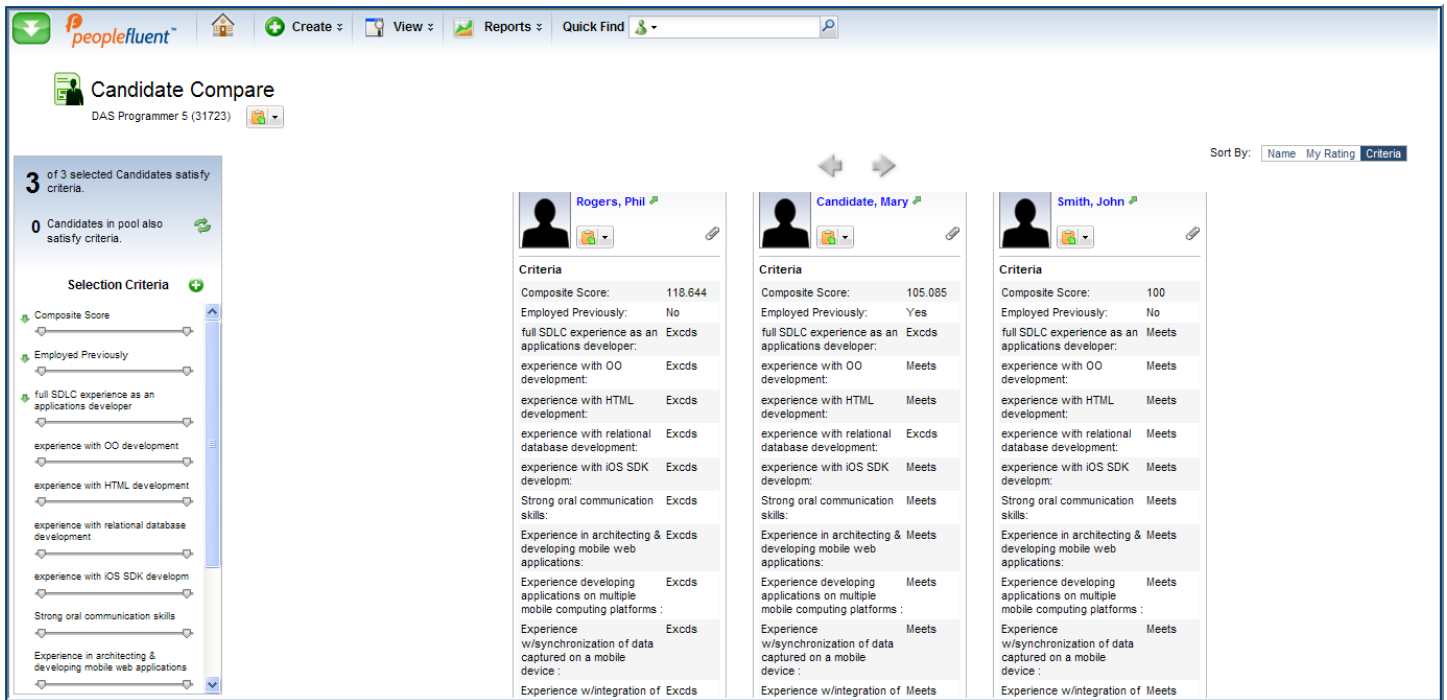
The following screen shot illustrates how you can change the selection criteria used for the candidate comparison. **Please note:** Once you alter the selection criteria, your changes will carry over to the next time you are doing a candidate comparison for this particular requisition.



Callouts:

- Click here to bring up the complete list of Selection Criteria.** (Points to the Selection Criteria icon in the left sidebar)
- These criteria are unique to the requisition. These are the Required/Desired Skills.** (Points to the Requisition Specific Criteria list)
- These criteria are standard for every requisition.** (Points to the Quick Compare Criteria list)
- Double-click to add criteria to the Candidate Compare.** (Points to a criterion in the Requisition Specific Criteria list)
- Click here to remove criteria from the Candidate Compare.** (Points to the minus icon in the Selected Criteria list)
- The candidates are ranked by the first criteria listed. So, if you'd like the candidates to be ranked based on their Composite Score, you can move it to the top by clicking on the row and sliding it up to the first position.** (Points to the Composite Score criterion in the Selected Criteria list)
- Click here to cancel any changes you made and return to the previous Candidate Compare.** (Points to the Cancel button)
- Click here to save your changes and update the Candidate Compare.** (Points to the Save button)

The following screen shot depicts what your Candidate Compare screen may look like if you make changes to the Selection Criteria.



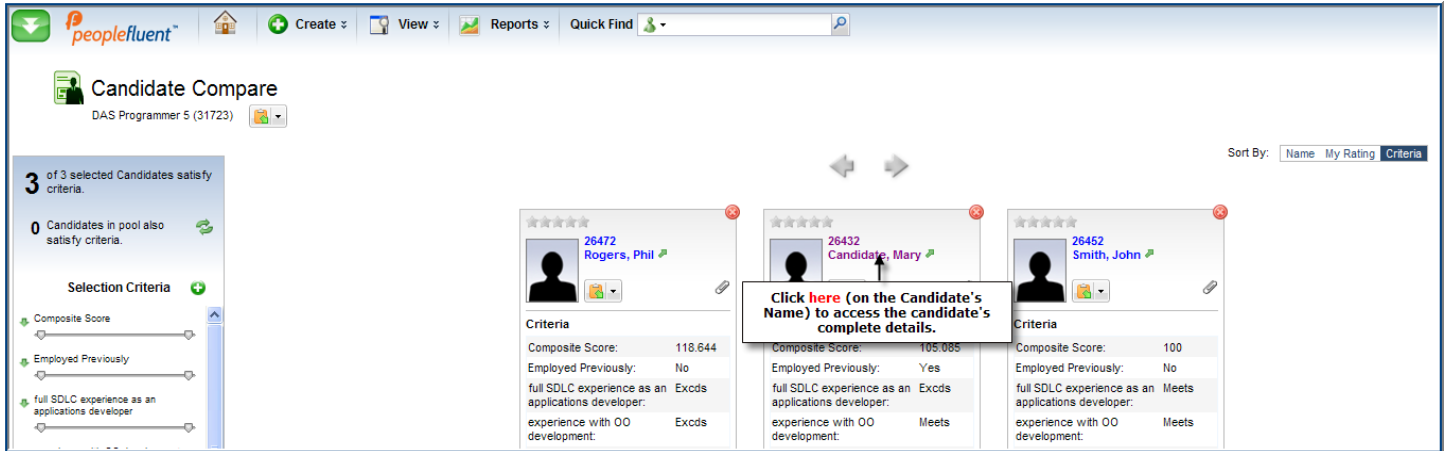
Selection Criteria (Left Sidebar):

- Composite Score
- Employed Previously
- full SDLC experience as an applications developer
- experience with OO development
- experience with HTML development
- experience with relational database development
- experience with iOS SDK developm
- Strong oral communication skills
- Experience in architecting & developing mobile web applications

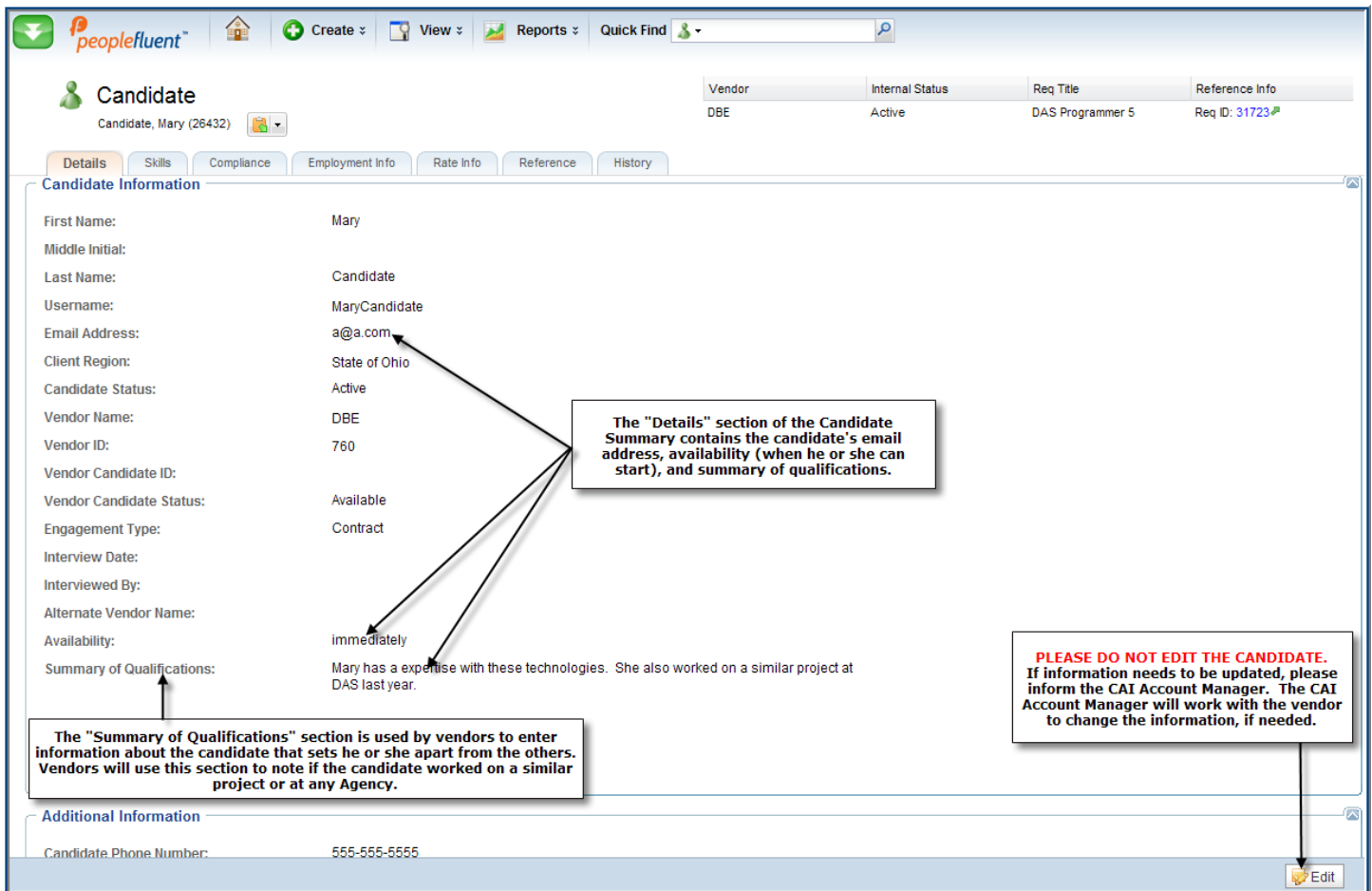
Candidate	Composite Score	Employed Previously	full SDLC experience as an applications developer	experience with OO development	experience with HTML development	experience with relational database development	experience with iOS SDK developm	Strong oral communication skills	Experience in architecting & developing mobile web applications
Rogers, Phil	118.644	No	Excds	Excds	Excds	Excds	Excds	Excds	Excds
Candidate, Mary	105.085	Yes	Excds	Meets	Meets	Excds	Meets	Meets	Meets
Smith, John	100	No	Meets	Meets	Meets	Meets	Meets	Meets	Meets

Review a Specific Candidate in Greater Detail

If you've done your candidate comparison and would like to look at an individual candidate's complete details, you can do so right from the Candidate Compare page, as illustrated in the screen shot below.



The **Candidate Summary** provides key information, including availability, summary of qualifications, skills, previous work experience, and resume. The following screen shots highlight these areas.



The "Details" section of the Candidate Summary contains the candidate's email address, availability (when he or she can start), and summary of qualifications.

The "Summary of Qualifications" section is used by vendors to enter information about the candidate that sets he or she apart from the others. Vendors will use this section to note if the candidate worked on a similar project or at any Agency.

PLEASE DO NOT EDIT THE CANDIDATE. If information needs to be updated, please inform the CAI Account Manager. The CAI Account Manager will work with the vendor to change the information, if needed.

peoplefluent Create View Reports Quick Find

Candidate
Candidate, Mary (26432)

Skills | Compliance | Employment Info

Requisition Details And Candidate Match

The "Skills" section lists the Required/Desired skills from your requisition, as well as the candidate's response to each. This section also includes any questions you asked, along with the candidate response.

Skill	Required / Desired	Amount	of Experience	Response	Amount	of Candidate's Experience
full SDLC experience as an applications developer	Required	10	Years	Exceeds	15	Years
experience with OO development	Required	5	Years	Meets	5	Years
experience with HTML development	Required	5	Years	Meets	5	Years
Strong oral communication skills	Required	2	Years	Meets	2	Years
Experience in architecting & developing mobile web applications	Desired			Meets		
Experience developing applications on multiple mobile computing platforms	Desired			Meets		
Experience w/synchronization of data captured on a mobile device	Desired			Meets		
Experience w/integration of data captured on a mobile device	Desired			Meets		

Questions For Requisition

Question	Response
Absences greater than two weeks MUST be approved by CAI management in advance, and contact information must be provided to CAI so that the resource can be reached during his or her	Yes

Compliance | Details | Skills | Employment Info | Rate Info | Reference | History

Compliance Items

This section contains tasks that will need to be completed as part of the Candidate Submittal and/or Engagement process.

The Compliance tab will show status of any required items. These items may also be attached.

Item	Owner	Status	Attachments	Response Attachments	Details
Global Onboarding Items					
SPPM form	Vendor	Complete			
Sensitive Data					
National Criminal Background Check	Vendor	Complete			

Page 1 of 1

Employment Info | Details | Skills | Compliance | Rate Info | Reference | History

Candidate Employment Status

Is Candidate currently employed by Vendor: Yes

Is/will be Paid-Employee/W2 to Vendor: Yes

If not, list candidate employer if subcontracted to vendor:

Independent Contractor: No

If yes, incorporated or 1099/Self-Employed:

Was Candidate ever contracted/employed by client: No

If yes, specify what type:

If yes, when did the last employment end?:

If yes, why did the employment end?:

If yes, detail previous contract/employment at client:

Citizen Status: US Citizen

The Employment tab will show the candidate's relationship with the submitting vendor, as well as any previous experience.

peoplefluent™

[Create](#) | [View](#) | [Reports](#) | [Quick Find](#)

Candidate
 Candidate, Mary (26432)

Vendor	Internal Status	Req Title	Reference Info
DBE	Active	DAS Programmer 5	Req ID: 31723

[Details](#) | [Skills](#) | [Compliance](#) | [Employment Info](#) | [Rate Info](#) | **[Reference](#)** | [History](#)

Candidate Comments

User Name	Org. Short Name	Date/Time	Comment	Sys. ID
There are currently no comments				

The "Reference" section lists any comments that may have been added by the Vendor, the Agency, or CAI. Please note that these comments are specific to this particular submittal. It is also worth noting that the Candidate Comments are viewable by the Vendor, and the Internal Comments are only viewable by you and the CAI Account Manager.

Internal Comments

User Name	Org. Short Name	Date/Time	Comment	Sys. ID
There are currently no comments				

The "Reference" section also contains the candidate resume, as well as any additional attachments that the vendor may have submitted. To view the file, simply click on the File Name.

Attachments

Attachment Type	Description	File Name	Created By	Created Date
Resume/CV	Mary Candidate Resume	Mary Candidate Resume.doc	Linda Leiby	02/05/12 9:13 PM

Displaying 1 - 1 of 1

peoplefluent™

[Create](#) | [View](#) | [Reports](#) | [Quick Find](#)

Candidate
 Candidate, Mary (26432)

Vendor	Internal Status	Req Title	Reference Info
DBE	Active	DAS Programmer 5	Req ID: 31723

[Details](#) | [Skills](#) | [Compliance](#) | [Employment Info](#) | [Rate Info](#) | [Reference](#) | **[History](#)**

Candidate History

First Name: Mary
 Middle Initial:
 Last Name: Candidate
 User ID: 14942

The "History" section enables you to see if the candidate has been submitted against any other requisitions within the Peoplefluent system.

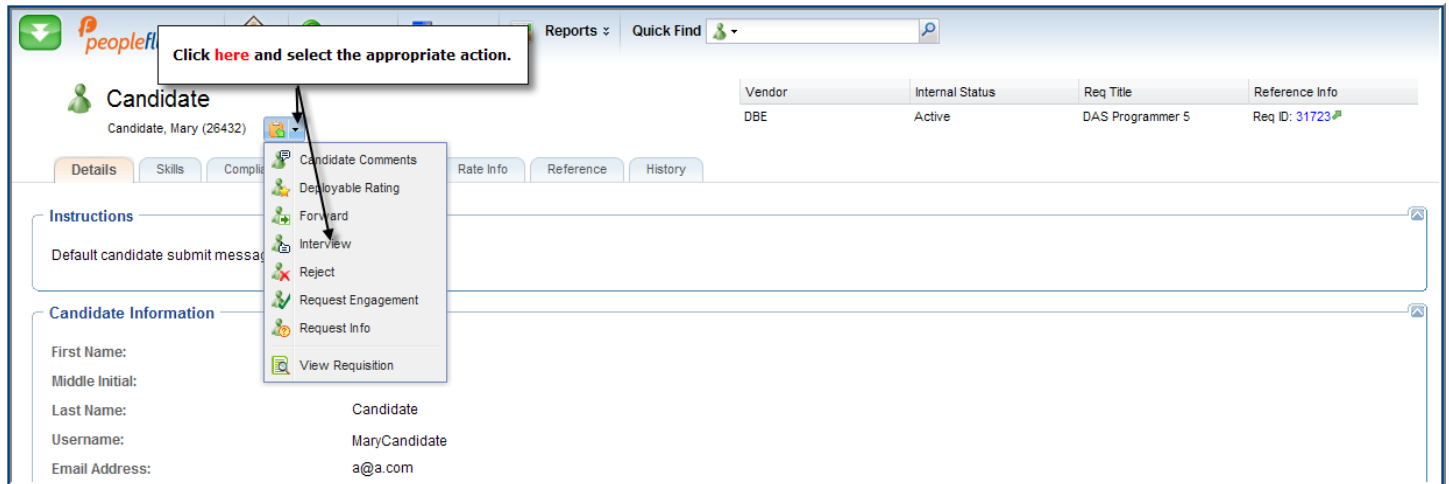
Job Title	Submitted To	Date	By	Candidate ID
Database Administrator	Commonwealth of Pennsylvania	12/14/2004	Jackie Boas	7809
DCNR - Database Administrator	Commonwealth of Pennsylvania	01/17/2005	Linda Leiby	8037
DCNR - Database Administrator	Commonwealth of Pennsylvania	01/17/2005	Linda Leiby	8040
DCNR - Database Administrator	Commonwealth of Pennsylvania	01/17/2005	Linda Leiby	8043
DCNR - Database Administrator	Commonwealth of Pennsylvania	01/17/2005	Linda Leiby	8046
DCNR - Database Administrator	Commonwealth of Pennsylvania	01/17/2005	Linda Leiby	8049
DCNR - Database Administrator	Commonwealth of Pennsylvania	01/17/2005	Linda Leiby	8052
DCNR - Database Administrator	Commonwealth of Pennsylvania	01/17/2005	Linda Leiby	8055
DCNR - Database Administrator	Commonwealth of Pennsylvania	01/17/2005	Linda Leiby	8058
DCNR - Database Administrator	Commonwealth of Pennsylvania	01/17/2005	Linda Leiby	8061

Displaying 1 - 10 of 44

From any part of the **Candidate Summary** page, the Hiring Manager can do the following:

- Request additional information about the candidate
- Forward the candidate to another person for review
- Request an interview with the candidate
- Reject the candidate
- Request that the candidate be engaged

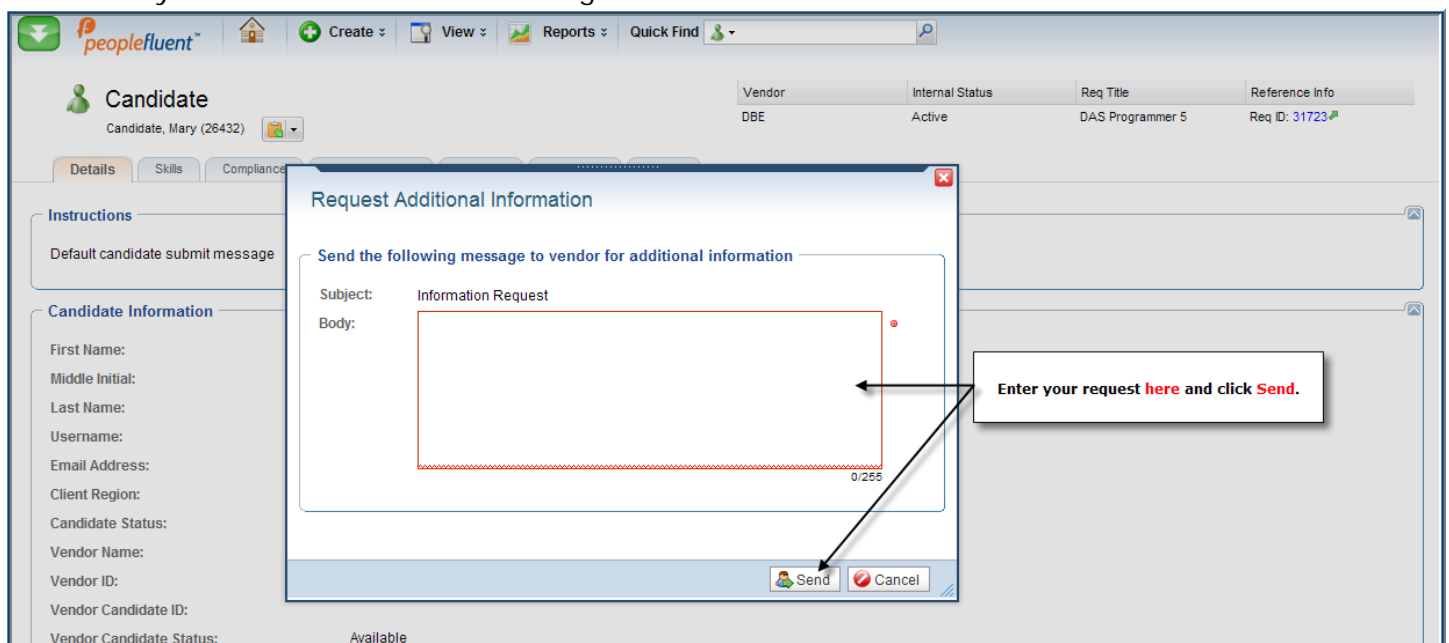
These action items, highlighted in the screen shot below, are sometimes referred to as “email generators”, as they initiate emails to CAI, requesting that action be taken.



The following sections describe these “email generators” in greater detail.

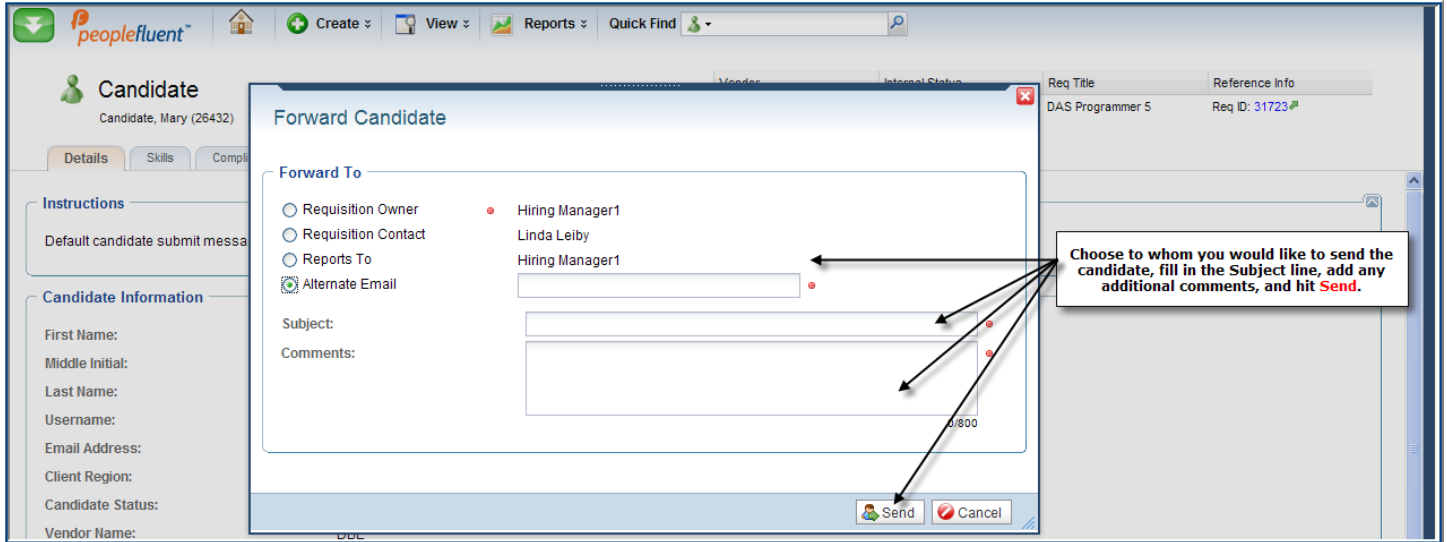
Request Information

The **Request Information** action item enables you to request additional information about the candidate. Note the additional information needed in PeopleFluent, and the CAI AM will work directly with the vendor/candidate to get this information.



Forward Candidate

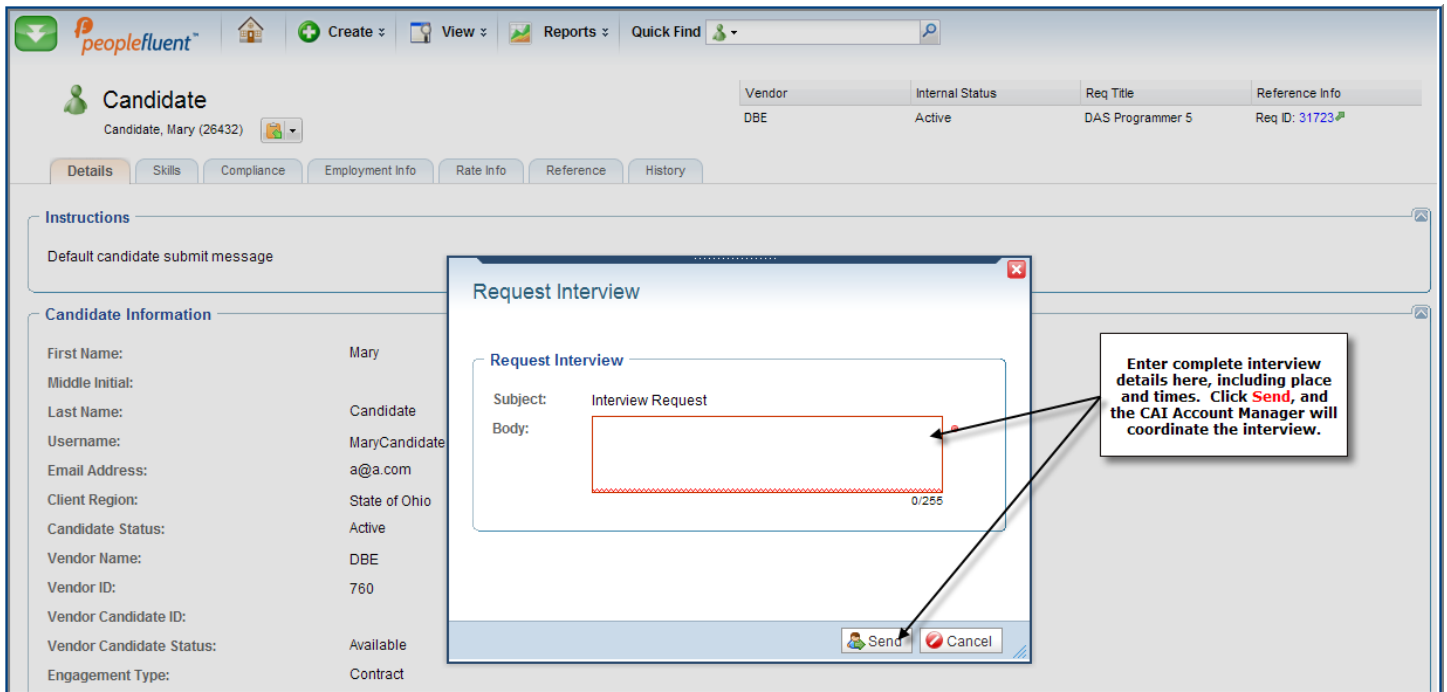
The **Forward Candidate** action item allows you to send an email to another person, asking them to review the candidate. **Please note:** In order for the other person to review the candidate's information, he or she must have access to the Peoplefluent system.



The screenshot shows the 'Forward Candidate' dialog box. On the left, there is a sidebar with 'Candidate' information for Mary (26432), including fields for First Name, Middle Initial, Last Name, Username, Email Address, Client Region, Candidate Status, and Vendor Name. The main area of the dialog has a 'Forward To' section with radio buttons for 'Requisition Owner', 'Requisition Contact', 'Reports To', and 'Alternate Email'. The 'Requisition Owner' is selected, and the name 'Hiring Manager1' is entered. Below this, there are fields for 'Subject' and 'Comments'. A callout box with arrows pointing to the 'Subject' and 'Comments' fields contains the text: 'Choose to whom you would like to send the candidate, fill in the Subject line, add any additional comments, and hit **Send**.' At the bottom right of the dialog are 'Send' and 'Cancel' buttons.

Request Interview

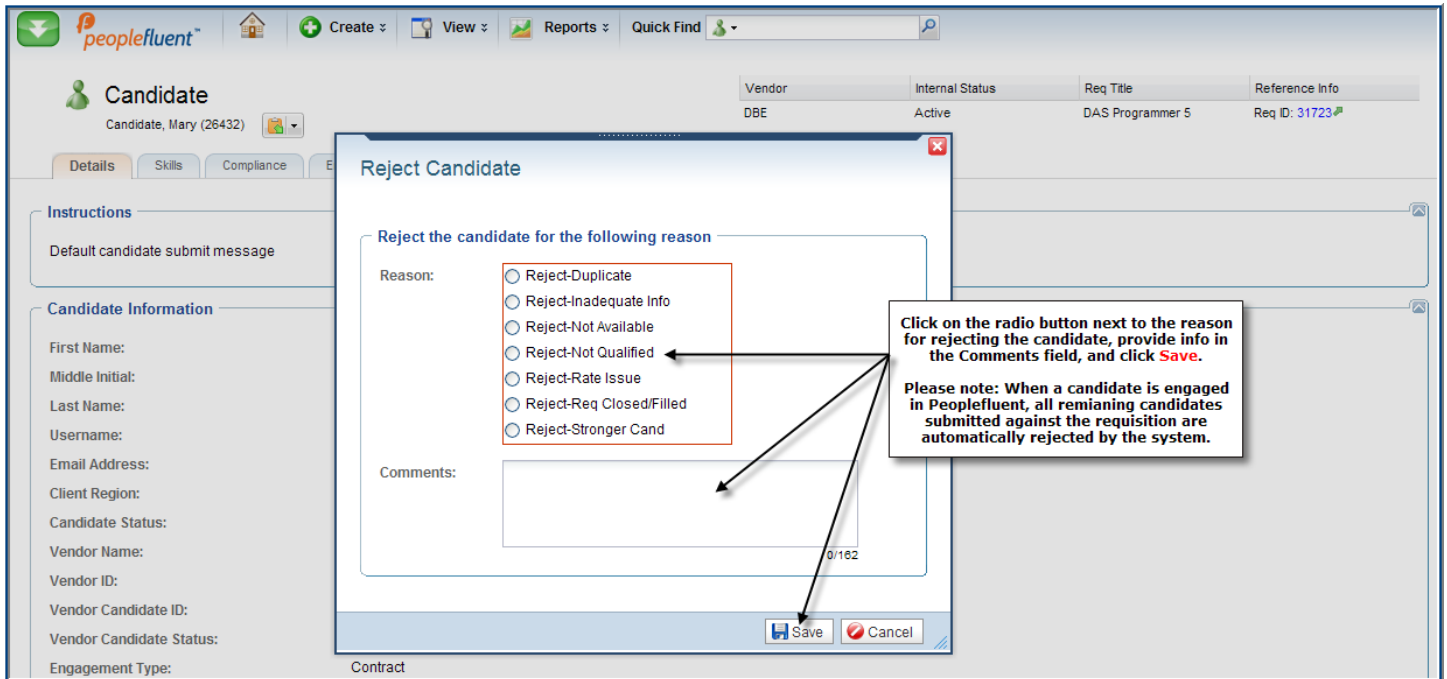
The **Request Interview** action item should be used to request an interview. Enter the complete details, and the CAI AM will coordinate scheduling with the vendor/candidate.



The screenshot shows the 'Request Interview' dialog box. The background shows the 'Candidate' page for Mary (26432) with tabs for Details, Skills, Compliance, Employment Info, Rate Info, Reference, and History. The 'Request Interview' dialog has a 'Request Interview' section with fields for 'Subject' (pre-filled with 'Interview Request') and 'Body'. A callout box with an arrow pointing to the 'Body' field contains the text: 'Enter complete interview details here, including place and times. Click **Send**, and the CAI Account Manager will coordinate the interview.' At the bottom right of the dialog are 'Send' and 'Cancel' buttons.

Reject Candidate

The **Reject Candidate** action item allows you to remove a candidate from consideration.



Reject Candidate

Reject the candidate for the following reason

Reason:

- ☐ Reject-Duplicate
- ☐ Reject-Inadequate Info
- ☐ Reject-Not Available
- ☐ Reject-Not Qualified
- ☐ Reject-Rate Issue
- ☐ Reject-Req Closed/Filled
- ☐ Reject-Stronger Cand

Comments:

0/162

Save Cancel

Contract

Candidate
Candidate, Mary (26432)

Details Skills Compliance

Instructions
Default candidate submit message

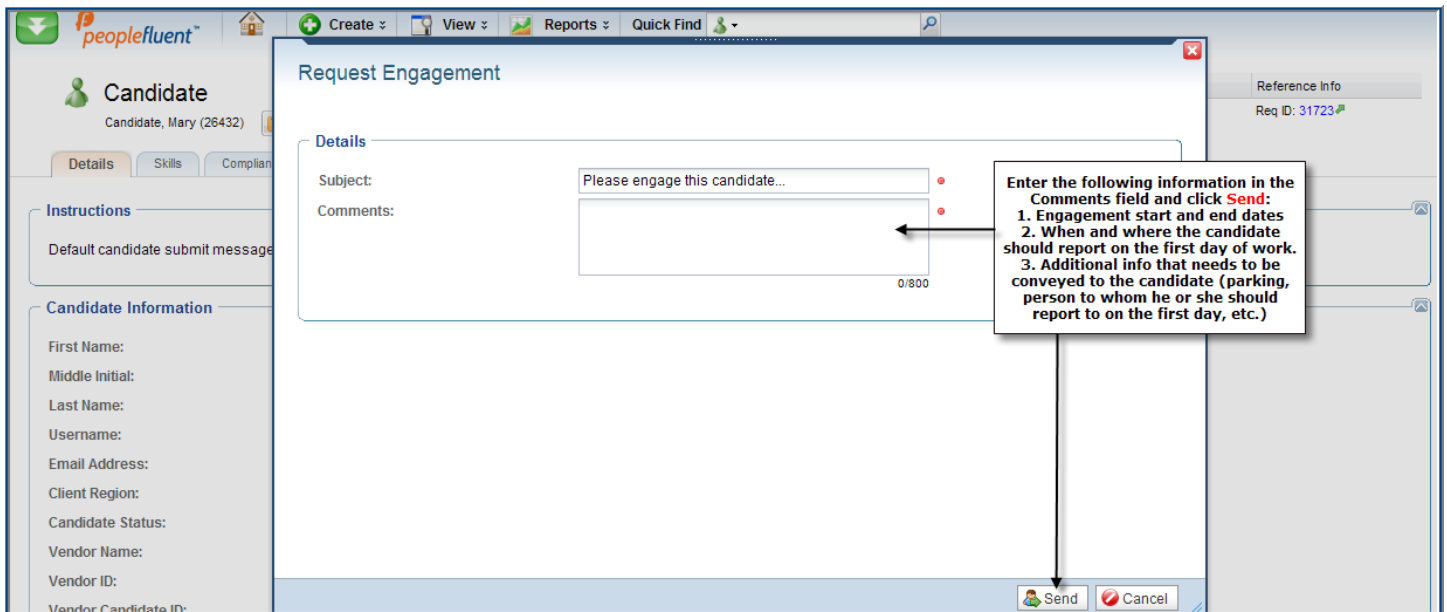
Candidate Information

First Name:
Middle Initial:
Last Name:
Username:
Email Address:
Client Region:
Candidate Status:
Vendor Name:
Vendor ID:
Vendor Candidate ID:
Vendor Candidate Status:
Engagement Type:

Vendor: DBE Internal Status: Active Req Title: DAS Programmer 5 Reference Info: Req ID: 31723

Request Engagement

The **Request Engagement** action item is used when you've selected a candidate. When the CAI AM receives the notification, CAI will begin the engagement process.



Request Engagement

Details

Subject: Please engage this candidate...

Comments:

0/800

Send Cancel

Candidate
Candidate, Mary (26432)

Details Skills Compliance

Instructions
Default candidate submit message

Candidate Information

First Name:
Middle Initial:
Last Name:
Username:
Email Address:
Client Region:
Candidate Status:
Vendor Name:
Vendor ID:
Vendor Candidate ID:
Vendor Candidate Status:
Engagement Type:

Reference Info: Req ID: 31723

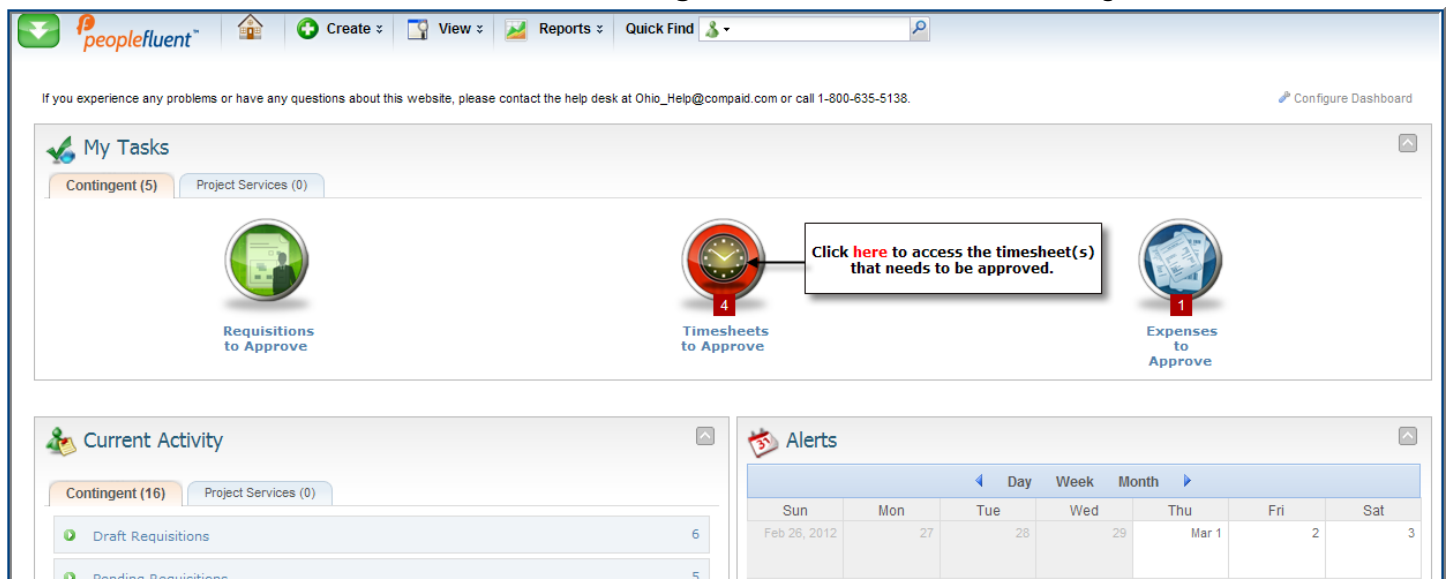
APPROVING A TIMESHEET

Each engaged candidate will be required to enter a weekly timesheet by noon on Monday into Peoplefluent. If you're designated as the candidate's time approver, you will be required to approve the timesheet by **the close of business on Tuesday of each week**. Approval indicates the hiring manager has accepted the time entered as being valid and approved for invoicing.

Once the timesheet is submitted, you'll receive an email from Peoplefluent. Within the email, you can click on a link that will take you directly to the timesheet that is pending your approval. You can also access all Peoplefluent timesheets pending your approval in the following manner.

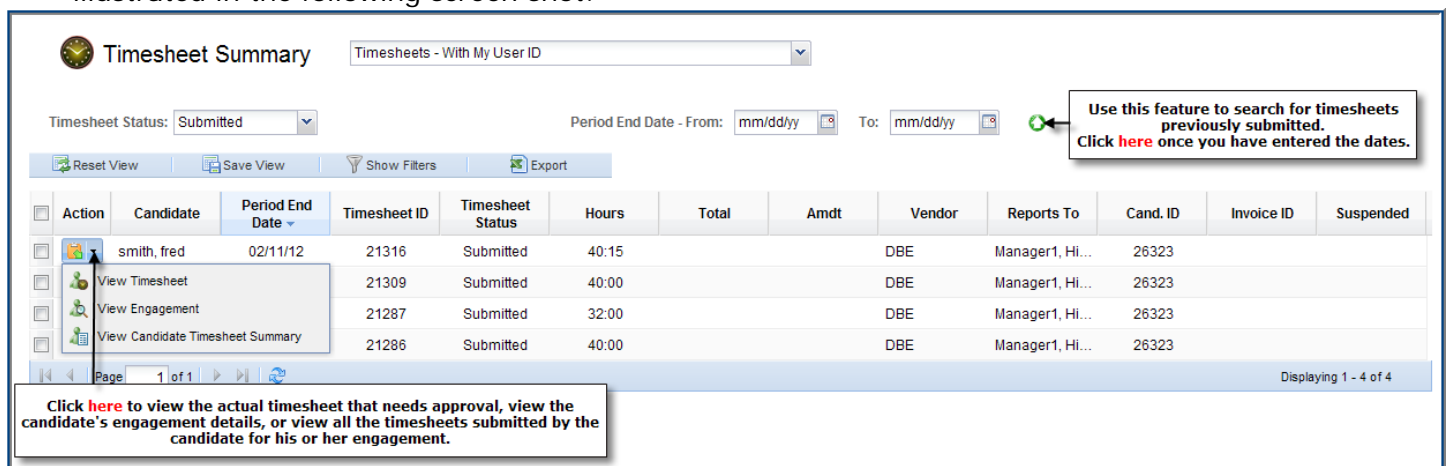
Go to the Timesheet Summary Page

You can access this screen via the **Home Page**, as illustrated in the following screen shot.



Access the Timesheet

Once you've accessed the **Timesheet Summary Page**, you can pull up the timesheet, as illustrated in the following screen shot.



Approve the Timesheet

The approval (or rejection) of a timesheet is highlighted in the following screen shot.

Period (Begin - End): Sunday, January 16, 2011 - Saturday, January 22, 2011

Timesheet

Timesheet ID: 19934 Submitted by: frank smith Status: Submitted (frank smith) 11/22/13 04:44 PM

	16 Sun	17 Mon	18 Tue	19 Wed	20 Thu	21 Fri	22 Sat	Total
VITA - 07/01/2010 - Federal Grant 123 / EP12345 / PROG~L00001			04:00	04:00	04:00			16:00
VITA - 07/01/2010 - Federal Grant 987 / EP12345 / PROG~L00002			04:00	04:00	04:00	04:00		16:00
Straight Time (2009)								32:00
Total Billable Hours (Day)			08:00	08:00	08:00	08:00		32:00

Rate Summary

Comment:

Comment History

Comment	User	Date
Monday January 17th was a Commonwealth Holiday	frank smith	01/22/11 08:14 PM

Attachments

Attachment Type	Description	File Name	Created By
Project doc	status report	Weekly Status Report.docx	frank smith

Display 1 - 1 of 1

[View Printable Version](#)
[Approve](#)
[Reject](#)

If you reject the timesheet, the candidate will be notified via another Peoplefluent email and will have the opportunity to resubmit a corrected timesheet for approval. This process will continue until the timesheet is approved.

If it is determined that a timesheet was submitted in error after it was approved, an amendment can be done to the timesheet. However, only the CAI Administrator can create an amendment.

Please note: You will need to approve the amendment just as you would the regular timesheet.

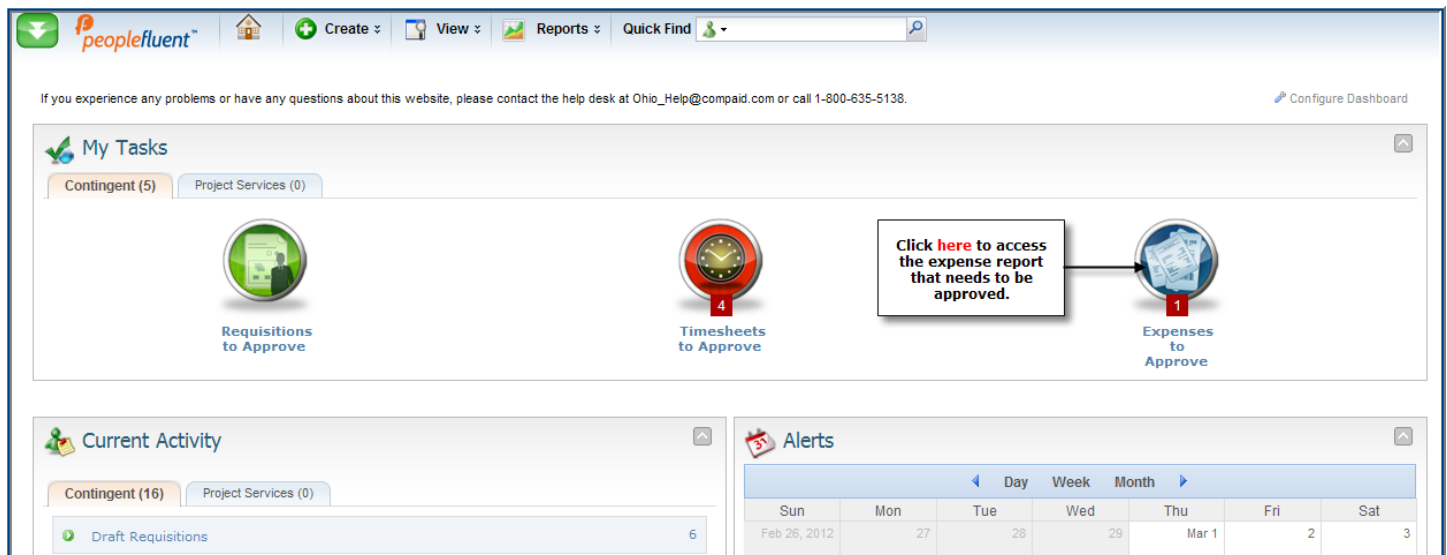
APPROVING AN EXPENSE REPORT

Like timesheets, any engagement-related expenses that the Commonwealth has agreed to reimburse must be approved by the Agency Hiring Manager through Peoplefluent. **Please note:** Expenses should only be approved if the candidate's PO includes a line item specifically for such reimbursements.

If an expense report has been submitted for your approval, you'll receive email notification from Peoplefluent. Within the email, you may click a link that will take you directly to the expense report that is pending your approval. You may also access all expense reports that require your approval by navigating through Peoplefluent in the following manner.

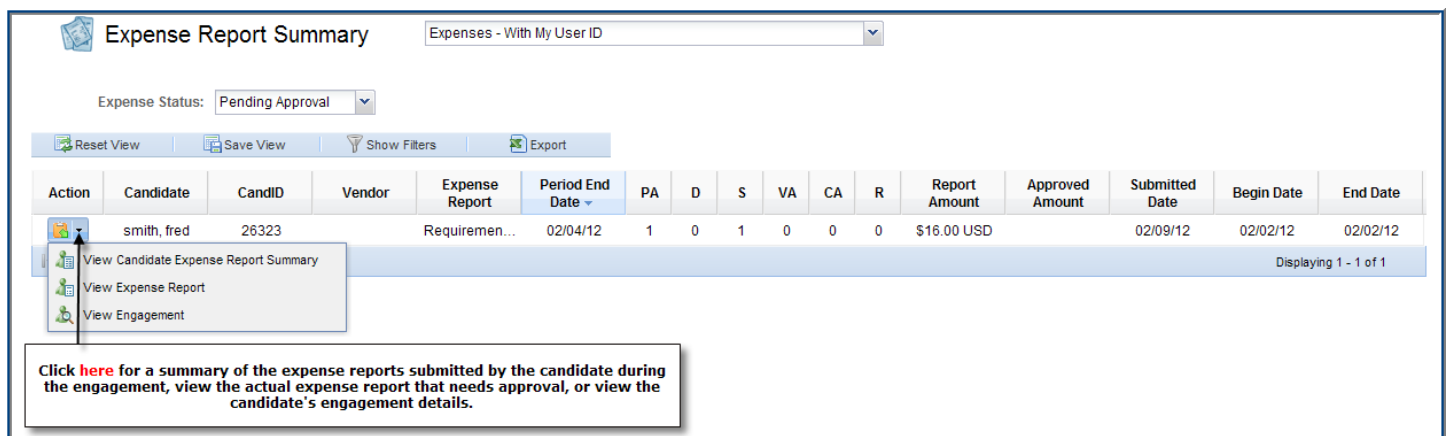
Go to the Expense Report Summary Page

You can access this screen via the **Home Page**, as illustrated in the following screen shot.



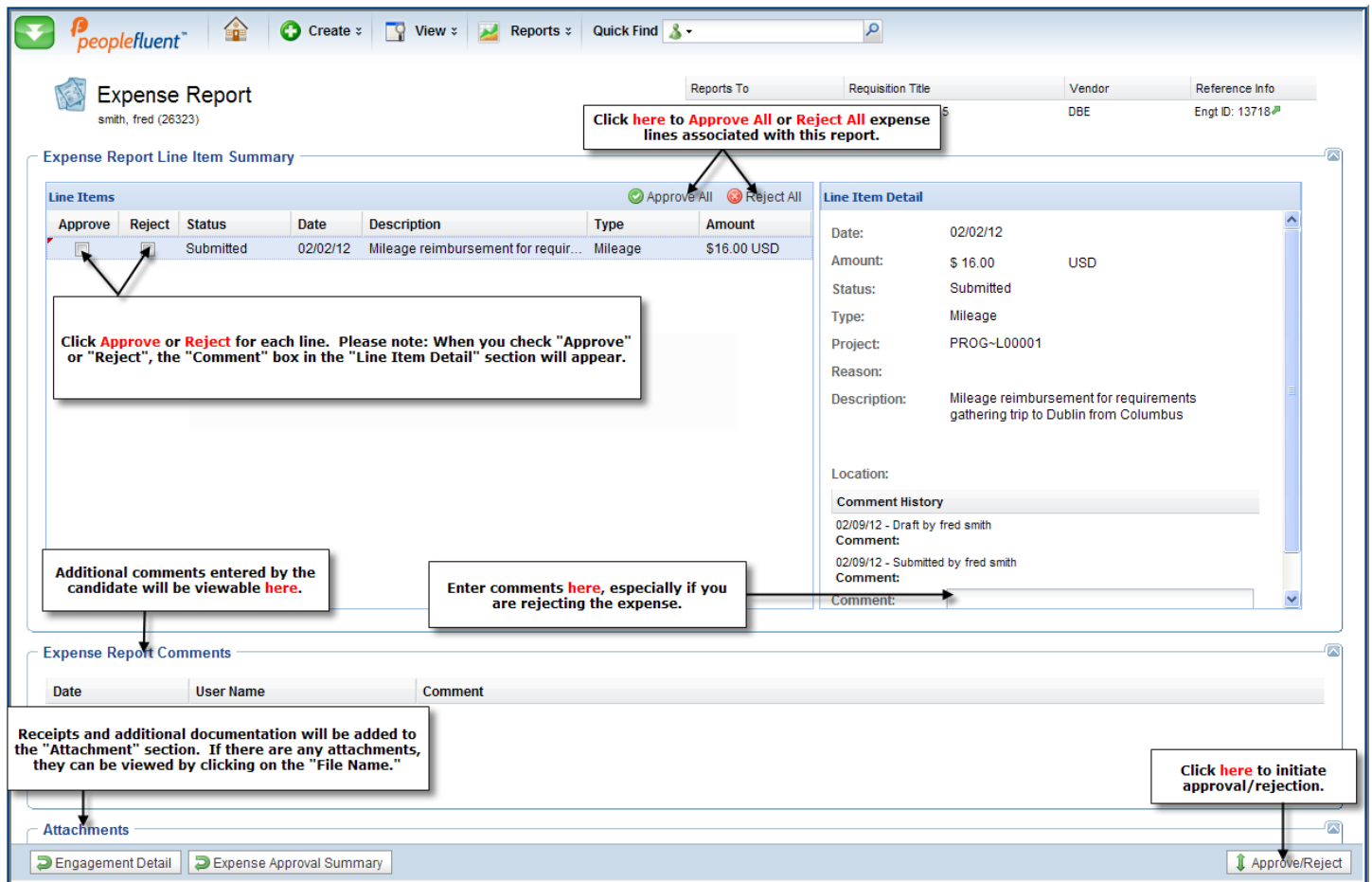
Access the Expense Report

Once you've accessed the **Expense Report Summary Page**, you can pull up the expense report, as illustrated in the following screen shot.



Approve the Expense Report

The approval (or rejection) of an expense report is highlighted in the following screen shot.



Expense Report
smith, fred (26323)

Reports To: [blank] Requisition Title: [blank] Vendor: DBE Reference Info: Engt ID: 13718

Expense Report Line Item Summary

Line Items: Approve All Reject All

Approve	Reject	Status	Date	Description	Type	Amount
<input type="checkbox"/>	<input type="checkbox"/>	Submitted	02/02/12	Mileage reimbursement for requir...	Mileage	\$16.00 USD

Line Item Detail

Date: 02/02/12
 Amount: \$ 16.00 USD
 Status: Submitted
 Type: Mileage
 Project: PROG-L00001
 Reason:
 Description: Mileage reimbursement for requirements gathering trip to Dublin from Columbus
 Location:
 Comment History
 02/09/12 - Draft by fred smith
 Comment:
 02/09/12 - Submitted by fred smith
 Comment:
 Comment:

Expense Report Comments

Date	User Name	Comment

Attachments

Engagement Detail Expense Approval Summary

Approve/Reject

Annotations:

- Click here to **Approve All** or **Reject All** expense lines associated with this report.
- Click **Approve** or **Reject** for each line. Please note: When you check "Approve" or "Reject", the "Comment" box in the "Line Item Detail" section will appear.
- Additional comments entered by the candidate will be viewable **here**.
- Enter comments **here**, especially if you are rejecting the expense.
- Receipts and additional documentation will be added to the "Attachment" section. If there are any attachments, they can be viewed by clicking on the "File Name."
- Click **here** to initiate approval/rejection.

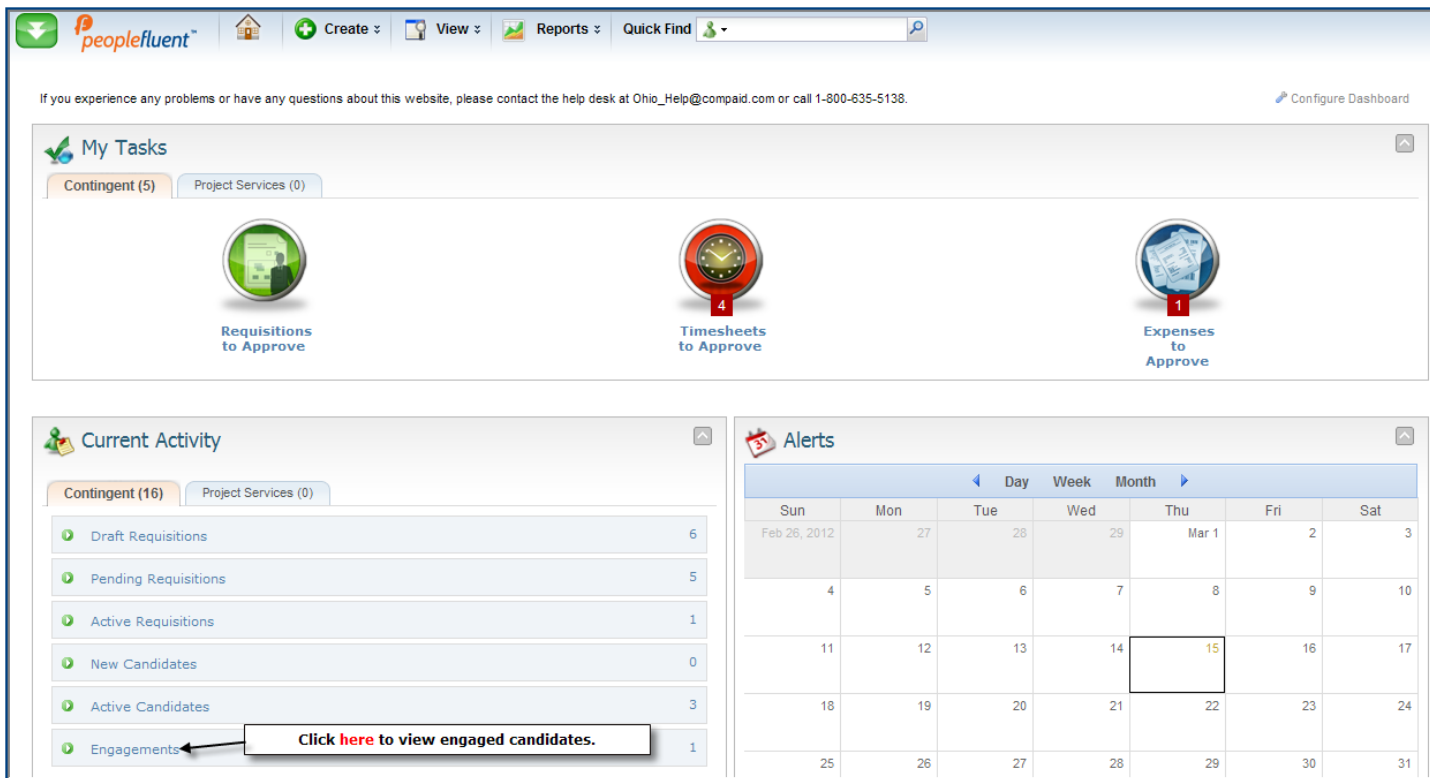
Expenses should only be approved if they have provided complete information, and have attached receipts for all expenses requiring such documentation. If you are not sure which expenses should include receipts, please feel free to contact your CAI Account Manager.

If you reject the expense report, the candidate will need to resubmit. If you discover an error on the expense report after you have already approved it, please contact the CAI Account Manager or the CAI-managed help desk. The CAI team will then ensure that it is corrected.

EVALUATING A CANDIDATE

For each candidate you have engaged under the contract, you will also receive an email request to complete an engagement evaluation form. Evaluation requests will be made after first thirty (30) days, six (6) months, and one (1) year. The evaluations are not required but highly recommended as they will be available for future reference.

If you receive a Peoplefluent email request, simply click on the link within the notification and fill in the fields as instructed in the last screen shot in this section. Or, if you decide to do an "unscheduled" evaluation, you can access the form by completing the steps detailed in the next four screen shots and then completing it, as instructed in the last screen shot.

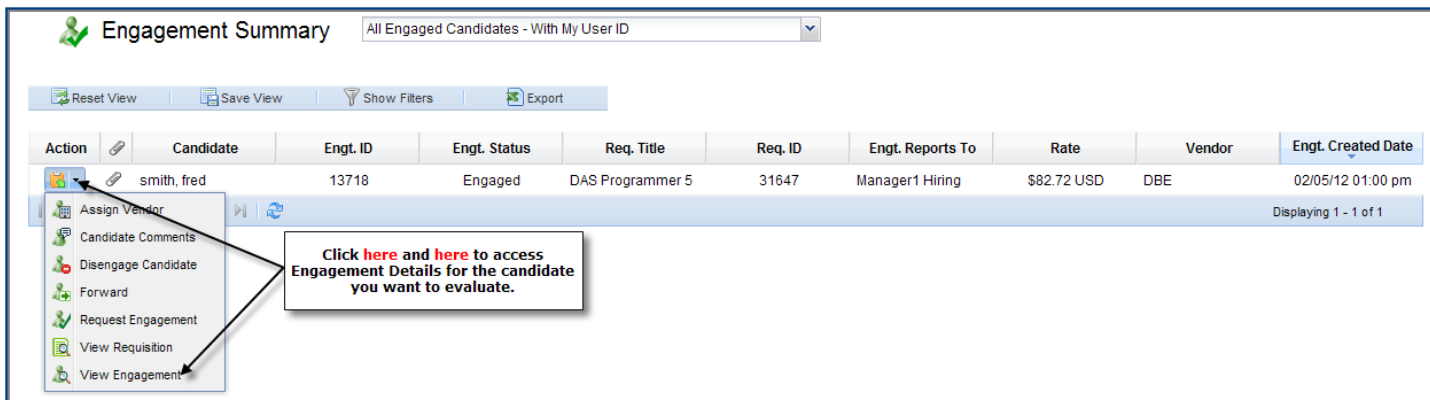


The screenshot shows the PeopleFluent dashboard. At the top, there's a navigation bar with 'peoplefluent' logo, home icon, and buttons for 'Create', 'View', 'Reports', and 'Quick Find'. Below this is a message: 'If you experience any problems or have any questions about this website, please contact the help desk at Ohio_Help@compaid.com or call 1-800-635-5138.' and a 'Configure Dashboard' link.

The 'My Tasks' section shows 'Contingent (5)' and 'Project Services (0)'. It features three circular icons: 'Requisitions to Approve', 'Timesheets to Approve' (with a red '4' badge), and 'Expenses to Approve' (with a red '1' badge).

The 'Current Activity' section shows 'Contingent (16)' and 'Project Services (0)'. It lists several activities with counts: 'Draft Requisitions' (6), 'Pending Requisitions' (5), 'Active Requisitions' (1), 'New Candidates' (0), 'Active Candidates' (3), and 'Engagements' (1). A callout box points to the 'Engagements' link with the text: 'Click here to view engaged candidates.'

The 'Alerts' section shows a calendar view for February 26, 2012, to March 3, 2012. The calendar has tabs for 'Day', 'Week', and 'Month'. The 'Day' tab is selected, showing a grid of dates. The date 15 is highlighted in yellow.



The screenshot shows the 'Engagement Summary' page. At the top, there's a dropdown menu set to 'All Engaged Candidates - With My User ID'. Below this are buttons for 'Reset View', 'Save View', 'Show Filters', and 'Export'.

The main table has the following columns: 'Action', 'Candidate', 'Engt. ID', 'Engt. Status', 'Req. Title', 'Req. ID', 'Engt. Reports To', 'Rate', 'Vendor', and 'Engt. Created Date'. The first row of data shows: 'smith, fred', '13718', 'Engaged', 'DAS Programmer 5', '31647', 'Manager1 Hiring', '\$82.72 USD', 'DBE', and '02/05/12 01:00 pm'.

A callout box points to the 'Action' column with the text: 'Click here and here to access Engagement Details for the candidate you want to evaluate.' The callout points to the 'Assign Vendor' and 'View Engagement' links in the 'Action' column.

Engagement		Vendor	Engagement Status	Req Title	Reference Info
fred smith (13718)		DBE	Engaged	DAS Programmer 5	Req ID: 31647 Cand ID: 26323

Details
Compliance
Timesheet Settings
Financials
Rates/Budget
Logistics
Attachments
Evaluation
Timesheets
Expenses
History

Candidate Information
 Client Name:

Click on the Evaluation tab of the Engagement Detail.

Details
Compliance
Timesheet Settings
Financials
Rates/Budget
Logistics
Attachments
Evaluation
Timesheets
Expenses
History

Evaluation History
 No Engagement Evaluations Found.

On the "Evaluation" tab, click [here](#) to bring up the evaluation form.

Engagement Summary List
Bulk Actions
New Evaluation

Evaluation Criteria
 Evaluation Date: 01/31/2012 12:00 (Evaluation 1)

Resource/Client Relationship:
 Attitude towards work and job, ability to work without direction, effectiveness when working with others, ability to communicate in an effective manner, professional appearance, professional personality.

Resource's productivity:
 Ability to finish assigned work on time, ability to work on multiple assignments, ability to plan and maintain workload.

Resource's quality of work:
 Accuracy of work completed, thorough at following, through, effectiveness of work produced, quality of work when completed.

Resource's tech capability:
 Knowledge of requirements and standards, knowledge of required technical disciplines.

Resource's overall performance:
 Overall performance.

Total Average:

Final Comments:

Outstanding
 Unsatisfactory
 Poor
 Satisfactory
 Above Average
 Outstanding

Outstanding

Outstanding

Outstanding

Outstanding

0

Rate the candidate in each area by selecting the appropriate rating from each drop-down box.

Add comments here.

Once you've completed the evaluation, click **Save**.

The total average is a numerical value based on the responses above, with 1 being assigned to Unsatisfactory and 5 being assigned to Outstanding.

Engagement Summary List
Bulk Actions
New Evaluation
Save
Cancel

SEEKING ASSISTANCE

You are now ready to begin using Peoplefluent to fill your Virginia IT Contingent Labor (ITCL) Contract hourly, T&M requisitions. Should you need assistance, please contact CAI's Help Desk at VAITCL_Help@compaid.com or 1-800-635-5138.

Performance Based Tiering

Performance-based Subcontractor Tiering includes development of key goals for assessing subcontractors based on performance and compliance with Service Level Agreements. The Tiering will be focused more strategically on overall compliance issues and performance history placing emphasis on the number of quality candidates submitted and successful placement to agencies.

The purpose is to:

- Encourage and reward excellence and continuous improvement;
- Foster improved and timely submittals;
- Establish performance objectives, measures and expectations;

All subcontractors will start in Tier 1 for the 60 day grace period and for a six month period following the grace period.

During Implementation CAI will work with the State to develop performance guidelines for participating subcontractors. Those guidelines will include performance against SLA's and additional quality metrics determined by the State. Sample metrics include:

- Total Unique Candidates Forwarded within 4 day window
- % of submitted candidates forwarded
- % of submitted candidates resulting in engagements

In addition, quantitative measures may be considered including:

- Negative terminations
- Non-customer initiated resignations
- Candidates that do not show up for interviews/first day of assignment
- Named requests
- Presenting resumes outside of program
- Service dependability

CAI will conduct Subcontractor training at the start of the performance period to educate subcontractors on the performance metrics and the tiering plan.

CAI will review subcontractor performance after 60 days and produce subcontractor dashboards customized to the performance measures.

High performing subcontractors will be promoted to Tier 1 all other subcontractors will remain in Tier 2.

Tiering will be assessed each Quarter and changes in Tiering will be made once a year.

ID		Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names	State	Responsible	State	Conference Room Needed	Jan 10	Jan 11
1		Michigan MSP Implementation	210 days	Mon 1/11/16	Mon 10/31/16	15%							S	S
2		Preparation	1 day	Fri 2/5/16	Mon 2/8/16	100%			Yes					
3		Signed Participating Addendum	0 days	Fri 2/5/16	Fri 2/5/16	100%		CAI Operations,Michigan POC						
4		CAI Staff Starts	0 days	Mon 2/8/16	Mon 2/8/16	100%								
5		Communications	24 days	Mon 1/11/16	Fri 2/12/16	99%								
6		Draft All Communications	5 days	Mon 1/11/16	Fri 1/15/16	100%		CAI Account Staff,CAI Implementation I						
7		Schedule Venue(s) for Intro Meetings	3 days	Tue 2/2/16	Thu 2/4/16	100%		CAI Account Staff,Michigan Steering Co	Yes					
8		Communications are Approved	0 days	Tue 2/2/16	Tue 2/2/16	100%		Michigan Steering Committee	Yes					
9		Send Communications/Contract Introduction Meeting Invites	8 days	Tue 2/2/16	Fri 2/12/16	0%	8							
10		Agencies	0 days	Tue 2/2/16	Tue 2/2/16	0%		Michigan Steering Committee	Yes					
11		Incumbent Suppliers	0 days	Fri 2/12/16	Fri 2/12/16	0%		Michigan Steering Committee	Yes					
12		Enrolled Suppliers	0 days	Fri 2/12/16	Fri 2/12/16	0%	11	Michigan Steering Committee	Yes					
13		Conduct Peoplefluent/CAI Kick-Off Meeting	0.88 days	Fri 2/12/16	Fri 2/12/16	0%								
14		Kick-Off Meeting	2 hrs	Fri 2/12/16	Fri 2/12/16	0%	12	CAI Implementation Manager,CAI Acco						
15		Peoplefluent Initial Setup	3 hrs	Fri 2/12/16	Fri 2/12/16	0%	14	CAI Ops Manager (Leiby)						
16		Conduct Peoplefluent Meeting	5 hrs	Fri 2/12/16	Fri 2/12/16	0%	14	CAI Implementation Manager,Peopleflu						
17														
18		PreDiscovery Items	12 days	Wed 2/3/16	Fri 2/19/16	99%								
19		Send Michigan the Discovery Topics	0 days	Thu 2/4/16	Thu 2/4/16	100%		CAI Account Staff,CAI Implementation I						
20		Reserve Vendor Contract Overview Venue	0 days	Wed 2/3/16	Wed 2/3/16	0%		Michigan Steering Committee	Yes					
21		Agency Contract Overview	10 days	Fri 2/5/16	Fri 2/19/16	99%								
22		Draft Agency Presentation	3 days	Tue 2/5/16	Tue 2/9/16	100%		CAI Account Staff						
23		Michigan Review and Approval	2 days	Wed 2/10/16	Thu 2/11/16	100%	22	CAI Account Staff,Michigan Steering Co	Yes					
24		Conduct Agency Contract Overview	2 hrs	Thu 2/18/16	Thu 2/18/16	100%		CAI Account Staff,CAI Implementation I			Yes			
25		Send CAI Vendor RSVP Communication	0 days	Fri 2/19/16	Fri 2/19/16	0%		CAI Account Staff,CAI Implementation I						
26														
27		Discovery	4.25 days	Tue 2/16/16	Mon 2/22/16	29%								
28		Define Help Desk Ticket/Issue Tracking System	8 hrs	Tue 2/16/16	Tue 2/16/16	100%		CAI Ops Manager (Leiby),Michigan POC						
29		Define Help Desk Process - email and phone	8 hrs	Wed 2/17/16	Wed 2/17/16	100%	28	CAI Ops Manager (Leiby),Michigan POC						
30		Establish Help Desk	16 hrs	Thu 2/18/16	Fri 2/19/16	100%	29	CAI Help Desk Staff						
31		Conduct Michigan/CAI Kick-Off Meeting	3.25 days	Wed 2/17/16	Mon 2/22/16	14%								
32		Kick-Off Meeting Prep	4 hrs	Wed 2/17/16	Wed 2/17/16	100%		CAI Implementation Manager,CAI Acco						
33		Michigan Organization and Key Contacts	1 hr	Wed 2/17/16	Wed 2/17/16	0%	32	Michigan Steering Committee						
34		Conduct Michigan Kick-Off Meeting	16 hrs	Thu 2/18/16	Fri 2/19/16	0%	33	Michigan Steering Committee,CAI Oper						
35		Discovery Day 1	0.13 days	Mon 2/22/16	Mon 2/22/16	0%			Yes		Yes (4 hours)			
36		Review Requisition Workflow - Order Process	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	34	Michigan Steering Committee,CAI Imple						
37		Approval Process	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	34	Michigan Steering Committee,CAI Imple						
38		Review Rate Cards	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	34	Michigan Steering Committee,CAI Imple						
39		Existing Vendors for Vendor Network	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	38	Michigan Steering Committee,CAI Imple						
40		Requirement/Job Classes	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	36	Michigan Steering Committee,CAI Imple						
41		Requirement Template Information	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	36	Michigan Steering Committee,CAI Imple						
42		Users and Cost Centers	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	36	Michigan Steering Committee,CAI Imple						
43		Business Rules	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	36	Michigan Steering Committee,CAI Imple						
44		Locations	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	36	Michigan Steering Committee,CAI Imple						
45		Current Engaged Contractors	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	36	Michigan Steering Committee,CAI Imple						
46		Discovery Day 2	0.13 days	Mon 2/22/16	Mon 2/22/16	0%			Yes		Yes (4 hours)			
47		Review Peoplefluent Site Config	1 hr	Mon 2/22/16	Mon 2/22/16	0%	35	Michigan Steering Committee,CAI Imple						

Project: Exhibit K Michigan MSP Imple
Date: Tue 2/16/16

Task

Split

Milestone

Summary

Project Summary

External Tasks

External Milestone

Inactive Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Progress

Deadline

ID		Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names	State	Responsible	State	Conference Room Needed	S	Jan 16	S	I
48		Review Revised Timeline and Plans	1 hr	Mon 2/22/16	Mon 2/22/16	0%	35	Michigan Steering Committee,CAI Imple								
49		Complete Open Items from Day 1	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	35	Michigan Steering Committee,CAI Imple								
50		Next Steps Review	0.5 hrs	Mon 2/22/16	Mon 2/22/16	0%	35	Michigan Steering Committee,CAI Imple								
51		Transition Preparation	0 days	Mon 2/22/16	Mon 2/22/16	0%			Yes							
52		Request Agencies to Identify Transition Positions	0 hrs	Mon 2/22/16	Mon 2/22/16	0%	46	CAI Implementation Manager,Michigan								
53		Vendor Network Interface	3 days	Tue 2/16/16	Thu 2/18/16	0%										
54		Amend Sub-Contractor Agreement	4 hrs	Tue 2/16/16	Tue 2/16/16	0%		Michigan Steering Committee,CAI Oper								
55		Identify Vendors for GO-LIVE	2 days	Wed 2/17/16	Thu 2/18/16	0%		Michigan Steering Committee	Yes							
56		Evaluate Current Vendor Information	8 hrs	Wed 2/17/16	Wed 2/17/16	0%		CAI Account Manager,Michigan Steerin								
57		Complete Currrent Vendor Information	16 hrs	Wed 2/17/16	Thu 2/18/16	0%		CAI Account Staff								
58		Draft Vendor Contract Overview Presentation	2 days	Wed 2/17/16	Thu 2/18/16	0%										
59		Supplier Presentation(s)	2 days	Wed 2/17/16	Thu 2/18/16	0%		CAI Account Staff								
60		Project Management	0.13 days	Fri 2/19/16	Fri 2/19/16	0%										
61		Status Meeting	1 hr	Fri 2/19/16	Fri 2/19/16	0%		CAI Implementation Manager								
62		Project Plan Updates	1 hr	Fri 2/19/16	Fri 2/19/16	0%		CAI Implementation Manager								
63		Issue Tracking	1 hr	Fri 2/19/16	Fri 2/19/16	0%		CAI Implementation Manager								
64																
65		Intro Sessions	5 days	Mon 2/22/16	Fri 2/26/16	0%										
66		Finalize/Amend Job Descriptions, rates and order process	0 hrs	Mon 2/22/16	Mon 2/22/16	0%	60FS+1	CAI Implementation Manager,CAI Ops day Manager (Leiby),Michigan Steering								
67		Peoplefluent Configuration	4 days	Mon 2/22/16	Fri 2/26/16	0%	-S+1 day	CAI Ops Manager (Leiby)								
68		Training Announcements	1.88 days	Mon 2/22/16	Tue 2/23/16	0%										
69		Vendor Training Letter	1 hr	Mon 2/22/16	Mon 2/22/16	0%		CAI Implementation Manager,Michigan								
70		Agency Training Letter	1 hr	Tue 2/23/16	Tue 2/23/16	0%		CAI Implementation Manager,Michigan								
71		Schedule Michigan Training Sessions	0 hrs	Mon 2/22/16	Mon 2/22/16	0%	69	CAI Operations,Michigan POC	Yes							
72		Schedule Vendors Training Sessions	0 hrs	Tue 2/23/16	Tue 2/23/16	0%	70	CAI Operations,Michigan POC	Yes							
73		CAI Materials	14 days	Tue 2/9/16	Fri 2/26/16	0%										
74		Michigan One-pager	3 days	Mon 2/22/16	Wed 2/24/16	0%		CAI Operations								
75		Web Portal	30 hrs	Tue 2/23/16	Fri 2/26/16	0%		CAI Operations								
76		Marketing Materials	24 hrs	Mon 2/22/16	Thu 2/25/16	0%	66	CAI Operations								
77		Account Manager Book	8 hrs	Mon 2/22/16	Tue 2/23/16	0%	66	CAI Operations								
78		Account On-Site Staff Training	13.88 days	Mon 2/8/16	Thu 2/25/16	0%										
79		Peoplefluent VMS Review	3 days	Tue 2/23/16	Thu 2/25/16	0%	16	CAI Account Manager,CAI Account Sta								
80		Develop Agency and Vendor Information Packets	12 days	Thu 2/11/16	Fri 2/26/16	0%										
81		Job Descriptions	4 hrs	Tue 2/23/16	Tue 2/23/16	0%		CAI Implementation Manager,Michigan								
82		Rate Cards (Vendor Rates Only)	4 hrs	Tue 2/23/16	Tue 2/23/16	0%		CAI Implementation Manager,Michigan								
83		Order Process	2 hrs	Tue 2/23/16	Tue 2/23/16	0%	82	CAI Implementation Manager,Michigan								
84		Org Chart	1 hr	Tue 2/23/16	Tue 2/23/16	0%	83	CAI Implementation Manager,Michigan								
85		Account Manager Assignments	4 hrs	Tue 2/23/16	Wed 2/24/16	0%	84	CAI Implementation Manager								
86		Escalation Procedures	2 hrs	Wed 2/24/16	Wed 2/24/16	0%	85	CAI Implementation Manager,Michigan								
87		Develop Training Material	40 hrs	Mon 2/22/16	Fri 2/26/16	0%		CAI Operations,CAI Ops Manager (Leib								
88		Schedule Agency Training	1 day	Fri 2/26/16	Fri 2/26/16	0%		Michigan POC								
89		Transition Preparation	4 days	Mon 2/22/16	Thu 2/25/16	0%										
90		Begin Meeting with Agencies to Discuss Transition Positions	0 days	Mon 2/22/16	Mon 2/22/16	0%		CAI Account Staff	Yes							
91		Identify Priority/Critical Vendors	4 days	Mon 2/22/16	Thu 2/25/16	0%	90	Michigan POC	Yes							
92		Project Management	11 days	Fri 2/12/16	Fri 2/26/16	0%										
93		Status Meeting	1 hr	Fri 2/26/16	Fri 2/26/16	0%		CAI Implementation Manager								
94		Project Plan Updates	1 hr	Fri 2/26/16	Fri 2/26/16	0%		CAI Implementation Manager								

Project: Exhibit K Michigan MSP Imple
Date: Tue 2/16/16

Task		External Tasks		Inactive Summary		Start-only	
Split		External Milestone		Manual Task		Finish-only	
Milestone		Inactive Task		Duration-only		Progress	
Summary		Inactive Task		Manual Summary Rollup		Deadline	
Project Summary		Inactive Milestone		Manual Summary			

ID		Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names	State	Responsible	State	Conference Room Needed	Jan 10	Jan 11
95		Issue Tracking	1 hr	Fri 2/26/16	Fri 2/26/16	0%		CAI Implementation Manager					S	S
96														
97		Peoplefluent Setup	5 days	Mon 2/29/16	Fri 3/4/16	0%								
98		Account Staff Training Continued	3.5 days	Tue 3/1/16	Fri 3/4/16	0%								
99		Distribute Materials Acquired to Date	4 hrs	Wed 3/2/16	Wed 3/2/16	0%	79,108	CAI Implementation Manager						
100		Conduct Account Staff Training	2 days	Wed 3/2/16	Fri 3/4/16	0%	99	CAI Account Manager,CAI Implementat						
101		Peoplefluent Demo Site VMS Setup	2 days	Tue 3/1/16	Wed 3/2/16	0%								
102		Organization Creation	1 hr	Tue 3/1/16	Tue 3/1/16	0%		Peoplefluent						
103		Region Creation	3 hrs	Tue 3/1/16	Tue 3/1/16	0%	102	Peoplefluent						
104		Client Configuration	1 hr	Tue 3/1/16	Tue 3/1/16	0%	103	Peoplefluent						
105		Michigan Review of Peoplefluent	16 hrs	Tue 3/1/16	Wed 3/2/16	0%								
106		Approve Demo VMS Environment	0 hrs	Wed 3/2/16	Wed 3/2/16	0%		CAI Account Manager,Michigan Steerin	Yes					
107		Conduct Contract Introduction Meetings	1 day	Tue 3/1/16	Tue 3/1/16	0%								
108		Supplier Meetings	1 day	Tue 3/1/16	Tue 3/1/16	0%		Michigan POC,CAI Implementation Mar			Yes (1.5 hours per session)			
109		CAI Accounting Interfaces	3.75 days	Tue 3/1/16	Fri 3/4/16	0%								
110		BEPA Full Run - Peoplefluent Thru Invoice	30 hrs	Tue 3/1/16	Fri 3/4/16	0%		CAI Account Staff						
111		Michigan Invoice Approval Meeting	4 hrs	Wed 3/2/16	Wed 3/2/16	0%		Michigan Steering Committee,CAI Accc	Yes					
112		Transition Discussions	4 days	Tue 3/1/16	Fri 3/4/16	0%								
113		Agency Lists of Resources	16 hrs	Thu 3/3/16	Fri 3/4/16	0%		Michigan Steering Committee,CAI Oper	Yes					
114		CAI Reviews PO List by Date	16 hrs	Thu 3/3/16	Fri 3/4/16	0%		CAI Account Manager,CAI Operations,M						
115		Develop Training Material	40 hrs	Mon 2/29/16	Fri 3/4/16	0%		CAI Operations,CAI Ops Manager (Leib						
116		Project Management	5 days	Mon 2/29/16	Fri 3/4/16	0%								
117		Status Meeting	1 hr	Fri 3/4/16	Fri 3/4/16	0%		CAI Implementation Manager						
118		Project Plan Updates	1 hr	Fri 3/4/16	Fri 3/4/16	0%		CAI Implementation Manager						
119		Issue Tracking	1 hr	Fri 3/4/16	Fri 3/4/16	0%		CAI Implementation Manager						
120														
121		Michigan Processes and Early Transition Discussions	5 days	Mon 3/7/16	Fri 3/11/16	0%								
122		Vendor Network Interface Continued	0.5 days	Mon 3/7/16	Mon 3/7/16	0%								
123		Develop Process for Quarterly Vendor Updates	4 hrs	Mon 3/7/16	Mon 3/7/16	0%	115	CAI Account Manager						
124		Peoplefluent VMS Training	2.5 days	Mon 3/7/16	Wed 3/9/16	0%								
125		Peoplefluent Production Site VMS Setup	5 days	Mon 3/7/16	Fri 3/11/16	0%								
126		VMS Org Shell and Privotal Form Setup Form.doc	2 hrs	Wed 3/9/16	Wed 3/9/16	0%	106	Peoplefluent,CAI Operations						
127		VMS Vendor Implementation Workbook.xls	40 hrs	Mon 3/7/16	Fri 3/11/16	0%	106	Peoplefluent,CAI Operations						
128		VMS Implementation Config Workbook.xls	4 hrs	Wed 3/9/16	Wed 3/9/16	0%	106	Peoplefluent,CAI Operations						
129		VMS email Configuration Worksheet.xls	4 hrs	Wed 3/9/16	Wed 3/9/16	0%	106	Peoplefluent,CAI Operations						
130		VMS Data Collection Workbook.xls	40 hrs	Mon 3/7/16	Fri 3/11/16	0%	106	Peoplefluent,CAI Operations						
131		Create Vendor Organizations	8 hrs	Mon 3/7/16	Mon 3/7/16	0%		Peoplefluent,CAI Operations						
132		Configure Vendor Organizations	20 hrs	Tue 3/8/16	Thu 3/10/16	0%	131	Peoplefluent,CAI Operations						
133		Develop Job Description Templates	10 hrs	Mon 3/7/16	Tue 3/8/16	0%		Peoplefluent,CAI Ops Manager (Leiby)						
134		Load email Configurations	8 hrs	Mon 3/7/16	Mon 3/7/16	0%		Peoplefluent						
135		QA Configuration/Data	8 hrs	Mon 3/7/16	Mon 3/7/16	0%		Michigan Steering Committee,CAI Oper						
136		Michigan Process Development	1.5 days	Wed 3/9/16	Thu 3/10/16	0%								
137		Security/Background Checks	4 hrs	Wed 3/9/16	Wed 3/9/16	0%	106	CAI Account Manager						
138		Order Process Exceptions	4 hrs	Wed 3/9/16	Wed 3/9/16	0%	106	Michigan Steering Committee						
139		Adding Job Description/Category	4 hrs	Wed 3/9/16	Wed 3/9/16	0%	138	Michigan Steering Committee						
140		Final Approval Checklist	4 hrs	Thu 3/10/16	Thu 3/10/16	0%	139	Michigan Steering Committee						
141		Candidate Contact Checklist	4 hrs	Thu 3/10/16	Thu 3/10/16	0%	139	CAI Account Staff						

Project: Exhibit K Michigan MSP Imple
Date: Tue 2/16/16

Task

Split

Milestone

Summary

Project Summary

External Tasks

External Milestone

Inactive Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Progress

Deadline

ID		Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names	State Responsible	State Conference Room Needed	Jan 10
142		Training Prep	1 day	Mon 3/7/16	Mon 3/7/16	0%					S
143		Print Training Materials	1 day	Mon 3/7/16	Mon 3/7/16	0%		CAI Operations			S
144		Transition Prep and Outreach	5 days	Mon 3/7/16	Fri 3/11/16	0%					S
145		Contact Priority/Critical Vendors	5 days	Mon 3/7/16	Fri 3/11/16	0%		CAI Account Staff			S
146		Conduct Vendor Workshop	1 day	Fri 3/11/16	Fri 3/11/16	0%		CAI Account Staff		Yes (All Day) - Auditorium	S
147		Develop Contingency Plans for Non-Participating Vendors	3 days	Wed 3/9/16	Fri 3/11/16	0%		CAI Account Staff	Yes		S
148		Project Management	5 days	Mon 3/7/16	Fri 3/11/16	0%					S
149		Status Meeting	1 hr	Fri 3/11/16	Fri 3/11/16	0%		CAI Implementation Manager			S
150		Project Plan Updates	1 hr	Fri 3/11/16	Fri 3/11/16	0%		CAI Implementation Manager			S
151		Issue Tracking	1 hr	Fri 3/11/16	Fri 3/11/16	0%		CAI Implementation Manager			S
152											S
153		Training / Site Approval	4 days	Tue 3/15/16	Fri 3/18/16	0%					S
154		Peoplefluent VMS Training	3 days	Tue 3/15/16	Thu 3/17/16	0%					S
155		Agency Training Sessions	1 day	Tue 3/15/16	Tue 3/15/16	0%					S
156		Michigan VMS Training Session 1	4 hrs	Tue 3/15/16	Tue 3/15/16	0%	S+1 day	CAI Operations,CAI Ops Manager (Leib		Yes (All Day) - Auditorium	S
157		Michigan VMS Training Session 2	4 hrs	Tue 3/15/16	Tue 3/15/16	0%		156 CAI Operations,CAI Ops Manager (Leib		Yes (All Day) - Auditorium	S
158		Vendor VMS Training Sessions	2 days	Wed 3/16/16	Thu 3/17/16	0%					S
159		Vendor VMS Training Session 1 1	2 hrs	Wed 3/16/16	Wed 3/16/16	0%		CAI Account Manager,CAI Ops Manage		Yes (All Day) - Auditorium	S
160		Vendor VMS Training Session 1 2	2 hrs	Wed 3/16/16	Wed 3/16/16	0%		159 CAI Account Manager,CAI Ops Manage		Yes (All Day) - Auditorium	S
161		Vendor VMS Training Session 2 1	2 hrs	Wed 3/16/16	Wed 3/16/16	0%		160 CAI Account Manager,CAI Ops Manage		Yes (All Day) - Auditorium	S
162		Vendor VMS Training Session 2 2	2 hrs	Wed 3/16/16	Wed 3/16/16	0%		161 CAI Account Manager,CAI Ops Manage		Yes (All Day) - Auditorium	S
163		Web Cast of Vendor Training Session	2 hrs	Thu 3/17/16	Thu 3/17/16	0%		162 CAI Ops Manager (Leiby),CAI Operatio			S
164		Production Review and Sign Off	2 days	Thu 3/17/16	Fri 3/18/16	0%					S
165		Final Review and Approval of Production Site	4 hrs	Thu 3/17/16	Thu 3/17/16	0%		Michigan Steering Committee,CAI Oper	Yes		S
166		Approve Process Documents	4 hrs	Thu 3/17/16	Thu 3/17/16	0%		CAI Account Manager,Michigan Steerin			S
167		Distribute Vendor Processes and Procedures	8 hrs	Thu 3/17/16	Fri 3/18/16	0%		166 CAI Implementation Manager,Michigan			S
168		Distribute Michigan Processes and Procedures	4 hrs	Fri 3/18/16	Fri 3/18/16	0%		167 CAI Implementation Manager,Michigan			S
169		Project Management	1 day	Fri 3/18/16	Fri 3/18/16	0%					S
170		Status Meeting	1 hr	Fri 3/18/16	Fri 3/18/16	0%		CAI Implementation Manager			S
171		Project Plan Updates	1 hr	Fri 3/18/16	Fri 3/18/16	0%		CAI Implementation Manager			S
172		Issue Tracking	1 hr	Fri 3/18/16	Fri 3/18/16	0%		CAI Implementation Manager			S
173											S
174		Go Live	0.25 days	Mon 3/21/16	Mon 3/21/16	0%					S
175		Production Ready	0.25 days	Mon 3/21/16	Mon 3/21/16	0%					S
176		Send Login Notifications	2 hrs	Mon 3/21/16	Mon 3/21/16	0%		CAI Operations			S
177		GO LIVE	0 hrs	Mon 3/21/16	Mon 3/21/16	0%	176				S
178											S
179		New Requisitions Begin	0 days	Mon 4/4/16	Mon 4/4/16	0%		CAI Account Staff,Michigan Hiring Man	Yes		S
180		Transition of all Positions to New Contract - Completed	0 days	Mon 10/31/16	Mon 10/31/16	0%		CAI Account Staff,Michigan Hiring Man	Yes		S

Project: Exhibit K Michigan MSP Imple

Date: Tue 2/16/16

Task

Split

Milestone

Summary

Project Summary

External Tasks

External Milestone

Inactive Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Progress

Deadline

Exhibit L: Contractor Key Personnel

Implementation Project Manager: Mike Park

Mike Park will serve as the Implementation Project Manager for the State of Michigan program. Mike has 18 years of experience as a Transition Manager and served as our Implementation Manager for the New Jersey, Iowa, Ohio, Virginia, Arkansas and North Carolina MSP implementations.

Contract Manager: Ellen Sigl

Ellen Sigl will be the Contract Manager for the State of Michigan. Ellen has been in a leadership role in our MSP Practice for 11 years. She has 18 years of IT experience and has been managing and overseeing our many MSP accounts. She is intimately familiar with the successful policies implemented under our MSP contracts and provides executive oversight to all of the Account Management teams. She has been certified by Staffing Industry Analysts as a Certified Contingent Workforce Professional (CCWP).

Account Managers (2): TBD

CAI will maintain an on-site Account Management team, made up of two individuals. These individuals will be hired during the first quarter of contract award and they will work on site in Lansing Michigan.

MSP for Contingent Labor

Managed by CAI

Exhibit L: Key Personnel