

CN Number: N/A  
SRM Parent Number: N/A  
SAP/SRM Contract Number: 4400007198  
Change Number: 1  
Change Effective Date: 11/16/2010

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF GENERAL SERVICES  
HARRISBURG**

**For:** All Using Agencies  
**Subject:** Enterprise IT Staff Augmentation - 4400007198  
**Contract Period:** Beginning 7/1/2010 and Ending 6/30/2012  
**Commodity Specialist:** Thomas Teprovich - XT3 - (717) 783-0257

**CHANGE SUMMARY:**

DGS has worked with CAI to develop a new category to cover agency needs. The new category title is Video Conference Specialist (VCS). The VCS provides video and photograph production support by operating a variety of film, sound-reproducing equipment, slide, and video equipment.

For additional detail please see the following documents.

ALL OTHER TERMS AND CONDITIONS OF THIS AGREEMENT NOT CHANGED BY THIS CHANGE NOTICE REMAIN AS ORIGINALLY WRITTEN.

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area #1</b>	<b>Area #2</b>	<b>Area #3</b>	<b>Area #4</b>	<b>Area #5</b>
Bedford County	Adams County	Beaver County	Allegheny County	Chester County
Clearfield County	Armstrong County	Butler County	Berks County	Delaware County
Forest County	Blair County	Cameron County	Bucks County	Montgomery County
Jefferson County	Bradford County	Clarion County	Centre County	Philadelphia County
Juniata County	Cambria County	Elk County	Cumberland County	
Perry County	Carbon County	Erie County	Dauphin County	
Somerset County	Clinton County	Fulton County	Lehigh County	
Susquehanna County	Columbia County	Greene County	Montour County	
	Crawford County	Indiana County	Wyoming County	
	Fayette County	Lackawanna County		
	Franklin County	Lancaster County		
	Huntingdon County	Lawrence County		
	Lycoming County	Lebanon County		
	Mc Kean County	Luzerne County		
	Mercer County	Monroe County		
	Mifflin County	Northampton County		
	Pike County	Northumberland County		
	Schuylkill County	Potter County		
	Snyder County	Sullivan County		
	Tioga County	Union County		
	Warren County	Venango County		
	Wayne County	Washington County		
		Westmoreland County		
		York County		

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 1 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Functional Architect	FA1	\$ 34.54	\$ 35.24	\$ 37.70
Functional Architect	FA2	\$ 41.27	\$ 42.12	\$ 45.07
Functional Architect	FA3	\$ 49.35	\$ 50.37	\$ 53.89
Help Desk Analyst	HDA1	\$ 27.02	\$ 27.57	\$ 29.49
Help Desk Analyst	HDA2	\$ 29.61	\$ 30.21	\$ 32.33
Help Desk Analyst	HDA3	\$ 36.68	\$ 37.42	\$ 40.04
Product Specialist	PS1	\$ 37.20	\$ 37.96	\$ 40.62
Product Specialist	PS2	\$ 42.75	\$ 43.62	\$ 46.67
Product Specialist	PS3	\$ 56.36	\$ 57.51	\$ 61.54
Programmer	PR1	\$ 31.73	\$ 32.37	\$ 34.64
Programmer	PR2	\$ 37.73	\$ 38.50	\$ 41.19
Programmer	PR3	\$ 47.74	\$ 48.71	\$ 52.12
Programmer	PR4	\$ 62.25	\$ 63.52	\$ 67.97
Service Desk	SD2	\$ 23.91	\$ 24.40	\$ 26.11
Service Desk	SD3	\$ 25.85	\$ 26.38	\$ 28.22
Software Process Engineer	SPS1	\$ 34.75	\$ 35.46	\$ 37.94
Software Process Engineer	SPS2	\$ 38.63	\$ 39.41	\$ 42.17
Software Process Engineer	SPS3	\$ 52.61	\$ 53.69	\$ 57.45
System Administrator	SA1	\$ 31.85	\$ 32.51	\$ 34.78
System Administrator	SA2	\$ 35.15	\$ 35.87	\$ 38.38
System Administrator	SA3	\$ 49.42	\$ 50.43	\$ 53.96
System Specialist	SS1	\$ 30.87	\$ 31.50	\$ 33.70
System Specialist	SS2	\$ 32.69	\$ 33.36	\$ 35.69
System Specialist	SS3	\$ 42.03	\$ 42.89	\$ 45.89
Technical Architecture Specialist	TAS1	\$ 41.53	\$ 42.37	\$ 45.34
Technical Architecture Specialist	TAS2	\$ 47.19	\$ 48.15	\$ 51.52
Technical Architecture Specialist	TAS3	\$ 50.47	\$ 51.50	\$ 55.10
Video Conference Specialist	VCS1	\$ 45.42	\$ 46.82	\$ 50.10
Video Conference Specialist	VCS2	\$ 51.72	\$ 53.32	\$ 57.06
Exception-DGS Approval Only	EXC	To Be Determined		

<b>Area 1 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$41.64
CADD/GIS Administrator	CGA2	\$48.01
CADD/GIS Administrator	CGA3	\$71.47
Data Entry Operator	DE1	\$14.54
Data Entry Operator	DE2	\$15.83
Database Administrator	DBA1	\$41.85
Database Administrator	DBA2	\$46.11
Database Administrator	DBA3	\$61.93
Program Manager	PM1	\$46.13
Program Manager	PM2	\$56.05
Program Manager	PM3	\$72.37

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 1 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Quality Assurance Specialist	QAS1	\$37.52
Quality Assurance Specialist	QAS2	\$41.59
Quality Assurance Specialist	QAS3	\$54.84
Senior Architect	SAR1	\$96.55
Senior Business Subject Matter Expert	SME1	\$90.68
Senior Database Architect	SDA1	\$81.72
Senior Program Manager	SPM1	\$102.13
Team Lead	TL1	\$55.64
Team Lead	TL2	\$60.00
Technical Writer	TW1	\$26.47
Technical Writer	TW2	\$30.92
Technical Writer	TW3	\$34.87
Telecom Engineer	TE1	\$35.83
Telecom Engineer	TE2	\$40.96
Telecom Engineer	TE3	\$48.33
Tester	Test1	\$33.19
Tester	Test2	\$38.35
Tester	Test3	\$44.63
Voice/Data Engineer	VDE1	\$34.01
Voice/Data Engineer	VDE2	\$39.45
Voice/Data Engineer	VDE3	\$47.45

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 2 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Functional Architect	FA1	\$ 34.66	\$ 35.37	\$ 37.85
Functional Architect	FA2	\$ 41.45	\$ 42.30	\$ 45.26
Functional Architect	FA3	\$ 49.87	\$ 50.88	\$ 54.45
Help Desk Analyst	HDA1	\$ 27.01	\$ 27.56	\$ 29.48
Help Desk Analyst	HDA2	\$ 29.62	\$ 30.23	\$ 32.34
Help Desk Analyst	HDA3	\$ 36.78	\$ 37.52	\$ 40.15
Product Specialist	PS1	\$ 37.35	\$ 38.10	\$ 40.77
Product Specialist	PS2	\$ 42.95	\$ 43.82	\$ 46.89
Product Specialist	PS3	\$ 57.13	\$ 58.29	\$ 62.37
Programmer	PR1	\$ 31.76	\$ 32.42	\$ 34.69
Programmer	PR2	\$ 37.88	\$ 38.65	\$ 41.36
Programmer	PR3	\$ 48.10	\$ 49.08	\$ 52.52
Programmer	PR4	\$ 63.13	\$ 64.41	\$ 68.92
Service Desk	SD2	\$ 23.87	\$ 24.36	\$ 26.07
Service Desk	SD3	\$ 25.84	\$ 26.36	\$ 28.21
Software Process Engineer	SPS1	\$ 34.88	\$ 35.59	\$ 38.08
Software Process Engineer	SPS2	\$ 38.77	\$ 39.56	\$ 42.34
Software Process Engineer	SPS3	\$ 53.27	\$ 54.36	\$ 58.17
System Administrator	SA1	\$ 31.96	\$ 32.61	\$ 34.89
System Administrator	SA2	\$ 35.28	\$ 36.00	\$ 38.51
System Administrator	SA3	\$ 49.94	\$ 50.96	\$ 54.52
System Specialist	SS1	\$ 30.91	\$ 31.53	\$ 33.74
System Specialist	SS2	\$ 32.75	\$ 33.42	\$ 35.75
System Specialist	SS3	\$ 42.22	\$ 43.08	\$ 46.09
Technical Architecture Specialist	TAS1	\$ 41.72	\$ 42.57	\$ 45.54
Technical Architecture Specialist	TAS2	\$ 47.51	\$ 48.48	\$ 51.88
Technical Architecture Specialist	TAS3	\$ 51.03	\$ 52.07	\$ 55.72
Video Conference Specialist	VCS1	\$ 45.77	\$ 47.19	\$ 50.48
Video Conference Specialist	VCS2	\$ 52.47	\$ 54.08	\$ 57.86
Exception-DGS Approval Only	EXC	To Be Determined		

<b>Area 2 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$41.87
CADD/GIS Administrator	CGA2	\$48.34
CADD/GIS Administrator	CGA3	\$72.62
Data Entry Operator	DE1	\$14.42
Data Entry Operator	DE2	\$15.72
Database Administrator	DBA1	\$42.00
Database Administrator	DBA2	\$46.31
Database Administrator	DBA3	\$62.77
Program Manager	PM1	\$46.35
Program Manager	PM2	\$56.78
Program Manager	PM3	\$73.45

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 2 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Quality Assurance Specialist	QAS1	\$37.67
Quality Assurance Specialist	QAS2	\$41.75
Quality Assurance Specialist	QAS3	\$55.46
Senior Architect	SAR1	\$97.92
Senior Business Subject Matter Expert	SME1	\$92.28
Senior Database Architect	SDA1	\$82.89
Senior Program Manager	SPM1	\$103.86
Team Lead	TL1	\$56.28
Team Lead	TL2	\$60.78
Technical Writer	TW1	\$26.85
Technical Writer	TW2	\$31.43
Technical Writer	TW3	\$35.49
Telecom Engineer	TE1	\$36.02
Telecom Engineer	TE2	\$41.19
Telecom Engineer	TE3	\$48.66
Tester	Test1	\$33.36
Tester	Test2	\$38.55
Tester	Test3	\$44.89
Voice/Data Engineer	VDE1	\$34.13
Voice/Data Engineer	VDE2	\$39.59
Voice/Data Engineer	VDE3	\$47.69

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 3 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Functional Architect	FA1	\$ 34.81	\$ 35.51	\$ 38.00
Functional Architect	FA2	\$ 41.62	\$ 42.46	\$ 45.44
Functional Architect	FA3	\$ 49.73	\$ 50.74	\$ 54.29
Help Desk Analyst	HDA1	\$ 27.21	\$ 27.76	\$ 29.70
Help Desk Analyst	HDA2	\$ 29.83	\$ 30.43	\$ 32.56
Help Desk Analyst	HDA3	\$ 36.96	\$ 37.72	\$ 40.36
Product Specialist	PS1	\$ 37.49	\$ 38.26	\$ 40.94
Product Specialist	PS2	\$ 43.09	\$ 43.98	\$ 47.06
Product Specialist	PS3	\$ 56.68	\$ 57.83	\$ 61.89
Programmer	PR1	\$ 31.96	\$ 32.61	\$ 34.89
Programmer	PR2	\$ 38.04	\$ 38.82	\$ 41.54
Programmer	PR3	\$ 48.19	\$ 49.17	\$ 52.61
Programmer	PR4	\$ 62.62	\$ 63.90	\$ 68.38
Service Desk	SD2	\$ 24.09	\$ 24.58	\$ 26.30
Service Desk	SD3	\$ 26.04	\$ 26.57	\$ 28.43
Software Process Engineer	SPS1	\$ 35.02	\$ 35.74	\$ 38.24
Software Process Engineer	SPS2	\$ 38.94	\$ 39.73	\$ 42.52
Software Process Engineer	SPS3	\$ 52.92	\$ 54.00	\$ 57.78
System Administrator	SA1	\$ 32.10	\$ 32.75	\$ 35.05
System Administrator	SA2	\$ 35.43	\$ 36.15	\$ 38.68
System Administrator	SA3	\$ 49.79	\$ 50.80	\$ 54.36
System Specialist	SS1	\$ 31.10	\$ 31.73	\$ 33.95
System Specialist	SS2	\$ 32.94	\$ 33.61	\$ 35.96
System Specialist	SS3	\$ 42.39	\$ 43.25	\$ 46.27
Technical Architecture Specialist	TAS1	\$ 41.87	\$ 42.73	\$ 45.72
Technical Architecture Specialist	TAS2	\$ 47.62	\$ 48.60	\$ 52.00
Technical Architecture Specialist	TAS3	\$ 50.78	\$ 51.82	\$ 55.45
Video Conference Specialist	VCS1	\$ 46.33	\$ 47.77	\$ 51.12
Video Conference Specialist	VCS2	\$ 52.67	\$ 54.31	\$ 58.10
Exception-DGS Approval Only	EXC	To Be Determined		

<b>Area 3 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$42.67
CADD/GIS Administrator	CGA2	\$49.20
CADD/GIS Administrator	CGA3	\$73.13
Data Entry Operator	DE1	\$14.60
Data Entry Operator	DE2	\$15.95
Database Administrator	DBA1	\$42.18
Database Administrator	DBA2	\$46.49
Database Administrator	DBA3	\$62.27
Program Manager	PM1	\$47.86
Program Manager	PM2	\$58.12
Program Manager	PM3	\$74.99

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 3 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Quality Assurance Specialist	QAS1	\$37.83
Quality Assurance Specialist	QAS2	\$41.93
Quality Assurance Specialist	QAS3	\$55.19
Senior Architect	SAR1	\$99.98
Senior Business Subject Matter Expert	SME1	\$93.22
Senior Database Architect	SDA1	\$82.34
Senior Program Manager	SPM1	\$104.98
Team Lead	TL1	\$55.97
Team Lead	TL2	\$60.33
Technical Writer	TW1	\$27.12
Technical Writer	TW2	\$31.69
Technical Writer	TW3	\$35.74
Telecom Engineer	TE1	\$36.70
Telecom Engineer	TE2	\$41.98
Telecom Engineer	TE3	\$49.55
Tester	Test1	\$33.98
Tester	Test2	\$39.27
Tester	Test3	\$45.72
Voice/Data Engineer	VDE1	\$34.27
Voice/Data Engineer	VDE2	\$39.76
Voice/Data Engineer	VDE3	\$47.85



Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 4 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Functional Architect	FA1	\$ 36.84	\$ 37.60	\$ 40.23
Functional Architect	FA2	\$ 43.73	\$ 44.63	\$ 47.76
Functional Architect	FA3	\$ 51.64	\$ 52.69	\$ 56.37
Help Desk Analyst	HDA1	\$ 29.22	\$ 29.81	\$ 31.91
Help Desk Analyst	HDA2	\$ 31.85	\$ 32.51	\$ 34.78
Help Desk Analyst	HDA3	\$ 39.08	\$ 39.87	\$ 42.67
Product Specialist	PS1	\$ 39.58	\$ 40.39	\$ 43.21
Product Specialist	PS2	\$ 45.24	\$ 46.16	\$ 49.39
Product Specialist	PS3	\$ 58.49	\$ 59.68	\$ 63.86
Programmer	PR1	\$ 34.04	\$ 34.73	\$ 37.15
Programmer	PR2	\$ 40.12	\$ 40.94	\$ 43.80
Programmer	PR3	\$ 50.21	\$ 51.24	\$ 54.83
Programmer	PR4	\$ 64.41	\$ 65.72	\$ 70.33
Service Desk	SD2	\$ 26.09	\$ 26.63	\$ 28.49
Service Desk	SD3	\$ 28.03	\$ 28.61	\$ 30.61
Software Process Engineer	SPS1	\$ 37.06	\$ 37.82	\$ 40.46
Software Process Engineer	SPS2	\$ 41.04	\$ 41.87	\$ 44.80
Software Process Engineer	SPS3	\$ 54.75	\$ 55.87	\$ 59.78
System Administrator	SA1	\$ 34.10	\$ 34.79	\$ 37.23
System Administrator	SA2	\$ 37.47	\$ 38.24	\$ 40.92
System Administrator	SA3	\$ 51.70	\$ 52.75	\$ 56.45
System Specialist	SS1	\$ 33.15	\$ 33.83	\$ 36.20
System Specialist	SS2	\$ 35.01	\$ 35.73	\$ 38.23
System Specialist	SS3	\$ 44.52	\$ 45.43	\$ 48.61
Technical Architecture Specialist	TAS1	\$ 44.00	\$ 44.90	\$ 48.04
Technical Architecture Specialist	TAS2	\$ 49.70	\$ 50.71	\$ 54.27
Technical Architecture Specialist	TAS3	\$ 52.66	\$ 53.74	\$ 57.50
Video Conference Specialist	VCS1	\$ 47.63	\$ 49.11	\$ 52.54
Video Conference Specialist	VCS2	\$ 53.50	\$ 55.16	\$ 59.02
Exception-DGS Approval Only	EXC	To Be Determined		

<b>Area 4 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$44.03
CADD/GIS Administrator	CGA2	\$50.48
CADD/GIS Administrator	CGA3	\$73.48
Data Entry Operator	DE1	\$15.87
Data Entry Operator	DE2	\$17.31
Database Administrator	DBA1	\$44.47
Database Administrator	DBA2	\$48.80
Database Administrator	DBA3	\$64.25
Program Manager	PM1	\$50.38
Program Manager	PM2	\$60.37
Program Manager	PM3	\$77.24

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 4 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Quality Assurance Specialist	QAS1	\$40.05
Quality Assurance Specialist	QAS2	\$44.20
Quality Assurance Specialist	QAS3	\$57.26
Senior Architect	SAR1	\$102.30
Senior Business Subject Matter Expert	SME1	\$93.88
Senior Database Architect	SDA1	\$84.29
Senior Program Manager	SPM1	\$105.57
Team Lead	TL1	\$58.03
Team Lead	TL2	\$62.32
Technical Writer	TW1	\$28.66
Technical Writer	TW2	\$33.14
Technical Writer	TW3	\$37.15
Telecom Engineer	TE1	\$38.10
Telecom Engineer	TE2	\$43.35
Telecom Engineer	TE3	\$50.80
Tester	Test1	\$35.41
Tester	Test2	\$40.66
Tester	Test3	\$47.06
Voice/Data Engineer	VDE1	\$36.45
Voice/Data Engineer	VDE2	\$42.01
Voice/Data Engineer	VDE3	\$50.19

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 5 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Functional Architect	FA1	\$ 40.54	\$ 41.36	\$ 44.26
Functional Architect	FA2	\$ 47.98	\$ 48.96	\$ 52.38
Functional Architect	FA3	\$ 56.17	\$ 57.31	\$ 61.32
Help Desk Analyst	HDA1	\$ 32.01	\$ 32.66	\$ 34.95
Help Desk Analyst	HDA2	\$ 34.95	\$ 35.66	\$ 38.17
Help Desk Analyst	HDA3	\$ 42.93	\$ 43.80	\$ 46.86
Product Specialist	PS1	\$ 43.52	\$ 44.40	\$ 47.51
Product Specialist	PS2	\$ 49.49	\$ 50.51	\$ 54.05
Product Specialist	PS3	\$ 63.58	\$ 64.88	\$ 69.42
Programmer	PR1	\$ 37.36	\$ 38.11	\$ 40.78
Programmer	PR2	\$ 44.12	\$ 45.02	\$ 48.17
Programmer	PR3	\$ 54.63	\$ 55.74	\$ 59.64
Programmer	PR4	\$ 70.03	\$ 71.46	\$ 76.46
Service Desk	SD2	\$ 28.58	\$ 29.16	\$ 31.20
Service Desk	SD3	\$ 30.71	\$ 31.34	\$ 33.54
Software Process Engineer	SPS1	\$ 40.77	\$ 41.60	\$ 44.52
Software Process Engineer	SPS2	\$ 45.09	\$ 46.02	\$ 49.24
Software Process Engineer	SPS3	\$ 59.51	\$ 60.73	\$ 64.98
System Administrator	SA1	\$ 37.51	\$ 38.28	\$ 40.96
System Administrator	SA2	\$ 41.22	\$ 42.07	\$ 45.02
System Administrator	SA3	\$ 56.23	\$ 57.37	\$ 61.39
System Specialist	SS1	\$ 36.37	\$ 37.11	\$ 39.72
System Specialist	SS2	\$ 38.45	\$ 39.23	\$ 41.98
System Specialist	SS3	\$ 48.75	\$ 49.75	\$ 53.23
Technical Architecture Specialist	TAS1	\$ 48.24	\$ 49.22	\$ 52.68
Technical Architecture Specialist	TAS2	\$ 54.09	\$ 55.19	\$ 59.05
Technical Architecture Specialist	TAS3	\$ 57.27	\$ 58.44	\$ 62.53
Video Conference Specialist	VCS1	\$ 51.16	\$ 52.73	\$ 56.43
Video Conference Specialist	VCS2	\$ 57.36	\$ 59.14	\$ 63.28
Exception-DGS Approval Only	EXC	To Be Determined		

<b>Area 5 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$47.58
CADD/GIS Administrator	CGA2	\$54.10
CADD/GIS Administrator	CGA3	\$78.58
Data Entry Operator	DE1	\$17.05
Data Entry Operator	DE2	\$18.60
Database Administrator	DBA1	\$48.88
Database Administrator	DBA2	\$53.46
Database Administrator	DBA3	\$69.84
Program Manager	PM1	\$56.51
Program Manager	PM2	\$67.28
Program Manager	PM3	\$85.93

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 5 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Quality Assurance Specialist	QAS1	\$44.07
Quality Assurance Specialist	QAS2	\$48.60
Quality Assurance Specialist	QAS3	\$62.25
Senior Architect	SAR1	\$113.66
Senior Business Subject Matter Expert	SME1	\$102.43
Senior Database Architect	SDA1	\$91.71
Senior Program Manager	SPM1	\$115.26
Team Lead	TL1	\$63.08
Team Lead	TL2	\$67.72
Technical Writer	TW1	\$31.37
Technical Writer	TW2	\$36.32
Technical Writer	TW3	\$40.78
Telecom Engineer	TE1	\$41.22
Telecom Engineer	TE2	\$46.85
Telecom Engineer	TE3	\$54.45
Tester	Test1	\$38.29
Tester	Test2	\$43.98
Tester	Test3	\$50.75
Voice/Data Engineer	VDE1	\$40.09
Voice/Data Engineer	VDE2	\$46.21
Voice/Data Engineer	VDE3	\$54.86



# **Pennsylvania Department of General Services Enterprise IT Staff Augmentation Services Contract**

## **Job Titles and Descriptions (Version 5)**

**Effective November, 2010**



This page is intentionally left blank.



## Job Titles and Descriptions

CADD/GIS Administrator.....	5
CGA1.....	5
CGA2.....	5
CGA3.....	5
Data Entry Operator .....	5
DE1 .....	5
DE2 .....	6
Database Administrator.....	7
DBA1 .....	7
DBA2 .....	7
DBA3 .....	7
Functional Architect.....	8
FA1 .....	8
FA2.....	9
FA3.....	9
Help Desk Analyst.....	10
HDA1 .....	10
HDA2.....	10
HDA3.....	11
Product Specialist.....	11
PS1.....	11
PS2.....	12
PS3.....	12
Program Manager .....	12
PM1 .....	13
PM2 .....	13
PM3 .....	14
Programmer .....	14
PR1 .....	14
PR2 .....	15
PR3 .....	15
PR4 .....	15
Quality Assurance Specialist.....	16
QAS1.....	16
QAS2.....	17
QAS3.....	17
Senior Architect.....	18
SAR1 .....	18
Senior Business Subject Matter Expert.....	19
SME1.....	19
Senior Database Architect.....	19
SDA1 .....	20
Senior Program Manager .....	20
SPM1.....	20
Service Desk.....	21
SD2 .....	21
SD3 .....	21



Software Process Engineer .....	22
SPS1 .....	22
SPS2 .....	23
SPS3 .....	23
System Administrator .....	23
SA1 .....	23
SA2 .....	24
SA3 .....	24
System Specialist .....	25
SS1 .....	25
SS2 .....	26
SS3 .....	26
Team Lead .....	27
TL1 .....	27
TL2 .....	28
Technical Architecture Specialist .....	28
TAS1 .....	28
TAS2 .....	29
TAS3 .....	29
Technical Writer .....	30
TW1 .....	30
TW2 .....	31
TW3 .....	31
Telecom Engineer .....	32
TE1 .....	32
TE2 .....	32
TE3 .....	33
Tester .....	33
Test1 .....	33
Test2 .....	33
Test3 .....	34
Video Conference Specialist .....	34
VCS1 .....	34
VCS2 .....	34
Voice/Data Engineer .....	35
VDE1 .....	35
VDE2 .....	35
VDE3 .....	35





## CADD/GIS Administrator

The CADD/GIS Administrator (CGA) is responsible for providing direct support of various CADD/GIS software and hardware systems. The CGA will perform hardware and software installations, relocations, testing and routine maintenance.

### CGA1

Years of Relevant Experience:	Up to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>Assist in troubleshooting CADD/GIS system hardware problems and work with the appropriate service and warranty vendors to make the necessary repairs and fixes.</li> <li>Track version upgrades and notify proper parties of available updates to CADD/GIS Systems software.</li> <li>Assist with phone and online problem reporting and maintaining problem report records.</li> <li>Assist with ordering consumable supplies for the CADD/GIS Systems.</li> <li>Maintain current inventory of all hardware, software, upgrades and fixes for each site.</li> <li>Maintain configuration charts of current inventory.</li> <li>Maintain data backups and data archives and provide data retrieval from backup.</li> <li>Monitor system status and data integrity.</li> </ul>

### CGA2

Years of Relevant Experience:	5 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA1 plus the following:</p> <ul style="list-style-type: none"> <li>Able to work independently.</li> <li>Demonstrate proven experience in troubleshooting with little supervision.</li> <li>Able to communicate status to managers and project sponsors.</li> <li>Assist in developing standards and direction for systems.</li> </ul>

### CGA3

Years of Relevant Experience:	8 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA2 plus the following:</p> <ul style="list-style-type: none"> <li>Lead efforts to troubleshoot CADD/GIS system hardware and software problems.</li> <li>Lead team of CGAs developing software and hardware plans and solutions.</li> <li>Expertise in teaching/conveying technical and/or functional courses/concepts.</li> </ul>

## Data Entry Operator

For data entry projects that require manual key entry and/or data capture through scanning.

### DE1

Years of Relevant Experience:	0 to 2 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> <li>Comprehensive PC skills.</li> <li>Able to follow written and spoken instructions.</li> <li>Minimum of 25 wpm.</li> <li>Ability to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen.</li> <li>Duties involve utilizing automated equipment, including electronic keyboard, display</li> </ul>



	<p>screen, and sorted memory to perform.</p> <ul style="list-style-type: none"> <li>• Ability to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques.</li> <li>• Ability to conduct basic data mining and data capture efforts.</li> <li>• Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP.</li> <li>• Key punch and verify records in specified format (ex. ASCII).</li> <li>• The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeros are not counted as keystrokes.</li> <li>• The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession.</li> <li>• Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis.</li> <li>• Pickup and delivery by contractor to be made on a weekly basis.</li> <li>• For key entry, required that a second individual completed 100% key verification to control errors.</li> <li>• Knowledge of imaging and visual display operating practices, procedures, and techniques.</li> <li>• Knowledge of arithmetic and numbering systems.</li> <li>• Ability to operate equipment with speed and accuracy to ensure information is captured.</li> </ul>
--	--

**DE2**

Years of Relevant Experience:	2 to 4 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> <li>• Comprehensive PC skills.</li> <li>• Able to follow written and spoken instructions.</li> <li>• Minimum of 35 wpm.</li> <li>• Ability to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen.</li> <li>• Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform.</li> <li>• Ability to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques.</li> <li>• Ability to conduct basic data mining and data capture efforts.</li> <li>• Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP.</li> <li>• Key punch and verify records in specified format (ex. ASCII).</li> <li>• The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeros are not counted as keystrokes.</li> <li>• The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession.</li> <li>• Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis.</li> <li>• Pickup and delivery by contractor to be made on a weekly basis.</li> <li>• For key entry, required that a second individual completed 100% key verification to control errors.</li> <li>• Knowledge of imaging and visual display operating practices, procedures, and techniques.</li> <li>• Knowledge of arithmetic and numbering systems.</li> </ul>



	<ul style="list-style-type: none"> <li>• Ability to operate equipment with speed and accuracy to ensure information is captured.</li> </ul>
--	---

## Database Administrator

The Database Administrator is responsible for data analysis and database management. Database Administrators typically are involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Database Administrators have a range of skills and knowledge of the utilities and production tools used for data storage management to support the Application Team.

### DBA1

Years of Relevant Experience:	2 to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Skilled data dictionary analysis and design and data model analysis design.</li> <li>• Maintains central data repository.</li> <li>• Experience and knowledge in supporting application system development life cycle.</li> <li>• Responsible for data dictionary backup and recovery.</li> <li>• Responsible for definition of standards of data dictionaries.</li> <li>• May program dictionary analysis and maintenance software.</li> <li>• Perform performance tuning.</li> <li>• Monitor database performance and space requirements.</li> <li>• Schedule and monitor end of day data warehousing jobs.</li> <li>• Assist in coordinating software releases.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

### DBA2

Years of Relevant Experience:	3 to 5 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Business systems analysis and design experience.</li> <li>• Logical data modeling techniques.</li> <li>• Production environment Tools/Utilities.</li> <li>• Knowledgeable in data analysis and database management techniques.</li> <li>• Execution of all responsibilities with little direct supervision of Team Lead.</li> <li>• Administration and scripting experience in relative platform.</li> <li>• Supervise performance tuning.</li> <li>• Author shell scripts to perform back up, restore, and monitoring tasks.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>

### DBA3

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study



Role Description:	<p>All roles specified in DBA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Highly skilled at database design, installations, conversions.</li> <li>• Responsible for database backup and recovery procedures, access security and database integrity, physical data storage design and data storage management.</li> <li>• Participates in Database Management System selection and maintains database performance.</li> <li>• Expertise in specific Database Management Systems.</li> <li>• Knowledge of various Database Management System products.</li> <li>• Provide status of work to Project Team Lead.</li> <li>• Engage in ongoing process improvement.</li> </ul>
-------------------	--

## Functional Architect

The Functional Architect is the functional expert for an application, a defined set of applications or a portfolio of related applications. The Functional Architect is also responsible for bringing an understanding of the enterprise, business system and industry to the team(s) supporting or interfacing with the application. The primary responsibility of a Functional Architect is to provide expertise in the business process supported by the application, to prepare and review designs, to recommend improvements, and to provide guidance during the testing process. The Functional Architect helps the Programmers establish a clear understanding of the business functional requirements and either creates the functional designs to meet the requirements or reviews and approves the designs written by the Programmers. The Functional Architect must understand all aspects of their specific application(s), and the underlying business process. The more experienced Functional Architect plans, analyzes, and defines high- level software strategies and solutions. Contained in the experienced role is the task of coordinating with other Functional Architects to define technical requirements and long range plans for meeting customer requirements.

### FA1

Years of Relevant Experience:	2 to 4 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Analyze, determine, and document functional requirements.</li> <li>• Provide definition on how the applications will support business requirements.</li> <li>• Conduct impact analyses of business requirements on the system.</li> <li>• Work with Technical Architecture Specialist in defining software / hardware requirements.</li> <li>• Gather and interpret user requirements into design specifications.</li> <li>• Participate in design of application.</li> <li>• Participate in design code and test reviews as appropriate.</li> <li>• Provide inputs to test planning.</li> <li>• Complete assigned tasks.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment.</li> <li>• Strong communication skills; both written and spoken</li> <li>• Act as the application(s) functional expert; providing expertise in the business process supported by the application.</li> <li>• Provide detailed definition on how the applications will support business requirements.</li> <li>• Work with Technical Architecture Specialist in planning and delivering technical architecture.</li> <li>• Provide expertise for defining functional architecture and infrastructure for applications.</li> <li>• Plan and develop user interface strategy.</li> <li>• Direct and participate in design of application.</li> </ul>



	<ul style="list-style-type: none"> <li>• Interpret and understand user requirements/design specifications.</li> <li>• Provide detailed definition on how the applications will support business requirements.</li> <li>• Work with Technical Architecture Specialist in defining software / hardware requirements and in planning and delivering architecture.</li> <li>• Provide expertise for defining architecture and infrastructure for applications.</li> <li>• Review and understand team work plan</li> <li>• Identify and track issues, risks and action items affecting own work and work of team.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>
--	---

## FA2

Years of Relevant Experience:	4 to 5 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in FA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Provide functional expertise to planning organization as required.</li> <li>• Review tasks prior to migration into production as appropriate. Provide assistance in scheduling design work for Lead Functional Architect.</li> <li>• Coordinate the design and development of work estimates and act as the primary point of contact. Assist in managing and directing application team processes.</li> <li>• Organize and prepare work effectively to facilitate proactive resolution of problems.</li> <li>• Work with client and Lead Functional Architect to identify direction of software.</li> <li>• Ensure business requirements are supported by the software.</li> <li>• Identify and initiate continuous improvement opportunities.</li> <li>• Define user interface strategies.</li> <li>• Understand specific business needs and overall business strategy of the business customer.</li> </ul>

## FA3

Years of Relevant Experience:	Five plus years in particular application area
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in FA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Guide processes for Functional Architects and direct work planning and design activities.</li> <li>• Provide standard, well-structured work planning which defines scope, resources, commitments, quality, risk, tasks, and acceptance criteria.</li> <li>• Ensure that overall application designs remain within project scope.</li> <li>• Work with customer business units to understand their business processes.</li> <li>• Work with customer business units and client to identify direction of software. Ensure business requirements are supported by the software.</li> <li>• Ensure goals for Functional Architects are being met and manage team commitments.</li> <li>• Analyze, define, and document how the applications will support functional and business requirements. Coordinate these efforts with Functional Architects.</li> <li>• Understand supporting/interfaces system applications.</li> <li>• Approve the determined need for new software/hardware.</li> <li>• Understand prioritization work based on business needs request/releases for work affecting an application.</li> <li>• Manage the accomplishment of delivery metrics, Service Level Agreements and</li> </ul>



	<p>other contractual obligations within areas of responsibility.</p> <ul style="list-style-type: none"> <li>• Sponsor coordination of the required skills, training, methodologies, and processes to ensure the success of team/project/program goals.</li> <li>• Coordinate and conduct project review meetings with Group Lead Functional Architects and Team Leads.</li> <li>• Communicate and resolve application interface issues with other Lead Functional Architects as needed.</li> <li>• Monitor and measure maintenance and development process effectiveness.</li> <li>• Communicate clearly the program/application goals, operational and organizational philosophies, and policies and procedures to the Functional Architects.</li> <li>• Communicate to team members the relationships between their work and assignments and the organizational and/ or program objectives.</li> </ul>
--	--

## Help Desk Analyst

The Help Desk Analyst provides Helpdesk Level 2 Support by performing the skills listed below.

### HDA1

Years of Relevant Experience:	1 to 3 years field experience
Preferred Education:	2 year associates degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Provides technical assistance, support, and advice to end users for hardware, software, and systems.</li> <li>• Provides hands-on technical assistance to business and technical users.</li> <li>• Investigates and resolves computer software and hardware problems of users.</li> <li>• Serves as a contact for level 1 support.</li> <li>• Serves as a contact for users having problems using computer software, hardware, and operating systems, and escalates as necessary.</li> <li>• Determines whether problem is caused by hardware, software, or system.</li> <li>• Answers questions, applying knowledge of computer software, hardware, systems, and procedures.</li> <li>• Talks with technical and non-technical co-workers to research problem and find solution.</li> <li>• Asks user with problem to use telephone and participate in diagnostic procedures, using diagnostic software or by listening to and following instructions.</li> <li>• Experienced with a variety of call-tracking software and systems.</li> <li>• Reads trade magazines and engages in independent study to maintain current industry knowledge.</li> <li>• Follow quality standards, and displays strong customer service skills.</li> <li>• Ability to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

### HDA2

Years of Relevant Experience:	3 – 5 years field experience
Preferred Education:	4 year college degree in field of specialty or equivalent education and experience combined
Role Description:	<p>All roles specified in HDA 1 plus the following:</p> <ul style="list-style-type: none"> <li>• Calls software and hardware vendors to request service regarding defective products.</li> <li>• Acts as a subject matter expert for one or more custom or COTS applications.</li> <li>• Talks to programmers to explain software errors or to recommend changes to programs.</li> </ul>





	<ul style="list-style-type: none"> <li>• May work as in-house consultant and research alternate approaches to existing software and hardware when standardized approaches cannot be applied.</li> <li>• Tests software and hardware to evaluate ease of use and whether product will aid user in performing work.</li> <li>• Write software and hardware evaluation and recommendations for management review.</li> <li>• Write or revise user-training manuals and procedures.</li> <li>• Develops training materials, such as exercises and visual displays.</li> <li>• Train users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.</li> </ul>
--	--

### **HDA3**

Years of Relevant Experience:	5 plus years field experience
Preferred Education:	4 year college degree in field of specialty
Role Description:	<p>All roles specified in HDA 1 and 2 plus the following:</p> <ul style="list-style-type: none"> <li>• Manage expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensure quality standards are followed.</li> <li>• Monitor the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Act as the escalation point for high priority support issues.</li> <li>• Ability to make recommendations on policies on system use and services.</li> </ul>

## **Product Specialist**

The Product Specialist is the expert for a technical development or execution environment product or set of products. The primary responsibility of a Product Specialist is to ensure the availability and facilitate the productive use of a product for Application Teams or end users. The Product Specialist may own part of a product, all of one, or several products depending on the nature of the product(s) and their use. The Product Specialist requires significant to expert experience and skills in the product supported. The Product Specialist will usually also have significant experience in the operating environment(s) (e.g., HP/UX, NT, MVS, etc) on which the product is implemented. If the product is one that was internally developed, the supporting PS should also have most of the skills of a Programmer. The Product Specialist is responsible for collaborating with Technical Architecture Specialist, System Specialists, Programmers and vendors to ensure and enhance the use of the product and effect migration to new versions of a product.

### **PS1**

Years of Relevant Experience:	1 to 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Make sound recommendations on functional and technical improvements to the product.</li> <li>• Analyze the functional and technical impact of product planning decisions.</li> <li>• Develop appropriate functional and usability standards for products.</li> <li>• Track and document expected volume and type of use of the product.</li> <li>• Participate in product design reviews to verify that design meets quality standards and functional/technical requirements.</li> <li>• Perform impact analyses on production fixes and enhancements to establish priorities.</li> <li>• Provide basic product support and provide accurate and complete answers to detailed product questions in a timely manner.</li> <li>• Provide effective on-site product support as needed.</li> <li>• Accurately sets severity of identified defects.</li> <li>• Provide input to training and / or documentation materials regarding latest technical</li> </ul>



	<p>and functional design changes.</p> <ul style="list-style-type: none"> <li>• Document all work for future reference.</li> <li>• Review the system test approach and conditions used as the basis for detailed test scenarios.</li> <li>• Follow quality standards.</li> <li>• Analytical and customer service skills.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Ability to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

**PS2**

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Actively contribute as an expert or actual designer.</li> <li>• Coordinate product design reviews to verify that design meets quality standards and functional/technical requirements.</li> <li>• Provide accurate estimates for design and programming efforts for system changes and enhancements.</li> <li>• Coordinate enhancements to business and logical data models with data base administration to make the appropriate changes to the physical data model.</li> <li>• Confirm that technical architecture will support all changes required by product enhancements.</li> <li>• Effectively lead product tests and trials.</li> <li>• Identify appropriate business examples to illustrate key concepts / features.</li> <li>• Anticipate, identify, track and resolve issues and risks affecting own work and work of the Application Team. Develop contingency plans as necessary.</li> <li>• Apply specific expertise to ensure that products meet defined customer objectives.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>

**PS3**

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Demonstrate expertise in teaching / conveying technical and / or functional courses / concepts.</li> <li>• Develop appropriate work programs / budgets and use to effectively schedule tasks / assignments.</li> <li>• Identify improvements to project standards to achieve high quality services / products.</li> </ul>

**Program Manager**

The Program Manager directs, controls, administers, and regulates an enhancement or development program. The Program Manager is the individual ultimately responsible to the agency. The Program Manager's primary responsibility is to drive the entire effort from start to finish. The Program Manager must ensure that the program is completed on schedule and that the final product meets the business,





technical, and established quality requirements. The difference between a PM1, PM2, and PM3 will depend on the size of the project, and the breadth and scope of the project.

### **PM1**

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Responsible for the development of estimates for the enhancement or development effort in planning, analysis, design, construction, testing, and implementation.</li> <li>• Accountable for delivery of all work tasks identified in the program plan.</li> <li>• Responsible for the capture and reporting of required program management metrics.</li> <li>• Adjust and revise estimates when necessary.</li> <li>• Ensure all changes to scope follow processes and are documented.</li> <li>• Ensure new estimates are approved by the client and agreed upon.</li> <li>• Adjust and revise estimates when necessary.</li> <li>• Manage, and track the program progress against the program plan.</li> <li>• Monitor project milestones and phases to ensure the project is on schedule. Take corrective actions if a project begins to slip its schedule.</li> <li>• Prepares status reports on a periodic basis for program team, team leads, group leads, and program manager and appropriate stakeholders.</li> <li>• Plan, organize, prioritize, and manage multiple work efforts across application teams.</li> <li>• Develop the detailed program plan for the enhancement or development effort</li> <li>• Accountable for the final program management evaluation review with stakeholders for approval upon program completion.</li> <li>• Responsible to tailor and baseline all program templates.</li> <li>• Accountable to schedule or monitor status reviews, peer reviews, program management inspections, and software quality assurance work product and process reviews with the appropriate designated resources.</li> <li>• Notify team leads of project timelines, milestones, phases, work requests target dates, and approved executable work package.</li> <li>• Communicate and work with users and client as necessary.</li> <li>• Coordinate and present proposals to agencies as necessary.</li> <li>• Analyze and distribute reports on program metrics associated with work items related to improvement measures.</li> <li>• Ensure processes and activities are followed.</li> </ul>

### **PM2**

Years of Relevant Experience:	5 to 7 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PM1 plus the following:</p> <ul style="list-style-type: none"> <li>• Accountable for the approval and sign-off of the program plan with customer representatives, such as portfolio managers, and all affected program stakeholders.</li> <li>• Accountable for management of scope for the program and gaining agreement and approval of scope changes with customer representatives and affected stakeholders.</li> <li>• Build and maintain relationships with key stakeholders and customer representatives.</li> <li>• Direct work planning and scheduling design work.</li> <li>• Manage, and track the program progress against the program plan.</li> <li>• Serve as the primary point of contact for all program-related issues and resolution of issues.</li> <li>• Coordinate and present proposals to agencies as necessary.</li> <li>• Identify and manage program risk and develops risk mitigation strategies, track to closure.</li> </ul>



	<ul style="list-style-type: none"> <li>• Ensure team leads adjust and revise estimates when necessary.</li> <li>• Anticipate issues and proactively address them. Resolve conflicts with sensitivity and tact.</li> <li>• Coordinate the establishment of program standards and program specific procedures with team leads.</li> <li>• Responsible for project compliance with standards and procedures.</li> <li>• Responsible for the capture and reporting of required program management metrics.</li> <li>• Responsible to tailor and baseline all program templates.</li> <li>• Develop and facilitate achievement of program service commitments and performance metrics.</li> <li>• Ensure that tasks provide value and support the strategic direction of the program and meet service commitments; conduct reviews with agencies.</li> <li>• Accountable for the final program management evaluation review with stakeholders for approval upon program completion.</li> <li>• Communicate effectively with customers and software / hardware suppliers supporting the State as appropriate.</li> <li>• Identify and track issues.</li> <li>• Balance workload with program members' capacity.</li> <li>• Communicate to team members how their work assignments relate to and help achieve program objectives.</li> <li>• Plan program specific training and orientation needs.</li> </ul>
--	--

**PM3**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PM2 plus the following: <ul style="list-style-type: none"> <li>• Accountable for activities with excess delivery cycles of 8 to 12 months.</li> </ul>

**Programmer**

The Programmer is responsible for analysis, design, coding, component and assembly testing of all application code owned by the Application Team. Programmers typically are involved in maintenance (including production support), enhancement and development work. Programmers have a range of skills and knowledge of the technologies used and applications supported by the Application Team. The Programmer works with the Functional Architect and Technical Architecture Specialist on an as needed basis to ensure that design and code meets customer requirements.

**PR1**

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Code enhancement and development programs and/or required fixes to production problems using the functional and technical programming standards.</li> <li>• Test enhancement and development programs.</li> <li>• Participate in structured code reviews / walkthroughs.</li> <li>• Execute all required process steps.</li> <li>• Create and provide content for operational documentation to Technical Writers.</li> <li>• Utilize configuration management tools, design tools, debugging tools, and any other environment specific tools necessary to create, test, and implement an application.</li> <li>• Research problems before approaching the Team Lead or Functional Architect for assistance.</li> <li>• Limited functional knowledge.</li> <li>• Follow quality standards.</li> </ul>



	<ul style="list-style-type: none"> <li>• Support installation of application releases into production as directed.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Ability to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>
--	---

### **PR2**

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PR1 plus the following:</p> <ul style="list-style-type: none"> <li>• Analyze and design enhancements, development programs, and/or required fixes to production problems.</li> <li>• Design applications to functional and technical programming standards.</li> <li>• Work with Functional Architects to gather and interpret user requirements into design specifications.</li> <li>• Develop system specifications and interfaces.</li> <li>• Determine time estimates and schedule for work.</li> <li>• Moderate functional and process knowledge.</li> <li>• Assist in managing and directing Application Team processes.</li> <li>• Coordinate work with other software developers on Application Teams.</li> <li>• Assist Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks.</li> <li>• Develop application designs in support of the systems specifications and interfaces, perhaps in conjunction with application or technical architects.</li> <li>• Operating System expertise sufficient to perform performance and tuning diagnostics.</li> <li>• Work with users to ensure that solutions meet business requirements.</li> <li>• Execution of all responsibilities with little direct supervision of Team Lead.</li> <li>• Generally aware of new developments in industry and process and has ability to apply them to work as appropriate.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>

### **PR3**

Years of Relevant Experience:	5 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PR2 plus the following:</p> <ul style="list-style-type: none"> <li>• Plan all required process steps.</li> <li>• Review and understand the Application Team's workplan.</li> <li>• Provide status of work to Team Lead.</li> <li>• Anticipate, identify, track and resolve issues and risks affecting own work and work of the Application Team. Develop contingency plans as necessary.</li> <li>• Engage in ongoing process improvement.</li> <li>• Detailed functional and process knowledge.</li> <li>• Utilize deep modeling, design and coding skills.</li> <li>• Provide expertise in one or more database environments.</li> </ul>

### **PR4**

Years of Relevant Experience:	8 plus years
-------------------------------	--------------



Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR3 plus the following:</p> <ul style="list-style-type: none"> <li>• Converts scientific, engineering, and other technical problem formulations to formats that can be processed by computer.</li> <li>• Resolves symbolic formulations, prepares flowcharts and block diagrams, and encodes resultant equations for processing by applying extensive knowledge of branch of science, engineering, or advanced mathematics, such as differential equations or numerical analysis, and understanding of capabilities and limitations of computer.</li> <li>• This is a professional level non-supervisory position which may require coordination of programming activities being conducted by the team</li> <li>• Confers with other business and technical personnel to resolve problems of intent, inaccuracy, or feasibility of computer processing.</li> <li>• Works with necessary personnel to determine if modifications are necessary with interested personnel to determine necessity for modifications or enhancements.</li> <li>• Leverages excellent written and verbal communication skills to develop new business process and programming solutions as directed by business and technical stakeholders.</li> <li>• May coordinate activities of computer programmers.</li> </ul>

## Quality Assurance Specialist

The Quality Assurance Specialist (QAS) is responsible for the design, pilot, and implementation of the software quality assurance review processes. The QAS Specialist will work with Application Teams during pre and post assessment periods. The QAS Specialist reports to the Quality Assurance Team Lead. For each phase end review the Quality Assurance Specialist is responsible to plan, schedule, execute, and document findings of the review. Quality Assurance Specialists must have a detailed understanding of processes which support the software development lifecycle. The Quality Assurance Lead is responsible for communicating with the State regarding the progress of the quality approach and a summary of the metrics, as well as managing the Quality Assurance Specialists.

### QAS1

Years of Relevant Experience:	3 years software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assist in software activities in defined span of control for the organization.</li> <li>• Track and monitor process and work product improvement opportunities.</li> <li>• Collect, review, and evaluate the project's required work products against standard work product templates.</li> <li>• Verify that established measurement procedures are used and all required metrics are collected.</li> <li>• Respond to requests for information.</li> <li>• Coordinate work with others on team and across teams</li> <li>• Draft report of observations, minor and major non-compliance.</li> <li>• Develop quality standards.</li> <li>• Monitor progress of action item resolution activity and ensure appropriate internal stakeholders are aware of pending deadlines.</li> <li>• Conduct training courses with project teams on software quality review process.</li> <li>• Research problems before approaching Quality Assurance Lead for assistance.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>



## QAS2

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Conduct software quality phase end review activities (work product and process) for each software project and produce the required quality assurance reports, as specified in the project's quality assurance plan.</li> <li>• Ensure the software development process followed by the project teams is compliant with approved tailored processes.</li> <li>• Review and check project's software development activities and the associated internal tasks required by the agencies as employed by the project and specified in the project plan.</li> <li>• Prepare preliminary software quality audit package for review before conduct of audit.</li> <li>• Define quality standards.</li> <li>• Monitor progress of action item resolution activity and ensure appropriate stakeholders are aware of pending deadlines.</li> <li>• Assist in managing and improving quality assurance team processes.</li> <li>• Review and understand project team work plan.</li> <li>• Determine time estimates and schedule for software quality review work. Conduct reviews according to schedule.</li> <li>• Organize and prepare work effectively to facilitate proactive resolution of problems, rather than reactive.</li> <li>• Identify and track issues, risks and action items affecting own work and work of team.</li> <li>• Report on progress of action item resolution and possible risk areas.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

## QAS3

Years of Relevant Experience:	7 years software development, testing and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Review project's required work products to ensure compliance with approved tailored procedures and standards.</li> <li>• Review and check project's software development activities and the associated internal tasks required as employed by the project and specified in the project plan.</li> <li>• Compare actual project procedures to the specified standards, procedures, and, if required, specific 3rd party contractual requirements.</li> <li>• Perform detailed reviews of interim and final tasks as appropriate.</li> <li>• Ensure process improvement opportunities are reviewed by appropriate contact to identify training needs of the organization.</li> <li>• Perform or manage the required software quality phase end reviews of work product and process for each software project and produce the required software quality reports, as specified in the project's software quality plan.</li> <li>• Develop, and manage short and long-term plans and schedules for organization wide software quality needs.</li> <li>• Balance workload with team's capacity by managing the team's activities according to schedule and budgets.</li> <li>• Coordinate and procure the required skills and techniques required.</li> <li>• Obtain feedback from project teams regarding the overall effectiveness of processes</li> </ul>





	<p>and procedures – Forward to appropriate stakeholders and process owners.</p> <ul style="list-style-type: none"> <li>• Provide feedback to project teams regarding process/procedure improvement opportunities and other potential areas for improvement discovered during software quality activities.</li> <li>• Report all software quality-revealed non-compliance.</li> <li>• Provide regular reports on the results of compliance reviews to the project team, project team leaders and management. Report on progress on action item resolution and possible risk areas.</li> <li>• Anticipate and resolve issues dealing with software quality.</li> <li>• Develop options and recommendations to assist teams in resolving issues.</li> <li>• Ensure action items are addressed and closed based on agreed dates and activities.</li> <li>• Ensure that defined processes are followed.</li> <li>• Communicate related improvement measures to the project team.</li> <li>• Obtain feedback from project teams regarding the overall effectiveness of software quality processes followed. Review with team and develop continuous improvement action plans. Report status to executive team.</li> <li>• Communicate and work with customers and other personnel as necessary.</li> <li>• Communicate clearly the team goals, organizational philosophies, and policies and procedures to the team.</li> <li>• Communicate to team members the relationship between their work assignments and the team and project objectives.</li> <li>• Lead efforts in developing and facilitating implementation of team goals and metrics.</li> </ul>
--	--

## Senior Architect

The Senior Architect is responsible for designing, developing, and implementing application infrastructure to provide highly-complex, reliable, and scalable applications and systems to meet the organization's objectives and requirements. Senior Architects are familiar with a variety of the application technologies, environments, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Senior Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They have proven experience defining systems and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SAR1

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Manages, organizes, and administers systems analysis and preparation of applications and operating systems programming to process data and solve problems by use of computers.</li> <li>• Establishes priorities and schedules, and oversees and reviews work of systems analysis personnel and programming personnel.</li> <li>• Reviews feasibility studies and time and cost estimates of new or revised systems.</li> <li>• Assists in the development of standards, procedures, and operating systems applications.</li> <li>• A combination of directly-related technical training and hands-on experience.</li> <li>• Works with stakeholders and management to ensure projects are completed on time and according to organization standards.</li> <li>• Consults with personnel in other information systems groups to coordinate activities.</li> <li>• Consults with management to clarify systems and programs intent, identify problems, suggest changes, and determine extent of application systems changes required.</li> <li>• Participates in developing a project plan and schedule with key milestones,</li> </ul>



	<p>contingency plans, workflow charts or diagrams, considering factors, such as resource requirements, computer storage capacity and speed, extent of peripheral equipment, and intended use of output data.</p> <ul style="list-style-type: none"> <li>• Manages conversion of workflow charts to language that can be processed by computer and entering of program codes and test data into computer.</li> <li>• Analyzes test runs on computer and supervises correction of coded program and input data.</li> <li>• Manages the revision of existing programs to increase operating efficiency or adapt to new requirements.</li> <li>• Compiles documentation of program development and subsequent revisions.</li> <li>• Trains subordinates in systems analysis, feasibility studies, programming, and program coding.</li> <li>• Prescribes standards for terms and symbols used to simplify interpretation of programs.</li> <li>• Collaborates with computer manufacturers and other users to develop new programming methods.</li> <li>• Prepares records and reports.</li> </ul>
--	---

## Senior Business Subject Matter Expert

The Senior Business Subject Matter Expert (SME) brings proven experience from related businesses or organizations as well as system integration and technology experience. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise and make recommendations on business and technical solutions based on hands-on experience solving similar business problems. They are able to utilize knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SME1

Years of Relevant Experience:	More than 10 years
Preferred Education	4 year college degree in computer science or a related field with advanced study preferred; certifications specific to the field of project management.
Role Description	<ul style="list-style-type: none"> <li>• Consults with executive-level stakeholders to define business need or problem; conducts research, performs studies and surveys to obtain data; and analyzes problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.</li> <li>• Requires knowledge in computer programming and other related technical fields as well as extensive experience in a particular business or industry subject matter.</li> <li>• Conducts study or survey on need or problem to obtain data required for solution.</li> <li>• Analyzes data to determine solution, such as installation of alternate methods and procedures, changes in processing methods and practices, modification of machines or equipment, or redesign of products or services.</li> <li>• Advises client or department heads on alternate methods of solving need or problem, or recommends specific solution.</li> <li>• Requires experience providing consulting services to governmental entities.</li> <li>• May be designated according to field of business and technical specialization.</li> </ul>

## Senior Database Architect

The Senior Database Architect is responsible for designing, developing, and implementing infrastructure to provide highly-complex, reliable, and scalable databases to meet the organization's objectives and requirements. Database Architects are familiar with a variety of the database technologies, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Database Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They assist in defining system and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or



issues, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### **SDA1**

Years of Relevant Experience:	8 plus years of database experience
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Possesses extensive knowledge of one or more database systems, and is capable of hands-on work in all phases of database design and management.</li> <li>• Designs, develops, and implements infrastructure to provide highly-complex, reliable, and scalable database to meet the organization's objectives and requirements.</li> <li>• Analyzes organization's business requirements for database design, and implements changes to database as required.</li> <li>• Performs systems analysis on database, and resolves performance, capacity, and replication issues as necessary.</li> <li>• Provides detailed design and specification documentation, including flowcharts, for all aspects of the database.</li> <li>• Works with database analysts to develop methodologies, report views, queries, and table replications</li> <li>• Ensures that all the data is in the proper format.</li> <li>• Participates in the identification, prioritization, and development of technical initiatives and strategies.</li> <li>• Develops and maintains database standards and naming conventions.</li> <li>• Keeps up-to-date on emerging database architectures, technologies, and methodologies, and attends training classes as necessary.</li> </ul>

### **Senior Program Manager**

The Senior Program Manager is responsible for managing, coordinating, and establishing priorities for the complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing. Senior Program Managers are familiar with a variety of the project management methodologies and rely on experience and judgment to plan and accomplish goals. They have proven experience leading technology projects to successful implementation. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### **SPM1**

Years of Relevant Experience:	More than 10 years
Preferred Education:	4 year college degree in computer science or a related field; certifications specific to the field of project management.
Role Description:	<p>All roles specified in PM3 plus the following:</p> <ul style="list-style-type: none"> <li>• Manages, coordinates, and establishes priorities for complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing.</li> <li>• Designs project plans, which identify needs and define major tasks and milestones, based on scope, resources, budget, and personnel.</li> <li>• Requires proven success communicating verbally and in writing to multiple project stakeholders internal and external to the organization.</li> </ul>





	<ul style="list-style-type: none"> <li>• Determines project needs and acquires resources required for the success of the project.</li> <li>• Coordinates the development of new systems and/or applications projects, the modification of existing systems or applications, or changes in current methods or techniques.</li> <li>• Coordinates project performance with the other work of the affected department or departments.</li> <li>• Excludes those who do not have full time responsibilities for project management.</li> </ul>
--	--

## Service Desk

The Service Desk Analyzes and troubleshoots computer support problems and applies his or her understanding of computer software and hardware products and services to resolve user problems.

### SD2

Years of Relevant Experience:	0 to 3 years A+ certification preferred
Preferred Education:	Usually prefer two years of postsecondary training in field of specialty; may accept equivalent education and experience combined.
Role Description:	<ul style="list-style-type: none"> <li>• Receive telephone calls and e-mails from users having problems using computer software and hardware or inquiring how to use specific software, programming languages, electronic mail, or operating systems.</li> <li>• Ascertain the nature of problem, determine whether problem is caused by hardware such as modem, printer, cables, or telephone, and log in tracking system.</li> <li>• Escalate problems in accordance with defined procedures.</li> <li>• Assist users through problem solving steps</li> <li>• Use technical databases to research problems, and talk with co-workers to research problem and find solution.</li> <li>• Test software and hardware for troubleshooting and problem resolution.</li> <li>▪ Provide service and preventive maintenance activities on element exchange/baseline products (products with element exchange service and traditional maintenance philosophies; i.e., terminals, printers, personal computers, etc.).</li> <li>▪ Able to diagnose and detect correct equipment errors and repair products by replacing worn or broken parts, and making technical adjustments.</li> <li>▪ Makes appropriate use of reference publications and diagnostic aids in resolving technical problems.</li> <li>▪ Assist in coordination of changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>▪ Provide accurate and complete answers to general use and administrative environment questions in a timely manner.</li> <li>▪ Support shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> <li>▪ Communicate accurate and useful status updates.</li> <li>▪ Manage and report time spent on all work activities.</li> <li>▪ Follow quality standards.</li> <li>▪ Ability to work in a team environment</li> <li>▪ Complete assigned tasks.</li> <li>▪ Strong communication skills; both written and spoken</li> </ul>

### SD3

Years of Relevant Experience:	More than 3 years A+ certification preferred; additional certification may be required based on specific technologies.
Preferred Education:	4 year college degree or equivalent technical study; may accept equivalent education and



	experience combined.
Role Description:	<p>All roles specified in SD2 plus the following:</p> <ul style="list-style-type: none"> <li>• Test software and hardware to evaluate ease of use and whether product will aid user in performing work.</li> <li>• Write or revise training manuals and procedures.</li> <li>• Develop training materials, such as exercises and visual displays.</li> <li>• Train users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.</li> <li>• Write software and hardware evaluation and recommendation for management review.</li> <li>• Implement shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> </ul>

## Software Process Engineer

The Software Process Engineer is responsible for implementing and supporting a set of standard software engineering processes used by agencies. The Software Process Engineer participates in the entire life-cycle of software process improvement initiatives. This includes the planning, analysis, design, construction, testing, and implementation of new processes. The Software Process Engineer is responsible for identifying opportunities for improving existing processes and implementing appropriate solutions.

The Software Process Engineer is also responsible for supporting projects and individual Teams in the use and understanding of processes on an ongoing basis. The Software Process Engineer is responsible for collaborating with the Team Lead(s) and Program Managers to provide guidance to team members and facilitate continual software process improvement. The Software Process engineer must understand all aspects of the specific processes used by the Teams. The Software Process Engineer must also be familiar with industry process models and standards.

### SPS1

Years of Relevant Experience:	3 years in Computer Software development
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Facilitate the implementation of standard software engineering processes.</li> <li>• Identify software development process improvement opportunities either independently or through working with projects and teams.</li> <li>• Assist in planning software process improvement initiatives.</li> <li>• Direct and participate in teams working on the analysis, design, construction, testing, and implementation of new processes.</li> <li>• Work with projects and teams to define the need for tailored processes and tools and assist in implementation, as appropriate.</li> <li>• Provide ongoing support to projects and teams in the use and understanding of the software processes.</li> <li>• Provide on-site support for teams on process related issues.</li> <li>• Provide assistance to the Software Process Engineer Lead in planning and scheduling activities.</li> <li>• Provide support in tracking and monitoring the success of process improvement initiatives.</li> <li>• Monitor and solicit feedback on the usability and functionality of implemented processes.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>



## SPS2

Years of Relevant Experience:	5 years in software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SPS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Facilitate the implementation of standard software engineering processes across agencies.</li> <li>• Determine time estimates and schedule for own work and resolve issues on a timely basis.</li> <li>• Identify and track issues, risks and action items.</li> <li>• Determine process to support various initiatives.</li> <li>• Lead the development of content for process training and deliver process training as appropriate.</li> <li>• Coordinate with various teams about process improvement opportunities.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>

## SPS3

Years of Relevant Experience:	7 years total experience; 5 years in software development and testing.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in SPS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Organize and prepare work effectively to facilitate proactive resolution of problems.</li> <li>• Anticipate and resolve issues on a timely basis.</li> <li>• Communicate accurate and useful status as appropriate.</li> <li>• Demonstrate and promote a focus on client service.</li> <li>• Communicate effectively with suppliers as appropriate.</li> <li>• Work with internal customers and others to identify direction of software process.</li> <li>• Identify knowledge in a form that is reusable.</li> </ul>

## System Administrator

The System Administrator is responsible for server back up and security, along with performance tuning and capacity planning. System Administrators should possess an understanding of network and distributed computing concepts. This is accomplished by working with the Systems Management Team Lead to understand the scope of services to be provided and assessing the impact they will have on the technical infrastructure.

### SA1

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Familiarity with most basic system administrator tools and process; for example, can boot/shutdown a machine, add and remove user accounts, use back up programs, and maintain system database files.</li> <li>• Maintain the project servers.</li> <li>• Maintain the file and print capacity</li> <li>• Ensures that backups are performed as appropriate.</li> <li>• Act as a front-line interface to users.</li> <li>• Accepts trouble reports and dispatch them to appropriate system administrators.</li> <li>• Ability to write scripts in a particular administrative language.</li> </ul>



	<ul style="list-style-type: none"> <li>• Programming experience with any applicable language.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

## SA2

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Responsible for operating and other system software.</li> <li>• Responsible for upgrading the operating and system software and keeping patches current.</li> <li>• Familiarity with fundamental networking/distributed computing environment concepts.</li> <li>• Ability to do minimal debugging and modification of programs.</li> <li>• Execute the disaster recovery/back up procedures and archiving procedures.</li> <li>• Manage security for servers.</li> <li>• Responsible for performance tuning, capacity planning, database administration, and fault management.</li> <li>• Provide tier two support of the technical infrastructure.</li> <li>• Coordinating efforts with vendors if tier three support is required.</li> <li>• Responsible for ensuring high priority issues are resolved in a timely manner.</li> <li>• Responsible for keeping the environment up and running.</li> <li>• In many cases is responsible for identifying and reporting hardware problems.</li> <li>• Capable of writing purchase justifications.</li> <li>• Understands basic routing concepts.</li> <li>• Identify and track issues, risks, and action items.</li> <li>• Resolve and/or assist in resolving issues.</li> <li>• Review, prioritize, and research service requests.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

## SA3

Years of Relevant Experience:	4 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Solid understanding of networking/distributed computing environment concepts.</li> <li>• Understands principles of routing client/server programming.</li> <li>• Manage expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensure quality standards are followed.</li> <li>• Understand the business application of technical support and design in an application development environment.</li> <li>• Work with the various Infrastructure teams and operations provider to identify the strategic direction of systems management activities.</li> <li>• Understands the design of consistent network-wide file system layouts</li> <li>• Maintain strong relationships with employees and various tier two and three support groups.</li> <li>• Develop plans for disaster recovery/ back up and archiving.</li> </ul>



	<ul style="list-style-type: none"> <li>• Manage the daily operations of the systems management team to ensure service levels are being met.</li> <li>• Manage the systems management team's support issue and backlog.</li> <li>• Monitor the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Act as the first level of escalation for high priority support issues.</li> <li>• Function as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develop the technical infrastructure maintenance strategy.</li> <li>• Manage the system management resources.</li> <li>• Act as a system's management expert.</li> <li>• Analyze, determine, and document requirements in terms of system management needs and implement them.</li> <li>• Identify, approve, and prioritize team projects.</li> <li>• Manages a large site or network.</li> <li>• Recommends policies on system use and services.</li> </ul>
--	--

## System Specialist

The System Specialist is knowledgeable on the usage and support of a collection of development platforms or technical architectures, and products that run on those platforms. The primary responsibility of a System Specialist is to ensure the availability and facilitate the productive use of a development platform or a test environment for Application Teams or end users. The System Specialist may support one or several instances of a platform/environment, applying their skills directly to a platform/environment and/or leveraging their skills across multiple platforms/environment. The System Specialist may, especially for usage and support of a platform, be part of an Application Team using the architecture. The System Specialist requires experience and skills in the environment supported and in the operations and in common usage of products for the environment. The System Specialist are responsible for collaborating with Technical Architecture Specialist, Functional Architects, Programmers and vendors to coordinate and enhance the use of the platform and facilitate migration to new versions of the platform.

### SS1

Years of Relevant Experience:	1 to 3 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assist in coordination of testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>• Make recommendations on functional and technical improvements to the environment.</li> <li>• Participate in performance and volume analysis and design.</li> <li>• Participate in performance improvement activities. Identify and apply potential improvements related to the environment for an application.</li> <li>• Provide accurate and complete answers to general use and environment questions in a timely manner.</li> <li>• Provide effective on-site environment support as needed.</li> <li>• Accurately set severity of identified defects.</li> <li>• Provide input to training and/or documentation materials regarding latest technical and functional design changes.</li> <li>• Ensure that all work is documented for future reference.</li> <li>• Follow quality standards.</li> <li>• Ensure effective and reliable backups are being performed and distributed properly.</li> <li>• Proactively address customer needs.</li> <li>• Track and anticipate volume and type of use of the environment.</li> <li>• Plan and implement shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and</li> </ul>



	<p>code editors.</p> <ul style="list-style-type: none"> <li>• Basic scripting and programming skills, including languages that run on specified platform.</li> <li>• Analytical and customer service skills.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

## SS2

Years of Relevant Experience:	3 to 5 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Plan and manage network operating system upgrades.</li> <li>• Actively participate in analyzing and evaluating emerging software and hardware technologies/standards.</li> <li>• Serve as a liaison between teams for network planning and connectivity.</li> <li>• Develop appropriate functional and usability standards for the environments.</li> <li>• Plan or assist in planning network environment, including supporting existing structure and enhancements.</li> <li>• Plan and coordinate testing changes, upgrades and new and standard products, ensuring systems will operate correctly in current and future environment.</li> <li>• Anticipate, identify, track and resolve issues and risks affecting own work and work of the Application or Environment team. Develop contingency plans as necessary.</li> <li>• Analyze the functional and/or technical impact of new product releases.</li> <li>• Advanced scripting and programming skills, including languages that run on specified platform.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>

## SS3

Years of Relevant Experience:	5 plus years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Identify opportunities for new and improved technologies/standards to be used in the organization.</li> <li>• Identify, plan, and implement phase-out strategies for products and technologies.</li> <li>• Plan and coordinate testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>• Demonstrate expertise in teaching/conveying technical courses/concepts.</li> <li>• Assist in setting architecture direction and knowledge sharing.</li> <li>• Plan, organize, prioritize, and manage multiple work efforts the Application or Environment Teams.</li> <li>• Develop appropriate work programs and use to effectively schedule tasks/assignments.</li> </ul>





## Team Lead

The Team Lead manages an Application Team to deliver services according to defined service level commitments owned by the Application Team. The Team Lead coordinates resources and work to deliver solutions to customers on time and within budget. The Team Lead is assigned responsibility and accountability for overseeing the successful completion of all work assigned to the Application Team. The Team Lead is a process expert within the Application Team, understanding the software development / maintenance processes and verifying process conformance. The Team Lead will monitor stability of production applications owned by the Application Team. The Team Lead assists Application Team members in development activities and reviews tasks as required. The Team Lead manages and updates progress towards Application Team objectives, assists Application Team members in resolving problems, and engages in personnel management and guidance to Application Team members. The Team Lead fosters a positive work environment by mentoring, supporting, and committing to the professional development of Application Team members. The Team Lead reports to the Group Lead or Program Manager, as appropriate. The difference between a TL1 and a TL2 will depend on the size of the project, and the breadth and scope of the project.

### TL1

Years of Relevant Experience:	4 to 5 years, and 1 to 2 years project management experience.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Monitor stability of production applications owned by Application Team.</li> <li>• Prepare estimates for maintenance and enhancement of existing applications and development of new applications.</li> <li>• Perform detailed reviews of interim and final tasks as appropriate.</li> <li>• Process work requests; review, prioritize, and package.</li> <li>• Manage and review tasks of suppliers and other interfaces to the Application Team.</li> <li>• Conduct structured walk-throughs or inspections; manage issues to closure.</li> <li>• Develop and manage short and long-term plans and schedules.</li> <li>• Direct the development of accurate estimates for Application Team activities as required.</li> <li>• Balance workload with Application Teams capacity by managing the Application Teams activities according to schedule.</li> <li>• Manage the accomplishment of delivery metrics to support contractual obligations in the areas of service delivery and on time performance commitments and productivity improvement.</li> <li>• Ensure work remains within the agreed scope.</li> <li>• Track work plan baseline against results.</li> <li>• Coordinate / communicate with Group Leads and / or Program Manager to ensure initiatives are in accordance with agreed customer commitments as planned.</li> <li>• Proactively identify and manage issues/risks affecting the project.</li> <li>• Communicate accurate and useful status to Group Lead and other management on a timely basis.</li> <li>• Identify and initiate continuous improvements.</li> <li>• Instill commitment to quality, customer service, ownership, and teamwork.</li> <li>• Conduct post project wrap-ups.</li> <li>• Monitor and measure maintenance and development process effectiveness.</li> <li>• Ensure that defined processes are followed.</li> <li>• Manage expectations of the Application Teams internal and external customers.</li> <li>• Facilitate communication and knowledge sharing within the Application Teams.</li> <li>• Maintain awareness of new developments in industry and processes and apply as appropriate.</li> <li>• Develop and deepen understanding of system business requirements supported by the Application Team.</li> </ul>



	<ul style="list-style-type: none"> <li>• Communicate clearly the Application Team goals, organizational philosophies, and policies and procedures to the Application Teams.</li> <li>• Conduct structured walk-throughs or inspections; manage issues to closure.</li> <li>• Communicate clearly the Application Team goals, organizational philosophies, and policies and procedures to the Application Teams.</li> </ul>
--	--

**TL2**

Years of Relevant Experience:	5 plus years, and 2 to 3 years project management experience
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TL1 plus the following:</p> <ul style="list-style-type: none"> <li>• Manage the resolution of high severity production problems.</li> <li>• Manage and direct Application Team activities employing appropriate program management and planning principles.</li> <li>• Coordinate work with other Team Leads as appropriate.</li> <li>• Coordinate and procure the required skills and techniques required by the Application Team.</li> </ul>

**Technical Architecture Specialist**

The Technical Architecture Specialist is the technical expert centered on a technology, technologies or a portfolio of applications. The Technical Architecture Specialist is the technologist who coordinates with other parties in setting the technical approach and direction and implementation for work. The Technical Architecture Specialist provides technical design expertise, defines what technical requirements are needed to support defined business requirements, participates in detailed design and code reviews, reviews system performance issues, reviews test plans, and provides technical guidance to the Application Team and Test Team members. The Technical Architecture Specialist is responsible for collaborating with the Team Lead(s) to coordinate project schedules, budgets, request management, and work authorization. The expert level Technical Architecture Specialist will interface with Executive Sponsors, Group Leads, and Lead Functional Architects to convey infrastructure requirements, plan, and schedule deployment of tasks, and resolve any issues that impact the deployment of the Application Delivery systems.

**TAS1**

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Define test plans and criteria for acceptance for the technical components of an application.</li> <li>• Ensure business requirements are supported by the technical architecture.</li> <li>• Assist in leading technical direction of software; coordinating and presenting proposals to Group Leads, Leads, and the client.</li> <li>• Define and evaluate logical and physical data models.</li> <li>• Assist in development of overall system technical architecture - including software and hardware.</li> <li>• Define test plans and criteria for acceptance for the technical components of an application.</li> <li>• Analyze, determine, and document technical requirements and change request impact analysis.</li> <li>• Participate in detailed design and product test execution as required.</li> <li>• Develop technical programming standards.</li> <li>• Ensure business requirements are supported by the technical architecture.</li> <li>• Conduct structured walk-throughs or inspections for technical areas; resolve issues.</li> <li>• Assist in defining technical programming standards.</li> <li>• Communicate accurate and useful status updates.</li> </ul>





	<ul style="list-style-type: none"> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> <li>• Perform integration of various architectures across multiple enterprises</li> <li>• Develop overall system technical architecture - including software and hardware.</li> <li>• Perform review of technical designs, code, and component test plans.</li> <li>• Resolve and / or assist in resolving cross application technical issues.</li> <li>• Conduct structured walk-throughs or inspections for technical areas; resolve issues.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>
--	--

## TAS2

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Ensure consistency and completeness across data models.</li> <li>• Plan and deliver development architecture environments in coordination with the Environmental Support Specialist.</li> <li>• Assist in managing and directing team's technical architecture processes.</li> <li>• Provide assistance in scheduling design work for Lead Technical Architecture Specialist.</li> <li>• Develop and document expert practices/ standards.</li> <li>• Possesses strong analysis, presentation, documentation and quality assurance skills.</li> <li>• Analyze, determine, and document technical requirements and impact analysis for technical and development architectures.</li> <li>• Explain defect priorities and enhancement classifications to client and customer when needed.</li> <li>• Maintain awareness of new technological developments in industry and processes - implement concepts appropriately.</li> <li>• Lead or participate in setting the service levels for the application.</li> <li>• Define overall system logical architecture.</li> <li>• Provide standard, well-structured work planning which defines scope, resources, milestones, quality, risk, tasks, and acceptance criteria.</li> <li>• Prepare contingencies, scenarios, scenario plans and action items to resolve issues.</li> <li>• Lead efforts in providing technical expertise, guidance, and training to the Application and Test Teams.</li> </ul>

## TAS3

Years of Relevant Experience:	5 plus years, and 1 to 2 years project management experience
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Communicate effectively with IT staff, client organization and software / hardware suppliers.</li> <li>• Lead efforts in designing technical strategy, direction and approach, technical architecture, data architecture, development architecture, performance tuning, performance and capacity analysis, technical standards, technical reliability and flexibility.</li> </ul>



	<ul style="list-style-type: none"> <li>• Design and define overall system technical architecture - including software and hardware within the framework and constraints of technical architecture.</li> <li>• Evaluate alternative designs.</li> <li>• Maintain control of specific tools and assets.</li> <li>• Own the technical architecture for a portfolio of applications, including the interpretation and application of the technical architecture.</li> <li>• Plan, design development and/or execution of architectures. Participate in the plan and design of technical architecture.</li> <li>• Assist with the preparation of estimates for new technology applications and maintenance of existing applications as part of Service Management.</li> <li>• Provide experience in utilizing the project architecture. Acknowledged as highly competent in one or more technologies.</li> <li>• Communicate accurate and useful status reports and other management on a timely basis.</li> <li>• Coordinate and conduct project architecture, infrastructure review meetings, and portfolio review meetings with Group Lead, Lead Functional Architects, and Team Leads. Integrate issues and identify impacts.</li> <li>• Communicate and resolve application interface issues.</li> <li>• Communicate to team members the relations between their work assignments and the organizational and/ or program strategy, objectives, business and technology needs of the application / system.</li> <li>• Share knowledge across teams with both similar and non-similar applications, specifically focusing on Technical Architecture</li> <li>• Interpret and communicate technical architecture to the Technology Application Architecture Team (s).</li> </ul>
--	---

## Technical Writer

The Technical Writer develops and maintains user and technical documentation and project process documentation for Application Teams. Technical Writer understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. The experienced Technical Writer 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 within their Tower.

### **TW1**

Years of Relevant Experience:	1 to 3 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Develop, enhance, and maintain user documentation for multiple applications including documentation required for the operations provider.</li> <li>• Develop on-line source documentation as appropriate.</li> <li>• Maintain documentation libraries and subscription lists.</li> <li>• Identify, create, revise, and maintain documentation and templates needed by the Application Teams.</li> <li>• Ensure appropriate control access/use of documentation materials.</li> <li>• Maintain application and user documentation.</li> <li>• Ensure messages and terminology is consistent across all written materials.</li> <li>• Research and complete documentation service requests.</li> <li>• Communicate and work with customers and other Client Telecommunications personnel as necessary.</li> <li>• Work with Application Team members to enhance their understanding of end-user and technical documentation.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> </ul>



	<ul style="list-style-type: none"> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

## **TW2**

Years of Relevant Experience:	3 to 5 years.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW1 plus the following:</p> <ul style="list-style-type: none"> <li>• Review and prioritize documentation service requests.</li> <li>• Determine procedures for use of on-line documentation tools and version control documentation as appropriate.</li> <li>• Assist or guide other Technical Writer as needed to develop and maintain user and technical documentation for their assigned applications.</li> <li>• Educate both business and technical groups on the essential need for developing and using standard documentation for all processes.</li> <li>• Organize and prepare work effectively to facilitate proactive resolution of problems, rather than reactive.</li> <li>• Research problems before approaching Lead Technical Writer or Team Lead for assistance.</li> <li>• Assist the Application Team Lead in monitoring budget by providing estimated-time-to-complete and actuals for assigned tasks.</li> <li>• Identify and make recommendations around documentation and templates needed by the Application Teams.</li> <li>• Work with users and other State personnel to ensure that the solutions meet State business requirements.</li> <li>• Identify and initiate continuous improvement opportunities.</li> <li>• Direct the development of accurate estimates for documentation requests/activities as required</li> <li>• Develop options and recommendations to assist documentation team members in resolving issues.</li> <li>• Lead efforts in developing and facilitating implementation of the Documentation team goals and metrics.</li> <li>• Develop workable, practical, measurable work plans defining activities, schedules and tasks with Team Leads and the Lead Technical Writer</li> <li>• Review and understand the Application Teams workplan.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>

## **TW3**

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW2 plus the following:</p> <ul style="list-style-type: none"> <li>• Review and approve procedures for use of on-line documentation tools as appropriate.</li> <li>• Identify business and technical documentation needs not currently addressed.</li> <li>• Manage Technical Writer.</li> <li>• Own documentation libraries and subscription lists.</li> <li>• Promote the need for developing and using standard documentation for all processes within the organization.</li> </ul>



	<ul style="list-style-type: none"> <li>• Perform detailed reviews of interim and final tasks as appropriate.</li> <li>• Oversee processing of service requests.</li> <li>• Manage, deploy, and schedule Technical Writer activities.</li> <li>• Develop and manage short and long-term documentation plans and schedules.</li> <li>• Understand work requests/needs within Application Teams</li> <li>• Manage the accomplishment of delivery metrics in support of contractual obligations in the areas of service delivery, on time performance.</li> <li>• Work with Team Leads and Group Leads to set documentation goals.</li> <li>• Ensure work remains within the agreed project scope.</li> <li>• Coordinate work with other Lead Technical Writers as appropriate.</li> <li>• Coordinate and procure the required skills and techniques required by the Application Teams for documentation needs.</li> <li>• Communicate accurate and useful status reports to Group Lead and other management on a timely basis.</li> <li>• Anticipate, identify, track and resolve issues and risks affecting own work and work of the Application Team. Develop contingency plans as necessary.</li> <li>• Manage expectations of the Technical Writers' internal and external customers.</li> <li>• Define documentation quality standards as needed.</li> <li>• Conduct post project reviews and quality assessments.</li> <li>• Ensure that defined processes are followed.</li> <li>• Communicate related improvement measures to the team.</li> <li>• Communicate clearly to Technical Writers their goals, organizational philosophies, and policies and procedures.</li> </ul>
--	--

## Telecom Engineer

The Telecom Engineer configures and installs hardware, wiring, and specialized equipment according to local building and electrical codes. The Telecom Engineer may also be responsible for the end-to-end installation of cable, wiring, and related equipment. The Telecom Engineer typically works closely with facilities/construction managers and site-based project managers. The Telecom Engineer should be able to accurately estimate the time and materials needed for tasks assigned. It is not uncommon for the Telecom Engineer to supervise a team of people and coordinate activities with other construction teams.

### TE1

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> <li>▪ Ensure proper connectivity from site-to-site and internal to facility.</li> <li>▪ Experience with CAT5, Romex, and similar cables/wiring.</li> <li>▪ Pull cable and ensure adherence to all building codes.</li> <li>▪ Escalate construction and installation problems to the construction/integration manager, as needed.</li> <li>▪ Prepare all job-related paperwork.</li> <li>▪ Close out work authorization when equipment is in service.</li> </ul>

### TE2

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE1 plus the following:</p> <ul style="list-style-type: none"> <li>▪ Inspect customer premises to ascertain available space for equipment installation</li> <li>▪ Determine the type and quantity of equipment that can be installed to provide requested communication facilities.</li> <li>▪ Create floor plan of equipment arrangement for customer or architect approval.</li> <li>▪ Prepare cost estimate for equipment and installation and submit data to management</li> </ul>



	for authorization to proceed. <ul style="list-style-type: none"> <li>▪ Order equipment and prepare installation specifications.</li> <li>▪ Monitor progress of installation to ensure facilities are ready on specified date.</li> </ul>
--	--

### **TE3**

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	All roles specified in TE2 plus the following: <ul style="list-style-type: none"> <li>▪ Lead full integration teams and interact with large infrastructure teams.</li> <li>▪ Act as telecommunications interface to outside vendors and construction manager.</li> <li>▪ Direct activities related to the selection and installation of telephone facilities and special equipment on premises to meet customer's communication requirements.</li> </ul>

## **Tester**

The Tester is a member of a team which plans, constructs, and executes product tests, system tests, unit tests, load tests, volume tests, network tests as well as works with others for release control processes. The more experienced Tester manages, plans, constructs, and executes tests and integrates with release control process.

### **Test1**

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Create test models for product test and release control (plans, data, and scripts).</li> <li>• Conduct structured walk-throughs</li> <li>• Execute assembly or product tests.</li> <li>• Meet time estimates for assigned tasks.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>

### **Test2**

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	All roles specified in Test1 plus the following: <ul style="list-style-type: none"> <li>• Define product test plans and criteria for acceptance.</li> <li>• Develop, update, and maintain testing standards and procedures.</li> <li>• Resolve testing process questions / issues.</li> <li>• Assist in the planning, creation, and control of the test environments.</li> <li>• Conduct inspections; resolve issues.</li> <li>• Coordinate and execute assembly or product tests with the Test Team, Application Team and the Program Manager.</li> <li>• Assist Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks.</li> <li>• Work with Test Team members to enhance their testing skills and build technical and business knowledge.</li> <li>• Update and test release installation procedures.</li> <li>• Generally aware of new developments in industry and processes and ability to apply to work as appropriate.</li> </ul>



	<ul style="list-style-type: none"> <li>• Determine time estimates and schedule for work efforts.</li> <li>• Define and utilize entry / exit criteria for testing.</li> <li>• Schedule the design of structured walk-throughs or inspections; resolve issues.</li> <li>• Work with users to ensure that solutions meet business requirements.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>
--	---

### Test3

Years of Relevant Experience:	4 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test2 plus the following:</p> <ul style="list-style-type: none"> <li>• Review and understand the Test Team work plan.</li> <li>• Assist in managing and directing Test Team processes.</li> <li>• Anticipate, identify, track and resolve issues and risks affecting own work and work of the Test and/or Application Teams. Develop contingency plans as necessary.</li> <li>• Research problems before approaching the Team Lead or Test Team Lead for assistance.</li> <li>• Assist or guide Testers as needed.</li> <li>• Develop understanding of system business requirements supported by the Test team</li> <li>• Assist Application Teams to plan and execute component and assembly tests.</li> <li>• Participate in assembly or product test execution as required.</li> </ul>

## Video Conference Specialist

The Video Conference Specialist (VCS) provides video and photograph production support by operating a variety of film, sound-reproducing equipment, slide, and video equipment.

### VCS1

Years of Relevant Experience:	Up to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Maintain equipment in working condition.</li> <li>• Make minor adjustments and repairs to equipment</li> <li>• Notify maintenance personnel when correction of major malfunction is required.</li> <li>• Position, install, connect, and repair equipment.</li> <li>• Familiar with fundamental networking/distributed computing environment concepts.</li> <li>• Troubleshoot network issues, systems, and applications to identify and correct malfunctions and other operational difficulties.</li> <li>• Investigate user problems, identify their source, determine possible solutions, test and implement solutions</li> <li>• Ensure high priority issues are resolved in a timely manner.</li> <li>• Excellent communication skills.</li> </ul>

### VCS2

Years of Relevant Experience:	6 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in VCS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Coordinate equipment operation with material presented, according to notations in script or instructions of speaker.</li> <li>• Advise speakers and presenters on alternative media.</li> </ul>





	<ul style="list-style-type: none"> <li>• Meet with department heads, managers, supervisors, vendors, and others, to solicit cooperation and resolve problems.</li> <li>• Actively participate in analyzing and evaluating emerging technologies/standards.</li> <li>• Evaluate and/or recommend purchases of network hardware, software, and peripheral equipment.</li> <li>• Act as the first level of escalation for high priority support issues.</li> <li>• Function as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develop the technical maintenance strategy.</li> <li>• Analyze, determine, and document requirements in terms of system management needs and implement them.</li> <li>• Identify, approve, and prioritize team projects.</li> <li>• Mentor and supervise other team members.</li> </ul>
--	--

## Voice/Data Engineer

The Voice/Data Engineer directs and participates in all activities related to the selection and installation of telephone facilities and special on-premises equipment that will meet the customer's communication requirements. The Voice/Data Engineer is responsible for all technology and connectivity involving telecommunications and data networks. The Voice/Data Engineer will typically specialize in telephony and data interfaces and systems that have proprietary functions within the communications area of a corporation/business. General wiring excluded, the Voice/Data Engineer ensures that any specialized conduit or wiring is properly deployed and installed according to code. The Voice/Data Engineer is also an expert in audio/visual, teleconferencing, and voice mail equipment. Often times, the Voice/Data Engineer is specialized or is certified in a particular piece of equipment.

### VDE1

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> <li>▪ Ensure proper connectivity of voice and data services and technologies.</li> <li>▪ Interact and work with Telecom Engineer, Integration Engineer, or Project Manager.</li> <li>▪ Prepare all job-related paperwork</li> <li>▪ Close out work authorization when equipment is in service.</li> </ul>

### VDE2

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE1 plus the following:</p> <ul style="list-style-type: none"> <li>▪ Prepare equipment floor plan for customer or architect approval.</li> <li>▪ Determine telephone, data services/components, and audio visual equipment placement within facility.</li> <li>▪ Act as installer of equipment for data/voice or Audio visual use.</li> <li>▪ Install, test, configure, and train users on products and equipment.</li> <li>▪ Support systems and products associated with telecommunications/telephone and data within a facility or department.</li> </ul>

### VDE3

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE2 plus the following:</p> <ul style="list-style-type: none"> <li>▪ Familiar with at least one type of equipment or service that is highly specialized.</li> <li>▪ Prepare cost estimate for equipment and installation and submit data to management</li> </ul>



	<p>for authorization to proceed with job.</p> <ul style="list-style-type: none"><li>▪ Order equipment and prepare installation specification.</li><li>▪ Monitor installation progress to ensure that the facilities are ready on projected date.</li><li>▪ Lead a team of installers and junior Voice/Data Engineers.</li></ul>
--	---



CN Number: N/A  
SRM Parent Number: N/A  
SAP/SRM Contract Number: 4400007198  
Change Number: 2  
Change Effective Date: 9/19/2011

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF GENERAL SERVICES  
HARRISBURG**

**For:** All Using Agencies  
**Subject:** Enterprise IT Staff Augmentation - 4400007198  
**Contract Period:** Beginning 7/1/2010 and Ending 6/30/2012  
**Commodity Specialist:** Thomas Teprovich - XT3 - (717) 783-0257

**CHANGE SUMMARY:**

DGS has worked with CAI to develop several new categories and updated the Skills Matrix to cover agency needs. The new job categories are as follows: Architect - AR1, Business Analyst 1,2 and 3 - BA1, BA2 and BA3, Database Administrator 4 - DBA4, Intern 1,2 and 3 - INT1, INT2 and INT3, Product Specialist 4 and 5 - PS4 and PS5, Programmer 5 - PR5, System Administrator 4 - SA4, and Program Manager 4 - PM4.

For additional detail please see the following documents.

ALL OTHER TERMS AND CONDITIONS OF THIS AGREEMENT NOT CHANGED BY THIS CHANGE NOTICE REMAIN AS ORIGINALLY WRITTEN.



# **Pennsylvania Enterprise IT Staff Augmentation Services Contract**

## **Job Titles and Descriptions (Version 5) Effective September, 2011**



This page is intentionally left blank.



## Job Titles and Descriptions

Architect.....	5
AR1 .....	5
Business Analyst.....	5
BA1.....	5
BA2.....	6
BA3.....	6
CADD/GIS Administrator .....	6
CGA1.....	6
CGA2.....	6
CGA3.....	6
Data Entry Operator.....	7
DE1 .....	7
DE2 .....	7
Database Administrator .....	8
DBA1 .....	8
DBA2.....	8
DBA3.....	9
DBA4.....	9
Functional Architect .....	9
FA1.....	9
FA2.....	10
FA3.....	10
Help Desk Analyst.....	11
HDA1.....	11
HDA2.....	12
HDA3.....	12
Intern.....	12
INT1.....	12
INT2.....	13
INT3.....	13
Product Specialist .....	13
PS1.....	13
PS2.....	14
PS3.....	14
PS4.....	15
PS5.....	15
Program Manager .....	15
PM1 .....	15
PM2.....	16
PM3.....	16
PM4.....	17
Programmer .....	17
PR1 .....	17
PR2 .....	17
PR3 .....	18
PR4 .....	18
PR5 .....	19
Quality Assurance Specialist .....	19
QAS1.....	19
QAS2.....	20
QAS3.....	20
Senior Architect.....	21



SAR1 .....	21
Senior Business Subject Matter Expert .....	22
SME1 .....	22
Senior Database Architect .....	22
SDA1 .....	23
Senior Program Manager.....	23
SPM1.....	23
Service Desk.....	24
SD2 .....	24
SD3 .....	24
Software Process Engineer .....	25
SPS1 .....	25
SPS2 .....	26
SPS3 .....	26
System Administrator .....	26
SA1.....	26
SA2.....	27
SA3.....	27
SA4.....	28
System Specialist.....	28
SS1.....	28
SS2.....	29
SS3.....	29
Team Lead.....	30
TL1 .....	30
TL2.....	31
Technical Architecture Specialist .....	31
TAS1 .....	31
TAS2 .....	32
TAS3 .....	32
Technical Writer .....	33
TW1 .....	33
TW2.....	34
TW3.....	34
TW4.....	35
Telecom Engineer.....	35
TE1.....	35
TE2.....	36
TE3.....	36
Tester.....	36
Test1 .....	36
Test2 .....	36
Test3 .....	37
Video Conference Specialist.....	37
VCS1 .....	37
VCS2.....	38
Voice/Data Engineer .....	38
VDE1 .....	38
VDE2 .....	38
VDE3 .....	39



## Architect

The Architect has the ability to design, develop, and implement application infrastructure to provide reliable and scalable applications and systems to meet the organization's objectives and requirements. The Architect is familiar with a variety of the application technologies, environments, concepts, methodologies, practices, and procedures. The Architect is also able to perform a variety of complicated tasks with minimal or no direct supervision. The Architect is experienced in defining systems and application architecture.

### AR1

Years of Relevant Experience:	Up to 5 years software development and testing
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Proven experience with hands-on technical development work.</li> <li>• Ability to coordinate with technical leads, business users and project managers.</li> <li>• Experience participating in development of standards and product recommendations.</li> <li>• Experience designing and architecting systems as a member of a design team.</li> <li>• Experience working through every phase of software development life cycle.</li> <li>• Strong verbal communication.</li> </ul>

## Business Analyst

The Business Analyst is responsible for the set of tasks and techniques used to work as a liaison among stakeholders in order to understand the structure, policies, and operations of an organization, and to recommend solutions that enable the organization to achieve its goals.

### BA1

Years of Relevant Experience:	Up to 4 years
Preferred Education:	4 year college degree or equivalent.
Role Description:	<ul style="list-style-type: none"> <li>• Experience conducting Facilitated Workshops for requirements analysis.</li> <li>• Experience creating workflows using formal notation such as the Business Process Modeling Notation (BPMN).</li> <li>• Knowledge of formal requirements gathering methodologies.</li> <li>• Experience developing Business Requirements - project initiation document, what the needed achievements will be, and the quality measures.</li> <li>• Experience developing Functional requirements - describe what the system, process, or product/service must do in order to fulfill the business requirements.</li> <li>• Experience developing User (stakeholder) requirements - are a very important part of the deliverables, the needs of the stakeholders will have to be correctly interpreted. This deliverable can also reflect how the product will be designed, developed, and define how test cases must be formulated.</li> <li>• Experience developing Quality-of-service (non-functional) requirements - are requirements that do not perform a specific function for the business requirement but are needed to support the functionality. For example: performance, scalability, quality of service (QoS), security and usability.</li> <li>• Experience developing Report Specifications - define the purpose of a report, its justification, attributes and columns, owners and runtime parameters.</li> <li>• Experience developing Requirements Traceability Matrix - a cross matrix for recording the requirements through each stage of the requirements gathering process.</li> <li>• Strong organization and writing skills. Experienced developing graphic representations of complex business processes.</li> </ul>



## BA2

Years of Relevant Experience:	4 to 6 years
Preferred Education:	4 year college degree or equivalent.
Role Description:	All roles specified in BA1 plus additional work experience and job knowledge.

## BA3

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent and IIBA-certified Business Analyst.
Role Description:	All roles specified in BA1 plus additional work experience, job knowledge, and IIBA certification.

## CADD/GIS Administrator

The CADD/GIS Administrator (CGA) is responsible for providing direct support of various CADD/GIS software and hardware systems. The CGA will perform hardware and software installations, relocations, testing and routine maintenance.

### CGA1

Years of Relevant Experience:	Up to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>Assist in troubleshooting CADD/GIS system hardware problems and work with the appropriate service and warranty vendors to make the necessary repairs and fixes.</li> <li>Track version upgrades and notify proper parties of available updates to CADD/GIS Systems software.</li> <li>Assist with phone and online problem reporting and maintaining problem report records.</li> <li>Assist with ordering consumable supplies for the CADD/GIS Systems.</li> <li>Maintain current inventory of all hardware, software, upgrades and fixes for each site.</li> <li>Maintain configuration charts of current inventory.</li> <li>Maintain data backups and data archives and provide data retrieval from backup.</li> <li>Monitor system status and data integrity.</li> </ul>

### CGA2

Years of Relevant Experience:	5 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA1 plus the following:</p> <ul style="list-style-type: none"> <li>Able to work independently.</li> <li>Demonstrate proven experience in troubleshooting with little supervision.</li> <li>Able to communicate status to managers and project sponsors.</li> <li>Assist in developing standards and direction for systems.</li> </ul>

### CGA3

Years of Relevant Experience:	8 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA2 plus the following:</p> <ul style="list-style-type: none"> <li>Lead efforts to troubleshoot CADD/GIS system hardware and software problems.</li> <li>Lead team of CGAs developing software and hardware plans and solutions.</li> <li>Expertise in teaching/conveying technical and/or functional courses/concepts.</li> </ul>



## Data Entry Operator

For data entry projects that require manual key entry and/or data capture through scanning.

### DE1

Years of Relevant Experience:	0 to 2 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> <li>• Comprehensive PC skills.</li> <li>• Able to follow written and spoken instructions.</li> <li>• Minimum of 25 wpm.</li> <li>• Ability to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen.</li> <li>• Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform.</li> <li>• Ability to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques.</li> <li>• Ability to conduct basic data mining and data capture efforts.</li> <li>• Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP.</li> <li>• Key punch and verify records in specified format (ex. ASCII).</li> <li>• The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeros are not counted as keystrokes.</li> <li>• The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession.</li> <li>• Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis.</li> <li>• Pickup and delivery by contractor to be made on a weekly basis.</li> <li>• For key entry, required that a second individual completed 100% key verification to control errors.</li> <li>• Knowledge of imaging and visual display operating practices, procedures, and techniques.</li> <li>• Knowledge of arithmetic and numbering systems.</li> <li>• Ability to operate equipment with speed and accuracy to ensure information is captured.</li> </ul>

### DE2

Years of Relevant Experience:	2 to 4 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> <li>• Comprehensive PC skills.</li> <li>• Able to follow written and spoken instructions.</li> <li>• Minimum of 35 wpm.</li> <li>• Ability to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen.</li> <li>• Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform.</li> <li>• Ability to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques.</li> <li>• Ability to conduct basic data mining and data capture efforts.</li> <li>• Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP.</li> <li>• Key punch and verify records in specified format (ex. ASCII).</li> </ul>





	<ul style="list-style-type: none"> <li>• The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeros are not counted as keystrokes.</li> <li>• The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession.</li> <li>• Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis.</li> <li>• Pickup and delivery by contractor to be made on a weekly basis.</li> <li>• For key entry, required that a second individual completed 100% key verification to control errors.</li> <li>• Knowledge of imaging and visual display operating practices, procedures, and techniques.</li> <li>• Knowledge of arithmetic and numbering systems.</li> <li>• Ability to operate equipment with speed and accuracy to ensure information is captured.</li> </ul>
--	--

## Database Administrator

The Database Administrator is responsible for data analysis and database management. Database Administrators typically are involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Database Administrators have a range of skills and knowledge of the utilities and production tools used for data storage management to support the Application Team.

### DBA1

Years of Relevant Experience:	Up to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Skilled data dictionary analysis and design and data model analysis design.</li> <li>• Maintains central data repository.</li> <li>• Experience and knowledge in supporting application system development life cycle.</li> <li>• Responsible for data dictionary backup and recovery.</li> <li>• Responsible for definition of standards of data dictionaries.</li> <li>• May program dictionary analysis and maintenance software.</li> <li>• Perform performance tuning.</li> <li>• Monitor database performance and space requirements.</li> <li>• Schedule and monitor end of day data warehousing jobs.</li> <li>• Assist in coordinating software releases.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

### DBA2

Years of Relevant Experience:	3 to 4 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Business systems analysis and design experience.</li> <li>• Logical data modeling techniques.</li> <li>• Production environment Tools/Utilities.</li> </ul>



	<ul style="list-style-type: none"> <li>• Knowledgeable in data analysis and database management techniques.</li> <li>• Execution of all responsibilities with little direct supervision of Team Lead.</li> <li>• Administration and scripting experience in relative platform.</li> <li>• Supervise performance tuning.</li> <li>• Author shell scripts to perform back up, restore, and monitoring tasks.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>
--	---

### **DBA3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Highly skilled at database design, installations, conversions.</li> <li>• Responsible for database backup and recovery procedures, access security and database integrity, physical data storage design and data storage management.</li> </ul>

### **DBA4**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA3 plus the following:</p> <ul style="list-style-type: none"> <li>• Participates in Database Management System selection and maintains database performance.</li> <li>• Knowledge of various Database Management System products.</li> <li>• Provide status of work to Project Team Lead.</li> <li>• Engage in ongoing process improvement.</li> </ul>

## **Functional Architect**

The Functional Architect is the functional expert for an application, a defined set of applications or a portfolio of related applications. The Functional Architect is also responsible for bringing an understanding of the enterprise, business system and industry to the team(s) supporting or interfacing with the application. The primary responsibility of a Functional Architect is to provide expertise in the business process supported by the application, to prepare and review designs, to recommend improvements, and to provide guidance during the testing process. The Functional Architect helps the Programmers establish a clear understanding of the business functional requirements and either creates the functional designs to meet the requirements or reviews and approves the designs written by the Programmers. The Functional Architect must understand all aspects of their specific application(s), and the underlying business process. The more experienced Functional Architect plans, analyzes, and defines high- level software strategies and solutions. Contained in the experienced role is the task of coordinating with other Functional Architects to define technical requirements and long range plans for meeting customer requirements.

### **FA1**

Years of Relevant Experience:	2 to 4 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Analyze, determine, and document functional requirements.</li> <li>• Provide definition on how the applications will support business requirements.</li> <li>• Conduct impact analyses of business requirements on the system.</li> <li>• Work with Technical Architecture Specialist in defining software / hardware requirements.</li> </ul>



	<ul style="list-style-type: none"> <li>• Gather and interpret user requirements into design specifications.</li> <li>• Participate in design of application.</li> <li>• Participate in design code and test reviews as appropriate.</li> <li>• Provide inputs to test planning.</li> <li>• Complete assigned tasks.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment.</li> <li>• Strong communication skills; both written and spoken</li> <li>• Act as the application(s) functional expert; providing expertise in the business process supported by the application.</li> <li>• Provide detailed definition on how the applications will support business requirements.</li> <li>• Work with Technical Architecture Specialist in planning and delivering technical architecture.</li> <li>• Provide expertise for defining functional architecture and infrastructure for applications.</li> <li>• Plan and develop user interface strategy.</li> <li>• Direct and participate in design of application.</li> <li>• Interpret and understand user requirements/design specifications.</li> <li>• Provide detailed definition on how the applications will support business requirements.</li> <li>• Work with Technical Architecture Specialist in defining software / hardware requirements and in planning and delivering architecture.</li> <li>• Provide expertise for defining architecture and infrastructure for applications.</li> <li>• Review and understand team work plan</li> <li>• Identify and track issues, risks and action items affecting own work and work of team.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>
--	--

**FA2**

Years of Relevant Experience:	4 to 5 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in FA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Provide functional expertise to planning organization as required.</li> <li>• Review tasks prior to migration into production as appropriate. Provide assistance in scheduling design work for Lead Functional Architect.</li> <li>• Coordinate the design and development of work estimates and act as the primary point of contact. Assist in managing and directing application team processes.</li> <li>• Organize and prepare work effectively to facilitate proactive resolution of problems.</li> <li>• Work with client and Lead Functional Architect to identify direction of software.</li> <li>• Ensure business requirements are supported by the software.</li> <li>• Identify and initiate continuous improvement opportunities.</li> <li>• Define user interface strategies.</li> <li>• Understand specific business needs and overall business strategy of the business customer.</li> </ul>

**FA3**

Years of Relevant Experience:	Five plus years in particular application area
-------------------------------	--



Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in FA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Guide processes for Functional Architects and direct work planning and design activities.</li> <li>• Provide standard, well-structured work planning which defines scope, resources, commitments, quality, risk, tasks, and acceptance criteria.</li> <li>• Ensure that overall application designs remain within project scope.</li> <li>• Work with customer business units to understand their business processes.</li> <li>• Work with customer business units and client to identify direction of software. Ensure business requirements are supported by the software.</li> <li>• Ensure goals for Functional Architects are being met and manage team commitments.</li> <li>• Analyze, define, and document how the applications will support functional and business requirements. Coordinate these efforts with Functional Architects.</li> <li>• Understand supporting/interfacing system applications.</li> <li>• Approve the determined need for new software/hardware.</li> <li>• Understand prioritization work based on business needs request/releases for work affecting an application.</li> <li>• Manage the accomplishment of delivery metrics, Service Level Agreements and other contractual obligations within areas of responsibility.</li> <li>• Sponsor coordination of the required skills, training, methodologies, and processes to ensure the success of team/project/program goals.</li> <li>• Coordinate and conduct project review meetings with Group Lead Functional Architects and Team Leads.</li> <li>• Communicate and resolve application interface issues with other Lead Functional Architects as needed.</li> <li>• Monitor and measure maintenance and development process effectiveness.</li> <li>• Communicate clearly the program/application goals, operational and organizational philosophies, and policies and procedures to the Functional Architects.</li> <li>• Communicate to team members the relationships between their work and assignments and the organizational and/ or program objectives.</li> </ul>

## Help Desk Analyst

The Help Desk Analyst provides Helpdesk Level 2 Support by performing the skills listed below.

### **HDA1**

Years of Relevant Experience:	1 to 3 years field experience
Preferred Education:	2 year associates degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Provides technical assistance, support, and advice to end users for hardware, software, and systems.</li> <li>• Provides hands-on technical assistance to business and technical users.</li> <li>• Investigates and resolves computer software and hardware problems of users.</li> <li>• Serves as a contact for level 1 support.</li> <li>• Serves as a contact for users having problems using computer software, hardware, and operating systems, and escalates as necessary.</li> <li>• Determines whether problem is caused by hardware, software, or system.</li> <li>• Answers questions, applying knowledge of computer software, hardware, systems, and procedures.</li> <li>• Talks with technical and non-technical co-workers to research problem and find solution.</li> <li>• Asks user with problem to use telephone and participate in diagnostic procedures, using diagnostic software or by listening to and following instructions.</li> <li>• Experienced with a variety of call-tracking software and systems.</li> </ul>



	<ul style="list-style-type: none"> <li>• Reads trade magazines and engages in independent study to maintain current industry knowledge.</li> <li>• Follow quality standards, and displays strong customer service skills.</li> <li>• Ability to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>
--	---

## **HDA2**

Years of Relevant Experience:	3 – 5 years field experience
Preferred Education:	4 year college degree in field of specialty or equivalent education and experience combined
Role Description:	<p>All roles specified in HDA 1 plus the following:</p> <ul style="list-style-type: none"> <li>• Calls software and hardware vendors to request service regarding defective products.</li> <li>• Acts as a subject matter expert for one or more custom or COTS applications.</li> <li>• Talks to programmers to explain software errors or to recommend changes to programs.</li> <li>• May work as in-house consultant and research alternate approaches to existing software and hardware when standardized approaches cannot be applied.</li> <li>• Tests software and hardware to evaluate ease of use and whether product will aid user in performing work.</li> <li>• Write software and hardware evaluation and recommendations for management review.</li> <li>• Write or revise user-training manuals and procedures.</li> <li>• Develops training materials, such as exercises and visual displays.</li> <li>• Train users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.</li> </ul>

## **HDA3**

Years of Relevant Experience:	5 plus years field experience
Preferred Education:	4 year college degree in field of specialty
Role Description:	<p>All roles specified in HDA 1 and 2 plus the following:</p> <ul style="list-style-type: none"> <li>• Manage expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensure quality standards are followed.</li> <li>• Monitor the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Act as the escalation point for high priority support issues.</li> <li>• Ability to make recommendations on policies on system use and services.</li> </ul>

## **Intern**

The Intern will assist team members with daily responsibilities as directed by his or her supervisor. Interns are not recruited through the standard Staff Augmentation process. They are recruited by the Technology Council of Central Pennsylvania through their TechQuest program, and selected by the agency.

## **INT1**

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Ability to perform tasks as assigned by the direct supervisor.</li> <li>• Ability to keep team members and supervisor apprised of work status and attendance.</li> </ul>



	<ul style="list-style-type: none"> <li>• Basic computer knowledge.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>
--	--

## **INT2**

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Ability to develop organizational and communication skills.</li> <li>• Ability to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge including experience with word processing software, and spreadsheet maintenance and development.</li> <li>• Must show willingness and ability to develop IT-related technical skills.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>

## **INT3**

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Ability to develop organizational and communication skills.</li> <li>• Ability to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge including experience with word processing software, and spreadsheet maintenance and development.</li> <li>• Must show willingness and ability to develop IT-related technical skills.</li> <li>• Must show willingness and ability to develop an understanding of IT-related technologies and concepts.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>

## **Product Specialist**

The Product Specialist is the expert for a technical development or execution environment product or set of products. The primary responsibility of a Product Specialist is to ensure the availability and facilitate the productive use of a product for Application Teams or end users. The Product Specialist may own part of a product, all of one, or several products depending on the nature of the product(s) and their use. The Product Specialist requires significant to expert experience and skills in the product supported. The Product Specialist will usually also have significant experience in the operating environment(s) (e.g., HP/UX, NT, MVS, etc.) on which the product is implemented. If the product is one that was internally developed, the supporting PS should also have most of the skills of a Programmer. The Product Specialist is responsible for collaborating with Technical Architecture Specialist, System Specialists, Programmers and vendors to ensure and enhance the use of the product and effect migration to new versions of a product.

## **PS1**

Years of Relevant Experience:	1 to 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Make sound recommendations on functional and technical improvements to the product.</li> <li>• Analyze the functional and technical impact of product planning decisions.</li> <li>• Develop appropriate functional and usability standards for products.</li> <li>• Track and document expected volume and type of use of the product.</li> <li>• Participate in product design reviews to verify that design meets quality standards and functional/technical requirements.</li> <li>• Perform impact analyses on production fixes and enhancements to establish priorities.</li> </ul>





	<ul style="list-style-type: none"> <li>• Provide basic product support and provide accurate and complete answers to detailed product questions in a timely manner.</li> <li>• Provide effective on-site product support as needed.</li> <li>• Accurately sets severity of identified defects.</li> <li>• Provide input to training and / or documentation materials regarding latest technical and functional design changes.</li> <li>• Document all work for future reference.</li> <li>• Review the system test approach and conditions used as the basis for detailed test scenarios.</li> <li>• Follow quality standards.</li> <li>• Analytical and customer service skills.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Ability to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

### **PS2**

Years of Relevant Experience:	3 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Actively contribute as an expert or actual designer.</li> <li>• Coordinate product design reviews to verify that design meets quality standards and functional/technical requirements.</li> <li>• Provide accurate estimates for design and programming efforts for system changes and enhancements.</li> <li>• Coordinate enhancements to business and logical data models with data base administration to make the appropriate changes to the physical data model.</li> <li>• Confirm that technical architecture will support all changes required by product enhancements.</li> <li>• Effectively lead product tests and trials.</li> <li>• Identify appropriate business examples to illustrate key concepts / features.</li> <li>• Anticipate, identify, track and resolve issues and risks affecting own work and work of the Application Team. Develop contingency plans as necessary.</li> <li>• Apply specific expertise to ensure that products meet defined customer objectives.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>

### **PS3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Demonstrate expertise in teaching / conveying technical and / or functional courses / concepts.</li> <li>• Develop appropriate work programs / budgets and use to effectively schedule tasks / assignments.</li> <li>• Identify improvements to project standards to achieve high quality services / products.</li> </ul>



### PS4

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PS3 plus the following: <ul style="list-style-type: none"> <li>• Deliver support and design for industry specific applications that require integration with statewide systems or applications.</li> <li>• Interact with executive level business users or technical experts.</li> <li>• May function as a niche SME.</li> </ul>

### PS5

Years of Relevant Experience:	9 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PS4 plus the following: <ul style="list-style-type: none"> <li>• Responsible for functioning as the Technical SME on an enterprise-wide system.</li> <li>• Responsible for implementations of products/services that involve significant Commonwealth and federal oversight.</li> <li>• Provide direct technical expertise to Executive applications involving national security.</li> </ul>

## Program Manager

The Program Manager directs, controls, administers, and regulates an enhancement or development program. The Program Manager is the individual ultimately responsible to the agency. The Program Manager's primary responsibility is to drive the entire effort from start to finish. The Program Manager must ensure that the program is completed on schedule and that the final product meets the business, technical, and established quality requirements. The difference between a PM1, PM2, PM3, and PM4 will depend on the size of the project, and the breadth and scope of the project.

### PM1

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Responsible for the development of estimates for the enhancement or development effort in planning, analysis, design, construction, testing, and implementation.</li> <li>• Accountable for delivery of all work tasks identified in the program plan.</li> <li>• Responsible for the capture and reporting of required program management metrics.</li> <li>• Adjust and revise estimates when necessary.</li> <li>• Ensure all changes to scope follow processes and are documented.</li> <li>• Ensure new estimates are approved by the client and agreed upon.</li> <li>• Adjust and revise estimates when necessary.</li> <li>• Manage, and track the program progress against the program plan.</li> <li>• Monitor project milestones and phases to ensure the project is on schedule. Take corrective actions if a project begins to slip its schedule.</li> <li>• Prepares status reports on a periodic basis for program team, team leads, group leads, and program manager and appropriate stakeholders.</li> <li>• Plan, organize, prioritize, and manage multiple work efforts across application teams.</li> <li>• Develop the detailed program plan for the enhancement or development effort</li> <li>• Accountable for the final program management evaluation review with stakeholders for approval upon program completion.</li> <li>• Responsible to tailor and baseline all program templates.</li> <li>• Accountable to schedule or monitor status reviews, peer reviews, program</li> </ul>





	<p>management inspections, and software quality assurance work product and process reviews with the appropriate designated resources.</p> <ul style="list-style-type: none"> <li>• Notify team leads of project timelines, milestones, phases, work requests target dates, and approved executable work package.</li> <li>• Communicate and work with users and client as necessary.</li> <li>• Coordinate and present proposals to agencies as necessary.</li> <li>• Analyze and distribute reports on program metrics associated with work items related to improvement measures.</li> <li>• Ensure processes and activities are followed.</li> </ul>
--	---

**PM2**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PM1 plus the following:</p> <ul style="list-style-type: none"> <li>• Accountable for the approval and sign-off of the program plan with customer representatives, such as portfolio managers, and all affected program stakeholders.</li> <li>• Accountable for management of scope for the program and gaining agreement and approval of scope changes with customer representatives and affected stakeholders.</li> <li>• Build and maintain relationships with key stakeholders and customer representatives.</li> <li>• Direct work planning and scheduling design work.</li> <li>• Manage, and track the program progress against the program plan.</li> <li>• Serve as the primary point of contact for all program-related issues and resolution of issues.</li> <li>• Coordinate and present proposals to agencies as necessary.</li> <li>• Identify and manage program risk and develops risk mitigation strategies, track to closure.</li> <li>• Ensure team leads adjust and revise estimates when necessary.</li> <li>• Anticipate issues and proactively address them. Resolve conflicts with sensitivity and tact.</li> <li>• Coordinate the establishment of program standards and program specific procedures with team leads.</li> <li>• Responsible for project compliance with standards and procedures.</li> <li>• Responsible for the capture and reporting of required program management metrics.</li> <li>• Responsible to tailor and baseline all program templates.</li> <li>• Develop and facilitate achievement of program service commitments and performance metrics.</li> <li>• Ensure that tasks provide value and support the strategic direction of the program and meet service commitments; conduct reviews with agencies.</li> <li>• Accountable for the final program management evaluation review with stakeholders for approval upon program completion.</li> <li>• Communicate effectively with customers and software / hardware suppliers supporting the State as appropriate.</li> <li>• Identify and track issues.</li> <li>• Balance workload with program members' capacity.</li> <li>• Communicate to team members how their work assignments relate to and help achieve program objectives.</li> <li>• Plan program specific training and orientation needs.</li> </ul>

**PM3**

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.



Role Description:	All roles specified in PM2 plus the following: <ul style="list-style-type: none"> <li>Accountable for activities with excess delivery cycles of 8 to 12 months.</li> </ul>
-------------------	--

**PM4**

Years of Relevant Experience:	8 to 9 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PM3 plus the following: <ul style="list-style-type: none"> <li>Manages, coordinates, and establishes priorities for complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing.</li> <li>Designs project plans, which identify needs and define major tasks and milestones, based on scope, resources, budget, and personnel.</li> </ul>

**Programmer**

The Programmer is responsible for analysis, design, coding, component and assembly testing of all application code owned by the Application Team. Programmers typically are involved in maintenance (including production support), enhancement and development work. Programmers have a range of skills and knowledge of the technologies used and applications supported by the Application Team. The Programmer works with the Functional Architect and Technical Architecture Specialist on an as needed basis to ensure that design and code meets customer requirements.

**PR1**

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>Code enhancement and development programs and/or required fixes to production problems using the functional and technical programming standards.</li> <li>Test enhancement and development programs.</li> <li>Participate in structured code reviews / walkthroughs.</li> <li>Execute all required process steps.</li> <li>Create and provide content for operational documentation to Technical Writers.</li> <li>Utilize configuration management tools, design tools, debugging tools, and any other environment specific tools necessary to create, test, and implement an application.</li> <li>Research problems before approaching the Team Lead or Functional Architect for assistance.</li> <li>Limited functional knowledge.</li> <li>Follow quality standards.</li> <li>Support installation of application releases into production as directed.</li> <li>Communicate accurate and useful status updates.</li> <li>Ability to work in a team environment.</li> <li>Complete assigned tasks.</li> <li>Strong communication skills; both written and spoken.</li> </ul>

**PR2**

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PR1 plus the following: <ul style="list-style-type: none"> <li>Analyze and design enhancements, development programs, and/or required fixes to production problems.</li> <li>Design applications to functional and technical programming standards.</li> </ul>



	<ul style="list-style-type: none"> <li>• Work with Functional Architects to gather and interpret user requirements into design specifications.</li> <li>• Develop system specifications and interfaces.</li> <li>• Determine time estimates and schedule for work.</li> <li>• Moderate functional and process knowledge.</li> <li>• Assist in managing and directing Application Team processes.</li> <li>• Coordinate work with other software developers on Application Teams.</li> <li>• Assist Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks.</li> <li>• Develop application designs in support of the systems specifications and interfaces, perhaps in conjunction with application or technical architects.</li> <li>• Operating System expertise sufficient to perform performance and tuning diagnostics.</li> <li>• Work with users to ensure that solutions meet business requirements.</li> <li>• Execution of all responsibilities with little direct supervision of Team Lead.</li> <li>• Generally aware of new developments in industry and process and has ability to apply them to work as appropriate.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>
--	--

**PR3**

Years of Relevant Experience:	6 to 7 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PR2 plus the following:</p> <ul style="list-style-type: none"> <li>• Plan all required process steps.</li> <li>• Review and understand the Application Team's workplan.</li> <li>• Provide status of work to Team Lead.</li> <li>• Anticipate, identify, track and resolve issues and risks affecting own work and work of the Application Team. Develop contingency plans as necessary.</li> <li>• Engage in ongoing process improvement.</li> <li>• Detailed functional and process knowledge.</li> <li>• Utilize deep modeling, design and coding skills.</li> <li>• Provide expertise in one or more database environments.</li> </ul>

**PR4**

Years of Relevant Experience:	8 to 9 years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR3 plus the following:</p> <ul style="list-style-type: none"> <li>• Converts scientific, engineering, and other technical problem formulations to formats that can be processed by computer.</li> <li>• Resolves symbolic formulations, prepares flowcharts and block diagrams, and encodes resultant equations for processing by applying extensive knowledge of branch of science, engineering, or advanced mathematics, such as differential equations or numerical analysis, and understanding of capabilities and limitations of computer.</li> <li>• This is a professional level non-supervisory position which may require coordination of programming activities being conducted by the team</li> <li>• Confers with other business and technical personnel to resolve problems of intent, inaccuracy, or feasibility of computer processing.</li> <li>• Works with necessary personnel to determine if modifications are necessary with</li> </ul>



	<p>interested personnel to determine necessity for modifications or enhancements.</p> <ul style="list-style-type: none"> <li>• Leverages excellent written and verbal communication skills to develop new business process and programming solutions as directed by business and technical stakeholders.</li> <li>• May coordinate activities of computer programmers.</li> </ul>
--	---

**PR5**

Years of Relevant Experience:	10 plus years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR4 plus the following:</p> <ul style="list-style-type: none"> <li>• Proven track record of hands-on technical design and code work within large complex systems.</li> <li>• Proven hands-on technical work with a variety of technologies.</li> <li>• Demonstrated technical expertise integrating a variety of diverse technical environments and cross-platform technologies.</li> <li>• Proven experience mentoring and performing supervisory functions for technical teams.</li> <li>• Ability to make best practice recommendations based on past work.</li> <li>• Proven ability to present complex technical constructs to business and non-technical users.</li> <li>• Proven ability to collaborate with business users, project managers and technical architects.</li> </ul>

**Quality Assurance Specialist**

The Quality Assurance Specialist (QAS) is responsible for the design, pilot, and implementation of the software quality assurance review processes. The QAS Specialist will work with Application Teams during pre and post assessment periods. The QAS Specialist reports to the Quality Assurance Team Lead. For each phase end review the Quality Assurance Specialist is responsible to plan, schedule, execute, and document findings of the review. Quality Assurance Specialists must have a detailed understanding of processes which support the software development lifecycle. The Quality Assurance Lead is responsible for communicating with the State regarding the progress of the quality approach and a summary of the metrics, as well as managing the Quality Assurance Specialists.

**QAS1**

Years of Relevant Experience:	3 years software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assist in software activities in defined span of control for the organization.</li> <li>• Track and monitor process and work product improvement opportunities.</li> <li>• Collect, review, and evaluate the project's required work products against standard work product templates.</li> <li>• Verify that established measurement procedures are used and all required metrics are collected.</li> <li>• Respond to requests for information.</li> <li>• Coordinate work with others on team and across teams</li> <li>• Draft report of observations, minor and major non-compliance.</li> <li>• Develop quality standards.</li> <li>• Monitor progress of action item resolution activity and ensure appropriate internal stakeholders are aware of pending deadlines.</li> <li>• Conduct training courses with project teams on software quality review process.</li> <li>• Research problems before approaching Quality Assurance Lead for assistance.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Manage and report time spent on all work activities.</li> </ul>



	<ul style="list-style-type: none"> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	--

## QAS2

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Conduct software quality phase end review activities (work product and process) for each software project and produce the required quality assurance reports, as specified in the project's quality assurance plan.</li> <li>• Ensure the software development process followed by the project teams is compliant with approved tailored processes.</li> <li>• Review and check project's software development activities and the associated internal tasks required by the agencies as employed by the project and specified in the project plan.</li> <li>• Prepare preliminary software quality audit package for review before conduct of audit.</li> <li>• Define quality standards.</li> <li>• Monitor progress of action item resolution activity and ensure appropriate stakeholders are aware of pending deadlines.</li> <li>• Assist in managing and improving quality assurance team processes.</li> <li>• Review and understand project team work plan.</li> <li>• Determine time estimates and schedule for software quality review work. Conduct reviews according to schedule.</li> <li>• Organize and prepare work effectively to facilitate proactive resolution of problems, rather than reactive.</li> <li>• Identify and track issues, risks and action items affecting own work and work of team.</li> <li>• Report on progress of action item resolution and possible risk areas.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

## QAS3

Years of Relevant Experience:	7 years software development, testing and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Review project's required work products to ensure compliance with approved tailored procedures and standards.</li> <li>• Review and check project's software development activities and the associated internal tasks required as employed by the project and specified in the project plan.</li> <li>• Compare actual project procedures to the specified standards, procedures, and, if required, specific 3rd party contractual requirements.</li> <li>• Perform detailed reviews of interim and final tasks as appropriate.</li> <li>• Ensure process improvement opportunities are reviewed by appropriate contact to identify training needs of the organization.</li> <li>• Perform or manage the required software quality phase end reviews of work product and process for each software project and produce the required software quality reports, as specified in the project's software quality plan.</li> <li>• Develop, and manage short and long-term plans and schedules for organization wide software quality needs.</li> </ul>



	<ul style="list-style-type: none"> <li>• Balance workload with team's capacity by managing the team's activities according to schedule and budgets.</li> <li>• Coordinate and procure the required skills and techniques required.</li> <li>• Obtain feedback from project teams regarding the overall effectiveness of processes and procedures – Forward to appropriate stakeholders and process owners.</li> <li>• Provide feedback to project teams regarding process/procedure improvement opportunities and other potential areas for improvement discovered during software quality activities.</li> <li>• Report all software quality-revealed non-compliance.</li> <li>• Provide regular reports on the results of compliance reviews to the project team, project team leaders and management. Report on progress on action item resolution and possible risk areas.</li> <li>• Anticipate and resolve issues dealing with software quality.</li> <li>• Develop options and recommendations to assist teams in resolving issues.</li> <li>• Ensure action items are addressed and closed based on agreed dates and activities.</li> <li>• Ensure that defined processes are followed.</li> <li>• Communicate related improvement measures to the project team.</li> <li>• Obtain feedback from project teams regarding the overall effectiveness of software quality processes followed. Review with team and develop continuous improvement action plans. Report status to executive team.</li> <li>• Communicate and work with customers and other personnel as necessary.</li> <li>• Communicate clearly the team goals, organizational philosophies, and policies and procedures to the team.</li> <li>• Communicate to team members the relationship between their work assignments and the team and project objectives.</li> <li>• Lead efforts in developing and facilitating implementation of team goals and metrics.</li> </ul>
--	---

## Senior Architect

The Senior Architect is responsible for designing, developing, and implementing application infrastructure to provide highly-complex, reliable, and scalable applications and systems to meet the organization's objectives and requirements. Senior Architects are familiar with a variety of the application technologies, environments, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Senior Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They have proven experience defining systems and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SAR1

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Manages, organizes, and administers systems analysis and preparation of applications and operating systems programming to process data and solve problems by use of computers.</li> <li>• Establishes priorities and schedules, and oversees and reviews work of systems analysis personnel and programming personnel.</li> <li>• Reviews feasibility studies and time and cost estimates of new or revised systems.</li> <li>• Assists in the development of standards, procedures, and operating systems applications.</li> <li>• A combination of directly-related technical training and hands-on experience.</li> <li>• Works with stakeholders and management to ensure projects are completed on time and according to organization standards.</li> </ul>





	<ul style="list-style-type: none"> <li>• Consults with personnel in other information systems groups to coordinate activities.</li> <li>• Consults with management to clarify systems and programs intent, identify problems, suggest changes, and determine extent of application systems changes required.</li> <li>• Participates in developing a project plan and schedule with key milestones, contingency plans, workflow charts or diagrams, considering factors, such as resource requirements, computer storage capacity and speed, extent of peripheral equipment, and intended use of output data.</li> <li>• Manages conversion of workflow charts to language that can be processed by computer and entering of program codes and test data into computer.</li> <li>• Analyzes test runs on computer and supervises correction of coded program and input data.</li> <li>• Manages the revision of existing programs to increase operating efficiency or adapt to new requirements.</li> <li>• Compiles documentation of program development and subsequent revisions.</li> <li>• Trains subordinates in systems analysis, feasibility studies, programming, and program coding.</li> <li>• Prescribes standards for terms and symbols used to simplify interpretation of programs.</li> <li>• Collaborates with computer manufacturers and other users to develop new programming methods.</li> <li>• Prepares records and reports.</li> </ul>
--	--

## Senior Business Subject Matter Expert

The Senior Business Subject Matter Expert (SME) brings proven experience from related businesses or organizations as well as system integration and technology experience. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise and make recommendations on business and technical solutions based on hands-on experience solving similar business problems. They are able to utilize knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SME1

Years of Relevant Experience:	More than 10 years
Preferred Education	4 year college degree in computer science or a related field with advanced study preferred; certifications specific to the field of project management.
Role Description	<ul style="list-style-type: none"> <li>• Consults with executive-level stakeholders to define business need or problem; conducts research, performs studies and surveys to obtain data; and analyzes problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.</li> <li>• Requires knowledge in computer programming and other related technical fields as well as extensive experience in a particular business or industry subject matter.</li> <li>• Conducts study or survey on need or problem to obtain data required for solution.</li> <li>• Analyzes data to determine solution, such as installation of alternate methods and procedures, changes in processing methods and practices, modification of machines or equipment, or redesign of products or services.</li> <li>• Advises client or department heads on alternate methods of solving need or problem, or recommends specific solution.</li> <li>• Requires experience providing consulting services to governmental entities.</li> <li>• May be designated according to field of business and technical specialization.</li> </ul>

## Senior Database Architect

The Senior Database Architect is responsible for designing, developing, and implementing infrastructure to provide highly-complex, reliable, and scalable databases to meet the organization's objectives and requirements. Database Architects are familiar with a variety of the database technologies, concepts,



methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Database Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They assist in defining system and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or issues, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### **SDA1**

Years of Relevant Experience:	8 plus years of database experience
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Possesses extensive knowledge of one or more database systems, and is capable of hands-on work in all phases of database design and management.</li> <li>• Designs, develops, and implements infrastructure to provide highly-complex, reliable, and scalable database to meet the organization's objectives and requirements.</li> <li>• Analyzes organization's business requirements for database design, and implements changes to database as required.</li> <li>• Performs systems analysis on database, and resolves performance, capacity, and replication issues as necessary.</li> <li>• Provides detailed design and specification documentation, including flowcharts, for all aspects of the database.</li> <li>• Works with database analysts to develop methodologies, report views, queries, and table replications</li> <li>• Ensures that all the data is in the proper format.</li> <li>• Participates in the identification, prioritization, and development of technical initiatives and strategies.</li> <li>• Develops and maintains database standards and naming conventions.</li> <li>• Keeps up-to-date on emerging database architectures, technologies, and methodologies, and attends training classes as necessary.</li> </ul>

### **Senior Program Manager**

The Senior Program Manager is responsible for managing, coordinating, and establishing priorities for the complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing. Senior Program Managers are familiar with a variety of the project management methodologies and rely on experience and judgment to plan and accomplish goals. They have proven experience leading technology projects to successful implementation. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### **SPM1**

Years of Relevant Experience:	10 plus years
Preferred Education:	4 year college degree in computer science or a related field; certifications specific to the field of project management.
Role Description:	<p>All roles specified in PM4 plus the following:</p> <ul style="list-style-type: none"> <li>• Requires proven success communicating verbally and in writing to multiple project stakeholders internal and external to the organization.</li> <li>• Determines project needs and acquires resources required for the success of the project.</li> </ul>





	<ul style="list-style-type: none"> <li>• Coordinates the development of new systems and/or applications projects, the modification of existing systems or applications, or changes in current methods or techniques.</li> <li>• Coordinates project performance with the other work of the affected department or departments.</li> <li>• Excludes those who do not have full time responsibilities for project management.</li> </ul>
--	--

## Service Desk

The Service Desk Analyzes and troubleshoots computer support problems and applies his or her understanding of computer software and hardware products and services to resolve user problems.

### SD2

Years of Relevant Experience:	0 to 3 years A+ certification preferred
Preferred Education:	Usually prefer two years of postsecondary training in field of specialty; may accept equivalent education and experience combined.
Role Description:	<ul style="list-style-type: none"> <li>• Receive telephone calls and e-mails from users having problems using computer software and hardware or inquiring how to use specific software, programming languages, electronic mail, or operating systems.</li> <li>• Ascertain the nature of problem, determine whether problem is caused by hardware such as modem, printer, cables, or telephone, and log in tracking system.</li> <li>• Escalate problems in accordance with defined procedures.</li> <li>• Assist users through problem solving steps</li> <li>• Use technical databases to research problems, and talk with co-workers to research problem and find solution.</li> <li>• Test software and hardware for troubleshooting and problem resolution.</li> <li>▪ Provide service and preventive maintenance activities on element exchange/baseline products (products with element exchange service and traditional maintenance philosophies; i.e., terminals, printers, personal computers, etc.).</li> <li>▪ Able to diagnose and detect correct equipment errors and repair products by replacing worn or broken parts, and making technical adjustments.</li> <li>▪ Makes appropriate use of reference publications and diagnostic aids in resolving technical problems.</li> <li>▪ Assist in coordination of changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>▪ Provide accurate and complete answers to general use and administrative environment questions in a timely manner.</li> <li>▪ Support shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> <li>▪ Communicate accurate and useful status updates.</li> <li>▪ Manage and report time spent on all work activities.</li> <li>▪ Follow quality standards.</li> <li>▪ Ability to work in a team environment</li> <li>▪ Complete assigned tasks.</li> <li>▪ Strong communication skills; both written and spoken</li> </ul>

### SD3

Years of Relevant Experience:	More than 3 years A+ certification preferred; additional certification may be required based on specific technologies.
Preferred Education:	4 year college degree or equivalent technical study; may accept equivalent education and experience combined.
Role Description:	All roles specified in SD2 plus the following:



	<ul style="list-style-type: none"> <li>• Test software and hardware to evaluate ease of use and whether product will aid user in performing work.</li> <li>• Write or revise training manuals and procedures.</li> <li>• Develop training materials, such as exercises and visual displays.</li> <li>• Train users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.</li> <li>• Write software and hardware evaluation and recommendation for management review.</li> <li>• Implement shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> </ul>
--	---

## Software Process Engineer

The Software Process Engineer is responsible for implementing and supporting a set of standard software engineering processes used by agencies. The Software Process Engineer participates in the entire life-cycle of software process improvement initiatives. This includes the planning, analysis, design, construction, testing, and implementation of new processes. The Software Process Engineer is responsible for identifying opportunities for improving existing processes and implementing appropriate solutions.

The Software Process Engineer is also responsible for supporting projects and individual Teams in the use and understanding of processes on an ongoing basis. The Software Process Engineer is responsible for collaborating with the Team Lead(s) and Program Managers to provide guidance to team members and facilitate continual software process improvement. The Software Process engineer must understand all aspects of the specific processes used by the Teams. The Software Process Engineer must also be familiar with industry process models and standards.

### SPS1

Years of Relevant Experience:	3 years in Computer Software development
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Facilitate the implementation of standard software engineering processes.</li> <li>• Identify software development process improvement opportunities either independently or through working with projects and teams.</li> <li>• Assist in planning software process improvement initiatives.</li> <li>• Direct and participate in teams working on the analysis, design, construction, testing, and implementation of new processes.</li> <li>• Work with projects and teams to define the need for tailored processes and tools and assist in implementation, as appropriate.</li> <li>• Provide ongoing support to projects and teams in the use and understanding of the software processes.</li> <li>• Provide on-site support for teams on process related issues.</li> <li>• Provide assistance to the Software Process Engineer Lead in planning and scheduling activities.</li> <li>• Provide support in tracking and monitoring the success of process improvement initiatives.</li> <li>• Monitor and solicit feedback on the usability and functionality of implemented processes.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>



## SPS2

Years of Relevant Experience:	5 years in software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SPS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Facilitate the implementation of standard software engineering processes across agencies.</li> <li>• Determine time estimates and schedule for own work and resolve issues on a timely basis.</li> <li>• Identify and track issues, risks and action items.</li> <li>• Determine process to support various initiatives.</li> <li>• Lead the development of content for process training and deliver process training as appropriate.</li> <li>• Coordinate with various teams about process improvement opportunities.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>

## SPS3

Years of Relevant Experience:	7 years total experience; 5 years in software development and testing.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in SPS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Organize and prepare work effectively to facilitate proactive resolution of problems.</li> <li>• Anticipate and resolve issues on a timely basis.</li> <li>• Communicate accurate and useful status as appropriate.</li> <li>• Demonstrate and promote a focus on client service.</li> <li>• Communicate effectively with suppliers as appropriate.</li> <li>• Work with internal customers and others to identify direction of software process.</li> <li>• Identify knowledge in a form that is reusable.</li> </ul>

## System Administrator

The System Administrator is responsible for server back up and security, along with performance tuning and capacity planning. System Administrators should possess an understanding of network and distributed computing concepts. This is accomplished by working with the Systems Management Team Lead to understand the scope of services to be provided and assessing the impact they will have on the technical infrastructure.

### SA1

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Familiarity with most basic system administrator tools and process; for example, can boot/shutdown a machine, add and remove user accounts, use back up programs, and maintain system database files.</li> <li>• Maintain the project servers.</li> <li>• Maintain the file and print capacity</li> <li>• Ensures that backups are performed as appropriate.</li> <li>• Act as a front-line interface to users.</li> <li>• Accepts trouble reports and dispatch them to appropriate system administrators.</li> <li>• Ability to write scripts in a particular administrative language.</li> </ul>



	<ul style="list-style-type: none"> <li>• Programming experience with any applicable language.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

## SA2

Years of Relevant Experience:	2 to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Responsible for operating and other system software.</li> <li>• Responsible for upgrading the operating and system software and keeping patches current.</li> <li>• Familiarity with fundamental networking/distributed computing environment concepts.</li> <li>• Ability to do minimal debugging and modification of programs.</li> <li>• Execute the disaster recovery/back up procedures and archiving procedures.</li> <li>• Manage security for servers.</li> <li>• Responsible for performance tuning, capacity planning, database administration, and fault management.</li> <li>• Provide tier two support of the technical infrastructure.</li> <li>• Coordinating efforts with vendors if tier three support is required.</li> <li>• Responsible for ensuring high priority issues are resolved in a timely manner.</li> <li>• Responsible for keeping the environment up and running.</li> <li>• In many cases is responsible for identifying and reporting hardware problems.</li> <li>• Capable of writing purchase justifications.</li> <li>• Understands basic routing concepts.</li> <li>• Identify and track issues, risks, and action items.</li> <li>• Resolve and/or assist in resolving issues.</li> <li>• Review, prioritize, and research service requests.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

## SA3

Years of Relevant Experience:	4 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Solid understanding of networking/distributed computing environment concepts.</li> <li>• Understands principles of routing client/server programming.</li> <li>• Manage expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensure quality standards are followed.</li> <li>• Understand the business application of technical support and design in an application development environment.</li> <li>• Work with the various Infrastructure teams and operations provider to identify the strategic direction of systems management activities.</li> <li>• Understands the design of consistent network-wide file system layouts</li> <li>• Maintain strong relationships with employees and various tier two and three support groups.</li> <li>• Develop plans for disaster recovery/ back up and archiving.</li> </ul>



	<ul style="list-style-type: none"> <li>• Manage the daily operations of the systems management team to ensure service levels are being met.</li> <li>• Manage the systems management team's support issue and backlog.</li> <li>• Monitor the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Act as the first level of escalation for high priority support issues.</li> </ul>
--	--

## SA4

Years of Relevant Experience:	6 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA3 plus the following:</p> <ul style="list-style-type: none"> <li>• Function as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develop the technical infrastructure maintenance strategy.</li> <li>• Manage the system management resources.</li> <li>• Act as a system's management expert.</li> <li>• Analyze, determine, and document requirements in terms of system management needs and implement them.</li> <li>• Identify, approve, and prioritize team projects.</li> <li>• Manages a large site or network.</li> <li>• Recommends policies on system use and services.</li> </ul>

## System Specialist

The System Specialist is knowledgeable on the usage and support of a collection of development platforms or technical architectures, and products that run on those platforms. The primary responsibility of a System Specialist is to ensure the availability and facilitate the productive use of a development platform or a test environment for Application Teams or end users. The System Specialist may support one or several instances of a platform/environment, applying their skills directly to a platform/environment and/or leveraging their skills across multiple platforms/environment. The System Specialist may, especially for usage and support of a platform, be part of an Application Team using the architecture. The System Specialist requires experience and skills in the environment supported and in the operations and in common usage of products for the environment. The System Specialist are responsible for collaborating with Technical Architecture Specialist, Functional Architects, Programmers and vendors to coordinate and enhance the use of the platform and facilitate migration to new versions of the platform.

## SS1

Years of Relevant Experience:	1 to 3 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assist in coordination of testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>• Make recommendations on functional and technical improvements to the environment.</li> <li>• Participate in performance and volume analysis and design.</li> <li>• Participate in performance improvement activities. Identify and apply potential improvements related to the environment for an application.</li> <li>• Provide accurate and complete answers to general use and environment questions in a timely manner.</li> <li>• Provide effective on-site environment support as needed.</li> <li>• Accurately set severity of identified defects.</li> <li>• Provide input to training and/or documentation materials regarding latest technical and functional design changes.</li> <li>• Ensure that all work is documented for future reference.</li> </ul>



	<ul style="list-style-type: none"> <li>• Follow quality standards.</li> <li>• Ensure effective and reliable backups are being performed and distributed properly.</li> <li>• Proactively address customer needs.</li> <li>• Track and anticipate volume and type of use of the environment.</li> <li>• Plan and implement shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> <li>• Basic scripting and programming skills, including languages that run on specified platform.</li> <li>• Analytical and customer service skills.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

## SS2

Years of Relevant Experience:	3 to 5 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Plan and manage network operating system upgrades.</li> <li>• Actively participate in analyzing and evaluating emerging software and hardware technologies/standards.</li> <li>• Serve as a liaison between teams for network planning and connectivity.</li> <li>• Develop appropriate functional and usability standards for the environments.</li> <li>• Plan or assist in planning network environment, including supporting existing structure and enhancements.</li> <li>• Plan and coordinate testing changes, upgrades and new and standard products, ensuring systems will operate correctly in current and future environment.</li> <li>• Anticipate, identify, track and resolve issues and risks affecting own work and work of the Application or Environment team. Develop contingency plans as necessary.</li> <li>• Analyze the functional and/or technical impact of new product releases.</li> <li>• Advanced scripting and programming skills, including languages that run on specified platform.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>

## SS3

Years of Relevant Experience:	5 plus years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Identify opportunities for new and improved technologies/standards to be used in the organization.</li> <li>• Identify, plan, and implement phase-out strategies for products and technologies.</li> <li>• Plan and coordinate testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>• Demonstrate expertise in teaching/conveying technical courses/concepts.</li> <li>• Assist in setting architecture direction and knowledge sharing.</li> <li>• Plan, organize, prioritize, and manage multiple work efforts the Application or Environment Teams.</li> </ul>





	<ul style="list-style-type: none"> <li>• Develop appropriate work programs and use to effectively schedule tasks/assignments.</li> </ul>
--	--

## Team Lead

The Team Lead manages an Application Team to deliver services according to defined service level commitments owned by the Application Team. The Team Lead coordinates resources and work to deliver solutions to customers on time and within budget. The Team Lead is assigned responsibility and accountability for overseeing the successful completion of all work assigned to the Application Team. The Team Lead is a process expert within the Application Team, understanding the software development / maintenance processes and verifying process conformance. The Team Lead will monitor stability of production applications owned by the Application Team. The Team Lead assists Application Team members in development activities and reviews tasks as required. The Team Lead manages and updates progress towards Application Team objectives, assists Application Team members in resolving problems, and engages in personnel management and guidance to Application Team members. The Team Lead fosters a positive work environment by mentoring, supporting, and committing to the professional development of Application Team members. The Team Lead reports to the Group Lead or Program Manager, as appropriate. The difference between a TL1 and a TL2 will depend on the size of the project, and the breadth and scope of the project.

### TL1

Years of Relevant Experience:	4 to 5 years, and 1 to 2 years project management experience.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Monitor stability of production applications owned by Application Team.</li> <li>• Prepare estimates for maintenance and enhancement of existing applications and development of new applications.</li> <li>• Perform detailed reviews of interim and final tasks as appropriate.</li> <li>• Process work requests; review, prioritize, and package.</li> <li>• Manage and review tasks of suppliers and other interfaces to the Application Team.</li> <li>• Conduct structured walk-throughs or inspections; manage issues to closure.</li> <li>• Develop and manage short and long-term plans and schedules.</li> <li>• Direct the development of accurate estimates for Application Team activities as required.</li> <li>• Balance workload with Application Teams capacity by managing the Application Teams activities according to schedule.</li> <li>• Manage the accomplishment of delivery metrics to support contractual obligations in the areas of service delivery and on time performance commitments and productivity improvement.</li> <li>• Ensure work remains within the agreed scope.</li> <li>• Track work plan baseline against results.</li> <li>• Coordinate / communicate with Group Leads and / or Program Manager to ensure initiatives are in accordance with agreed customer commitments as planned.</li> <li>• Proactively identify and manage issues/risks affecting the project.</li> <li>• Communicate accurate and useful status to Group Lead and other management on a timely basis.</li> <li>• Identify and initiate continuous improvements.</li> <li>• Instill commitment to quality, customer service, ownership, and teamwork.</li> <li>• Conduct post project wrap-ups.</li> <li>• Monitor and measure maintenance and development process effectiveness.</li> <li>• Ensure that defined processes are followed.</li> <li>• Manage expectations of the Application Teams internal and external customers.</li> <li>• Facilitate communication and knowledge sharing within the Application Teams.</li> <li>• Maintain awareness of new developments in industry and processes and apply as appropriate.</li> </ul>



	<ul style="list-style-type: none"> <li>• Develop and deepen understanding of system business requirements supported by the Application Team.</li> <li>• Communicate clearly the Application Team goals, organizational philosophies, and policies and procedures to the Application Teams.</li> <li>• Conduct structured walk-throughs or inspections; manage issues to closure.</li> <li>• Communicate clearly the Application Team goals, organizational philosophies, and policies and procedures to the Application Teams.</li> </ul>
--	---

## **TL2**

Years of Relevant Experience:	5 plus years, and 2 to 3 years project management experience
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TL1 plus the following:</p> <ul style="list-style-type: none"> <li>• Manage the resolution of high severity production problems.</li> <li>• Manage and direct Application Team activities employing appropriate program management and planning principles.</li> <li>• Coordinate work with other Team Leads as appropriate.</li> <li>• Coordinate and procure the required skills and techniques required by the Application Team.</li> </ul>

## **Technical Architecture Specialist**

The Technical Architecture Specialist is the technical expert centered on a technology, technologies or a portfolio of applications. The Technical Architecture Specialist is the technologist who coordinates with other parties in setting the technical approach and direction and implementation for work. The Technical Architecture Specialist provides technical design expertise, defines what technical requirements are needed to support defined business requirements, participates in detailed design and code reviews, reviews system performance issues, reviews test plans, and provides technical guidance to the Application Team and Test Team members. The Technical Architecture Specialist is responsible for collaborating with the Team Lead(s) to coordinate project schedules, budgets, request management, and work authorization. The expert level Technical Architecture Specialist will interface with Executive Sponsors, Group Leads, and Lead Functional Architects to convey infrastructure requirements, plan, and schedule deployment of tasks, and resolve any issues that impact the deployment of the Application Delivery systems.

## **TAS1**

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Define test plans and criteria for acceptance for the technical components of an application.</li> <li>• Ensure business requirements are supported by the technical architecture.</li> <li>• Assist in leading technical direction of software; coordinating and presenting proposals to Group Leads, Leads, and the client.</li> <li>• Define and evaluate logical and physical data models.</li> <li>• Assist in development of overall system technical architecture - including software and hardware.</li> <li>• Define test plans and criteria for acceptance for the technical components of an application.</li> <li>• Analyze, determine, and document technical requirements and change request impact analysis.</li> <li>• Participate in detailed design and product test execution as required.</li> <li>• Develop technical programming standards.</li> <li>• Ensure business requirements are supported by the technical architecture.</li> <li>• Conduct structured walk-throughs or inspections for technical areas; resolve issues.</li> </ul>





	<ul style="list-style-type: none"> <li>• Assist in defining technical programming standards.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> <li>• Perform integration of various architectures across multiple enterprises</li> <li>• Develop overall system technical architecture - including software and hardware.</li> <li>• Perform review of technical designs, code, and component test plans.</li> <li>• Resolve and / or assist in resolving cross application technical issues.</li> <li>• Conduct structured walk-throughs or inspections for technical areas; resolve issues.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>
--	--

## TAS2

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Ensure consistency and completeness across data models.</li> <li>• Plan and deliver development architecture environments in coordination with the Environmental Support Specialist.</li> <li>• Assist in managing and directing team's technical architecture processes.</li> <li>• Provide assistance in scheduling design work for Lead Technical Architecture Specialist.</li> <li>• Develop and document expert practices/ standards.</li> <li>• Possesses strong analysis, presentation, documentation and quality assurance skills.</li> <li>• Analyze, determine, and document technical requirements and impact analysis for technical and development architectures.</li> <li>• Explain defect priorities and enhancement classifications to client and customer when needed.</li> <li>• Maintain awareness of new technological developments in industry and processes - implement concepts appropriately.</li> <li>• Lead or participate in setting the service levels for the application.</li> <li>• Define overall system logical architecture.</li> <li>• Provide standard, well-structured work planning which defines scope, resources, milestones, quality, risk, tasks, and acceptance criteria.</li> <li>• Prepare contingencies, scenarios, scenario plans and action items to resolve issues.</li> <li>• Lead efforts in providing technical expertise, guidance, and training to the Application and Test Teams.</li> </ul>

## TAS3

Years of Relevant Experience:	5 plus years, and 1 to 2 years project management experience
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Communicate effectively with IT staff, client organization and software / hardware suppliers.</li> <li>• Lead efforts in designing technical strategy, direction and approach, technical architecture, data architecture, development architecture, performance tuning,</li> </ul>



	<p>performance and capacity analysis, technical standards, technical reliability and flexibility.</p> <ul style="list-style-type: none"> <li>• Design and define overall system technical architecture - including software and hardware within the framework and constraints of technical architecture.</li> <li>• Evaluate alternative designs.</li> <li>• Maintain control of specific tools and assets.</li> <li>• Own the technical architecture for a portfolio of applications, including the interpretation and application of the technical architecture.</li> <li>• Plan, design development and/or execution of architectures. Participate in the plan and design of technical architecture.</li> <li>• Assist with the preparation of estimates for new technology applications and maintenance of existing applications as part of Service Management.</li> <li>• Provide experience in utilizing the project architecture. Acknowledged as highly competent in one or more technologies.</li> <li>• Communicate accurate and useful status reports and other management on a timely basis.</li> <li>• Coordinate and conduct project architecture, infrastructure review meetings, and portfolio review meetings with Group Lead, Lead Functional Architects, and Team Leads. Integrate issues and identify impacts.</li> <li>• Communicate and resolve application interface issues.</li> <li>• Communicate to team members the relations between their work assignments and the organizational and/ or program strategy, objectives, business and technology needs of the application / system.</li> <li>• Share knowledge across teams with both similar and non-similar applications, specifically focusing on Technical Architecture</li> <li>• Interpret and communicate technical architecture to the Technology Application Architecture Team (s).</li> </ul>
--	---

## Technical Writer

The Technical Writer develops and maintains user and technical documentation and project process documentation for Application Teams. Technical Writer understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. The experienced Technical Writer 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 within their Tower.

### TW1

Years of Relevant Experience:	Up to 2 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Develop, enhance, and maintain user documentation for multiple applications including documentation required for the operations provider.</li> <li>• Develop on-line source documentation as appropriate.</li> <li>• Maintain documentation libraries and subscription lists.</li> <li>• Identify, create, revise, and maintain documentation and templates needed by the Application Teams.</li> <li>• Ensure appropriate control access/use of documentation materials.</li> <li>• Maintain application and user documentation.</li> <li>• Ensure messages and terminology is consistent across all written materials.</li> <li>• Research and complete documentation service requests.</li> <li>• Communicate and work with customers and other Client Telecommunications personnel as necessary.</li> <li>• Work with Application Team members to enhance their understanding of end-user and technical documentation.</li> <li>• Communicate accurate and useful status updates.</li> </ul>



	<ul style="list-style-type: none"> <li>• Manage and report time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	--

**TW2**

Years of Relevant Experience:	2 to 4 years.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW1 plus the following:</p> <ul style="list-style-type: none"> <li>• Review and prioritize documentation service requests.</li> <li>• Determine procedures for use of on-line documentation tools and version control documentation as appropriate.</li> <li>• Assist or guide other Technical Writer as needed to develop and maintain user and technical documentation for their assigned applications.</li> <li>• Educate both business and technical groups on the essential need for developing and using standard documentation for all processes.</li> <li>• Organize and prepare work effectively to facilitate proactive resolution of problems, rather than reactive.</li> <li>• Research problems before approaching Lead Technical Writer or Team Lead for assistance.</li> <li>• Assist the Application Team Lead in monitoring budget by providing estimated-time-to-complete and actuals for assigned tasks.</li> <li>• Identify and make recommendations around documentation and templates needed by the Application Teams.</li> <li>• Work with users and other State personnel to ensure that the solutions meet State business requirements.</li> <li>• Identify and initiate continuous improvement opportunities.</li> <li>• Direct the development of accurate estimates for documentation requests/activities as required</li> <li>• Develop options and recommendations to assist documentation team members in resolving issues.</li> <li>• Lead efforts in developing and facilitating implementation of the Documentation team goals and metrics.</li> <li>• Develop workable, practical, measurable work plans defining activities, schedules and tasks with Team Leads and the Lead Technical Writer</li> <li>• Review and understand the Application Teams workplan.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>

**TW3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW2 plus the following:</p> <ul style="list-style-type: none"> <li>• Review and approve procedures for use of on-line documentation tools as appropriate.</li> <li>• Identify business and technical documentation needs not currently addressed.</li> <li>• Manage Technical Writer.</li> <li>• Own documentation libraries and subscription lists.</li> </ul>



	<ul style="list-style-type: none"> <li>Promote the need for developing and using standard documentation for all processes within the organization.</li> <li>Perform detailed reviews of interim and final tasks as appropriate.</li> <li>Oversee processing of service requests.</li> <li>Manage, deploy, and schedule Technical Writer activities.</li> <li>Develop and manage short and long-term documentation plans and schedules.</li> <li>Understand work requests/needs within Application Teams</li> <li>Manage the accomplishment of delivery metrics in support of contractual obligations in the areas of service delivery, on time performance.</li> <li>Work with Team Leads and Group Leads to set documentation goals.</li> </ul>
--	--

### **TW4**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW3 plus the following:</p> <ul style="list-style-type: none"> <li>Ensure work remains within the agreed project scope.</li> <li>Coordinate work with other Lead Technical Writers as appropriate.</li> <li>Coordinate and procure the required skills and techniques required by the Application Teams for documentation needs.</li> <li>Communicate accurate and useful status reports to Group Lead and other management on a timely basis.</li> <li>Anticipate, identify, track and resolve issues and risks affecting own work and work of the Application Team. Develop contingency plans as necessary.</li> <li>Manage expectations of the Technical Writers' internal and external customers.</li> <li>Define documentation quality standards as needed.</li> <li>Conduct post project reviews and quality assessments.</li> <li>Ensure that defined processes are followed.</li> <li>Communicate related improvement measures to the team.</li> <li>Communicate clearly to Technical Writers their goals, organizational philosophies, policies and procedures.</li> </ul>

## **Telecom Engineer**

The Telecom Engineer configures and installs hardware, wiring, and specialized equipment according to local building and electrical codes. The Telecom Engineer may also be responsible for the end-to-end installation of cable, wiring, and related equipment. The Telecom Engineer typically works closely with facilities/construction managers and site-based project managers. The Telecom Engineer should be able to accurately estimate the time and materials needed for tasks assigned. It is not uncommon for the Telecom Engineer to supervise a team of people and coordinate activities with other construction teams.

### **TE1**

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> <li>Ensure proper connectivity from site-to-site and internal to facility.</li> <li>Experience with CAT5, Romex, and similar cables/wiring.</li> <li>Pull cable and ensure adherence to all building codes.</li> <li>Escalate construction and installation problems to the construction/integration manager, as needed.</li> <li>Prepare all job-related paperwork.</li> <li>Close out work authorization when equipment is in service.</li> </ul>



## TE2

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE1 plus the following:</p> <ul style="list-style-type: none"> <li>▪ Inspect customer premises to ascertain available space for equipment installation</li> <li>▪ Determine the type and quantity of equipment that can be installed to provide requested communication facilities.</li> <li>▪ Create floor plan of equipment arrangement for customer or architect approval.</li> <li>▪ Prepare cost estimate for equipment and installation and submit data to management for authorization to proceed.</li> <li>▪ Order equipment and prepare installation specifications.</li> <li>▪ Monitor progress of installation to ensure facilities are ready on specified date.</li> </ul>

## TE3

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE2 plus the following:</p> <ul style="list-style-type: none"> <li>▪ Lead full integration teams and interact with large infrastructure teams.</li> <li>▪ Act as telecommunications interface to outside vendors and construction manager.</li> <li>▪ Direct activities related to the selection and installation of telephone facilities and special equipment on premises to meet customer's communication requirements.</li> </ul>

## Tester

The Tester is a member of a team which plans, constructs, and executes product tests, system tests, unit tests, load tests, volume tests, network tests as well as works with others for release control processes. The more experienced Tester manages, plans, constructs, and executes tests and integrates with release control process.

### Test1

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Create test models for product test and release control (plans, data, and scripts).</li> <li>• Conduct structured walk-throughs</li> <li>• Execute assembly or product tests.</li> <li>• Meet time estimates for assigned tasks.</li> <li>• Communicate accurate and useful status updates.</li> <li>• Follow quality standards.</li> <li>• Ability to work in a team environment</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>

### Test2

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test1 plus the following:</p> <ul style="list-style-type: none"> <li>• Define product test plans and criteria for acceptance.</li> <li>• Develop, update, and maintain testing standards and procedures.</li> <li>• Resolve testing process questions / issues.</li> <li>• Assist in the planning, creation, and control of the test environments.</li> </ul>



	<ul style="list-style-type: none"> <li>• Conduct inspections; resolve issues.</li> <li>• Coordinate and execute assembly or product tests with the Test Team, Application Team and the Program Manager.</li> <li>• Assist Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks.</li> <li>• Work with Test Team members to enhance their testing skills and build technical and business knowledge.</li> <li>• Update and test release installation procedures.</li> <li>• Generally aware of new developments in industry and processes and ability to apply to work as appropriate.</li> <li>• Determine time estimates and schedule for work efforts.</li> <li>• Define and utilize entry / exit criteria for testing.</li> <li>• Schedule the design of structured walk-throughs or inspections; resolve issues.</li> <li>• Work with users to ensure that solutions meet business requirements.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>
--	---

### **Test3**

Years of Relevant Experience:	4 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test2 plus the following:</p> <ul style="list-style-type: none"> <li>• Review and understand the Test Team work plan.</li> <li>• Assist in managing and directing Test Team processes.</li> <li>• Anticipate, identify, track and resolve issues and risks affecting own work and work of the Test and/or Application Teams. Develop contingency plans as necessary.</li> <li>• Research problems before approaching the Team Lead or Test Team Lead for assistance.</li> <li>• Assist or guide Testers as needed.</li> <li>• Develop understanding of system business requirements supported by the Test team</li> <li>• Assist Application Teams to plan and execute component and assembly tests.</li> <li>• Participate in assembly or product test execution as required.</li> </ul>

### **Video Conference Specialist**

The Video Conference Specialist (VCS) provides video and photograph production support by operating a variety of film, sound-reproducing equipment, slide, and video equipment.

#### **VCS1**

Years of Relevant Experience:	Up to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Maintain equipment in working condition.</li> <li>• Make minor adjustments and repairs to equipment</li> <li>• Notify maintenance personnel when correction of major malfunction is required.</li> <li>• Position, install, connect, and repair equipment.</li> <li>• Familiar with fundamental networking/distributed computing environment concepts.</li> <li>• Troubleshoot network issues, systems, and applications to identify and correct malfunctions and other operational difficulties.</li> <li>• Investigate user problems, identify their source, determine possible solutions, test and implement solutions</li> <li>• Ensure high priority issues are resolved in a timely manner.</li> </ul>





	<ul style="list-style-type: none"> <li>• Excellent communication skills.</li> </ul>
--	---

## VCS2

Years of Relevant Experience:	6 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in VCS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Coordinate equipment operation with material presented, according to notations in script or instructions of speaker.</li> <li>• Advise speakers and presenters on alternative media.</li> <li>• Meet with department heads, managers, supervisors, vendors, and others, to solicit cooperation and resolve problems.</li> <li>• Actively participate in analyzing and evaluating emerging technologies/standards.</li> <li>• Evaluate and/or recommend purchases of network hardware, software, and peripheral equipment.</li> <li>• Act as the first level of escalation for high priority support issues.</li> <li>• Function as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develop the technical maintenance strategy.</li> <li>• Analyze, determine, and document requirements in terms of system management needs and implement them.</li> <li>• Identify, approve, and prioritize team projects.</li> <li>• Mentor and supervise other team members.</li> </ul>

## Voice/Data Engineer

The Voice/Data Engineer directs and participates in all activities related to the selection and installation of telephone facilities and special on-premises equipment that will meet the customer's communication requirements. The Voice/Data Engineer is responsible for all technology and connectivity involving telecommunications and data networks. The Voice/Data Engineer will typically specialize in telephony and data interfaces and systems that have proprietary functions within the communications area of a corporation/business. General wiring excluded, the Voice/Data Engineer ensures that any specialized conduit or wiring is properly deployed and installed according to code. The Voice/Data Engineer is also an expert in audio/visual, teleconferencing, and voice mail equipment. Often times, the Voice/Data Engineer is specialized or is certified in a particular piece of equipment.

### VDE1

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> <li>• Ensure proper connectivity of voice and data services and technologies.</li> <li>• Interact and work with Telecom Engineer, Integration Engineer, or Project Manager.</li> <li>• Prepare all job-related paperwork</li> <li>• Close out work authorization when equipment is in service.</li> </ul>

### VDE2

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE1 plus the following:</p> <ul style="list-style-type: none"> <li>• Prepare equipment floor plan for customer or architect approval.</li> <li>• Determine telephone, data services/components, and audio visual equipment placement within facility.</li> <li>• Act as installer of equipment for data/voice or Audio visual use.</li> </ul>



	<ul style="list-style-type: none"><li>• Install, test, configure, and train users on products and equipment.</li><li>• Support systems and products associated with telecommunications/telephone and data within a facility or department.</li></ul>
--	--

### **VDE3**

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	All roles specified in VDE2 plus the following: <ul style="list-style-type: none"><li>• Familiar with at least one type of equipment or service that is highly specialized.</li><li>• Prepare cost estimate for equipment and installation and submit data to management for authorization to proceed with job.</li><li>• Order equipment and prepare installation specification.</li><li>• Monitor installation progress to ensure that the facilities are ready on projected date.</li><li>• Lead a team of installers and junior Voice/Data Engineers.</li></ul>





This page is intentionally left blank.

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Skill Category Matrix

Legacy	Core	Emerging
Low Tech. Skills; Mature Technologies; High Labor Supply; Low Labor Demand	Mid Tech. Skills; Avg. Technology Maturity; Avg. Labor Supply; Avg. Labor Demand	High Tech. Skills; New Technologies; Low Labor Supply; High Labor Demand
Technologies/Skills		
4GL Programming with PL/SQL	Analytical and Technical Architecture (Business Process Mapping using UML, Enterprise Architect .NET Microsoft, and Enterprise Architect Sparxsystems)	Advanced Web Development, web 2.0 - Ajax (Ajax.Net and JQuery), HTML5, Silverlight, WPF (Jquery and HTML5 are not .Net specific)
Access	ASP.Net, C#.Net, VB.Net	AIX - Administrator
Accessibility Standards (ACC Verify, MacroMedia, ITB 508)	BizTalk - Administrator	Applications Architecture
Adobe Acrobat	Business Objects	Oracle 10gR3/Aqualogics - Portal Developer/Content Developer/Application Developer
Altiris	CA SiteMinder Suite	Biz Talk - Developer
AS/400	Checkpoint Firewall	Embarcadero/Borland Delphi
ASP	Cisco - Low-end Switch/Router	CA Identity Manager
BlackBerry	Cisco PIX Firewall	Capacity Planning
C	Clarity	Cisco - High-end Switch/Router
CADD	Client Server Operating Systems	Cloud Architecture/Application Development
CICS	Cobol	Cognos - Developer
Com/Com+/DCOM	Cold Fusion	Data Architecture
Data Modeling	Crystal Reports	Data Center (Unisys OEM Version)
Database - Mainframe	Database - Client Server	Data Warehousing
DB2 - Administrator	DB2 - DBA/Developer	Database - Mixed Platform
DC/DB2	Encryption	Dimensional Data Modeling for DW/BI
DreamWeaver	ERWin	DSF
Eclipse	FileNet - Administrator	EC/EDI
eLMS	Flash	Enterprise Architecture
Exchange 2000/2003/2007	FormWare	Filenet - Developer
Frontpage	GIS - Programming/Analytical (C/S)	GIS - Architecture
GIS - Digitizing/Scanning/Data Collection	Host Publishing	GIS Web Application Development
Homesite	IBM SAN - Administrator	Grid Computing Architecture
HTML	IBM/Rational Application Developer	IBM SAN - Architect/Implementation
IBM/Rational Functional Tester	IBM/Rational Requisite Pro	IBM/Rational Modeler/Software Architect
IBM/Rational Performance Tester	IBM/Rational Rose/XDE	Informatica
IBM/Rational Robot	IIS (.Net WEB Server)	Infrastructure Architecture
IBM/Rational Test Manager	Imaging Systems (Onbase, Key File, Info Image)	ISS Proventia
IMS DB/DC	Intelligent Transportation Systems (ITS)(Traffic congestion, weather monitoring, programmable signing, pavement sensing, and other such devices)	ITIL
JavaScript	IQU+1	Java EJBs
ListServe	ISA	Java Espresso
MS Ops Mgr 2005	LAN/WAN Support	J2EE
MS SQL Server 2000/2005	Logidex	Java - Developer
OmniPage ProTesting Tools (LoadRunner/WinRunner)	MS ActiveX	JSF
Oracle 10G (and below)	Mercury Test Tool - Adminisrtator	JSP
Performance Monitoring - Mainframe	MS .NET Framework 3.0 (and below)	Knowledge Management
Progress 4GL RDMS	MS SQL Server 2008	Linux - z, v. 10, Red Hat, SUSE
Remedy - User	Netegrity Siteminder	Lotus Notes/Domino - Developer
SAS	Novell - Administrator	Mercury Test Tool - Developer
Servlets	Oracle 11g	Middleware (Open Distributed Transaction Integrator ( ODTI, Unisys-Proprietary), WebMethods 6.1, publish Subscribe, Data Transformation, Asynchronous Messaging, and Trading Networks suite) (also known as ESB tools)
SMS - User	Powerbuilder	Mobile Device Development (iOS, Android, etc.)
SOAP	Remedy - Administrator	MS .Net Framwork 4.0
SOLARIS	Sharepoint - Administrator	MS .Net Web Services - WCF and ASMX
SQL - Adminisrator	SMS - Administrator	Novell Identity Manager
SQL Server - Install	SQL - Developer	Oracle Financials
Surf Control	Systems Design & Development	Portlet Development
Systems Development & Administration	Veritas	Remedy - Developer
TSO	Web Services	SAP - Functional/Technical

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Skill Category Matrix

Legacy	Core	Emerging
Low Tech. Skills; Mature Technologies; High Labor Supply; Low Labor Demand	Mid Tech. Skills; Avg. Technology Maturity; Avg. Labor Supply; Avg. Labor Demand	High Tech. Skills; New Technologies; Low Labor Supply; High Labor Demand
Technologies/Skills		
Unisys	Windows XP	Security - Encryption
Visual Basic	XML (XML, Spy, Data Base Schemas and support, and XSLT)	Service Oriented Architecture
Visual FoxPro	z/OS Developer	Sharepoint Developer
Visual Source Safe		Sightline
Web (Visual Source Safe, Accessibility Standards (ACC Verify, MacroMedia, 506), DreamWeaver, and Homesite, Photoshop, Fireworks, Paint Shop Pro)		SMS - Architect/Implementation
		SMS 2003 - Administrator
		SMS 2003 - Architect/Implementation
		Software Engineering
		Subversion
		Systems Engineering & Architecture
		Team Foundation Server/Application Life Cycle Development
		Tivoli - Architect/Implementation/Administration
		VMWare
		VOIP
		Websphere/MQ Series
		z/OS Administrator

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Geographic Areas

Area #1	Area #2	Area #3	Area #4	Area #5
Bedford County	Adams County	Beaver County	Allegheny County	Chester County
Clearfield County	Armstrong County	Butler County	Berks County	Delaware County
Forest County	Blair County	Cameron County	Bucks County	Montgomery County
Jefferson County	Bradford County	Clarion County	Centre County	Philadelphia County
Juniata County	Cambria County	Elk County	Cumberland County	
Perry County	Carbon County	Erie County	Dauphin County	
Somerset County	Clinton County	Fulton County	Lehigh County	
Susquehanna County	Columbia County	Greene County	Montour County	
	Crawford County	Indiana County	Wyoming County	
	Fayette County	Lackawanna County		
	Franklin County	Lancaster County		
	Huntingdon County	Lawrence County		
	Lycoming County	Lebanon County		
	Mc Kean County	Luzerne County		
	Mercer County	Monroe County		
	Mifflin County	Northampton County		
	Pike County	Northumberland County		
	Schuylkill County	Potter County		
	Snyder County	Sullivan County		
	Tioga County	Union County		
	Warren County	Venango County		
	Wayne County	Washington County		
		Westmoreland County		
		York County		

This page is intentionally left blank.

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 1 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Architect	AR1	\$82.08	\$83.76	\$89.61
Functional Architect	FA1	\$34.54	\$35.24	\$37.70
Functional Architect	FA2	\$41.27	\$42.12	\$45.07
Functional Architect	FA3	\$49.35	\$50.37	\$53.89
Help Desk Analyst	HDA1	\$27.02	\$27.57	\$29.49
Help Desk Analyst	HDA2	\$29.61	\$30.21	\$32.33
Help Desk Analyst	HDA3	\$36.68	\$37.42	\$40.04
Product Specialist	PS1	\$37.20	\$37.96	\$40.62
Product Specialist	PS2	\$42.75	\$43.62	\$46.67
Product Specialist	PS3	\$56.36	\$57.51	\$61.54
Product Specialist	PS4	\$71.25	\$72.70	\$77.79
Product Specialist	PS5	\$87.95	\$89.74	\$96.02
Programmer	PR1	\$31.73	\$32.37	\$34.64
Programmer	PR2	\$37.73	\$38.50	\$41.19
Programmer	PR3	\$47.74	\$48.71	\$52.12
Programmer	PR4	\$62.25	\$63.52	\$67.97
Programmer	PR5	\$74.41	\$75.93	\$81.25
Service Desk	SD2	\$23.91	\$24.40	\$26.11
Service Desk	SD3	\$25.85	\$26.38	\$28.22
Software Process Engineer	SPS1	\$34.75	\$35.46	\$37.94
Software Process Engineer	SPS2	\$38.63	\$39.41	\$42.17
Software Process Engineer	SPS3	\$52.61	\$53.69	\$57.45
System Administrator	SA1	\$31.85	\$32.51	\$34.78
System Administrator	SA2	\$35.15	\$35.87	\$38.38
System Administrator	SA3	\$49.42	\$50.43	\$53.96
System Administrator	SA4	\$66.37	\$67.72	\$72.47
System Specialist	SS1	\$30.87	\$31.50	\$33.70
System Specialist	SS2	\$32.69	\$33.36	\$35.69
System Specialist	SS3	\$42.03	\$42.89	\$45.89
Technical Architecture Specialist	TAS1	\$41.53	\$42.37	\$45.34
Technical Architecture Specialist	TAS2	\$47.19	\$48.15	\$51.52
Technical Architecture Specialist	TAS3	\$50.47	\$51.50	\$55.10
Video Conference Specialist	VCS1	\$45.42	\$46.82	\$50.10
Video Conference Specialist	VCS2	\$51.72	\$53.32	\$57.06
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 1 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$48.28
Business Analyst	BA2	\$61.77
Business Analyst	BA3	\$70.49
CADD/GIS Administrator	CGA1	\$41.64
CADD/GIS Administrator	CGA2	\$48.01
CADD/GIS Administrator	CGA3	\$71.47
Data Entry Operator	DE1	\$14.54
Data Entry Operator	DE2	\$15.83
Database Administrator	DBA1	\$41.85
Database Administrator	DBA2	\$46.11
Database Administrator	DBA3	\$61.93
Database Administrator	DBA4	\$75.13
Intern	INT1	\$15.39
Intern	INT2	\$17.96
Intern	INT3	\$23.09

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 1 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Program Manager	PM1	\$46.13
Program Manager	PM2	\$56.05
Program Manager	PM3	\$72.37
Program Manager	PM4	\$93.79
Quality Assurance Specialist	QAS1	\$37.52
Quality Assurance Specialist	QAS2	\$41.59
Quality Assurance Specialist	QAS3	\$54.84
Senior Architect	SAR1	\$96.55
Senior Business Subject Matter Expert	SME1	\$90.68
Senior Database Architect	SDA1	\$81.72
Senior Program Manager	SPM1	\$102.13
Team Lead	TL1	\$55.64
Team Lead	TL2	\$60.00
Technical Writer	TW1	\$26.47
Technical Writer	TW2	\$30.92
Technical Writer	TW3	\$34.87
Technical Writer	TW4	\$43.19
Telecom Engineer	TE1	\$35.83
Telecom Engineer	TE2	\$40.96
Telecom Engineer	TE3	\$48.33
Tester	Test1	\$33.19
Tester	Test2	\$38.35
Tester	Test3	\$44.63
Voice/Data Engineer	VDE1	\$34.01
Voice/Data Engineer	VDE2	\$39.45
Voice/Data Engineer	VDE3	\$47.45



Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 2 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Architect	AR1	\$82.93	\$84.62	\$90.55
Functional Architect	FA1	\$34.66	\$35.37	\$37.85
Functional Architect	FA2	\$41.45	\$42.30	\$45.26
Functional Architect	FA3	\$49.87	\$50.88	\$54.45
Help Desk Analyst	HDA1	\$27.01	\$27.56	\$29.48
Help Desk Analyst	HDA2	\$29.62	\$30.23	\$32.34
Help Desk Analyst	HDA3	\$36.78	\$37.52	\$40.15
Product Specialist	PS1	\$37.35	\$38.10	\$40.77
Product Specialist	PS2	\$42.95	\$43.82	\$46.89
Product Specialist	PS3	\$57.13	\$58.29	\$62.37
Product Specialist	PS4	\$72.02	\$73.48	\$78.62
Product Specialist	PS5	\$88.84	\$90.65	\$97.00
Programmer	PR1	\$31.76	\$32.42	\$34.69
Programmer	PR2	\$37.88	\$38.65	\$41.36
Programmer	PR3	\$48.10	\$49.08	\$52.52
Programmer	PR4	\$63.13	\$64.41	\$68.92
Programmer	PR5	\$75.21	\$76.74	\$82.12
Service Desk	SD2	\$23.87	\$24.36	\$26.07
Service Desk	SD3	\$25.84	\$26.36	\$28.21
Software Process Engineer	SPS1	\$34.88	\$35.59	\$38.08
Software Process Engineer	SPS2	\$38.77	\$39.56	\$42.34
Software Process Engineer	SPS3	\$53.27	\$54.36	\$58.17
System Administrator	SA1	\$31.96	\$32.61	\$34.89
System Administrator	SA2	\$35.28	\$36.00	\$38.51
System Administrator	SA3	\$49.94	\$50.96	\$54.52
System Administrator	SA4	\$67.09	\$68.46	\$73.25
System Specialist	SS1	\$30.91	\$31.53	\$33.74
System Specialist	SS2	\$32.75	\$33.42	\$35.75
System Specialist	SS3	\$42.22	\$43.08	\$46.09
Technical Architecture Specialist	TAS1	\$41.72	\$42.57	\$45.54
Technical Architecture Specialist	TAS2	\$47.51	\$48.48	\$51.88
Technical Architecture Specialist	TAS3	\$51.03	\$52.07	\$55.72
Video Conference Specialist	VCS1	\$45.77	\$47.19	\$50.48
Video Conference Specialist	VCS2	\$52.47	\$54.08	\$57.86
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 2 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$48.49
Business Analyst	BA2	\$62.42
Business Analyst	BA3	\$71.25
CADD/GIS Administrator	CGA1	\$41.87
CADD/GIS Administrator	CGA2	\$48.34
CADD/GIS Administrator	CGA3	\$72.62
Data Entry Operator	DE1	\$14.42
Data Entry Operator	DE2	\$15.72
Database Administrator	DBA1	\$42.00
Database Administrator	DBA2	\$46.31
Database Administrator	DBA3	\$62.77
Database Administrator	DBA4	\$75.94
Intern	INT1	\$15.39
Intern	INT2	\$17.96
Intern	INT3	\$23.09

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 2 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Program Manager	PM1	\$46.35
Program Manager	PM2	\$56.78
Program Manager	PM3	\$73.45
Program Manager	PM4	\$95.03
Quality Assurance Specialist	QAS1	\$37.67
Quality Assurance Specialist	QAS2	\$41.75
Quality Assurance Specialist	QAS3	\$55.46
Senior Architect	SAR1	\$97.92
Senior Business Subject Matter Expert	SME1	\$92.28
Senior Database Architect	SDA1	\$82.89
Senior Program Manager	SPM1	\$103.86
Team Lead	TL1	\$56.28
Team Lead	TL2	\$60.78
Technical Writer	TW1	\$26.85
Technical Writer	TW2	\$31.43
Technical Writer	TW3	\$35.49
Technical Writer	TW4	\$44.26
Telecom Engineer	TE1	\$36.02
Telecom Engineer	TE2	\$41.19
Telecom Engineer	TE3	\$48.66
Tester	Test1	\$33.36
Tester	Test2	\$38.55
Tester	Test3	\$44.89
Voice/Data Engineer	VDE1	\$34.13
Voice/Data Engineer	VDE2	\$39.59
Voice/Data Engineer	VDE3	\$47.69

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 3 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Architect	AR1	\$82.41	\$84.09	\$89.98
Functional Architect	FA1	\$34.81	\$35.51	\$38.00
Functional Architect	FA2	\$41.62	\$42.46	\$45.44
Functional Architect	FA3	\$49.73	\$50.74	\$54.29
Help Desk Analyst	HDA1	\$27.21	\$27.76	\$29.70
Help Desk Analyst	HDA2	\$29.83	\$30.43	\$32.56
Help Desk Analyst	HDA3	\$36.96	\$37.72	\$40.36
Product Specialist	PS1	\$37.49	\$38.26	\$40.94
Product Specialist	PS2	\$43.09	\$43.98	\$47.06
Product Specialist	PS3	\$56.68	\$57.83	\$61.89
Product Specialist	PS4	\$71.49	\$72.95	\$78.06
Product Specialist	PS5	\$88.33	\$90.13	\$96.45
Programmer	PR1	\$31.96	\$32.61	\$34.89
Programmer	PR2	\$38.04	\$38.82	\$41.54
Programmer	PR3	\$48.19	\$49.17	\$52.61
Programmer	PR4	\$62.62	\$63.90	\$68.38
Programmer	PR5	\$74.68	\$76.21	\$81.54
Service Desk	SD2	\$24.09	\$24.58	\$26.30
Service Desk	SD3	\$26.04	\$26.57	\$28.43
Software Process Engineer	SPS1	\$35.02	\$35.74	\$38.24
Software Process Engineer	SPS2	\$38.94	\$39.73	\$42.52
Software Process Engineer	SPS3	\$52.92	\$54.00	\$57.78
System Administrator	SA1	\$32.10	\$32.75	\$35.05
System Administrator	SA2	\$35.43	\$36.15	\$38.68
System Administrator	SA3	\$49.79	\$50.80	\$54.36
System Administrator	SA4	\$66.58	\$67.95	\$72.69
System Specialist	SS1	\$31.10	\$31.73	\$33.95
System Specialist	SS2	\$32.94	\$33.61	\$35.96
System Specialist	SS3	\$42.39	\$43.25	\$46.27
Technical Architecture Specialist	TAS1	\$41.87	\$42.73	\$45.72
Technical Architecture Specialist	TAS2	\$47.62	\$48.60	\$52.00
Technical Architecture Specialist	TAS3	\$50.78	\$51.82	\$55.45
Video Conference Specialist	VCS1	\$46.33	\$47.77	\$51.12
Video Conference Specialist	VCS2	\$52.67	\$54.31	\$58.10
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 3 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$48.67
Business Analyst	BA2	\$61.96
Business Analyst	BA3	\$70.70
CADD/GIS Administrator	CGA1	\$42.67
CADD/GIS Administrator	CGA2	\$49.20
CADD/GIS Administrator	CGA3	\$73.13
Data Entry Operator	DE1	\$14.60
Data Entry Operator	DE2	\$15.95
Database Administrator	DBA1	\$42.18
Database Administrator	DBA2	\$46.49
Database Administrator	DBA3	\$62.27
Database Administrator	DBA4	\$75.38
Intern	INT1	\$15.39
Intern	INT2	\$17.96
Intern	INT3	\$23.09

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 3 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Program Manager	PM1	\$47.86
Program Manager	PM2	\$58.12
Program Manager	PM3	\$74.99
Program Manager	PM4	\$95.65
Quality Assurance Specialist	QAS1	\$37.83
Quality Assurance Specialist	QAS2	\$41.93
Quality Assurance Specialist	QAS3	\$55.19
Senior Architect	SAR1	\$99.98
Senior Business Subject Matter Expert	SME1	\$93.22
Senior Database Architect	SDA1	\$82.34
Senior Program Manager	SPM1	\$104.98
Team Lead	TL1	\$55.97
Team Lead	TL2	\$60.33
Technical Writer	TW1	\$27.12
Technical Writer	TW2	\$31.69
Technical Writer	TW3	\$35.74
Technical Writer	TW4	\$43.88
Telecom Engineer	TE1	\$36.70
Telecom Engineer	TE2	\$41.98
Telecom Engineer	TE3	\$49.55
Tester	Test1	\$33.98
Tester	Test2	\$39.27
Tester	Test3	\$45.72
Voice/Data Engineer	VDE1	\$34.27
Voice/Data Engineer	VDE2	\$39.76
Voice/Data Engineer	VDE3	\$47.85

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 4 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Architect	AR1	\$83.77	\$85.47	\$91.45
Functional Architect	FA1	\$36.84	\$37.60	\$40.23
Functional Architect	FA2	\$43.73	\$44.63	\$47.76
Functional Architect	FA3	\$51.64	\$52.69	\$56.37
Help Desk Analyst	HDA1	\$29.22	\$29.81	\$31.91
Help Desk Analyst	HDA2	\$31.85	\$32.51	\$34.78
Help Desk Analyst	HDA3	\$39.08	\$39.87	\$42.67
Product Specialist	PS1	\$39.58	\$40.39	\$43.21
Product Specialist	PS2	\$45.24	\$46.16	\$49.39
Product Specialist	PS3	\$58.49	\$59.68	\$63.86
Product Specialist	PS4	\$72.95	\$74.45	\$79.66
Product Specialist	PS5	\$89.62	\$91.45	\$97.86
Programmer	PR1	\$34.04	\$34.73	\$37.15
Programmer	PR2	\$40.12	\$40.94	\$43.80
Programmer	PR3	\$50.21	\$51.24	\$54.83
Programmer	PR4	\$64.41	\$65.72	\$70.33
Programmer	PR5	\$76.12	\$77.67	\$83.11
Service Desk	SD2	\$26.09	\$26.63	\$28.49
Service Desk	SD3	\$28.03	\$28.61	\$30.61
Software Process Engineer	SPS1	\$37.06	\$37.82	\$40.46
Software Process Engineer	SPS2	\$41.04	\$41.87	\$44.80
Software Process Engineer	SPS3	\$54.75	\$55.87	\$59.78
System Administrator	SA1	\$34.10	\$34.79	\$37.23
System Administrator	SA2	\$37.47	\$38.24	\$40.92
System Administrator	SA3	\$51.70	\$52.75	\$56.45
System Administrator	SA4	\$68.11	\$69.50	\$74.36
System Specialist	SS1	\$33.15	\$33.83	\$36.20
System Specialist	SS2	\$35.01	\$35.73	\$38.23
System Specialist	SS3	\$44.52	\$45.43	\$48.61
Technical Architecture Specialist	TAS1	\$44.00	\$44.90	\$48.04
Technical Architecture Specialist	TAS2	\$49.70	\$50.71	\$54.27
Technical Architecture Specialist	TAS3	\$52.66	\$53.74	\$57.50
Video Conference Specialist	VCS1	\$47.63	\$49.11	\$52.54
Video Conference Specialist	VCS2	\$53.50	\$55.16	\$59.02
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 4 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$50.88
Business Analyst	BA2	\$63.77
Business Analyst	BA3	\$72.39
CADD/GIS Administrator	CGA1	\$44.03
CADD/GIS Administrator	CGA2	\$50.48
CADD/GIS Administrator	CGA3	\$73.48
Data Entry Operator	DE1	\$15.87
Data Entry Operator	DE2	\$17.31
Database Administrator	DBA1	\$44.47
Database Administrator	DBA2	\$48.80
Database Administrator	DBA3	\$64.25
Database Administrator	DBA4	\$77.01
Intern	INT1	\$15.39
Intern	INT2	\$17.96
Intern	INT3	\$23.09

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 4 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Program Manager	PM1	\$50.38
Program Manager	PM2	\$60.37
Program Manager	PM3	\$77.24
Program Manager	PM4	\$98.06
Quality Assurance Specialist	QAS1	\$40.05
Quality Assurance Specialist	QAS2	\$44.20
Quality Assurance Specialist	QAS3	\$57.26
Senior Architect	SAR1	\$102.30
Senior Business Subject Matter Expert	SME1	\$93.88
Senior Database Architect	SDA1	\$84.29
Senior Program Manager	SPM1	\$105.57
Team Lead	TL1	\$58.03
Team Lead	TL2	\$62.32
Technical Writer	TW1	\$28.66
Technical Writer	TW2	\$33.14
Technical Writer	TW3	\$37.15
Technical Writer	TW4	\$45.23
Telecom Engineer	TE1	\$38.10
Telecom Engineer	TE2	\$43.35
Telecom Engineer	TE3	\$50.80
Tester	Test1	\$35.41
Tester	Test2	\$40.66
Tester	Test3	\$47.06
Voice/Data Engineer	VDE1	\$36.45
Voice/Data Engineer	VDE2	\$42.01
Voice/Data Engineer	VDE3	\$50.19

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 5 Affiliated</b>				
<b>Job Title</b>		<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Architect	AR1	\$92.60	\$94.49	\$101.10
Functional Architect	FA1	\$40.54	\$41.36	\$44.26
Functional Architect	FA2	\$47.98	\$48.96	\$52.38
Functional Architect	FA3	\$56.17	\$57.31	\$61.32
Help Desk Analyst	HDA1	\$32.01	\$32.66	\$34.95
Help Desk Analyst	HDA2	\$34.95	\$35.66	\$38.17
Help Desk Analyst	HDA3	\$42.93	\$43.80	\$46.86
Product Specialist	PS1	\$43.52	\$44.40	\$47.51
Product Specialist	PS2	\$49.49	\$50.51	\$54.05
Product Specialist	PS3	\$63.58	\$64.88	\$69.42
Product Specialist	PS4	\$80.54	\$82.17	\$87.92
Product Specialist	PS5	\$99.15	\$101.17	\$108.26
Programmer	PR1	\$37.36	\$38.11	\$40.78
Programmer	PR2	\$44.12	\$45.02	\$48.17
Programmer	PR3	\$54.63	\$55.74	\$59.64
Programmer	PR4	\$70.03	\$71.46	\$76.46
Programmer	PR5	\$84.07	\$85.78	\$91.78
Service Desk	SD2	\$28.58	\$29.16	\$31.20
Service Desk	SD3	\$30.71	\$31.34	\$33.54
Software Process Engineer	SPS1	\$40.77	\$41.60	\$44.52
Software Process Engineer	SPS2	\$45.09	\$46.02	\$49.24
Software Process Engineer	SPS3	\$59.51	\$60.73	\$64.98
System Administrator	SA1	\$37.51	\$38.28	\$40.96
System Administrator	SA2	\$41.22	\$42.07	\$45.02
System Administrator	SA3	\$56.23	\$57.37	\$61.39
System Administrator	SA4	\$75.12	\$76.65	\$82.01
System Specialist	SS1	\$36.37	\$37.11	\$39.72
System Specialist	SS2	\$38.45	\$39.23	\$41.98
System Specialist	SS3	\$48.75	\$49.75	\$53.23
Technical Architecture Specialist	TAS1	\$48.24	\$49.22	\$52.68
Technical Architecture Specialist	TAS2	\$54.09	\$55.19	\$59.05
Technical Architecture Specialist	TAS3	\$57.27	\$58.44	\$62.53
Video Conference Specialist	VCS1	\$51.16	\$52.73	\$56.43
Video Conference Specialist	VCS2	\$57.36	\$59.14	\$63.28
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 5 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$56.23
Business Analyst	BA2	\$70.21
Business Analyst	BA3	\$79.81
CADD/GIS Administrator	CGA1	\$47.58
CADD/GIS Administrator	CGA2	\$54.10
CADD/GIS Administrator	CGA3	\$78.58
Data Entry Operator	DE1	\$17.05
Data Entry Operator	DE2	\$18.60
Database Administrator	DBA1	\$48.88
Database Administrator	DBA2	\$53.46
Database Administrator	DBA3	\$69.84
Database Administrator	DBA4	\$84.97
Intern	INT1	\$15.39
Intern	INT2	\$17.96
Intern	INT3	\$23.09



Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 5 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Program Manager	PM1	\$56.51
Program Manager	PM2	\$67.28
Program Manager	PM3	\$85.93
Program Manager	PM4	\$109.99
Quality Assurance Specialist	QAS1	\$44.07
Quality Assurance Specialist	QAS2	\$48.60
Quality Assurance Specialist	QAS3	\$62.25
Senior Architect	SAR1	\$113.66
Senior Business Subject Matter Expert	SME1	\$102.43
Senior Database Architect	SDA1	\$91.71
Senior Program Manager	SPM1	\$115.26
Team Lead	TL1	\$63.08
Team Lead	TL2	\$67.72
Technical Writer	TW1	\$31.37
Technical Writer	TW2	\$36.32
Technical Writer	TW3	\$40.78
Technical Writer	TW4	\$49.92
Telecom Engineer	TE1	\$41.22
Telecom Engineer	TE2	\$46.85
Telecom Engineer	TE3	\$54.45
Tester	Test1	\$38.29
Tester	Test2	\$43.98
Tester	Test3	\$50.75
Voice/Data Engineer	VDE1	\$40.09
Voice/Data Engineer	VDE2	\$46.21
Voice/Data Engineer	VDE3	\$54.86

CN Number: N/A  
SRM Parent Number: N/A  
SAP/SRM Contract Number: 4400007198  
Change Number: 3  
Change Effective Date: 5/4/2012

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF GENERAL SERVICES  
HARRISBURG**

**For:** All Using Agencies  
**Subject:** Enterprise IT Staff Augmentation Contract  
**Contract Period:** Beginning 7/1/2010 and Ending 6/30/2013  
**Commodity Specialist:** Joseph Millovich (XT6)

**CHANGE SUMMARY:**

As stated within the terms and conditions of this contract, the Commonwealth is exercising its option to extend the Enterprise IT Staff Augmentation Contract for one (1) year. The new contract expiration date will be June 30, 2013.

Please find the signed Contract Renewal Letter along with an updated Skills Matrix and price sheet attached to this change notice.

The Commonwealth has assigned a new Commodity Specialist to manage the Enterprise IT Staff Augmentation Contract. All correspondence should be sent to Joseph Millovich. Please see the contact information below:

Joseph M. Millovich | Commodity Specialist  
Office of Administration | Bureau for Information Technology Procurement  
613 North Street, 5th Floor, Finance Building | Harrisburg, PA 17120  
phone: 717.214.3434 | fax: 717.214.6983  
email: [jmillovich@pa.gov](mailto:jmillovich@pa.gov) | web: <http://www.oit.state.pa.us>

ALL OTHER TERMS AND CONDITIONS OF THIS AGREEMENT NOT CHANGED BY THIS CHANGE NOTICE REMAIN AS ORIGINALLY WRITTEN.



May 2, 2012

SUBJECT: Renewal of Contract: 4400007198
Contract Title: Enterprise IT Staff Augmentation
Term of Renewal: July 1, 2012 - June 30, 2013

Dear Mr. Cooney:

The Commonwealth is exercising its option to extend the Enterprise IT Staff Augmentation between the Commonwealth of Pennsylvania and Computer Aid, Inc. The contract states in sections I-25 Term of Contract:

"The Commonwealth, at its sole option, may renew the contract for up to an additional three (3) years. The Commonwealth may exercise the renewal(s) in single or multiple year increments, at any time during the contact term. The Issuing Office will fix the Effective Date after the contract has been fully executed by the selected Offeror and by the Commonwealth and all approvals required by Commonwealth contracting procedures have been obtained."

The Commonwealth is renewing the contract for one (1) year. The new termination date will be June 30, 2013.

The renewal of this agreement includes a reduction in the MSP fee paid to Computer Aid. The MSP fee has been reduced from 6.9% to 6.56%

Please note, this contract has been assigned to PA Office of Administration. Future correspondence related to this contract should be addressed to me at the address set out below.

Joseph M. Millovich | Commodity Specialist |
Bureau of IT Procurement | Office of Administration |
613 North Street, 5th Floor Room 506, Finance Building | Harrisburg, PA 17120
email: jmillovich@pa.gov | phone: 717.214.3434 | fax: 717.214.6983

The Commonwealth requests your acknowledgement of the contract renewal, price reduction, and the assignment of the contract. Please confirm your acknowledgement by completing the bottom section of this letter and emailing a copy to me by close of business on Friday, May 4, 2012.

Thank you for your prompt response. If you have any questions, please do not hesitate to contact me.

Sincerely, [Redacted Signature]

Joe Millovich
Commodity Specialist

I acknowledge the extension of the above referenced contract for the above stated Term of Extension, the noted price reduction, and that all terms and conditions in the contract shall remain in full force and effect.

Yes [checked] No

Signature [Redacted Signature]

Title Managing Director

Date May 3, 2012

# **Pennsylvania Enterprise IT Staff Augmentation Services Contract**

## **Job Titles and Descriptions (Version 6)**

Please note: Version 6 includes the following titles, added to the contract since Version 5:

- Application Developer - Levels 1, 2, and 3
- Network Engineer - Levels 1, 2, and 3
- Technical Specialist - Levels 1, 2, 3, and 4

Application Developer .....	5
AD1 .....	5
AD2 .....	5
AD3 .....	5
Architect .....	5
AR1 .....	6
Business Analyst .....	6
BA1 .....	6
BA2 .....	6
BA3 .....	7
CADD/GIS Administrator .....	7
CGA1 .....	7
CGA2 .....	7
CGA3 .....	7
Data Entry Operator .....	7
DE1 .....	8
DE2 .....	8
Database Administrator .....	9
DBA1 .....	9
DBA2 .....	9
DBA3 .....	10
DBA4 .....	10
Functional Architect .....	10
FA1 .....	10
FA2 .....	11
FA3 .....	11
Help Desk Analyst .....	12
HDA1 .....	12
HDA2 .....	13
HDA3 .....	13
Intern .....	13
INT1 .....	13
INT2 .....	14
INT3 .....	14
Network Engineer .....	14
NE1 .....	14
NE2 .....	15
NE3 .....	15
Product Specialist .....	15
PS1 .....	15
PS2 .....	16
PS3 .....	16
PS4 .....	17
PS5 .....	17
Program Manager .....	17
PM1 .....	17
PM2 .....	18
PM3 .....	19
PM4 .....	19

Programmer .....	19
PR1 .....	19
PR2 .....	19
PR3 .....	20
PR4 .....	20
PR5 .....	21
Quality Assurance Specialist.....	21
QAS1 .....	21
QAS2.....	22
QAS3.....	22
Senior Architect.....	23
SAR1 .....	23
Senior Business Subject Matter Expert .....	24
SME1.....	24
Senior Database Architect.....	25
SDA1 .....	25
Senior Program Manager .....	25
SPM1.....	26
Service Desk.....	26
SD2 .....	26
SD3 .....	27
Software Process Engineer .....	27
SPS1 .....	27
SPS2 .....	28
SPS3 .....	28
System Administrator .....	28
SA1.....	28
SA2.....	29
SA3.....	29
SA4.....	30
System Specialist.....	30
SS1.....	30
SS2.....	31
SS3.....	31
Team Lead .....	32
TL1 .....	32
TL2 .....	33
Technical Architecture Specialist .....	33
TAS1 .....	33
TAS2 .....	34
TAS3 .....	35
Technical Specialist.....	35
TS1 .....	35
TS2.....	36
TS3.....	36
TS4.....	36
Technical Writer .....	36
TW1 .....	36
TW2.....	37

TW3.....	37
TW4.....	38
Telecom Engineer .....	38
TE1 .....	38
TE2.....	39
TE3.....	39
Tester .....	39
Test1 .....	39
Test2 .....	39
Test3 .....	40
Video Conference Specialist .....	40
VCS1 .....	40
VCS2 .....	41
Voice/Data Engineer .....	41
VDE1 .....	41
VDE2 .....	41
VDE3 .....	42

## Application Developer

The Application Developer will provide support to existing production applications and perform complex technical analysis, design, development, documentation, testing, deployment and implementation of new applications using existing and emerging platforms. This category includes web application and database development. This category won't likely be suitable for wireless application development as of release 6.0.

### AD1

Years of Relevant Experience:	Up to 3 years industry experience
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Reviews and understands the Application Team's work plan.</li> <li>• Provides status of work to Team Lead.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Engages in ongoing process improvement.</li> <li>• Detailed functional and process knowledge.</li> <li>• Utilizes deep modeling, design and coding skills.</li> <li>• Provides expertise in one or more database environments.</li> </ul>

### AD2

Years of Relevant Experience:	3 to 5 years industry experience
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in AD1 plus the following:</p> <ul style="list-style-type: none"> <li>• This is a professional level non-supervisory position which may require coordination of programming activities being conducted by the team</li> <li>• Supports team in modification of enhancements and changes to applications.</li> <li>• Leverages excellent written and verbal communication skills May coordinate activities of other application developers</li> <li>• Supports business process, problem analysis and consultation.</li> <li>• Processes open defect/maintenance tickets and correct technical errors.</li> </ul>

### AD3

Years of Relevant Experience:	More than 5 years industry experience
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in AD2 plus the following:</p> <ul style="list-style-type: none"> <li>• Proven track record of hands-on technical design and code work within large complex systems.</li> <li>• Proven hands-on technical work with a variety of technologies..</li> <li>• Able to make best practice recommendations based on past work.</li> <li>• Proven ability to present complex technical constructs to business and non-technical users.</li> <li>• Proven ability to collaborate with business users, project managers and technical architects.</li> </ul>

## Architect

The Architect has the ability to design, develop, and implement application infrastructure to provide reliable and scalable applications and systems to meet the organization's objectives and requirements. The Architect is familiar with a variety of the application technologies, environments, concepts,



methodologies, practices, and procedures. The Architect is also able to perform a variety of complicated tasks with minimal or no direct supervision. The Architect is experienced in defining systems and application architecture.

**AR1**

Years of Relevant Experience:	Up to 5 years software development and testing
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Proven experience with hands-on technical development work.</li> <li>• Able to coordinate with technical leads, business users and project managers.</li> <li>• Experience participating in development of standards and product recommendations.</li> <li>• Experience designing and architecting systems as a member of a design team.</li> <li>• Experience working through every phase of software development life cycle.</li> <li>• Strong verbal communication.</li> </ul>

**Business Analyst**

The Business Analyst is responsible for the set of tasks and techniques used to work as a liaison among stakeholders in order to understand the structure, policies, and operations of an organization, and to recommend solutions that enable the organization to achieve its goals.

**BA1**

Years of Relevant Experience:	Up to 4 years
Preferred Education:	4 year college degree or equivalent.
Role Description:	<ul style="list-style-type: none"> <li>• Experience conducting Facilitated Workshops for requirements analysis.</li> <li>• Experience creating workflows using formal notation such as the Business Process Modeling Notation (BPMN).</li> <li>• Knowledge of formal requirements gathering methodologies.</li> <li>• Experience developing Business Requirements - project initiation document, what the needed achievements will be, and the quality measures.</li> <li>• Experience developing Functional requirements - describe what the system, process, or product/service must do in order to fulfill the business requirements.</li> <li>• Experience developing User (stakeholder) requirements - are a very important part of the deliverables, the needs of the stakeholders will have to be correctly interpreted. This deliverable can also reflect how the product will be designed, developed, and define how test cases must be formulated.</li> <li>• Experience developing Quality-of-service (non-functional) requirements - are requirements that do not perform a specific function for the business requirement but are needed to support the functionality. For example: performance, scalability, quality of service (QoS), security and usability.</li> <li>• Experience developing Report Specifications - define the purpose of a report, its justification, attributes and columns, owners and runtime parameters.</li> <li>• Experience developing Requirements Traceability Matrix - a cross matrix for recording the requirements through each stage of the requirements gathering process.</li> <li>• Strong organization and writing skills. Experienced developing graphic representations of complex business processes.</li> </ul>

**BA2**

Years of Relevant Experience:	4 to 6 years
Preferred Education:	4 year college degree or equivalent.
Role Description:	All roles specified in BA1 plus additional work experience and job knowledge.

### BA3

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent and IIBA-certified Business Analyst.
Role Description:	All roles specified in BA1 plus additional work experience, job knowledge, and IIBA certification.

### CADD/GIS Administrator

The CADD/GIS Administrator (CGA) is responsible for providing direct support of various CADD/GIS software and hardware systems. The CGA will perform hardware and software installations, relocations, testing and routine maintenance.

#### CGA1

Years of Relevant Experience:	Up to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>Assists in troubleshooting CADD/GIS system hardware problems and works with the appropriate service and warranty vendors to make the necessary repairs and fixes.</li> <li>Tracks version upgrades and notifies proper parties of available updates to CADD/GIS Systems software.</li> <li>Assists with phone and online problem reporting and maintaining problem report records.</li> <li>Assists with ordering consumable supplies for the CADD/GIS Systems.</li> <li>Maintains current inventory of all hardware, software, upgrades and fixes for each site.</li> <li>Maintains configuration charts of current inventory.</li> <li>Maintains data backups and data archives and provides data retrieval from backup.</li> <li>Monitors system status and data integrity.</li> </ul>

#### CGA2

Years of Relevant Experience:	5 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA1 plus the following:</p> <ul style="list-style-type: none"> <li>Able to work independently.</li> <li>Demonstrates proven experience in troubleshooting with little supervision.</li> <li>Able to communicate status to managers and project sponsors.</li> <li>Assists in developing standards and direction for systems.</li> </ul>

#### CGA3

Years of Relevant Experience:	8 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA2 plus the following:</p> <ul style="list-style-type: none"> <li>Leads efforts to troubleshoot CADD/GIS system hardware and software problems.</li> <li>Leads team of CGAs developing software and hardware plans and solutions.</li> <li>Expertise in teaching/conveying technical and/or functional courses/concepts.</li> </ul>

### Data Entry Operator

For data entry projects that require manual key entry and/or data capture through scanning.

**DE1**

Years of Relevant Experience:	Up to 2 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> <li>• Comprehensive PC skills.</li> <li>• Able to follow written and spoken instructions.</li> <li>• Minimum of 25 wpm.</li> <li>• Able to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen.</li> <li>• Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform.</li> <li>• Able to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques.</li> <li>• Able to conduct basic data mining and data capture efforts.</li> <li>• Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP.</li> <li>• Key punch and verify records in specified format (ex. ASCII).</li> <li>• The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeros are not counted as keystrokes.</li> <li>• The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession.</li> <li>• Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis.</li> <li>• Pickup and delivery by contractor to be made on a weekly basis.</li> <li>• For key entry, required that a second individual completed 100% key verification to control errors.</li> <li>• Knowledge of imaging and visual display operating practices, procedures, and techniques.</li> <li>• Knowledge of arithmetic and numbering systems.</li> <li>• Able to operate equipment with speed and accuracy to ensure information is captured.</li> </ul>

**DE2**

Years of Relevant Experience:	2 to 4 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> <li>• Comprehensive PC skills.</li> <li>• Able to follow written and spoken instructions.</li> <li>• Minimum of 35 wpm.</li> <li>• Able to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen.</li> <li>• Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform.</li> <li>• Able to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques.</li> <li>• Able to conduct basic data mining and data capture efforts.</li> <li>• Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP.</li> <li>• Key punch and verify records in specified format (ex. ASCII).</li> <li>• The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeros are not counted as keystrokes.</li> </ul>

	<ul style="list-style-type: none"> <li>• The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession.</li> <li>• Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis.</li> <li>• Pickup and delivery by contractor to be made on a weekly basis.</li> <li>• For key entry, required that a second individual completed 100% key verification to control errors.</li> <li>• Knowledge of imaging and visual display operating practices, procedures, and techniques.</li> <li>• Knowledge of arithmetic and numbering systems.</li> <li>• Able to operate equipment with speed and accuracy to ensure information is captured.</li> </ul>
--	--

## Database Administrator

The Database Administrator is responsible for data analysis and database management. Database Administrators typically are involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Database Administrators have a range of skills and knowledge of the utilities and production tools used for data storage management to support the Application Team.

### DBA1

Years of Relevant Experience:	Up to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Skilled data dictionary analysis and design and data model analysis design.</li> <li>• Maintains central data repository.</li> <li>• Experience and knowledge in supporting application system development life cycle.</li> <li>• Responsible for data dictionary backup and recovery.</li> <li>• Responsible for definition of standards of data dictionaries.</li> <li>• May program dictionary analysis and maintenance software.</li> <li>• Performs performance tuning.</li> <li>• Monitors database performance and space requirements.</li> <li>• Schedules and monitors end of day data warehousing jobs.</li> <li>• Assists in coordinating software releases.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Able to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

### DBA2

Years of Relevant Experience:	3 to 4 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Business systems analysis and design experience.</li> <li>• Logical data modeling techniques.</li> <li>• Production environment Tools/Utilities.</li> <li>• Knowledgeable in data analysis and database management techniques.</li> <li>• Execution of all responsibilities with little direct supervision of Team Lead.</li> <li>• Administration and scripting experience in relative platform.</li> </ul>

	<ul style="list-style-type: none"> <li>• Supervise performance tuning.</li> <li>• Author shell scripts to perform back up, restore, and monitoring tasks.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>
--	--

### **DBA3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Highly skilled at database design, installations, conversions.</li> <li>• Responsible for database backup and recovery procedures, access security and database integrity, physical data storage design and data storage management.</li> </ul>

### **DBA4**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA3 plus the following:</p> <ul style="list-style-type: none"> <li>• Participates in Database Management System selection and maintains database performance.</li> <li>• Knowledge of various Database Management System products.</li> <li>• Provides status of work to Project Team Lead.</li> <li>• Engages in ongoing process improvement.</li> </ul>

## **Functional Architect**

The Functional Architect is the functional expert for an application, a defined set of applications or a portfolio of related applications. The Functional Architect is also responsible for bringing an understanding of the enterprise, business system and industry to the team(s) supporting or interfacing with the application. The primary responsibility of a Functional Architect is to provide expertise in the business process supported by the application, to prepare and review designs, to recommend improvements, and to provide guidance during the testing process. The Functional Architect helps the Programmers establish a clear understanding of the business functional requirements and either creates the functional designs to meet the requirements or reviews and approves the designs written by the Programmers. The Functional Architect must understand all aspects of their specific application(s), and the underlying business process. The more experienced Functional Architect plans, analyzes, and defines high- level software strategies and solutions. Contained in the experienced role is the task of coordinating with other Functional Architects to define technical requirements and long range plans for meeting customer requirements.

### **FA1**

Years of Relevant Experience:	2 to 4 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Analyzes, determines, and documents functional requirements.</li> <li>• Provides definition on how the applications will support business requirements.</li> <li>• Conducts impact analyses of business requirements on the system.</li> <li>• Works with Technical Architecture Specialist in defining software / hardware requirements.</li> <li>• Gathers and interprets user requirements into design specifications.</li> <li>• Participates in design of application.</li> <li>• Participates in design code and test reviews as appropriate.</li> </ul>

	<ul style="list-style-type: none"> <li>• Provides inputs to test planning.</li> <li>• Completes assigned tasks.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment.</li> <li>• Strong communication skills; both written and spoken</li> <li>• Acts as the application(s) functional expert; providing expertise in the business process supported by the application.</li> <li>• Provides detailed definition on how the applications will support business requirements.</li> <li>• Works with Technical Architecture Specialist in planning and delivering technical architecture.</li> <li>• Provides expertise for defining functional architecture and infrastructure for applications.</li> <li>• Plans and develops user interface strategy.</li> <li>• Directs and participates in design of application.</li> <li>• Interprets and understands user requirements/design specifications.</li> <li>• Provides detailed definition on how the applications will support business requirements.</li> <li>• Works with Technical Architecture Specialist in defining software / hardware requirements and in planning and delivering architecture.</li> <li>• Provides expertise for defining architecture and infrastructure for applications.</li> <li>• Reviews and understands team work plan</li> <li>• Identifies and tracks issues, risks and action items affecting own work and work of team.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>
--	--

**FA2**

Years of Relevant Experience:	4 to 5 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in FA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Provides functional expertise to planning organization as required.</li> <li>• Reviews tasks prior to migration into production as appropriate. Provide assistance in scheduling design work for Lead Functional Architect.</li> <li>• Coordinates the design and development of work estimates and act as the primary point of contact. Assist in managing and directing application team processes.</li> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems.</li> <li>• Works with client and Lead Functional Architect to identify direction of software.</li> <li>• Ensures business requirements are supported by the software.</li> <li>• Identifies and initiates continuous improvement opportunities.</li> <li>• Defines user interface strategies.</li> <li>• Understands specific business needs and overall business strategy of the business customer.</li> </ul>

**FA3**

Years of Relevant Experience:	Five plus years in particular application area
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	All roles specified in FA2 plus the following:



	<ul style="list-style-type: none"> <li>• Guides processes for Functional Architects and direct work planning and design activities.</li> <li>• Provides standard, well-structured work planning which defines scope, resources, commitments, quality, risk, tasks, and acceptance criteria.</li> <li>• Ensures that overall application designs remain within project scope.</li> <li>• Works with customer business units to understand their business processes.</li> <li>• Works with customer business units and client to identify direction of software.</li> <li>• Ensures business requirements are supported by the software.</li> <li>• Ensures goals for Functional Architects are being met and manage team commitments.</li> <li>• Analyzes, defines, and documents how the applications will support functional and business requirements.</li> <li>• Coordinates these efforts with Functional Architects.</li> <li>• Understands supporting/interfacing system applications.</li> <li>• Approves the determined need for new software/hardware.</li> <li>• Understands prioritization work based on business needs request/releases for work affecting an application.</li> <li>• Manages the accomplishment of delivery metrics, Service Level Agreements and other contractual obligations within areas of responsibility.</li> <li>• Sponsors coordination of the required skills, training, methodologies, and processes to ensure the success of team/project/program goals.</li> <li>• Coordinates and conducts project review meetings with Group Lead Functional Architects and Team Leads.</li> <li>• Communicates and resolves application interface issues with other Lead Functional Architects as needed.</li> <li>• Monitors and measures maintenance and development process effectiveness.</li> <li>• Communicates clearly the program/application goals, operational and organizational philosophies, and policies and procedures to the Functional Architects.</li> <li>• Communicates to team members the relationships between their work and assignments and the organizational and/ or program objectives.</li> </ul>
--	---

## Help Desk Analyst

The Help Desk Analyst provides Helpdesk Level 2 Support by performing the skills listed below.

### HDA1

Years of Relevant Experience:	1 to 3 years field experience
Preferred Education:	2 year associates degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Provides technical assistance, support, and advice to end users for hardware, software, and systems.</li> <li>• Provides hands-on technical assistance to business and technical users.</li> <li>• Investigates and resolves computer software and hardware problems of users.</li> <li>• Serves as a contact for level 1 support.</li> <li>• Serves as a contact for users having problems using computer software, hardware, and operating systems, and escalates as necessary.</li> <li>• Determines whether problem is caused by hardware, software, or system.</li> <li>• Answers questions, applying knowledge of computer software, hardware, systems, and procedures.</li> <li>• Talks with technical and non-technical co-workers to research problem and find solution.</li> <li>• Asks user with problem to use telephone and participate in diagnostic procedures, using diagnostic software or by listening to and following instructions.</li> <li>• Experienced with a variety of call-tracking software and systems.</li> <li>• Reads trade magazines and engages in independent study to maintain current</li> </ul>

	industry knowledge. <ul style="list-style-type: none"> <li>• Follow quality standards, and displays strong customer service skills.</li> <li>• Able to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>
--	--

### **HDA2**

Years of Relevant Experience:	3 to 5 years field experience
Preferred Education:	4 year college degree in field of specialty or equivalent education and experience combined
Role Description:	All roles specified in HDA 1 plus the following: <ul style="list-style-type: none"> <li>• Calls software and hardware vendors to request service regarding defective products.</li> <li>• Acts as a subject matter expert for one or more custom or COTS applications.</li> <li>• Talks to programmers to explain software errors or to recommend changes to programs.</li> <li>• May work as in-house consultant and research alternate approaches to existing software and hardware when standardized approaches cannot be applied.</li> <li>• Tests software and hardware to evaluate ease of use and whether product will aid user in performing work.</li> <li>• Write software and hardware evaluation and recommendations for management review.</li> <li>• Write or revise user-training manuals and procedures.</li> <li>• Develops training materials, such as exercises and visual displays.</li> <li>• Train users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.</li> </ul>

### **HDA3**

Years of Relevant Experience:	5 plus years field experience
Preferred Education:	4 year college degree in field of specialty
Role Description:	All roles specified in HDA 1 and 2 plus the following: <ul style="list-style-type: none"> <li>• Manage expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensure quality standards are followed.</li> <li>• Monitor the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Act as the escalation point for high priority support issues.</li> <li>• Able to make recommendations on policies on system use and services.</li> </ul>

## **Intern**

The Intern will assist team members with daily responsibilities as directed by his or her supervisor. Interns are not recruited through the standard Staff Augmentation process. They are recruited by the Technology Council of Central Pennsylvania through their TechQuest program, and selected by the agency.

### **INT1**

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Able to perform tasks as assigned by the direct supervisor.</li> <li>• Able to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>



**INT2**

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Able to develop organizational and communication skills.</li> <li>• Able to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge including experience with word processing software, and spreadsheet maintenance and development.</li> <li>• Must show willingness and ability to develop IT-related technical skills.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>

**INT3**

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Able to develop organizational and communication skills.</li> <li>• Able to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge including experience with word processing software, and spreadsheet maintenance and development.</li> <li>• Must show willingness and ability to develop IT-related technical skills.</li> <li>• Must show willingness and ability to develop an understanding of IT-related technologies and concepts.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>

**Network Engineer**

The Network Engineer is involved in the design and maintenance of both the hardware and software necessary for a computer network. The Network Engineer is a high-level technical analyst, specializing in Local Area Networks (LANs)/Wide Area Networks (WANs), TCP/IP, and server/network infrastructure.

**NE1**

Years of Relevant Experience:	2 to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Responsible for the installation, configuration and administration of network routers and switches.</li> <li>• Executes the disaster recovery/back up procedures and archiving procedures.</li> <li>• Manages security for servers.</li> <li>• Responsible for performance tuning, capacity planning, database administration, and fault management.</li> <li>• Coordinates efforts with vendors</li> <li>• Responsible for ensuring high priority issues are resolved in a timely manner.</li> <li>• Responsible for keeping the environment up and running.</li> <li>• Often times, responsible for identifying and reporting hardware problems.</li> <li>• Understands basic routing concepts.</li> <li>• Identifies and track issues, risks, and action items.</li> <li>• Resolves and/or assists in resolving issues.</li> <li>• Reviews, prioritizes, and researches service requests.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

## NE2

Years of Relevant Experience:	3 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in NE1 plus the following:</p> <ul style="list-style-type: none"> <li>• Solid understanding of networking/distributed computing environment concepts.</li> <li>• Understands principles of routing client/server programming.</li> <li>• Manages expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensures quality standards are followed.</li> <li>• Understands the business application of technical support and design in an application development environment.</li> <li>• Develops plans for disaster recovery/ back up and archiving.</li> <li>• Manages the daily operations of the systems management team to ensure service levels are being met.</li> <li>• Manages the systems management team's support issue and backlog.</li> <li>• Monitors the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Acts as the first level of escalation for high priority support issues.</li> </ul>

## NE3

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in NE2 plus the following:</p> <ul style="list-style-type: none"> <li>• Functions as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develops the technical infrastructure maintenance strategy.</li> <li>• Analyzes, determines and documents requirements in terms of system management needs and implements them.</li> </ul>

## Product Specialist

The Product Specialist is the expert for a technical development or execution environment product or set of products. The primary responsibility of a Product Specialist is to ensure the availability and facilitate the productive use of a product for Application Teams or end users. The Product Specialist may own part of a product, all of one, or several products depending on the nature of the product(s) and their use. The Product Specialist requires significant to expert experience and skills in the product supported. The Product Specialist will usually also have significant experience in the operating environment(s) (e.g., HP/UX, NT, MVS, etc.) on which the product is implemented. If the product is one that was internally developed, the supporting PS should also have most of the skills of a Programmer. The Product Specialist is responsible for collaborating with Technical Architecture Specialist, System Specialists, Programmers and vendors to ensure and enhance the use of the product and effect migration to new versions of a product.

## PS1

Years of Relevant Experience:	1 to 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Makes sound recommendations on functional and technical improvements to the product.</li> <li>• Analyzes the functional and technical impact of product planning decisions.</li> <li>• Develops appropriate functional and usability standards for products.</li> <li>• Tracks and document expected volume and type of use of the product.</li> <li>• Participates in product design reviews to verify that design meets quality standards</li> </ul>

	<p>and functional/technical requirements.</p> <ul style="list-style-type: none"> <li>• Performs impact analyses on production fixes and enhancements to establish priorities.</li> <li>• Provides basic product support and provide accurate and complete answers to detailed product questions in a timely manner.</li> <li>• Provides effective on-site product support as needed.</li> <li>• Accurately sets severity of identified defects.</li> <li>• Provides input to training and / or documentation materials regarding latest technical and functional design changes.</li> <li>• Documents all work for future reference.</li> <li>• Reviews the system test approach and conditions used as the basis for detailed test scenarios.</li> <li>• Follows quality standards.</li> <li>• Analytical and customer service skills.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Able to work in a team environment.</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	--

**PS2**

Years of Relevant Experience:	3 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Actively contributes as an expert or actual designer.</li> <li>• Coordinates product design reviews to verify that design meets quality standards and functional/technical requirements.</li> <li>• Provides accurate estimates for design and programming efforts for system changes and enhancements.</li> <li>• Coordinates enhancements to business and logical data models with data base administration to make the appropriate changes to the physical data model.</li> <li>• Confirms that technical architecture will support all changes required by product enhancements.</li> <li>• Effectively leads product tests and trials.</li> <li>• Identifies appropriate business examples to illustrate key concepts / features.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Applies specific expertise to ensure that products meet defined customer objectives.</li> <li>• Anticipates and resolve issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>

**PS3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Demonstrates expertise in teaching / conveying technical and / or functional courses / concepts.</li> <li>• Develops appropriate work programs / budgets and use to effectively schedule tasks / assignments.</li> </ul>

	<ul style="list-style-type: none"> <li>Identifies improvements to project standards to achieve high quality services / products.</li> </ul>
--	---

**PS4**

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS3 plus the following:</p> <ul style="list-style-type: none"> <li>Delivers support and design for industry specific applications that require integration with statewide systems or applications.</li> <li>Interacts with executive level business users or technical experts.</li> <li>May functions as a niche SME.</li> </ul>

**PS5**

Years of Relevant Experience:	9 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS4 plus the following:</p> <ul style="list-style-type: none"> <li>Responsible for functioning as the Technical SME on an enterprise-wide system.</li> <li>Responsible for implementations of products/services that involve significant Commonwealth and federal oversight.</li> <li>Provides direct technical expertise to Executive applications involving national security.</li> </ul>

**Program Manager**

The Program Manager directs, controls, administers, and regulates an enhancement or development program. The Program Manager is the individual ultimately responsible to the agency. The Program Manager's primary responsibility is to drive the entire effort from start to finish. The Program Manager must ensure that the program is completed on schedule and that the final product meets the business, technical, and established quality requirements. The difference between a PM1, PM2, PM3, and PM4 will depend on the size of the project, and the breadth and scope of the project.

**PM1**

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>Responsible for the development of estimates for the enhancement or development effort in planning, analysis, design, construction, testing, and implementation.</li> <li>Accountable for delivery of all work tasks identified in the program plan.</li> <li>Responsible for the capture and reporting of required program management metrics.</li> <li>Adjusts and revises estimates when necessary.</li> <li>Ensures all changes to scope follow processes and are documented.</li> <li>Ensures new estimates are approved by the client and agreed upon.</li> <li>Adjusts and revises estimates when necessary.</li> <li>Manages and tracks the program progress against the program plan.</li> <li>Monitors project milestones and phases to ensure the project is on schedule.</li> <li>Takes corrective actions if a project begins to slip its schedule.</li> <li>Prepares status reports on a periodic basis for program team, team leads, group leads, and program manager and appropriate stakeholders.</li> <li>Plans, organizes, prioritizes, and manages multiple work efforts across application teams.</li> <li>Develops the detailed program plan for the enhancement or development effort</li> <li>Accountable for the final program management evaluation review with stakeholders</li> </ul>

	<p>for approval upon program completion.</p> <ul style="list-style-type: none"> <li>• Responsible for tailoring and baseline of all program templates.</li> <li>• Accountable to schedule or monitor status reviews, peer reviews, program management inspections, and software quality assurance work product and process reviews with the appropriate designated resources.</li> <li>• Notifies team leads of project timelines, milestones, phases, work requests target dates, and approved executable work package.</li> <li>• Communicates and works with users and client as necessary.</li> <li>• Coordinates and presents proposals to agencies as necessary.</li> <li>• Analyzes and distributes reports on program metrics associated with work items related to improvement measures.</li> <li>• Ensures processes and activities are followed.</li> </ul>
--	--

**PM2**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PM1 plus the following:</p> <ul style="list-style-type: none"> <li>• Accountable for the approval and sign-off of the program plan with customer representatives, such as portfolio managers, and all affected program stakeholders.</li> <li>• Accountable for management of scope for the program and gaining agreement and approval of scope changes with customer representatives and affected stakeholders.</li> <li>• Builds and maintains relationships with key stakeholders and customer representatives.</li> <li>• Directs work planning and scheduling design work.</li> <li>• Manages and tracks the program progress against the program plan.</li> <li>• Serves as the primary point of contact for all program-related issues and resolution of issues.</li> <li>• Coordinates and present proposals to agencies as necessary.</li> <li>• Identifies and manages program risk and develops risk mitigation strategies, track to closure.</li> <li>• Ensures team leads adjust and revise estimates when necessary.</li> <li>• Anticipates issues and proactively address them. Resolve conflicts with sensitivity and tact.</li> <li>• Coordinates the establishment of program standards and program specific procedures with team leads.</li> <li>• Responsible for project compliance with standards and procedures.</li> <li>• Responsible for the capturing and reporting of required program management metrics.</li> <li>• Responsible for tailoring and baseline of all program templates.</li> <li>• Develops and facilitates achievement of program service commitments and performance metrics.</li> <li>• Ensures that tasks provide value and support the strategic direction of the program and meet service commitments; conduct reviews with agencies.</li> <li>• Accountable for the final program management evaluation review with stakeholders for approval upon program completion.</li> <li>• Communicates effectively with customers and software / hardware suppliers supporting the State as appropriate.</li> <li>• Identifies and tracks issues.</li> <li>• Balances workload with program members' capacity.</li> <li>• Communicates to team members how their work assignments relate to and help achieve program objectives.</li> <li>• Plans program specific training and orientation needs.</li> </ul>

### **PM3**

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PM2 plus the following: <ul style="list-style-type: none"> <li>Accountable for activities with excess delivery cycles of 8 to 12 months.</li> </ul>

### **PM4**

Years of Relevant Experience:	8 to 9 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PM3 plus the following: <ul style="list-style-type: none"> <li>Manages, coordinates, and establishes priorities for complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing.</li> <li>Designs project plans, which identify needs and define major tasks and milestones, based on scope, resources, budget, and personnel.</li> </ul>

## **Programmer**

The Programmer is responsible for analysis, design, coding, component and assembly testing of all application code. Programmers typically are involved in maintenance (including production support), enhancement and development work. Programmers have a range of skills and knowledge of the technologies. The Programmer works with the Functional Architect and Technical Architecture Specialist on an as needed basis to ensure that design and code meets customer requirements.

### **PR1**

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>Codes enhancement and development programs and/or required fixes to production problems using the functional and technical programming standards.</li> <li>Tests enhancement and development programs.</li> <li>Participates in structured code reviews / walkthroughs.</li> <li>Executes all required process steps.</li> <li>Creates and provide content for operational documentation to Technical Writers.</li> <li>Utilizes configuration management tools, design tools, debugging tools, and any other environment specific tools necessary to create, test, and implement an application.</li> <li>Researches problems before approaching the Team Lead or Functional Architect for assistance.</li> <li>Limited functional knowledge.</li> <li>Follows quality standards.</li> <li>Supports installation of application releases into production as directed.</li> <li>Communicates accurate and useful status updates.</li> <li>Able to work in a team environment.</li> <li>Complete assigned tasks.</li> <li>Strong communication skills; both written and spoken.</li> </ul>

### **PR2**

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PR1 plus the following:



	<ul style="list-style-type: none"> <li>• Analyzes and designs enhancements, development programs, and/or required fixes to production problems.</li> <li>• Designs applications to functional and technical programming standards.</li> <li>• Works with Functional Architects to gather and interprets user requirements into design specifications.</li> <li>• Develops system specifications and interfaces.</li> <li>• Determines time estimates and schedule for work.</li> <li>• Moderates functional and process knowledge.</li> <li>• Assists in managing and directing Application Team processes.</li> <li>• Coordinates work with other software developers on Application Teams.</li> <li>• Assists Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks.</li> <li>• Develops application designs in support of the systems specifications and interfaces, perhaps in conjunction with application or technical architects.</li> <li>• Operating System expertise sufficient to perform performance and tuning diagnostics.</li> <li>• Works with users to ensure that solutions meet business requirements.</li> <li>• Execution of all responsibilities with little direct supervision of Team Lead.</li> <li>• Generally aware of new developments in industry and process and has ability to apply them to work as appropriate.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>
--	---

**PR3**

Years of Relevant Experience:	6 to 7 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PR2 plus the following:</p> <ul style="list-style-type: none"> <li>• Plans all required process steps.</li> <li>• Reviews and understands the Application Team's work plan.</li> <li>• Provides status of work to Team Lead.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Engages in ongoing process improvement.</li> <li>• Detailed functional and process knowledge.</li> <li>• Utilizes deep modeling, design and coding skills.</li> <li>• Provides expertise in one or more database environments.</li> </ul>

**PR4**

Years of Relevant Experience:	8 to 9 years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR3 plus the following:</p> <ul style="list-style-type: none"> <li>• Converts scientific, engineering, and other technical problem formulations to formats that can be processed by computer.</li> <li>• Resolves symbolic formulations, prepares flowcharts and block diagrams, and encodes resultant equations for processing by applying extensive knowledge of branch of science, engineering, or advanced mathematics, such as differential equations or numerical analysis, and understanding of capabilities and limitations of computer.</li> <li>• This is a professional level non-supervisory position which may require coordination of</li> </ul>

	<p>programming activities being conducted by the team</p> <ul style="list-style-type: none"> <li>• Confers with other business and technical personnel to resolve problems of intent, inaccuracy, or feasibility of computer processing.</li> <li>• Works with necessary personnel to determine if modifications are necessary with interested personnel to determine necessity for modifications or enhancements.</li> <li>• Leverages excellent written and verbal communication skills to develop new business process and programming solutions as directed by business and technical stakeholders.</li> <li>• May coordinate activities of computer programmers.</li> </ul>
--	--

**PR5**

Years of Relevant Experience:	10 plus years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR4 plus the following:</p> <ul style="list-style-type: none"> <li>• Proven track record of hands-on technical design and code work within large complex systems.</li> <li>• Proven hands-on technical work with a variety of technologies.</li> <li>• Demonstrated technical expertise integrating a variety of diverse technical environments and cross-platform technologies.</li> <li>• Proven experience mentoring and performing supervisory functions for technical teams.</li> <li>• Able to make best practice recommendations based on past work.</li> <li>• Proven ability to present complex technical constructs to business and non-technical users.</li> <li>• Proven ability to collaborate with business users, project managers and technical architects.</li> </ul>

**Quality Assurance Specialist**

The Quality Assurance Specialist (QAS) is responsible for the design, pilot, and implementation of the software quality assurance review processes. The QAS Specialist will work with Application Teams during pre and post assessment periods. The QAS Specialist reports to the Quality Assurance Team Lead. For each phase end review the Quality Assurance Specialist is responsible to plan, schedule, execute, and document findings of the review. Quality Assurance Specialists must have a detailed understanding of processes which support the software development lifecycle. The Quality Assurance Lead is responsible for communicating with the State regarding the progress of the quality approach and a summary of the metrics, as well as managing the Quality Assurance Specialists.

**QAS1**

Years of Relevant Experience:	3 years software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assists in software activities in defined span of control for the organization.</li> <li>• Tracks and monitors process and work product improvement opportunities.</li> <li>• Collects, reviews, and evaluates the project’s required work products against standard work product templates.</li> <li>• Verifies that established measurement procedures are used and all required metrics are collected.</li> <li>• Responds to requests for information.</li> <li>• Coordinates work with others on team and across teams</li> <li>• Draft report of observations, minor and major non-compliance.</li> <li>• Develops quality standards.</li> <li>• Monitors progress of action item resolution activity and ensure appropriate internal stakeholders are aware of pending deadlines.</li> </ul>



	<ul style="list-style-type: none"> <li>• Conducts training courses with project teams on software quality review process.</li> <li>• Researches problems before approaching Quality Assurance Lead for assistance.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>
--	--

### **QAS2**

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Conducts software quality phase end review activities (work product and process) for each software project and produces the required quality assurance reports, as specified in the project's quality assurance plan.</li> <li>• Ensures the software development process followed by the project teams is compliant with approved tailored processes.</li> <li>• Reviews and checks project software development activities and the associated internal tasks required by the agencies as employed by the project and specified in the project plan.</li> <li>• Prepares preliminary software quality audit package for review before conduct of audit.</li> <li>• Defines quality standards.</li> <li>• Monitors progress of action item resolution activity and ensure appropriate stakeholders are aware of pending deadlines.</li> <li>• Assists in managing and improving quality assurance team processes.</li> <li>• Reviews and understands project team work plan.</li> <li>• Determines time estimates and schedule for software quality review work. Conduct reviews according to schedule.</li> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems, rather than reactive.</li> <li>• Identifies and tracks issues, risks and action items affecting own work and work of team.</li> <li>• Reports on progress of action item resolution and possible risk areas.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

### **QAS3**

Years of Relevant Experience:	7 years software development, testing and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews required work products to ensure compliance with approved tailored procedures and standards.</li> <li>• Reviews and checks software development activities and the associated internal tasks required as employed by the project and specified in the project plan.</li> <li>• Compares actual project procedures to the specified standards, procedures, and, if required, specific 3rd party contractual requirements.</li> <li>• Performs detailed reviews of interim and final tasks as appropriate.</li> <li>• Ensures process improvement opportunities are reviewed by appropriate contact to</li> </ul>

	<p>identify training needs of the organization.</p> <ul style="list-style-type: none"> <li>• Performs or manages the required software quality phase end reviews of work product and process for each software project and produce the required software quality reports, as specified in the project's software quality plan.</li> <li>• Develops and manages short and long-term plans and schedules for organization wide software quality needs.</li> <li>• Balances workload with team's capacity by managing the team's activities according to schedule and budgets.</li> <li>• Coordinates and procures the required skills and techniques required.</li> <li>• Obtains feedback from project teams regarding the overall effectiveness of processes and procedures – Forward to appropriate stakeholders and process owners.</li> <li>• Provides feedback to project teams regarding process/procedure improvement opportunities and other potential areas for improvement discovered during software quality activities.</li> <li>• Reports all software quality-revealed non-compliance.</li> <li>• Provides regular reports on the results of compliance reviews to the project team, project team leaders and management.</li> <li>• Reports on progress on action item resolution and possible risk areas.</li> <li>• Anticipates and resolves issues dealing with software quality.</li> <li>• Develops options and recommendations to assist teams in resolving issues.</li> <li>• Ensure action items are addressed and closed based on agreed dates and activities.</li> <li>• Ensure that defined processes are followed.</li> <li>• Communicate related improvement measures to the project team.</li> <li>• Obtain feedback from project teams regarding the overall effectiveness of software quality processes followed. Review with team and develop continuous improvement action plans. Report status to executive team.</li> <li>• Communicate and work with customers and other personnel as necessary.</li> <li>• Communicate clearly the team goals, organizational philosophies, and policies and procedures to the team.</li> <li>• Communicate to team members the relationship between their work assignments and the team and project objectives.</li> <li>• Lead efforts in developing and facilitating implementation of team goals and metrics.</li> </ul>
--	--

## Senior Architect

The Senior Architect is responsible for designing, developing, and implementing application infrastructure to provide highly-complex, reliable, and scalable applications and systems to meet the organization's objectives and requirements. Senior Architects are familiar with a variety of the application technologies, environments, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Senior Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They have proven experience defining systems and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SAR1

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Manages, organizes, and administers systems analysis and preparation of applications and operating systems programming to process data and solve problems by use of computers.</li> <li>• Establishes priorities and schedules, and oversees and reviews work of systems</li> </ul>

	<p>analysis personnel and programming personnel.</p> <ul style="list-style-type: none"> <li>• Reviews feasibility studies and time and cost estimates of new or revised systems.</li> <li>• Assists in the development of standards, procedures, and operating systems applications.</li> <li>• A combination of directly-related technical training and hands-on experience.</li> <li>• Works with stakeholders and management to ensure projects are completed on time and according to organization standards.</li> <li>• Consults with personnel in other information systems groups to coordinate activities.</li> <li>• Consults with management to clarify systems and programs intent, identify problems, suggest changes, and determine extent of application systems changes required.</li> <li>• Participates in developing a project plan and schedule with key milestones, contingency plans, workflow charts or diagrams, considering factors, such as resource requirements, computer storage capacity and speed, extent of peripheral equipment, and intended use of output data.</li> <li>• Manages conversion of workflow charts to language that can be processed by computer and entering of program codes and test data into computer.</li> <li>• Analyzes test runs on computer and supervises correction of coded program and input data.</li> <li>• Manages the revision of existing programs to increase operating efficiency or adapt to new requirements.</li> <li>• Compiles documentation of program development and subsequent revisions.</li> <li>• Trains subordinates in systems analysis, feasibility studies, programming, and program coding.</li> <li>• Prescribes standards for terms and symbols used to simplify interpretation of programs.</li> <li>• Collaborates with computer manufacturers and other users to develop new programming methods.</li> <li>• Prepares records and reports.</li> </ul>
--	--

## Senior Business Subject Matter Expert

The Senior Business Subject Matter Expert (SME) brings proven experience from related businesses or organizations as well as system integration and technology experience. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise and make recommendations on business and technical solutions based on hands-on experience solving similar business problems. They are able to utilize knowledge of theory, principles, or technology of specific discipline or field of specialization.

### **SME1**

Years of Relevant Experience:	More than 10 years
Preferred Education	4 year college degree in computer science or a related field with advanced study preferred; certifications specific to the field of project management.
Role Description	<ul style="list-style-type: none"> <li>• Consults with executive-level stakeholders to define business need or problem; conducts research, performs studies and surveys to obtain data; and analyzes problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.</li> <li>• Requires knowledge in computer programming and other related technical fields as well as extensive experience in a particular business or industry subject matter.</li> <li>• Conducts study or survey on need or problem to obtain data required for solution.</li> <li>• Analyzes data to determine solution, such as installation of alternate methods and procedures, changes in processing methods and practices, modification of machines or equipment, or redesign of products or services.</li> <li>• Advises client or department heads on alternate methods of solving need or problem, or recommends specific solution.</li> </ul>

	<ul style="list-style-type: none"> <li>• Requires experience providing consulting services to governmental entities.</li> <li>• May be designated according to field of business and technical specialization.</li> </ul>
--	---

## Senior Database Architect

The Senior Database Architect is responsible for designing, developing, and implementing infrastructure to provide highly-complex, reliable, and scalable databases to meet the organization's objectives and requirements. Database Architects are familiar with a variety of the database technologies, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Database Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They assist in defining system and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or issues, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SDA1

Years of Relevant Experience:	8 plus years of database experience
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Possesses extensive knowledge of one or more database systems, and is capable of hands-on work in all phases of database design and management.</li> <li>• Designs, develops, and implements infrastructure to provide highly-complex, reliable, and scalable database to meet the organization's objectives and requirements.</li> <li>• Analyzes organization's business requirements for database design, and implements changes to database as required.</li> <li>• Performs systems analysis on database, and resolves performance, capacity, and replication issues as necessary.</li> <li>• Provides detailed design and specification documentation, including flowcharts, for all aspects of the database.</li> <li>• Works with database analysts to develop methodologies, report views, queries, and table replications</li> <li>• Ensures that all the data is in the proper format.</li> <li>• Participates in the identification, prioritization, and development of technical initiatives and strategies.</li> <li>• Develops and maintains database standards and naming conventions.</li> <li>• Keeps up-to-date on emerging database architectures, technologies, and methodologies, and attends training classes as necessary.</li> </ul>

## Senior Program Manager

The Senior Program Manager is responsible for managing, coordinating, and establishing priorities for the complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing. Senior Program Managers are familiar with a variety of the project management methodologies and rely on experience and judgment to plan and accomplish goals. They have proven experience leading technology projects to successful implementation. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SPM1

Years of Relevant Experience:	10 plus years
Preferred Education:	4 year college degree in computer science or a related field; certifications specific to the field of project management.
Role Description:	<p>All roles specified in PM4 plus the following:</p> <ul style="list-style-type: none"> <li>• Requires proven success communicating verbally and in writing to multiple project stakeholders internal and external to the organization.</li> <li>• Determines project needs and acquires resources required for the success of the project.</li> <li>• Coordinates the development of new systems and/or applications projects, the modification of existing systems or applications, or changes in current methods or techniques.</li> <li>• Coordinates project performance with the other work of the affected department or departments.</li> <li>• Excludes those who do not have full time responsibilities for project management.</li> </ul>

### Service Desk

The Service Desk Analyzes and troubleshoots computer support problems and applies his or her understanding of computer software and hardware products and services to resolve user problems.

### SD2

Years of Relevant Experience:	0 to 3 years A+ certification preferred
Preferred Education:	Usually prefer two years of postsecondary training in field of specialty; may accept equivalent education and experience combined.
Role Description:	<ul style="list-style-type: none"> <li>• Receives telephone calls and e-mails from users having problems using computer software and hardware or inquiring how to use specific software, programming languages, electronic mail, or operating systems.</li> <li>• Ascertains the nature of problem, determine whether problem is caused by hardware such as modem, printer, cables, or telephone, and log in tracking system.</li> <li>• Escalates problems in accordance with defined procedures.</li> <li>• Assists users through problem solving steps</li> <li>• Uses technical databases to research problems, and talks with co-workers to research problem and find solution.</li> <li>• Tests software and hardware for troubleshooting and problem resolution.</li> <li>▪ Provides service and preventive maintenance activities on element exchange/baseline products (products with element exchange service and traditional maintenance philosophies; i.e., terminals, printers, personal computers, etc.).</li> <li>▪ Able to diagnose and detect correct equipment errors and repair products by replacing worn or broken parts, and making technical adjustments.</li> <li>▪ Makes appropriate use of reference publications and diagnostic aids in resolving technical problems.</li> <li>▪ Assists in coordination of changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>▪ Provides accurate and complete answers to general use and administrative environment questions in a timely manner.</li> <li>▪ Supports shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> <li>▪ Communicates accurate and useful status updates.</li> <li>▪ Manages and reports time spent on all work activities.</li> <li>▪ Follows quality standards.</li> <li>▪ Able to work in a team environment</li> <li>▪ Completes assigned tasks.</li> </ul>



	▪ Strong communication skills; both written and spoken.
--	---

### SD3

Years of Relevant Experience:	More than 3 years A+ certification preferred; additional certification may be required based on specific technologies.
Preferred Education:	4 year college degree or equivalent technical study; may accept equivalent education and experience combined.
Role Description:	All roles specified in SD2 plus the following: <ul style="list-style-type: none"> <li>• Tests software and hardware to evaluate ease of use and whether product will aid user in performing work.</li> <li>• Writes or revises training manuals and procedures.</li> <li>• Develops training materials, such as exercises and visual displays.</li> <li>• Trains users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.</li> <li>• Writes software and hardware evaluation and recommendation for management review.</li> <li>• Implements shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> </ul>

## Software Process Engineer

The Software Process Engineer is responsible for implementing and supporting a set of standard software engineering processes used by agencies. The Software Process Engineer participates in the entire life-cycle of software process improvement initiatives. This includes the planning, analysis, design, construction, testing, and implementation of new processes. The Software Process Engineer is responsible for identifying opportunities for improving existing processes and implementing appropriate solutions.

The Software Process Engineer is also responsible for supporting projects and individual Teams in the use and understanding of processes on an ongoing basis. The Software Process Engineer is responsible for collaborating with the Team Lead(s) and Program Managers to provide guidance to team members and facilitate continual software process improvement. The Software Process engineer must understand all aspects of the specific processes used by the Teams. The Software Process Engineer must also be familiar with industry process models and standards.

### SPS1

Years of Relevant Experience:	3 years in Computer Software development
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Facilitates the implementation of standard software engineering processes.</li> <li>• Identifies software development process improvement opportunities either independently or through working with projects and teams.</li> <li>• Assists in planning software process improvement initiatives.</li> <li>• Directs and participates in teams working on the analysis, design, construction, testing, and implementation of new processes.</li> <li>• Works with projects and teams to define the need for tailored processes and tools and assist in implementation, as appropriate.</li> <li>• Provides ongoing support to projects and teams in the use and understanding of the software processes.</li> <li>• Provides on-site support for teams on process related issues.</li> <li>• Provides assistance to the Software Process Engineer Lead in planning and scheduling activities.</li> <li>• Provides support in tracking and monitoring the success of process improvement initiatives.</li> <li>• Monitors and solicits feedback on the usability and functionality of implemented</li> </ul>

	<p>processes.</p> <ul style="list-style-type: none"> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and report time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	--

### **SPS2**

Years of Relevant Experience:	5 years in software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SPS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Facilitates the implementation of standard software engineering processes across agencies.</li> <li>• Determines time estimates and schedule for own work and resolve issues on a timely basis.</li> <li>• Identifies and tracks issues, risks and action items.</li> <li>• Determines process to support various initiatives.</li> <li>• Leads the development of content for process training and deliver process training as appropriate.</li> <li>• Coordinates with various teams about process improvement opportunities.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>

### **SPS3**

Years of Relevant Experience:	7 years total experience; 5 years in software development and testing.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in SPS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems.</li> <li>• Anticipates and resolves issues on a timely basis.</li> <li>• Communicates accurate and useful status as appropriate.</li> <li>• Demonstrates and promotes a focus on client service.</li> <li>• Communicates effectively with suppliers as appropriate.</li> <li>• Works with internal customers and others to identify direction of software process.</li> <li>• Identifies knowledge in a form that is reusable.</li> </ul>

## **System Administrator**

The System Administrator is responsible for server back up and security, along with performance tuning and capacity planning. System Administrators should possess an understanding of network and distributed computing concepts. This is accomplished by working with the Systems Management Team Lead to understand the scope of services to be provided and assessing the impact they will have on the technical infrastructure.

### **SA1**

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Familiarity with most basic system administrator tools and process; for example, can boot/shutdown a machine, add and remove user accounts, use back up programs,</li> </ul>

	<p>and maintain system database files.</p> <ul style="list-style-type: none"> <li>• Maintains the project servers.</li> <li>• Maintains the file and print capacity</li> <li>• Ensures that backups are performed as appropriate.</li> <li>• Acts as a front-line interface to users.</li> <li>• Accepts trouble reports and dispatch them to appropriate system administrators.</li> <li>• Able to write scripts in a particular administrative language.</li> <li>• Programming experience with any applicable language.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	--

### SA2

Years of Relevant Experience:	2 to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Responsible for operating and other system software.</li> <li>• Responsible for upgrading the operating and system software and keeping patches current.</li> <li>• Familiarity with fundamental networking/distributed computing environment concepts.</li> <li>• Able to do minimal debugging and modification of programs.</li> <li>• Executes the disaster recovery/back up procedures and archiving procedures.</li> <li>• Manages security for servers.</li> <li>• Responsible for performance tuning, capacity planning, database administration, and fault management.</li> <li>• Provides tier two support of the technical infrastructure.</li> <li>• Coordinating efforts with vendors if tier three support is required.</li> <li>• Responsible for ensuring high priority issues are resolved in a timely manner.</li> <li>• Responsible for keeping the environment up and running.</li> <li>• In many cases is responsible for identifying and reporting hardware problems.</li> <li>• Capable of writing purchase justifications.</li> <li>• Understands basic routing concepts.</li> <li>• Identifies and tracks issues, risks, and action items.</li> <li>• Resolves and/or assists in resolving issues.</li> <li>• Reviews, prioritizes, and researches service requests.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

### SA3

Years of Relevant Experience:	4 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Solid understanding of networking/distributed computing environment concepts.</li> <li>• Understands principles of routing client/server programming.</li> <li>• Manages expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensures quality standards are followed.</li> <li>• Understands the business application of technical support and design in an</li> </ul>



	<p>application development environment.</p> <ul style="list-style-type: none"> <li>• Works with the various Infrastructure teams and operations provider to identify the strategic direction of systems management activities.</li> <li>• Understands the design of consistent network-wide file system layouts</li> <li>• Maintains strong relationships with employees and various tier two and three support groups.</li> <li>• Develops plans for disaster recovery/ back up and archiving.</li> <li>• Manages the daily operations of the systems management team to ensure service levels are being met.</li> <li>• Manages the systems management team's support issue and backlog.</li> <li>• Monitors the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Acts as the first level of escalation for high priority support issues.</li> </ul>
--	--

**SA4**

Years of Relevant Experience:	6 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA3 plus the following:</p> <ul style="list-style-type: none"> <li>• Functions as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develops the technical infrastructure maintenance strategy.</li> <li>• Manages the system management resources.</li> <li>• Acts as a system's management expert.</li> <li>• Analyzes, determines, and documents requirements in terms of system management needs and implement them.</li> <li>• Identifies, approves, and prioritizes team projects.</li> <li>• Manages a large site or network.</li> <li>• Recommends policies on system use and services.</li> </ul>

**System Specialist**

The System Specialist is knowledgeable on the usage and support of a collection of development platforms or technical architectures, and products that run on those platforms. The primary responsibility of a System Specialist is to ensure the availability and facilitate the productive use of a development platform or a test environment for Application Teams or end users. The System Specialist may support one or several instances of a platform/environment, applying their skills directly to a platform/environment and/or leveraging their skills across multiple platforms/environment. The System Specialist may, especially for usage and support of a platform, be part of an Application Team using the architecture. The System Specialist requires experience and skills in the environment supported and in the operations and in common usage of products for the environment. The System Specialist are responsible for collaborating with Technical Architecture Specialist, Functional Architects, Programmers and vendors to coordinate and enhance the use of the platform and facilitate migration to new versions of the platform.

**SS1**

Years of Relevant Experience:	1 to 3 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assists in coordination of testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>• Makes recommendations on functional and technical improvements to the environment.</li> <li>• Participates in performance and volume analysis and design.</li> <li>• Participates in performance improvement activities. Identify and apply potential improvements related to the environment for an application.</li> </ul>

	<ul style="list-style-type: none"> <li>• Provides accurate and complete answers to general use and environment questions in a timely manner.</li> <li>• Provides effective on-site environment support as needed.</li> <li>• Accurately sets severity of identified defects.</li> <li>• Provides input to training and/or documentation materials regarding latest technical and functional design changes.</li> <li>• Ensures that all work is documented for future reference.</li> <li>• Follows quality standards.</li> <li>• Ensures effective and reliable backups are being performed and distributed properly.</li> <li>• Proactively addresses customer needs.</li> <li>• Tracks and anticipates volume and type of use of the environment.</li> <li>• Plans and implements shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> <li>• Basic scripting and programming skills, including languages that run on specified platform.</li> <li>• Analytical and customer service skills.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>
--	--

## SS2

Years of Relevant Experience:	3 to 5 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Plans and manages network operating system upgrades.</li> <li>• Actively participates in analyzing and evaluating emerging software and hardware technologies/standards.</li> <li>• Serves as a liaison between teams for network planning and connectivity.</li> <li>• Develops appropriate functional and usability standards for the environments.</li> <li>• Plans or assists in planning network environment, including supporting existing structure and enhancements.</li> <li>• Plans and coordinates testing changes, upgrades and new and standard products, ensuring systems will operate correctly in current and future environment.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application or Environment team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Analyzes the functional and/or technical impact of new product releases.</li> <li>• Advanced scripting and programming skills, including languages that run on specified platform.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and track issues, risks and action items.</li> </ul>

## SS3

Years of Relevant Experience:	5 plus years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Identifies opportunities for new and improved technologies/standards to be used in</li> </ul>

	<p>the organization.</p> <ul style="list-style-type: none"> <li>• Identifies, plans, and implements phase-out strategies for products and technologies.</li> <li>• Plans and coordinates testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>• Demonstrates expertise in teaching/conveying technical courses/concepts.</li> <li>• Assists in setting architecture direction and knowledge sharing.</li> <li>• Plans, organizes, prioritizes, and manages multiple work efforts the Application or Environment Teams.</li> <li>• Develops appropriate work programs and uses to effectively schedule tasks/assignments.</li> </ul>
--	--

## Team Lead

The Team Lead manages an Application Team to deliver services according to defined service level commitments owned by the Application Team. The Team Lead coordinates resources and work to deliver solutions to customers on time and within budget. The Team Lead is assigned responsibility and accountability for overseeing the successful completion of all work assigned to the Application Team. The Team Lead is a process expert within the Application Team, understanding the software development / maintenance processes and verifying process conformance. The Team Lead will monitor stability of production applications owned by the Application Team. The Team Lead assists Application Team members in development activities and reviews tasks as required. The Team Lead manages and updates progress towards Application Team objectives, assists Application Team members in resolving problems, and engages in personnel management and guidance to Application Team members. The Team Lead fosters a positive work environment by mentoring, supporting, and committing to the professional development of Application Team members. The Team Lead reports to the Group Lead or Program Manager, as appropriate. The difference between a TL1 and a TL2 will depend on the size of the project, and the breadth and scope of the project.

### TL1

Years of Relevant Experience:	4 to 5 years, and 1 to 2 years project management experience.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Monitors stability of production applications owned by Application Team.</li> <li>• Prepares estimates for maintenance and enhancement of existing applications and development of new applications.</li> <li>• Performs detailed reviews of interim and final tasks as appropriate.</li> <li>• Processes work requests; review, prioritize, and package.</li> <li>• Manages and reviews tasks of suppliers and other interfaces to the Application Team.</li> <li>• Conducts structured walk-throughs or inspections; manage issues to closure.</li> <li>• Develops and manages short and long-term plans and schedules.</li> <li>• Directs the development of accurate estimates for Application Team activities as required.</li> <li>• Balances workload with Application Teams capacity by managing the Application Teams activities according to schedule.</li> <li>• Manages the accomplishment of delivery metrics to support contractual obligations in the areas of service delivery and on time performance commitments and productivity improvement.</li> <li>• Ensures work remains within the agreed scope.</li> <li>• Tracks work plan baseline against results.</li> <li>• Coordinates/communicates with Group Leads and/or Program Manager to ensure initiatives are in accordance with agreed customer commitments as planned.</li> <li>• Proactively identifies and manages issues/risks affecting the project.</li> <li>• Communicates accurate and useful status to Group Lead and other management on a timely basis.</li> <li>• Identifies and initiates continuous improvements.</li> </ul>

	<ul style="list-style-type: none"> <li>• Instills commitment to quality, customer service, ownership, and teamwork.</li> <li>• Conducts post project wrap-ups.</li> <li>• Monitors and measures maintenance and development process effectiveness.</li> <li>• Ensures that defined processes are followed.</li> <li>• Manages expectations of the Application Teams internal and external customers.</li> <li>• Facilitates communication and knowledge sharing within the Application Teams.</li> <li>• Maintains awareness of new developments in industry and processes and apply as appropriate.</li> <li>• Develops and deepens understanding of system business requirements supported by the Application Team.</li> <li>• Communicates clearly the Application Team goals, organizational philosophies, and policies and procedures to the Application Teams.</li> <li>• Conducts structured walk-throughs or inspections; manage issues to closure.</li> </ul>
--	--

## **TL2**

Years of Relevant Experience:	5 plus years, and 2 to 3 years project management experience
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TL1 plus the following:</p> <ul style="list-style-type: none"> <li>• Manages the resolution of high severity production problems.</li> <li>• Manages and directs Application Team activities employing appropriate program management and planning principles.</li> <li>• Coordinates work with other Team Leads as appropriate.</li> <li>• Coordinates and procures the required skills and techniques required by the Application Team.</li> </ul>

## **Technical Architecture Specialist**

The Technical Architecture Specialist is the technical expert centered on a technology, technologies or a portfolio of applications. The Technical Architecture Specialist is the technologist who coordinates with other parties in setting the technical approach and direction and implementation for work. The Technical Architecture Specialist provides technical design expertise, defines what technical requirements are needed to support defined business requirements, participates in detailed design and code reviews, reviews system performance issues, reviews test plans, and provides technical guidance to the Application Team and Test Team members. The Technical Architecture Specialist is responsible for collaborating with the Team Lead(s) to coordinate project schedules, budgets, request management, and work authorization. The expert level Technical Architecture Specialist will interface with Executive Sponsors, Group Leads, and Lead Functional Architects to convey infrastructure requirements, plan, and schedule deployment of tasks, and resolve any issues that impact the deployment of the Application Delivery systems.

## **TAS1**

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Defines test plans and criteria for acceptance for the technical components of an application.</li> <li>• Ensures business requirements are supported by the technical architecture.</li> <li>• Assists in leading technical direction of software; coordinating and presenting proposals to Group Leads, Leads, and the client.</li> <li>• Defines and evaluates logical and physical data models.</li> <li>• Assists in development of overall system technical architecture - including software and hardware.</li> <li>• Defines test plans and criteria for acceptance for the technical components of an application.</li> </ul>

	<ul style="list-style-type: none"> <li>• Analyzes, determines, and documents technical requirements and change request impact analysis.</li> <li>• Participates in detailed design and product test execution as required.</li> <li>• Develops technical programming standards.</li> <li>• Ensures business requirements are supported by the technical architecture.</li> <li>• Conducts structured walk-throughs or inspections for technical areas; resolve issues.</li> <li>• Assists in defining technical programming standards.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> <li>• Performs integration of various architectures across multiple enterprises</li> <li>• Develops overall system technical architecture, including software and hardware.</li> <li>• Performs review of technical designs, code, and component test plans.</li> <li>• Resolves and/or assists in resolving cross application technical issues.</li> <li>• Conducts structured walk-throughs or inspections for technical areas; resolve issues.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>
--	--

**TAS2**

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Ensures consistency and completeness across data models.</li> <li>• Plans and delivers development architecture environments in coordination with the Environmental Support Specialist.</li> <li>• Assists in managing and directing team's technical architecture processes.</li> <li>• Provides assistance in scheduling design work for Lead Technical Architecture Specialist.</li> <li>• Develops and documents expert practices/ standards.</li> <li>• Possesses strong analysis, presentation, documentation, and quality assurance skills.</li> <li>• Analyzes, determines, and documents technical requirements and impact analysis for technical and development architectures.</li> <li>• Explains defect priorities and enhancement classifications to client and customer when needed.</li> <li>• Maintains awareness of new technological developments in industry and processes - implement concepts appropriately.</li> <li>• Leads or participates in setting the service levels for the application.</li> <li>• Defines overall system logical architecture.</li> <li>• Provides standard, well-structured work planning that defines scope, resources, milestones, quality, risk, tasks, and acceptance criteria.</li> <li>• Prepares contingencies, scenarios, scenario plans and action items to resolve issues.</li> <li>• Leads efforts in providing technical expertise, guidance, and training to the Application and Test Teams.</li> </ul>

### TAS3

Years of Relevant Experience:	5 plus years, and 1 to 2 years project management experience
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Communicates effectively with IT staff, client organization and software / hardware suppliers.</li> <li>• Leads efforts in designing technical strategy, direction and approach, technical architecture, data architecture, development architecture, performance tuning, performance and capacity analysis, technical standards, technical reliability and flexibility.</li> <li>• Designs and defines overall system technical architecture - including software and hardware within the framework and constraints of technical architecture.</li> <li>• Evaluates alternative designs.</li> <li>• Maintains control of specific tools and assets.</li> <li>• Owns the technical architecture for a portfolio of applications, including the interpretation and application of the technical architecture.</li> <li>• Plans, designs, develops, and/or executes of technical architecture.</li> <li>• Assists with the preparation of estimates for new technology applications and maintenance of existing applications as part of Service Management.</li> <li>• Provides experience in utilizing the project architecture. Acknowledged as highly competent in one or more technologies.</li> <li>• Communicates accurate and useful status reports and other management on a timely basis.</li> <li>• Coordinates and conducts project architecture, infrastructure review meetings, and portfolio review meetings with Group Lead, Lead Functional Architects, and Team Leads.</li> <li>• Integrates issues and identifies impact.</li> <li>• Communicates and resolves application interface issues.</li> <li>• Communicates to team members the relations between their work assignments and the organizational and/ or program strategy, objectives, business and technology needs of the application / system.</li> <li>• Shares knowledge across teams with both similar and non-similar applications, specifically focusing on Technical Architecture</li> <li>• Interprets and communicates technical architecture to the Technology Application Architecture Team(s).</li> </ul>

## Technical Specialist

The Technical Specialist is a senior level resource with specialized knowledge and experience in a specific technology such as SharePoint development or an SAP specialist. The Technical Specialist has an overall knowledge and understanding of application development and architecture that serves as a strong base for technical expertise in a specific product or program.

### TS1

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Demonstrates expertise in conveying technical and functional concepts for a specific technical specialty.</li> <li>• Identifies improvements to project standards to achieve high quality services/ products.</li> <li>• Able to identify best practices and standards for the use of the product.</li> </ul>



### **TS2**

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in TS1 plus the following: <ul style="list-style-type: none"> <li>• Delivers support and design for industry specific applications that require integration with statewide systems or applications.</li> <li>• Interacts with executive level business users or technical experts.</li> <li>• May function as a niche technical SME.</li> </ul>

### **TS3**

Years of Relevant Experience:	8-10 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in TS2 plus the following: <ul style="list-style-type: none"> <li>• Advanced experience in the required technical subject matter.</li> </ul>

### **TS4**

Years of Relevant Experience:	More than 10 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in TS3 plus the following: <ul style="list-style-type: none"> <li>• Proven experience with a technical specialty across large and complex implementations and systems</li> </ul>

## **Technical Writer**

The Technical Writer develops and maintains user and technical documentation and project process documentation for Application Teams. Technical Writer understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. The experienced Technical Writer 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 within their Tower.

### **TW1**

Years of Relevant Experience:	Up to 2 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Develops, enhances, and maintains user documentation for multiple applications including documentation required for the operations provider.</li> <li>• Develops on-line source documentation as appropriate.</li> <li>• Maintains documentation libraries and subscription lists.</li> <li>• Identifies, creates, revises, and maintains documentation and templates needed by the Application Teams.</li> <li>• Ensures appropriate control access/use of documentation materials.</li> <li>• Maintains application and user documentation.</li> <li>• Ensures messages and terminology is consistent across all written materials.</li> <li>• Researches and completes documentation service requests.</li> <li>• Communicates and works with customers and other Client Telecommunications personnel as necessary.</li> <li>• Works with Application Team members to enhance their understanding of end-user and technical documentation.</li> <li>• Communicates accurate and useful status updates.</li> </ul>



	<ul style="list-style-type: none"> <li>• Manages and reports time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

**TW2**

Years of Relevant Experience:	2 to 4 years.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW1 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews and prioritizes documentation service requests.</li> <li>• Determines procedures for use of on-line documentation tools and version control documentation as appropriate.</li> <li>• Assists or guides other Technical Writer as needed to develop and maintain user and technical documentation for their assigned applications.</li> <li>• Educates both business and technical groups on the essential need for developing and using standard documentation for all processes.</li> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems, rather than reactive.</li> <li>• Researches problems before approaching Lead Technical Writer or Team Lead for assistance.</li> <li>• Assists the Application Team Lead in monitoring budget by providing estimated-time-to-complete and actuals for assigned tasks.</li> <li>• Identifies and makes recommendations around documentation and templates needed by the Application Teams.</li> <li>• Works with users and other State personnel to ensure that the solutions meet State business requirements.</li> <li>• Identifies and initiates continuous improvement opportunities.</li> <li>• Directs the development of accurate estimates for documentation requests/activities as required</li> <li>• Develops options and recommendations to assist documentation team members in resolving issues.</li> <li>• Leads efforts in developing and facilitating implementation of the Documentation team goals and metrics.</li> <li>• Develops workable, practical, measurable work plans defining activities, schedules and tasks with Team Leads and the Lead Technical Writer</li> <li>• Reviews and understands the Application Teams workplan.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>

**TW3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW2 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews and approves procedures for use of on-line documentation tools as appropriate.</li> <li>• Identifies business and technical documentation needs not currently addressed.</li> <li>• Manages Technical Writer.</li> <li>• Owns documentation libraries and subscription lists.</li> </ul>

	<ul style="list-style-type: none"> <li>• Promotes the need for developing and using standard documentation for all processes within the organization.</li> <li>• Performs detailed reviews of interim and final tasks as appropriate.</li> <li>• Oversees processing of service requests.</li> <li>• Manages, deploys, and schedules Technical Writer activities.</li> <li>• Develops and manages short and long-term documentation plans and schedules.</li> <li>• Understands work requests/needs within Application Teams</li> <li>• Manages the accomplishment of delivery metrics in support of contractual obligations in the areas of service delivery, on time performance.</li> <li>• Works with Team Leads and Group Leads to set documentation goals.</li> </ul>
--	---

### **TW4**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW3 plus the following:</p> <ul style="list-style-type: none"> <li>• Ensures work remains within the agreed project scope.</li> <li>• Coordinates work with other Lead Technical Writers as appropriate.</li> <li>• Coordinates and procure the required skills and techniques required by the Application Teams for documentation needs.</li> <li>• Communicates accurate and useful status reports to Group Lead and other management on a timely basis.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Manages expectations of the Technical Writers' internal and external customers.</li> <li>• Defines documentation quality standards as needed.</li> <li>• Conducts post project reviews and quality assessments.</li> <li>• Ensures that defined processes are followed.</li> <li>• Communicates related improvement measures to the team.</li> <li>• Communicates clearly to Technical Writers their goals, organizational philosophies, policies and procedures.</li> </ul>

## **Telecom Engineer**

The Telecom Engineer configures and installs hardware, wiring, and specialized equipment according to local building and electrical codes. The Telecom Engineer may also be responsible for the end-to-end installation of cable, wiring, and related equipment. The Telecom Engineer typically works closely with facilities/construction managers and site-based project managers. The Telecom Engineer should be able to accurately estimate the time and materials needed for tasks assigned. It is not uncommon for the Telecom Engineer to supervise a team of people and coordinate activities with other construction teams.

### **TE1**

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> <li>• Ensures proper connectivity from site-to-site and internal to facility.</li> <li>• Experience with CAT5, Romex, and similar cables/wiring.</li> <li>• Pulls cable and ensures adherence to all building codes.</li> <li>• Escalates construction and installation problems to the construction/integration manager, as needed.</li> <li>• Prepares all job-related paperwork.</li> <li>• Closes out work authorization when equipment is in service.</li> </ul>

## TE2

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE1 plus the following:</p> <ul style="list-style-type: none"> <li>• Inspects customer premises to ascertain available space for equipment installation</li> <li>• Determines the type and quantity of equipment that can be installed to provide requested communication facilities.</li> <li>• Creates floor plan of equipment arrangement for customer or architect approval.</li> <li>• Prepares cost estimate for equipment and installation and submit data to management for authorization to proceed.</li> <li>• Orders equipment and prepare installation specifications.</li> <li>• Monitors progress of installation to ensure facilities are ready on specified date.</li> </ul>

## TE3

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE2 plus the following:</p> <ul style="list-style-type: none"> <li>• Leads full integration teams and interact with large infrastructure teams.</li> <li>• Acts as telecommunications interface to outside vendors and construction manager.</li> <li>• Directs activities related to the selection and installation of telephone facilities and special equipment on premises to meet customer's communication requirements.</li> </ul>

## Tester

The Tester is a member of a team which plans, constructs, and executes product tests, system tests, unit tests, load tests, volume tests, network tests as well as works with others for release control processes. The more experienced Tester manages, plans, constructs, and executes tests and integrates with release control process.

### Test1

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Creates test models for product test and release control (plans, data, and scripts).</li> <li>• Conducts structured walk-throughs</li> <li>• Executes assembly or product tests.</li> <li>• Meets time estimates for assigned tasks.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>

### Test2

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test1 plus the following:</p> <ul style="list-style-type: none"> <li>• Defines product test plans and criteria for acceptance.</li> <li>• Develops, updates, and maintains testing standards and procedures.</li> <li>• Resolves testing process questions / issues.</li> <li>• Assists in the planning, creation, and control of the test environments.</li> </ul>

	<ul style="list-style-type: none"> <li>• Conducts inspections; resolve issues.</li> <li>• Coordinates and executes assembly or product tests with the Test Team, Application Team and the Program Manager.</li> <li>• Assists Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks.</li> <li>• Works with Test Team members to enhance their testing skills and build technical and business knowledge.</li> <li>• Updates and tests release installation procedures.</li> <li>• Generally aware of new developments in industry and processes and ability to apply to work as appropriate.</li> <li>• Determines time estimates and schedule for work efforts.</li> <li>• Defines and utilizes entry / exit criteria for testing.</li> <li>• Schedules the design of structured walk-throughs or inspections; resolve issues.</li> <li>• Works with users to ensure that solutions meet business requirements.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks, and action items.</li> </ul>
--	--

**Test3**

Years of Relevant Experience:	4 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test2 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews and understands the Test Team work plan.</li> <li>• Assists in managing and directing Test Team processes.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Test and/or Application Teams.</li> <li>• Develops contingency plans as necessary.</li> <li>• Researches problems before approaching the Team Lead or Test Team Lead for assistance.</li> <li>• Assists or guides Testers as needed.</li> <li>• Develops understanding of system business requirements supported by the Test team</li> <li>• Assists Application Teams to plan and execute component and assembly tests.</li> <li>• Participates in assembly or product test execution as required.</li> </ul>

**Video Conference Specialist**

The Video Conference Specialist (VCS) provides video and photograph production support by operating a variety of film, sound-reproducing equipment, slide, and video equipment.

**VCS1**

Years of Relevant Experience:	Up to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Maintains equipment in working condition.</li> <li>• Makes minor adjustments and repairs to equipment</li> <li>• Notifies maintenance personnel when correction of major malfunction is required.</li> <li>• Positions, installs, connects, and repairs equipment.</li> <li>• Familiar with fundamental networking/distributed computing environment concepts.</li> <li>• Troubleshoots network issues, systems, and applications to identify and correct malfunctions and other operational difficulties.</li> <li>• Investigates user problems, identifies their source, determines possible solutions, tests and implements solutions</li> </ul>

	<ul style="list-style-type: none"> <li>• Ensures high priority issues are resolved in a timely manner.</li> <li>• Excellent communication skills.</li> </ul>
--	--

### VCS2

Years of Relevant Experience:	6 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in VCS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Coordinates equipment operation with material presented, according to notations in script or instructions of speaker.</li> <li>• Advises speakers and presenters on alternative media.</li> <li>• Meets with department heads, managers, supervisors, vendors, and others, to solicit cooperation and resolve problems.</li> <li>• Actively participates in analyzing and evaluating emerging technologies/standards.</li> <li>• Evaluates and/or recommend purchases of network hardware, software, and peripheral equipment.</li> <li>• Acts as the first level of escalation for high priority support issues.</li> <li>• Functions as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develops the technical maintenance strategy.</li> <li>• Analyzes, determines, and documents requirements in terms of system management needs and implement them.</li> <li>• Identifies, approves, and prioritizes team projects.</li> <li>• Mentors and supervises other team members.</li> </ul>

## Voice/Data Engineer

The Voice/Data Engineer directs and participates in all activities related to the selection and installation of telephone facilities and special on-premises equipment that will meet the customer's communication requirements. The Voice/Data Engineer is responsible for all technology and connectivity involving telecommunications and data networks. The Voice/Data Engineer will typically specialize in telephony and data interfaces and systems that have proprietary functions within the communications area of a corporation/business. General wiring excluded, the Voice/Data Engineer ensures that any specialized conduit or wiring is properly deployed and installed according to code. The Voice/Data Engineer is also an expert in audio/visual, teleconferencing, and voice mail equipment. Often times, the Voice/Data Engineer is specialized or is certified in a particular piece of equipment.

### VDE1

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> <li>• Ensures proper connectivity of voice and data services and technologies.</li> <li>• Interacts and work with Telecom Engineer, Integration Engineer, or Project Manager.</li> <li>• Prepares all job-related paperwork</li> <li>• Closes out work authorization when equipment is in service.</li> </ul>

### VDE2

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE1 plus the following:</p> <ul style="list-style-type: none"> <li>• Prepares equipment floor plan for customer or architect approval.</li> <li>• Determines telephone, data services/components, and audio visual equipment placement within facility.</li> </ul>

	<ul style="list-style-type: none"> <li>• Acts as installer of equipment for data/voice or Audio visual use.</li> <li>• Installs, tests, configures, and train users on products and equipment.</li> <li>• Supports systems and products associated with telecommunications/telephone and data within a facility or department.</li> </ul>
--	---

**VDE3**

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE2 plus the following:</p> <ul style="list-style-type: none"> <li>• Familiar with at least one type of equipment or service that is highly specialized.</li> <li>• Prepares cost estimate for equipment and installation and submit data to management for authorization to proceed with job.</li> <li>• Orders equipment and prepare installation specification.</li> <li>• Monitors installation progress to ensure that the facilities are ready on projected date.</li> <li>• Leads a team of installers and junior Voice/Data Engineers.</li> </ul>

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

Area #1	Area #2	Area #3	Area #4	Area #5
Bedford County	Adams County	Beaver County	Allegheny County	Chester County
Clearfield County	Armstrong County	Butler County	Berks County	Delaware County
Forest County	Blair County	Cameron County	Bucks County	Montgomery County
Jefferson County	Bradford County	Clarion County	Centre County	Philadelphia County
Juniata County	Cambria County	Elk County	Cumberland County	
Perry County	Carbon County	Erie County	Dauphin County	
Somerset County	Clinton County	Fulton County	Lehigh County	
Susquehanna County	Columbia County	Greene County	Montour County	
	Crawford County	Indiana County	Wyoming County	
	Fayette County	Lackawanna County		
	Franklin County	Lancaster County		
	Huntingdon County	Lawrence County		
	Lycoming County	Lebanon County		
	Mc Kean County	Luzerne County		
	Mercer County	Monroe County		
	Mifflin County	Northampton County		
	Pike County	Northumberland County		
	Schuylkill County	Potter County		
	Snyder County	Sullivan County		
	Tioga County	Union County		
	Warren County	Venango County		
	Wayne County	Washington County		
		Westmoreland County		
		York County		



Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 1 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Application Developer	AD1	\$60.19	\$61.42	\$65.72
Application Developer	AD2	\$66.16	\$67.52	\$72.25
Application Developer	AD3	\$71.03	\$72.48	\$77.55
Architect	AR1	\$81.82	\$83.49	\$89.33
Functional Architect	FA1	\$34.42	\$35.12	\$37.58
Functional Architect	FA2	\$41.13	\$41.98	\$44.93
Functional Architect	FA3	\$49.19	\$50.20	\$53.72
Help Desk Analyst	HDA1	\$26.93	\$27.48	\$29.40
Help Desk Analyst	HDA2	\$29.52	\$30.11	\$32.22
Help Desk Analyst	HDA3	\$36.56	\$37.30	\$39.91
Network Engineer	NE1	\$47.42	\$48.39	\$51.78
Network Engineer	NE2	\$53.78	\$54.88	\$58.71
Network Engineer	NE3	\$60.47	\$61.70	\$66.02
Product Specialist	PS1	\$37.08	\$37.84	\$40.48
Product Specialist	PS2	\$42.60	\$43.48	\$46.52
Product Specialist	PS3	\$56.18	\$57.33	\$61.34
Product Specialist	PS4	\$71.02	\$72.47	\$77.54
Product Specialist	PS5	\$87.67	\$89.46	\$95.71
Programmer	PR1	\$31.63	\$32.27	\$34.53
Programmer	PR2	\$37.61	\$38.37	\$41.06
Programmer	PR3	\$47.58	\$48.55	\$51.96
Programmer	PR4	\$62.04	\$63.31	\$67.75
Programmer	PR5	\$74.18	\$75.69	\$81.00
Service Desk	SD2	\$23.84	\$24.32	\$26.02
Service Desk	SD3	\$25.77	\$26.29	\$28.13
Software Process Engineer	SPS1	\$34.64	\$35.35	\$37.81
Software Process Engineer	SPS2	\$38.50	\$39.28	\$42.03
Software Process Engineer	SPS3	\$52.44	\$53.51	\$57.27
System Administrator	SA1	\$31.75	\$32.40	\$34.66
System Administrator	SA2	\$35.04	\$35.75	\$38.26
System Administrator	SA3	\$49.25	\$50.26	\$53.78
System Administrator	SA4	\$66.16	\$67.51	\$72.24
System Specialist	SS1	\$30.76	\$31.39	\$33.59
System Specialist	SS2	\$32.59	\$33.25	\$35.57
System Specialist	SS3	\$41.89	\$42.75	\$45.74
Technical Architecture Specialist	TAS1	\$41.39	\$42.24	\$45.19
Technical Architecture Specialist	TAS2	\$47.04	\$47.99	\$51.35
Technical Architecture Specialist	TAS3	\$50.31	\$51.33	\$54.92
Technical Specialist	TS1	\$74.23	\$75.74	\$81.05
Technical Specialist	TS2	\$78.17	\$79.77	\$85.35
Technical Specialist	TS3	\$84.73	\$86.45	\$92.50
Technical Specialist	TS4	\$101.68	\$103.74	\$111.00
Video Conference Specialist	VCS1	\$45.28	\$46.67	\$49.94
Video Conference Specialist	VCS2	\$51.55	\$53.15	\$56.88
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 1 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$48.12
Business Analyst	BA2	\$61.57
Business Analyst	BA3	\$70.27

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 1 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$41.51
CADD/GIS Administrator	CGA2	\$47.85
CADD/GIS Administrator	CGA3	\$71.24
Data Entry Operator	DE1	\$14.49
Data Entry Operator	DE2	\$15.78
Database Administrator	DBA1	\$41.71
Database Administrator	DBA2	\$45.96
Database Administrator	DBA3	\$61.72
Database Administrator	DBA4	\$74.89
Intern	INT1	\$15.34
Intern	INT2	\$17.90
Intern	INT3	\$23.02
Program Manager	PM1	\$45.98
Program Manager	PM2	\$55.87
Program Manager	PM3	\$72.13
Program Manager	PM4	\$93.50
Quality Assurance Specialist	QAS1	\$37.40
Quality Assurance Specialist	QAS2	\$41.45
Quality Assurance Specialist	QAS3	\$54.67
Senior Architect	SAR1	\$96.23
Senior Business Subject Matter Expert	SME1	\$90.38
Senior Database Architect	SDA1	\$81.45
Senior Program Manager	SPM1	\$101.80
Team Lead	TL1	\$55.45
Team Lead	TL2	\$59.80
Technical Writer	TW1	\$26.38
Technical Writer	TW2	\$30.82
Technical Writer	TW3	\$34.76
Technical Writer	TW4	\$43.05
Telecom Engineer	TE1	\$35.72
Telecom Engineer	TE2	\$40.83
Telecom Engineer	TE3	\$48.17
Tester	Test1	\$33.08
Tester	Test2	\$38.22
Tester	Test3	\$44.49
Voice/Data Engineer	VDE1	\$33.90
Voice/Data Engineer	VDE2	\$39.32
Voice/Data Engineer	VDE3	\$47.30

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 2 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Application Developer	AD1	\$60.63	\$61.88	\$66.22
Application Developer	AD2	\$66.73	\$68.08	\$72.84
Application Developer	AD3	\$71.67	\$73.13	\$78.25
Architect	AR1	\$82.67	\$84.35	\$90.27
Functional Architect	FA1	\$34.55	\$35.25	\$37.72
Functional Architect	FA2	\$41.31	\$42.16	\$45.12
Functional Architect	FA3	\$49.70	\$50.71	\$54.27
Help Desk Analyst	HDA1	\$26.92	\$27.47	\$29.39
Help Desk Analyst	HDA2	\$29.53	\$30.12	\$32.23
Help Desk Analyst	HDA3	\$36.66	\$37.40	\$40.02
Network Engineer	NE1	\$47.48	\$48.45	\$51.84
Network Engineer	NE2	\$54.10	\$55.20	\$59.07
Network Engineer	NE3	\$60.92	\$62.16	\$66.50
Product Specialist	PS1	\$37.22	\$37.98	\$40.64
Product Specialist	PS2	\$42.82	\$43.68	\$46.74
Product Specialist	PS3	\$56.95	\$58.11	\$62.17
Product Specialist	PS4	\$71.79	\$73.25	\$78.37
Product Specialist	PS5	\$88.56	\$90.36	\$96.69
Programmer	PR1	\$31.66	\$32.31	\$34.58
Programmer	PR2	\$37.76	\$38.53	\$41.23
Programmer	PR3	\$47.94	\$48.92	\$52.35
Programmer	PR4	\$62.92	\$64.20	\$68.69
Programmer	PR5	\$74.98	\$76.50	\$81.86
Service Desk	SD2	\$23.79	\$24.29	\$25.98
Service Desk	SD3	\$25.76	\$26.28	\$28.12
Software Process Engineer	SPS1	\$34.77	\$35.47	\$37.96
Software Process Engineer	SPS2	\$38.64	\$39.44	\$42.20
Software Process Engineer	SPS3	\$53.09	\$54.18	\$57.98
System Administrator	SA1	\$31.85	\$32.50	\$34.78
System Administrator	SA2	\$35.16	\$35.88	\$38.38
System Administrator	SA3	\$49.78	\$50.79	\$54.35
System Administrator	SA4	\$66.88	\$68.24	\$73.01
System Specialist	SS1	\$30.81	\$31.44	\$33.63
System Specialist	SS2	\$32.65	\$33.31	\$35.63
System Specialist	SS3	\$42.08	\$42.94	\$45.95
Technical Architecture Specialist	TAS1	\$41.58	\$42.43	\$45.39
Technical Architecture Specialist	TAS2	\$47.36	\$48.32	\$51.71
Technical Architecture Specialist	TAS3	\$50.87	\$51.91	\$55.54
Technical Specialist	TS1	\$74.91	\$76.45	\$81.78
Technical Specialist	TS2	\$78.91	\$80.52	\$86.16
Technical Specialist	TS3	\$85.56	\$87.32	\$93.42
Technical Specialist	TS4	\$102.67	\$104.78	\$112.10
Video Conference Specialist	VCS1	\$45.63	\$47.04	\$50.32
Video Conference Specialist	VCS2	\$52.30	\$53.91	\$57.68
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 2 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$48.34
Business Analyst	BA2	\$62.22
Business Analyst	BA3	\$71.02

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 2 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$41.74
CADD/GIS Administrator	CGA2	\$48.19
CADD/GIS Administrator	CGA3	\$72.39
Data Entry Operator	DE1	\$14.37
Data Entry Operator	DE2	\$15.66
Database Administrator	DBA1	\$41.87
Database Administrator	DBA2	\$46.16
Database Administrator	DBA3	\$62.57
Database Administrator	DBA4	\$75.70
Intern	INT1	\$15.34
Intern	INT2	\$17.90
Intern	INT3	\$23.02
Program Manager	PM1	\$46.20
Program Manager	PM2	\$56.59
Program Manager	PM3	\$73.21
Program Manager	PM4	\$94.73
Quality Assurance Specialist	QAS1	\$37.54
Quality Assurance Specialist	QAS2	\$41.61
Quality Assurance Specialist	QAS3	\$55.28
Senior Architect	SAR1	\$97.61
Senior Business Subject Matter Expert	SME1	\$91.98
Senior Database Architect	SDA1	\$82.62
Senior Program Manager	SPM1	\$103.52
Team Lead	TL1	\$56.09
Team Lead	TL2	\$60.59
Technical Writer	TW1	\$26.77
Technical Writer	TW2	\$31.33
Technical Writer	TW3	\$35.37
Technical Writer	TW4	\$44.12
Telecom Engineer	TE1	\$35.91
Telecom Engineer	TE2	\$41.06
Telecom Engineer	TE3	\$48.51
Tester	Test1	\$33.25
Tester	Test2	\$38.43
Tester	Test3	\$44.74
Voice/Data Engineer	VDE1	\$34.01
Voice/Data Engineer	VDE2	\$39.46
Voice/Data Engineer	VDE3	\$47.53

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 3 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Application Developer	AD1	\$60.12	\$61.36	\$65.65
Application Developer	AD2	\$66.10	\$67.44	\$72.16
Application Developer	AD3	\$70.98	\$72.43	\$77.49
Architect	AR1	\$82.15	\$83.82	\$89.69
Functional Architect	FA1	\$34.70	\$35.40	\$37.87
Functional Architect	FA2	\$41.48	\$42.33	\$45.29
Functional Architect	FA3	\$49.56	\$50.57	\$54.11
Help Desk Analyst	HDA1	\$27.12	\$27.67	\$29.60
Help Desk Analyst	HDA2	\$29.73	\$30.33	\$32.46
Help Desk Analyst	HDA3	\$36.84	\$37.59	\$40.23
Network Engineer	NE1	\$47.53	\$48.51	\$51.91
Network Engineer	NE2	\$53.73	\$54.84	\$58.67
Network Engineer	NE3	\$60.40	\$61.62	\$65.93
Product Specialist	PS1	\$37.36	\$38.13	\$40.80
Product Specialist	PS2	\$42.95	\$43.84	\$46.91
Product Specialist	PS3	\$56.50	\$57.65	\$61.69
Product Specialist	PS4	\$71.27	\$72.72	\$77.81
Product Specialist	PS5	\$88.05	\$89.84	\$96.14
Programmer	PR1	\$31.85	\$32.50	\$34.78
Programmer	PR2	\$37.91	\$38.69	\$41.41
Programmer	PR3	\$48.03	\$49.02	\$52.44
Programmer	PR4	\$62.41	\$63.69	\$68.16
Programmer	PR5	\$74.44	\$75.97	\$81.28
Service Desk	SD2	\$24.02	\$24.50	\$26.21
Service Desk	SD3	\$25.96	\$26.48	\$28.33
Software Process Engineer	SPS1	\$34.91	\$35.62	\$38.12
Software Process Engineer	SPS2	\$38.81	\$39.60	\$42.38
Software Process Engineer	SPS3	\$52.75	\$53.82	\$57.60
System Administrator	SA1	\$31.99	\$32.65	\$34.93
System Administrator	SA2	\$35.31	\$36.04	\$38.55
System Administrator	SA3	\$49.62	\$50.64	\$54.18
System Administrator	SA4	\$66.37	\$67.73	\$72.46
System Specialist	SS1	\$31.00	\$31.63	\$33.83
System Specialist	SS2	\$32.84	\$33.50	\$35.85
System Specialist	SS3	\$42.25	\$43.10	\$46.12
Technical Architecture Specialist	TAS1	\$41.74	\$42.59	\$45.58
Technical Architecture Specialist	TAS2	\$47.46	\$48.44	\$51.83
Technical Architecture Specialist	TAS3	\$50.62	\$51.65	\$55.26
Technical Specialist	TS1	\$74.18	\$75.69	\$80.99
Technical Specialist	TS2	\$78.12	\$79.72	\$85.29
Technical Specialist	TS3	\$84.70	\$86.43	\$92.47
Technical Specialist	TS4	\$101.64	\$103.72	\$110.96
Video Conference Specialist	VCS1	\$46.18	\$47.62	\$50.96
Video Conference Specialist	VCS2	\$52.50	\$54.13	\$57.92
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 3 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$48.52
Business Analyst	BA2	\$61.76
Business Analyst	BA3	\$70.48

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 3 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$42.53
CADD/GIS Administrator	CGA2	\$49.04
CADD/GIS Administrator	CGA3	\$72.89
Data Entry Operator	DE1	\$14.56
Data Entry Operator	DE2	\$15.90
Database Administrator	DBA1	\$42.05
Database Administrator	DBA2	\$46.34
Database Administrator	DBA3	\$62.07
Database Administrator	DBA4	\$75.14
Intern	INT1	\$15.34
Intern	INT2	\$17.90
Intern	INT3	\$23.02
Program Manager	PM1	\$47.71
Program Manager	PM2	\$57.93
Program Manager	PM3	\$74.74
Program Manager	PM4	\$95.35
Quality Assurance Specialist	QAS1	\$37.71
Quality Assurance Specialist	QAS2	\$41.79
Quality Assurance Specialist	QAS3	\$55.01
Senior Architect	SAR1	\$99.65
Senior Business Subject Matter Expert	SME1	\$92.91
Senior Database Architect	SDA1	\$82.07
Senior Program Manager	SPM1	\$104.64
Team Lead	TL1	\$55.79
Team Lead	TL2	\$60.14
Technical Writer	TW1	\$27.03
Technical Writer	TW2	\$31.58
Technical Writer	TW3	\$35.62
Technical Writer	TW4	\$43.74
Telecom Engineer	TE1	\$36.58
Telecom Engineer	TE2	\$41.84
Telecom Engineer	TE3	\$49.38
Tester	Test1	\$33.88
Tester	Test2	\$39.14
Tester	Test3	\$45.58
Voice/Data Engineer	VDE1	\$34.15
Voice/Data Engineer	VDE2	\$39.63
Voice/Data Engineer	VDE3	\$47.70

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 4 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Application Developer	AD1	\$61.40	\$62.66	\$67.05
Application Developer	AD2	\$67.19	\$68.55	\$73.35
Application Developer	AD3	\$71.91	\$73.38	\$78.51
Architect	AR1	\$83.50	\$85.19	\$91.16
Functional Architect	FA1	\$36.72	\$37.48	\$40.10
Functional Architect	FA2	\$43.59	\$44.49	\$47.61
Functional Architect	FA3	\$51.47	\$52.51	\$56.19
Help Desk Analyst	HDA1	\$29.13	\$29.72	\$31.80
Help Desk Analyst	HDA2	\$31.75	\$32.40	\$34.66
Help Desk Analyst	HDA3	\$38.95	\$39.75	\$42.53
Network Engineer	NE1	\$49.40	\$50.40	\$53.94
Network Engineer	NE2	\$55.25	\$56.38	\$60.33
Network Engineer	NE3	\$61.68	\$62.92	\$67.32
Product Specialist	PS1	\$39.45	\$40.26	\$43.07
Product Specialist	PS2	\$45.09	\$46.01	\$49.23
Product Specialist	PS3	\$58.30	\$59.48	\$63.66
Product Specialist	PS4	\$72.72	\$74.21	\$79.41
Product Specialist	PS5	\$89.34	\$91.16	\$97.55
Programmer	PR1	\$33.93	\$34.61	\$37.03
Programmer	PR2	\$39.98	\$40.80	\$43.66
Programmer	PR3	\$50.05	\$51.07	\$54.65
Programmer	PR4	\$64.20	\$65.51	\$70.10
Programmer	PR5	\$75.88	\$77.43	\$82.85
Service Desk	SD2	\$26.01	\$26.54	\$28.40
Service Desk	SD3	\$27.94	\$28.52	\$30.51
Software Process Engineer	SPS1	\$36.94	\$37.70	\$40.33
Software Process Engineer	SPS2	\$40.91	\$41.74	\$44.65
Software Process Engineer	SPS3	\$54.58	\$55.69	\$59.59
System Administrator	SA1	\$33.99	\$34.67	\$37.10
System Administrator	SA2	\$37.35	\$38.12	\$40.79
System Administrator	SA3	\$51.53	\$52.58	\$56.26
System Administrator	SA4	\$67.89	\$69.27	\$74.12
System Specialist	SS1	\$33.04	\$33.72	\$36.08
System Specialist	SS2	\$34.90	\$35.61	\$38.11
System Specialist	SS3	\$44.37	\$45.28	\$48.45
Technical Architecture Specialist	TAS1	\$43.86	\$44.76	\$47.89
Technical Architecture Specialist	TAS2	\$49.54	\$50.55	\$54.09
Technical Architecture Specialist	TAS3	\$52.49	\$53.57	\$57.31
Technical Specialist	TS1	\$74.99	\$76.52	\$81.88
Technical Specialist	TS2	\$78.82	\$80.43	\$86.06
Technical Specialist	TS3	\$85.18	\$86.93	\$93.02
Technical Specialist	TS4	\$102.22	\$104.32	\$111.62
Video Conference Specialist	VCS1	\$47.48	\$48.95	\$52.37
Video Conference Specialist	VCS2	\$53.33	\$54.98	\$58.83
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 4 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$50.72
Business Analyst	BA2	\$63.56
Business Analyst	BA3	\$72.16



Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 4 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$43.88
CADD/GIS Administrator	CGA2	\$50.32
CADD/GIS Administrator	CGA3	\$73.25
Data Entry Operator	DE1	\$15.81
Data Entry Operator	DE2	\$17.25
Database Administrator	DBA1	\$44.32
Database Administrator	DBA2	\$48.64
Database Administrator	DBA3	\$64.04
Database Administrator	DBA4	\$76.77
Intern	INT1	\$15.34
Intern	INT2	\$17.90
Intern	INT3	\$23.02
Program Manager	PM1	\$50.21
Program Manager	PM2	\$60.17
Program Manager	PM3	\$76.99
Program Manager	PM4	\$97.75
Quality Assurance Specialist	QAS1	\$39.92
Quality Assurance Specialist	QAS2	\$44.05
Quality Assurance Specialist	QAS3	\$57.07
Senior Architect	SAR1	\$101.97
Senior Business Subject Matter Expert	SME1	\$93.58
Senior Database Architect	SDA1	\$84.01
Senior Program Manager	SPM1	\$105.23
Team Lead	TL1	\$57.84
Team Lead	TL2	\$62.12
Technical Writer	TW1	\$28.57
Technical Writer	TW2	\$33.03
Technical Writer	TW3	\$37.03
Technical Writer	TW4	\$45.09
Telecom Engineer	TE1	\$37.98
Telecom Engineer	TE2	\$43.21
Telecom Engineer	TE3	\$50.64
Tester	Test1	\$35.29
Tester	Test2	\$40.52
Tester	Test3	\$46.91
Voice/Data Engineer	VDE1	\$36.33
Voice/Data Engineer	VDE2	\$41.88
Voice/Data Engineer	VDE3	\$50.02

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 5 Affiliated</b>				
<b>Job Title</b>		<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Application Developer	AD1	\$68.82	\$70.22	\$75.14
Application Developer	AD2	\$75.49	\$77.02	\$82.41
Application Developer	AD3	\$80.90	\$82.55	\$88.34
Architect	AR1	\$92.30	\$94.19	\$100.77
Functional Architect	FA1	\$40.41	\$41.23	\$44.12
Functional Architect	FA2	\$47.82	\$48.79	\$52.21
Functional Architect	FA3	\$55.99	\$57.12	\$61.12
Help Desk Analyst	HDA1	\$31.90	\$32.55	\$34.83
Help Desk Analyst	HDA2	\$34.83	\$35.55	\$38.04
Help Desk Analyst	HDA3	\$42.78	\$43.66	\$46.72
Network Engineer	NE1	\$55.07	\$56.20	\$60.14
Network Engineer	NE2	\$61.74	\$63.00	\$67.41
Network Engineer	NE3	\$69.13	\$70.53	\$75.47
Product Specialist	PS1	\$43.37	\$44.25	\$47.36
Product Specialist	PS2	\$49.34	\$50.34	\$53.88
Product Specialist	PS3	\$63.37	\$64.66	\$69.19
Product Specialist	PS4	\$80.28	\$81.91	\$87.65
Product Specialist	PS5	\$98.83	\$100.85	\$107.91
Programmer	PR1	\$37.23	\$37.99	\$40.65
Programmer	PR2	\$43.98	\$44.87	\$48.02
Programmer	PR3	\$54.45	\$55.56	\$59.45
Programmer	PR4	\$69.81	\$71.22	\$76.21
Programmer	PR5	\$83.80	\$85.50	\$91.49
Service Desk	SD2	\$28.49	\$29.07	\$31.09
Service Desk	SD3	\$30.61	\$31.24	\$33.43
Software Process Engineer	SPS1	\$40.64	\$41.47	\$44.37
Software Process Engineer	SPS2	\$44.95	\$45.86	\$49.08
Software Process Engineer	SPS3	\$59.32	\$60.54	\$64.77
System Administrator	SA1	\$37.39	\$38.16	\$40.83
System Administrator	SA2	\$41.09	\$41.93	\$44.87
System Administrator	SA3	\$56.05	\$57.18	\$61.19
System Administrator	SA4	\$74.88	\$76.40	\$81.75
System Specialist	SS1	\$36.25	\$37.00	\$39.59
System Specialist	SS2	\$38.32	\$39.11	\$41.84
System Specialist	SS3	\$48.59	\$49.59	\$53.06
Technical Architecture Specialist	TAS1	\$48.08	\$49.06	\$52.50
Technical Architecture Specialist	TAS2	\$53.91	\$55.01	\$58.86
Technical Architecture Specialist	TAS3	\$57.08	\$58.25	\$62.33
Technical Specialist	TS1	\$84.46	\$86.19	\$92.22
Technical Specialist	TS2	\$88.88	\$90.70	\$97.05
Technical Specialist	TS3	\$96.21	\$98.18	\$105.05
Technical Specialist	TS4	\$115.45	\$117.82	\$126.06
Video Conference Specialist	VCS1	\$51.00	\$52.57	\$56.25
Video Conference Specialist	VCS2	\$57.18	\$58.95	\$63.08
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 5 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$56.05
Business Analyst	BA2	\$69.99
Business Analyst	BA3	\$79.56

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 5 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$47.43
CADD/GIS Administrator	CGA2	\$53.92
CADD/GIS Administrator	CGA3	\$78.32
Data Entry Operator	DE1	\$17.00
Data Entry Operator	DE2	\$18.54
Database Administrator	DBA1	\$48.72
Database Administrator	DBA2	\$53.28
Database Administrator	DBA3	\$69.62
Database Administrator	DBA4	\$84.70
Intern	INT1	\$15.34
Intern	INT2	\$17.90
Intern	INT3	\$23.02
Program Manager	PM1	\$56.33
Program Manager	PM2	\$67.06
Program Manager	PM3	\$85.65
Program Manager	PM4	\$109.64
Quality Assurance Specialist	QAS1	\$43.92
Quality Assurance Specialist	QAS2	\$48.44
Quality Assurance Specialist	QAS3	\$62.04
Senior Architect	SAR1	\$113.29
Senior Business Subject Matter Expert	SME1	\$102.10
Senior Database Architect	SDA1	\$91.42
Senior Program Manager	SPM1	\$114.88
Team Lead	TL1	\$62.87
Team Lead	TL2	\$67.51
Technical Writer	TW1	\$31.26
Technical Writer	TW2	\$36.20
Technical Writer	TW3	\$40.65
Technical Writer	TW4	\$49.76
Telecom Engineer	TE1	\$41.09
Telecom Engineer	TE2	\$46.69
Telecom Engineer	TE3	\$54.27
Tester	Test1	\$38.17
Tester	Test2	\$43.84
Tester	Test3	\$50.58
Voice/Data Engineer	VDE1	\$39.96
Voice/Data Engineer	VDE2	\$46.06
Voice/Data Engineer	VDE3	\$54.68



Parent Contract Number: 6100014920  
SAP/SRM Contract Number: 4400007198  
Change Number: 4  
Change Effective Date: 8/31/12

**Using Agency:** All Using Agencies

**Contract Title:** Enterprise IT Staff Augmentation Contract

**Contract Period:** Beginning 7/1/10 and Ending 6/30/13

**Commodity Specialist:** Joe Millovich    **Telephone:** 717-214-3434    **Email:** jmillovich@pa.gov

#### **CHANGE SUMMARY:**

The Commonwealth has worked with CAI to develop a new category and updated the Skills Matrix to cover agency needs. The new job category is as follows: Mobile Specialist (Level 1 & 2)

Please find the updated Job Titles, Bill Rates attached to this change notice. Also note the Staff Augmentation User Guide (attached to the Contract Overview) has been updated.

**ALL OTHER TERMS AND CONDITIONS OF THIS AGREEMENT NOT CHANGED BY THIS CHANGE NOTICE REMAIN AS ORIGINALLY WRITTEN.**

# **Pennsylvania Enterprise IT Staff Augmentation Services Contract**

## **Job Titles and Descriptions (Version 6)**

Please note: Version 6 now includes the following titles:

- Mobile Specialist - Levels 1 and 2

Application Developer .....	5
AD1 .....	5
AD2 .....	5
AD3 .....	5
Architect .....	6
AR1 .....	6
Business Analyst .....	6
BA1 .....	6
BA2 .....	7
BA3 .....	7
CADD/GIS Administrator .....	7
CGA1 .....	7
CGA2 .....	7
CGA3 .....	7
Data Entry Operator .....	8
DE1 .....	8
DE2 .....	8
Database Administrator .....	9
DBA1 .....	9
DBA2 .....	9
DBA3 .....	10
DBA4 .....	10
Functional Architect .....	10
FA1 .....	10
FA2 .....	11
FA3 .....	12
Help Desk Analyst .....	12
HDA1 .....	12
HDA2 .....	13
HDA3 .....	13
Intern .....	13
INT1 .....	14
INT2 .....	14
INT3 .....	14
Mobile Specialist .....	14
MS1 .....	14
MS2 .....	15
Network Engineer .....	15
NE1 .....	15
NE2 .....	15
NE3 .....	16
Product Specialist .....	16
PS1 .....	16
PS2 .....	17
PS3 .....	17
PS4 .....	17
PS5 .....	18
Program Manager .....	18

PM1 .....	18
PM2 .....	19
PM3 .....	19
PM4 .....	19
Programmer .....	20
PR1 .....	20
PR2 .....	20
PR3 .....	21
PR4 .....	21
PR5 .....	22
Quality Assurance Specialist.....	22
QAS1 .....	22
QAS2 .....	23
QAS3 .....	23
Senior Architect.....	24
SAR1 .....	24
Senior Business Subject Matter Expert.....	25
SME1.....	25
Senior Database Architect.....	25
SDA1 .....	26
Senior Program Manager .....	26
SPM1.....	26
Service Desk .....	27
SD2 .....	27
SD3 .....	27
Software Process Engineer .....	28
SPS1 .....	28
SPS2 .....	29
SPS3 .....	29
System Administrator .....	29
SA1.....	29
SA2.....	30
SA3.....	30
SA4.....	31
System Specialist.....	31
SS1.....	31
SS2.....	32
SS3.....	32
Team Lead .....	33
TL1 .....	33
TL2 .....	34
Technical Architecture Specialist .....	34
TAS1 .....	34
TAS2 .....	35
TAS3 .....	35
Technical Specialist.....	36
TS1 .....	36
TS2.....	36
TS3.....	37
TS4.....	37

Technical Writer .....	37
TW1 .....	37
TW2 .....	38
TW3 .....	38
TW4 .....	39
Telecom Engineer .....	39
TE1 .....	39
TE2 .....	39
TE3 .....	40
Tester .....	40
Test1 .....	40
Test2 .....	40
Test3 .....	41
Video Conference Specialist .....	41
VCS1 .....	41
VCS2 .....	42
Voice/Data Engineer .....	42
VDE1 .....	42
VDE2 .....	42
VDE3 .....	43



## Application Developer

The Application Developer will provide support to existing production applications and perform complex technical analysis, design, development, documentation, testing, deployment and implementation of new applications using existing and emerging platforms. This category includes web application and database development. This category won't likely be suitable for wireless application development as of release 6.0.

### AD1

Years of Relevant Experience:	Up to 3years industry experience
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Reviews and understands the Application Team's workplan.</li> <li>• Provides status of work to Team Lead.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Engages in ongoing process improvement.</li> <li>• Detailed functional and process knowledge.</li> <li>• Utilizes deep modeling, design and coding skills.</li> <li>• Provides expertise in one or more database environments.</li> </ul>

### AD2

Years of Relevant Experience:	3 to 5 years industry experience
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in AD1 plus the following:</p> <ul style="list-style-type: none"> <li>• This is a professional level non-supervisory position which may require coordination of programming activities being conducted by the team</li> <li>• Supports team in modification of enhancements and changes to applications.</li> <li>• Leverages excellent written and verbal communication skills May coordinate activities of other application developers</li> <li>• Supports business process, problem analysis and consultation.</li> <li>• Processes open defect/maintenance tickets and correct technical errors.</li> </ul>

### AD3

Years of Relevant Experience:	More than 5 years industry experience
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in AD2 plus the following:</p> <ul style="list-style-type: none"> <li>• Proven track record of hands-on technical design and code work within large complex systems.</li> <li>• Proven hands-on technical work with a variety of technologies..</li> <li>• Able to make best practice recommendations based on past work.</li> <li>• Proven ability to present complex technical constructs to business and non-technical users.</li> <li>• Proven ability to collaborate with business users, project managers and technical architects.</li> </ul>

## Architect

The Architect has the ability to design, develop, and implement application infrastructure to provide reliable and scalable applications and systems to meet the organization's objectives and requirements. The Architect is familiar with a variety of the application technologies, environments, concepts, methodologies, practices, and procedures. The Architect is also able to perform a variety of complicated tasks with minimal or no direct supervision. The Architect is experienced in defining systems and application architecture.

### AR1

Years of Relevant Experience:	Up to 5 years software development and testing
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Proven experience with hands-on technical development work.</li> <li>• Able to coordinate with technical leads, business users and project managers.</li> <li>• Experience participating in development of standards and product recommendations.</li> <li>• Experience designing and architecting systems as a member of a design team.</li> <li>• Experience working through every phase of software development life cycle.</li> <li>• Strong verbal communication.</li> </ul>

## Business Analyst

The Business Analyst is responsible for the set of tasks and techniques used to work as a liaison among stakeholders in order to understand the structure, policies, and operations of an organization, and to recommend solutions that enable the organization to achieve its goals.

### BA1

Years of Relevant Experience:	Up to 4 years
Preferred Education:	4 year college degree or equivalent.
Role Description:	<ul style="list-style-type: none"> <li>• Experience conducting Facilitated Workshops for requirements analysis.</li> <li>• Experience creating workflows using formal notation such as the Business Process Modeling Notation (BPMN).</li> <li>• Knowledge of formal requirements gathering methodologies.</li> <li>• Experience developing Business Requirements - project initiation document, what the needed achievements will be, and the quality measures.</li> <li>• Experience developing Functional requirements - describe what the system, process, or product/service must do in order to fulfill the business requirements.</li> <li>• Experience developing User (stakeholder) requirements - are a very important part of the deliverables, the needs of the stakeholders will have to be correctly interpreted. This deliverable can also reflect how the product will be designed, developed, and define how test cases must be formulated.</li> <li>• Experience developing Quality-of-service (non-functional) requirements - are requirements that do not perform a specific function for the business requirement but are needed to support the functionality. For example: performance, scalability, quality of service (QoS), security and usability.</li> <li>• Experience developing Report Specifications - define the purpose of a report, its justification, attributes and columns, owners and runtime parameters.</li> <li>• Experience developing Requirements Traceability Matrix - a cross matrix for recording the requirements through each stage of the requirements gathering process.</li> <li>• Strong organization and writing skills. Experienced developing graphic representations of complex business processes.</li> </ul>

### **BA2**

Years of Relevant Experience:	4 to 6 years
Preferred Education:	4 year college degree or equivalent.
Role Description:	All roles specified in BA1 plus additional work experience and job knowledge.

### **BA3**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent and IIBA-certified Business Analyst.
Role Description:	All roles specified in BA1 plus additional work experience, job knowledge, and IIBA certification.

## **CADD/GIS Administrator**

The CADD/GIS Administrator (CGA) is responsible for providing direct support of various CADD/GIS software and hardware systems. The CGA will perform hardware and software installations, relocations, testing and routine maintenance.

### **CGA1**

Years of Relevant Experience:	Up to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assists in troubleshooting CADD/GIS system hardware problems and works with the appropriate service and warranty vendors to make the necessary repairs and fixes.</li> <li>• Tracks version upgrades and notifies proper parties of available updates to CADD/GIS Systems software.</li> <li>• Assists with phone and online problem reporting and maintaining problem report records.</li> <li>• Assists with ordering consumable supplies for the CADD/GIS Systems.</li> <li>• Maintains current inventory of all hardware, software, upgrades and fixes for each site.</li> <li>• Maintains configuration charts of current inventory.</li> <li>• Maintains data backups and data archives and provides data retrieval from backup.</li> <li>• Monitors system status and data integrity.</li> </ul>

### **CGA2**

Years of Relevant Experience:	5 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Able to work independently.</li> <li>• Demonstrates proven experience in troubleshooting with little supervision.</li> <li>• Able to communicate status to managers and project sponsors.</li> <li>• Assists in developing standards and direction for systems.</li> </ul>

### **CGA3**

Years of Relevant Experience:	8 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Leads efforts to troubleshoot CADD/GIS system hardware and software problems.</li> <li>• Leads team of CGAs developing software and hardware plans and solutions.</li> <li>• Expertise in teaching/conveying technical and/or functional courses/concepts.</li> </ul>

## Data Entry Operator

For data entry projects that require manual key entry and/or data capture through scanning.

### DE1

Years of Relevant Experience:	Up to 2 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> <li>• Comprehensive PC skills.</li> <li>• Able to follow written and spoken instructions.</li> <li>• Minimum of 25 wpm.</li> <li>• Able to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen.</li> <li>• Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform.</li> <li>• Able to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques.</li> <li>• Able to conduct basic data mining and data capture efforts.</li> <li>• Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP.</li> <li>• Key punch and verify records in specified format (ex. ASCII).</li> <li>• The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeros are not counted as keystrokes.</li> <li>• The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession.</li> <li>• Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis.</li> <li>• Pickup and delivery by contractor to be made on a weekly basis.</li> <li>• For key entry, required that a second individual completed 100% key verification to control errors.</li> <li>• Knowledge of imaging and visual display operating practices, procedures, and techniques.</li> <li>• Knowledge of arithmetic and numbering systems.</li> <li>• Able to operate equipment with speed and accuracy to ensure information is captured.</li> </ul>

### DE2

Years of Relevant Experience:	2 to 4 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> <li>• Comprehensive PC skills.</li> <li>• Able to follow written and spoken instructions.</li> <li>• Minimum of 35 wpm.</li> <li>• Able to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen.</li> <li>• Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform.</li> <li>• Able to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques.</li> <li>• Able to conduct basic data mining and data capture efforts.</li> <li>• Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP.</li> <li>• Key punch and verify records in specified format (ex. ASCII).</li> </ul>

	<ul style="list-style-type: none"> <li>• The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeros are not counted as keystrokes.</li> <li>• The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession.</li> <li>• Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis.</li> <li>• Pickup and delivery by contractor to be made on a weekly basis.</li> <li>• For key entry, required that a second individual completed 100% key verification to control errors.</li> <li>• Knowledge of imaging and visual display operating practices, procedures, and techniques.</li> <li>• Knowledge of arithmetic and numbering systems.</li> <li>• Able to operate equipment with speed and accuracy to ensure information is captured.</li> </ul>
--	---

## Database Administrator

The Database Administrator is responsible for data analysis and database management. Database Administrators typically are involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Database Administrators have a range of skills and knowledge of the utilities and production tools used for data storage management to support the Application Team.

### DBA1

Years of Relevant Experience:	Up to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Skilled data dictionary analysis and design and data model analysis design.</li> <li>• Maintains central data repository.</li> <li>• Experience and knowledge in supporting application system development life cycle.</li> <li>• Responsible for data dictionary backup and recovery.</li> <li>• Responsible for definition of standards of data dictionaries.</li> <li>• May program dictionary analysis and maintenance software.</li> <li>• Performs performance tuning.</li> <li>• Monitors database performance and space requirements.</li> <li>• Schedules and monitors end of day data warehousing jobs.</li> <li>• Assists in coordinating software releases.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Able to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

### DBA2

Years of Relevant Experience:	3 to 4 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Business systems analysis and design experience.</li> <li>• Logical data modeling techniques.</li> <li>• Production environment Tools/Utilities.</li> </ul>

	<ul style="list-style-type: none"> <li>• Knowledgeable in data analysis and database management techniques.</li> <li>• Execution of all responsibilities with little direct supervision of Team Lead.</li> <li>• Administration and scripting experience in relative platform.</li> <li>• Supervise performance tuning.</li> <li>• Author shell scripts to perform back up, restore, and monitoring tasks.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>
--	---

### **DBA3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	All roles specified in DBA2 plus the following: <ul style="list-style-type: none"> <li>• Highly skilled at database design, installations, conversions.</li> <li>• Responsible for database backup and recovery procedures, access security and database integrity, physical data storage design and data storage management.</li> </ul>

### **DBA4**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	All roles specified in DBA3 plus the following: <ul style="list-style-type: none"> <li>• Participates in Database Management System selection and maintains database performance.</li> <li>• Knowledge of various Database Management System products.</li> <li>• Provides status of work to Project Team Lead.</li> <li>• Engages in ongoing process improvement.</li> </ul>

## **Functional Architect**

The Functional Architect is the functional expert for an application, a defined set of applications or a portfolio of related applications. The Functional Architect is also responsible for bringing an understanding of the enterprise, business system and industry to the team(s) supporting or interfacing with the application. The primary responsibility of a Functional Architect is to provide expertise in the business process supported by the application, to prepare and review designs, to recommend improvements, and to provide guidance during the testing process. The Functional Architect helps the Programmers establish a clear understanding of the business functional requirements and either creates the functional designs to meet the requirements or reviews and approves the designs written by the Programmers. The Functional Architect must understand all aspects of their specific application(s), and the underlying business process. The more experienced Functional Architect plans, analyzes, and defines high- level software strategies and solutions. Contained in the experienced role is the task of coordinating with other Functional Architects to define technical requirements and long range plans for meeting customer requirements.

### **FA1**

Years of Relevant Experience:	2 to 4 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Analyzes, determines, and documents functional requirements.</li> <li>• Provides definition on how the applications will support business requirements.</li> <li>• Conducts impact analyses of business requirements on the system.</li> <li>• Works with Technical Architecture Specialist in defining software / hardware requirements.</li> </ul>



	<ul style="list-style-type: none"> <li>• Gathers and interprets user requirements into design specifications.</li> <li>• Participates in design of application.</li> <li>• Participates in design code and test reviews as appropriate.</li> <li>• Provides inputs to test planning.</li> <li>• Completes assigned tasks.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment.</li> <li>• Strong communication skills; both written and spoken</li> <li>• Acts as the application(s) functional expert; providing expertise in the business process supported by the application.</li> <li>• Provides detailed definition on how the applications will support business requirements.</li> <li>• Works with Technical Architecture Specialist in planning and delivering technical architecture.</li> <li>• Provides expertise for defining functional architecture and infrastructure for applications.</li> <li>• Plans and develops user interface strategy.</li> <li>• Directs and participates in design of application.</li> <li>• Interprets and understands user requirements/design specifications.</li> <li>• Provides detailed definition on how the applications will support business requirements.</li> <li>• Works with Technical Architecture Specialist in defining software / hardware requirements and in planning and delivering architecture.</li> <li>• Provides expertise for defining architecture and infrastructure for applications.</li> <li>• Reviews and understands team work plan</li> <li>• Identifies and tracks issues, risks and action items affecting own work and work of team.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>
--	--

**FA2**

Years of Relevant Experience:	4 to 5 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in FA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Provides functional expertise to planning organization as required.</li> <li>• Reviews tasks prior to migration into production as appropriate. Provide assistance in scheduling design work for Lead Functional Architect.</li> <li>• Coordinates the design and development of work estimates and act as the primary point of contact. Assist in managing and directing application team processes.</li> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems.</li> <li>• Works with client and Lead Functional Architect to identify direction of software.</li> <li>• Ensures business requirements are supported by the software.</li> <li>• Identifies and initiates continuous improvement opportunities.</li> <li>• Defines user interface strategies.</li> <li>• Understands specific business needs and overall business strategy of the business customer.</li> </ul>

### FA3

Years of Relevant Experience:	Five plus years in particular application area
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in FA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Guides processes for Functional Architects and direct work planning and design activities.</li> <li>• Provides standard, well-structured work planning which defines scope, resources, commitments, quality, risk, tasks, and acceptance criteria.</li> <li>• Ensures that overall application designs remain within project scope.</li> <li>• Works with customer business units to understand their business processes.</li> <li>• Works with customer business units and client to identify direction of software.</li> <li>• Ensures business requirements are supported by the software.</li> <li>• Ensures goals for Functional Architects are being met and manage team commitments.</li> <li>• Analyzes, defines, and documents how the applications will support functional and business requirements.</li> <li>• Coordinates these efforts with Functional Architects.</li> <li>• Understands supporting/interfaces system applications.</li> <li>• Approves the determined need for new software/hardware.</li> <li>• Understands prioritization work based on business needs request/releases for work affecting an application.</li> <li>• Manages the accomplishment of delivery metrics, Service Level Agreements and other contractual obligations within areas of responsibility.</li> <li>• Sponsors coordination of the required skills, training, methodologies, and processes to ensure the success of team/project/program goals.</li> <li>• Coordinates and conducts project review meetings with Group Lead Functional Architects and Team Leads.</li> <li>• Communicates and resolves application interface issues with other Lead Functional Architects as needed.</li> <li>• Monitors and measures maintenance and development process effectiveness.</li> <li>• Communicates clearly the program/application goals, operational and organizational philosophies, and policies and procedures to the Functional Architects.</li> <li>• Communicates to team members the relationships between their work and assignments and the organizational and/ or program objectives.</li> </ul>

## Help Desk Analyst

The Help Desk Analyst provides Helpdesk Level 2 Support by performing the skills listed below.

### HDA1

Years of Relevant Experience:	1 to 3 years field experience
Preferred Education:	2 year associates degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Provides technical assistance, support, and advice to end users for hardware, software, and systems.</li> <li>• Provides hands-on technical assistance to business and technical users.</li> <li>• Investigates and resolves computer software and hardware problems of users.</li> <li>• Serves as a contact for level 1 support.</li> <li>• Serves as a contact for users having problems using computer software, hardware, and operating systems, and escalates as necessary.</li> <li>• Determines whether problem is caused by hardware, software, or system.</li> <li>• Answers questions, applying knowledge of computer software, hardware, systems,</li> </ul>



	<p>and procedures.</p> <ul style="list-style-type: none"> <li>• Talks with technical and non-technical co-workers to research problem and find solution.</li> <li>• Asks user with problem to use telephone and participate in diagnostic procedures, using diagnostic software or by listening to and following instructions.</li> <li>• Experienced with a variety of call-tracking software and systems.</li> <li>• Reads trade magazines and engages in independent study to maintain current industry knowledge.</li> <li>• Follow quality standards, and displays strong customer service skills.</li> <li>• Able to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>
--	--

### **HDA2**

Years of Relevant Experience:	3 to 5 years field experience
Preferred Education:	4 year college degree in field of specialty or equivalent education and experience combined
Role Description:	<p>All roles specified in HDA 1 plus the following:</p> <ul style="list-style-type: none"> <li>• Calls software and hardware vendors to request service regarding defective products.</li> <li>• Acts as a subject matter expert for one or more custom or COTS applications.</li> <li>• Talks to programmers to explain software errors or to recommend changes to programs.</li> <li>• May work as in-house consultant and research alternate approaches to existing software and hardware when standardized approaches cannot be applied.</li> <li>• Tests software and hardware to evaluate ease of use and whether product will aid user in performing work.</li> <li>• Write software and hardware evaluation and recommendations for management review.</li> <li>• Write or revise user-training manuals and procedures.</li> <li>• Develops training materials, such as exercises and visual displays.</li> <li>• Train users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.</li> </ul>

### **HDA3**

Years of Relevant Experience:	5 plus years field experience
Preferred Education:	4 year college degree in field of specialty
Role Description:	<p>All roles specified in HDA 1 and 2 plus the following:</p> <ul style="list-style-type: none"> <li>• Manage expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensure quality standards are followed.</li> <li>• Monitor the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Act as the escalation point for high priority support issues.</li> <li>• Able to make recommendations on policies on system use and services.</li> </ul>

### **Intern**

The Intern will assist team members with daily responsibilities as directed by his or her supervisor. Interns are not recruited through the standard Staff Augmentation process. They are recruited by the Technology Council of Central Pennsylvania through their TechQuest program, and selected by the agency.

### **INT1**

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Able to perform tasks as assigned by the direct supervisor.</li> <li>• Able to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>

### **INT2**

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Able to develop organizational and communication skills.</li> <li>• Able to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge including experience with word processing software, and spreadsheet maintenance and development.</li> <li>• Must show willingness and ability to develop IT-related technical skills.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>

### **INT3**

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Able to develop organizational and communication skills.</li> <li>• Able to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge including experience with word processing software, and spreadsheet maintenance and development.</li> <li>• Must show willingness and ability to develop IT-related technical skills.</li> <li>• Must show willingness and ability to develop an understanding of IT-related technologies and concepts.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>

## **Mobile Specialist**

The Mobile Specialist serves in many capacities, including Developer, Engineer, Technical Architect, and Analyst for Mobile Development, Security, and/or Infrastructure Projects. The Mobile Specialist participates in project planning and in the creation and review of technical deliverables. The Mobile Specialist often guides and mentors the technical team in all phases of the SDLC including requirement validation, detail design, development, and implementation.

### **MS1**

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

## MS2

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

## Network Engineer

The Network Engineer is involved in the design and maintenance of both the hardware and software necessary for a computer network. The Network Engineer is a high-level technical analyst, specializing in Local Area Networks (LANs)/Wide Area Networks (WANs), TCP/IP, and server/network infrastructure.

### NE1

Years of Relevant Experience:	2 to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Responsible for the installation, configuration and administration of network routers and switches.</li> <li>• Executes the disaster recovery/back up procedures and archiving procedures.</li> <li>• Manages security for servers.</li> <li>• Responsible for performance tuning, capacity planning, database administration, and fault management.</li> <li>• Coordinates efforts with vendors</li> <li>• Responsible for ensuring high priority issues are resolved in a timely manner.</li> <li>• Responsible for keeping the environment up and running.</li> <li>• Often times, responsible for identifying and reporting hardware problems.</li> <li>• Understands basic routing concepts.</li> <li>• Identifies and track issues, risks, and action items.</li> <li>• Resolves and/or assists in resolving issues.</li> <li>• Reviews, prioritizes, and researches service requests.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

### NE2

Years of Relevant Experience:	3 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in NE1 plus the following:</p> <ul style="list-style-type: none"> <li>• Solid understanding of networking/distributed computing environment concepts.</li> <li>• Understands principles of routing client/server programming.</li> <li>• Manages expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensures quality standards are followed.</li> <li>• Understands the business application of technical support and design in an application development environment.</li> </ul>

	<ul style="list-style-type: none"> <li>• Develops plans for disaster recovery/ back up and archiving.</li> <li>• Manages the daily operations of the systems management team to ensure service levels are being met.</li> <li>• Manages the systems management team's support issue and backlog.</li> <li>• Monitors the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Acts as the first level of escalation for high priority support issues.</li> </ul>
--	--

### **NE3**

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in NE2 plus the following:</p> <ul style="list-style-type: none"> <li>• Functions as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develops the technical infrastructure maintenance strategy.</li> <li>• Analyzes, determines and documents requirements in terms of system management needs and implements them.</li> </ul>

## **Product Specialist**

The Product Specialist is the expert for a technical development or execution environment product or set of products. The primary responsibility of a Product Specialist is to ensure the availability and facilitate the productive use of a product for Application Teams or end users. The Product Specialist may own part of a product, all of one, or several products depending on the nature of the product(s) and their use. The Product Specialist requires significant to expert experience and skills in the product supported. The Product Specialist will usually also have significant experience in the operating environment(s) (e.g., HP/UX, NT, MVS, etc.) on which the product is implemented. If the product is one that was internally developed, the supporting PS should also have most of the skills of a Programmer. The Product Specialist is responsible for collaborating with Technical Architecture Specialist, System Specialists, Programmers and vendors to ensure and enhance the use of the product and effect migration to new versions of a product.

### **PS1**

Years of Relevant Experience:	1 to 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Makes sound recommendations on functional and technical improvements to the product.</li> <li>• Analyzes the functional and technical impact of product planning decisions.</li> <li>• Develops appropriate functional and usability standards for products.</li> <li>• Tracks and document expected volume and type of use of the product.</li> <li>• Participates in product design reviews to verify that design meets quality standards and functional/technical requirements.</li> <li>• Performs impact analyses on production fixes and enhancements to establish priorities.</li> <li>• Provides basic product support and provide accurate and complete answers to detailed product questions in a timely manner.</li> <li>• Provides effective on-site product support as needed.</li> <li>• Accurately sets severity of identified defects.</li> <li>• Provides input to training and / or documentation materials regarding latest technical and functional design changes.</li> <li>• Documents all work for future reference.</li> <li>• Reviews the system test approach and conditions used as the basis for detailed test scenarios.</li> </ul>

	<ul style="list-style-type: none"> <li>• Follows quality standards.</li> <li>• Analytical and customer service skills.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Able to work in a team environment.</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

### **PS2**

Years of Relevant Experience:	3 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Actively contributes as an expert or actual designer.</li> <li>• Coordinates product design reviews to verify that design meets quality standards and functional/technical requirements.</li> <li>• Provides accurate estimates for design and programming efforts for system changes and enhancements.</li> <li>• Coordinates enhancements to business and logical data models with data base administration to make the appropriate changes to the physical data model.</li> <li>• Confirms that technical architecture will support all changes required by product enhancements.</li> <li>• Effectively leads product tests and trials.</li> <li>• Identifies appropriate business examples to illustrate key concepts / features.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Applies specific expertise to ensure that products meet defined customer objectives.</li> <li>• Anticipates and resolve issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>

### **PS3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Demonstrates expertise in teaching / conveying technical and / or functional courses / concepts.</li> <li>• Develops appropriate work programs / budgets and use to effectively schedule tasks / assignments.</li> <li>• Identifies improvements to project standards to achieve high quality services / products.</li> </ul>

### **PS4**

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS3 plus the following:</p> <ul style="list-style-type: none"> <li>• Delivers support and design for industry specific applications that require integration with statewide systems or applications.</li> <li>• Interacts with executive level business users or technical experts.</li> <li>• May functions as a niche SME.</li> </ul>

**PS5**

Years of Relevant Experience:	9 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PS4 plus the following: <ul style="list-style-type: none"> <li>• Responsible for functioning as the Technical SME on an enterprise-wide system.</li> <li>• Responsible for implementations of products/services that involve significant Commonwealth and federal oversight.</li> <li>• Provides direct technical expertise to Executive applications involving national security.</li> </ul>

**Program Manager**

The Program Manager directs, controls, administers, and regulates an enhancement or development program. The Program Manager is the individual ultimately responsible to the agency. The Program Manager's primary responsibility is to drive the entire effort from start to finish. The Program Manager must ensure that the program is completed on schedule and that the final product meets the business, technical, and established quality requirements. The difference between a PM1, PM2, PM3, and PM4 will depend on the size of the project, and the breadth and scope of the project.

**PM1**

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Responsible for the development of estimates for the enhancement or development effort in planning, analysis, design, construction, testing, and implementation.</li> <li>• Accountable for delivery of all work tasks identified in the program plan.</li> <li>• Responsible for the capture and reporting of required program management metrics.</li> <li>• Adjusts and revises estimates when necessary.</li> <li>• Ensures all changes to scope follow processes and are documented.</li> <li>• Ensures new estimates are approved by the client and agreed upon.</li> <li>• Adjusts and revises estimates when necessary.</li> <li>• Manages and tracks the program progress against the program plan.</li> <li>• Monitors project milestones and phases to ensure the project is on schedule.</li> <li>• Takes corrective actions if a project begins to slip its schedule.</li> <li>• Prepares status reports on a periodic basis for program team, team leads, group leads, and program manager and appropriate stakeholders.</li> <li>• Plans, organizes, prioritizes, and manages multiple work efforts across application teams.</li> <li>• Develops the detailed program plan for the enhancement or development effort</li> <li>• Accountable for the final program management evaluation review with stakeholders for approval upon program completion.</li> <li>• Responsible for tailoring and baseline of all program templates.</li> <li>• Accountable to schedule or monitor status reviews, peer reviews, program management inspections, and software quality assurance work product and process reviews with the appropriate designated resources.</li> <li>• Notifies team leads of project timelines, milestones, phases, work requests target dates, and approved executable work package.</li> <li>• Communicates and works with users and client as necessary.</li> <li>• Coordinates and presents proposals to agencies as necessary.</li> <li>• Analyzes and distributes reports on program metrics associated with work items related to improvement measures.</li> <li>• Ensures processes and activities are followed.</li> </ul>



**PM2**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PM1 plus the following:</p> <ul style="list-style-type: none"> <li>• Accountable for the approval and sign-off of the program plan with customer representatives, such as portfolio managers, and all affected program stakeholders.</li> <li>• Accountable for management of scope for the program and gaining agreement and approval of scope changes with customer representatives and affected stakeholders.</li> <li>• Builds and maintains relationships with key stakeholders and customer representatives.</li> <li>• Directs work planning and scheduling design work.</li> <li>• Manages and tracks the program progress against the program plan.</li> <li>• Serves as the primary point of contact for all program-related issues and resolution of issues.</li> <li>• Coordinates and present proposals to agencies as necessary.</li> <li>• Identifies and manages program risk and develops risk mitigation strategies, track to closure.</li> <li>• Ensures team leads adjust and revise estimates when necessary.</li> <li>• Anticipates issues and proactively address them. Resolve conflicts with sensitivity and tact.</li> <li>• Coordinates the establishment of program standards and program specific procedures with team leads.</li> <li>• Responsible for project compliance with standards and procedures.</li> <li>• Responsible for the capturing and reporting of required program management metrics.</li> <li>• Responsible for tailoring and baseline of all program templates.</li> <li>• Develops and facilitates achievement of program service commitments and performance metrics.</li> <li>• Ensures that tasks provide value and support the strategic direction of the program and meet service commitments; conduct reviews with agencies.</li> <li>• Accountable for the final program management evaluation review with stakeholders for approval upon program completion.</li> <li>• Communicates effectively with customers and software / hardware suppliers supporting the State as appropriate.</li> <li>• Identifies and tracks issues.</li> <li>• Balances workload with program members' capacity.</li> <li>• Communicates to team members how their work assignments relate to and help achieve program objectives.</li> <li>• Plans program specific training and orientation needs.</li> </ul>

**PM3**

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PM2 plus the following:</p> <ul style="list-style-type: none"> <li>• Accountable for activities with excess delivery cycles of 8 to 12 months.</li> </ul>

**PM4**

Years of Relevant Experience:	8 to 9 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PM3 plus the following:

	<ul style="list-style-type: none"> <li>• Manages, coordinates, and establishes priorities for complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing.</li> <li>• Designs project plans, which identify needs and define major tasks and milestones, based on scope, resources, budget, and personnel.</li> </ul>
--	--

## Programmer

The Programmer is responsible for analysis, design, coding, component and assembly testing of all application code. Programmers typically are involved in maintenance (including production support), enhancement and development work. Programmers have a range of skills and knowledge of the technologies. The Programmer works with the Functional Architect and Technical Architecture Specialist on an as needed basis to ensure that design and code meets customer requirements.

### PR1

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Codes enhancement and development programs and/or required fixes to production problems using the functional and technical programming standards.</li> <li>• Tests enhancement and development programs.</li> <li>• Participates in structured code reviews / walkthroughs.</li> <li>• Executes all required process steps.</li> <li>• Creates and provide content for operational documentation to Technical Writers.</li> <li>• Utilizes configuration management tools, design tools, debugging tools, and any other environment specific tools necessary to create, test, and implement an application.</li> <li>• Researches problems before approaching the Team Lead or Functional Architect for assistance.</li> <li>• Limited functional knowledge.</li> <li>• Follows quality standards.</li> <li>• Supports installation of application releases into production as directed.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Able to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

### PR2

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PR1 plus the following:</p> <ul style="list-style-type: none"> <li>• Analyzes and designs enhancements, development programs, and/or required fixes to production problems.</li> <li>• Designs applications to functional and technical programming standards.</li> <li>• Works with Functional Architects to gather and interprets user requirements into design specifications.</li> <li>• Develops system specifications and interfaces.</li> <li>• Determines time estimates and schedule for work.</li> <li>• Moderates functional and process knowledge.</li> <li>• Assists in managing and directing Application Team processes.</li> <li>• Coordinates work with other software developers on Application Teams.</li> <li>• Assists Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks.</li> </ul>



	<ul style="list-style-type: none"> <li>• Develops application designs in support of the systems specifications and interfaces, perhaps in conjunction with application or technical architects.</li> <li>• Operating System expertise sufficient to perform performance and tuning diagnostics.</li> <li>• Works with users to ensure that solutions meet business requirements.</li> <li>• Execution of all responsibilities with little direct supervision of Team Lead.</li> <li>• Generally aware of new developments in industry and process and has ability to apply them to work as appropriate.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>
--	--

**PR3**

Years of Relevant Experience:	6 to 7 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PR2 plus the following:</p> <ul style="list-style-type: none"> <li>• Plans all required process steps.</li> <li>• Reviews and understands the Application Team's workplan.</li> <li>• Provides status of work to Team Lead.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Engages in ongoing process improvement.</li> <li>• Detailed functional and process knowledge.</li> <li>• Utilizes deep modeling, design and coding skills.</li> <li>• Provides expertise in one or more database environments.</li> </ul>

**PR4**

Years of Relevant Experience:	8 to 9 years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR3 plus the following:</p> <ul style="list-style-type: none"> <li>• Converts scientific, engineering, and other technical problem formulations to formats that can be processed by computer.</li> <li>• Resolves symbolic formulations, prepares flowcharts and block diagrams, and encodes resultant equations for processing by applying extensive knowledge of branch of science, engineering, or advanced mathematics, such as differential equations or numerical analysis, and understanding of capabilities and limitations of computer.</li> <li>• This is a professional level non-supervisory position which may require coordination of programming activities being conducted by the team</li> <li>• Confers with other business and technical personnel to resolve problems of intent, inaccuracy, or feasibility of computer processing.</li> <li>• Works with necessary personnel to determine if modifications are necessary with interested personnel to determine necessity for modifications or enhancements.</li> <li>• Leverages excellent written and verbal communication skills to develop new business process and programming solutions as directed by business and technical stakeholders.</li> <li>• May coordinate activities of computer programmers.</li> </ul>

**PR5**

Years of Relevant Experience:	10 plus years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR4 plus the following:</p> <ul style="list-style-type: none"> <li>• Proven track record of hands-on technical design and code work within large complex systems.</li> <li>• Proven hands-on technical work with a variety of technologies.</li> <li>• Demonstrated technical expertise integrating a variety of diverse technical environments and cross-platform technologies.</li> <li>• Proven experience mentoring and performing supervisory functions for technical teams.</li> <li>• Able to make best practice recommendations based on past work.</li> <li>• Proven ability to present complex technical constructs to business and non-technical users.</li> <li>• Proven ability to collaborate with business users, project managers and technical architects.</li> </ul>

**Quality Assurance Specialist**

The Quality Assurance Specialist (QAS) is responsible for the design, pilot, and implementation of the software quality assurance review processes. The QAS Specialist will work with Application Teams during pre and post assessment periods. The QAS Specialist reports to the Quality Assurance Team Lead. For each phase end review the Quality Assurance Specialist is responsible to plan, schedule, execute, and document findings of the review. Quality Assurance Specialists must have a detailed understanding of processes which support the software development lifecycle. The Quality Assurance Lead is responsible for communicating with the State regarding the progress of the quality approach and a summary of the metrics, as well as managing the Quality Assurance Specialists.

**QAS1**

Years of Relevant Experience:	3 years software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assists in software activities in defined span of control for the organization.</li> <li>• Tracks and monitors process and work product improvement opportunities.</li> <li>• Collects, reviews, and evaluates the project’s required work products against standard work product templates.</li> <li>• Verifies that established measurement procedures are used and all required metrics are collected.</li> <li>• Responds to requests for information.</li> <li>• Coordinates work with others on team and across teams</li> <li>• Draft report of observations, minor and major non-compliance.</li> <li>• Develops quality standards.</li> <li>• Monitors progress of action item resolution activity and ensure appropriate internal stakeholders are aware of pending deadlines.</li> <li>• Conducts training courses with project teams on software quality review process.</li> <li>• Researches problems before approaching Quality Assurance Lead for assistance.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

## QAS2

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Conducts software quality phase end review activities (work product and process) for each software project and produces the required quality assurance reports, as specified in the project's quality assurance plan.</li> <li>• Ensures the software development process followed by the project teams is compliant with approved tailored processes.</li> <li>• Reviews and checks project software development activities and the associated internal tasks required by the agencies as employed by the project and specified in the project plan.</li> <li>• Prepares preliminary software quality audit package for review before conduct of audit.</li> <li>• Defines quality standards.</li> <li>• Monitors progress of action item resolution activity and ensure appropriate stakeholders are aware of pending deadlines.</li> <li>• Assists in managing and improving quality assurance team processes.</li> <li>• Reviews and understands project team work plan.</li> <li>• Determines time estimates and schedule for software quality review work. Conduct reviews according to schedule.</li> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems, rather than reactive.</li> <li>• Identifies and tracks issues, risks and action items affecting own work and work of team.</li> <li>• Reports on progress of action item resolution and possible risk areas.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

## QAS3

Years of Relevant Experience:	7 years software development, testing and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews required work products to ensure compliance with approved tailored procedures and standards.</li> <li>• Reviews and checks software development activities and the associated internal tasks required as employed by the project and specified in the project plan.</li> <li>• Compares actual project procedures to the specified standards, procedures, and, if required, specific 3rd party contractual requirements.</li> <li>• Performs detailed reviews of interim and final tasks as appropriate.</li> <li>• Ensures process improvement opportunities are reviewed by appropriate contact to identify training needs of the organization.</li> <li>• Performs or manages the required software quality phase end reviews of work product and process for each software project and produce the required software quality reports, as specified in the project's software quality plan.</li> <li>• Develops and manages short and long-term plans and schedules for organization wide software quality needs.</li> <li>• Balances workload with team's capacity by managing the team's activities according to schedule and budgets.</li> <li>• Coordinates and procures the required skills and techniques required.</li> </ul>

	<ul style="list-style-type: none"> <li>• Obtains feedback from project teams regarding the overall effectiveness of processes and procedures – Forward to appropriate stakeholders and process owners.</li> <li>• Provides feedback to project teams regarding process/procedure improvement opportunities and other potential areas for improvement discovered during software quality activities.</li> <li>• Reports all software quality-revealed non-compliance.</li> <li>• Provides regular reports on the results of compliance reviews to the project team, project team leaders and management.</li> <li>• Reports on progress on action item resolution and possible risk areas.</li> <li>• Anticipates and resolves issues dealing with software quality.</li> <li>• Develops options and recommendations to assist teams in resolving issues.</li> <li>• Ensure action items are addressed and closed based on agreed dates and activities.</li> <li>• Ensure that defined processes are followed.</li> <li>• Communicate related improvement measures to the project team.</li> <li>• Obtain feedback from project teams regarding the overall effectiveness of software quality processes followed. Review with team and develop continuous improvement action plans. Report status to executive team.</li> <li>• Communicate and work with customers and other personnel as necessary.</li> <li>• Communicate clearly the team goals, organizational philosophies, and policies and procedures to the team.</li> <li>• Communicate to team members the relationship between their work assignments and the team and project objectives.</li> <li>• Lead efforts in developing and facilitating implementation of team goals and metrics.</li> </ul>
--	---

## Senior Architect

The Senior Architect is responsible for designing, developing, and implementing application infrastructure to provide highly-complex, reliable, and scalable applications and systems to meet the organization's objectives and requirements. Senior Architects are familiar with a variety of the application technologies, environments, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Senior Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They have proven experience defining systems and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SAR1

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Manages, organizes, and administers systems analysis and preparation of applications and operating systems programming to process data and solve problems by use of computers.</li> <li>• Establishes priorities and schedules, and oversees and reviews work of systems analysis personnel and programming personnel.</li> <li>• Reviews feasibility studies and time and cost estimates of new or revised systems.</li> <li>• Assists in the development of standards, procedures, and operating systems applications.</li> <li>• A combination of directly-related technical training and hands-on experience.</li> <li>• Works with stakeholders and management to ensure projects are completed on time and according to organization standards.</li> <li>• Consults with personnel in other information systems groups to coordinate activities.</li> <li>• Consults with management to clarify systems and programs intent, identify problems,</li> </ul>

	<p>suggest changes, and determine extent of application systems changes required.</p> <ul style="list-style-type: none"> <li>• Participates in developing a project plan and schedule with key milestones, contingency plans, workflow charts or diagrams, considering factors, such as resource requirements, computer storage capacity and speed, extent of peripheral equipment, and intended use of output data.</li> <li>• Manages conversion of workflow charts to language that can be processed by computer and entering of program codes and test data into computer.</li> <li>• Analyzes test runs on computer and supervises correction of coded program and input data.</li> <li>• Manages the revision of existing programs to increase operating efficiency or adapt to new requirements.</li> <li>• Compiles documentation of program development and subsequent revisions.</li> <li>• Trains subordinates in systems analysis, feasibility studies, programming, and program coding.</li> <li>• Prescribes standards for terms and symbols used to simplify interpretation of programs.</li> <li>• Collaborates with computer manufacturers and other users to develop new programming methods.</li> <li>• Prepares records and reports.</li> </ul>
--	---

## Senior Business Subject Matter Expert

The Senior Business Subject Matter Expert (SME) brings proven experience from related businesses or organizations as well as system integration and technology experience. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise and make recommendations on business and technical solutions based on hands-on experience solving similar business problems. They are able to utilize knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SME1

Years of Relevant Experience:	More than 10 years
Preferred Education	4 year college degree in computer science or a related field with advanced study preferred; certifications specific to the field of project management.
Role Description	<ul style="list-style-type: none"> <li>• Consults with executive-level stakeholders to define business need or problem; conducts research, performs studies and surveys to obtain data; and analyzes problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.</li> <li>• Requires knowledge in computer programming and other related technical fields as well as extensive experience in a particular business or industry subject matter.</li> <li>• Conducts study or survey on need or problem to obtain data required for solution.</li> <li>• Analyzes data to determine solution, such as installation of alternate methods and procedures, changes in processing methods and practices, modification of machines or equipment, or redesign of products or services.</li> <li>• Advises client or department heads on alternate methods of solving need or problem, or recommends specific solution.</li> <li>• Requires experience providing consulting services to governmental entities.</li> <li>• May be designated according to field of business and technical specialization.</li> </ul>

## Senior Database Architect

The Senior Database Architect is responsible for designing, developing, and implementing infrastructure to provide highly-complex, reliable, and scalable databases to meet the organization's objectives and requirements. Database Architects are familiar with a variety of the database technologies, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Database Architects are able to perform a variety of complicated tasks with minimal or no direct

supervision. They assist in defining system and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or issues, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### **SDA1**

Years of Relevant Experience:	8 plus years of database experience
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Possesses extensive knowledge of one or more database systems, and is capable of hands-on work in all phases of database design and management.</li> <li>• Designs, develops, and implements infrastructure to provide highly-complex, reliable, and scalable database to meet the organization's objectives and requirements.</li> <li>• Analyzes organization's business requirements for database design, and implements changes to database as required.</li> <li>• Performs systems analysis on database, and resolves performance, capacity, and replication issues as necessary.</li> <li>• Provides detailed design and specification documentation, including flowcharts, for all aspects of the database.</li> <li>• Works with database analysts to develop methodologies, report views, queries, and table replications</li> <li>• Ensures that all the data is in the proper format.</li> <li>• Participates in the identification, prioritization, and development of technical initiatives and strategies.</li> <li>• Develops and maintains database standards and naming conventions.</li> <li>• Keeps up-to-date on emerging database architectures, technologies, and methodologies, and attends training classes as necessary.</li> </ul>

## **Senior Program Manager**

The Senior Program Manager is responsible for managing, coordinating, and establishing priorities for the complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing. Senior Program Managers are familiar with a variety of the project management methodologies and rely on experience and judgment to plan and accomplish goals. They have proven experience leading technology projects to successful implementation. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### **SPM1**

Years of Relevant Experience:	10 plus years
Preferred Education:	4 year college degree in computer science or a related field; certifications specific to the field of project management.
Role Description:	<p>All roles specified in PM4 plus the following:</p> <ul style="list-style-type: none"> <li>• Requires proven success communicating verbally and in writing to multiple project stakeholders internal and external to the organization.</li> <li>• Determines project needs and acquires resources required for the success of the project.</li> <li>• Coordinates the development of new systems and/or applications projects, the modification of existing systems or applications, or changes in current methods or</li> </ul>



	<p>techniques.</p> <ul style="list-style-type: none"> <li>• Coordinates project performance with the other work of the affected department or departments.</li> <li>• Excludes those who do not have full time responsibilities for project management.</li> </ul>
--	--

## Service Desk

The Service Desk Analyzes and troubleshoots computer support problems and applies his or her understanding of computer software and hardware products and services to resolve user problems.

### SD2

Years of Relevant Experience:	0 to 3 years A+ certification preferred
Preferred Education:	Usually prefer two years of postsecondary training in field of specialty; may accept equivalent education and experience combined.
Role Description:	<ul style="list-style-type: none"> <li>• Receives telephone calls and e-mails from users having problems using computer software and hardware or inquiring how to use specific software, programming languages, electronic mail, or operating systems.</li> <li>• Ascertains the nature of problem, determine whether problem is caused by hardware such as modem, printer, cables, or telephone, and log in tracking system.</li> <li>• Escalates problems in accordance with defined procedures.</li> <li>• Assists users through problem solving steps</li> <li>• Uses technical databases to research problems, and talks with co-workers to research problem and find solution.</li> <li>• Tests software and hardware for troubleshooting and problem resolution.</li> <li>▪ Provides service and preventive maintenance activities on element exchange/baseline products (products with element exchange service and traditional maintenance philosophies; i.e., terminals, printers, personal computers, etc.).</li> <li>▪ Able to diagnose and detect correct equipment errors and repair products by replacing worn or broken parts, and making technical adjustments.</li> <li>▪ Makes appropriate use of reference publications and diagnostic aids in resolving technical problems.</li> <li>▪ Assists in coordination of changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>▪ Provides accurate and complete answers to general use and administrative environment questions in a timely manner.</li> <li>▪ Supports shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> <li>▪ Communicates accurate and useful status updates.</li> <li>▪ Manages and reports time spent on all work activities.</li> <li>▪ Follows quality standards.</li> <li>▪ Able to work in a team environment</li> <li>▪ Completes assigned tasks.</li> <li>▪ Strong communication skills; both written and spoken.</li> </ul>

### SD3

Years of Relevant Experience:	More than 3 years A+ certification preferred; additional certification may be required based on specific technologies.
Preferred Education:	4 year college degree or equivalent technical study; may accept equivalent education and experience combined.
Role Description:	<p>All roles specified in SD2 plus the following:</p> <ul style="list-style-type: none"> <li>• Tests software and hardware to evaluate ease of use and whether product will aid user in performing work.</li> <li>• Writes or revises training manuals and procedures.</li> </ul>

	<ul style="list-style-type: none"> <li>• Develops training materials, such as exercises and visual displays.</li> <li>• Trains users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.</li> <li>• Writes software and hardware evaluation and recommendation for management review.</li> <li>• Implements shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> </ul>
--	---

## Software Process Engineer

The Software Process Engineer is responsible for implementing and supporting a set of standard software engineering processes used by agencies. The Software Process Engineer participates in the entire life-cycle of software process improvement initiatives. This includes the planning, analysis, design, construction, testing, and implementation of new processes. The Software Process Engineer is responsible for identifying opportunities for improving existing processes and implementing appropriate solutions.

The Software Process Engineer is also responsible for supporting projects and individual Teams in the use and understanding of processes on an ongoing basis. The Software Process Engineer is responsible for collaborating with the Team Lead(s) and Program Managers to provide guidance to team members and facilitate continual software process improvement. The Software Process engineer must understand all aspects of the specific processes used by the Teams. The Software Process Engineer must also be familiar with industry process models and standards.

### SPS1

Years of Relevant Experience:	3 years in Computer Software development
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Facilitates the implementation of standard software engineering processes.</li> <li>• Identifies software development process improvement opportunities either independently or through working with projects and teams.</li> <li>• Assists in planning software process improvement initiatives.</li> <li>• Directs and participates in teams working on the analysis, design, construction, testing, and implementation of new processes.</li> <li>• Works with projects and teams to define the need for tailored processes and tools and assist in implementation, as appropriate.</li> <li>• Provides ongoing support to projects and teams in the use and understanding of the software processes.</li> <li>• Provides on-site support for teams on process related issues.</li> <li>• Provides assistance to the Software Process Engineer Lead in planning and scheduling activities.</li> <li>• Provides support in tracking and monitoring the success of process improvement initiatives.</li> <li>• Monitors and solicits feedback on the usability and functionality of implemented processes.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and report time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>



## SPS2

Years of Relevant Experience:	5 years in software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SPS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Facilitates the implementation of standard software engineering processes across agencies.</li> <li>• Determines time estimates and schedule for own work and resolve issues on a timely basis.</li> <li>• Identifies and tracks issues, risks and action items.</li> <li>• Determines process to support various initiatives.</li> <li>• Leads the development of content for process training and deliver process training as appropriate.</li> <li>• Coordinates with various teams about process improvement opportunities.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>

## SPS3

Years of Relevant Experience:	7 years total experience; 5 years in software development and testing.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in SPS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems.</li> <li>• Anticipates and resolves issues on a timely basis.</li> <li>• Communicates accurate and useful status as appropriate.</li> <li>• Demonstrates and promotes a focus on client service.</li> <li>• Communicates effectively with suppliers as appropriate.</li> <li>• Works with internal customers and others to identify direction of software process.</li> <li>• Identifies knowledge in a form that is reusable.</li> </ul>

## System Administrator

The System Administrator is responsible for server back up and security, along with performance tuning and capacity planning. System Administrators should possess an understanding of network and distributed computing concepts. This is accomplished by working with the Systems Management Team Lead to understand the scope of services to be provided and assessing the impact they will have on the technical infrastructure.

### SA1

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Familiarity with most basic system administrator tools and process; for example, can boot/shutdown a machine, add and remove user accounts, use back up programs, and maintain system database files.</li> <li>• Maintains the project servers.</li> <li>• Maintains the file and print capacity</li> <li>• Ensures that backups are performed as appropriate.</li> <li>• Acts as a front-line interface to users.</li> <li>• Accepts trouble reports and dispatch them to appropriate system administrators.</li> <li>• Able to write scripts in a particular administrative language.</li> </ul>

	<ul style="list-style-type: none"> <li>• Programming experience with any applicable language.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

## SA2

Years of Relevant Experience:	2 to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Responsible for operating and other system software.</li> <li>• Responsible for upgrading the operating and system software and keeping patches current.</li> <li>• Familiarity with fundamental networking/distributed computing environment concepts.</li> <li>• Able to do minimal debugging and modification of programs.</li> <li>• Executes the disaster recovery/back up procedures and archiving procedures.</li> <li>• Manages security for servers.</li> <li>• Responsible for performance tuning, capacity planning, database administration, and fault management.</li> <li>• Provides tier two support of the technical infrastructure.</li> <li>• Coordinating efforts with vendors if tier three support is required.</li> <li>• Responsible for ensuring high priority issues are resolved in a timely manner.</li> <li>• Responsible for keeping the environment up and running.</li> <li>• In many cases is responsible for identifying and reporting hardware problems.</li> <li>• Capable of writing purchase justifications.</li> <li>• Understands basic routing concepts.</li> <li>• Identifies and tracks issues, risks, and action items.</li> <li>• Resolves and/or assists in resolving issues.</li> <li>• Reviews, prioritizes, and researches service requests.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

## SA3

Years of Relevant Experience:	4 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Solid understanding of networking/distributed computing environment concepts.</li> <li>• Understands principles of routing client/server programming.</li> <li>• Manages expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensures quality standards are followed.</li> <li>• Understands the business application of technical support and design in an application development environment.</li> <li>• Works with the various Infrastructure teams and operations provider to identify the strategic direction of systems management activities.</li> <li>• Understands the design of consistent network-wide file system layouts</li> <li>• Maintains strong relationships with employees and various tier two and three support groups.</li> <li>• Develops plans for disaster recovery/ back up and archiving.</li> </ul>

	<ul style="list-style-type: none"> <li>• Manages the daily operations of the systems management team to ensure service levels are being met.</li> <li>• Manages the systems management team's support issue and backlog.</li> <li>• Monitors the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Acts as the first level of escalation for high priority support issues.</li> </ul>
--	--

## SA4

Years of Relevant Experience:	6 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA3 plus the following:</p> <ul style="list-style-type: none"> <li>• Functions as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develops the technical infrastructure maintenance strategy.</li> <li>• Manages the system management resources.</li> <li>• Acts as a system's management expert.</li> <li>• Analyzes, determines, and documents requirements in terms of system management needs and implement them.</li> <li>• Identifies, approves, and prioritizes team projects.</li> <li>• Manages a large site or network.</li> <li>• Recommends policies on system use and services.</li> </ul>

## System Specialist

The System Specialist is knowledgeable on the usage and support of a collection of development platforms or technical architectures, and products that run on those platforms. The primary responsibility of a System Specialist is to ensure the availability and facilitate the productive use of a development platform or a test environment for Application Teams or end users. The System Specialist may support one or several instances of a platform/environment, applying their skills directly to a platform/environment and/or leveraging their skills across multiple platforms/environment. The System Specialist may, especially for usage and support of a platform, be part of an Application Team using the architecture. The System Specialist requires experience and skills in the environment supported and in the operations and in common usage of products for the environment. The System Specialist are responsible for collaborating with Technical Architecture Specialist, Functional Architects, Programmers and vendors to coordinate and enhance the use of the platform and facilitate migration to new versions of the platform.

## SS1

Years of Relevant Experience:	1 to 3 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assists in coordination of testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>• Makes recommendations on functional and technical improvements to the environment.</li> <li>• Participates in performance and volume analysis and design.</li> <li>• Participates in performance improvement activities. Identify and apply potential improvements related to the environment for an application.</li> <li>• Provides accurate and complete answers to general use and environment questions in a timely manner.</li> <li>• Provides effective on-site environment support as needed.</li> <li>• Accurately sets severity of identified defects.</li> <li>• Provides input to training and/or documentation materials regarding latest technical and functional design changes.</li> <li>• Ensures that all work is documented for future reference.</li> </ul>

	<ul style="list-style-type: none"> <li>• Follows quality standards.</li> <li>• Ensures effective and reliable backups are being performed and distributed properly.</li> <li>• Proactively addresses customer needs.</li> <li>• Tracks and anticipates volume and type of use of the environment.</li> <li>• Plans and implements shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> <li>• Basic scripting and programming skills, including languages that run on specified platform.</li> <li>• Analytical and customer service skills.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>
--	---

## SS2

Years of Relevant Experience:	3 to 5 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Plans and manages network operating system upgrades.</li> <li>• Actively participates in analyzing and evaluating emerging software and hardware technologies/standards.</li> <li>• Serves as a liaison between teams for network planning and connectivity.</li> <li>• Develops appropriate functional and usability standards for the environments.</li> <li>• Plans or assists in planning network environment, including supporting existing structure and enhancements.</li> <li>• Plans and coordinates testing changes, upgrades and new and standard products, ensuring systems will operate correctly in current and future environment.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application or Environment team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Analyzes the functional and/or technical impact of new product releases.</li> <li>• Advanced scripting and programming skills, including languages that run on specified platform.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and track issues, risks and action items.</li> </ul>

## SS3

Years of Relevant Experience:	5 plus years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Identifies opportunities for new and improved technologies/standards to be used in the organization.</li> <li>• Identifies, plans, and implements phase-out strategies for products and technologies.</li> <li>• Plans and coordinates testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>• Demonstrates expertise in teaching/conveying technical courses/concepts.</li> <li>• Assists in setting architecture direction and knowledge sharing.</li> <li>• Plans, organizes, prioritizes, and manages multiple work efforts the Application or</li> </ul>

	Environment Teams. <ul style="list-style-type: none"> <li>• Develops appropriate work programs and uses to effectively schedule tasks/assignments.</li> </ul>
--	---

## Team Lead

The Team Lead manages an Application Team to deliver services according to defined service level commitments owned by the Application Team. The Team Lead coordinates resources and work to deliver solutions to customers on time and within budget. The Team Lead is assigned responsibility and accountability for overseeing the successful completion of all work assigned to the Application Team. The Team Lead is a process expert within the Application Team, understanding the software development / maintenance processes and verifying process conformance. The Team Lead will monitor stability of production applications owned by the Application Team. The Team Lead assists Application Team members in development activities and reviews tasks as required. The Team Lead manages and updates progress towards Application Team objectives, assists Application Team members in resolving problems, and engages in personnel management and guidance to Application Team members. The Team Lead fosters a positive work environment by mentoring, supporting, and committing to the professional development of Application Team members. The Team Lead reports to the Group Lead or Program Manager, as appropriate. The difference between a TL1 and a TL2 will depend on the size of the project, and the breadth and scope of the project.

### TL1

Years of Relevant Experience:	4 to 5 years, and 1 to 2 years project management experience.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Monitors stability of production applications owned by Application Team.</li> <li>• Prepares estimates for maintenance and enhancement of existing applications and development of new applications.</li> <li>• Performs detailed reviews of interim and final tasks as appropriate.</li> <li>• Processes work requests; review, prioritize, and package.</li> <li>• Manages and reviews tasks of suppliers and other interfaces to the Application Team.</li> <li>• Conducts structured walk-throughs or inspections; manage issues to closure.</li> <li>• Develops and manages short and long-term plans and schedules.</li> <li>• Directs the development of accurate estimates for Application Team activities as required.</li> <li>• Balances workload with Application Teams capacity by managing the Application Teams activities according to schedule.</li> <li>• Manages the accomplishment of delivery metrics to support contractual obligations in the areas of service delivery and on time performance commitments and productivity improvement.</li> <li>• Ensures work remains within the agreed scope.</li> <li>• Tracks workplan baseline against results.</li> <li>• Coordinates/communicates with Group Leads and/or Program Manager to ensure initiatives are in accordance with agreed customer commitments as planned.</li> <li>• Proactively identifies and manages issues/risks affecting the project.</li> <li>• Communicates accurate and useful status to Group Lead and other management on a timely basis.</li> <li>• Identifies and initiates continuous improvements.</li> <li>• Instills commitment to quality, customer service, ownership, and teamwork.</li> <li>• Conducts post project wrap-ups.</li> <li>• Monitors and measures maintenance and development process effectiveness.</li> <li>• Ensures that defined processes are followed.</li> <li>• Manages expectations of the Application Teams internal and external customers.</li> <li>• Facilitates communication and knowledge sharing within the Application Teams.</li> <li>• Maintains awareness of new developments in industry and processes and apply as</li> </ul>

	<p>appropriate.</p> <ul style="list-style-type: none"> <li>• Develops and deepens understanding of system business requirements supported by the Application Team.</li> <li>• Communicates clearly the Application Team goals, organizational philosophies, and policies and procedures to the Application Teams.</li> <li>• Conducts structured walk-throughs or inspections; manage issues to closure.</li> </ul>
--	---

## TL2

Years of Relevant Experience:	5 plus years, and 2 to 3 years project management experience
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TL1 plus the following:</p> <ul style="list-style-type: none"> <li>• Manages the resolution of high severity production problems.</li> <li>• Manages and directs Application Team activities employing appropriate program management and planning principles.</li> <li>• Coordinates work with other Team Leads as appropriate.</li> <li>• Coordinates and procures the required skills and techniques required by the Application Team.</li> </ul>

## Technical Architecture Specialist

The Technical Architecture Specialist is the technical expert centered on a technology, technologies or a portfolio of applications. The Technical Architecture Specialist is the technologist who coordinates with other parties in setting the technical approach and direction and implementation for work. The Technical Architecture Specialist provides technical design expertise, defines what technical requirements are needed to support defined business requirements, participates in detailed design and code reviews, reviews system performance issues, reviews test plans, and provides technical guidance to the Application Team and Test Team members. The Technical Architecture Specialist is responsible for collaborating with the Team Lead(s) to coordinate project schedules, budgets, request management, and work authorization. The expert level Technical Architecture Specialist will interface with Executive Sponsors, Group Leads, and Lead Functional Architects to convey infrastructure requirements, plan, and schedule deployment of tasks, and resolve any issues that impact the deployment of the Application Delivery systems.

## TAS1

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Defines test plans and criteria for acceptance for the technical components of an application.</li> <li>• Ensures business requirements are supported by the technical architecture.</li> <li>• Assists in leading technical direction of software; coordinating and presenting proposals to Group Leads, Leads, and the client.</li> <li>• Defines and evaluates logical and physical data models.</li> <li>• Assists in development of overall system technical architecture - including software and hardware.</li> <li>• Defines test plans and criteria for acceptance for the technical components of an application.</li> <li>• Analyzes, determines, and documents technical requirements and change request impact analysis.</li> <li>• Participates in detailed design and product test execution as required.</li> <li>• Develops technical programming standards.</li> <li>• Ensures business requirements are supported by the technical architecture.</li> <li>• Conducts structured walk-throughs or inspections for technical areas; resolve issues.</li> <li>• Assists in defining technical programming standards.</li> </ul>



	<ul style="list-style-type: none"> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> <li>• Performs integration of various architectures across multiple enterprises</li> <li>• Develops overall system technical architecture, including software and hardware.</li> <li>• Performs review of technical designs, code, and component test plans.</li> <li>• Resolves and/or assists in resolving cross application technical issues.</li> <li>• Conducts structured walk-throughs or inspections for technical areas; resolve issues.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>
--	---

## TAS2

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Ensures consistency and completeness across data models.</li> <li>• Plans and delivers development architecture environments in coordination with the Environmental Support Specialist.</li> <li>• Assists in managing and directing team's technical architecture processes.</li> <li>• Provides assistance in scheduling design work for Lead Technical Architecture Specialist.</li> <li>• Develops and documents expert practices/ standards.</li> <li>• Possesses strong analysis, presentation, documentation, and quality assurance skills.</li> <li>• Analyzes, determines, and documents technical requirements and impact analysis for technical and development architectures.</li> <li>• Explains defect priorities and enhancement classifications to client and customer when needed.</li> <li>• Maintains awareness of new technological developments in industry and processes - implement concepts appropriately.</li> <li>• Leads or participates in setting the service levels for the application.</li> <li>• Defines overall system logical architecture.</li> <li>• Provides standard, well-structured work planning that defines scope, resources, milestones, quality, risk, tasks, and acceptance criteria.</li> <li>• Prepares contingencies, scenarios, scenario plans and action items to resolve issues.</li> <li>• Leads efforts in providing technical expertise, guidance, and training to the Application and Test Teams.</li> </ul>

## TAS3

Years of Relevant Experience:	5 plus years, and 1 to 2 years project management experience
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Communicates effectively with IT staff, client organization and software / hardware suppliers.</li> <li>• Leads efforts in designing technical strategy, direction and approach, technical architecture, data architecture, development architecture, performance tuning, performance and capacity analysis, technical standards, technical reliability and</li> </ul>



	<p>flexibility.</p> <ul style="list-style-type: none"> <li>• Designs and defines overall system technical architecture - including software and hardware within the framework and constraints of technical architecture.</li> <li>• Evaluates alternative designs.</li> <li>• Maintains control of specific tools and assets.</li> <li>• Owns the technical architecture for a portfolio of applications, including the interpretation and application of the technical architecture.</li> <li>• Plans, designs, develops, and/or executes of technical architecture.</li> <li>• Assists with the preparation of estimates for new technology applications and maintenance of existing applications as part of Service Management.</li> <li>• Provides experience in utilizing the project architecture. Acknowledged as highly competent in one or more technologies.</li> <li>• Communicates accurate and useful status reports and other management on a timely basis.</li> <li>• Coordinates and conducts project architecture, infrastructure review meetings, and portfolio review meetings with Group Lead, Lead Functional Architects, and Team Leads.</li> <li>• Integrates issues and identifies impact.</li> <li>• Communicates and resolves application interface issues.</li> <li>• Communicates to team members the relations between their work assignments and the organizational and/ or program strategy, objectives, business and technology needs of the application / system.</li> <li>• Shares knowledge across teams with both similar and non-similar applications, specifically focusing on Technical Architecture</li> <li>• Interprets and communicates technical architecture to the Technology Application Architecture Team(s).</li> </ul>
--	--

## Technical Specialist

The Technical Specialist is a senior level resource with specialized knowledge and experience in a specific technology such as SharePoint development or an SAP specialist. The Technical Specialist has an overall knowledge and understanding of application development and architecture that serves as a strong base for technical expertise in a specific product or program.

### TS1

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Demonstrates expertise in conveying technical and functional concepts for a specific technical specialty.</li> <li>• Identifies improvements to project standards to achieve high quality services/ products.</li> <li>• Able to identify best practices and standards for the use of the product.</li> </ul>

### TS2

Years of Relevant Experience:	7to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Delivers support and design for industry specific applications that require integration with statewide systems or applications.</li> <li>• Interacts with executive level business users or technical experts.</li> <li>• May function as a niche technical SME.</li> </ul>

### **TS3**

Years of Relevant Experience:	8-10 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in TS2 plus the following: <ul style="list-style-type: none"> <li>• Advanced experience in the required technical subject matter.</li> </ul>

### **TS4**

Years of Relevant Experience:	More than 10 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in TS3 plus the following: <ul style="list-style-type: none"> <li>• Proven experience with a technical specialty across large and complex implementations and systems</li> </ul>

## **Technical Writer**

The Technical Writer develops and maintains user and technical documentation and project process documentation for Application Teams. Technical Writer understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. The experienced Technical Writer 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 within their Tower.

### **TW1**

Years of Relevant Experience:	Up to 2 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Develops, enhances, and maintains user documentation for multiple applications including documentation required for the operations provider.</li> <li>• Develops on-line source documentation as appropriate.</li> <li>• Maintains documentation libraries and subscription lists.</li> <li>• Identifies, creates, revises, and maintains documentation and templates needed by the Application Teams.</li> <li>• Ensures appropriate control access/use of documentation materials.</li> <li>• Maintains application and user documentation.</li> <li>• Ensures messages and terminology is consistent across all written materials.</li> <li>• Researches and completes documentation service requests.</li> <li>• Communicates and works with customers and other Client Telecommunications personnel as necessary.</li> <li>• Works with Application Team members to enhance their understanding of end-user and technical documentation.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>

**TW2**

Years of Relevant Experience:	2 to 4 years.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW1 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews and prioritizes documentation service requests.</li> <li>• Determines procedures for use of on-line documentation tools and version control documentation as appropriate.</li> <li>• Assists or guides other Technical Writer as needed to develop and maintain user and technical documentation for their assigned applications.</li> <li>• Educates both business and technical groups on the essential need for developing and using standard documentation for all processes.</li> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems, rather than reactive.</li> <li>• Researches problems before approaching Lead Technical Writer or Team Lead for assistance.</li> <li>• Assists the Application Team Lead in monitoring budget by providing estimated-time-to-complete and actuals for assigned tasks.</li> <li>• Identifies and makes recommendations around documentation and templates needed by the Application Teams.</li> <li>• Works with users and other State personnel to ensure that the solutions meet State business requirements.</li> <li>• Identifies and initiates continuous improvement opportunities.</li> <li>• Directs the development of accurate estimates for documentation requests/activities as required</li> <li>• Develops options and recommendations to assist documentation team members in resolving issues.</li> <li>• Leads efforts in developing and facilitating implementation of the Documentation team goals and metrics.</li> <li>• Develops workable, practical, measurable work plans defining activities, schedules and tasks with Team Leads and the Lead Technical Writer</li> <li>• Reviews and understands the Application Teams workplan.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>

**TW3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW2 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews and approves procedures for use of on-line documentation tools as appropriate.</li> <li>• Identifies business and technical documentation needs not currently addressed.</li> <li>• Manages Technical Writer.</li> <li>• Owns documentation libraries and subscription lists.</li> <li>• Promotes the need for developing and using standard documentation for all processes within the organization.</li> <li>• Performs detailed reviews of interim and final tasks as appropriate.</li> <li>• Oversees processing of service requests.</li> <li>• Manages, deploys, and schedules Technical Writer activities.</li> <li>• Develops and manages short and long-term documentation plans and schedules.</li> </ul>

	<ul style="list-style-type: none"> <li>• Understands work requests/needs within Application Teams</li> <li>• Manages the accomplishment of delivery metrics in support of contractual obligations in the areas of service delivery, on time performance.</li> <li>• Works with Team Leads and Group Leads to set documentation goals.</li> </ul>
--	--

### **TW4**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW3 plus the following:</p> <ul style="list-style-type: none"> <li>• Ensures work remains within the agreed project scope.</li> <li>• Coordinates work with other Lead Technical Writers as appropriate.</li> <li>• Coordinates and procure the required skills and techniques required by the Application Teams for documentation needs.</li> <li>• Communicates accurate and useful status reports to Group Lead and other management on a timely basis.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Manages expectations of the Technical Writers' internal and external customers.</li> <li>• Defines documentation quality standards as needed.</li> <li>• Conducts post project reviews and quality assessments.</li> <li>• Ensures that defined processes are followed.</li> <li>• Communicates related improvement measures to the team.</li> <li>• Communicates clearly to Technical Writers their goals, organizational philosophies, policies and procedures.</li> </ul>

## **Telecom Engineer**

The Telecom Engineer configures and installs hardware, wiring, and specialized equipment according to local building and electrical codes. The Telecom Engineer may also be responsible for the end-to-end installation of cable, wiring, and related equipment. The Telecom Engineer typically works closely with facilities/construction managers and site-based project managers. The Telecom Engineer should be able to accurately estimate the time and materials needed for tasks assigned. It is not uncommon for the Telecom Engineer to supervise a team of people and coordinate activities with other construction teams.

### **TE1**

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> <li>• Ensures proper connectivity from site-to-site and internal to facility.</li> <li>• Experience with CAT5, Romex, and similar cables/wiring.</li> <li>• Pulls cable and ensures adherence to all building codes.</li> <li>• Escalates construction and installation problems to the construction/integration manager, as needed.</li> <li>• Prepares all job-related paperwork.</li> <li>• Closesout work authorization when equipment is in service.</li> </ul>

### **TE2**

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE1 plus the following:</p> <ul style="list-style-type: none"> <li>• Inspects customer premises to ascertain available space for equipment installation</li> </ul>

	<ul style="list-style-type: none"> <li>• Determines the type and quantity of equipment that can be installed to provide requested communication facilities.</li> <li>• Creates floor plan of equipment arrangement for customer or architect approval.</li> <li>• Prepares cost estimate for equipment and installation and submit data to management for authorization to proceed.</li> <li>• Orders equipment and prepare installation specifications.</li> <li>• Monitors progress of installation to ensure facilities are ready on specified date.</li> </ul>
--	--

### **TE3**

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE2 plus the following:</p> <ul style="list-style-type: none"> <li>• Leads full integration teams and interact with large infrastructure teams.</li> <li>• Acts as telecommunications interface to outside vendors and construction manager.</li> <li>• Directs activities related to the selection and installation of telephone facilities and special equipment on premises to meet customer's communication requirements.</li> </ul>

## **Tester**

The Tester is a member of a team which plans, constructs, and executes product tests, system tests, unit tests, load tests, volume tests, network tests as well as works with others for release control processes. The more experienced Tester manages, plans, constructs, and executes tests and integrates with release control process.

### **Test1**

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Creates test models for product test and release control (plans, data, and scripts).</li> <li>• Conducts structured walk-throughs</li> <li>• Executes assembly or product tests.</li> <li>• Meets time estimates for assigned tasks.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>

### **Test2**

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test1 plus the following:</p> <ul style="list-style-type: none"> <li>• Defines product test plans and criteria for acceptance.</li> <li>• Develops, updates, and maintains testing standards and procedures.</li> <li>• Resolves testing process questions / issues.</li> <li>• Assists in the planning, creation, and control of the test environments.</li> <li>• Conducts inspections; resolve issues.</li> <li>• Coordinates and executes assembly or product tests with the Test Team, Application Team and the Program Manager.</li> <li>• Assists Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks.</li> <li>• Works with Test Team members to enhance their testing skills and build technical and</li> </ul>

	<p>business knowledge.</p> <ul style="list-style-type: none"> <li>• Updates and tests release installation procedures.</li> <li>• Generally aware of new developments in industry and processes and ability to apply to work as appropriate.</li> <li>• Determines time estimates and schedule for work efforts.</li> <li>• Defines and utilizes entry / exit criteria for testing.</li> <li>• Schedules the design of structured walk-throughs or inspections; resolve issues.</li> <li>• Works with users to ensure that solutions meet business requirements.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks, and action items.</li> </ul>
--	--

### Test3

Years of Relevant Experience:	4 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test2 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews and understands the Test Team work plan.</li> <li>• Assists in managing and directing Test Team processes.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Test and/or Application Teams.</li> <li>• Develops contingency plans as necessary.</li> <li>• Researches problems before approaching the Team Lead or Test Team Lead for assistance.</li> <li>• Assists or guides Testers as needed.</li> <li>• Develops understanding of system business requirements supported by the Test team</li> <li>• Assists Application Teams to plan and execute component and assembly tests.</li> <li>• Participates in assembly or product test execution as required.</li> </ul>

## Video Conference Specialist

The Video Conference Specialist (VCS) provides video and photograph production support by operating a variety of film, sound-reproducing equipment, slide, and video equipment.

### VCS1

Years of Relevant Experience:	Up to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Maintains equipment in working condition.</li> <li>• Makes minor adjustments and repairs to equipment</li> <li>• Notifies maintenance personnel when correction of major malfunction is required.</li> <li>• Positions, installs, connects, and repairs equipment.</li> <li>• Familiar with fundamental networking/distributed computing environment concepts.</li> <li>• Troubleshoots network issues, systems, and applications to identify and correct malfunctions and other operational difficulties.</li> <li>• Investigates user problems, identifies their source, determines possible solutions, tests and implements solutions</li> <li>• Ensures high priority issues are resolved in a timely manner.</li> <li>• Excellent communication skills.</li> </ul>



## VCS2

Years of Relevant Experience:	6 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in VCS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Coordinates equipment operation with material presented, according to notations in script or instructions of speaker.</li> <li>• Advises speakers and presenters on alternative media.</li> <li>• Meets with department heads, managers, supervisors, vendors, and others, to solicit cooperation and resolve problems.</li> <li>• Actively participates in analyzing and evaluating emerging technologies/standards.</li> <li>• Evaluates and/or recommend purchases of network hardware, software, and peripheral equipment.</li> <li>• Acts as the first level of escalation for high priority support issues.</li> <li>• Functions as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develops the technical maintenance strategy.</li> <li>• Analyzes, determines, and documents requirements in terms of system management needs and implement them.</li> <li>• Identifies, approves, and prioritizes team projects.</li> <li>• Mentors and supervises other team members.</li> </ul>

## Voice/Data Engineer

The Voice/Data Engineer directs and participates in all activities related to the selection and installation of telephone facilities and special on-premises equipment that will meet the customer's communication requirements. The Voice/Data Engineer is responsible for all technology and connectivity involving telecommunications and data networks. The Voice/Data Engineer will typically specialize in telephony and data interfaces and systems that have proprietary functions within the communications area of a corporation/business. General wiring excluded, the Voice/Data Engineer ensures that any specialized conduit or wiring is properly deployed and installed according to code. The Voice/Data Engineer is also an expert in audio/visual, teleconferencing, and voice mail equipment. Often times, the Voice/Data Engineer is specialized or is certified in a particular piece of equipment.

### VDE1

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> <li>• Ensures proper connectivity of voice and data services and technologies.</li> <li>• Interacts and work with Telecom Engineer, Integration Engineer, or Project Manager.</li> <li>• Prepares all job-related paperwork</li> <li>• Closes out work authorization when equipment is in service.</li> </ul>

### VDE2

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE1 plus the following:</p> <ul style="list-style-type: none"> <li>• Prepares equipment floor plan for customer or architect approval.</li> <li>• Determines telephone, data services/components, and audio visual equipment placement within facility.</li> <li>• Acts as installer of equipment for data/voice or Audio visual use.</li> <li>• Installs, tests, configures, and train users on products and equipment.</li> </ul>



	<ul style="list-style-type: none"> <li>• Supports systems and products associated with telecommunications/telephone and data within a facility or department.</li> </ul>
--	--

**VDE3**

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE2 plus the following:</p> <ul style="list-style-type: none"> <li>• Familiar with at least one type of equipment or service that is highly specialized.</li> <li>• Prepares cost estimate for equipment and installation and submit data to management for authorization to proceed with job.</li> <li>• Orders equipment and prepare installation specification.</li> <li>• Monitors installation progress to ensure that the facilities are ready on projected date.</li> <li>• Leads a team of installers and junior Voice/Data Engineers.</li> </ul>

This page is intentionally left blank.

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

Area #1	Area #2	Area #3	Area #4	Area #5
Bedford County	Adams County	Beaver County	Allegheny County	Chester County
Clearfield County	Armstrong County	Butler County	Berks County	Delaware County
Forest County	Blair County	Cameron County	Bucks County	Montgomery County
Jefferson County	Bradford County	Clarion County	Centre County	Philadelphia County
Juniata County	Cambria County	Elk County	Cumberland County	
Perry County	Carbon County	Erie County	Dauphin County	
Somerset County	Clinton County	Fulton County	Lehigh County	
Susquehanna County	Columbia County	Greene County	Montour County	
	Crawford County	Indiana County	Wyoming County	
	Fayette County	Lackawanna County		
	Franklin County	Lancaster County		
	Huntingdon County	Lawrence County		
	Lycoming County	Lebanon County		
	Mc Kean County	Luzerne County		
	Mercer County	Monroe County		
	Mifflin County	Northampton County		
	Pike County	Northumberland County		
	Schuylkill County	Potter County		
	Snyder County	Sullivan County		
	Tioga County	Union County		
	Warren County	Venango County		
	Wayne County	Washington County		
		Westmoreland County		
		York County		

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 1 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Application Developer	AD1	\$60.19	\$61.42	\$65.72
Application Developer	AD2	\$66.16	\$67.52	\$72.25
Application Developer	AD3	\$71.03	\$72.48	\$77.55
Architect	AR1	\$81.82	\$83.49	\$89.33
Functional Architect	FA1	\$34.42	\$35.12	\$37.58
Functional Architect	FA2	\$41.13	\$41.98	\$44.93
Functional Architect	FA3	\$49.19	\$50.20	\$53.72
Help Desk Analyst	HDA1	\$26.93	\$27.48	\$29.40
Help Desk Analyst	HDA2	\$29.52	\$30.11	\$32.22
Help Desk Analyst	HDA3	\$36.56	\$37.30	\$39.91
Network Engineer	NE1	\$47.42	\$48.39	\$51.78
Network Engineer	NE2	\$53.78	\$54.88	\$58.71
Network Engineer	NE3	\$60.47	\$61.70	\$66.02
Product Specialist	PS1	\$37.08	\$37.84	\$40.48
Product Specialist	PS2	\$42.60	\$43.48	\$46.52
Product Specialist	PS3	\$56.18	\$57.33	\$61.34
Product Specialist	PS4	\$71.02	\$72.47	\$77.54
Product Specialist	PS5	\$87.67	\$89.46	\$95.71
Programmer	PR1	\$31.63	\$32.27	\$34.53
Programmer	PR2	\$37.61	\$38.37	\$41.06
Programmer	PR3	\$47.58	\$48.55	\$51.96
Programmer	PR4	\$62.04	\$63.31	\$67.75
Programmer	PR5	\$74.18	\$75.69	\$81.00
Service Desk	SD2	\$23.84	\$24.32	\$26.02
Service Desk	SD3	\$25.77	\$26.29	\$28.13
Software Process Engineer	SPS1	\$34.64	\$35.35	\$37.81
Software Process Engineer	SPS2	\$38.50	\$39.28	\$42.03
Software Process Engineer	SPS3	\$52.44	\$53.51	\$57.27
System Administrator	SA1	\$31.75	\$32.40	\$34.66
System Administrator	SA2	\$35.04	\$35.75	\$38.26
System Administrator	SA3	\$49.25	\$50.26	\$53.78
System Administrator	SA4	\$66.16	\$67.51	\$72.24
System Specialist	SS1	\$30.76	\$31.39	\$33.59
System Specialist	SS2	\$32.59	\$33.25	\$35.57
System Specialist	SS3	\$41.89	\$42.75	\$45.74
Technical Architecture Specialist	TAS1	\$41.39	\$42.24	\$45.19
Technical Architecture Specialist	TAS2	\$47.04	\$47.99	\$51.35
Technical Architecture Specialist	TAS3	\$50.31	\$51.33	\$54.92
Technical Specialist	TS1	\$74.23	\$75.74	\$81.05
Technical Specialist	TS2	\$78.17	\$79.77	\$85.35
Technical Specialist	TS3	\$84.73	\$86.45	\$92.50
Technical Specialist	TS4	\$101.68	\$103.74	\$111.00
Video Conference Specialist	VCS1	\$45.28	\$46.67	\$49.94
Video Conference Specialist	VCS2	\$51.55	\$53.15	\$56.88
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 1 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$48.12
Business Analyst	BA2	\$61.57
Business Analyst	BA3	\$70.27

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 1 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$41.51
CADD/GIS Administrator	CGA2	\$47.85
CADD/GIS Administrator	CGA3	\$71.24
Data Entry Operator	DE1	\$14.49
Data Entry Operator	DE2	\$15.78
Database Administrator	DBA1	\$41.71
Database Administrator	DBA2	\$45.96
Database Administrator	DBA3	\$61.72
Database Administrator	DBA4	\$74.89
Intern	INT1	\$15.34
Intern	INT2	\$17.90
Intern	INT3	\$23.02
Mobile Specialist	MS1	\$143.85
Mobile Specialist	MS2	\$159.84
Program Manager	PM1	\$45.98
Program Manager	PM2	\$55.87
Program Manager	PM3	\$72.13
Program Manager	PM4	\$93.50
Quality Assurance Specialist	QAS1	\$37.40
Quality Assurance Specialist	QAS2	\$41.45
Quality Assurance Specialist	QAS3	\$54.67
Senior Architect	SAR1	\$96.23
Senior Business Subject Matter Expert	SME1	\$90.38
Senior Database Architect	SDA1	\$81.45
Senior Program Manager	SPM1	\$101.80
Team Lead	TL1	\$55.45
Team Lead	TL2	\$59.80
Technical Writer	TW1	\$26.38
Technical Writer	TW2	\$30.82
Technical Writer	TW3	\$34.76
Technical Writer	TW4	\$43.05
Telecom Engineer	TE1	\$35.72
Telecom Engineer	TE2	\$40.83
Telecom Engineer	TE3	\$48.17
Tester	Test1	\$33.08
Tester	Test2	\$38.22
Tester	Test3	\$44.49
Voice/Data Engineer	VDE1	\$33.90
Voice/Data Engineer	VDE2	\$39.32
Voice/Data Engineer	VDE3	\$47.30

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 2 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Application Developer	AD1	\$60.63	\$61.88	\$66.22
Application Developer	AD2	\$66.73	\$68.08	\$72.84
Application Developer	AD3	\$71.67	\$73.13	\$78.25
Architect	AR1	\$82.67	\$84.35	\$90.27
Functional Architect	FA1	\$34.55	\$35.25	\$37.72
Functional Architect	FA2	\$41.31	\$42.16	\$45.12
Functional Architect	FA3	\$49.70	\$50.71	\$54.27
Help Desk Analyst	HDA1	\$26.92	\$27.47	\$29.39
Help Desk Analyst	HDA2	\$29.53	\$30.12	\$32.23
Help Desk Analyst	HDA3	\$36.66	\$37.40	\$40.02
Network Engineer	NE1	\$47.48	\$48.45	\$51.84
Network Engineer	NE2	\$54.10	\$55.20	\$59.07
Network Engineer	NE3	\$60.92	\$62.16	\$66.50
Product Specialist	PS1	\$37.22	\$37.98	\$40.64
Product Specialist	PS2	\$42.82	\$43.68	\$46.74
Product Specialist	PS3	\$56.95	\$58.11	\$62.17
Product Specialist	PS4	\$71.79	\$73.25	\$78.37
Product Specialist	PS5	\$88.56	\$90.36	\$96.69
Programmer	PR1	\$31.66	\$32.31	\$34.58
Programmer	PR2	\$37.76	\$38.53	\$41.23
Programmer	PR3	\$47.94	\$48.92	\$52.35
Programmer	PR4	\$62.92	\$64.20	\$68.69
Programmer	PR5	\$74.98	\$76.50	\$81.86
Service Desk	SD2	\$23.79	\$24.29	\$25.98
Service Desk	SD3	\$25.76	\$26.28	\$28.12
Software Process Engineer	SPS1	\$34.77	\$35.47	\$37.96
Software Process Engineer	SPS2	\$38.64	\$39.44	\$42.20
Software Process Engineer	SPS3	\$53.09	\$54.18	\$57.98
System Administrator	SA1	\$31.85	\$32.50	\$34.78
System Administrator	SA2	\$35.16	\$35.88	\$38.38
System Administrator	SA3	\$49.78	\$50.79	\$54.35
System Administrator	SA4	\$66.88	\$68.24	\$73.01
System Specialist	SS1	\$30.81	\$31.44	\$33.63
System Specialist	SS2	\$32.65	\$33.31	\$35.63
System Specialist	SS3	\$42.08	\$42.94	\$45.95
Technical Architecture Specialist	TAS1	\$41.58	\$42.43	\$45.39
Technical Architecture Specialist	TAS2	\$47.36	\$48.32	\$51.71
Technical Architecture Specialist	TAS3	\$50.87	\$51.91	\$55.54
Technical Specialist	TS1	\$74.91	\$76.45	\$81.78
Technical Specialist	TS2	\$78.91	\$80.52	\$86.16
Technical Specialist	TS3	\$85.56	\$87.32	\$93.42
Technical Specialist	TS4	\$102.67	\$104.78	\$112.10
Video Conference Specialist	VCS1	\$45.63	\$47.04	\$50.32
Video Conference Specialist	VCS2	\$52.30	\$53.91	\$57.68
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 2 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$48.34
Business Analyst	BA2	\$62.22
Business Analyst	BA3	\$71.02

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 2 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$41.74
CADD/GIS Administrator	CGA2	\$48.19
CADD/GIS Administrator	CGA3	\$72.39
Data Entry Operator	DE1	\$14.37
Data Entry Operator	DE2	\$15.66
Database Administrator	DBA1	\$41.87
Database Administrator	DBA2	\$46.16
Database Administrator	DBA3	\$62.57
Database Administrator	DBA4	\$75.70
Intern	INT1	\$15.34
Intern	INT2	\$17.90
Intern	INT3	\$23.02
Mobile Specialist	MS1	\$143.85
Mobile Specialist	MS2	\$159.84
Program Manager	PM1	\$46.20
Program Manager	PM2	\$56.59
Program Manager	PM3	\$73.21
Program Manager	PM4	\$94.73
Quality Assurance Specialist	QAS1	\$37.54
Quality Assurance Specialist	QAS2	\$41.61
Quality Assurance Specialist	QAS3	\$55.28
Senior Architect	SAR1	\$97.61
Senior Business Subject Matter Expert	SME1	\$91.98
Senior Database Architect	SDA1	\$82.62
Senior Program Manager	SPM1	\$103.52
Team Lead	TL1	\$56.09
Team Lead	TL2	\$60.59
Technical Writer	TW1	\$26.77
Technical Writer	TW2	\$31.33
Technical Writer	TW3	\$35.37
Technical Writer	TW4	\$44.12
Telecom Engineer	TE1	\$35.91
Telecom Engineer	TE2	\$41.06
Telecom Engineer	TE3	\$48.51
Tester	Test1	\$33.25
Tester	Test2	\$38.43
Tester	Test3	\$44.74
Voice/Data Engineer	VDE1	\$34.01
Voice/Data Engineer	VDE2	\$39.46
Voice/Data Engineer	VDE3	\$47.53



Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 3 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Application Developer	AD1	\$60.12	\$61.36	\$65.65
Application Developer	AD2	\$66.10	\$67.44	\$72.16
Application Developer	AD3	\$70.98	\$72.43	\$77.49
Architect	AR1	\$82.15	\$83.82	\$89.69
Functional Architect	FA1	\$34.70	\$35.40	\$37.87
Functional Architect	FA2	\$41.48	\$42.33	\$45.29
Functional Architect	FA3	\$49.56	\$50.57	\$54.11
Help Desk Analyst	HDA1	\$27.12	\$27.67	\$29.60
Help Desk Analyst	HDA2	\$29.73	\$30.33	\$32.46
Help Desk Analyst	HDA3	\$36.84	\$37.59	\$40.23
Network Engineer	NE1	\$47.53	\$48.51	\$51.91
Network Engineer	NE2	\$53.73	\$54.84	\$58.67
Network Engineer	NE3	\$60.40	\$61.62	\$65.93
Product Specialist	PS1	\$37.36	\$38.13	\$40.80
Product Specialist	PS2	\$42.95	\$43.84	\$46.91
Product Specialist	PS3	\$56.50	\$57.65	\$61.69
Product Specialist	PS4	\$71.27	\$72.72	\$77.81
Product Specialist	PS5	\$88.05	\$89.84	\$96.14
Programmer	PR1	\$31.85	\$32.50	\$34.78
Programmer	PR2	\$37.91	\$38.69	\$41.41
Programmer	PR3	\$48.03	\$49.02	\$52.44
Programmer	PR4	\$62.41	\$63.69	\$68.16
Programmer	PR5	\$74.44	\$75.97	\$81.28
Service Desk	SD2	\$24.02	\$24.50	\$26.21
Service Desk	SD3	\$25.96	\$26.48	\$28.33
Software Process Engineer	SPS1	\$34.91	\$35.62	\$38.12
Software Process Engineer	SPS2	\$38.81	\$39.60	\$42.38
Software Process Engineer	SPS3	\$52.75	\$53.82	\$57.60
System Administrator	SA1	\$31.99	\$32.65	\$34.93
System Administrator	SA2	\$35.31	\$36.04	\$38.55
System Administrator	SA3	\$49.62	\$50.64	\$54.18
System Administrator	SA4	\$66.37	\$67.73	\$72.46
System Specialist	SS1	\$31.00	\$31.63	\$33.83
System Specialist	SS2	\$32.84	\$33.50	\$35.85
System Specialist	SS3	\$42.25	\$43.10	\$46.12
Technical Architecture Specialist	TAS1	\$41.74	\$42.59	\$45.58
Technical Architecture Specialist	TAS2	\$47.46	\$48.44	\$51.83
Technical Architecture Specialist	TAS3	\$50.62	\$51.65	\$55.26
Technical Specialist	TS1	\$74.18	\$75.69	\$80.99
Technical Specialist	TS2	\$78.12	\$79.72	\$85.29
Technical Specialist	TS3	\$84.70	\$86.43	\$92.47
Technical Specialist	TS4	\$101.64	\$103.72	\$110.96
Video Conference Specialist	VCS1	\$46.18	\$47.62	\$50.96
Video Conference Specialist	VCS2	\$52.50	\$54.13	\$57.92
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 3 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$48.52
Business Analyst	BA2	\$61.76
Business Analyst	BA3	\$70.48

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 3 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$42.53
CADD/GIS Administrator	CGA2	\$49.04
CADD/GIS Administrator	CGA3	\$72.89
Data Entry Operator	DE1	\$14.56
Data Entry Operator	DE2	\$15.90
Database Administrator	DBA1	\$42.05
Database Administrator	DBA2	\$46.34
Database Administrator	DBA3	\$62.07
Database Administrator	DBA4	\$75.14
Intern	INT1	\$15.34
Intern	INT2	\$17.90
Intern	INT3	\$23.02
Mobile Specialist	MS1	\$143.85
Mobile Specialist	MS2	\$159.84
Program Manager	PM1	\$47.71
Program Manager	PM2	\$57.93
Program Manager	PM3	\$74.74
Program Manager	PM4	\$95.35
Quality Assurance Specialist	QAS1	\$37.71
Quality Assurance Specialist	QAS2	\$41.79
Quality Assurance Specialist	QAS3	\$55.01
Senior Architect	SAR1	\$99.65
Senior Business Subject Matter Expert	SME1	\$92.91
Senior Database Architect	SDA1	\$82.07
Senior Program Manager	SPM1	\$104.64
Team Lead	TL1	\$55.79
Team Lead	TL2	\$60.14
Technical Writer	TW1	\$27.03
Technical Writer	TW2	\$31.58
Technical Writer	TW3	\$35.62
Technical Writer	TW4	\$43.74
Telecom Engineer	TE1	\$36.58
Telecom Engineer	TE2	\$41.84
Telecom Engineer	TE3	\$49.38
Tester	Test1	\$33.88
Tester	Test2	\$39.14
Tester	Test3	\$45.58
Voice/Data Engineer	VDE1	\$34.15
Voice/Data Engineer	VDE2	\$39.63
Voice/Data Engineer	VDE3	\$47.70

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 4 Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Application Developer	AD1	\$61.40	\$62.66	\$67.05
Application Developer	AD2	\$67.19	\$68.55	\$73.35
Application Developer	AD3	\$71.91	\$73.38	\$78.51
Architect	AR1	\$83.50	\$85.19	\$91.16
Functional Architect	FA1	\$36.72	\$37.48	\$40.10
Functional Architect	FA2	\$43.59	\$44.49	\$47.61
Functional Architect	FA3	\$51.47	\$52.51	\$56.19
Help Desk Analyst	HDA1	\$29.13	\$29.72	\$31.80
Help Desk Analyst	HDA2	\$31.75	\$32.40	\$34.66
Help Desk Analyst	HDA3	\$38.95	\$39.75	\$42.53
Network Engineer	NE1	\$49.40	\$50.40	\$53.94
Network Engineer	NE2	\$55.25	\$56.38	\$60.33
Network Engineer	NE3	\$61.68	\$62.92	\$67.32
Product Specialist	PS1	\$39.45	\$40.26	\$43.07
Product Specialist	PS2	\$45.09	\$46.01	\$49.23
Product Specialist	PS3	\$58.30	\$59.48	\$63.66
Product Specialist	PS4	\$72.72	\$74.21	\$79.41
Product Specialist	PS5	\$89.34	\$91.16	\$97.55
Programmer	PR1	\$33.93	\$34.61	\$37.03
Programmer	PR2	\$39.98	\$40.80	\$43.66
Programmer	PR3	\$50.05	\$51.07	\$54.65
Programmer	PR4	\$64.20	\$65.51	\$70.10
Programmer	PR5	\$75.88	\$77.43	\$82.85
Service Desk	SD2	\$26.01	\$26.54	\$28.40
Service Desk	SD3	\$27.94	\$28.52	\$30.51
Software Process Engineer	SPS1	\$36.94	\$37.70	\$40.33
Software Process Engineer	SPS2	\$40.91	\$41.74	\$44.65
Software Process Engineer	SPS3	\$54.58	\$55.69	\$59.59
System Administrator	SA1	\$33.99	\$34.67	\$37.10
System Administrator	SA2	\$37.35	\$38.12	\$40.79
System Administrator	SA3	\$51.53	\$52.58	\$56.26
System Administrator	SA4	\$67.89	\$69.27	\$74.12
System Specialist	SS1	\$33.04	\$33.72	\$36.08
System Specialist	SS2	\$34.90	\$35.61	\$38.11
System Specialist	SS3	\$44.37	\$45.28	\$48.45
Technical Architecture Specialist	TAS1	\$43.86	\$44.76	\$47.89
Technical Architecture Specialist	TAS2	\$49.54	\$50.55	\$54.09
Technical Architecture Specialist	TAS3	\$52.49	\$53.57	\$57.31
Technical Specialist	TS1	\$74.99	\$76.52	\$81.88
Technical Specialist	TS2	\$78.82	\$80.43	\$86.06
Technical Specialist	TS3	\$85.18	\$86.93	\$93.02
Technical Specialist	TS4	\$102.22	\$104.32	\$111.62
Video Conference Specialist	VCS1	\$47.48	\$48.95	\$52.37
Video Conference Specialist	VCS2	\$53.33	\$54.98	\$58.83
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 4 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$50.72
Business Analyst	BA2	\$63.56
Business Analyst	BA3	\$72.16

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 4 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$43.88
CADD/GIS Administrator	CGA2	\$50.32
CADD/GIS Administrator	CGA3	\$73.25
Data Entry Operator	DE1	\$15.81
Data Entry Operator	DE2	\$17.25
Database Administrator	DBA1	\$44.32
Database Administrator	DBA2	\$48.64
Database Administrator	DBA3	\$64.04
Database Administrator	DBA4	\$76.77
Intern	INT1	\$15.34
Intern	INT2	\$17.90
Intern	INT3	\$23.02
Mobile Specialist	MS1	\$143.85
Mobile Specialist	MS2	\$159.84
Program Manager	PM1	\$50.21
Program Manager	PM2	\$60.17
Program Manager	PM3	\$76.99
Program Manager	PM4	\$97.75
Quality Assurance Specialist	QAS1	\$39.92
Quality Assurance Specialist	QAS2	\$44.05
Quality Assurance Specialist	QAS3	\$57.07
Senior Architect	SAR1	\$101.97
Senior Business Subject Matter Expert	SME1	\$93.58
Senior Database Architect	SDA1	\$84.01
Senior Program Manager	SPM1	\$105.23
Team Lead	TL1	\$57.84
Team Lead	TL2	\$62.12
Technical Writer	TW1	\$28.57
Technical Writer	TW2	\$33.03
Technical Writer	TW3	\$37.03
Technical Writer	TW4	\$45.09
Telecom Engineer	TE1	\$37.98
Telecom Engineer	TE2	\$43.21
Telecom Engineer	TE3	\$50.64
Tester	Test1	\$35.29
Tester	Test2	\$40.52
Tester	Test3	\$46.91
Voice/Data Engineer	VDE1	\$36.33
Voice/Data Engineer	VDE2	\$41.88
Voice/Data Engineer	VDE3	\$50.02

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 5 Affiliated</b>				
<b>Job Title</b>		<b>Legacy</b>	<b>Core</b>	<b>Emerging</b>
Application Developer	AD1	\$68.82	\$70.22	\$75.14
Application Developer	AD2	\$75.49	\$77.02	\$82.41
Application Developer	AD3	\$80.90	\$82.55	\$88.34
Architect	AR1	\$92.30	\$94.19	\$100.77
Functional Architect	FA1	\$40.41	\$41.23	\$44.12
Functional Architect	FA2	\$47.82	\$48.79	\$52.21
Functional Architect	FA3	\$55.99	\$57.12	\$61.12
Help Desk Analyst	HDA1	\$31.90	\$32.55	\$34.83
Help Desk Analyst	HDA2	\$34.83	\$35.55	\$38.04
Help Desk Analyst	HDA3	\$42.78	\$43.66	\$46.72
Network Engineer	NE1	\$55.07	\$56.20	\$60.14
Network Engineer	NE2	\$61.74	\$63.00	\$67.41
Network Engineer	NE3	\$69.13	\$70.53	\$75.47
Product Specialist	PS1	\$43.37	\$44.25	\$47.36
Product Specialist	PS2	\$49.34	\$50.34	\$53.88
Product Specialist	PS3	\$63.37	\$64.66	\$69.19
Product Specialist	PS4	\$80.28	\$81.91	\$87.65
Product Specialist	PS5	\$98.83	\$100.85	\$107.91
Programmer	PR1	\$37.23	\$37.99	\$40.65
Programmer	PR2	\$43.98	\$44.87	\$48.02
Programmer	PR3	\$54.45	\$55.56	\$59.45
Programmer	PR4	\$69.81	\$71.22	\$76.21
Programmer	PR5	\$83.80	\$85.50	\$91.49
Service Desk	SD2	\$28.49	\$29.07	\$31.09
Service Desk	SD3	\$30.61	\$31.24	\$33.43
Software Process Engineer	SPS1	\$40.64	\$41.47	\$44.37
Software Process Engineer	SPS2	\$44.95	\$45.86	\$49.08
Software Process Engineer	SPS3	\$59.32	\$60.54	\$64.77
System Administrator	SA1	\$37.39	\$38.16	\$40.83
System Administrator	SA2	\$41.09	\$41.93	\$44.87
System Administrator	SA3	\$56.05	\$57.18	\$61.19
System Administrator	SA4	\$74.88	\$76.40	\$81.75
System Specialist	SS1	\$36.25	\$37.00	\$39.59
System Specialist	SS2	\$38.32	\$39.11	\$41.84
System Specialist	SS3	\$48.59	\$49.59	\$53.06
Technical Architecture Specialist	TAS1	\$48.08	\$49.06	\$52.50
Technical Architecture Specialist	TAS2	\$53.91	\$55.01	\$58.86
Technical Architecture Specialist	TAS3	\$57.08	\$58.25	\$62.33
Technical Specialist	TS1	\$84.46	\$86.19	\$92.22
Technical Specialist	TS2	\$88.88	\$90.70	\$97.05
Technical Specialist	TS3	\$96.21	\$98.18	\$105.05
Technical Specialist	TS4	\$115.45	\$117.82	\$126.06
Video Conference Specialist	VCS1	\$51.00	\$52.57	\$56.25
Video Conference Specialist	VCS2	\$57.18	\$58.95	\$63.08
Exception-OA/OIT Approval Only	EXC	To Be Determined		

<b>Area 5 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
Business Analyst	BA1	\$56.05
Business Analyst	BA2	\$69.99
Business Analyst	BA3	\$79.56

Pennsylvania Enterprise IT Staff Augmentation Services Contract  
Bill Rates

<b>Area 5 Non-Affiliated</b>		
<b>Job Title</b>	<b>Level</b>	<b>Rate</b>
CADD/GIS Administrator	CGA1	\$47.43
CADD/GIS Administrator	CGA2	\$53.92
CADD/GIS Administrator	CGA3	\$78.32
Data Entry Operator	DE1	\$17.00
Data Entry Operator	DE2	\$18.54
Database Administrator	DBA1	\$48.72
Database Administrator	DBA2	\$53.28
Database Administrator	DBA3	\$69.62
Database Administrator	DBA4	\$84.70
Intern	INT1	\$15.34
Intern	INT2	\$17.90
Intern	INT3	\$23.02
Mobile Specialist	MS1	\$143.85
Mobile Specialist	MS2	\$159.84
Program Manager	PM1	\$56.33
Program Manager	PM2	\$67.06
Program Manager	PM3	\$85.65
Program Manager	PM4	\$109.64
Quality Assurance Specialist	QAS1	\$43.92
Quality Assurance Specialist	QAS2	\$48.44
Quality Assurance Specialist	QAS3	\$62.04
Senior Architect	SAR1	\$113.29
Senior Business Subject Matter Expert	SME1	\$102.10
Senior Database Architect	SDA1	\$91.42
Senior Program Manager	SPM1	\$114.88
Team Lead	TL1	\$62.87
Team Lead	TL2	\$67.51
Technical Writer	TW1	\$31.26
Technical Writer	TW2	\$36.20
Technical Writer	TW3	\$40.65
Technical Writer	TW4	\$49.76
Telecom Engineer	TE1	\$41.09
Telecom Engineer	TE2	\$46.69
Telecom Engineer	TE3	\$54.27
Tester	Test1	\$38.17
Tester	Test2	\$43.84
Tester	Test3	\$50.58
Voice/Data Engineer	VDE1	\$39.96
Voice/Data Engineer	VDE2	\$46.06
Voice/Data Engineer	VDE3	\$54.68



**PARENT CONTRACT NUMBER:** 6100014920  
**SAP/SRM CONTRACT NUMBER:** 4400007198  
**CHANGE NUMBER:** 5  
**CHANGE EFFECTIVE DATE:** 04/03/2013

**USING AGENCY:** All Using Agencies

**CONTRACT TITLE:** Enterprise IT Staff Augmentation Contract

**CONTRACT PERIOD:** Beginning 7/1/10 and Ending 6/30/14

**COMMODITY SPECIALIST:** Joe Millovich    **TELEPHONE:** 717-214-3434    **EMAIL:** jmillovich@pa.gov

**CHANGE SUMMARY:**

As stated within the terms and conditions of this contract, the Commonwealth is exercising its option to renew the Enterprise IT Staff Augmentation Contract for one (1) year. The new contract expiration date will be June 30, 2014.

Please find the signed Contract Renewal Letter attached to this change notice.

**ALL OTHER TERMS AND CONDITIONS OF THIS AGREEMENT NOT CHANGED BY THIS CHANGE NOTICE  
REMAIN AS ORIGINALLY WRITTEN.**

April 3, 2013

Computer Aid, Inc.  
470 Friendship Rd., Suite 300  
Harrisburg, PA 17111

**SUBJECT:** Renewal of Contract: 4400007198  
Contract Title: Enterprise IT Staff Augmentation  
Term of Renewal: July 1, 2013 – June 30, 2014

Dear Mr. Cooney:

The Commonwealth is exercising its option to renew the Enterprise IT Staff Augmentation contract (“Contract”) between the Commonwealth of Pennsylvania and Computer Aid, Inc. The Contract states in section I-25 (Term of Contract):

The Commonwealth, at its sole option, may renew the contract for up to an additional three (3) years. The Commonwealth may exercise the renewal(s) in single or multiple year increments, at any time during the contact term. The Issuing Office will fix the Effective Date after the contract has been fully executed by the selected Offeror and by the Commonwealth and all approvals required by Commonwealth contracting procedures have been obtained.

The Commonwealth is renewing the Contract for one (1) year. The new termination date will be June 30, 2014.

### **Contract Change Order**

The attached Contract Change Order sets forth two changes to the Contract.

1. The renewal of this Contract includes a reduction in the MSP Fee paid to Computer Aid. The MSP Fee has been reduced from 6.56% to 6.22%.
2. In the past year, the Department of General Services (“DGS”) renamed the Disadvantaged Business Program to the Small Diverse Business Program and expanded its reach to include veteran and service-disabled veteran-owned small businesses. Accordingly, upon the effective date of the Contract renewal, the Small Diverse Business Program and its requirements will apply to this Contract. Details about the new Small Diverse Business Program are set forth in the enclosed notice from DGS.



Questions regarding the Small Diverse Business Program can be directed to:

Department of General Services  
Bureau of Small Business Opportunities  
Room 611, North Office Building  
Harrisburg, PA 17125  
Phone: (717) 783-3119  
Fax: (717) 787-7052  
Email: [gs-bsbo@pa.gov](mailto:gs-bsbo@pa.gov)  
Website: [www.dgs.state.pa.us](http://www.dgs.state.pa.us)

The Commonwealth requests your acknowledgement of the contract renewal and the reduction to the MSP Fee and changes to the contract regarding the Small Diverse Business Program noted on the Change Order. Please confirm your acknowledgement by completing the bottom section of this letter and emailing a copy to me by close of business on Friday, April 12, 2013.

Thank you for your prompt response. If you have any questions, please do not hesitate to contact me.

Sincerely,



Joseph M. Millovich  
Commodity Specialist

I acknowledge the extension of the Contract for the above stated Term of Renewal and the reduction to the MSP Fee and changes to the contract regarding the Small Diverse Business Program noted on the Change Order. All other terms and conditions in the contract shall remain in full force and effect.

Yes  No

Signature




Title

*Managing Director*

Date

*April 8, 2013*

**CHANGE ORDER TO CONTRACT #4400007198  
Enterprise IT Staff Augmentation**

<b>ISSUING OFFICE</b>  OFFICE OF ADMINISTRATION 613 NORTH ST. 5TH FLOOR, FINANCE BUILDING HARRISBURG, PA 17120	<b>CHANGE ORDER NO.</b>  CO 1 <b>DATE</b>  <p align="center">04/03/2013</p> <b>Contract NO.</b>  <p align="center">4400007198</p>
<b>CONTRACTOR'S NAME AND ADDRESS</b>  COMPUTER AID INC 470 FRIENDSHIP RD., SUITE 300 HARRISBURG PA 17111-2103  CONTACT PERSON: JAMES P. COONEY  PHONE NO.: 717-651-3075      FAX NO.: 717-651-3229 CONTRACTOR'S FEDERAL IDENTIFICATION NO. OR SOCIAL SECURITY NO. 23-2180878	<b>CHANGE ORDER APPROVED BY:</b>  <b>CONTRACTING OFFICER'S SIGNATURE</b> <b>CONTRACTING OFFICER'S NAME</b>  Joseph M, Millovich
CONTRACTING OFFICER'S TITLE Commodity Specialist	

**THE CONTRACT IS HEREBY CHANGED AS FOLLOWS:**

The following changes to the Contract will be effective upon renewal on July 1, 2013.

1. The MSP Fee paid to Computer Aid has been reduced from 6.56% to 6.22%.
2. The Department of General Services ("DGS") has renamed the Disadvantaged Business Program to the Small Diverse Business Program and expanded its reach to include veteran and service-disabled veteran-owned small businesses. Accordingly, the Small Diverse Business Program and its requirements will apply to this Contract. All references in the Contract to the Bureau of Minority and Women Business Opportunities will now refer to the Bureau of Small Business Opportunities ("BSBO"). All references in the Contract to a Disadvantaged Business ("DB") will now refer to a Small Diverse Business ("SDB").

Computer Aid is required to obtain a DGS Small Diverse Business Verification Letter from all sub-contractors that are interested in providing staff augmentation services to the Commonwealth through the Contract, and verify the status of each SDB on an annual basis.

For purposes of the Program, a small business is a business in the United States which is independently owned, not dominant in its field of operation, employs no more than 100 full-time or full-time equivalent employees, and earns less than \$7 million in gross annual revenues for building design, \$20 million in gross annual revenues for sales and services and \$25 million in gross annual revenues for those businesses in the information technology sales or service business.

A Small Diverse Business is a DGS-verified minority-owned business, woman-owned business, veteran-owned business or service-disabled veteran-owned business.

**ALL OTHER TERMS AND CONDITIONS OF THE CONTRACT WHICH ARE NOT CHANGED BY THIS CHANGE ORDER REMAIN IN FULL FORCE AND EFFECT.**



As a business certified through the Bureau of Minority and Woman Business Opportunities (BMWBO), we want to inform you about many exciting and important changes to both BMWBO and the bureau's programs. **Please read through this correspondence in its entirety, as it contains important information relative to new programs and your certification as a minority- (MBE), woman- (WBE), veteran- (VBE) and/or service-disabled veteran-owned business (SDVBE).**

#### The Small Business Procurement Initiative

Governor Tom Corbett and Secretary of General Services (DGS) Sheri Phillips are excited to announce the creation of the **Small Business Procurement Initiative**. The Small Business Procurement Initiative (SBPI) will reserve certain Commonwealth procurements for competition among only self-certified, small businesses: businesses with 100 or fewer employees that meet maximum revenue requirements. While the SBPI is a race and gender neutral program, it was developed in part based on feedback from MBEs/WBEs/VBEs, who expressed a strong desire to participate in Commonwealth contracts as a prime contractor.

The first step to participating in the SBPI is to self-certify your business through an online application accessed through the PA Supplier Portal at [www.smallbusiness.pa.gov](http://www.smallbusiness.pa.gov). This website also contains specific program guidelines, Frequently Asked Questions (FAQs), and a step-by-step instruction manual for the self-certification process.

#### The Small Diverse Business Program

In addition to the SBPI, and in accordance with Governor Corbett's [Executive Order 2011-10](#), the department has also expanded the reach of the **Small Diverse Business Program** (formerly the Small Disadvantaged Business Program) to include veteran and service-disabled veteran-owned small businesses, affording them the same opportunities and assistance in doing business with the Commonwealth as minority and women-owned small businesses. Minority-, woman-, veteran- and service-disabled veteran-owned small businesses will be collectively referred to as small diverse businesses.

#### The Bureau of Small Business Opportunities

As a result of the SBPI and expansion of the Small Diverse Business program, the department is also announcing the reorganization and renaming of the Bureau of Minority and Woman Business Opportunities (BMWBO) to **The Bureau of Small Business Opportunities (BSBO)**. The overarching goal of this bureau remains intact: to provide assistance to small and small diverse businesses in navigating the state contracting process. In response to feedback from small diverse businesses, this reorganization will place a greater focus on program and contract compliance to ensure that commitments made to small diverse businesses are fulfilled and that maximum practicable opportunities are afforded to small diverse businesses.

#### Discontinuance of DGS Certification

DGS is revising its Statement of Policy with regard to the certification of small diverse businesses (MBEs/WBEs/VBEs/SDVBEs) to address your concerns with the certification process. Effective August

31, 2012, DGS will no longer accept applications for certification from small diverse businesses but will instead verify that small diverse businesses have been certified by an approved third party. Approved third parties to date include the PA Unified Certification Program (PA-UCP); the Minority Supplier Development Council (MSDC); the Women's Business Enterprise National Council (WBENC); the United States Small Business Administration (SBA) 8(a) Business Development Program; and the VetBiz VIP Verification Program (vetbiz.gov).

**To facilitate this change and allow current DGS-certified small diverse businesses ample time to seek third-party certification, your DGS certification will remain valid for one year from the date of your SBPI self-certification, provided that you complete the SBPI self-certification process on or before December 31, 2012.** For example, a currently DGS-certified MBE/WBE/VBE/SDVBE who completes the SBPI self-certification process on, September 15, 2012 will be certified for both the SBPI and Small Diverse Business programs until September 15, 2013. By September 15, 2013, the business will need to complete the annual SBPI self-certification process again (to verify its status as small) AND provide proof of certification as an MBE/WBE/VBE/SDVBE from an approved third-party from the list provided above in order to continue participation in the small diverse business program.

Additional information on the Bureau of Small Business Opportunities, the Small Diverse Business program and verification process described above will be posted soon on the DGS website at [www.dgs.state.pa.us](http://www.dgs.state.pa.us). In the interim, if you have questions, please contact the Bureau of Small Business Opportunities at [gs-bsbo@pa.gov](mailto:gs-bsbo@pa.gov) or by phone at 717.787.3119.



**PARENT CONTRACT NUMBER:** 6100014920  
**SAP/SRM CONTRACT NUMBER:** 4400007198  
**CHANGE NUMBER:** 6  
**CHANGE EFFECTIVE DATE:** 05/07/2014

**USING AGENCY:** All Using Agencies

**CONTRACT TITLE:** Enterprise IT Staff Augmentation Contract

**CONTRACT PERIOD:** Beginning 7/1/10 and Ending 6/30/15

**COMMODITY SPECIALIST:** Joe Millovich    **TELEPHONE:** 717-214-3434    **EMAIL:** jmillovich@pa.gov

**CHANGE SUMMARY:**

As stated within the terms and conditions of this contract, the Commonwealth is exercising its option to renew the Enterprise IT Staff Augmentation Contract for one (1) year. The new contract expiration date will be June 30, 2015. Please find the signed Contract Renewal Letter attached to this change notice. No renewal options remain.

Through this renewal the Commonwealth has worked with the Contractor to develop additional job categories to cover agency needs. The new job categories are as follows: Product Specialist (level 6), Programmer (level 6), System Administrator (level 5), Technical Specialist (level 5), Senior Architect (level 2) and Senior Business Subject Matter Expert (level 2). Please find the updated Job Titles, Bill Rates attached to this change notice.

**ALL OTHER TERMS AND CONDITIONS OF THIS AGREEMENT NOT CHANGED BY THIS CHANGE NOTICE  
REMAIN AS ORIGINALLY WRITTEN.**



May 5, 2014

Computer Aid, Inc.  
470 Friendship Rd., Suite 300  
Harrisburg, PA 17111

SUBJECT: Renewal of Contract: 4400007198  
Contract Title: Enterprise IT Staff Augmentation  
Term of Renewal: July 1, 2014 through June 30, 2015

Dear Mr. Cooney:

The Commonwealth of Pennsylvania, acting through its Governor's Office of Administration ("OA"), is exercising its option to renew the Enterprise IT Staff Augmentation contract with Computer Aid, Inc. ("CAI"). Section 6 of the Contract states the following:

The term of this Contract shall commence on the Effective Date as defined in Paragraph 1a (Term and Scope of Contract) of the IT Contract Terms and Conditions and shall expire on June 30, 2012. The Commonwealth, at its sole option, may renew the contract for up to an additional three (3) years. The Commonwealth may exercise the renewal(s) in single or multiple year increments, at any time during the contact term, by written notification provided to the Contractor by the Commonwealth's Contracting Officer.

The Commonwealth is renewing the contract for one (1) year. The new termination date will be June 30, 2015. No additional renewals remain.

As discussed in our recent meeting, CAI has not met its general Small Diverse Business ("SDB") participation commitment for staff augmentation resources through the current contract term. CAI made a commitment to use SDBs for 70% of the staff augmentation resources "calculated as a yearly percentage of the total amount paid to Offeror by the Commonwealth for the services provided by Offeror." As corrective action to increase SDB participation, CAI has agreed to the following procedures as part of this renewal:

- DGS-verified SDBs will receive a minimum of twelve (12) business hours to review and respond to competitive requisitions issued by the Commonwealth, prior to the release of the requisition to the network. The Commonwealth defines business hours as Monday through Friday, 8:00 am to 5:00 pm.
- CAI must provide five (5) candidates, at least three (3) of which must be DGS-verified SDBs, to the agency hiring manager, within four (4) business days of the initial release of the requisition to the network. On a case by case basis, OA may waive this requirement if CAI provides adequate justification to show that meeting the requirement would be impracticable.

If CAI fails to meet its contractual commitment for SDB participation during this renewal year, OA may enter CAI into its Contractor Responsibility Program and take such other action as appropriate.

Additionally as part of this renewal, OA has agreed to add the following job classifications to the Contract:

- Product Specialist – Level 6 (Core, Legacy, Emerging)
- Programmer – Level 6 (Core, Legacy, Emerging)
- System Administrator – Level 5 (Core, Legacy, Emerging)
- Technical Specialist – Level 5 (Core, Legacy, Emerging)
- Senior Architect – Level 2
- Senior Business Subject Matter Expert – Level 2

For additional information please refer to the updated *Job Titles and Descriptions* document and the *Wage, Vendor, Bill Rates* document attached to this renewal letter.

OA requests your acknowledgement of the contract renewal, the updated procedures for soliciting SDBs, and the new job classifications. Please confirm your acknowledgement by completing the bottom section of this letter and emailing a copy to me by close of business on May 9, 2014.

Thank you for your prompt response. If you have any questions, please do not hesitate to contact me.

Sincerely,



Joseph M. Millovich  
Commodity Specialist

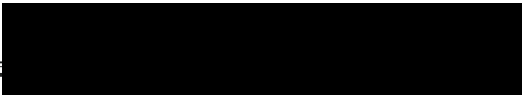
Attachments

---

I acknowledge the extension of the contract for the above stated Term of Extension, the updated procedures for soliciting Small Diverse Businesses, the new job classifications, and that all terms and conditions in the contract remain in full force and effect.

Yes       No

Signature



Title

*Managing Director*

Date

*5-28-2014*

*JPC*



PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

Area #1	Area #2	Area #3	Area #4	Area #5
Bedford County	Adams County	Beaver County	Allegheny County	Chester County
Clearfield County	Armstrong County	Butler County	Berks County	Delaware County
Forest County	Blair County	Cameron County	Bucks County	Montgomery County
Jefferson County	Bradford County	Clarion County	Centre County	Philadelphia County
Juniata County	Cambria County	Elk County	Cumberland County	
Perry County	Carbon County	Erie County	Dauphin County	
Somerset County	Clinton County	Fulton County	Lehigh County	
Susquehanna County	Columbia County	Greene County	Montour County	
	Crawford County	Indiana County	Wyoming County	
	Fayette County	Lackawanna County		
	Franklin County	Lancaster County		
	Huntingdon County	Lawrence County		
	Lycoming County	Lebanon County		
	Mc Kean County	Luzerne County		
	Mercer County	Monroe County		
	Mifflin County	Northampton County		
	Pike County	Northumberland County		
	Schuylkill County	Potter County		
	Snyder County	Sullivan County		
	Tioga County	Union County		
	Warren County	Venango County		
	Wayne County	Washington County		
		Westmoreland County		
		York County		



PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

Area 1		Legacy			Core			Emerging		
Job Title	Level	Wage	Vendor	Bill	Wage	Vendor	Bill	Wage	Vendor	Bill
Application Developer	AD1	\$47.07	\$56.67	\$60.19	\$48.03	\$57.83	\$61.42	\$51.39	\$61.87	\$65.72
Application Developer	AD2	\$51.74	\$62.29	\$66.16	\$52.80	\$63.57	\$67.52	\$56.50	\$68.03	\$72.25
Application Developer	AD3	\$55.55	\$66.88	\$71.03	\$56.68	\$68.24	\$72.48	\$60.65	\$73.02	\$77.55
Architect	AR1	\$63.98	\$77.03	\$81.82	\$65.29	\$78.61	\$83.49	\$69.86	\$84.11	\$89.33
Functional Architect	FA1	\$26.92	\$32.41	\$34.42	\$27.47	\$33.07	\$35.12	\$29.39	\$35.39	\$37.58
Functional Architect	FA2	\$32.17	\$38.73	\$41.13	\$32.83	\$39.53	\$41.98	\$35.13	\$42.30	\$44.93
Functional Architect	FA3	\$38.47	\$46.32	\$49.19	\$39.26	\$47.27	\$50.20	\$42.01	\$50.58	\$53.72
Help Desk Analyst	HDA1	\$21.06	\$25.36	\$26.93	\$21.49	\$25.87	\$27.48	\$22.99	\$27.68	\$29.40
Help Desk Analyst	HDA2	\$23.08	\$27.79	\$29.52	\$23.55	\$28.35	\$30.11	\$25.20	\$30.34	\$32.22
Help Desk Analyst	HDA3	\$28.59	\$34.42	\$36.56	\$29.17	\$35.12	\$37.30	\$31.21	\$37.58	\$39.91
Network Engineer	NE1	\$37.08	\$44.64	\$47.42	\$37.84	\$45.56	\$48.39	\$40.49	\$48.75	\$51.78
Network Engineer	NE2	\$42.06	\$50.64	\$53.78	\$42.92	\$51.68	\$54.88	\$45.92	\$55.29	\$58.71
Network Engineer	NE3	\$47.29	\$56.94	\$60.47	\$48.25	\$58.09	\$61.70	\$51.63	\$62.16	\$66.02
Product Specialist	PS1	\$29.00	\$34.92	\$37.08	\$29.59	\$35.63	\$37.84	\$31.66	\$38.12	\$40.48
Product Specialist	PS2	\$33.32	\$40.12	\$42.60	\$34.00	\$40.94	\$43.48	\$36.38	\$43.80	\$46.52
Product Specialist	PS3	\$43.93	\$52.89	\$56.18	\$44.83	\$53.98	\$57.33	\$47.97	\$57.76	\$61.34
Product Specialist	PS4	\$55.54	\$66.87	\$71.02	\$56.67	\$68.23	\$72.47	\$60.64	\$73.01	\$77.54
Product Specialist	PS5	\$68.56	\$82.55	\$87.67	\$69.96	\$84.23	\$89.46	\$74.85	\$90.12	\$95.71
Product Specialist	PS6	\$79.63	\$95.56	\$101.83	\$81.26	\$97.51	\$103.91	\$86.95	\$104.34	\$111.18
Programmer	PR1	\$24.73	\$29.77	\$31.63	\$25.23	\$30.38	\$32.27	\$27.00	\$32.51	\$34.53
Programmer	PR2	\$29.41	\$35.41	\$37.61	\$30.01	\$36.13	\$38.37	\$32.11	\$38.66	\$41.06
Programmer	PR3	\$37.21	\$44.80	\$47.58	\$37.97	\$45.72	\$48.55	\$40.63	\$48.92	\$51.96
Programmer	PR4	\$48.52	\$58.42	\$62.04	\$49.51	\$59.61	\$63.31	\$52.98	\$63.79	\$67.75
Programmer	PR5	\$58.01	\$69.84	\$74.18	\$59.20	\$71.28	\$75.69	\$63.34	\$76.26	\$81.00
Programmer	PR6	\$64.28	\$77.14	\$82.20	\$65.59	\$78.71	\$83.87	\$70.18	\$84.22	\$89.74
Service Desk	SD2	\$18.64	\$22.44	\$23.84	\$19.02	\$22.90	\$24.32	\$20.35	\$24.50	\$26.02
Service Desk	SD3	\$20.15	\$24.26	\$25.77	\$20.56	\$24.75	\$26.29	\$22.00	\$26.49	\$28.13
Software Process Engineer	SPS1	\$27.09	\$32.62	\$34.64	\$27.64	\$33.28	\$35.35	\$29.57	\$35.60	\$37.81
Software Process Engineer	SPS2	\$30.11	\$36.25	\$38.50	\$30.72	\$36.99	\$39.28	\$32.87	\$39.58	\$42.03
Software Process Engineer	SPS3	\$41.01	\$49.38	\$52.44	\$41.85	\$50.39	\$53.51	\$44.78	\$53.92	\$57.27
System Administrator	SA1	\$24.83	\$29.90	\$31.75	\$25.34	\$30.51	\$32.40	\$27.11	\$32.64	\$34.66
System Administrator	SA2	\$27.40	\$32.99	\$35.04	\$27.96	\$33.66	\$35.75	\$29.92	\$36.02	\$38.26
System Administrator	SA3	\$38.52	\$46.38	\$49.25	\$39.31	\$47.33	\$50.26	\$42.06	\$50.64	\$53.78
System Administrator	SA4	\$51.74	\$62.29	\$66.16	\$52.79	\$63.56	\$67.51	\$56.49	\$68.01	\$72.24
System Administrator	SA5	\$55.78	\$66.94	\$71.33	\$56.92	\$68.30	\$72.78	\$60.90	\$73.08	\$77.87
System Specialist	SS1	\$24.06	\$28.97	\$30.76	\$24.55	\$29.56	\$31.39	\$26.27	\$31.63	\$33.59
System Specialist	SS2	\$25.48	\$30.68	\$32.59	\$26.00	\$31.30	\$33.25	\$27.82	\$33.50	\$35.57
System Specialist	SS3	\$32.76	\$39.44	\$41.89	\$33.43	\$40.25	\$42.75	\$35.77	\$43.07	\$45.74
Technical Architecture Specialist	TAS1	\$32.37	\$38.97	\$41.39	\$33.03	\$39.77	\$42.24	\$35.34	\$42.55	\$45.19
Technical Architecture Specialist	TAS2	\$36.78	\$44.28	\$47.04	\$37.53	\$45.19	\$47.99	\$40.16	\$48.35	\$51.35
Technical Architecture Specialist	TAS3	\$39.34	\$47.37	\$50.31	\$40.14	\$48.33	\$51.33	\$42.95	\$51.71	\$54.92
Technical Specialist	TS1	\$58.05	\$69.89	\$74.23	\$59.23	\$71.31	\$75.74	\$63.38	\$76.31	\$81.05
Technical Specialist	TS2	\$61.13	\$73.60	\$78.17	\$62.38	\$75.11	\$79.77	\$66.75	\$80.37	\$85.35
Technical Specialist	TS3	\$66.26	\$79.78	\$84.73	\$67.61	\$81.40	\$86.45	\$72.34	\$87.10	\$92.50
Technical Specialist	TS4	\$79.51	\$95.73	\$101.68	\$81.13	\$97.68	\$103.74	\$86.81	\$104.52	\$111.00
Technical Specialist	TS5	\$88.66	\$106.39	\$113.37	\$90.47	\$108.56	\$115.68	\$96.80	\$116.16	\$123.78
Video Conference Specialist	VCS1	\$35.41	\$42.63	\$45.28	\$36.50	\$43.95	\$46.67	\$39.06	\$47.03	\$49.94
Video Conference Specialist	VCS2	\$40.32	\$48.55	\$51.55	\$41.57	\$50.05	\$53.15	\$44.48	\$53.55	\$56.88
Exception-DGS Approval Only	EXC	To Be Determined								

PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

<b>Non-Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Wage</b>	<b>Vendor</b>	<b>Bill</b>
Business Analyst	BA1	\$37.63	\$45.31	\$48.12
Business Analyst	BA2	\$48.15	\$57.97	\$61.57
Business Analyst	BA3	\$54.95	\$66.16	\$70.27
CADD/GIS Administrator	CGA1	\$32.46	\$39.08	\$41.51
CADD/GIS Administrator	CGA2	\$37.42	\$45.05	\$47.85
CADD/GIS Administrator	CGA3	\$55.71	\$67.07	\$71.24
Data Entry Operator	DE1	\$11.33	\$13.64	\$14.49
Data Entry Operator	DE2	\$12.34	\$14.86	\$15.78
Database Administrator	DBA1	\$32.62	\$39.27	\$41.71
Database Administrator	DBA2	\$35.94	\$43.27	\$45.96
Database Administrator	DBA3	\$48.27	\$58.12	\$61.72
Database Administrator	DBA4	\$58.57	\$70.52	\$74.89
Intern	INT1	\$12.00	\$14.45	\$15.34
Intern	INT2	\$14.00	\$16.86	\$17.90
Intern	INT3	\$18.00	\$21.67	\$23.02
Mobile Specialist	MS1	\$112.49	\$135.44	\$143.85
Mobile Specialist	MS2	\$125.00	\$150.50	\$159.84
Program Manager	PM1	\$35.96	\$43.30	\$45.98
Program Manager	PM2	\$43.69	\$52.60	\$55.87
Program Manager	PM3	\$56.41	\$67.92	\$72.13
Program Manager	PM4	\$73.12	\$88.04	\$93.50
Quality Assurance Specialist	QAS1	\$29.25	\$35.22	\$37.40
Quality Assurance Specialist	QAS2	\$32.42	\$39.03	\$41.45
Quality Assurance Specialist	QAS3	\$42.75	\$51.47	\$54.67
Senior Architect	SAR1	\$75.26	\$90.61	\$96.23
Senior Architect	SAR2	\$85.60	\$102.72	\$109.46
Senior Business Subject Matter Expert	SME1	\$70.68	\$85.10	\$90.38
Senior Business Subject Matter Expert	SME2	\$93.75	\$112.50	\$119.88
Senior Database Architect	SDA1	\$63.70	\$76.69	\$81.45
Senior Program Manager	SPM1	\$79.61	\$95.85	\$101.80
Team Lead	TL1	\$43.37	\$52.22	\$55.45
Team Lead	TL2	\$46.77	\$56.31	\$59.80
Technical Writer	TW1	\$20.63	\$24.84	\$26.38
Technical Writer	TW2	\$24.10	\$29.02	\$30.82
Technical Writer	TW3	\$27.18	\$32.72	\$34.76
Technical Writer	TW4	\$33.67	\$40.54	\$43.05
Telecom Engineer	TE1	\$27.93	\$33.63	\$35.72
Telecom Engineer	TE2	\$31.93	\$38.44	\$40.83
Telecom Engineer	TE3	\$37.67	\$45.35	\$48.17
Tester	Test1	\$25.87	\$31.15	\$33.08
Tester	Test2	\$29.89	\$35.99	\$38.22
Tester	Test3	\$34.79	\$41.89	\$44.49
Voice/Data Engineer	VDE1	\$26.51	\$31.92	\$33.90
Voice/Data Engineer	VDE2	\$30.75	\$37.02	\$39.32
Voice/Data Engineer	VDE3	\$36.99	\$44.54	\$47.30

PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

Area 2		Legacy			Core			Emerging		
Job Title	Level	Wage	Vendor	Bill	Wage	Vendor	Bill	Wage	Vendor	Bill
Application Developer	AD1	\$47.42	\$57.09	\$60.63	\$48.39	\$58.26	\$61.88	\$51.78	\$62.34	\$66.22
Application Developer	AD2	\$52.18	\$62.82	\$66.73	\$53.24	\$64.10	\$68.08	\$56.97	\$68.59	\$72.84
Application Developer	AD3	\$56.05	\$67.48	\$71.67	\$57.19	\$68.86	\$73.13	\$61.19	\$73.67	\$78.25
Architect	AR1	\$64.65	\$77.84	\$82.67	\$65.97	\$79.43	\$84.35	\$70.59	\$84.99	\$90.27
Functional Architect	FA1	\$27.02	\$32.53	\$34.55	\$27.57	\$33.19	\$35.25	\$29.50	\$35.52	\$37.72
Functional Architect	FA2	\$32.31	\$38.90	\$41.31	\$32.97	\$39.70	\$42.16	\$35.28	\$42.48	\$45.12
Functional Architect	FA3	\$38.87	\$46.80	\$49.70	\$39.66	\$47.75	\$50.71	\$42.44	\$51.10	\$54.27
Help Desk Analyst	HDA1	\$21.05	\$25.34	\$26.92	\$21.48	\$25.86	\$27.47	\$22.98	\$27.67	\$29.39
Help Desk Analyst	HDA2	\$23.09	\$27.80	\$29.53	\$23.56	\$28.37	\$30.12	\$25.21	\$30.35	\$32.23
Help Desk Analyst	HDA3	\$28.67	\$34.52	\$36.66	\$29.25	\$35.22	\$37.40	\$31.30	\$37.69	\$40.02
Network Engineer	NE1	\$37.13	\$44.70	\$47.48	\$37.89	\$45.62	\$48.45	\$40.54	\$48.81	\$51.84
Network Engineer	NE2	\$42.31	\$50.94	\$54.10	\$43.17	\$51.98	\$55.20	\$46.19	\$55.61	\$59.07
Network Engineer	NE3	\$47.64	\$57.36	\$60.92	\$48.61	\$58.53	\$62.16	\$52.01	\$62.62	\$66.50
Product Specialist	PS1	\$29.11	\$35.05	\$37.22	\$29.70	\$35.76	\$37.98	\$31.78	\$38.26	\$40.64
Product Specialist	PS2	\$33.48	\$40.31	\$42.82	\$34.16	\$41.13	\$43.68	\$36.55	\$44.01	\$46.74
Product Specialist	PS3	\$44.53	\$53.61	\$56.95	\$45.44	\$54.71	\$58.11	\$48.62	\$58.54	\$62.17
Product Specialist	PS4	\$56.14	\$67.59	\$71.79	\$57.28	\$68.97	\$73.25	\$61.29	\$73.79	\$78.37
Product Specialist	PS5	\$69.26	\$83.39	\$88.56	\$70.67	\$85.09	\$90.36	\$75.62	\$91.05	\$96.69
Product Specialist	PS6	\$81.44	\$97.73	\$104.14	\$83.10	\$99.72	\$106.26	\$88.92	\$106.70	\$113.70
Programmer	PR1	\$24.76	\$29.81	\$31.66	\$25.27	\$30.43	\$32.31	\$27.04	\$32.56	\$34.58
Programmer	PR2	\$29.53	\$35.55	\$37.76	\$30.13	\$36.28	\$38.53	\$32.24	\$38.82	\$41.23
Programmer	PR3	\$37.49	\$45.14	\$47.94	\$38.26	\$46.07	\$48.92	\$40.94	\$49.29	\$52.35
Programmer	PR4	\$49.21	\$59.25	\$62.92	\$50.21	\$60.45	\$64.20	\$53.72	\$64.68	\$68.69
Programmer	PR5	\$58.63	\$70.59	\$74.98	\$59.83	\$72.04	\$76.50	\$64.02	\$77.08	\$81.86
Programmer	PR6	\$65.76	\$78.91	\$84.09	\$67.10	\$80.52	\$85.80	\$71.80	\$86.16	\$91.81
Service Desk	SD2	\$18.61	\$22.41	\$23.79	\$18.99	\$22.86	\$24.29	\$20.32	\$24.47	\$25.98
Service Desk	SD3	\$20.14	\$24.25	\$25.76	\$20.55	\$24.74	\$26.28	\$21.99	\$26.48	\$28.12
Software Process Engineer	SPS1	\$27.19	\$32.74	\$34.77	\$27.74	\$33.40	\$35.47	\$29.68	\$35.73	\$37.96
Software Process Engineer	SPS2	\$30.22	\$36.38	\$38.64	\$30.84	\$37.13	\$39.44	\$33.00	\$39.73	\$42.20
Software Process Engineer	SPS3	\$41.52	\$49.99	\$53.09	\$42.37	\$51.01	\$54.18	\$45.34	\$54.59	\$57.98
System Administrator	SA1	\$24.91	\$29.99	\$31.85	\$25.42	\$30.61	\$32.50	\$27.20	\$32.75	\$34.78
System Administrator	SA2	\$27.50	\$33.11	\$35.16	\$28.06	\$33.78	\$35.88	\$30.02	\$36.14	\$38.38
System Administrator	SA3	\$38.93	\$46.87	\$49.78	\$39.72	\$47.82	\$50.79	\$42.50	\$51.17	\$54.35
System Administrator	SA4	\$52.30	\$62.97	\$66.88	\$53.37	\$64.26	\$68.24	\$57.10	\$68.75	\$73.01
System Administrator	SA5	\$57.02	\$68.42	\$72.91	\$58.18	\$69.82	\$74.40	\$62.25	\$74.70	\$79.60
System Specialist	SS1	\$24.09	\$29.00	\$30.81	\$24.58	\$29.59	\$31.44	\$26.30	\$31.67	\$33.63
System Specialist	SS2	\$25.53	\$30.74	\$32.65	\$26.05	\$31.36	\$33.31	\$27.87	\$33.56	\$35.63
System Specialist	SS3	\$32.91	\$39.62	\$42.08	\$33.58	\$40.43	\$42.94	\$35.93	\$43.26	\$45.95
Technical Architecture Specialist	TAS1	\$32.52	\$39.15	\$41.58	\$33.18	\$39.95	\$42.43	\$35.50	\$42.74	\$45.39
Technical Architecture Specialist	TAS2	\$37.03	\$44.58	\$47.36	\$37.79	\$45.50	\$48.32	\$40.44	\$48.69	\$51.71
Technical Architecture Specialist	TAS3	\$39.78	\$47.90	\$50.87	\$40.59	\$48.87	\$51.91	\$43.43	\$52.29	\$55.54
Technical Specialist	TS1	\$58.58	\$70.53	\$74.91	\$59.78	\$71.98	\$76.45	\$63.96	\$77.01	\$81.78
Technical Specialist	TS2	\$61.71	\$74.30	\$78.91	\$62.97	\$75.82	\$80.52	\$67.38	\$81.13	\$86.16
Technical Specialist	TS3	\$66.91	\$80.56	\$85.56	\$68.28	\$82.21	\$87.32	\$73.06	\$87.96	\$93.42
Technical Specialist	TS4	\$80.29	\$96.67	\$102.67	\$81.94	\$98.66	\$104.78	\$87.67	\$105.55	\$112.10
Technical Specialist	TS5	\$91.45	\$109.74	\$116.94	\$93.32	\$111.98	\$119.33	\$99.85	\$119.82	\$127.68
Video Conference Specialist	VCS1	\$35.68	\$42.96	\$45.63	\$36.78	\$44.28	\$47.04	\$39.35	\$47.38	\$50.32
Video Conference Specialist	VCS2	\$40.90	\$49.24	\$52.30	\$42.16	\$50.76	\$53.91	\$45.11	\$54.31	\$57.68
Exception-DGS Approval Only	EXC	To Be Determined								

PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

<b>Non-Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Wage</b>	<b>Vendor</b>	<b>Bill</b>
Business Analyst	BA1	37.8	45.51	48.34
Business Analyst	BA2	\$48.66	\$58.59	\$62.22
Business Analyst	BA3	\$55.54	\$66.87	\$71.02
CADD/GIS Administrator	CGA1	\$32.64	\$39.30	\$41.74
CADD/GIS Administrator	CGA2	\$37.68	\$45.37	\$48.19
CADD/GIS Administrator	CGA3	\$56.61	\$68.16	\$72.39
Data Entry Operator	DE1	\$11.24	\$13.53	\$14.37
Data Entry Operator	DE2	\$12.25	\$14.75	\$15.66
Database Administrator	DBA1	\$32.74	\$39.42	\$41.87
Database Administrator	DBA2	\$36.10	\$43.46	\$46.16
Database Administrator	DBA3	\$48.93	\$58.91	\$62.57
Database Administrator	DBA4	\$59.20	\$71.28	\$75.70
Intern	INT1	\$12.00	\$14.45	\$15.34
Intern	INT2	\$14.00	\$16.86	\$17.90
Intern	INT3	\$18.00	\$21.67	\$23.02
Mobile Specialist	MS1	\$112.49	\$135.44	\$143.85
Mobile Specialist	MS2	\$125.00	\$150.50	\$159.84
Program Manager	PM1	\$36.13	\$43.50	\$46.20
Program Manager	PM2	\$44.26	\$53.29	\$56.59
Program Manager	PM3	\$57.25	\$68.93	\$73.21
Program Manager	PM4	\$74.08	\$89.19	\$94.73
Quality Assurance Specialist	QAS1	\$29.36	\$35.35	\$37.54
Quality Assurance Specialist	QAS2	\$32.54	\$39.18	\$41.61
Quality Assurance Specialist	QAS3	\$43.23	\$52.05	\$55.28
Senior Architect	SAR1	\$76.33	\$91.90	\$97.61
Senior Architect	SAR2	\$88.22	\$105.86	\$112.80
Senior Business Subject Matter Expert	SME1	\$71.93	\$86.60	\$91.98
Senior Business Subject Matter Expert	SME2	\$96.75	\$116.10	\$123.72
Senior Database Architect	SDA1	\$64.61	\$77.79	\$82.62
Senior Program Manager	SPM1	\$80.96	\$97.48	\$103.52
Team Lead	TL1	\$43.87	\$52.82	\$56.09
Team Lead	TL2	\$47.38	\$57.05	\$60.59
Technical Writer	TW1	\$20.93	\$25.20	\$26.77
Technical Writer	TW2	\$24.50	\$29.50	\$31.33
Technical Writer	TW3	\$27.66	\$33.30	\$35.37
Technical Writer	TW4	\$34.50	\$41.54	\$44.12
Telecom Engineer	TE1	\$28.08	\$33.81	\$35.91
Telecom Engineer	TE2	\$32.11	\$38.66	\$41.06
Telecom Engineer	TE3	\$37.93	\$45.67	\$48.51
Tester	Test1	\$26.00	\$31.30	\$33.25
Tester	Test2	\$30.05	\$36.18	\$38.43
Tester	Test3	\$34.99	\$42.13	\$44.74
Voice/Data Engineer	VDE1	\$26.60	\$32.03	\$34.01
Voice/Data Engineer	VDE2	\$30.86	\$37.16	\$39.46
Voice/Data Engineer	VDE3	\$37.17	\$44.75	\$47.53



PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

Area 3		Legacy			Core			Emerging		
Job Title	Level	Wage	Vendor	Bill	Wage	Vendor	Bill	Wage	Vendor	Bill
Application Developer	AD1	\$47.02	\$56.61	\$60.12	\$47.98	\$57.77	\$61.36	\$51.34	\$61.81	\$65.65
Application Developer	AD2	\$51.69	\$62.23	\$66.10	\$52.74	\$63.50	\$67.44	\$56.43	\$67.94	\$72.16
Application Developer	AD3	\$55.51	\$66.83	\$70.98	\$56.64	\$68.19	\$72.43	\$60.60	\$72.96	\$77.49
Architect	AR1	\$64.24	\$77.34	\$82.15	\$65.55	\$78.92	\$83.82	\$70.14	\$84.45	\$89.69
Functional Architect	FA1	\$27.13	\$32.66	\$34.70	\$27.68	\$33.33	\$35.40	\$29.62	\$35.66	\$37.87
Functional Architect	FA2	\$32.44	\$39.06	\$41.48	\$33.10	\$39.85	\$42.33	\$35.42	\$42.65	\$45.29
Functional Architect	FA3	\$38.76	\$46.67	\$49.56	\$39.55	\$47.62	\$50.57	\$42.32	\$50.95	\$54.11
Help Desk Analyst	HDA1	\$21.21	\$25.54	\$27.12	\$21.64	\$26.05	\$27.67	\$23.15	\$27.87	\$29.60
Help Desk Analyst	HDA2	\$23.25	\$27.99	\$29.73	\$23.72	\$28.56	\$30.33	\$25.38	\$30.56	\$32.46
Help Desk Analyst	HDA3	\$28.81	\$34.69	\$36.84	\$29.40	\$35.40	\$37.59	\$31.46	\$37.88	\$40.23
Network Engineer	NE1	\$37.17	\$44.75	\$47.53	\$37.93	\$45.67	\$48.51	\$40.59	\$48.87	\$51.91
Network Engineer	NE2	\$42.02	\$50.59	\$53.73	\$42.88	\$51.63	\$54.84	\$45.88	\$55.24	\$58.67
Network Engineer	NE3	\$47.23	\$56.86	\$60.40	\$48.19	\$58.02	\$61.62	\$51.56	\$62.08	\$65.93
Product Specialist	PS1	\$29.22	\$35.18	\$37.36	\$29.82	\$35.90	\$38.13	\$31.91	\$38.42	\$40.80
Product Specialist	PS2	\$33.59	\$40.44	\$42.95	\$34.28	\$41.27	\$43.84	\$36.68	\$44.16	\$46.91
Product Specialist	PS3	\$44.18	\$53.19	\$56.50	\$45.08	\$54.28	\$57.65	\$48.24	\$58.08	\$61.69
Product Specialist	PS4	\$55.73	\$67.10	\$71.27	\$56.87	\$68.47	\$72.72	\$60.85	\$73.26	\$77.81
Product Specialist	PS5	\$68.86	\$82.91	\$88.05	\$70.26	\$84.59	\$89.84	\$75.18	\$90.52	\$96.14
Product Specialist	PS6	\$79.88	\$95.86	\$102.15	\$81.51	\$97.81	\$104.23	\$87.22	\$104.66	\$111.53
Programmer	PR1	\$24.91	\$29.99	\$31.85	\$25.42	\$30.61	\$32.50	\$27.20	\$32.75	\$34.78
Programmer	PR2	\$29.65	\$35.70	\$37.91	\$30.26	\$36.43	\$38.69	\$32.38	\$38.99	\$41.41
Programmer	PR3	\$37.56	\$45.22	\$48.03	\$38.33	\$46.15	\$49.02	\$41.01	\$49.38	\$52.44
Programmer	PR4	\$48.81	\$58.77	\$62.41	\$49.81	\$59.97	\$63.69	\$53.30	\$64.17	\$68.16
Programmer	PR5	\$58.22	\$70.10	\$74.44	\$59.41	\$71.53	\$75.97	\$63.57	\$76.54	\$81.28
Programmer	PR6	\$64.43	\$77.32	\$82.39	\$65.74	\$78.89	\$84.07	\$70.34	\$84.41	\$89.95
Service Desk	SD2	\$18.78	\$22.61	\$24.02	\$19.16	\$23.07	\$24.50	\$20.50	\$24.68	\$26.21
Service Desk	SD3	\$20.30	\$24.44	\$25.96	\$20.71	\$24.93	\$26.48	\$22.16	\$26.68	\$28.33
Software Process Engineer	SPS1	\$27.30	\$32.87	\$34.91	\$27.86	\$33.54	\$35.62	\$29.81	\$35.89	\$38.12
Software Process Engineer	SPS2	\$30.35	\$36.54	\$38.81	\$30.97	\$37.29	\$39.60	\$33.14	\$39.90	\$42.38
Software Process Engineer	SPS3	\$41.25	\$49.67	\$52.75	\$42.09	\$50.68	\$53.82	\$45.04	\$54.23	\$57.60
System Administrator	SA1	\$25.02	\$30.12	\$31.99	\$25.53	\$30.74	\$32.65	\$27.32	\$32.89	\$34.93
System Administrator	SA2	\$27.62	\$33.25	\$35.31	\$28.18	\$33.93	\$36.04	\$30.15	\$36.30	\$38.55
System Administrator	SA3	\$38.81	\$46.73	\$49.62	\$39.60	\$47.68	\$50.64	\$42.37	\$51.01	\$54.18
System Administrator	SA4	\$51.90	\$62.49	\$66.37	\$52.96	\$63.76	\$67.73	\$56.67	\$68.23	\$72.46
System Administrator	SA5	\$55.80	\$66.96	\$71.35	\$56.94	\$68.33	\$72.81	\$60.93	\$73.12	\$77.92
System Specialist	SS1	\$24.24	\$29.18	\$31.00	\$24.73	\$29.77	\$31.63	\$26.46	\$31.86	\$33.83
System Specialist	SS2	\$25.68	\$30.92	\$32.84	\$26.20	\$31.54	\$33.50	\$28.03	\$33.75	\$35.85
System Specialist	SS3	\$33.04	\$39.78	\$42.25	\$33.71	\$40.59	\$43.10	\$36.07	\$43.43	\$46.12
Technical Architecture Specialist	TAS1	\$32.64	\$39.30	\$41.74	\$33.31	\$40.11	\$42.59	\$35.64	\$42.91	\$45.58
Technical Architecture Specialist	TAS2	\$37.12	\$44.69	\$47.46	\$37.88	\$45.61	\$48.44	\$40.53	\$48.80	\$51.83
Technical Architecture Specialist	TAS3	\$39.58	\$47.65	\$50.62	\$40.39	\$48.63	\$51.65	\$43.22	\$52.04	\$55.26
Technical Specialist	TS1	\$58.01	\$69.84	\$74.18	\$59.19	\$71.26	\$75.69	\$63.33	\$76.25	\$80.99
Technical Specialist	TS2	\$61.09	\$73.55	\$78.12	\$62.34	\$75.06	\$79.72	\$66.70	\$80.31	\$85.29
Technical Specialist	TS3	\$66.24	\$79.75	\$84.70	\$67.59	\$81.38	\$86.43	\$72.32	\$87.07	\$92.47
Technical Specialist	TS4	\$79.49	\$95.71	\$101.64	\$81.11	\$97.66	\$103.72	\$86.78	\$104.48	\$110.96
Technical Specialist	TS5	\$89.36	\$107.23	\$114.26	\$91.18	\$109.42	\$116.60	\$97.56	\$117.07	\$124.75
Video Conference Specialist	VCS1	\$36.12	\$43.49	\$46.18	\$37.24	\$44.84	\$47.62	\$39.85	\$47.98	\$50.96
Video Conference Specialist	VCS2	\$41.06	\$49.44	\$52.50	\$42.33	\$50.97	\$54.13	\$45.29	\$54.53	\$57.92
Exception-DGS Approval Only	EXC	To Be Determined								

PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

<b>Non-Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Wage</b>	<b>Vendor</b>	<b>Bill</b>
Business Analyst	BA1	\$37.94	\$45.68	\$48.52
Business Analyst	BA2	\$48.30	\$58.15	\$61.76
Business Analyst	BA3	\$55.12	\$66.36	\$70.48
CADD/GIS Administrator	CGA1	\$33.26	\$40.05	\$42.53
CADD/GIS Administrator	CGA2	\$38.35	\$46.17	\$49.04
CADD/GIS Administrator	CGA3	\$57.00	\$68.63	\$72.89
Data Entry Operator	DE1	\$11.38	\$13.70	\$14.56
Data Entry Operator	DE2	\$12.43	\$14.97	\$15.90
Database Administrator	DBA1	\$32.88	\$39.59	\$42.05
Database Administrator	DBA2	\$36.24	\$43.63	\$46.34
Database Administrator	DBA3	\$48.54	\$58.44	\$62.07
Database Administrator	DBA4	\$58.76	\$70.75	\$75.14
Intern	INT1	\$12.00	\$14.45	\$15.34
Intern	INT2	\$14.00	\$16.86	\$17.90
Intern	INT3	\$18.00	\$21.67	\$23.02
Mobile Specialist	MS1	\$112.49	\$135.44	\$143.85
Mobile Specialist	MS2	\$125.00	\$150.50	\$159.84
Program Manager	PM1	\$37.31	\$44.92	\$47.71
Program Manager	PM2	\$45.30	\$54.54	\$57.93
Program Manager	PM3	\$58.45	\$70.37	\$74.74
Program Manager	PM4	\$74.57	\$89.78	\$95.35
Quality Assurance Specialist	QAS1	\$29.49	\$35.51	\$37.71
Quality Assurance Specialist	QAS2	\$32.68	\$39.35	\$41.79
Quality Assurance Specialist	QAS3	\$43.02	\$51.80	\$55.01
Senior Architect	SAR1	\$77.93	\$93.83	\$99.65
Senior Architect	SAR2	\$87.59	\$105.11	\$112.01
Senior Business Subject Matter Expert	SME1	\$72.66	\$87.48	\$92.91
Senior Business Subject Matter Expert	SME2	\$94.49	\$113.39	\$120.83
Senior Database Architect	SDA1	\$64.18	\$77.27	\$82.07
Senior Program Manager	SPM1	\$81.83	\$98.52	\$104.64
Team Lead	TL1	\$43.63	\$52.53	\$55.79
Team Lead	TL2	\$47.03	\$56.62	\$60.14
Technical Writer	TW1	\$21.14	\$25.45	\$27.03
Technical Writer	TW2	\$24.70	\$29.74	\$31.58
Technical Writer	TW3	\$27.86	\$33.54	\$35.62
Technical Writer	TW4	\$34.21	\$41.19	\$43.74
Telecom Engineer	TE1	\$28.61	\$34.45	\$36.58
Telecom Engineer	TE2	\$32.72	\$39.39	\$41.84
Telecom Engineer	TE3	\$38.62	\$46.50	\$49.38
Tester	Test1	\$26.49	\$31.89	\$33.88
Tester	Test2	\$30.61	\$36.85	\$39.14
Tester	Test3	\$35.64	\$42.91	\$45.58
Voice/Data Engineer	VDE1	\$26.71	\$32.16	\$34.15
Voice/Data Engineer	VDE2	\$30.99	\$37.31	\$39.63
Voice/Data Engineer	VDE3	\$37.30	\$44.91	\$47.70

PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

Area 4		Legacy			Core			Emerging		
Job Title	Level	Wage	Vendor	Bill	Wage	Vendor	Bill	Wage	Vendor	Bill
Application Developer	AD1	\$48.02	\$57.82	\$61.40	\$49.00	\$59.00	\$62.66	\$52.43	\$63.13	\$67.05
Application Developer	AD2	\$52.54	\$63.26	\$67.19	\$53.61	\$64.55	\$68.55	\$57.36	\$69.06	\$73.35
Application Developer	AD3	\$56.23	\$67.70	\$71.91	\$57.38	\$69.09	\$73.38	\$61.40	\$73.93	\$78.51
Architect	AR1	\$65.30	\$78.62	\$83.50	\$66.63	\$80.22	\$85.19	\$71.29	\$85.83	\$91.16
Functional Architect	FA1	\$28.72	\$34.58	\$36.72	\$29.31	\$35.29	\$37.48	\$31.36	\$37.76	\$40.10
Functional Architect	FA2	\$34.09	\$41.04	\$43.59	\$34.79	\$41.89	\$44.49	\$37.23	\$44.82	\$47.61
Functional Architect	FA3	\$40.25	\$48.46	\$51.47	\$41.07	\$49.45	\$52.51	\$43.94	\$52.90	\$56.19
Help Desk Analyst	HDA1	\$22.78	\$27.43	\$29.13	\$23.24	\$27.98	\$29.72	\$24.87	\$29.94	\$31.80
Help Desk Analyst	HDA2	\$24.83	\$29.90	\$31.75	\$25.34	\$30.51	\$32.40	\$27.11	\$32.64	\$34.66
Help Desk Analyst	HDA3	\$30.46	\$36.67	\$38.95	\$31.08	\$37.42	\$39.75	\$33.26	\$40.05	\$42.53
Network Engineer	NE1	\$38.63	\$46.51	\$49.40	\$39.42	\$47.46	\$50.40	\$42.18	\$50.78	\$53.94
Network Engineer	NE2	\$43.21	\$52.02	\$55.25	\$44.09	\$53.08	\$56.38	\$47.18	\$56.80	\$60.33
Network Engineer	NE3	\$48.23	\$58.07	\$61.68	\$49.21	\$59.25	\$62.92	\$52.65	\$63.39	\$67.32
Product Specialist	PS1	\$30.85	\$37.14	\$39.45	\$31.48	\$37.90	\$40.26	\$33.68	\$40.55	\$43.07
Product Specialist	PS2	\$35.26	\$42.45	\$45.09	\$35.98	\$43.32	\$46.01	\$38.50	\$46.35	\$49.23
Product Specialist	PS3	\$45.59	\$54.89	\$58.30	\$46.52	\$56.01	\$59.48	\$49.78	\$59.94	\$63.66
Product Specialist	PS4	\$56.87	\$68.47	\$72.72	\$58.03	\$69.87	\$74.21	\$62.10	\$74.77	\$79.41
Product Specialist	PS5	\$69.87	\$84.12	\$89.34	\$71.29	\$85.83	\$91.16	\$76.28	\$91.84	\$97.55
Product Specialist	PS6	\$79.85	\$95.82	\$102.11	\$81.48	\$97.78	\$104.19	\$87.18	\$104.62	\$111.48
Programmer	PR1	\$26.53	\$31.94	\$33.93	\$27.07	\$32.59	\$34.61	\$28.96	\$34.87	\$37.03
Programmer	PR2	\$31.27	\$37.65	\$39.98	\$31.91	\$38.42	\$40.80	\$34.14	\$41.10	\$43.66
Programmer	PR3	\$39.14	\$47.12	\$50.05	\$39.94	\$48.09	\$51.07	\$42.74	\$51.46	\$54.65
Programmer	PR4	\$50.21	\$60.45	\$64.20	\$51.23	\$61.68	\$65.51	\$54.82	\$66.00	\$70.10
Programmer	PR5	\$59.34	\$71.45	\$75.88	\$60.55	\$72.90	\$77.43	\$64.79	\$78.01	\$82.85
Programmer	PR6	\$65.13	\$78.16	\$83.29	\$66.46	\$79.75	\$84.98	\$71.11	\$85.33	\$90.93
Service Desk	SD2	\$20.34	\$24.49	\$26.01	\$20.76	\$25.00	\$26.54	\$22.21	\$26.74	\$28.40
Service Desk	SD3	\$21.85	\$26.31	\$27.94	\$22.30	\$26.85	\$28.52	\$23.86	\$28.73	\$30.51
Software Process Engineer	SPS1	\$28.89	\$34.78	\$36.94	\$29.48	\$35.49	\$37.70	\$31.54	\$37.97	\$40.33
Software Process Engineer	SPS2	\$31.99	\$38.52	\$40.91	\$32.64	\$39.30	\$41.74	\$34.92	\$42.04	\$44.65
Software Process Engineer	SPS3	\$42.68	\$51.39	\$54.58	\$43.55	\$52.43	\$55.69	\$46.60	\$56.11	\$59.59
System Administrator	SA1	\$26.58	\$32.00	\$33.99	\$27.12	\$32.65	\$34.67	\$29.02	\$34.94	\$37.10
System Administrator	SA2	\$29.21	\$35.17	\$37.35	\$29.81	\$35.89	\$38.12	\$31.90	\$38.41	\$40.79
System Administrator	SA3	\$40.30	\$48.52	\$51.53	\$41.12	\$49.51	\$52.58	\$44.00	\$52.98	\$56.26
System Administrator	SA4	\$53.09	\$63.92	\$67.89	\$54.17	\$65.22	\$69.27	\$57.97	\$69.80	\$74.12
System Administrator	SA5	\$56.63	\$67.96	\$72.42	\$57.79	\$69.35	\$73.90	\$61.84	\$74.21	\$79.08
System Specialist	SS1	\$25.84	\$31.11	\$33.04	\$26.37	\$31.75	\$33.72	\$28.22	\$33.98	\$36.08
System Specialist	SS2	\$27.29	\$32.86	\$34.90	\$27.85	\$33.53	\$35.61	\$29.80	\$35.88	\$38.11
System Specialist	SS3	\$34.70	\$41.78	\$44.37	\$35.41	\$42.63	\$45.28	\$37.89	\$45.62	\$48.45
Technical Architecture Specialist	TAS1	\$34.30	\$41.30	\$43.86	\$35.00	\$42.14	\$44.76	\$37.45	\$45.09	\$47.89
Technical Architecture Specialist	TAS2	\$38.74	\$46.64	\$49.54	\$39.53	\$47.59	\$50.55	\$42.30	\$50.93	\$54.09
Technical Architecture Specialist	TAS3	\$41.05	\$49.42	\$52.49	\$41.89	\$50.44	\$53.57	\$44.82	\$53.96	\$57.31
Technical Specialist	TS1	\$58.64	\$70.60	\$74.99	\$59.84	\$72.05	\$76.52	\$64.03	\$77.09	\$81.88
Technical Specialist	TS2	\$61.64	\$74.21	\$78.82	\$62.90	\$75.73	\$80.43	\$67.30	\$81.03	\$86.06
Technical Specialist	TS3	\$66.62	\$80.21	\$85.18	\$67.98	\$81.85	\$86.93	\$72.74	\$87.58	\$93.02
Technical Specialist	TS4	\$79.94	\$96.25	\$102.22	\$81.58	\$98.22	\$104.32	\$87.29	\$105.10	\$111.62
Technical Specialist	TS5	\$88.51	\$106.21	\$113.18	\$90.32	\$108.38	\$115.49	\$96.64	\$115.97	\$123.58
Video Conference Specialist	VCS1	\$37.13	\$44.70	\$47.48	\$38.28	\$46.09	\$48.95	\$40.96	\$49.32	\$52.37
Video Conference Specialist	VCS2	\$41.71	\$50.22	\$53.33	\$43.00	\$51.77	\$54.98	\$46.01	\$55.40	\$58.83
Exception-DGS Approval Only	EXC	To Be Determined								

PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

<b>Non-Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Wage</b>	<b>Vendor</b>	<b>Bill</b>
Business Analyst	BA1	\$39.67	\$47.76	\$50.72
Business Analyst	BA2	\$49.71	\$59.85	\$63.56
Business Analyst	BA3	\$56.43	\$67.94	\$72.16
CADD/GIS Administrator	CGA1	\$34.32	\$41.32	\$43.88
CADD/GIS Administrator	CGA2	\$39.35	\$47.38	\$50.32
CADD/GIS Administrator	CGA3	\$57.28	\$68.97	\$73.25
Data Entry Operator	DE1	\$12.37	\$14.89	\$15.81
Data Entry Operator	DE2	\$13.49	\$16.24	\$17.25
Database Administrator	DBA1	\$34.66	\$41.73	\$44.32
Database Administrator	DBA2	\$38.04	\$45.80	\$48.64
Database Administrator	DBA3	\$50.08	\$60.30	\$64.04
Database Administrator	DBA4	\$60.03	\$72.28	\$76.77
Intern	INT1	\$12.00	\$14.45	\$15.34
Intern	INT2	\$14.00	\$16.86	\$17.90
Intern	INT3	\$18.00	\$21.67	\$23.02
Mobile Specialist	MS1	\$112.49	\$135.44	\$143.85
Mobile Specialist	MS2	\$125.00	\$150.50	\$159.84
Program Manager	PM1	\$39.27	\$47.28	\$50.21
Program Manager	PM2	\$47.06	\$56.66	\$60.17
Program Manager	PM3	\$60.21	\$72.49	\$76.99
Program Manager	PM4	\$76.44	\$92.03	\$97.75
Quality Assurance Specialist	QAS1	\$31.22	\$37.59	\$39.92
Quality Assurance Specialist	QAS2	\$34.45	\$41.48	\$44.05
Quality Assurance Specialist	QAS3	\$44.63	\$53.73	\$57.07
Senior Architect	SAR1	\$79.74	\$96.01	\$101.97
Senior Architect	SAR2	\$88.10	\$105.72	\$112.66
Senior Business Subject Matter Expert	SME1	\$73.18	\$88.11	\$93.58
Senior Business Subject Matter Expert	SME2	\$81.45	\$97.74	\$104.15
Senior Database Architect	SDA1	\$65.70	\$79.10	\$84.01
Senior Program Manager	SPM1	\$82.29	\$99.08	\$105.23
Team Lead	TL1	\$45.23	\$54.46	\$57.84
Team Lead	TL2	\$48.58	\$58.49	\$62.12
Technical Writer	TW1	\$22.34	\$26.90	\$28.57
Technical Writer	TW2	\$25.83	\$31.10	\$33.03
Technical Writer	TW3	\$28.96	\$34.87	\$37.03
Technical Writer	TW4	\$35.26	\$42.45	\$45.09
Telecom Engineer	TE1	\$29.70	\$35.76	\$37.98
Telecom Engineer	TE2	\$33.79	\$40.68	\$43.21
Telecom Engineer	TE3	\$39.60	\$47.68	\$50.64
Tester	Test1	\$27.60	\$33.23	\$35.29
Tester	Test2	\$31.69	\$38.15	\$40.52
Tester	Test3	\$36.68	\$44.16	\$46.91
Voice/Data Engineer	VDE1	\$28.41	\$34.21	\$36.33
Voice/Data Engineer	VDE2	\$32.75	\$39.43	\$41.88
Voice/Data Engineer	VDE3	\$39.12	\$47.10	\$50.02



PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

Area 5		Legacy			Core			Emerging		
Job Title	Level	Wage	Vendor	Bill	Wage	Vendor	Bill	Wage	Vendor	Bill
Application Developer	AD1	\$53.82	\$64.80	\$68.82	\$54.92	\$66.12	\$70.22	\$58.76	\$70.75	\$75.14
Application Developer	AD2	\$59.03	\$71.07	\$75.49	\$60.23	\$72.52	\$77.02	\$64.45	\$77.60	\$82.41
Application Developer	AD3	\$63.27	\$76.18	\$80.90	\$64.56	\$77.73	\$82.55	\$69.08	\$83.17	\$88.34
Architect	AR1	\$72.18	\$86.90	\$92.30	\$73.65	\$88.67	\$94.19	\$78.81	\$94.89	\$100.77
Functional Architect	FA1	\$31.60	\$38.05	\$40.41	\$32.24	\$38.82	\$41.23	\$34.50	\$41.54	\$44.12
Functional Architect	FA2	\$37.40	\$45.03	\$47.82	\$38.16	\$45.94	\$48.79	\$40.83	\$49.16	\$52.21
Functional Architect	FA3	\$43.78	\$52.71	\$55.99	\$44.67	\$53.78	\$57.12	\$47.80	\$57.55	\$61.12
Help Desk Analyst	HDA1	\$24.95	\$30.04	\$31.90	\$25.46	\$30.65	\$32.55	\$27.24	\$32.80	\$34.83
Help Desk Analyst	HDA2	\$27.24	\$32.80	\$34.83	\$27.80	\$33.47	\$35.55	\$29.75	\$35.82	\$38.04
Help Desk Analyst	HDA3	\$33.46	\$40.29	\$42.78	\$34.14	\$41.10	\$43.66	\$36.53	\$43.98	\$46.72
Network Engineer	NE1	\$43.07	\$51.86	\$55.07	\$43.95	\$52.92	\$56.20	\$47.03	\$56.62	\$60.14
Network Engineer	NE2	\$48.28	\$58.13	\$61.74	\$49.27	\$59.32	\$63.00	\$52.72	\$63.47	\$67.41
Network Engineer	NE3	\$54.06	\$65.09	\$69.13	\$55.16	\$66.41	\$70.53	\$59.02	\$71.06	\$75.47
Product Specialist	PS1	\$33.92	\$40.84	\$43.37	\$34.61	\$41.67	\$44.25	\$37.03	\$44.58	\$47.36
Product Specialist	PS2	\$38.58	\$46.45	\$49.34	\$39.37	\$47.40	\$50.34	\$42.13	\$50.72	\$53.88
Product Specialist	PS3	\$49.56	\$59.67	\$63.37	\$50.57	\$60.89	\$64.66	\$54.11	\$65.15	\$69.19
Product Specialist	PS4	\$62.78	\$75.59	\$80.28	\$64.06	\$77.13	\$81.91	\$68.54	\$82.52	\$87.65
Product Specialist	PS5	\$77.29	\$93.06	\$98.83	\$78.87	\$94.96	\$100.85	\$84.39	\$101.61	\$107.91
Product Specialist	PS6	\$88.97	\$106.76	\$113.76	\$90.79	\$108.95	\$116.10	\$97.15	\$116.58	\$124.23
Programmer	PR1	\$29.12	\$35.06	\$37.23	\$29.71	\$35.77	\$37.99	\$31.79	\$38.28	\$40.65
Programmer	PR2	\$34.39	\$41.41	\$43.98	\$35.09	\$42.25	\$44.87	\$37.55	\$45.21	\$48.02
Programmer	PR3	\$42.58	\$51.27	\$54.45	\$43.45	\$52.31	\$55.56	\$46.49	\$55.97	\$59.45
Programmer	PR4	\$54.59	\$65.73	\$69.81	\$55.70	\$67.06	\$71.22	\$59.60	\$71.76	\$76.21
Programmer	PR5	\$65.53	\$78.90	\$83.80	\$66.87	\$80.51	\$85.50	\$71.55	\$86.15	\$91.49
Programmer	PR6	\$73.52	\$88.22	\$94.01	\$75.02	\$90.02	\$95.93	\$80.27	\$96.32	\$102.64
Service Desk	SD2	\$22.28	\$26.83	\$28.49	\$22.73	\$27.37	\$29.07	\$24.32	\$29.28	\$31.09
Service Desk	SD3	\$23.94	\$28.82	\$30.61	\$24.43	\$29.41	\$31.24	\$26.14	\$31.47	\$33.43
Software Process Engineer	SPS1	\$31.78	\$38.26	\$40.64	\$32.43	\$39.05	\$41.47	\$34.70	\$41.78	\$44.37
Software Process Engineer	SPS2	\$35.15	\$42.32	\$44.95	\$35.87	\$43.19	\$45.86	\$38.38	\$46.21	\$49.08
Software Process Engineer	SPS3	\$46.39	\$55.85	\$59.32	\$47.34	\$57.00	\$60.54	\$50.65	\$60.98	\$64.77
System Administrator	SA1	\$29.24	\$35.20	\$37.39	\$29.84	\$35.93	\$38.16	\$31.93	\$38.44	\$40.83
System Administrator	SA2	\$32.13	\$38.68	\$41.09	\$32.79	\$39.48	\$41.93	\$35.09	\$42.25	\$44.87
System Administrator	SA3	\$43.83	\$52.77	\$56.05	\$44.72	\$53.84	\$57.18	\$47.85	\$57.61	\$61.19
System Administrator	SA4	\$58.56	\$70.51	\$74.88	\$59.75	\$71.94	\$76.40	\$63.93	\$76.97	\$81.75
System Administrator	SA5	\$64.22	\$77.06	\$82.12	\$65.53	\$78.64	\$83.80	\$70.12	\$84.14	\$89.66
System Specialist	SS1	\$28.35	\$34.13	\$36.25	\$28.93	\$34.83	\$37.00	\$30.96	\$37.28	\$39.59
System Specialist	SS2	\$29.97	\$36.08	\$38.32	\$30.58	\$36.82	\$39.11	\$32.72	\$39.39	\$41.84
System Specialist	SS3	\$38.00	\$45.75	\$48.59	\$38.78	\$46.69	\$49.59	\$41.49	\$49.95	\$53.06
Technical Architecture Specialist	TAS1	\$37.60	\$45.27	\$48.08	\$38.37	\$46.20	\$49.06	\$41.06	\$49.44	\$52.50
Technical Architecture Specialist	TAS2	\$42.16	\$50.76	\$53.91	\$43.02	\$51.80	\$55.01	\$46.03	\$55.42	\$58.86
Technical Architecture Specialist	TAS3	\$44.64	\$53.75	\$57.08	\$45.55	\$54.84	\$58.25	\$48.74	\$58.68	\$62.33
Technical Specialist	TS1	\$66.05	\$79.52	\$84.46	\$67.40	\$81.15	\$86.19	\$72.12	\$86.83	\$92.22
Technical Specialist	TS2	\$69.51	\$83.69	\$88.88	\$70.93	\$85.40	\$90.70	\$75.90	\$91.38	\$97.05
Technical Specialist	TS3	\$75.24	\$90.59	\$96.21	\$76.78	\$92.44	\$98.18	\$82.15	\$98.91	\$105.05
Technical Specialist	TS4	\$90.29	\$108.71	\$115.45	\$92.14	\$110.94	\$117.82	\$98.58	\$118.69	\$126.06
Technical Specialist	TS5	\$96.23	\$115.48	\$123.06	\$98.19	\$117.83	\$125.56	\$105.06	\$126.07	\$134.34
Video Conference Specialist	VCS1	\$39.88	\$48.02	\$51.00	\$41.11	\$49.50	\$52.57	\$43.99	\$52.96	\$56.25
Video Conference Specialist	VCS2	\$44.72	\$53.84	\$57.18	\$46.10	\$55.50	\$58.95	\$49.33	\$59.39	\$63.08
Exception-DGS Approval Only	EXC	To Be Determined								

PA Enterprise IT Staff Augmentation Contract  
Wage, Vendor, Bill Rates

<b>Non-Affiliated</b>				
<b>Job Title</b>	<b>Level</b>	<b>Wage</b>	<b>Vendor</b>	<b>Bill</b>
Business Analyst	BA1	\$43.83	\$52.77	\$56.05
Business Analyst	BA2	\$54.73	\$65.89	\$69.99
Business Analyst	BA3	\$62.22	\$74.91	\$79.56
CADD/GIS Administrator	CGA1	\$37.09	\$44.66	\$47.43
CADD/GIS Administrator	CGA2	\$42.17	\$50.77	\$53.92
CADD/GIS Administrator	CGA3	\$61.25	\$73.75	\$78.32
Data Entry Operator	DE1	\$13.29	\$16.00	\$17.00
Data Entry Operator	DE2	\$14.50	\$17.46	\$18.54
Database Administrator	DBA1	\$38.10	\$45.87	\$48.72
Database Administrator	DBA2	\$41.67	\$50.17	\$53.28
Database Administrator	DBA3	\$54.44	\$65.55	\$69.62
Database Administrator	DBA4	\$66.24	\$79.75	\$84.70
Intern	INT1	\$12.00	\$14.45	\$15.34
Intern	INT2	\$14.00	\$16.86	\$17.90
Intern	INT3	\$18.00	\$21.67	\$23.02
Mobile Specialist	MS1	\$112.49	\$135.44	\$143.85
Mobile Specialist	MS2	\$125.00	\$150.50	\$159.84
Program Manager	PM1	\$44.05	\$53.04	\$56.33
Program Manager	PM2	\$52.44	\$63.14	\$67.06
Program Manager	PM3	\$66.98	\$80.64	\$85.65
Program Manager	PM4	\$85.74	\$103.23	\$109.64
Quality Assurance Specialist	QAS1	\$34.35	\$41.36	\$43.92
Quality Assurance Specialist	QAS2	\$37.88	\$45.61	\$48.44
Quality Assurance Specialist	QAS3	\$48.52	\$58.42	\$62.04
Senior Architect	SAR1	\$88.60	\$106.67	\$113.29
Senior Architect	SAR2	\$99.07	\$118.88	\$126.68
Senior Business Subject Matter Expert	SME1	\$79.84	\$96.13	\$102.10
Senior Business Subject Matter Expert	SME2	\$101.83	\$122.20	\$130.22
Senior Database Architect	SDA1	\$71.49	\$86.07	\$91.42
Senior Program Manager	SPM1	\$89.84	\$108.17	\$114.88
Team Lead	TL1	\$49.17	\$59.20	\$62.87
Team Lead	TL2	\$52.79	\$63.56	\$67.51
Technical Writer	TW1	\$24.45	\$29.44	\$31.26
Technical Writer	TW2	\$28.31	\$34.09	\$36.20
Technical Writer	TW3	\$31.79	\$38.28	\$40.65
Technical Writer	TW4	\$38.92	\$46.86	\$49.76
Telecom Engineer	TE1	\$32.13	\$38.68	\$41.09
Telecom Engineer	TE2	\$36.52	\$43.97	\$46.69
Telecom Engineer	TE3	\$42.44	\$51.10	\$54.27
Tester	Test1	\$29.85	\$35.94	\$38.17
Tester	Test2	\$34.28	\$41.27	\$43.84
Tester	Test3	\$39.56	\$47.63	\$50.58
Voice/Data Engineer	VDE1	\$31.25	\$37.63	\$39.96
Voice/Data Engineer	VDE2	\$36.02	\$43.37	\$46.06
Voice/Data Engineer	VDE3	\$42.76	\$51.48	\$54.68

# **Pennsylvania Enterprise IT Staff Augmentation Services Contract**

## **Job Titles and Descriptions (Version 7)**

Please note: Version 7 now includes the following levels:

- Product Specialist – Level 6
- Programmer – Level 6
- System Administrator – Level 5
- Technical Specialist – Level 5
- Senior Architect – Level 2
- Senior Business Subject Matter Expert – Level 2

Application Developer .....	5
AD1 .....	5
AD2 .....	5
AD3 .....	5
Architect .....	6
AR1 .....	6
Business Analyst .....	6
BA1 .....	6
BA2 .....	7
BA3 .....	7
CADD/GIS Administrator .....	7
CGA1 .....	7
CGA2 .....	7
CGA3 .....	7
Data Entry Operator .....	8
DE1 .....	8
DE2 .....	8
Database Administrator .....	9
DBA1 .....	9
DBA2 .....	9
DBA3 .....	10
DBA4 .....	10
Functional Architect .....	10
FA1 .....	10
FA2 .....	11
FA3 .....	12
Help Desk Analyst .....	12
HDA1 .....	12
HDA2 .....	13
HDA3 .....	13
Intern .....	14
INT1 .....	14
INT2 .....	14
INT3 .....	14
Mobile Specialist .....	14
MS1 .....	14
MS2 .....	15
Network Engineer .....	15
NE1 .....	15
NE2 .....	15
NE3 .....	16
Product Specialist .....	16
PS1 .....	16
PS2 .....	17
PS3 .....	17
PS4 .....	17
PS5 .....	18
PS6 .....	18

Program Manager .....	19
PM1 .....	19
PM2 .....	19
PM3 .....	20
PM4 .....	20
Programmer .....	20
PR1 .....	21
PR2 .....	21
PR3 .....	22
PR4 .....	22
PR5 .....	23
PR6 .....	23
Quality Assurance Specialist .....	24
QAS1 .....	24
QAS2 .....	24
QAS3 .....	25
Senior Architect .....	26
SAR1 .....	26
SAR2 .....	27
Senior Business Subject Matter Expert .....	27
SME1 .....	27
SME2 .....	27
Senior Database Architect .....	28
SDA1 .....	28
Senior Program Manager .....	28
SPM1 .....	29
Service Desk .....	29
SD2 .....	29
SD3 .....	30
Software Process Engineer .....	30
SPS1 .....	30
SPS2 .....	31
SPS3 .....	31
System Administrator .....	31
SA1 .....	31
SA2 .....	32
SA3 .....	32
SA4 .....	33
SA5 .....	33
System Specialist .....	33
SS1 .....	34
SS2 .....	34
SS3 .....	35
Team Lead .....	35
TL1 .....	35
TL2 .....	36
Technical Architecture Specialist .....	36
TAS1 .....	37
TAS2 .....	37
TAS3 .....	38

Technical Specialist.....	38
TS1 .....	39
TS2 .....	39
TS3 .....	39
TS4 .....	39
TS5 .....	39
Technical Writer .....	39
TW1 .....	40
TW2 .....	40
TW3 .....	41
TW4 .....	41
Telecom Engineer .....	42
TE1 .....	42
TE2 .....	42
TE3 .....	42
Tester .....	42
Test1 .....	42
Test2 .....	43
Test3 .....	43
Video Conference Specialist .....	44
VCS1 .....	44
VCS2 .....	44
Voice/Data Engineer .....	44
VDE1 .....	45
VDE2 .....	45
VDE3 .....	45

## Application Developer

The Application Developer will provide support to existing production applications and perform complex technical analysis, design, development, documentation, testing, deployment and implementation of new applications using existing and emerging platforms. This category includes web application and database development. This category won't likely be suitable for wireless application development as of release 6.0.

### AD1

Years of Relevant Experience:	Up to 3years industry experience
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Reviews and understands the Application Team's work plan.</li> <li>• Provides status of work to Team Lead.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Engages in ongoing process improvement.</li> <li>• Detailed functional and process knowledge.</li> <li>• Utilizes deep modeling, design and coding skills.</li> <li>• Provides expertise in one or more database environments.</li> </ul>

### AD2

Years of Relevant Experience:	3 to 5 years industry experience
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in AD1 plus the following:</p> <ul style="list-style-type: none"> <li>• This is a professional level non-supervisory position which may require coordination of programming activities being conducted by the team</li> <li>• Supports team in modification of enhancements and changes to applications.</li> <li>• Leverages excellent written and verbal communication skills May coordinate activities of other application developers</li> <li>• Supports business process, problem analysis and consultation.</li> <li>• Processes open defect/maintenance tickets and correct technical errors.</li> </ul>

### AD3

Years of Relevant Experience:	More than 5 years industry experience
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in AD2 plus the following:</p> <ul style="list-style-type: none"> <li>• Proven track record of hands-on technical design and code work within large complex systems.</li> <li>• Proven hands-on technical work with a variety of technologies..</li> <li>• Able to make best practice recommendations based on past work.</li> <li>• Proven ability to present complex technical constructs to business and non-technical users.</li> <li>• Proven ability to collaborate with business users, project managers and technical architects.</li> </ul>



## Architect

The Architect has the ability to design, develop, and implement application infrastructure to provide reliable and scalable applications and systems to meet the organization's objectives and requirements. The Architect is familiar with a variety of the application technologies, environments, concepts, methodologies, practices, and procedures. The Architect is also able to perform a variety of complicated tasks with minimal or no direct supervision. The Architect is experienced in defining systems and application architecture.

### AR1

Years of Relevant Experience:	Up to 5 years software development and testing
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Proven experience with hands-on technical development work.</li> <li>• Able to coordinate with technical leads, business users and project managers.</li> <li>• Experience participating in development of standards and product recommendations.</li> <li>• Experience designing and architecting systems as a member of a design team.</li> <li>• Experience working through every phase of software development life cycle.</li> <li>• Strong verbal communication.</li> </ul>

## Business Analyst

The Business Analyst is responsible for the set of tasks and techniques used to work as a liaison among stakeholders in order to understand the structure, policies, and operations of an organization, and to recommend solutions that enable the organization to achieve its goals.

### BA1

Years of Relevant Experience:	Up to 4 years
Preferred Education:	4 year college degree or equivalent.
Role Description:	<ul style="list-style-type: none"> <li>• Experience conducting Facilitated Workshops for requirements analysis.</li> <li>• Experience creating workflows using formal notation such as the Business Process Modeling Notation (BPMN).</li> <li>• Knowledge of formal requirements gathering methodologies.</li> <li>• Experience developing Business Requirements - project initiation document, what the needed achievements will be, and the quality measures.</li> <li>• Experience developing Functional requirements - describe what the system, process, or product/service must do in order to fulfill the business requirements.</li> <li>• Experience developing User (stakeholder) requirements - are a very important part of the deliverables, the needs of the stakeholders will have to be correctly interpreted. This deliverable can also reflect how the product will be designed, developed, and define how test cases must be formulated.</li> <li>• Experience developing Quality-of-service (non-functional) requirements - are requirements that do not perform a specific function for the business requirement but are needed to support the functionality. For example: performance, scalability, quality of service (QoS), security and usability.</li> <li>• Experience developing Report Specifications - define the purpose of a report, its justification, attributes and columns, owners and runtime parameters.</li> <li>• Experience developing Requirements Traceability Matrix - a cross matrix for recording the requirements through each stage of the requirements gathering process.</li> <li>• Strong organization and writing skills. Experienced developing graphic representations of complex business processes.</li> </ul>

### **BA2**

Years of Relevant Experience:	4 to 6 years
Preferred Education:	4 year college degree or equivalent.
Role Description:	All roles specified in BA1 plus additional work experience and job knowledge.

### **BA3**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent and IIBA-certified Business Analyst.
Role Description:	All roles specified in BA1 plus additional work experience, job knowledge, and IIBA certification.

## **CADD/GIS Administrator**

The CADD/GIS Administrator (CGA) is responsible for providing direct support of various CADD/GIS software and hardware systems. The CGA will perform hardware and software installations, relocations, testing and routine maintenance.

### **CGA1**

Years of Relevant Experience:	Up to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assists in troubleshooting CADD/GIS system hardware problems and works with the appropriate service and warranty vendors to make the necessary repairs and fixes.</li> <li>• Tracks version upgrades and notifies proper parties of available updates to CADD/GIS Systems software.</li> <li>• Assists with phone and online problem reporting and maintaining problem report records.</li> <li>• Assists with ordering consumable supplies for the CADD/GIS Systems.</li> <li>• Maintains current inventory of all hardware, software, upgrades and fixes for each site.</li> <li>• Maintains configuration charts of current inventory.</li> <li>• Maintains data backups and data archives and provides data retrieval from backup.</li> <li>• Monitors system status and data integrity.</li> </ul>

### **CGA2**

Years of Relevant Experience:	5 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Able to work independently.</li> <li>• Demonstrates proven experience in troubleshooting with little supervision.</li> <li>• Able to communicate status to managers and project sponsors.</li> <li>• Assists in developing standards and direction for systems.</li> </ul>

### **CGA3**

Years of Relevant Experience:	8 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in CGA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Leads efforts to troubleshoot CADD/GIS system hardware and software problems.</li> <li>• Leads team of CGAs developing software and hardware plans and solutions.</li> <li>• Expertise in teaching/conveying technical and/or functional courses/concepts.</li> </ul>

## Data Entry Operator

For data entry projects that require manual key entry and/or data capture through scanning.

### DE1

Years of Relevant Experience:	Up to 2 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> <li>• Comprehensive PC skills.</li> <li>• Able to follow written and spoken instructions.</li> <li>• Minimum of 25 wpm.</li> <li>• Able to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen.</li> <li>• Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform.</li> <li>• Able to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques.</li> <li>• Able to conduct basic data mining and data capture efforts.</li> <li>• Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP.</li> <li>• Key punch and verify records in specified format (ex. ASCII).</li> <li>• The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeros are not counted as keystrokes.</li> <li>• The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession.</li> <li>• Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis.</li> <li>• Pickup and delivery by contractor to be made on a weekly basis.</li> <li>• For key entry, required that a second individual completed 100% key verification to control errors.</li> <li>• Knowledge of imaging and visual display operating practices, procedures, and techniques.</li> <li>• Knowledge of arithmetic and numbering systems.</li> <li>• Able to operate equipment with speed and accuracy to ensure information is captured.</li> </ul>

### DE2

Years of Relevant Experience:	2 to 4 years
Preferred Education:	Associates Degree or equivalent
Role Description:	<ul style="list-style-type: none"> <li>• Comprehensive PC skills.</li> <li>• Able to follow written and spoken instructions.</li> <li>• Minimum of 35 wpm.</li> <li>• Able to accurately enter information into a computer, accessing information from a computer, and verifying information on a screen.</li> <li>• Duties involve utilizing automated equipment, including electronic keyboard, display screen, and sorted memory to perform.</li> <li>• Able to operate and understand basic scanning and imaging equipment, including pan, skew, and image correction techniques.</li> <li>• Able to conduct basic data mining and data capture efforts.</li> <li>• Services may be required to be provided at supplier's site using supplier's equipment. Typically need an end product of electronic data, typically transmitted through FTP.</li> <li>• Key punch and verify records in specified format (ex. ASCII).</li> </ul>

	<ul style="list-style-type: none"> <li>• The total number of keystrokes is limited to actual characters, numbers and special characters that are keyed. Spaces, function keys, nulls, and zeros are not counted as keystrokes.</li> <li>• The contractor must complete all data forms within an agreed-upon amount of time from receipt or average a minimum of a set number of strokes each week data forms are in possession.</li> <li>• Error rate cannot exceed 1/2%. Error rate is calculated on a character (not field or record) basis.</li> <li>• Pickup and delivery by contractor to be made on a weekly basis.</li> <li>• For key entry, required that a second individual completed 100% key verification to control errors.</li> <li>• Knowledge of imaging and visual display operating practices, procedures, and techniques.</li> <li>• Knowledge of arithmetic and numbering systems.</li> <li>• Able to operate equipment with speed and accuracy to ensure information is captured.</li> </ul>
--	---

## Database Administrator

The Database Administrator is responsible for data analysis and database management. Database Administrators typically are involved in maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning. Database Administrators have a range of skills and knowledge of the utilities and production tools used for data storage management to support the Application Team.

### DBA1

Years of Relevant Experience:	Up to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Skilled data dictionary analysis and design and data model analysis design.</li> <li>• Maintains central data repository.</li> <li>• Experience and knowledge in supporting application system development life cycle.</li> <li>• Responsible for data dictionary backup and recovery.</li> <li>• Responsible for definition of standards of data dictionaries.</li> <li>• May program dictionary analysis and maintenance software.</li> <li>• Performs performance tuning.</li> <li>• Monitors database performance and space requirements.</li> <li>• Schedules and monitors end of day data warehousing jobs.</li> <li>• Assists in coordinating software releases.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Able to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

### DBA2

Years of Relevant Experience:	3 to 4 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in DBA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Business systems analysis and design experience.</li> <li>• Logical data modeling techniques.</li> <li>• Production environment Tools/Utilities.</li> </ul>

	<ul style="list-style-type: none"> <li>• Knowledgeable in data analysis and database management techniques.</li> <li>• Execution of all responsibilities with little direct supervision of Team Lead.</li> <li>• Administration and scripting experience in relative platform.</li> <li>• Supervise performance tuning.</li> <li>• Author shell scripts to perform back up, restore, and monitoring tasks.</li> <li>• Anticipate and resolve issues specific to the team.</li> <li>• Determine time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identify and track issues, risks and action items.</li> </ul>
--	---

### **DBA3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	All roles specified in DBA2 plus the following: <ul style="list-style-type: none"> <li>• Highly skilled at database design, installations, conversions.</li> <li>• Responsible for database backup and recovery procedures, access security and database integrity, physical data storage design and data storage management.</li> </ul>

### **DBA4**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	All roles specified in DBA3 plus the following: <ul style="list-style-type: none"> <li>• Participates in Database Management System selection and maintains database performance.</li> <li>• Knowledge of various Database Management System products.</li> <li>• Provides status of work to Project Team Lead.</li> <li>• Engages in ongoing process improvement.</li> </ul>

## **Functional Architect**

The Functional Architect is the functional expert for an application, a defined set of applications or a portfolio of related applications. The Functional Architect is also responsible for bringing an understanding of the enterprise, business system and industry to the team(s) supporting or interfacing with the application. The primary responsibility of a Functional Architect is to provide expertise in the business process supported by the application, to prepare and review designs, to recommend improvements, and to provide guidance during the testing process. The Functional Architect helps the Programmers establish a clear understanding of the business functional requirements and either creates the functional designs to meet the requirements or reviews and approves the designs written by the Programmers. The Functional Architect must understand all aspects of their specific application(s), and the underlying business process. The more experienced Functional Architect plans, analyzes, and defines high- level software strategies and solutions. Contained in the experienced role is the task of coordinating with other Functional Architects to define technical requirements and long range plans for meeting customer requirements.

### **FA1**

Years of Relevant Experience:	2 to 4 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Analyzes, determines, and documents functional requirements.</li> <li>• Provides definition on how the applications will support business requirements.</li> <li>• Conducts impact analyses of business requirements on the system.</li> <li>• Works with Technical Architecture Specialist in defining software / hardware requirements.</li> </ul>

	<ul style="list-style-type: none"> <li>• Gathers and interprets user requirements into design specifications.</li> <li>• Participates in design of application.</li> <li>• Participates in design code and test reviews as appropriate.</li> <li>• Provides inputs to test planning.</li> <li>• Completes assigned tasks.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment.</li> <li>• Strong communication skills; both written and spoken</li> <li>• Acts as the application(s) functional expert; providing expertise in the business process supported by the application.</li> <li>• Provides detailed definition on how the applications will support business requirements.</li> <li>• Works with Technical Architecture Specialist in planning and delivering technical architecture.</li> <li>• Provides expertise for defining functional architecture and infrastructure for applications.</li> <li>• Plans and develops user interface strategy.</li> <li>• Directs and participates in design of application.</li> <li>• Interprets and understands user requirements/design specifications.</li> <li>• Provides detailed definition on how the applications will support business requirements.</li> <li>• Works with Technical Architecture Specialist in defining software / hardware requirements and in planning and delivering architecture.</li> <li>• Provides expertise for defining architecture and infrastructure for applications.</li> <li>• Reviews and understands team work plan</li> <li>• Identifies and tracks issues, risks and action items affecting own work and work of team.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>
--	--

**FA2**

Years of Relevant Experience:	4 to 5 years in particular application area
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in FA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Provides functional expertise to planning organization as required.</li> <li>• Reviews tasks prior to migration into production as appropriate. Provide assistance in scheduling design work for Lead Functional Architect.</li> <li>• Coordinates the design and development of work estimates and act as the primary point of contact. Assist in managing and directing application team processes.</li> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems.</li> <li>• Works with client and Lead Functional Architect to identify direction of software.</li> <li>• Ensures business requirements are supported by the software.</li> <li>• Identifies and initiates continuous improvement opportunities.</li> <li>• Defines user interface strategies.</li> <li>• Understands specific business needs and overall business strategy of the business customer.</li> </ul>



### FA3

Years of Relevant Experience:	Five plus years in particular application area
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in FA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Guides processes for Functional Architects and direct work planning and design activities.</li> <li>• Provides standard, well-structured work planning which defines scope, resources, commitments, quality, risk, tasks, and acceptance criteria.</li> <li>• Ensures that overall application designs remain within project scope.</li> <li>• Works with customer business units to understand their business processes.</li> <li>• Works with customer business units and client to identify direction of software.</li> <li>• Ensures business requirements are supported by the software.</li> <li>• Ensures goals for Functional Architects are being met and manage team commitments.</li> <li>• Analyzes, defines, and documents how the applications will support functional and business requirements.</li> <li>• Coordinates these efforts with Functional Architects.</li> <li>• Understands supporting/interfacing system applications.</li> <li>• Approves the determined need for new software/hardware.</li> <li>• Understands prioritization work based on business needs request/releases for work affecting an application.</li> <li>• Manages the accomplishment of delivery metrics, Service Level Agreements and other contractual obligations within areas of responsibility.</li> <li>• Sponsors coordination of the required skills, training, methodologies, and processes to ensure the success of team/project/program goals.</li> <li>• Coordinates and conducts project review meetings with Group Lead Functional Architects and Team Leads.</li> <li>• Communicates and resolves application interface issues with other Lead Functional Architects as needed.</li> <li>• Monitors and measures maintenance and development process effectiveness.</li> <li>• Communicates clearly the program/application goals, operational and organizational philosophies, and policies and procedures to the Functional Architects.</li> <li>• Communicates to team members the relationships between their work and assignments and the organizational and/ or program objectives.</li> </ul>

## Help Desk Analyst

The Help Desk Analyst provides Helpdesk Level 2 Support by performing the skills listed below.

### HDA1

Years of Relevant Experience:	1 to 3 years field experience
Preferred Education:	2 year associates degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Provides technical assistance, support, and advice to end users for hardware, software, and systems.</li> <li>• Provides hands-on technical assistance to business and technical users.</li> <li>• Investigates and resolves computer software and hardware problems of users.</li> <li>• Serves as a contact for level 1 support.</li> <li>• Serves as a contact for users having problems using computer software, hardware, and operating systems, and escalates as necessary.</li> <li>• Determines whether problem is caused by hardware, software, or system.</li> <li>• Answers questions, applying knowledge of computer software, hardware, systems,</li> </ul>



	<p>and procedures.</p> <ul style="list-style-type: none"> <li>• Talks with technical and non-technical co-workers to research problem and find solution.</li> <li>• Asks user with problem to use telephone and participate in diagnostic procedures, using diagnostic software or by listening to and following instructions.</li> <li>• Experienced with a variety of call-tracking software and systems.</li> <li>• Reads trade magazines and engages in independent study to maintain current industry knowledge.</li> <li>• Follow quality standards, and displays strong customer service skills.</li> <li>• Able to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>
--	--

**HDA2**

Years of Relevant Experience:	3 to 5 years field experience
Preferred Education:	4 year college degree in field of specialty or equivalent education and experience combined
Role Description:	<p>All roles specified in HDA 1 plus the following:</p> <ul style="list-style-type: none"> <li>• Calls software and hardware vendors to request service regarding defective products.</li> <li>• Acts as a subject matter expert for one or more custom or COTS applications.</li> <li>• Talks to programmers to explain software errors or to recommend changes to programs.</li> <li>• May work as in-house consultant and research alternate approaches to existing software and hardware when standardized approaches cannot be applied.</li> <li>• Tests software and hardware to evaluate ease of use and whether product will aid user in performing work.</li> <li>• Write software and hardware evaluation and recommendations for management review.</li> <li>• Write or revise user-training manuals and procedures.</li> <li>• Develops training materials, such as exercises and visual displays.</li> <li>• Train users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.</li> </ul>

**HDA3**

Years of Relevant Experience:	5 plus years field experience
Preferred Education:	4 year college degree in field of specialty
Role Description:	<p>All roles specified in HDA 1 and 2 plus the following:</p> <ul style="list-style-type: none"> <li>• Manage expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensure quality standards are followed.</li> <li>• Monitor the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Act as the escalation point for high priority support issues.</li> <li>• Able to make recommendations on policies on system use and services.</li> </ul>

## Intern

The Intern will assist team members with daily responsibilities as directed by his or her supervisor.

### INT1

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Able to perform tasks as assigned by the direct supervisor.</li> <li>• Able to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>

### INT2

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Able to develop organizational and communication skills.</li> <li>• Able to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge including experience with word processing software, and spreadsheet maintenance and development.</li> <li>• Must show willingness and ability to develop IT-related technical skills.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>

### INT3

Preferred Education:	Enrolled in secondary and post-secondary educational institution.
Role Description:	<ul style="list-style-type: none"> <li>• Able to develop organizational and communication skills.</li> <li>• Able to keep team members and supervisor apprised of work status and attendance.</li> <li>• Basic computer knowledge including experience with word processing software, and spreadsheet maintenance and development.</li> <li>• Must show willingness and ability to develop IT-related technical skills.</li> <li>• Must show willingness and ability to develop an understanding of IT-related technologies and concepts.</li> <li>• Additional requirements may need to be met, depending on opportunity.</li> </ul>

## Mobile Specialist

The Mobile Specialist serves in many capacities, including Developer, Engineer, Technical Architect, and Analyst for Mobile Development, Security, and/or Infrastructure Projects. The Mobile Specialist participates in project planning and in the creation and review of technical deliverables. The Mobile Specialist often guides and mentors the technical team in all phases of the SDLC including requirement validation, detail design, development, and implementation.

### MS1

Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Serves as the Designer, Developer and/or Engineer on Mobile Projects.</li> <li>• Meets with end users and technical staff of all types to gather business and system requirements</li> <li>• May work with Mobile Specialist 2 to propose comprehensive solutions based on business and technical requirements</li> <li>• Develops and/or engineers user interface, service tier, data tier components, infrastructure or security for Mobile Projects.</li> <li>• Develops standards, repeatable processes, and reusable components</li> <li>• Assists in project planning, including developing of timelines, composition of technical teams, and leveling of resources.</li> </ul>

	<ul style="list-style-type: none"> <li>• Mentors technical team leads and team members on Department processes and standards to promote consistency and improve productivity.</li> <li>• Assists in the development and review of technical deliverables on projects.</li> </ul>
--	--

## MS2

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

## Network Engineer

The Network Engineer is involved in the design and maintenance of both the hardware and software necessary for a computer network. The Network Engineer is a high-level technical analyst, specializing in Local Area Networks (LANs)/Wide Area Networks (WANs), TCP/IP, and server/network infrastructure.

### NE1

Years of Relevant Experience:	2 to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Responsible for the installation, configuration and administration of network routers and switches.</li> <li>• Executes the disaster recovery/back up procedures and archiving procedures.</li> <li>• Manages security for servers.</li> <li>• Responsible for performance tuning, capacity planning, database administration, and fault management.</li> <li>• Coordinates efforts with vendors</li> <li>• Responsible for ensuring high priority issues are resolved in a timely manner.</li> <li>• Responsible for keeping the environment up and running.</li> <li>• Often times, responsible for identifying and reporting hardware problems.</li> <li>• Understands basic routing concepts.</li> <li>• Identifies and track issues, risks, and action items.</li> <li>• Resolves and/or assists in resolving issues.</li> <li>• Reviews, prioritizes, and researches service requests.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

### NE2

Years of Relevant Experience:	3 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in NE1 plus the following: <ul style="list-style-type: none"> <li>• Solid understanding of networking/distributed computing environment concepts.</li> <li>• Understands principles of routing client/server programming.</li> </ul>

	<ul style="list-style-type: none"> <li>• Manages expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensures quality standards are followed.</li> <li>• Understands the business application of technical support and design in an application development environment.</li> <li>• Develops plans for disaster recovery/ back up and archiving.</li> <li>• Manages the daily operations of the systems management team to ensure service levels are being met.</li> <li>• Manages the systems management team's support issue and backlog.</li> <li>• Monitors the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Acts as the first level of escalation for high priority support issues.</li> </ul>
--	--

### **NE3**

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in NE2 plus the following:</p> <ul style="list-style-type: none"> <li>• Functions as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develops the technical infrastructure maintenance strategy.</li> <li>• Analyzes, determines and documents requirements in terms of system management needs and implements them.</li> </ul>

## **Product Specialist**

The Product Specialist is the expert for a technical development or execution environment product or set of products. The primary responsibility of a Product Specialist is to ensure the availability and facilitate the productive use of a product for Application Teams or end users. The Product Specialist may own part of a product, all of one, or several products depending on the nature of the product(s) and their use. The Product Specialist requires significant to expert experience and skills in the product supported. The Product Specialist will usually also have significant experience in the operating environment(s) (e.g., HP/UX, NT, MVS, etc.) on which the product is implemented. If the product is one that was internally developed, the supporting PS should also have most of the skills of a Programmer. The Product Specialist is responsible for collaborating with Technical Architecture Specialist, System Specialists, Programmers and vendors to ensure and enhance the use of the product and effect migration to new versions of a product.

### **PS1**

Years of Relevant Experience:	1 to 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Makes sound recommendations on functional and technical improvements to the product.</li> <li>• Analyzes the functional and technical impact of product planning decisions.</li> <li>• Develops appropriate functional and usability standards for products.</li> <li>• Tracks and document expected volume and type of use of the product.</li> <li>• Participates in product design reviews to verify that design meets quality standards and functional/technical requirements.</li> <li>• Performs impact analyses on production fixes and enhancements to establish priorities.</li> <li>• Provides basic product support and provide accurate and complete answers to detailed product questions in a timely manner.</li> <li>• Provides effective on-site product support as needed.</li> <li>• Accurately sets severity of identified defects.</li> <li>• Provides input to training and / or documentation materials regarding latest</li> </ul>

	<p>technical and functional design changes.</p> <ul style="list-style-type: none"> <li>• Documents all work for future reference.</li> <li>• Reviews the system test approach and conditions used as the basis for detailed test scenarios.</li> <li>• Follows quality standards.</li> <li>• Analytical and customer service skills.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Able to work in a team environment.</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	---

**PS2**

Years of Relevant Experience:	3 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Actively contributes as an expert or actual designer.</li> <li>• Coordinates product design reviews to verify that design meets quality standards and functional/technical requirements.</li> <li>• Provides accurate estimates for design and programming efforts for system changes and enhancements.</li> <li>• Coordinates enhancements to business and logical data models with data base administration to make the appropriate changes to the physical data model.</li> <li>• Confirms that technical architecture will support all changes required by product enhancements.</li> <li>• Effectively leads product tests and trials.</li> <li>• Identifies appropriate business examples to illustrate key concepts / features.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Applies specific expertise to ensure that products meet defined customer objectives.</li> <li>• Anticipates and resolve issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>

**PS3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Demonstrates expertise in teaching / conveying technical and / or functional courses / concepts.</li> <li>• Develops appropriate work programs / budgets and use to effectively schedule tasks / assignments.</li> <li>• Identifies improvements to project standards to achieve high quality services / products.</li> </ul>

**PS4**

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PS3 plus the following:

	<ul style="list-style-type: none"> <li>• Delivers support and design for industry specific applications that require integration with statewide systems or applications.</li> <li>• Interacts with executive level business users or technical experts.</li> <li>• May functions as a niche SME.</li> </ul>
--	---

**PS5**

Years of Relevant Experience:	9 to 11 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PS4 plus the following: <ul style="list-style-type: none"> <li>• Responsible for functioning as the Technical SME on an enterprise-wide system.</li> <li>• Responsible for implementations of products/services that involve significant Commonwealth and federal oversight.</li> <li>• Provides direct technical expertise to Executive applications involving national security.</li> </ul>

**PS6**

Years of Relevant Experience:	12 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PS5 plus the following: <ul style="list-style-type: none"> <li>• Responsible for serving as a Technical Team Lead on enterprise-wide systems.</li> <li>• Responsible for leading implementation efforts related to products/services that involve significant Commonwealth and federal oversight.</li> <li>• Serves as a mentor to team members by sharing industry best standards and practices.</li> </ul>

## Program Manager

The Program Manager directs, controls, administers, and regulates an enhancement or development program. The Program Manager is the individual ultimately responsible to the agency. The Program Manager's primary responsibility is to drive the entire effort from start to finish. The Program Manager must ensure that the program is completed on schedule and that the final product meets the business, technical, and established quality requirements. The difference between a PM1, PM2, PM3, and PM4 will depend on the size of the project, and the breadth and scope of the project.

### PM1

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Responsible for the development of estimates for the enhancement or development effort in planning, analysis, design, construction, testing, and implementation.</li> <li>• Accountable for delivery of all work tasks identified in the program plan.</li> <li>• Responsible for the capture and reporting of required program management metrics.</li> <li>• Adjusts and revises estimates when necessary.</li> <li>• Ensures all changes to scope follow processes and are documented.</li> <li>• Ensures new estimates are approved by the client and agreed upon.</li> <li>• Adjusts and revises estimates when necessary.</li> <li>• Manages and tracks the program progress against the program plan.</li> <li>• Monitors project milestones and phases to ensure the project is on schedule.</li> <li>• Takes corrective actions if a project begins to slip its schedule.</li> <li>• Prepares status reports on a periodic basis for program team, team leads, group leads, and program manager and appropriate stakeholders.</li> <li>• Plans, organizes, prioritizes, and manages multiple work efforts across application teams.</li> <li>• Develops the detailed program plan for the enhancement or development effort</li> <li>• Accountable for the final program management evaluation review with stakeholders for approval upon program completion.</li> <li>• Responsible for tailoring and baseline of all program templates.</li> <li>• Accountable to schedule or monitor status reviews, peer reviews, program management inspections, and software quality assurance work product and process reviews with the appropriate designated resources.</li> <li>• Notifies team leads of project timelines, milestones, phases, work requests target dates, and approved executable work package.</li> <li>• Communicates and works with users and client as necessary.</li> <li>• Coordinates and presents proposals to agencies as necessary.</li> <li>• Analyzes and distributes reports on program metrics associated with work items related to improvement measures.</li> <li>• Ensures processes and activities are followed.</li> </ul>

### PM2

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PM1 plus the following:</p> <ul style="list-style-type: none"> <li>• Accountable for the approval and sign-off of the program plan with customer representatives, such as portfolio managers, and all affected program stakeholders.</li> <li>• Accountable for management of scope for the program and gaining agreement and approval of scope changes with customer representatives and affected stakeholders.</li> <li>• Builds and maintains relationships with key stakeholders and customer representatives.</li> </ul>



	<ul style="list-style-type: none"> <li>• Directs work planning and scheduling design work.</li> <li>• Manages and tracks the program progress against the program plan.</li> <li>• Serves as the primary point of contact for all program-related issues and resolution of issues.</li> <li>• Coordinates and present proposals to agencies as necessary.</li> <li>• Identifies and manages program risk and develops risk mitigation strategies, track to closure.</li> <li>• Ensures team leads adjust and revise estimates when necessary.</li> <li>• Anticipates issues and proactively address them. Resolve conflicts with sensitivity and tact.</li> <li>• Coordinates the establishment of program standards and program specific procedures with team leads.</li> <li>• Responsible for project compliance with standards and procedures.</li> <li>• Responsible for the capturing and reporting of required program management metrics.</li> <li>• Responsible for tailoring and baseline of all program templates.</li> <li>• Develops and facilitates achievement of program service commitments and performance metrics.</li> <li>• Ensures that tasks provide value and support the strategic direction of the program and meet service commitments; conduct reviews with agencies.</li> <li>• Accountable for the final program management evaluation review with stakeholders for approval upon program completion.</li> <li>• Communicates effectively with customers and software / hardware suppliers supporting the State as appropriate.</li> <li>• Identifies and tracks issues.</li> <li>• Balances workload with program members' capacity.</li> <li>• Communicates to team members how their work assignments relate to and help achieve program objectives.</li> <li>• Plans program specific training and orientation needs.</li> </ul>
--	--

**PM3**

Years of Relevant Experience:	7 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PM2 plus the following: <ul style="list-style-type: none"> <li>• Accountable for activities with excess delivery cycles of 8 to 12 months.</li> </ul>

**PM4**

Years of Relevant Experience:	8 to 9 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	All roles specified in PM3 plus the following: <ul style="list-style-type: none"> <li>• Manages, coordinates, and establishes priorities for complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing.</li> <li>• Designs project plans, which identify needs and define major tasks and milestones, based on scope, resources, budget, and personnel.</li> </ul>

**Programmer**

The Programmer is responsible for analysis, design, coding, component and assembly testing of all application code. Programmers typically are involved in maintenance (including production support), enhancement and development work. Programmers have a range of skills and knowledge of the

technologies. The Programmer works with the Functional Architect and Technical Architecture Specialist on an as needed basis to ensure that design and code meets customer requirements.

**PR1**

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Codes enhancement and development programs and/or required fixes to production problems using the functional and technical programming standards.</li> <li>• Tests enhancement and development programs.</li> <li>• Participates in structured code reviews / walkthroughs.</li> <li>• Executes all required process steps.</li> <li>• Creates and provide content for operational documentation to Technical Writers.</li> <li>• Utilizes configuration management tools, design tools, debugging tools, and any other environment specific tools necessary to create, test, and implement an application.</li> <li>• Researches problems before approaching the Team Lead or Functional Architect for assistance.</li> <li>• Limited functional knowledge.</li> <li>• Follows quality standards.</li> <li>• Supports installation of application releases into production as directed.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Able to work in a team environment.</li> <li>• Complete assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

**PR2**

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PR1 plus the following:</p> <ul style="list-style-type: none"> <li>• Analyzes and designs enhancements, development programs, and/or required fixes to production problems.</li> <li>• Designs applications to functional and technical programming standards.</li> <li>• Works with Functional Architects to gather and interprets user requirements into design specifications.</li> <li>• Develops system specifications and interfaces.</li> <li>• Determines time estimates and schedule for work.</li> <li>• Moderates functional and process knowledge.</li> <li>• Assists in managing and directing Application Team processes.</li> <li>• Coordinates work with other software developers on Application Teams.</li> <li>• Assists Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks.</li> <li>• Develops application designs in support of the systems specifications and interfaces, perhaps in conjunction with application or technical architects.</li> <li>• Operating System expertise sufficient to perform performance and tuning diagnostics.</li> <li>• Works with users to ensure that solutions meet business requirements.</li> <li>• Execution of all responsibilities with little direct supervision of Team Lead.</li> <li>• Generally aware of new developments in industry and process and has ability to apply them to work as appropriate.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>

**PR3**

Years of Relevant Experience:	6 to 7 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in PR2 plus the following:</p> <ul style="list-style-type: none"> <li>• Plans all required process steps.</li> <li>• Reviews and understands the Application Team's work plan.</li> <li>• Provides status of work to Team Lead.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Engages in ongoing process improvement.</li> <li>• Detailed functional and process knowledge.</li> <li>• Utilizes deep modeling, design and coding skills.</li> <li>• Provides expertise in one or more database environments.</li> </ul>

**PR4**

Years of Relevant Experience:	8 to 9 years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR3 plus the following:</p> <ul style="list-style-type: none"> <li>• Converts scientific, engineering, and other technical problem formulations to formats that can be processed by computer.</li> <li>• Resolves symbolic formulations, prepares flowcharts and block diagrams, and encodes resultant equations for processing by applying extensive knowledge of branch of science, engineering, or advanced mathematics, such as differential equations or numerical analysis, and understanding of capabilities and limitations of computer.</li> <li>• This is a professional level non-supervisory position which may require coordination of programming activities being conducted by the team</li> <li>• Confers with other business and technical personnel to resolve problems of intent, inaccuracy, or feasibility of computer processing.</li> <li>• Works with necessary personnel to determine if modifications are necessary with interested personnel to determine necessity for modifications or enhancements.</li> <li>• Leverages excellent written and verbal communication skills to develop new business process and programming solutions as directed by business and technical stakeholders.</li> <li>• May coordinate activities of computer programmers.</li> </ul>

**PR5**

Years of Relevant Experience:	10 to 12 years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR4 plus the following:</p> <ul style="list-style-type: none"> <li>• Proven track record of hands-on technical design and code work within large complex systems.</li> <li>• Proven hands-on technical work with a variety of technologies.</li> <li>• Demonstrated technical expertise integrating a variety of diverse technical environments and cross-platform technologies.</li> <li>• Proven experience mentoring and performing supervisory functions for technical teams.</li> <li>• Able to make best practice recommendations based on past work.</li> <li>• Proven ability to present complex technical constructs to business and non-technical users.</li> <li>• Proven ability to collaborate with business users, project managers and technical architects.</li> </ul>

**PR6**

Years of Relevant Experience:	12 plus years
Preferred Education:	4 year college degree or equivalent technical study with advanced study preferred.
Role Description:	<p>All roles specified in PR5 plus the following:</p> <ul style="list-style-type: none"> <li>• Proven track record leading technical design and code work within complex enterprise systems.</li> <li>• Proven hands-on technical design and development expertise working with emerging technologies in diverse technical environments and cross-platform technologies.</li> <li>• Serves as a mentor to team members by sharing industry best standards and practices.</li> <li>• Proven ability to lead complex technical discussions with business and non-technical users.</li> </ul>

## Quality Assurance Specialist

The Quality Assurance Specialist (QAS) is responsible for the design, pilot, and implementation of the software quality assurance review processes. The QAS Specialist will work with Application Teams during pre and post assessment periods. The QAS Specialist reports to the Quality Assurance Team Lead. For each phase end review the Quality Assurance Specialist is responsible to plan, schedule, execute, and document findings of the review. Quality Assurance Specialists must have a detailed understanding of processes which support the software development lifecycle. The Quality Assurance Lead is responsible for communicating with the State regarding the progress of the quality approach and a summary of the metrics, as well as managing the Quality Assurance Specialists.

### QAS1

Years of Relevant Experience:	3 years software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assists in software activities in defined span of control for the organization.</li> <li>• Tracks and monitors process and work product improvement opportunities.</li> <li>• Collects, reviews, and evaluates the project's required work products against standard work product templates.</li> <li>• Verifies that established measurement procedures are used and all required metrics are collected.</li> <li>• Responds to requests for information.</li> <li>• Coordinates work with others on team and across teams</li> <li>• Draft report of observations, minor and major non-compliance.</li> <li>• Develops quality standards.</li> <li>• Monitors progress of action item resolution activity and ensure appropriate internal stakeholders are aware of pending deadlines.</li> <li>• Conducts training courses with project teams on software quality review process.</li> <li>• Researches problems before approaching Quality Assurance Lead for assistance.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follow quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

### QAS2

Years of Relevant Experience:	5 years software development, testing, and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Conducts software quality phase end review activities (work product and process) for each software project and produces the required quality assurance reports, as specified in the project's quality assurance plan.</li> <li>• Ensures the software development process followed by the project teams is compliant with approved tailored processes.</li> <li>• Reviews and checks project software development activities and the associated internal tasks required by the agencies as employed by the project and specified in the project plan.</li> <li>• Prepares preliminary software quality audit package for review before conduct of audit.</li> <li>• Defines quality standards.</li> <li>• Monitors progress of action item resolution activity and ensure appropriate stakeholders are aware of pending deadlines.</li> </ul>

	<ul style="list-style-type: none"> <li>• Assists in managing and improving quality assurance team processes.</li> <li>• Reviews and understands project team work plan.</li> <li>• Determines time estimates and schedule for software quality review work. Conduct reviews according to schedule.</li> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems, rather than reactive.</li> <li>• Identifies and tracks issues, risks and action items affecting own work and work of team.</li> <li>• Reports on progress of action item resolution and possible risk areas.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>
--	--

**QAS3**

Years of Relevant Experience:	7 years software development, testing and project management
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in QAS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews required work products to ensure compliance with approved tailored procedures and standards.</li> <li>• Reviews and checks software development activities and the associated internal tasks required as employed by the project and specified in the project plan.</li> <li>• Compares actual project procedures to the specified standards, procedures, and, if required, specific 3rd party contractual requirements.</li> <li>• Performs detailed reviews of interim and final tasks as appropriate.</li> <li>• Ensures process improvement opportunities are reviewed by appropriate contact to identify training needs of the organization.</li> <li>• Performs or manages the required software quality phase end reviews of work product and process for each software project and produce the required software quality reports, as specified in the project's software quality plan.</li> <li>• Develops and manages short and long-term plans and schedules for organization wide software quality needs.</li> <li>• Balances workload with team's capacity by managing the team's activities according to schedule and budgets.</li> <li>• Coordinates and procures the required skills and techniques required.</li> <li>• Obtains feedback from project teams regarding the overall effectiveness of processes and procedures – Forward to appropriate stakeholders and process owners.</li> <li>• Provides feedback to project teams regarding process/procedure improvement opportunities and other potential areas for improvement discovered during software quality activities.</li> <li>• Reports all software quality-revealed non-compliance.</li> <li>• Provides regular reports on the results of compliance reviews to the project team, project team leaders and management.</li> <li>• Reports on progress on action item resolution and possible risk areas.</li> <li>• Anticipates and resolves issues dealing with software quality.</li> <li>• Develops options and recommendations to assist teams in resolving issues.</li> <li>• Ensure action items are addressed and closed based on agreed dates and activities.</li> <li>• Ensure that defined processes are followed.</li> <li>• Communicate related improvement measures to the project team.</li> <li>• Obtain feedback from project teams regarding the overall effectiveness of software quality processes followed. Review with team and develop continuous improvement action plans. Report status to executive team.</li> <li>• Communicate and work with customers and other personnel as necessary.</li> </ul>



	<ul style="list-style-type: none"> <li>• Communicate clearly the team goals, organizational philosophies, and policies and procedures to the team.</li> <li>• Communicate to team members the relationship between their work assignments and the team and project objectives.</li> <li>• Lead efforts in developing and facilitating implementation of team goals and metrics.</li> </ul>
--	--

## Senior Architect

The Senior Architect is responsible for designing, developing, and implementing application infrastructure to provide highly-complex, reliable, and scalable applications and systems to meet the organization's objectives and requirements. Senior Architects are familiar with a variety of the application technologies, environments, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Senior Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They have proven experience defining systems and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SAR1

Years of Relevant Experience:	5 to 7 years software architecture development, testing, and project management
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Manages, organizes, and administers systems analysis and preparation of applications and operating systems programming to process data and solve problems by use of computers.</li> <li>• Establishes priorities and schedules, and oversees and reviews work of systems analysis personnel and programming personnel.</li> <li>• Reviews feasibility studies and time and cost estimates of new or revised systems.</li> <li>• Assists in the development of standards, procedures, and operating systems applications.</li> <li>• A combination of directly-related technical training and hands-on experience.</li> <li>• Works with stakeholders and management to ensure projects are completed on time and according to organization standards.</li> <li>• Consults with personnel in other information systems groups to coordinate activities.</li> <li>• Consults with management to clarify systems and programs intent, identify problems, suggest changes, and determine extent of application systems changes required.</li> <li>• Participates in developing a project plan and schedule with key milestones, contingency plans, workflow charts or diagrams, considering factors, such as resource requirements, computer storage capacity and speed, extent of peripheral equipment, and intended use of output data.</li> <li>• Manages conversion of workflow charts to language that can be processed by computer and entering of program codes and test data into computer.</li> <li>• Analyzes test runs on computer and supervises correction of coded program and input data.</li> <li>• Manages the revision of existing programs to increase operating efficiency or adapt to new requirements.</li> <li>• Compiles documentation of program development and subsequent revisions.</li> <li>• Trains subordinates in systems analysis, feasibility studies, programming, and program coding.</li> <li>• Prescribes standards for terms and symbols used to simplify interpretation of programs.</li> <li>• Collaborates with computer manufacturers and other users to develop new programming methods.</li> <li>• Prepares records and reports.</li> </ul>



## SAR2

Years of Relevant Experience:	8 plus years software architecture, development, testing, and project management
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<p>All roles specified in SAR1 plus the following:</p> <ul style="list-style-type: none"> <li>• Leads systems analysis for architecture and development of new applications.</li> <li>• Establishes development schedule, and allocates work of personnel based on project plans, timelines and budgets.</li> <li>• Works with organizational leadership to ensure projects are in line with long-term IT strategies and initiatives.</li> <li>• Coordinates project activities with all departments/personnel involved.</li> <li>• Works with management to articulate systems and programs purpose, identifies problems, suggest changes, and determines required changes to existing applications.</li> <li>• Provides mentoring and guidance to agency personnel and leadership.</li> </ul>

## Senior Business Subject Matter Expert

The Senior Business Subject Matter Expert (SME) brings proven experience from related businesses or organizations as well as system integration and technology experience. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise and make recommendations on business and technical solutions based on hands-on experience solving similar business problems. They are able to utilize knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SME1

Years of Relevant Experience:	10-15 years of experience
Preferred Education	4 year college degree in computer science or a related field with advanced study preferred; certifications specific to the field of project management.
Role Description	<ul style="list-style-type: none"> <li>• Consults with executive-level stakeholders to define business need or problem; conducts research, performs studies and surveys to obtain data; and analyzes problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.</li> <li>• Requires knowledge in computer programming and other related technical fields as well as extensive experience in a particular business or industry subject matter.</li> <li>• Conducts study or survey on need or problem to obtain data required for solution.</li> <li>• Analyzes data to determine solution, such as installation of alternate methods and procedures, changes in processing methods and practices, modification of machines or equipment, or redesign of products or services.</li> <li>• Advises client or department heads on alternate methods of solving need or problem, or recommends specific solution.</li> <li>• Requires experience providing consulting services to governmental entities.</li> <li>• May be designated according to field of business and technical specialization.</li> </ul>

### SME2

Years of Relevant Experience:	15 plus years of experience
Preferred Education	4 year college degree in computer science or a related field with advanced study preferred; certifications specific to the field of project management.
Role Description	<p>All roles specified in SME1 plus the following:</p> <ul style="list-style-type: none"> <li>• Guides executive-level stakeholders based on industry standards related to specific discipline or field of specialization.</li> <li>• Requires specific expertise in related technical fields or area of specialization.</li> </ul>

	<ul style="list-style-type: none"> <li>• Conducts detailed audits and analysis to identify obstacles and suggests recommended solutions.</li> <li>• Requires extensive experience providing consulting services to governmental entities related to specific technologies or field of specialization.</li> <li>• Provides mentoring and guidance to agency personnel and leadership.</li> </ul>
--	---

## Senior Database Architect

The Senior Database Architect is responsible for designing, developing, and implementing infrastructure to provide highly-complex, reliable, and scalable databases to meet the organization's objectives and requirements. Database Architects are familiar with a variety of the database technologies, concepts, methodologies, practices, and procedures and rely on experience and judgment to plan and accomplish goals. Database Architects are able to perform a variety of complicated tasks with minimal or no direct supervision. They assist in defining system and application architecture and provide vision, problem anticipation, and problem solving ability to organization. They consult with the client to define needs or issues, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SDA1

Years of Relevant Experience:	8 plus years of database experience
Preferred Education:	4 year college degree in computer science or related field with advanced study preferred.
Role Description:	<ul style="list-style-type: none"> <li>• Possesses extensive knowledge of one or more database systems, and is capable of hands-on work in all phases of database design and management.</li> <li>• Designs, develops, and implements infrastructure to provide highly-complex, reliable, and scalable database to meet the organization's objectives and requirements.</li> <li>• Analyzes organization's business requirements for database design, and implements changes to database as required.</li> <li>• Performs systems analysis on database, and resolves performance, capacity, and replication issues as necessary.</li> <li>• Provides detailed design and specification documentation, including flowcharts, for all aspects of the database.</li> <li>• Works with database analysts to develop methodologies, report views, queries, and table replications</li> <li>• Ensures that all the data is in the proper format.</li> <li>• Participates in the identification, prioritization, and development of technical initiatives and strategies.</li> <li>• Develops and maintains database standards and naming conventions.</li> <li>• Keeps up-to-date on emerging database architectures, technologies, and methodologies, and attends training classes as necessary.</li> </ul>

## Senior Program Manager

The Senior Program Manager is responsible for managing, coordinating, and establishing priorities for the complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing. Senior Program Managers are familiar with a variety of the project management methodologies and rely on experience and judgment to plan and accomplish goals. They have proven experience leading technology projects to successful implementation. They consult with the client to define needs or problems, conduct research, perform studies and surveys to obtain data, and analyze problems to advise on or recommend solutions, utilizing knowledge of theory, principles, or technology of specific discipline or field of specialization.

### SPM1

Years of Relevant Experience:	10 plus years
Preferred Education:	4 year college degree in computer science or a related field; certifications specific to the field of project management.
Role Description:	<p>All roles specified in PM4 plus the following:</p> <ul style="list-style-type: none"> <li>• Requires proven success communicating verbally and in writing to multiple project stakeholders internal and external to the organization.</li> <li>• Determines project needs and acquires resources required for the success of the project.</li> <li>• Coordinates the development of new systems and/or applications projects, the modification of existing systems or applications, or changes in current methods or techniques.</li> <li>• Coordinates project performance with the other work of the affected department or departments.</li> <li>• Excludes those who do not have full time responsibilities for project management.</li> </ul>

### Service Desk

The Service Desk Analyzes and troubleshoots computer support problems and applies his or her understanding of computer software and hardware products and services to resolve user problems.

### SD2

Years of Relevant Experience:	0 to 3 years A+ certification preferred
Preferred Education:	Usually prefer two years of postsecondary training in field of specialty; may accept equivalent education and experience combined.
Role Description:	<ul style="list-style-type: none"> <li>• Receives telephone calls and e-mails from users having problems using computer software and hardware or inquiring how to use specific software, programming languages, electronic mail, or operating systems.</li> <li>• Ascertains the nature of problem, determine whether problem is caused by hardware such as modem, printer, cables, or telephone, and log in tracking system.</li> <li>• Escalates problems in accordance with defined procedures.</li> <li>• Assists users through problem solving steps</li> <li>• Uses technical databases to research problems, and talks with co-workers to research problem and find solution.</li> <li>• Tests software and hardware for troubleshooting and problem resolution.</li> <li>▪ Provides service and preventive maintenance activities on element exchange/baseline products (products with element exchange service and traditional maintenance philosophies; i.e., terminals, printers, personal computers, etc.).</li> <li>▪ Able to diagnose and detect correct equipment errors and repair products by replacing worn or broken parts, and making technical adjustments.</li> <li>▪ Makes appropriate use of reference publications and diagnostic aids in resolving technical problems.</li> <li>▪ Assists in coordination of changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>▪ Provides accurate and complete answers to general use and administrative environment questions in a timely manner.</li> <li>▪ Supports shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> <li>▪ Communicates accurate and useful status updates.</li> <li>▪ Manages and reports time spent on all work activities.</li> <li>▪ Follows quality standards.</li> <li>▪ Able to work in a team environment</li> <li>▪ Completes assigned tasks.</li> </ul>

	▪ Strong communication skills; both written and spoken.
--	---

### SD3

Years of Relevant Experience:	More than 3 years A+ certification preferred; additional certification may be required based on specific technologies.
Preferred Education:	4 year college degree or equivalent technical study; may accept equivalent education and experience combined.
Role Description:	All roles specified in SD2 plus the following: <ul style="list-style-type: none"> <li>• Tests software and hardware to evaluate ease of use and whether product will aid user in performing work.</li> <li>• Writes or revises training manuals and procedures.</li> <li>• Develops training materials, such as exercises and visual displays.</li> <li>• Trains users on software and hardware on-site or in classroom, or recommend outside contractors to provide training.</li> <li>• Writes software and hardware evaluation and recommendation for management review.</li> <li>• Implements shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> </ul>

## Software Process Engineer

The Software Process Engineer is responsible for implementing and supporting a set of standard software engineering processes used by agencies. The Software Process Engineer participates in the entire life-cycle of software process improvement initiatives. This includes the planning, analysis, design, construction, testing, and implementation of new processes. The Software Process Engineer is responsible for identifying opportunities for improving existing processes and implementing appropriate solutions.

The Software Process Engineer is also responsible for supporting projects and individual Teams in the use and understanding of processes on an ongoing basis. The Software Process Engineer is responsible for collaborating with the Team Lead(s) and Program Managers to provide guidance to team members and facilitate continual software process improvement. The Software Process engineer must understand all aspects of the specific processes used by the Teams. The Software Process Engineer must also be familiar with industry process models and standards.

### SPS1

Years of Relevant Experience:	3 years in Computer Software development
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Facilitates the implementation of standard software engineering processes.</li> <li>• Identifies software development process improvement opportunities either independently or through working with projects and teams.</li> <li>• Assists in planning software process improvement initiatives.</li> <li>• Directs and participates in teams working on the analysis, design, construction, testing, and implementation of new processes.</li> <li>• Works with projects and teams to define the need for tailored processes and tools and assist in implementation, as appropriate.</li> <li>• Provides ongoing support to projects and teams in the use and understanding of the software processes.</li> <li>• Provides on-site support for teams on process related issues.</li> <li>• Provides assistance to the Software Process Engineer Lead in planning and scheduling activities.</li> <li>• Provides support in tracking and monitoring the success of process improvement initiatives.</li> <li>• Monitors and solicits feedback on the usability and functionality of implemented</li> </ul>

	<p>processes.</p> <ul style="list-style-type: none"> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and report time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	--

### **SPS2**

Years of Relevant Experience:	5 years in software development and testing
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SPS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Facilitates the implementation of standard software engineering processes across agencies.</li> <li>• Determines time estimates and schedule for own work and resolve issues on a timely basis.</li> <li>• Identifies and tracks issues, risks and action items.</li> <li>• Determines process to support various initiatives.</li> <li>• Leads the development of content for process training and deliver process training as appropriate.</li> <li>• Coordinates with various teams about process improvement opportunities.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>

### **SPS3**

Years of Relevant Experience:	7 years total experience; 5 years in software development and testing.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in SPS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems.</li> <li>• Anticipates and resolves issues on a timely basis.</li> <li>• Communicates accurate and useful status as appropriate.</li> <li>• Demonstrates and promotes a focus on client service.</li> <li>• Communicates effectively with suppliers as appropriate.</li> <li>• Works with internal customers and others to identify direction of software process.</li> <li>• Identifies knowledge in a form that is reusable.</li> </ul>

## **System Administrator**

The System Administrator is responsible for server back up and security, along with performance tuning and capacity planning. System Administrators should possess an understanding of network and distributed computing concepts. This is accomplished by working with the Systems Management Team Lead to understand the scope of services to be provided and assessing the impact they will have on the technical infrastructure.

### **SA1**

Years of Relevant Experience:	Less than 2 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Familiarity with most basic system administrator tools and process; for example, can boot/shutdown a machine, add and remove user accounts, use back up programs,</li> </ul>

	<p>and maintain system database files.</p> <ul style="list-style-type: none"> <li>• Maintains the project servers.</li> <li>• Maintains the file and print capacity</li> <li>• Ensures that backups are performed as appropriate.</li> <li>• Acts as a front-line interface to users.</li> <li>• Accepts trouble reports and dispatch them to appropriate system administrators.</li> <li>• Able to write scripts in a particular administrative language.</li> <li>• Programming experience with any applicable language.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>
--	--

### SA2

Years of Relevant Experience:	2 to 3 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA1 plus the following:</p> <ul style="list-style-type: none"> <li>• Responsible for operating and other system software.</li> <li>• Responsible for upgrading the operating and system software and keeping patches current.</li> <li>• Familiarity with fundamental networking/distributed computing environment concepts.</li> <li>• Able to do minimal debugging and modification of programs.</li> <li>• Executes the disaster recovery/back up procedures and archiving procedures.</li> <li>• Manages security for servers.</li> <li>• Responsible for performance tuning, capacity planning, database administration, and fault management.</li> <li>• Provides tier two support of the technical infrastructure.</li> <li>• Coordinating efforts with vendors if tier three support is required.</li> <li>• Responsible for ensuring high priority issues are resolved in a timely manner.</li> <li>• Responsible for keeping the environment up and running.</li> <li>• In many cases is responsible for identifying and reporting hardware problems.</li> <li>• Capable of writing purchase justifications.</li> <li>• Understands basic routing concepts.</li> <li>• Identifies and tracks issues, risks, and action items.</li> <li>• Resolves and/or assists in resolving issues.</li> <li>• Reviews, prioritizes, and researches service requests.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> </ul>

### SA3

Years of Relevant Experience:	4 to 5 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA2 plus the following:</p> <ul style="list-style-type: none"> <li>• Solid understanding of networking/distributed computing environment concepts.</li> <li>• Understands principles of routing client/server programming.</li> <li>• Manages expectations at all levels: customers/end users, executive sponsors.</li> <li>• Ensures quality standards are followed.</li> <li>• Understands the business application of technical support and design in an</li> </ul>



	<p>application development environment.</p> <ul style="list-style-type: none"> <li>• Works with the various Infrastructure teams and operations provider to identify the strategic direction of systems management activities.</li> <li>• Understands the design of consistent network-wide file system layouts</li> <li>• Maintains strong relationships with employees and various tier two and three support groups.</li> <li>• Develops plans for disaster recovery/ back up and archiving.</li> <li>• Manages the daily operations of the systems management team to ensure service levels are being met.</li> <li>• Manages the systems management team's support issue and backlog.</li> <li>• Monitors the team's open backlog of support issues and re-assign issues as necessary to ensure they are closed per agreed upon service levels.</li> <li>• Acts as the first level of escalation for high priority support issues.</li> </ul>
--	--

### **SA4**

Years of Relevant Experience:	6 to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA3 plus the following:</p> <ul style="list-style-type: none"> <li>• Functions as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develops the technical infrastructure maintenance strategy.</li> <li>• Manages the system management resources.</li> <li>• Acts as a system's management expert.</li> <li>• Analyzes, determines, and documents requirements in terms of system management needs and implement them.</li> <li>• Identifies, approves, and prioritizes team projects.</li> <li>• Manages a large site or network.</li> <li>• Recommends policies on system use and services.</li> </ul>

### **SA5**

Years of Relevant Experience:	8 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SA4 plus the following:</p> <ul style="list-style-type: none"> <li>• Functions as the Team Lead to the various support groups with whom the systems management team interfaces.</li> <li>• Leads the creation of technical infrastructure maintenance strategies for enterprise environments.</li> <li>• Creates system management strategy and leads implementation efforts.</li> <li>• Oversees technical project efforts and implementation strategy.</li> <li>• Guides policies and best practices based on current market and technical standards.</li> </ul>

## **System Specialist**

The System Specialist is knowledgeable on the usage and support of a collection of development platforms or technical architectures, and products that run on those platforms. The primary responsibility of a System Specialist is to ensure the availability and facilitate the productive use of a development platform or a test environment for Application Teams or end users. The System Specialist may support one or several instances of a platform/environment, applying their skills directly to a platform/environment and/or leveraging their skills across multiple platforms/environment. The System Specialist may, especially for usage and support of a platform, be part of an Application Team using the architecture. The System Specialist requires experience and skills in the environment supported and in the operations and in common usage of products for the environment. The System Specialist are responsible for



collaborating with Technical Architecture Specialist, Functional Architects, Programmers and vendors to coordinate and enhance the use of the platform and facilitate migration to new versions of the platform.

**SS1**

Years of Relevant Experience:	1 to 3 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Assists in coordination of testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>• Makes recommendations on functional and technical improvements to the environment.</li> <li>• Participates in performance and volume analysis and design.</li> <li>• Participates in performance improvement activities. Identify and apply potential improvements related to the environment for an application.</li> <li>• Provides accurate and complete answers to general use and environment questions in a timely manner.</li> <li>• Provides effective on-site environment support as needed.</li> <li>• Accurately sets severity of identified defects.</li> <li>• Provides input to training and/or documentation materials regarding latest technical and functional design changes.</li> <li>• Ensures that all work is documented for future reference.</li> <li>• Follows quality standards.</li> <li>• Ensures effective and reliable backups are being performed and distributed properly.</li> <li>• Proactively addresses customer needs.</li> <li>• Tracks and anticipates volume and type of use of the environment.</li> <li>• Plans and implements shared software, such as operating systems, configuration management tools, application and development tools, testing tools, compilers, and code editors.</li> <li>• Basic scripting and programming skills, including languages that run on specified platform.</li> <li>• Analytical and customer service skills.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> </ul>

**SS2**

Years of Relevant Experience:	3 to 5 years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Plans and manages network operating system upgrades.</li> <li>• Actively participates in analyzing and evaluating emerging software and hardware technologies/standards.</li> <li>• Serves as a liaison between teams for network planning and connectivity.</li> <li>• Develops appropriate functional and usability standards for the environments.</li> <li>• Plans or assists in planning network environment, including supporting existing structure and enhancements.</li> <li>• Plans and coordinates testing changes, upgrades and new and standard products, ensuring systems will operate correctly in current and future environment.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application or Environment team.</li> <li>• Develops contingency plans as necessary.</li> </ul>

	<ul style="list-style-type: none"> <li>Analyzes the functional and/or technical impact of new product releases.</li> <li>Advanced scripting and programming skills, including languages that run on specified platform.</li> <li>Anticipates and resolves issues specific to the team.</li> <li>Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>Identifies and track issues, risks and action items.</li> </ul>
--	---

### SS3

Years of Relevant Experience:	5 plus years in desired environment
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in SS2 plus the following:</p> <ul style="list-style-type: none"> <li>Identifies opportunities for new and improved technologies/standards to be used in the organization.</li> <li>Identifies, plans, and implements phase-out strategies for products and technologies.</li> <li>Plans and coordinates testing changes, upgrades and new products, ensuring systems will operate correctly in current and future environment.</li> <li>Demonstrates expertise in teaching/conveying technical courses/concepts.</li> <li>Assists in setting architecture direction and knowledge sharing.</li> <li>Plans, organizes, prioritizes, and manages multiple work efforts the Application or Environment Teams.</li> <li>Develops appropriate work programs and uses to effectively schedule tasks/assignments.</li> </ul>

### Team Lead

The Team Lead manages an Application Team to deliver services according to defined service level commitments owned by the Application Team. The Team Lead coordinates resources and work to deliver solutions to customers on time and within budget. The Team Lead is assigned responsibility and accountability for overseeing the successful completion of all work assigned to the Application Team. The Team Lead is a process expert within the Application Team, understanding the software development / maintenance processes and verifying process conformance. The Team Lead will monitor stability of production applications owned by the Application Team. The Team Lead assists Application Team members in development activities and reviews tasks as required. The Team Lead manages and updates progress towards Application Team objectives, assists Application Team members in resolving problems, and engages in personnel management and guidance to Application Team members. The Team Lead fosters a positive work environment by mentoring, supporting, and committing to the professional development of Application Team members. The Team Lead reports to the Group Lead or Program Manager, as appropriate. The difference between a TL1 and a TL2 will depend on the size of the project, and the breadth and scope of the project.

### TL1

Years of Relevant Experience:	4 to 5 years, and 1 to 2 years project management experience.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>Monitors stability of production applications owned by Application Team.</li> <li>Prepares estimates for maintenance and enhancement of existing applications and development of new applications.</li> <li>Performs detailed reviews of interim and final tasks as appropriate.</li> <li>Processes work requests; review, prioritize, and package.</li> <li>Manages and reviews tasks of suppliers and other interfaces to the Application Team.</li> <li>Conducts structured walk-throughs or inspections; manage issues to closure.</li> <li>Develops and manages short and long-term plans and schedules.</li> <li>Directs the development of accurate estimates for Application Team activities as</li> </ul>

	<p>required.</p> <ul style="list-style-type: none"> <li>• Balances workload with Application Teams capacity by managing the Application Teams activities according to schedule.</li> <li>• Manages the accomplishment of delivery metrics to support contractual obligations in the areas of service delivery and on time performance commitments and productivity improvement.</li> <li>• Ensures work remains within the agreed scope.</li> <li>• Tracks work plan baseline against results.</li> <li>• Coordinates/communicates with Group Leads and/or Program Manager to ensure initiatives are in accordance with agreed customer commitments as planned.</li> <li>• Proactively identifies and manages issues/risks affecting the project.</li> <li>• Communicates accurate and useful status to Group Lead and other management on a timely basis.</li> <li>• Identifies and initiates continuous improvements.</li> <li>• Instills commitment to quality, customer service, ownership, and teamwork.</li> <li>• Conducts post project wrap-ups.</li> <li>• Monitors and measures maintenance and development process effectiveness.</li> <li>• Ensures that defined processes are followed.</li> <li>• Manages expectations of the Application Teams internal and external customers.</li> <li>• Facilitates communication and knowledge sharing within the Application Teams.</li> <li>• Maintains awareness of new developments in industry and processes and apply as appropriate.</li> <li>• Develops and deepens understanding of system business requirements supported by the Application Team.</li> <li>• Communicates clearly the Application Team goals, organizational philosophies, and policies and procedures to the Application Teams.</li> <li>• Conducts structured walk-throughs or inspections; manage issues to closure.</li> </ul>
--	--

**TL2**

Years of Relevant Experience:	5 plus years, and 2 to 3 years project management experience
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TL1 plus the following:</p> <ul style="list-style-type: none"> <li>• Manages the resolution of high severity production problems.</li> <li>• Manages and directs Application Team activities employing appropriate program management and planning principles.</li> <li>• Coordinates work with other Team Leads as appropriate.</li> <li>• Coordinates and procures the required skills and techniques required by the Application Team.</li> </ul>

**Technical Architecture Specialist**

The Technical Architecture Specialist is the technical expert centered on a technology, technologies or a portfolio of applications. The Technical Architecture Specialist is the technologist who coordinates with other parties in setting the technical approach and direction and implementation for work. The Technical Architecture Specialist provides technical design expertise, defines what technical requirements are needed to support defined business requirements, participates in detailed design and code reviews, reviews system performance issues, reviews test plans, and provides technical guidance to the Application Team and Test Team members. The Technical Architecture Specialist is responsible for collaborating with the Team Lead(s) to coordinate project schedules, budgets, request management, and work authorization. The expert level Technical Architecture Specialist will interface with Executive Sponsors, Group Leads, and Lead Functional Architects to convey infrastructure requirements, plan, and schedule deployment of tasks, and resolve any issues that impact the deployment of the Application Delivery systems.

**TAS1**

Years of Relevant Experience:	2 to 5 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Defines test plans and criteria for acceptance for the technical components of an application.</li> <li>• Ensures business requirements are supported by the technical architecture.</li> <li>• Assists in leading technical direction of software; coordinating and presenting proposals to Group Leads, Leads, and the client.</li> <li>• Defines and evaluates logical and physical data models.</li> <li>• Assists in development of overall system technical architecture - including software and hardware.</li> <li>• Defines test plans and criteria for acceptance for the technical components of an application.</li> <li>• Analyzes, determines, and documents technical requirements and change request impact analysis.</li> <li>• Participates in detailed design and product test execution as required.</li> <li>• Develops technical programming standards.</li> <li>• Ensures business requirements are supported by the technical architecture.</li> <li>• Conducts structured walk-throughs or inspections for technical areas; resolve issues.</li> <li>• Assists in defining technical programming standards.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken.</li> <li>• Performs integration of various architectures across multiple enterprises</li> <li>• Develops overall system technical architecture, including software and hardware.</li> <li>• Performs review of technical designs, code, and component test plans.</li> <li>• Resolves and/or assists in resolving cross application technical issues.</li> <li>• Conducts structured walk-throughs or inspections for technical areas; resolve issues.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>

**TAS2**

Years of Relevant Experience:	5 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Ensures consistency and completeness across data models.</li> <li>• Plans and delivers development architecture environments in coordination with the Environmental Support Specialist.</li> <li>• Assists in managing and directing team's technical architecture processes.</li> <li>• Provides assistance in scheduling design work for Lead Technical Architecture Specialist.</li> <li>• Develops and documents expert practices/ standards.</li> <li>• Possesses strong analysis, presentation, documentation, and quality assurance skills.</li> <li>• Analyzes, determines, and documents technical requirements and impact analysis for technical and development architectures.</li> <li>• Explains defect priorities and enhancement classifications to client and customer</li> </ul>

	<p>when needed.</p> <ul style="list-style-type: none"> <li>• Maintains awareness of new technological developments in industry and processes - implement concepts appropriately.</li> <li>• Leads or participates in setting the service levels for the application.</li> <li>• Defines overall system logical architecture.</li> <li>• Provides standard, well-structured work planning that defines scope, resources, milestones, quality, risk, tasks, and acceptance criteria.</li> <li>• Prepares contingencies, scenarios, scenario plans and action items to resolve issues.</li> <li>• Leads efforts in providing technical expertise, guidance, and training to the Application and Test Teams.</li> </ul>
--	---

### **TAS3**

Years of Relevant Experience:	5 plus years, and 1 to 2 years project management experience
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TAS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Communicates effectively with IT staff, client organization and software / hardware suppliers.</li> <li>• Leads efforts in designing technical strategy, direction and approach, technical architecture, data architecture, development architecture, performance tuning, performance and capacity analysis, technical standards, technical reliability and flexibility.</li> <li>• Designs and defines overall system technical architecture - including software and hardware within the framework and constraints of technical architecture.</li> <li>• Evaluates alternative designs.</li> <li>• Maintains control of specific tools and assets.</li> <li>• Owns the technical architecture for a portfolio of applications, including the interpretation and application of the technical architecture.</li> <li>• Plans, designs, develops, and/or executes of technical architecture.</li> <li>• Assists with the preparation of estimates for new technology applications and maintenance of existing applications as part of Service Management.</li> <li>• Provides experience in utilizing the project architecture. Acknowledged as highly competent in one or more technologies.</li> <li>• Communicates accurate and useful status reports and other management on a timely basis.</li> <li>• Coordinates and conducts project architecture, infrastructure review meetings, and portfolio review meetings with Group Lead, Lead Functional Architects, and Team Leads.</li> <li>• Integrates issues and identifies impact.</li> <li>• Communicates and resolves application interface issues.</li> <li>• Communicates to team members the relations between their work assignments and the organizational and/ or program strategy, objectives, business and technology needs of the application / system.</li> <li>• Shares knowledge across teams with both similar and non-similar applications, specifically focusing on Technical Architecture</li> <li>• Interprets and communicates technical architecture to the Technology Application Architecture Team(s).</li> </ul>

## **Technical Specialist**

The Technical Specialist is a senior level resource with specialized knowledge and experience in a specific technology such as SharePoint development or an SAP specialist. The Technical Specialist has an overall knowledge and understanding of application development and architecture that serves as a strong base for technical expertise in a specific product or program.

### **TS1**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Demonstrates expertise in conveying technical and functional concepts for a specific technical specialty.</li> <li>• Identifies improvements to project standards to achieve high quality services/ products.</li> <li>• Able to identify best practices and standards for the use of the product.</li> </ul>

### **TS2**

Years of Relevant Experience:	7to 8 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Delivers support and design for industry specific applications that require integration with statewide systems or applications.</li> <li>• Interacts with executive level business users or technical experts.</li> <li>• May function as a niche technical SME.</li> </ul>

### **TS3**

Years of Relevant Experience:	8-10 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TS2 plus the following:</p> <ul style="list-style-type: none"> <li>• Advanced experience in the required technical subject matter.</li> </ul>

### **TS4**

Years of Relevant Experience:	10-12 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TS3 plus the following:</p> <ul style="list-style-type: none"> <li>• Proven experience with a technical specialty across large and complex implementations and systems.</li> </ul>

### **TS5**

Years of Relevant Experience:	12 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in TS4 plus the following:</p> <ul style="list-style-type: none"> <li>• Lead experience with technical expertise across large, complex implementations for enterprise systems.</li> </ul>

## **Technical Writer**

The Technical Writer develops and maintains user and technical documentation and project process documentation for Application Teams. Technical Writer understands the user's view of applications and /or technology and is able to put procedures in a logical sequence. The experienced Technical Writer 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 within their Tower.



**TW1**

Years of Relevant Experience:	Up to 2 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Develops, enhances, and maintains user documentation for multiple applications including documentation required for the operations provider.</li> <li>• Develops on-line source documentation as appropriate.</li> <li>• Maintains documentation libraries and subscription lists.</li> <li>• Identifies, creates, revises, and maintains documentation and templates needed by the Application Teams.</li> <li>• Ensures appropriate control access/use of documentation materials.</li> <li>• Maintains application and user documentation.</li> <li>• Ensures messages and terminology is consistent across all written materials.</li> <li>• Researches and completes documentation service requests.</li> <li>• Communicates and works with customers and other Client Telecommunications personnel as necessary.</li> <li>• Works with Application Team members to enhance their understanding of end-user and technical documentation.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Manages and reports time spent on all work activities.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>

**TW2**

Years of Relevant Experience:	2 to 4 years.
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW1 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews and prioritizes documentation service requests.</li> <li>• Determines procedures for use of on-line documentation tools and version control documentation as appropriate.</li> <li>• Assists or guides other Technical Writer as needed to develop and maintain user and technical documentation for their assigned applications.</li> <li>• Educates both business and technical groups on the essential need for developing and using standard documentation for all processes.</li> <li>• Organizes and prepares work effectively to facilitate proactive resolution of problems, rather than reactive.</li> <li>• Researches problems before approaching Lead Technical Writer or Team Lead for assistance.</li> <li>• Assists the Application Team Lead in monitoring budget by providing estimated-time-to-complete and actuals for assigned tasks.</li> <li>• Identifies and makes recommendations around documentation and templates needed by the Application Teams.</li> <li>• Works with users and other State personnel to ensure that the solutions meet State business requirements.</li> <li>• Identifies and initiates continuous improvement opportunities.</li> <li>• Directs the development of accurate estimates for documentation requests/activities as required</li> <li>• Develops options and recommendations to assist documentation team members in resolving issues.</li> <li>• Leads efforts in developing and facilitating implementation of the Documentation</li> </ul>



	<p>team goals and metrics.</p> <ul style="list-style-type: none"> <li>• Develops workable, practical, measurable work plans defining activities, schedules and tasks with Team Leads and the Lead Technical Writer</li> <li>• Reviews and understands the Application Teams workplan.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks and action items.</li> </ul>
--	--

**TW3**

Years of Relevant Experience:	5 to 6 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW2 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews and approves procedures for use of on-line documentation tools as appropriate.</li> <li>• Identifies business and technical documentation needs not currently addressed.</li> <li>• Manages Technical Writer.</li> <li>• Owns documentation libraries and subscription lists.</li> <li>• Promotes the need for developing and using standard documentation for all processes within the organization.</li> <li>• Performs detailed reviews of interim and final tasks as appropriate.</li> <li>• Oversees processing of service requests.</li> <li>• Manages, deploys, and schedules Technical Writer activities.</li> <li>• Develops and manages short and long-term documentation plans and schedules.</li> <li>• Understands work requests/needs within Application Teams</li> <li>• Manages the accomplishment of delivery metrics in support of contractual obligations in the areas of service delivery, on time performance.</li> <li>• Works with Team Leads and Group Leads to set documentation goals.</li> </ul>

**TW4**

Years of Relevant Experience:	7 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in TW3 plus the following:</p> <ul style="list-style-type: none"> <li>• Ensures work remains within the agreed project scope.</li> <li>• Coordinates work with other Lead Technical Writers as appropriate.</li> <li>• Coordinates and procure the required skills and techniques required by the Application Teams for documentation needs.</li> <li>• Communicates accurate and useful status reports to Group Lead and other management on a timely basis.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Application Team.</li> <li>• Develops contingency plans as necessary.</li> <li>• Manages expectations of the Technical Writers' internal and external customers.</li> <li>• Defines documentation quality standards as needed.</li> <li>• Conducts post project reviews and quality assessments.</li> <li>• Ensures that defined processes are followed.</li> <li>• Communicates related improvement measures to the team.</li> <li>• Communicates clearly to Technical Writers their goals, organizational philosophies, policies and procedures.</li> </ul>

## Telecom Engineer

The Telecom Engineer configures and installs hardware, wiring, and specialized equipment according to local building and electrical codes. The Telecom Engineer may also be responsible for the end-to-end installation of cable, wiring, and related equipment. The Telecom Engineer typically works closely with facilities/construction managers and site-based project managers. The Telecom Engineer should be able to accurately estimate the time and materials needed for tasks assigned. It is not uncommon for the Telecom Engineer to supervise a team of people and coordinate activities with other construction teams.

### TE1

Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> <li>Ensures proper connectivity from site-to-site and internal to facility.</li> <li>Experience with CAT5, Romex, and similar cables/wiring.</li> <li>Pulls cable and ensures adherence to all building codes.</li> <li>Escalates construction and installation problems to the construction/integration manager, as needed.</li> <li>Prepares all job-related paperwork.</li> <li>Closes out work authorization when equipment is in service.</li> </ul>

### TE2

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE1 plus the following:</p> <ul style="list-style-type: none"> <li>Inspects customer premises to ascertain available space for equipment installation</li> <li>Determines the type and quantity of equipment that can be installed to provide requested communication facilities.</li> <li>Creates floor plan of equipment arrangement for customer or architect approval.</li> <li>Prepares cost estimate for equipment and installation and submit data to management for authorization to proceed.</li> <li>Orders equipment and prepare installation specifications.</li> <li>Monitors progress of installation to ensure facilities are ready on specified date.</li> </ul>

### TE3

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in TE2 plus the following:</p> <ul style="list-style-type: none"> <li>Leads full integration teams and interact with large infrastructure teams.</li> <li>Acts as telecommunications interface to outside vendors and construction manager.</li> <li>Directs activities related to the selection and installation of telephone facilities and special equipment on premises to meet customer's communication requirements.</li> </ul>

## Tester

The Tester is a member of a team which plans, constructs, and executes product tests, system tests, unit tests, load tests, volume tests, network tests as well as works with others for release control processes. The more experienced Tester manages, plans, constructs, and executes tests and integrates with release control process.

### Test1

Years of Relevant Experience:	Less than 2 years
-------------------------------	-------------------

Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<ul style="list-style-type: none"> <li>• Creates test models for product test and release control (plans, data, and scripts).</li> <li>• Conducts structured walk-throughs</li> <li>• Executes assembly or product tests.</li> <li>• Meets time estimates for assigned tasks.</li> <li>• Communicates accurate and useful status updates.</li> <li>• Follows quality standards.</li> <li>• Able to work in a team environment</li> <li>• Completes assigned tasks.</li> <li>• Strong communication skills; both written and spoken</li> </ul>

### **Test2**

Years of Relevant Experience:	2 to 4 years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test1 plus the following:</p> <ul style="list-style-type: none"> <li>• Defines product test plans and criteria for acceptance.</li> <li>• Develops, updates, and maintains testing standards and procedures.</li> <li>• Resolves testing process questions / issues.</li> <li>• Assists in the planning, creation, and control of the test environments.</li> <li>• Conducts inspections; resolve issues.</li> <li>• Coordinates and executes assembly or product tests with the Test Team, Application Team and the Program Manager.</li> <li>• Assists Team Lead or Test Team Lead in monitoring estimated-time-to-complete (ETC) and actuals for assigned tasks.</li> <li>• Works with Test Team members to enhance their testing skills and build technical and business knowledge.</li> <li>• Updates and tests release installation procedures.</li> <li>• Generally aware of new developments in industry and processes and ability to apply to work as appropriate.</li> <li>• Determines time estimates and schedule for work efforts.</li> <li>• Defines and utilizes entry / exit criteria for testing.</li> <li>• Schedules the design of structured walk-throughs or inspections; resolve issues.</li> <li>• Works with users to ensure that solutions meet business requirements.</li> <li>• Anticipates and resolves issues specific to the team.</li> <li>• Determines time estimates and schedule for own work and resolve issues in a timely manner.</li> <li>• Identifies and tracks issues, risks, and action items.</li> </ul>

### **Test3**

Years of Relevant Experience:	4 plus years
Preferred Education:	4 year college degree or equivalent technical study
Role Description:	<p>All roles specified in Test2 plus the following:</p> <ul style="list-style-type: none"> <li>• Reviews and understands the Test Team work plan.</li> <li>• Assists in managing and directing Test Team processes.</li> <li>• Anticipates, identifies, tracks, and resolves issues and risks affecting own work and work of the Test and/or Application Teams.</li> <li>• Develops contingency plans as necessary.</li> <li>• Researches problems before approaching the Team Lead or Test Team Lead for assistance.</li> <li>• Assists or guides Testers as needed.</li> <li>• Develops understanding of system business requirements supported by the Test team</li> </ul>

	<ul style="list-style-type: none"> <li>• Assists Application Teams to plan and execute component and assembly tests.</li> <li>• Participates in assembly or product test execution as required.</li> </ul>
--	--

## Video Conference Specialist

The Video Conference Specialist (VCS) provides video and photograph production support by operating a variety of film, sound-reproducing equipment, slide, and video equipment.

### VCS1

Years of Relevant Experience:	Up to 6 years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<ul style="list-style-type: none"> <li>• Maintains equipment in working condition.</li> <li>• Makes minor adjustments and repairs to equipment</li> <li>• Notifies maintenance personnel when correction of major malfunction is required.</li> <li>• Positions, installs, connects, and repairs equipment.</li> <li>• Familiar with fundamental networking/distributed computing environment concepts.</li> <li>• Troubleshoots network issues, systems, and applications to identify and correct malfunctions and other operational difficulties.</li> <li>• Investigates user problems, identifies their source, determines possible solutions, tests and implements solutions</li> <li>• Ensures high priority issues are resolved in a timely manner.</li> <li>• Excellent communication skills.</li> </ul>

### VCS2

Years of Relevant Experience:	6 plus years
Preferred Education:	4 year college degree or equivalent technical study.
Role Description:	<p>All roles specified in VCS1 plus the following:</p> <ul style="list-style-type: none"> <li>• Coordinates equipment operation with material presented, according to notations in script or instructions of speaker.</li> <li>• Advises speakers and presenters on alternative media.</li> <li>• Meets with department heads, managers, supervisors, vendors, and others, to solicit cooperation and resolve problems.</li> <li>• Actively participates in analyzing and evaluating emerging technologies/standards.</li> <li>• Evaluates and/or recommend purchases of network hardware, software, and peripheral equipment.</li> <li>• Acts as the first level of escalation for high priority support issues.</li> <li>• Functions as the liaison to the various support groups with whom the systems management team interfaces.</li> <li>• Develops the technical maintenance strategy.</li> <li>• Analyzes, determines, and documents requirements in terms of system management needs and implement them.</li> <li>• Identifies, approves, and prioritizes team projects.</li> <li>• Mentors and supervises other team members.</li> </ul>

## Voice/Data Engineer

The Voice/Data Engineer directs and participates in all activities related to the selection and installation of telephone facilities and special on-premises equipment that will meet the customer's communication requirements. The Voice/Data Engineer is responsible for all technology and connectivity involving telecommunications and data networks. The Voice/Data Engineer will typically specialize in telephony and data interfaces and systems that have proprietary functions within the communications area of a corporation/business. General wiring excluded, the Voice/Data Engineer ensures that any specialized conduit or wiring is properly deployed and installed according to code. The Voice/Data Engineer is also

an expert in audio/visual, teleconferencing, and voice mail equipment. Often times, the Voice/Data Engineer is specialized or is certified in a particular piece of equipment.

**VDE1**

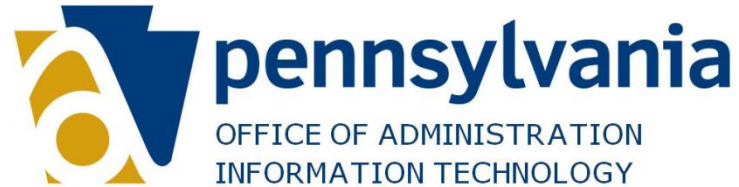
Years of Relevant Experience	0 to 2 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<ul style="list-style-type: none"> <li>• Ensures proper connectivity of voice and data services and technologies.</li> <li>• Interacts and work with Telecom Engineer, Integration Engineer, or Project Manager.</li> <li>• Prepares all job-related paperwork</li> <li>• Closes out work authorization when equipment is in service.</li> </ul>

**VDE2**

Years of Relevant Experience	2 to 5 years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE1 plus the following:</p> <ul style="list-style-type: none"> <li>• Prepares equipment floor plan for customer or architect approval.</li> <li>• Determines telephone, data services/components, and audio visual equipment placement within facility.</li> <li>• Acts as installer of equipment for data/voice or Audio visual use.</li> <li>• Installs, tests, configures, and train users on products and equipment.</li> <li>• Supports systems and products associated with telecommunications/telephone and data within a facility or department.</li> </ul>

**VDE3**

Years of Relevant Experience	5 plus years
Preferred Education	4 year college degree or equivalent technical study
Role Description	<p>All roles specified in VDE2 plus the following:</p> <ul style="list-style-type: none"> <li>• Familiar with at least one type of equipment or service that is highly specialized.</li> <li>• Prepares cost estimate for equipment and installation and submit data to management for authorization to proceed with job.</li> <li>• Orders equipment and prepare installation specification.</li> <li>• Monitors installation progress to ensure that the facilities are ready on projected date.</li> <li>• Leads a team of installers and junior Voice/Data Engineers.</li> </ul>



**PARENT CONTRACT NUMBER:** 6100014920  
**SAP/SRM CONTRACT NUMBER:** 4400007198  
**CHANGE NUMBER:** 7  
**CHANGE EFFECTIVE DATE:** 08/13/2014

**USING AGENCY:** All Using Agencies

**CONTRACT TITLE:** Enterprise IT Staff Augmentation Contract

**CONTRACT PERIOD:** Beginning 7/1/10 and Ending 9/30/15

**COMMODITY SPECIALIST:** Joe Millovich    **TELEPHONE:** 717-214-3434    **EMAIL:** jmillovich@pa.gov

**CHANGE SUMMARY:**

As stated within the terms and conditions of this contract, the Commonwealth is exercising its option to extend the Enterprise IT Staff Augmentation Contract for three (3) months. The new contract expiration date will be 9/30/15. Please find the Contract Extension Letter attached to this change notice.

**ALL OTHER TERMS AND CONDITIONS OF THIS AGREEMENT NOT CHANGED BY THIS CHANGE NOTICE  
REMAIN AS ORIGINALLY WRITTEN.**



August 13, 2014

Computer Aid, Inc.  
470 Friendship Rd., Suite 300  
Harrisburg, PA 17111

**SUBJECT:** Renewal of Contract: 4400007198  
Contract Title: Enterprise IT Staff Augmentation  
Term of Extension: June 30, 2015 – September 30, 2015

Dear Mr. Cooney:

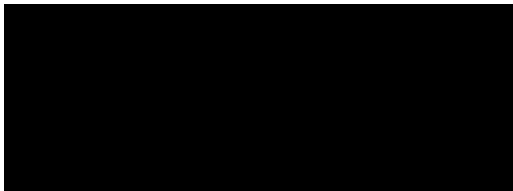
The above referenced contract expires on June 30, 2015. The Commonwealth of Pennsylvania is exercising its right to extend the agreement upon the same terms and conditions for three (3) months as defined in Section 9 of the IT Contract Terms and Conditions:

**“OPTION TO ENTEND**

The Commonwealth reserves the right, upon notice to the Contractor, to extend the term of the Contract for up to three (3) months upon the same terms and conditions. This will be utilized to prevent a lapse in Contract coverage and only for the time necessary, up to three (3) months, to enter into a new contract.”

If you have any questions, please contact Joe Millovich at 717-214-3434, or send email inquiries to [jmillovich@pa.gov](mailto:jmillovich@pa.gov).

Sincerely,



Joseph M. Millovich  
Commodity Specialist