

STATE OF MICHIGAN
 DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
 PROCUREMENT
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

August 14, 2012

CHANGE NOTICE NO. 5
 to
CONTRACT NO. 071B9200198
 between
THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF CONTRACTOR:	PRIMARY CONTACT	EMAIL
Systems Technology Group, Inc. (STG) 3155 W. Big Beaver Road, Suite 220 Troy, Michigan 48084-3007	Mona Aggarwal, VP Finance	apopat@stgit.com
	TELEPHONE (248) 643-9010	CONTRACTOR #, MAIL CODE

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
CONTRACT COMPLIANCE INSPECTOR:	DTMB	Shelley Warstler	(517) 335-4079	WarstlerS@michigan.gov
BUYER:	DTMB	Steve Motz	(517) 241-3215	motzs@michigan.gov

CONTRACT SUMMARY:			
DESCRIPTION: Online Teacher Certification System			
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	AVAILABLE OPTIONS	CURRENT EXPIRATION DATE
April 20, 2009	April 19, 2012	Five, One Year	July 30, 2012
PAYMENT TERMS	F.O.B	SHIPPED	SHIPPED FROM
N/A	N/A	N/A	N/A
ALTERNATE PAYMENT OPTIONS:			AVAILABLE TO MiDEAL PARTICIPANTS
<input type="checkbox"/> P-card	<input type="checkbox"/> Direct Voucher (DV)	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
MINIMUM DELIVERY REQUIREMENTS:			
N/A			

DESCRIPTION OF CHANGE NOTICE:		
OPTION EXERCISED: <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES	IF YES, NEW EXPIRATION DATE: December 26, 2012	EFFECTIVE DATE OF CHANGE: July 26, 2012
Effective immediately this contract is hereby INCREASED by \$ 99,750.00 per the attached Change Control Request (CCR) 005. The purpose of this increase is to include funding for five (5) additional months of Maintenance and Support for the period from 7/26/2012 thru 12/26/2012. STG and MDE used Purchase Order #084N2203685 to cover support services from STG for the month of July 2012 that are identified included in CCR-005. All other terms, conditions, specifications, and pricing remain the same.		
VALUE/COST OF CHANGE NOTICE:	\$ 99,750.00	
ESTIMATED REVISED AGGREGATE CONTRACT VALUE:	\$ 2,721,122.00	

**State of Michigan
Online Teacher Certification System / MOECS
Change Control Request**

A. General Information

Information to be provided in this section is general in nature and provides the necessary information about the organization of the project and project participants.

Project ID/Acronym:	<u>OTCS/MOECS</u>	Date:	<u>June 5, 2012</u>
Controlling Agency:	<u>Department of Education</u>	Modification Date:	<u></u>
Prepared by:	<u>Sriram Rao, (STG)</u>	Control Number (From Control Log)	<u>CCR-005</u>

B. Requestor Information

Proposed Change Description and References:

The requestor will provide information concerning the requested change along with any supporting documentation.

Background

The purpose of this Change Control Request is to extend the Maintenance Phase by 6 months from June 26th, 2012 to December 26th, 2012. This CCR005 references Contract #071IB9200198.

C. Initial Review Results of the Change Request

Initial Review Date: June 5, 2012 **Assigned to:** STG

Approve for Impact Analysis

Reject

Defer Until:

Reason:

D. Initial Impact Analysis

Baselines Affected:

The purpose of this Change Control Request is to extend the Maintenance Phase by 6 months from June 26th, 2012 to December 26th, 2012.

Cost / Schedule Impact Analysis Required? **Yes** **No**

Impact on Cost:

The cost of services per month is \$19,950 per month. In order to preserve the schedule and cost impact specified above, State must accord its approval to this CCR on or before June 25th, 2012 authorized through a Purchase Order Amendment from DMB. Any further delays in such approval may further impact the schedule and cost specified above.

APR

Assumptions

All milestones, deliverables and tasks completed as of June 25th, 2012 have been accepted and approved by the State of Michigan.

Please find the updated Payment Milestone Schedule in the table below.

Milestone/Deliverable Schedule/Pay Points	Original Payment Date (Business days from Start date of Project)	Original Contract Payment (USD)	Revised Payment Date (Business days from Start date of Project)	Payment Per this CCR-005 (USD)
Milestone 1 -Engagement Startup	5	\$16,500	5	\$16,500
Milestone 2a - Requirements Gathering and Functional Design Completed (Requirements Definition) (towards baseline scope)	55	\$165,005	55	\$165,005
Milestone 2a1 - Requirements Gathering and Functional Design Completed (Requirements Definition) -	90	\$126,000	90	\$126,000
Milestone 2b - System Design Completed	153	\$230,199	153	\$230,199
Milestone 3a – Bundle 1 Development and Unit Test Completed (Construction Phase)			213	\$350,000
Milestone 3b – Bundle 2 Development and Unit Test Completed (Construction Phase)			248	\$200,000
Milestone 3c – Bundle 3 Development and Unit Test Completed (Construction Phase)	248	\$445,513	278	\$214,313
Milestone 4a - System and Integration Testing Completed	288	\$187,585	338	\$524,945
Milestone 4b - User Acceptance Testing Completed	332	\$206,343	393	\$206,343
Milestone 4c - Performance/Load Testing Completed	342	\$46,896	403	\$46,896

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Milestone 5a - Deployment Completed	352	\$33,001	413	\$33,001
Milestone 5b - Pilot Completed	396	\$145,204	457	\$145,204
Milestone 5c - Full Rollout Completed	426	\$99,003	487	\$99,003
Milestone 6 - Warranty Completed	470	\$84,413	531	\$84,413
Transition, Maintenance and Support Services Completed (For a period of 5 consecutive months to be billed as \$19,950 per month for month for the following: 07/26/11 to 08/25/11; 08/26/11 to 09/25/2011; 09/26/2011 to 10/25/2011; For the following periods, STG will provide services free of cost 10/26/11 to 11/25/2011; 11/26/11 to 12/25/2011	827			
			635	Value: \$99,750 Less: Discount: \$39,900 Net Value: 59,850
Maintenance & Support for six (6) additional months starting from 12/26/2011 thru 6/25/2012 at \$19,950 per month.			755	\$119,700
Maintenance & Support for six (6) additional months starting from June 26 th , 2012 thru December 26 th , 2012 at \$19,950 per month.			875	\$119,700
Total Contract Value		Original Contract Value: \$2,124,812		Revised Contract Value: \$2,741,072

Impact on Schedule:

There is no impact to schedule since all milestones and deliverables have been completed by the contractor and accepted by the state. This CCR is for a 6 month extension for maintenance and support services.

NDA

E. Impact Analysis Results

Impact of Not Implementing the Change:

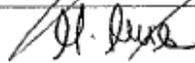
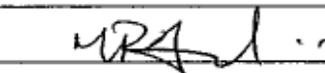
n/a

Alternatives to the Proposed Change:
There are no alternatives identified at this time.

Final Recommendation:
n/a

F. Signatures

Governance Body:

Name/Title	Signature	Date
Flora Jenkins, MDE OPPS Project Sponsor		6/12/12
Glenn Gorton, MDIT Agency Services CSD		6/8/12
Sriram Rao, STG Director of Delivery		June 5, 2012
Mona Aggarwal, VP Finance		JUNE 5, 2012

**STATE OF MICHIGAN
 DEPARTMENT OF MANAGEMENT AND BUDGET
 PURCHASING OPERATIONS
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933**

October 27, 2011

**CHANGE NOTICE NO. 4
 TO
 CONTRACT NO. 071B9200198
 between
 THE STATE OF MICHIGAN
 and**

NAME & ADDRESS OF CONTRACTOR Systems Technology Group, Inc. (STG) 3155 W. Big Beaver Road, Suite 220 Troy, Michigan 48084-3007 Attention: Ms. Mona Aggarwal, VP Finance Email: apopat@stgit.com	TELEPHONE (248) 643-9010
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-3215 Steve Motz
Contract Compliance Inspector: Ann Lindberg Online Teacher Certification System	
CONTRACT PERIOD: 3 yrs. + 5 one-year options From: April 20, 2009 To: July 30, 2012	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	
MISCELLANEOUS INFORMATION:	

NATURE OF CHANGE (S):

Effective immediately this contract is hereby **INCREASED** by \$119,700.00 per the attached Change Control Request (CCR) 004. The purpose of this increase is to include funding for six (6) additional months of Maintenance and Support for the period from 12/26/2011 thru 6/25/2012.

All other terms, conditions, specifications, and pricing remain the same.

AUTHORITY/REASON:

Per Contractor MDE and DTMB agreement.

INCREASE: \$119,700.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$2,621,372.00

State of Michigan
Online Teacher Certification System / MOECS
Change Control Request

A. General Information

Information to be provided in this section is general in nature and provides the necessary information about the organization of the project and project participants.

<i>Project ID/Acronym:</i>	<u>OTCS/MOECS</u>	<i>Date:</i>	<u>10/11/2011</u>
<i>Controlling Agency:</i>	<u>Department of Education</u>	<i>Modification Date:</i>	<u></u>
<i>Prepared by:</i>	<u>Siva Ramanathan, STG Project Manager</u>	<i>Control Number (From Control Log)</i>	<u>CCR-004</u>

B. Requestor Information

Proposed Change Description and References:

The requestor will provide information concerning the requested change along with any supporting documentation.

Background

The purpose of this Change Control Request is to extend the Maintenance Phase by 6 months from December 26th, 2011 to June 25th, 2012. This CCR004 references Contract #071B9200198.

C. Initial Review Results of the Change Request

Initial Review Date: 10/11/2011 Assigned to: STG

- Approve for Impact Analysis
 Reject
 Defer Until:

Reason:

D. Initial Impact Analysis

Baselines Affected:

The purpose of this Change Control Request is to extend the Maintenance Phase by 6 months from December 26th, 2011 to June 26th, 2012.

Cost / Schedule Impact Analysis Required? Yes No

Impact on Cost:

The cost of services per month is \$19,950 per month. In order to preserve the schedule and cost impact specified above, State must accord its approval to this CCR on or before December 2nd, 2011 authorized through a Purchase Order Amendment from DMB. Any further delays in such approval may further impact the schedule and cost specified above.

Assumptions

All milestones, deliverables and tasks completed as of October 11, 2011 have been accepted and approved by the State of Michigan.

Please find the updated Payment Milestone Schedule in the table below.

Milestone/Deliverable Schedule/Pay Points	Original Payment Date (Business days from Start date of Project)	Original Payment (USD)	Revised Payment Date (Business days from Start date of Project)	Payment For this CCR (USD)
Milestone 1 - Engagement Startup	5	\$16,500	5	\$16,500
Milestone 2a - Requirements Gathering and Functional Design Completed (Requirements Definition) (towards baseline scope)	55	\$165,005	55	\$165,005
Milestone 2a1 - Requirements Gathering and Functional Design Completed (Requirements Definition) -	90	\$126,000	90	\$126,000
Milestone 2b - System Design Completed	153	\$230,199	163	\$230,199
Milestone 3a - Bundle 1 Development and Unit Test Completed (Construction Phase)			213	\$350,000
Milestone 3b - Bundle 2 Development and Unit Test Completed (Construction Phase)			248	\$200,000
Milestone 3c - Bundle 3 Development and Unit Test Completed (Construction Phase)	248	\$445,513	278	\$214,313
Milestone 4a - System and Integration Testing Completed	288	\$187,585	338	\$524,945
Milestone 4b - User Acceptance Testing Completed	332	\$206,343	393	\$206,343
Milestone 4c - Performance/Load Testing Completed	342	\$46,896	403	\$46,896

Milestone 5a - Deployment Completed	352	\$33,001	413	\$33,001
Milestone 5b - Pilot Completed	396	\$146,204	457	\$146,204
Milestone 5c - Full Rollout Completed	426	\$99,003	487	\$99,003
Milestone 6 - Warranty Completed	470	\$84,413	531	\$84,413
Transition, Maintenance and Support Services Completed (For a period of 5 consecutive months to be billed as \$19,950 per month for month for the following: 07/26/11 to 08/26/11; 08/26/11 to 09/25/2011; 09/26/2011 to 10/26/2011; For the following periods, STG will provide services free of cost 10/26/11 to 11/25/2011; 11/26/11 to 12/25/2011	827			
			635	Value: \$99,750 Less: Discount: \$39,900 Net Value: 59,850
Maintenance & Support for six (6) additional months starting from 12/26/2011 thru 6/26/2012 at \$19,950 per month.			755	\$119,700
Total Contract Value		\$2,124,812		\$2,621,372

Impact on Schedule:

There is no impact to schedule since all milestones and deliverables have been completed by the contractor and accepted by the state. This CCR is for a 6 month extension for maintenance and support services.

E. Impact Analysis Results

Impact of Not Implementing the Change:

n/a

Alternatives to the Proposed Change:

There are no alternatives identified at this time.

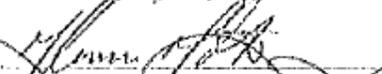
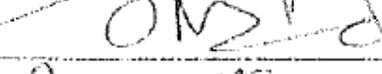
Final Recommendation:

n/a



F. Signatures

Governance Body:

Name/Title	Signature	Date
Flora Jenkins, MDE OPPS Project Sponsor		10/2/11
Glenn Gorton, MDTF Agency Services CSD		10/2/11
Bill Kerr, MDTF Project Manager		10/14/11
Shanta Santapakashi, STG GSD Delivery Executive		10/13/11
Siva Ramanathan, STG Project Manager		10/13/2011

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

January 20, 2010

CHANGE NOTICE NO. 3
TO
CONTRACT NO. 071B9200198
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR Systems Technology Group, Inc. (STG) 3155 W. Big Beaver Road, Suite 220 Troy, Michigan 48084-3007 Attention: Ms. Mona Aggarwal, VP Finance Email: apopat@stgit.com	TELEPHONE (248) 643-9010
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-3215 Steve Motz
Contract Compliance Inspector: Ann Lindberg Online Teacher Certification System	
CONTRACT PERIOD: 3 yrs. + 5 one-year options From: April 20, 2009 To: July 30, 2012	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	
MISCELLANEOUS INFORMATION:	

NATURE OF CHANGE (S):

Effective immediately this contract is hereby **INCREASED** by \$376,860.00 per the attached Change Control Request (CCR) 003. The purpose of this increase is to include additional funding for additional time required to complete Milestone 3 – “Development and Unit Test”, Milestone 4a – “System and Integration Testing” and Milestone 4b – “User Acceptance Testing Completed” to address the new requirements and changes to the baseline requirements (Appendix A of the contract) identified during previous Milestone activities.

All other terms, conditions, specifications, and pricing remain the same.

AUTHORITY/REASON:

Per Contractor and DIT agreement and Administrative Board Approval on 1/19/2010.

INCREASE: \$376,860.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$2,501,672.00

**State of Michigan
Online Teacher Certification System
Change Control Request**

A. General Information

Information to be provided in this section is general in nature and provides the necessary information about the organization of the project and project participants.

Project ID/Acronym:	OTCS	Date:	10/23/2009
Controlling Agency:	Department of Education	Modification Date:	
Prepared by:	Siva Ramanathan, STG Project Manager	Control Number (From Control Log)	CCR-003

B. Requestor Information

Proposed Change Description and References:

The requestor will provide information concerning the requested change along with any supporting documentation.

Background

The purpose of this Change Control Request is to extend the schedule for "Milestone 3 - Development and Unit Test", "Milestone 4a - System and Integration Testing" and "Milestone 4b - User Acceptance Testing Completed" to address the new requirements and changes to the baseline requirements (Appendix A of the contract) identified during "Milestone 2a - Requirements Gathering and Functional Design Completed" and "Milestone 2a1 - Requirements Gathering and Functional Design Completed" stage.

STG has documented the new and changed requirements in the below change log. The below change log records the changes identified during the JAD session.

#	Logged Date	Logged By	Change Type	Requirement Type	Affected Use Case	Appendix A Ref	Description	Source	Impact	Comments
1	5/26/2009	Siva	Requirements change	Business	Apply for Certificate / Permit	2-09, 2-22 1-03 1-04	Business rules for applicant eligibility for certificate / permit and renewal is not described in detail in Appendix A. The requirements with respect to the various process flows (approx 55) and the business rules are not mentioned in Appendix A	JAD session for Apply for certificate / Permit	Very High	Since uploading of roster functionality was removed by OPPS, all the questions, validation and business rules for each type of certificate and renewal is moved to the application process which has increased the complexity significantly.

#	Logged Date	Logged By	Change Type	Requirement Type	Affected Use Case	Appendix A Ref	Description	Source	Impact	Comments
2	6/26/2009	Siva	Requirements change	Business	Apply for Certificate	1-02 1-03 1-04	The requirement in Appendix A specifies TPI's recommending in-state applicants for teacher certification thru rosters. The appendix A does not specify in-state applicants starting the application process. Only out-of-state applicants starts the application process. In-state applicants only renew the certificates.	JAD Session for Apply for Certificate	Very High	
3	6/26/2009	Siva	New Feature	Business	Apply for Certificate		The following teaching certificate is not mentioned in Appendix A: Temporary Teacher employment Authorization Two Year provisional extension Professional Temporary Teacher Employment Authorization Occupational (vocational) certificate	JAD Session for Apply for Certificate	High	
4	6/26/2009	Siva	New Feature	Business	Apply for Permit	1-05. 4-01	Permit type 1233B, Full-Year Permit, Limited License to Instruct (LL) are not specified in Appendix A	JAD Session 06/25/2009	Very High	Permit type 1233B and renewal flow was discussed on 06/25/2009
5	6/26/2009	Siva	Requirements change	Business	Apply for Permit	4/24	4-24 of Appendix A mentions word "renews" for certificate / permit, but does not specify the need for various types of permit renewals with different business rules.	JAD Session 06/25/2009	Very High	Substitute permit renewal was covered on 06/25/2009; Emergency Permit renewal flow was discussed on 06/25/2009
6	6/26/2009	Siva	New Feature	Business	Apply for Permit	2-16, 3-08, 4-34	Reminder email for payment to applicants before 2 weeks of Rescinded status must be sent to both the applicants and school districts. This is not mentioned in Appendix A	JAD Session 06/25/2009	Medium	Email functionality is requested in Appendix A only for the following functions 2-16 - Reminder email for certificate renewal 3-08 - Pay Fee 4-34 - OPPS user sends email to applicant, TPI and school district

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#	Logged Date	Logged By	Change Type	Requirement Type	Affected Use Case	Appendix A Ref	Description	Source	Impact	Comments
7	6/26/2009	Siva	New Feature	Business	Apply for Permit		National Board Certification is not specified in Appendix A but provided as one of the License type in the JAD session	JAD Session 06/17/2009	Medium	
8	6/26/2009	Siva	New Feature	Technical	Maintain master data		School District data from CEPI's Educational Entity Master (EEM) system. Maintenance of school district is not mentioned in Appendix A	Weekly Status meeting 06/23/2009	Medium	
9	6/26/2009	Siva	New Feature	Business	Apply for Permit	4-01	The six different types of annual vocational authorization was provided in the JAD session but is not mentioned in Appendix A.	Documental on provided by OPPS	Very High	
10	6/30/2009	Siva	New Feature	Business	Apply for Certificate	4-18	The following application status is not mentioned in Appendix A : Draft, Submitted, Univ hold, Canceled, denied. These additional status are resulting in new business rules and system requirements	JAD Session for Apply for Certificate	Medium	Appendix A - 4-18 - mentions only the following status "pending payment", "pending evaluation", "approved", "pending additional information"
11	6/30/2009	Siva	New Feature	Business	Apply for Permit	4-24	The certificate status "Revoke" is not mentioned in Appendix A The permit Status "Rescinded" is not mentioned in Appendix A These additional status are resulting in new business rules and system requirements	JAD session for Apply for certificate / Permit	High	Appendix A 4-24 - mentions only the following status - valid, expired

This Change control request document is for addressing the change log items listed as above.

The following is a table of requirements (process flows) addressed under this CCR003.

Table 1:

	In-State Applicants (Application goes to TPI)
1	Provisional Certificate
2	Provisional 1st Renewal/Professional Ed Cert
3	Provisional 2nd Renewal/Professional Ed Cert
4	Professional Education Cert
5	Interim Occupational Certificate (IOC)
6	IOC 1st Renewal/Occupational Ed Cert

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- 7 | IOC 2nd Renewal/Occupational Ed Cert
- 8 | Occupational Ed Cert
- 9 | Preliminary School Psychologist Cert
- 10 | Preliminary School Psych Cert Renewal/School Psych Cert
- 11 | School Psychologist Cert
- 12 | Preliminary School Counselor Authorization
- 13 | School Counselor License
- 14 | School Administrator Certificate
- 15 | Additional Endorsement
- Out-of-State Applicants (Application goes to OPPS)**
- 16 | Provisional/Professional Education Certificate
- 17 | Provisional 1st Renewal/Professional Ed Cert
- 18 | Provisional 2nd Renewal/Professional Ed Cert
- 19 | Professional Education Certificate
- 20 | IOC/Occupational Education Cert
- 21 | IOC 1st Renewal/Occupational Ed Cert
- 22 | IOC 2nd Renewal/Occupational Ed Cert
- 23 | Occupational Education Certificate
- 24 | Preliminary School Psych Cert/School Psych Cert
- 25 | Preliminary School Psych Cert Renewal/School Psych Cert
- 26 | School Psychologist Cert
- 27 | School Counselor License
- 28 | School Administrator Certificate
- 29 | Additional Endorsement
- 30 | Reinstatement of Permanent/Cont Cert or Full Voc Auth
- 31 | Advanced Certificate Renewal (Prof Ed Cert, Occ Ed Cert, School Psychologist
Cert, School Counselor License, School Administrator Cert = 1 flow) - This is
for both Instate and outstate
- Permit/Annual Vocational Authorization Applications (Application
submitted by school district to OPPS)**
- 32 | Substitute Permit
- 33 | Full-Year Permit
- 34 | Full-Year Permit Renewal
- 35 | Emergency Permit
- 36 | Emergency Permit Renewal
- 37 | 1233(b) Permit
- 38 | 1233(b) Permit Renewal
- 39 | LLI (application submitted by school district to TPI)
- 40 | LLI Renewal (application submitted by school district to TPI)
- 41 | Initial Annual Vocational Authorization
- 42 | Initial Annual Vocational Authorization Renewal
- 43 | Day-to-Day Substitute Annual Vocational Authorization
- 44 | Long-Term Substitute Annual Vocational Authorization
- 45 | Less Than Class Size Annual Vocational Authorization
- 46 | Adult Education Annual Vocational Authorization
- 47 | Adult Education Annual Vocational Authorization Renewal
- 48 | Credit Track Annual Vocational Authorization
- School Nurse Certificate, Two-Year Provisional/IOC Extension, Third
Provisional Certificate/IOC Renewal**
 (Application submitted by individual to school district)

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49	Interim School Nurse Certificate
50	Renewal of Interim School Nurse Certificate
51	Standard School Nurse Certificate
52	Standard School Nurse Certificate 1st Renewal
53	Standard School Nurse Certificate 2nd Renewal
54	Professional School Nurse Certificate
55	Two-Year Provisional/IOC Extension
56	Third Renewal of Provisional Certificate/IOC

Impact of Not Implementing Proposed Change:

The impact of not implementing the proposed change is that the Online Teacher Certification System will not meet critical business requirements.

Alternatives:

There are no alternatives identified at this time.

C. Initial Review Results of the Change Request

Initial Review Date: 10/23/2009 Assigned to: STG

- Approve for Impact Analysis
- Reject
- Defer Until:

Reason:

D. Initial Impact Analysis

Baselines Affected:

The baseline scope defined in Appendix A of the Online Teacher Certification System contract is affected. Please refer to the original contract for Appendix A.

Per State request, the Transition, Maintenance and Support Services Completed – Milestone duration has been modified from 17 months to 5 months.

Configuration Items Affected:

The following "Milestone 3 - Development and Unit Test" deliverables will be updated to reflect the new requirements:

- Application Code components
- System Integration Test Cases

The following "Milestone 4a - System and Integration testing" deliverables will be updated to reflect the new requirements:

- Tested Application Code components
- Test Scripts/Test Data
- Testing Package
- Test Report (final)

The following "Milestone 4b – User Acceptance Testing Completed" deliverables will be updated to reflect the new requirements:

- Tested Application Code components
- Test Report (final)

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Cost / Schedule Impact Analysis Required?

Yes

No

Impact on Cost:

1. The cost table below provides the calculation for cost towards the extension of schedule by 61 business days and adding two senior programmer analysts for a period of 260 business days. STG has used the agreed upon hourly billing rates stated in section 1.601 of the contract.

Project Resource Plan				
	Total Days	Total Hours	Rate (per hour)	Tot Amount
Project Manager	61	488	\$125	\$61,000
Senior Enterprise Architect	61	488	\$115	\$56,120
Database Administrator	61	488	\$115	\$56,120
Senior Systems Analyst	61	488	\$95	\$46,360
Senior Programmer Analysts	61	488	\$85	\$41,480
Senior Programmer Analysts	61	488	\$85	\$41,480
Senior Programmer Analysts	260	2080	\$85	\$176,800
Senior Programmer Analysts	260	2080	\$85	\$176,800
Total				\$656,160

In order to preserve the schedule and cost impact specified above, State must accord its approval to this CCR on or before December 2nd, 2009 authorized through a Purchase Order Amendment from DMB. Any further delays in such approval may further impact the schedule and cost specified above.

Assumptions

1. The impact provided in this change control request is only for the completion of Application Development, System Testing activities and deliverables and User Acceptance Testing activities and deliverables for the new requirements and changes identified in the requirements change log attached to this document and the additional process flows identified in the background section (Table 1).
2. In accordance with the meeting regarding data migration held on 07/17/2009 with State (Refer STG Engagement Status report OTCS_Weekly Status Report_07172009.pdf) the following are changes to Data Migration scope and responsibilities:
 - a. State will be responsible for extracting and cleansing the L2K data and will load the same to a staging area in first normal form as defined in the Contract.

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- b. State will be responsible for resolving any issues identified as part of L2K and G-Link Data Migration Assessment (*L2K and G-Link Data Migration Assessment.xls*) document provided by State.
 - c. Data from Filemaker and G-link will also be migrated to the staging area by State
 - d. State will be responsible for providing incremental data from the existing legacy systems, during the period of the pilot run of the OTCS system. This incremental data will be the new data or existing data that was changed in the legacy system during the period of the pilot run of the new OTCS system. This incremental data will be made available in the staging area in first normal form (in the same format as initial load) as defined in the Contract.
 - e. State will make the data available in staging area for data-migration in accordance with the dependency dates identified in the project log and in accordance with the project schedule.
 - f. STG will be responsible for migrating data only from the staging area to the new data model of the OTCS system
3. This CCR also includes the updated estimates towards data migration activities based on the changes to data migration scope and responsibilities specified above. Therefore the original estimate of ninety two hours towards data migration has been factored into the estimate of this CCR and the net effect has been incorporated in this CCR.

Milestone " Milestone 3 - Development and Unit Test Completed " has been split into three delivery bundles due to expansion of scope with the following use cases.

Bundle 1:

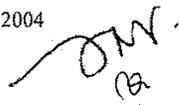
- UC_GF_01 - Manage Master Data.doc
- UC_GF_02 - Public Search.doc
- UC_SC_01 - Authentication.doc
- UC_SC_02 - Authorization.doc
- UC_AC_01 - Maintain Demographics.doc
- UC_SB_01 - Maintain SB-CEU Details.doc
- UC_AC_04 - Maintain Demographics by OPPS.doc

Bundle 2:

- UC_AC_02 - Apply For Certificate.doc
- UC_AC_06 - Apply For Occupational Certificate.doc
- UC_AC_10 - Apply For School Administrator.doc
- UC_AC_09 - Apply for 2 year provisional & IOC Extension.doc
- UC_AC_07 - Apply For Additional Endorsements.doc
- UC_AC_11 - Apply For School Counselor Certificate.doc
- UC_AC_13 - Apply For School Psychologist Certificate.doc
- UC_AC_12 - Apply for 3rd provisional & 3rd IOC renewal.doc
- UC_AC_14 - Apply For Nurse Certificate.doc
- UC_PA_04 - Upload Files and Print Certificates.doc

Bundle 3:

- UC_AC_03 - List Certificate
- UC_HM_01 - Home
- UC_AP_02 - Apply For Permit
- UC_AP_04 - Manage Permits
- UC_AP_03 - List Permit
- UC_EI_01 - Credential Data Exchange
- UC_PA_01 - Work list
- UC_AC_05 - Search Profile by TPI
- UC_AC_08 - Perform Action on Certificates
- UC_PA_02 OPPS Work list for out-of-state applicants
- UC_PA_04 - OPPS Work list for Conviction Review
- UC_PA_03 - TPI Work list for In-State applicants
- UC_HM_02 - Home Page for OPPS, TPI and School District
- UC_RP_01 - Reports
- UC_AP_05 - Apply For 1233B And Full-Year Permit

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- UC_AP_06 - Apply For Annual Vocational Authorizations
- UC_AP_07 - List Annual Vocational Authorization
- UC_PA_05 - School district Worklist for two year Prov and IOC
- UC_PA_06 - Certificate Correction
- UC_AP_08 - Apply for LLI
- UC_PA_07 - OPPS Worklist for Other Certificates
- UC_PA_08 - TPI Worklist for Other Certificates

Bundles 1, 2 and 3 are provided for milestone purpose only. Source Code deliverables delivered in these bundles will not be deployable to test/production environment since completed application components may use stubs to simulate components that have not yet been developed and will be developed in the upcoming milestones. These source code deliverables will be fully available with the completion of Bundle 3.

Please find the updated Payment Milestone Schedule in the table below.

Milestone/Deliverable Schedule/Pay Points	Original Payment Date (Business days from Start date of Project)	Original Payment (USD)	Revised Payment Date (Business days from Start date of Project)	Payment Per this CCR (USD)
Milestone 1 -Engagement Startup	5	\$16,500	5	\$16,500
Milestone 2a - Requirements Gathering and Functional Design Completed (Requirements Definition) (towards baseline scope)	55	\$165,005	55	\$165,005
Milestone 2a1 - Requirements Gathering and Functional Design Completed (Requirements Definition) -	90	\$126,000	90	\$126,000
Milestone 2b - System Design Completed	153	\$230,199	153	\$230,199
Milestone 3a - Bundle 1 Development and Unit Test Completed (Construction Phase)			213	\$350,000
Milestone 3b - Bundle 2 Development and Unit Test Completed (Construction Phase)			248	\$200,000
Milestone 3c - Bundle 3 Development and Unit Test Completed (Construction Phase)			278	\$214,313
Milestone 4a - System and Integration Testing Completed	288	\$187,585	338	\$524,945

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Milestone 4b - User Acceptance Testing Completed	332	\$206,343	393	\$206,343
Milestone 4c - Performance/Load Testing Completed	342	\$46,896	403	\$46,896
Milestone 5a - Deployment Completed	352	\$33,001	413	\$33,001
Milestone 5b - Pilot Completed	396	\$145,204	457	\$145,204
Milestone 5c - Full Rollout Completed	426	\$99,003	487	\$99,003
Milestone 6 - Warranty Completed	470	\$84,413	531	\$84,413
Transition, Maintenance and Support Services Completed (For a period of 5 consecutive months to be billed as \$19,950 per month for months 1, 2 and 3; months 4 and 5 will be provided free of charge (value \$39,900).)	827		635	Value: \$99,750 Less: Discount: \$39,900 Net Value: \$59,850
Total Contract Value		\$2,124,812		\$2,501,672

Impact on Schedule:

The "Milestone 3 - Development and Unit Test" will need to be extended by 30 business days, "Milestone 4 - System and Integration Testing" will need to be extended by 20 business days and "Milestone 4b - User Acceptance Testing Completed" will need to be extended by 11 business days.

1. Additional time to develop the application components for the new requirements described in the background section
2. Additional time to perform System Test of the application components for the new requirements described in the background section
3. Additional time to support User Acceptance testing and fix UAT defects for the new requirements described in the background section
4. Additional time to update deliverables listed in section D

The total impact to schedule towards the above will be 61 business days.

In addition, per State request, the Transition, Maintenance and Support Services Completed – Milestone duration has been modified from 17 months to 5 months.

Please find the updated Milestone Schedule in the table below:

Milestone/Deliverable Schedule/Pay Points	Deliverables	Per current Contract (Business days from Start date of Project)	Date of Completion of the Milestone (As per Contract & CCR-002)	Per this Change Control (Business days from the Start date of the project)	Estimated Revised Date of Completion of the Milestone (As per CCR-003)
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<p>Milestone 1 - Engagement Startup (Initiation and Planning)</p>	<ul style="list-style-type: none"> • Project Plan • Work Breakdown Structure • Project Schedule • Risk Management Plan • Quality Plan • Communication Plan • Change Management Plan • Issue Management Plan • Security Plan (initial) • Software Configuration Plan (initial) • Maintenance Plan (initial) • Project Planning Transition checklist • CEASAR criteria • Dependencies List 	5	6/5/2009	5	6/5/2009
<p>Milestone 2a - Requirements Gathering and Functional Design Completed (Requirements Definition)</p>	<ul style="list-style-type: none"> • Use Case documents • UI Prototype screens 	55	8/24/2009	55	8/24/2009
<p>Milestone 2a1 - Requirements Gathering and Functional Design Completed (Requirements Definition)</p>	<ul style="list-style-type: none"> • Business Requirements Document • Use Case Model • Use Case documents • UI Prototype screens • EA Solution Assessment • Infrastructure Service Request • Logical Data Model • Requirement Traceability Matrix (initial) • Requirements Management Checklist • Functional Design Document • Technical Requirements document 	90	10/14/2009	90	10/14/2009

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Milestone 2b - System Design Completed	<ul style="list-style-type: none"> • System Design Document • Physical Data Model • Data Conversion Plan (Initial) • Test Plan • Test Reports (initial) • System Design Checklist • Software Testing Checklist • Software Configuration Management Plan (final) 	153	1/21/2010	153	1/21/2010
Milestone 3a – Bundle 1 Development and Unit Test Completed (Construction Phase)	<ul style="list-style-type: none"> • Application Code components 			213	04/16/2010
Milestone 3b – Bundle 2 Development and Unit Test Completed (Construction Phase)	<ul style="list-style-type: none"> • Application Code components 			248	06/07/2010
Milestone 3c – Bundle 3 Development and Unit Test Completed (Construction Phase)	<ul style="list-style-type: none"> • Application Code components • Data Migration output Data • System Integration Test Cases • Test Reports (updated) • Transition Plan (initial) • Installation Plan (initial) • Training Plan • Training Checklist 	248	6/7/2010	278	7/20/2010
Milestone 4a - System and Integration Testing Completed	<ul style="list-style-type: none"> • Tested Application Code components • Test Scripts/Test Data • Testing Package • Test Report (final) 	288	8/3/2010	338	10/13/2010
Milestone 4b - User Acceptance Testing Completed	<ul style="list-style-type: none"> • Tested Application Code components • Test Report (final) 	332	10/5/2010	393	1/7/2011
Milestone 4c - Performance/Load Testing Completed	<ul style="list-style-type: none"> • Test Report (final) • Installation Plan (final) • Training Plan (final) • Requirements Traceability Matrix (final) 	342	10/19/2010	403	1/24/2011

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Milestone 5a - Deployment Completed	<ul style="list-style-type: none"> User Manual Installation Manual Operations Manual Deployed Application Code Post Implementation Evaluation Report (Deployment) 	352	11/2/2010	413	2/7/2011
Milestone 5b - Pilot Completed	<ul style="list-style-type: none"> Post Implementation Evaluation Report (Pilot) Training Training Manual 	396	1/12/2011	457	4/11/2011
Milestone 5c - Full Rollout Completed	<ul style="list-style-type: none"> Data Conversion Plan (final) Knowledge Transfer Sessions Maintenance Plan (final) Transition Plan (final) Security Plan (final) Post Implementation Evaluation Report (Full Rollout) 	426	2/25/2011	487	5/23/2011
Milestone 6 - Warranty Completed	<ul style="list-style-type: none"> Warranty Defects log with list and status of defects 	470	4/28/2011	531	7/26/2011
Transition, Maintenance and Support Services Completed	<p>After conclusion of warranty period as specified in the schedule above, State will pay contractor a sum of \$19,950 for each month for 3 consecutive months. This is towards one full time equivalent resource to be assigned by Contractor onsite at State's facilities towards the above Transition and Maintenance and Support services. This amount will not be subject to any hold back.</p> <p>After 3 consecutive months, STG will provide one full time equivalent resource for a period of 2 consecutive months without any charges to the State.</p>	827	9/28/2012	635	12/25/2011

Impact on Resources:

The STG Project resources working on the "Milestone 3 - Development and Unit Test" will be extended by 30 business days, "Milestone 4 - System and Integration Testing" will be extended by 20 business days and "Milestone 4b - User Acceptance Testing Completed" will need to be extended by 11 business days.. In addition to the above, two additional Senior Programmer Analysts will be added for a period of 260 business days. Please refer to impact on Cost section for the list of resources.

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Final Review Results:

The STG Project resources working on the "Milestone 3 - Development and Unit Test" will be extended by 30 business days, "Milestone 4 - System and Integration Testing" will be extended by 20 business days and "Milestone 4b - User Acceptance Testing Completed" will need to be extended by 11 business days.

Two senior programmer analysts will be added to the team for a period of 260 business days in order to address the Application Development till deployment for the new and changed requirements identified in the Requirements Change Log and the additional process flows (Ref Table 1) identified in the background section.

Review Date: 10/20/2009

Classification: HIGH MEDIUM LOW

E. Impact Analysis Results

Specific Requirements Definition:

Please refer to the requirements change log attached in section B

Resource Requirements	Work Days	Cost (in US Dollars)
Project Manager	61	\$61,000
Senior Enterprise Architect	61	\$56,120
Database Administrator	61	\$56,120
Senior Systems Analyst	61	\$46,360
Senior Programmer Analysts	61	\$41,480
Senior Programmer Analysts	61	\$41,480
Senior Programmer Analysts	260	\$176,800
Senior Programmer Analysts	260	\$176,800
Total		\$656,160

Impact of Not Implementing the Change:

The impact of not implementing the proposed change is that the Online Teacher Certification system will not meet critical business requirements

Alternatives to the Proposed Change:

There are no alternatives identified at this time.

Final Recommendation:

The STG Project resources working on the "Milestone 3 - Development and Unit Test" will be extended by 30 business days, "Milestone 4 - System and Integration Testing" will be extended by 20 business days, "Milestone 4b - User Acceptance Testing Completed" will need to be extended by 11 business days and two senior programmer analysts will be added for a period of 260 business days in order to address the new and changed requirements identified in the Requirements Change Log and the additional process flows (Ref Table 1) identified in the background section.

F. Signatures

Governance Body:

Name/Title	Signature	Date
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Flora Jenkins, MDE OPSS Project Sponsor	<i>Flora Jenkins</i> <i>Flora Jenkins</i>	12/11/09
Glenn Gorton, MDIT Agency Services CSD	<i>Glenn Gorton</i>	12/11/09
Mohamed Peeran, MDIT Project Manager	<i>M. Peeran</i>	12/11/2009
Shanta Santaprakash, STG GSD Delivery Executive	<i>Shanta Santaprakash</i>	12/10/2009
Siva Ramanathan, STG Project Manager	<i>Siva Ramanathan</i>	12/11/2009

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

November 4, 2009

CHANGE NOTICE NO. 2
TO
CONTRACT NO. 071B9200198
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR Systems Technology Group, Inc. (STG) 3155 W. Big Beaver Road, Suite 220 Troy, Michigan 48084-3007 Attention: Ms. Mona Aggarwal, VP Finance Email: apopat@stgit.com	TELEPHONE (248) 643-9010
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-3215 Steve Motz
Contract Compliance Inspector: Ann Lindberg Online Teacher Certification System	
CONTRACT PERIOD: 3 yrs. + 5 one-year options From: April 20, 2009 To: July 30, 2012	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	
MISCELLANEOUS INFORMATION:	

NATURE OF CHANGE (S):

Effective immediately this contract is hereby **INCREASED** by \$100,800.00 per the attached Change Control Request (CCR) 002, to include additional funding for additional time to complete Milestone 2b – “System Design Completed”. All other terms, conditions, specifications, and pricing remain the same.

The original Ad Board approval for this project was in the amount of \$2,376,812.00. However, after contract negotiations, the value of the base contract awarded to Systems Technology Group (STG) was \$1,898,012.00. From the balance of \$478,800.00, \$126,000.00 was used towards CN 1 and \$100,800.00 was used towards CN 2. There is \$252,000.00 left in the original Ad Board approval which will be used for future enhancements.

AUTHORITY/REASON:

Per Contractor and MDIT agreement and Administrative Board Approval on 12/16/2008.

INCREASE: \$100,800.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$2,124,812.00

**State of Michigan
Online Teacher Certification System
Change Control Request**

A. General Information

Information to be provided in this section is general in nature and provides the necessary information about the organization of the project and project participants.

Project ID/Acronym:	OTCS	Date:	09/09/2009
Controlling Agency:	Department of Education	Modification Date:	
Prepared by:	Siva Ramanathan, STG Project Manager	Control Number (From Control Log)	CCR-002

B. Requestor Information

Proposed Change Description and References:

The requestor will provide information concerning the requested change along with any supporting documentation.

Background

The purpose of this Change Control Request is to extend the schedule for "Milestone 2b – System Design Completed" to address the new requirements and changes to the baseline requirements (Appendix A of the contract) identified during the "Milestone 2a – Requirements Gathering and Functional Design Completed" stage.

STG has documented the new and changed requirements in the below change log. The below change log records the changes identified during the JAD sessions.

Req. #	Logged Date	Logged By	Change Type	Requirement Type	Associated Use Case	Appendix A Ref	Description	Source	Impact	Comments
1	6/26/2009	Siva	Requirements change	Business	Apply for Certificate / Permit	2-09, 2-22, 1-03, 1-04	Business rules for applicant eligibility for certificate / permit and renewal is not described in detail in Appendix A. The requirements with respect to the various process flows (approx 55) and the business rules are not mentioned in Appendix A.	JAD session for Apply for certificate / Permit	Very High	Since uploading of roster functionality was removed by OPPS, all the questions, validation and business rules for each type of certificate and renewal is moved to the application process which has increased the complexity significantly.

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2	6/26/2009	Siva	Requirements change	Business	Apply for Certificate	1-02 1-03 1-04	The requirement in Appendix A specifies TPI's recommending in-state applicants for teacher certification thru rosters. The appendix A does not specify in-state applicants starting the application process. Only out-of-state applicants starts the application process. In-state applicants only renew the certificates.	JAD Session for Apply for Certificate	Very High	
3	6/26/2009	Siva	New Feature	Business	Apply for Certificate		The following teaching certificate is not mentioned in Appendix A: Temporary Teacher employment Authorization Two Year provisional extension Professional Temporary Teacher Employment Authorization Occupational (vocational) certificate	JAD Session for Apply for Certificate	High	
4	6/26/2009	Siva	New Feature	Business	Apply for Permit	1-05, 4-01	Permit type 1233B, Full-Year Permit, Limited License to Instruct (LLI) are not specified in Appendix A	JAD Session 06/25/2009	Very High	Permit type 1233B and renewal flow was discussed on 06/25/2009
5	6/26/2009	Siva	Requirements change	Business	Apply for Permit	4/24	4-24 of Appendix A mentions word "renews" for certificate / permit, but does not specify the need for various types of permit renewals with different business rules.	JAD Session 06/25/2009	Very High	Substitute permit renewal was covered on 06/25/2009. Emergency Permit renewal flow was discussed on 06/25/2009
6	6/26/2009	Siva	New Feature	Business	Apply for Permit	2-16, 3-08, 4-34	Reminder email for payment to applicants before 2 weeks of Rescinded status must be sent to both the applicants and school districts. This is not mentioned in Appendix A	JAD Session 06/25/2009	Medium	Email functionality is requested in Appendix A only for the following functions 2-16 - Reminder email for certificate renewal 3-08 - Pay Fee 4-34 - OPFS user sends email to applicant, TPI and school district
7	6/26/2009	Siva	New Feature	Business	Apply for Permit		National Board Certification is not specified in Appendix A but provided as one of the License type in the JAD session	JAD Session 06/17/2009	Medium	
8	8/28/2009	Siva	New Feature	Technical	Maintain master data		School District data from CEPI's Educational Entity Master (EEM) system. Maintenance of school district is not mentioned in Appendix A	Weekly Status meeting 06/23/2009	Medium	

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9	6/26/2009	Siva	New Feature	Business	Apply for Permit	4-01	The six different types of annual vocational authorization was provided in the JAD session but is not mentioned in Appendix A.	Documentation provided by OPPS	Very High	
10	6/30/2009	Siva	New Feature	Business	Apply for Certificate	4-18	The following application status is not mentioned in Appendix A : Draft, Submitted, Univ hold, Canceled, denied. These additional statuses are resulting in new business rules and system requirements	JAD Session for Apply for Certificate	Medium	Appendix A - 4-18 - mentions only the following statuses "pending payment", "pending evaluation", "approved", "pending additional information"
11	6/30/2009	Siva	New Feature	Business	Apply for Permit	4-24	The certificate status "Revoke" is not mentioned in Appendix A The permit Status "Rescinded" is not mentioned in Appendix A These additional statuses are resulting in new business rules and system requirements	JAD session for Apply for certificate / Permit	High	Appendix A 4-24 - mentions only the following statuses - valid, expired

This Change control request document is for addressing the change log items listed in the document attached above.

The following is a table of requirements (process flows) addressed under this CCR002.

Table 1:

	In-State Applicants (Application goes to TPI)
1	Provisional Certificate
2	Provisional 1st Renewal/Professional Ed Cert
3	Provisional 2nd Renewal/Professional Ed Cert
4	Professional Education Cert
5	Interim Occupational Certificate (IOC)
6	IOC 1st Renewal/Occupational Ed Cert
7	IOC 2nd Renewal/Occupational Ed Cert
8	Occupational Ed Cert
9	Preliminary School Psychologist Cert
10	Preliminary School Psych Cert Renewal/School Psych Cert
11	School Psychologist Cert
12	Preliminary School Counselor Authorization
13	School Counselor License
14	School Administrator Certificate
15	Additional Endorsement
	Out-of-State Applicants (Application goes to OPPS)
16	Provisional/Professional Education Certificate
17	Provisional 1st Renewal/Professional Ed Cert
18	Provisional 2nd Renewal/Professional Ed Cert
19	Professional Education Certificate
20	IOC/Occupational Education Cert
21	IOC 1st Renewal/Occupational Ed Cert
22	IOC 2nd Renewal/Occupational Ed Cert
23	Occupational Education Certificate
24	Preliminary School Psych Cert/School Psych Cert
25	Preliminary School Psych Cert Renewal/School Psych Cert

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26	School Psychologist Cert
27	School Counselor License
28	School Administrator Certificate
29	Additional Endorsement
30	Reinstatement of Permanent/Cont Cert or Full Voc Auth
31	Advanced Certificate Renewal (Prof Ed Cert, Occ Ed Cert, School Psychologist Cert, School Counselor License, School Administrator Cert = 1 flow) - This is for both Instate and outstate <u>Permit/Annual Vocational Authorization Applications</u> (Application submitted by school district to OPPS)
32	Substitute Permit
33	Full-Year Permit
34	Full-Year Permit Renewal
35	Emergency Permit
36	Emergency Permit Renewal
37	1233(b) Permit
38	1233(b) Permit Renewal
39	LLI (application submitted by school district to TPI)
40	LLI Renewal (application submitted by school district to TPI)
41	Initial Annual Vocational Authorization
42	Initial Annual Vocational Authorization Renewal
43	Day-to-Day Substitute Annual Vocational Authorization
44	Long-Term Substitute Annual Vocational Authorization
45	Less Than Class Size Annual Vocational Authorization
46	Adult Education Annual Vocational Authorization
47	Adult Education Annual Vocational Authorization Renewal
48	Credit Track Annual Vocational Authorization <u>School Nurse Certificate, Two-Year Provisional/IOC Extension, Third Provisional Certificate/IOC Renewal</u> (Application submitted by individual to school district)
49	Interim School Nurse Certificate
50	Renewal of Interim School Nurse Certificate
51	Standard School Nurse Certificate
52	Standard School Nurse Certificate 1st Renewal
53	Standard School Nurse Certificate 2nd Renewal
54	Professional School Nurse Certificate
55	Two-Year Provisional/IOC Extension
56	Third Renewal of Provisional Certificate/IOC

Impact of Not Implementing Proposed Change:

The impact of not implementing the proposed change is that the Online Teacher Certification System will not meet critical business requirements

Alternatives:

There are no alternatives identified at this time.

C. Initial Review Results of the Change Request

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Initial Review Date: 09/08/2009

Assigned to: STG

- Approve for Impact Analysis
 Reject
 Defer Until:

Reason:

D. Initial Impact Analysis

Baselines Affected:

The baseline scope defined in Appendix A of the Online Teacher Certification System contract is affected. Please refer to the contract for Appendix A.

Configuration Items Affected:

The following "Milestone 2b – System Design Completed" deliverables will be updated:

- System Design Document
- Physical Data Model
- Data Conversion Plan
- Requirement Traceability Matrix

Cost / Schedule Impact Analysis Required? Yes No

Impact on Cost:

1. The cost table below provides the calculation for cost towards the extension of schedule by 28 business days. STG has used the agreed upon hourly billing rates stated in section 1.601 of the contract.

Project Resource Plan				
	Requirements (business days)	Total Hours	Rate (per hour)**	Tot Amount
Project Manager	28	224	\$125	\$28,000
Senior Enterprise Architect	28	224	\$115	\$25,760
Database Administrator	28	224	\$115	\$25,760
Senior Systems Analyst	28	224	\$95	\$21,280
Total		896		\$100,800

In order to preserve the schedule and cost impact specified above, State must accord its approval to this CCR on or before 09/30/2009 authorized through a Purchase Order Amendment from DMB. Any further delays in such approval may further impact the schedule and cost specified above.

Assumptions

1. The impact provided in this change control request is only for the new requirements and changes identified in the requirements change log attached to this document and the additional process flows identified in the background section (Table 1).
2. If new requirements and/or further changes to existing requirements are identified in the upcoming JAD sessions or during the State Review and approval process, STG will assess the impact of those changes in a separate CCR.
3. The impact to Development, Testing and Deployment activities for the new and changed requirements specified in this CCR will be provided in CCR-003

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Please find the updated Payment Milestone Schedule in the table below:

Milestone/Deliverable Schedule/Pay Points	Original Payment Date (Business days from Start date of Project)	Original Payment (USD)	Revised Payment Date Per this CCR (Business days from Start date of Project)	Payment Per this CCR (USD)
Milestone 1 -Engagement Startup	5	\$16,500	5	\$16,500
Milestone 2a - Requirements Gathering and Functional Design Completed (Requirements Definition) (towards baseline scope)	55	\$165,005	55	\$165,005
Milestone 2a1 - Requirements Gathering and Functional Design Completed (Requirements Definition) –	90	\$126,000	90	\$126,000
Milestone 2b - System Design Completed	125	\$129,399	153	\$230,199
Milestone 3 - Development and Unit Test Completed (Construction Phase)	220	\$445,513	248	\$445,513
Milestone 4a - System and integration Testing Completed	260	\$187,585	288	\$187,585
Milestone 4b - User Acceptance Testing Completed	304	\$206,343	332	\$206,343
Milestone 4c - Performance/Load Testing Completed	314	\$46,896	342	\$46,896
Milestone 5a - Deployment Completed	324	\$33,001	352	\$33,001
Milestone 5b - Pilot Completed	368	\$145,204	396	\$145,204
Milestone 5c - Full Rollout Completed	398	\$99,003	426	\$99,003
Milestone 6 - Warranty Completed	442	\$84,413	470	\$84,413
Transition , Maintenance and Support Services Completed	799	\$339,150	827	\$339,150
Total Contract Value		\$2,024,012		\$2,124,812

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Impact on Schedule:

The "Milestone 2b – System Design Completed" will be extended by 28 business days towards the following:

1. Additional time to develop the System design for the new requirements described in the background section
2. Additional time to update the new requirements and changed requirements in the Physical Data Model, Data Migration Plan, Requirements Traceability Matrix
3. Additional Time needed to conduct STG internal reviews before submission to State
4. Additional time towards State Review sessions for new and changed requirements and potential rework effort to address review feedback.

The total impact to schedule towards the above will be 28 business days.

Please find the updated Milestone Schedule in the table below:

Milestone/Deliverable Schedule/Pay Points	Deliverables	Per current Contract (Business days from Start date of Project)	Date of Completion of the Milestone (As per Contract)	Per this Change Control (Business days from the Start date of the project)	Revised Date of Completion of the Milestone (As per CCR-002)
Milestone 1 - Engagement Startup (<u>Initiation and Planning</u>)	<ul style="list-style-type: none"> • Project Plan • Work Breakdown Structure • Project Schedule • Risk Management Plan • Quality Plan • Communication Plan • Change Management Plan • Issue Management Plan • Security Plan (initial) • Software Configuration Plan (initial) • Maintenance Plan (initial) • Project Planning Transition checklist • CEASAR criteria • Dependencies List 	5	06/05/2009	5	6/5/2009
Milestone 2a - Requirements Gathering and Functional Design Completed (<u>Requirements Definition</u>)	<ul style="list-style-type: none"> • Use Case documents • UI Prototype screens 	55	08/24/2009	55	8/24/2009

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Milestone 2a1 - Requirements Gathering and Functional Design Completed (Requirements Definition)	<ul style="list-style-type: none"> • Business Requirements Document • Use Case Model • Use Case documents • UI Prototype screens • EA Solution Assessment • Infrastructure Service Request • Logical Data Model • Requirement Traceability Matrix (initial) • Requirements Management Checklist • Functional Design Document • Technical Requirements document 	90	10/14/2009	90	10/14/2009
Milestone 2b - System Design Completed	<ul style="list-style-type: none"> • System Design Document • Physical Data Model • Data Conversion Plan (Initial) • Test Plan • Test Reports (initial) • System Design Checklist • Software Testing Checklist • Software Configuration Management Plan (final) 	125	12/07/2009	153	1/21/2010
Milestone 3 - Development and Unit Test Completed (Construction Phase)	<ul style="list-style-type: none"> • Application Code components • Data Migration output Data • System Integration Test Cases • Test Reports (updated) • Transition Plan (initial) • Installation Plan (Initial) • Training Plan • Training Checklist 	220	4/27/2010	248	6/7/2010
Milestone 4a - System and Integration Testing Completed	<ul style="list-style-type: none"> • Tested Application Code components • Test Scripts/Test Data • Testing Package • Test Report (final) 	260	06/23/2010	288	8/3/2010
Milestone 4b - User Acceptance Testing Completed	<ul style="list-style-type: none"> • Tested Application Code components • Test Report (final) 	304	08/25/2010	332	10/5/2010

RS M-D

Milestone 4c - Performance/Load Testing Completed	<ul style="list-style-type: none"> • Test Report (final) • Installation Plan (final) • Training Plan (final) • Requirements Traceability Matrix (final) 	314	09/09/2010	342	10/19/2010
Milestone 5a - Deployment Completed	<ul style="list-style-type: none"> • User Manual • Installation Manual • Operations Manual • Deployed Application Code • Post Implementation Evaluation Report (Deployment) 	324	09/23/2010	352	11/2/2010
Milestone 5b - Pilot Completed	<ul style="list-style-type: none"> • Post Implementation Evaluation Report (Pilot) • Training • Training Manual 	368	11/29/2010	396	1/12/2011
Milestone 5c - Full Rollout Completed	<ul style="list-style-type: none"> • Data Conversion Plan (final) • Knowledge Transfer Sessions • Maintenance Plan (final) • Transition Plan (final) • Security Plan (final) • Post Implementation Evaluation Report (Full Rollout) 	398	01/14/2011	426	2/25/2011
Milestone 6 - Warranty Completed	<ul style="list-style-type: none"> • Warranty Defects log with list and status of defects 	442	03/17/2011	470	4/28/2011
Transition, Maintenance and Support Services Completed	<p>After conclusion of warranty period as specified in the schedule above, State will pay contractor a sum of \$19,950 for each month for 17 months. This is towards one full time equivalent resource to be assigned by Contractor onsite at State's facilities towards the above Transition and Maintenance and Support services. This amount will not be subject to any hold back.</p>	799	07/30/2012	827	9/28/2012

Impact on Resources:

The STG Project resources working on the "Milestone 2b – System Design Completed" will be extended by 28 business days. Please refer to impact on Cost section for the list of resources.

Final Review Results:

RS M-J

The "Milestone 2b – System Design Completed" will need to be extended by 28 business days in order to address the System Design of the new and changed requirements identified in the attached Requirements Change Log and the additional process flows (Ref Table 1) identified in the background section.

Review Date: 09/08/2009

Classification: HIGH MEDIUM LOW

E. Impact Analysis Results

Specific Requirements Definition:

Please refer to the requirements change log attached in section B

Resource Requirements	Work Days	Cost (in US Dollars)
Project Manager	28	\$28,000
Senior Enterprise Architect	28	\$25,760
Database Administrator	28	\$25,760
Senior Systems Analyst	28	\$21,280
Total	28	\$100,800

Impact of Not Implementing the Change:

The impact of not implementing the proposed change is that the Online Teacher Certification system will not meet critical business requirements

Alternatives to the Proposed Change:

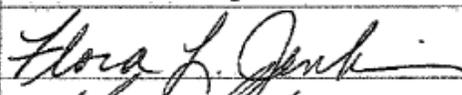
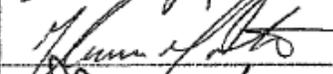
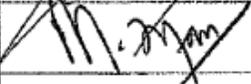
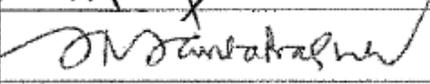
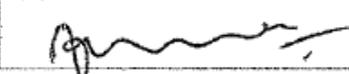
There are no alternatives identified at this time.

Final Recommendation:

The "Milestone 2b – System Design Completed" will need to be extended by 28 business days in order to address the new and changed requirements identified in the attached Requirements Change Log and the additional process flows (Ref Table 1) identified in the background section.

F. Signatures

Governance Body:

Name/Title	Signature	Date
Flora Jenkins, MDE OPSS Project Sponsor		9/12/09
Glenn Gorton, MDIT Agency Services CSD		9/10/09
Mohamed Peoran, MDIT Project Manager		9/10/2009
Shanta Santaprakash, STG GSD Delivery Executive		9/10/09
Siva Ramanathan, STG Project Manager		09/10/2009

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

August 31, 2009

CHANGE NOTICE NO. 1
TO
CONTRACT NO. 071B9200198
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR Systems Technology Group, Inc. (STG) 3155 W. Big Beaver Road, Suite 220 Troy, Michigan 48084-3007 Attention: Ms. Mona Aggarwal, VP Finance Email: apopat@stgit.com	TELEPHONE (248) 643-9010
	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-3215 Steve Motz
Contract Compliance Inspector: Ann Lindberg Online Teacher Certification System	
CONTRACT PERIOD: 3 yrs. + 5 one-year options From: April 20, 2009 To: July 30, 2012	
TERMS N/A	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS N/A	
MISCELLANEOUS INFORMATION:	

NATURE OF CHANGE (S):

Effective immediately this contract is hereby **INCREASED** by \$126,000.00 per the attached Change Control Request (CCR) 001, to include additional funding for additional time to complete Milestone 2a – “Requirements Gathering and Functional Design Completed”. Two months of the first option to extend on this contract are being used to change the contract end date to July 30, 2012. All other terms, conditions, specifications, and pricing remain the same.

AUTHORITY/REASON:

Per Contractor and MDIT agreement and Administrative Board Approval on 12/16/2008.

INCREASE: \$126,000.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: \$2,024,012

**State of Michigan
Online Teacher Certification System
Change Control Request**

A. General Information

Information to be provided in this section is general in nature and provides the necessary information about the organization of the project and project participants.

Project ID/Acronym:	OTCS	Date:	07/20/2009
Controlling Agency:	Department of Education	Modification Date:	07/28/2009
Prepared by:	Siva Ramanathan, STG Project Manager	Control Number (From Control Log)	CCR-001

B. Requestor Information

Proposed Change Description and References:

The requestor will provide information concerning the requested change along with any supporting documentation.

Background

The purpose of this Change Control Request is to extend the schedule for "Milestone 2a - Requirements Gathering and Functional Design Completed" to address the new requirements and changes to the baseline requirements (Appendix A of the contract) identified during the JAD sessions conducted up to 06/29/2009.

STG has documented the changes to Appendix A requirements and analyzed the same with the State. To minimize the impact of Scope changes, MDE/OPPS prioritized the different Process flows. The tables below (table 1 & table 2) illustrate the details of the prioritization and the complexity of the 52 process flows prepared by MDE/OPPS..

STG has documented the new and changed requirements in the attached change log. The attached change log records the changes identified till the 06/29/2009 JAD session.

#	Logged Date	Logged By	Change Type	Requirement Type	Affected Use Case	Appendix A Ref	Description	Source	Impact	Comments
1	6/26/2009	Siva	Requirements change	Business	Apply for Certificate / Permit	2-09, 2-22, 1-03, 1-04	Business rules for applicant eligibility for certificate / permit and renewal is not described in detail in Appendix A. The requirements with respect to the various process flows (approx 55) and the business rules are not mentioned in Appendix A	JAD session for Apply for certificate / Permit	Very High	Since uploading of roster functionality was removed by OPSS, all the questions, validation and business rules for each type of certificate and renewal is moved to the application process which has increased the complexity significantly.
2	6/26/2009	Siva	Requirements change	Business	Apply for Certificate	1-02, 1-03, 1-04	The requirement in Appendix A specifies TPI's recommending in-state applicants for teacher certification thru rosters. The appendix A does not specify in-state applicants starting the application process. Only out-of-state applicants starts the applicatio	JAD Session for Apply for Certificate	Very High	
3	6/26/2009	Siva	New Feature	Business	Apply for Certificate		The following teaching certificate is not mentioned in Appendix A: Temporary Teacher employment Authorization Two Year provisional extension Professional Temporary Teacher Employment Authorization Occupational (vocational) certificate	JAD Session for Apply for Certificate	High	
4	6/26/2009	Siva	New Feature	Business	Apply for Permit	1-05, 4-01	Permit type 1233B, Full-Year Permit, Limited License to Instruct (LLI) are not specified in Appendix A	JAD Session 06/25/2009	Very High	Permit type 1233B and renewal flow was discussed on 06/25/2009
5	6/26/2009	Siva	Requirements change	Business	Apply for Permit	4/24	4-24 of Appendix A mentions word "renews" for certificate / permit, but does not specify the need for various types of permit renewals with different business rules.	JAD Session 06/25/2009	Very High	Substitute permit renewal was covered on 06/25/2009; Emergency Permit renewal flow was discussed on 06/25/2009
6	6/26/2009	Siva	New Feature	Business	Apply for Permit	2-16, 3-08, 4-34	Reminder email for payment to applicants before 2 weeks of Rescinded status must be sent to both the applicants and school districts. This is not mentioned in Appendix A	JAD Session 06/25/2009	Medium	Email functionality is requested in Appendix A only for the following functions 2-16 - Reminder email for certificate renewal 3-08 - Pay Fee 4-34 - OPSS user sends email to applicant, TPI and school district
7	6/26/2009	Siva	New Feature	Business	Apply for Permit		National Board Certification is not specified in Appendix A but provided as one of the License type in the JAD session	JAD Session 06/17/2009	Medium	
8	6/26/2009	Siva	New Feature	Technical	Maintain master data		School District data from CEPI's Educational Entity Master (EEM) system. Maintenance of school district is not mentioned in Appendix A	Weekly Status meeting 06/23/2009	Medium	
9	6/26/2009	Siva	New Feature	Business	Apply for Permit	4-01	The six different types of annual vocational authorization was provided in the JAD session but is not mentioned in Appendix A.	Documentaion provided by OPSS	Very High	
10	6/30/2009	Siva	New Feature	Business	Apply for Certificate	4-18	The following application status is not mentioned in Appendix A : Draft, Submitted, Univ hold, Canceled, denied. These additional statusus are resulting in new business rules and system requirements	JAD Session for Apply for Certificate	Medium	Appendix A - 4-18 - mentions only the following statusus "pending payment", "pending evaluation", "approved", "pending additional information"
11	6/30/2009	Siva	New Feature	Business	Apply for Permit	4-24	The certificate status "Revoke" is not mentioned in Appendix A The permit Status "Rescinded" is not mentioned in Appendix A These additional statusus are resulting in new business rules and system requirements	JAD session for Apply for certificate / Permit	High	Appendix A 4-24 - mentions only the following statusus - valid, expired

This Change control request document is for addressing the change log items listed in the document attached above.

The change log items 1,2,3,4,5,6,7,9,10 and11 cover the process flow items mentioned in Table 1 and Table 2 as above.

Table 1:

No	Description	No of Flows
1	Total Number of process flows for Certificates and Permits	52
2	Total number of high priority flows	32
3	Total number of low priority flows	20
4	Number of high priority flows completed in JAD sessions till 7/21/2009	10
5	Number of low priority process flows completed in JAD sessions 7/21/2009	2
6	Number of high priority process flows remaining	22
7	Number of low priority process flows remaining	18

Table 2:

**Online Teacher Certification System (OTCS) - Prioritization of Flow Charts (Certificates & Permits)
Prepared on 7/14/09**

		Priorit y	Flow Charts Comple ted by OPPS	Flow Charts Covered by STG in JAD sessions	Notes	Appl y Proc ess	TPI / school district Process	Convicti on Process	OPPS Process
	5 = Very High priority; Must be completely automated = 33 flows; By combining some flows this will come down to 30 flows 4 = High priority; Should be completely automated = 02 2 = Low priority; Data need go into the system = 20 flows; * Data can be uploaded through a roster with edits; ** Data can be uploaded by filling an online application form 1 = Very Low priority; Don't need it =1 flow								
	<u>In-State Applicants (Application goes to TPI)</u>					Complexity			
1	Provisional Certificate	5	Yes-1	Yes-1		3	3	1	0
2	Provisional 1st Renewal/Professional Ed Cert	5	Yes-2	Yes-2		5	3	1	0
3	Provisional 2nd Renewal/Professional Ed Cert	5	Yes-3	Yes-3		5	3	1	0

4	Professional Education Cert	5	Yes-4	Yes-4		3	3	1	0
5	Interim Occupational Certificate (IOC) IOC 1st	5	No-1	No-1		3	3	1	0
6	Renewal/Occupational Ed Cert IOC 2nd	5	No-2	No-2		5	3	1	0
7	Renewal/Occupational Ed Cert	5	No-3	No-3		5	3	1	0
8	Occupational Ed Cert	5	No-4	No-4		3	3	1	0
9	Preliminary School Psychologist Cert	2	No	No	*				0
10	Preliminary School Psych Cert	2	No	No	*				0
11	Renewal/School Psychologist Cert	2	No	No	*				0
12	Preliminary School Counselor Authorization	2	No	No	*				0
13	School Counselor License	2	No	No	*				0
14	School Administrator Certificate	4	No	No		2	2	1	0
15	Additional Endorsement	5	No-5	No-5		2	2	1	0
<u>Out-of-State Applicants (Application goes to OPPS)</u>									
16	Provisional/Professional Education Certificate	5	Yes-5	Yes-5		5	0	1	5
17	Provisional 1st Renewal/Professional Ed Cert	5	Yes-6	Yes-6		5	0	1	5
18	Provisional 2nd Renewal/Professional Ed Cert	5	Yes-7	Yes-7		5	0	1	5
19	Professional Education Certificate	5	Yes-8	Yes-8		3	0	1	3
20	IOC/Occupational Education Cert	5	No-6	No-6		5	0	1	5
21	IOC 1st Renewal/Occupational Ed Cert	5	No-7	No-7		5	0	1	5
22	IOC 2nd Renewal/Occupational Ed Cert	5	No-8	No-8		5	0	1	5
23	Occupational Education Certificate	5	No-9	No-9		3	0	1	3
24	Preliminary School Psych Cert	2	No	No	**				
25	Preliminary School Psych Cert	2	No	No	**				
26	Renewal/School Psychologist Cert	2	No	No	**				

27	School Counselor License	2	No	No	**				
28	School Administrator Certificate	4	No	No		2	0	1	2
29	Additional Endorsement	5	No-10	No-10		2	0	1	2
30	Reinstatement of Permanent/Cont Cert or Full Voc Auth	1	No	No	This will be removed				
31	Advanced Certificate Renewal (Prof Ed Cert, Occ Ed Cert, School Psychologist Cert, School Counselor License, School Administrator Cert = 1 flow) - This is for both Instate and outstate	5	Yes-9	Yes-9		2		1	
<p>Permit/Annual Vocational Authorization Applications (Application submitted by school district to OPPS)</p>									
32	Substitute Permit	5	Yes-10	Yes-10		3		1	
33	Full-Year Permit	5	Yes-11	No-11		5		1	3
34	Full-Year Permit Renewal	5	Yes-12	No-12		3		1	2
35	Emergency Permit	2	Yes-13	Yes-11	**				
36	Emergency Permit Renewal	2	Yes-14	Yes-12	**				
37	1233(b) Permit	5	Yes-15	No-13		4		1	3
38	1233(b) Permit Renewal	5	Yes-16	No-14		3		1	2
39	LLI (application submitted by school district to TPI)	2	Yes-17	No	**				
40	LLI Renewal (application submitted by school district to TPI)	2	Yes-18	No	**				
41	Initial Annual Vocational Authorization	5	Yes-19	No-15	41 & 46 can be combined	3		1	
42	Initial Annual Vocational Authorization Renewal	5	Yes-20	No-16	42 & 47 can be combined	3		1	
43	Day-to-Day Substitute Annual Vocational Authorization	5	Yes-21	No-17		3		1	
44	Long-Term Substitute Annual Vocational	5	Yes-22	No-18	44 & 45 can	3		1	

	Authorization				be combi ned				
45	Less Than Class Size Annual Vocational Authorization	5	Yes-23	No-19		3		1	
46	Adult Education Annual Vocational Authorization	5	No-11	No-20		3		1	
47	Annual Vocational Authorization Renewal	5	No-12	No-21		3		1	
48	Credit Track Annual Vocational Authorization	5	No-13	No-22		2		1	2
	<u>School Nurse Certificate, Two- Year Provisional/IOC Extension, Third Provisional Certificate/IOC Renewal</u> (Application submitted by individual to school district)								
49	Interim School Nurse Certificate	2	No	No	**				
50	Renewal of Interim School Nurse Certificate	2	No	No	**				
51	Standard School Nurse Certificate	2	No	No	**				
52	Standard School Nurse Certificate 1st Renewal	2	No	No	**				
53	Standard School Nurse Certificate 2nd Renewal	2	No	No	**				
54	Professional School Nurse Certificate	2	No	No	**				
55	Two-Year Provisional/IOC Extension	5	No-14	No-23		4	1*	1	3
56	Third Renewal of Provisional Certificate/IOC	2	No	No	**				

It should be noted that there could be further change requests as additional functional scope changes are discussed during upcoming JAD sessions during the remainder of the "Milestone 2a - Requirements Gathering and Functional Design Completed" stage.

The State and STG have collaboratively derived a schedule to address the additional requirements which is provided below (Table 3).

Table 3:

No	Description	No of flows	No of Sessions	No of Weeks
1	Number of high priority process flows pending	22	12	4
2	Number of low priority process flows pending	18	3	1
3	Interface with Educational Entity Master (EEM) for school district data (Item # 8 of the change log)	N/A	1	Included in 1, 2 of this table.
4	Review and approval			2
Total			16	7

The above schedule is based on the assumption that the team will be able to define and analyze 5 to 6 high priority process flows per week and be able to define and analyze all the 18 low priority process flows within one week. The above schedule and the associated cost impact may vary if the definition and analysis of process flows take longer than that stated in the above assumption.

Impact of Not Implementing Proposed Change:

The impact of not implementing the proposed change is that the Online Teacher Certification System will not meet critical business requirements

Alternatives:

There are no alternatives identified at this time.

C. Initial Review Results of the Change Request

Initial Review Date:	07/20/2009	Assigned to:	STG
<input checked="" type="checkbox"/>	Approve for Impact Analysis		
<input type="checkbox"/>	Reject		
<input type="checkbox"/>	Defer Until:		
	Reason:		

D. Initial Impact Analysis

Baselines Affected:

The baseline scope defined in Appendix A of the Online Teacher Certification System contract is affected. Please refer to the contract for Appendix A.

Configuration Items Affected:

The following "Milestone 2a - Requirements Gathering and Functional Design Completed" deliverables will be updated:

- Business Requirements Document
- Use Case documents
- UI Prototype screens
- Logical Data Model
- Requirement Traceability Matrix (initial)
- Functional Design Document
- Technical requirements document

Cost / Schedule Impact Analysis Required?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
--	-------------------------------------	------------	--------------------------	-----------

Impact on Cost:

1. The cost table below provides the calculation for cost towards the extension of schedule by 35 business days. STG has used the agreed upon hourly billing rates stated in section 1.601 of the contract.

Project Resource Plan				
	Requirements (business days)	Total Hours	Rate (per hour)**	Tot Amount
Project Manager	35	280	\$125	\$35,000
Senior Enterprise Architect	35	280	\$115	\$32,200
Database Administrator	35	280	\$115	\$32,200
Senior Systems Analyst	35	280	\$95	\$26,600
Total		1120		\$126,000

In order to preserve the schedule and cost impact specified above, State must accord its approval to this CCR on or before 7/29/2009 authorized through a Purchase Order Amendment from DMB. Any further delays in such approval may further impact the schedule and cost specified above.

Assumptions

1. The impact provided in this change control request is only for the new requirements and changes identified in the requirements change log attached to this document and the additional process flows (table 1 & table 2) identified in the background section.
2. If new requirements and further changes to existing requirements are identified in the upcoming JAD sessions or during the State Review and approval process, STG will assess the impact of those changes in a separate CCR.
3. The impact to Design, Development, Testing, Deployment activities for the new and changed requirements specified in this CCR will be provided at the end of the "Milestone 2a1 - Requirements Gathering and Functional Design Completed".

Milestone 2a - Requirements Gathering and Functional Design Completed (Requirements Definition) will be modified to include only Use Case documents and associated UI Prototype screens pertaining to JAD sessions conducted till day 55 of the project.

A new milestone "Milestone 2a1 - Requirements Gathering and Functional Design Completed (Requirements Definition)" will be introduced to include the following project deliverables:

- Business Requirements Document
- Use Case Model
- Use Case documents
- UI Prototype screens
- EA Solution Assessment
- Infrastructure Service Request
- Logical Data Model
- Requirement Traceability Matrix (initial)
- Requirements Management Checklist
- Functional Design Document
- Technical Requirements document

Please find the updated Payment Milestone Schedule in the table below:

Milestone/Deliverable Schedule/Pay Points	Original Payment Date (Business days from Start date of Project)	Original Payment (USD)	Revised Payment Date (Business days from Start date of Project)	Payment Per this CCR (USD)
Milestone 1 -Engagement Startup	5	\$16,500	5	\$16,500
Milestone 2a - Requirements Gathering and Functional Design Completed (Requirements Definition) (towards baseline scope)	55	\$165,005	55	\$165,005
Milestone 2a1 - Requirements Gathering and Functional Design Completed (Requirements Definition) –	NA	NA	90	\$126,000
Milestone 2b - System Design Completed	90	\$129,399	125	\$129,399
Milestone 3 - Development and Unit Test Completed (Construction Phase)	185	\$445,513	220	\$445,513
Milestone 4a - System and Integration Testing Completed	225	\$187,585	260	\$187,585
Milestone 4b - User Acceptance Testing Completed	269	\$206,343	304	\$206,343
Milestone 4c - Performance/Load Testing Completed	279	\$46,896	314	\$46,896
Milestone 5a - Deployment Completed	289	\$33,001	324	\$33,001
Milestone 5b - Pilot Completed	333	\$145,204	368	\$145,204
Milestone 5c - Full Rollout Completed	363	\$99,003	398	\$99,003
Milestone 6 - Warranty Completed	407	\$84,413	442	\$84,413
Transition , Maintenance and Support Services Completed	657	\$339,150	799	\$339,150
Total Contract Value		\$1,898,012		\$2,024,012

Impact on Schedule:

The “Milestone 2a1 - Requirements Gathering and Functional Design Completed (Requirements Definition)” will be introduced for a period of 35 business days towards the new requirements in the attached changed log and the additional process flows identified in the background section:

1. STG plans to conduct 16 additional JAD (refer table 3 in the background section) and review & approval sessions towards the identified changes and new requirements
2. Additional time to develop User Interface prototypes
3. Additional time to create / update use case documents, Business requirements document, Functional Design Document, Requirements Traceability Matrix and Logical Data Model
4. Additional Time needed to conduct STG internal reviews before submission to State
5. Additional time towards State Review sessions for new and changed requirements and potential rework effort to address review feedback.

The total impact to schedule towards the above will be 35 business days.

Please find the updated Milestone Schedule in the table below:

Milestone/Deliverable Schedule/Pay Points	Deliverables	Per current Contract (Business days from Start date of Project)	Date of Completion of the Milestone (As per Contract)	Per this Change Control (Business days from the Start date of the project)	Revised Date of Completion of the Milestone (As per CCR-001)
Milestone 1 - Engagement Startup (<u>Initiation and Planning</u>)	<ul style="list-style-type: none"> • Project Plan • Work Breakdown Structure • Project Schedule • Risk Management Plan • Quality Plan • Communication Plan • Change Management Plan • Issue Management Plan • Security Plan (initial) • Software Configuration Plan (initial) • Maintenance Plan (initial) • Project Planning Transition checklist • CEASAR criteria • Dependencies List 	5	06/05/2009	5	06/05/2009
Milestone 2a - Requirements Gathering and Functional Design Completed (<u>Requirements Definition</u>)	<ul style="list-style-type: none"> • Use Case documents • UI Prototype screens 	55	08/24/2009	55	8/24/2009
Milestone 2a1 - Requirements Gathering and Functional Design Completed (<u>Requirements Definition</u>)	<ul style="list-style-type: none"> • Business Requirements Document • Use Case Model • Use Case documents • UI Prototype screens • EA Solution Assessment • Infrastructure Service Request • Logical Data Model • Requirement Traceability Matrix (initial) • Requirements Management Checklist • Functional Design Document • Technical Requirements document 	-	-	90	10/14/2009

Milestone 2b - System Design Completed	<ul style="list-style-type: none"> • System Design Document • Physical Data Model • Data Conversion Plan (Initial) • Test Plan • Test Reports (initial) • System Design Checklist • Software Testing Checklist • Software Configuration Management Plan (final) 	90	10/13/2009	125	12/07/2009
Milestone 3 - Development and Unit Test Completed (Construction Phase)	<ul style="list-style-type: none"> • Application Code components • Data Migration output Data • System Integration Test Cases • Test Reports (updated) • Transition Plan (initial) • Installation Plan (initial) • Training Plan • Training Checklist 	185	03/08/2010	220	4/27/2010
Milestone 4a - System and Integration Testing Completed	<ul style="list-style-type: none"> • Tested Application Code components • Test Scripts/Test Data • Testing Package • Test Report (final) 	225	05/03/2010	260	06/23/2010
Milestone 4b - User Acceptance Testing Completed	<ul style="list-style-type: none"> • Tested Application Code components • Test Report (final) 	269	07/06/2010	304	08/25/2010
Milestone 4c - Performance/Load Testing Completed	<ul style="list-style-type: none"> • Test Report (final) • Installation Plan (final) • Training Plan (final) • Requirements Traceability Matrix (final) 	279	07/20/2010	314	09/09/2010
Milestone 5a - Deployment Completed	<ul style="list-style-type: none"> • User Manual • Installation Manual • Operations Manual • Deployed Application Code • Post Implementation Evaluation Report (Deployment) 	289	08/03/2010	324	09/23/2010
Milestone 5b - Pilot Completed	<ul style="list-style-type: none"> • Post Implementation Evaluation Report (Pilot) • Training • Training Manual 	333	10/05/2010	368	11/29/2010

Milestone 5c - Full Rollout Completed	<ul style="list-style-type: none"> • Data Conversion Plan (final) • Knowledge Transfer Sessions • Maintenance Plan (final) • Transition Plan (final) • Security Plan (final) • Post Implementation Evaluation Report (Full Rollout) 	363	11/17/2010	398	01/14/2011
Milestone 6 - Warranty Completed	<ul style="list-style-type: none"> • Warranty Defects log with list and status of defects 	407	01/26/2011	442	03/17/2011
Transition , Maintenance and Support Services Completed	After conclusion of warranty period as specified in the schedule above, State will pay contractor a sum of \$19,950 for each month for 17 months. This is towards one full time equivalent resource to be assigned by Contractor onsite at State's facilities towards the above Transition and Maintenance and Support services. This amount will not be subject to any hold back.	657	05/31/2012	799	07/30/2012

Impact on Resources:

The STG Project resources working on the "Milestone 2a - Requirements Gathering and Functional Design Completed" will be extended by 35 business days. Please refer to impact on Cost section for the list of resources.

Final Review Results:

The "Milestone 2a - Requirements Gathering and Functional Design Completed" will need to be extended by 35 business days in order to address the new and changed requirements identified in the attached Requirements Change Log.

Review Date:	07/22/2009					
Classification:	<input checked="" type="checkbox"/>	HIGH	<input type="checkbox"/>	MEDIUM	<input type="checkbox"/>	LOW

E. Impact Analysis Results

Specific Requirements Definition:

Please refer to the requirements change log attached in section B

Resource Requirements	Work Days	Cost (in US Dollars)
Project Manager	35	\$35,000
Senior Enterprise Architect	35	\$32,200
Database Administrator	35	\$32,200
Senior Systems Analyst	35	\$26,600
Total	35	\$126,000

Impact of Not Implementing the Change:

The impact of not implementing the proposed change is that the Online Teacher Certification system will not meet critical business requirements

Alternatives to the Proposed Change:

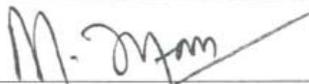
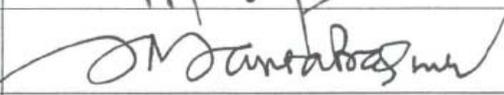
There are no alternatives identified at this time.

Final Recommendation:

The "Milestone 2a - Requirements Gathering and Functional Design Completed" will need to be extended by 35 business days in order to address the new and changed requirements identified in the attached Requirements Change Log and the additional process flows identified in the background section.

F. Signatures

Governance Body:

Name/Title	Signature	Date
Flora Jenkins, MDE OPPS Project Sponsor		7/28/09
Glenn Gorton, MDIT Agency Services CSD		7/29/09
Mohamed Peeran, MDIT Project Manager		7/28/09
Shanta Santaprakash, STG GSD Delivery Executive		7/28/09
Siva Ramanathan, STG Project Manager		7/28/2009

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
 OR
530 W. ALLEGAN, LANSING, MI 48933

June 2, 2009

NOTICE
OF
CONTRACT NO. 071B9200198
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR Systems Technology Group, Inc. (STG) 3155 W. Big Beaver Road, Suite 220 Troy, Michigan 48084-3007 Attention: Ms. Mona Aggarwal, VP Finance Email: apopat@stgit.com		TELEPHONE (248) 643-9010
		VENDOR NUMBER/MAIL CODE
		BUYER/CA (517) 241-3215 Steve Motz
Contract Compliance Inspector: Ann Lindberg Online Teacher Certification System		
CONTRACT PERIOD: 3 yrs. + 5 one-year options From: April 20, 2009 To: April 19, 2012		
TERMS <p style="text-align: center;">N/A</p>	SHIPMENT <p style="text-align: center;">N/A</p>	
F.O.B. <p style="text-align: center;">N/A</p>	SHIPPED FROM <p style="text-align: center;">N/A</p>	
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>		
MISCELLANEOUS INFORMATION:		

Estimated Contract Value: \$1,898,012

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
 OR
530 W. ALLEGAN, LANSING, MI 48933

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F.O.B. <p style="text-align: center;">N/A</p>	SHIPPED FROM <p style="text-align: center;">N/A</p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;">N/A</p>	
MISCELLANEOUS INFORMATION: Estimated Contract Value: \$1,898,012	

THIS IS NOT AN ORDER: The terms and conditions of this contract are enclosed.

FOR THE CONTRACTOR: Systems Technology Group, Inc. (STG) Firm Name	FOR THE STATE: Signature Greg Faremouth, IT Division Director
Authorized Agent Signature Mona Aggarwal, VP Finance	Name/Title IT Division
Authorized Agent (Print or Type)	Division
Date	Date



**STATE OF MICHIGAN
Department of Management and Budget
Purchasing Operations**

Contract No. **071B9200198**
On-Line Teacher Certification System

Buyer Name: [Steve Motz](#)
Telephone Number: [517-241-3215](#)
E-Mail Address: motzs@michigan.gov



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DEFINITIONS

Days	Means calendar days unless otherwise specified.
24x7x365	Means 24 hours a day, seven days a week, and 365 days a year (including the 366th day in a leap year).
Additional Service	Means any Services/Deliverables within the scope of the Contract, but not specifically provided under any Statement of Work, that once added will result in the need to provide the Contractor with additional consideration.
Audit Period	See Section 2.110
Business Day	Whether capitalized or not, shall mean any day other than a Saturday, Sunday or State-recognized legal holiday (as identified in the Collective Bargaining Agreement for State employees) from 8:00am EST through 5:00pm EST unless otherwise stated.
Blanket Purchase Order	An alternate term for Contract as used in the States computer system.
Business Critical	Any function identified in any Statement of Work as Business Critical.
Chronic Failure	Defined in any applicable Service Level Agreements.
Deliverable	Physical goods and/or commodities as required or identified by a Statement of Work
DMB	Michigan Department of Management and Budget
Environmentally preferable products	A product or service that has a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. Such products or services may include, but are not limited to, those that contain recycled content, minimize waste, conserve energy or water, and reduce the amount of toxics either disposed of or consumed.
Excusable Failure	See Section 2.244.
Hazardous material	Any material defined as hazardous under the latest version of federal Emergency Planning and Community Right-to-Know Act of 1986 (including revisions adopted during the term of the Contract).
Incident	Any interruption in Services.
ITB	A generic term used to describe an Invitation to Bid. The ITB serves as the document for transmitting the ITB to potential bidders
Key Personnel	Any Personnel designated in Article 1 as Key Personnel.
New Work	Any Services/Deliverables outside the scope of the Contract and not specifically provided under any Statement of Work, that once added will result in the need to provide the Contractor with additional consideration.
Ozone-depleting substance	Any substance the Environmental Protection Agency designates in 40 CFR part 82 as: (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or (2) Class II, including, but not limited to, hydro chlorofluorocarbons
Post-Consumer Waste	Any product generated by a business or consumer which has served its intended end use, and which has been separated or diverted from solid waste for the purpose of recycling into a usable commodity or product, and which does not include post-industrial waste.
Post-Industrial Waste	Industrial by-products that would otherwise go to disposal and wastes generated after completion of a manufacturing process, but do not include internally generated scrap commonly returned to industrial or manufacturing processes.
Recycling	The series of activities by which materials that are no longer useful to the generator are collected, sorted, processed, and converted into raw materials and used in the production of new products. This definition excludes the use of these materials as a fuel substitute or for energy production.
Deleted – Not Applicable	Section is not applicable or included in this ITB. This is used as a placeholder to maintain consistent numbering.
Reuse	Using a product or component of municipal solid waste in its original form more than once.
ITB	Request for Proposal designed to solicit proposals for services
Services	Any function performed for the benefit of the State.
Source reduction	Any practice that reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment prior to recycling, energy recovery, treatment, or disposal.
State Location	Any physical location where the State performs work. State Location may include state-owned, leased, or rented space.
Subcontractor	A company Contractor delegates performance of a portion of the Services to, but does not include independent contractors engaged by Contractor solely in a staff augmentation role.
Unauthorized Removal	Contractor's removal of Key Personnel without the prior written consent of the State.



Waste prevention	Source reduction and reuse, but not recycling.
Waste reduction and Pollution prevention	The practice of minimizing the generation of waste at the source and, when wastes cannot be prevented, utilizing environmentally sound on-site or off-site reuse and recycling. The term includes equipment or technology modifications, process or procedure modifications, product reformulation or redesign, and raw material substitutions. Waste treatment, control, management, and disposal are not considered pollution prevention, per the definitions under Part 143, Waste Minimization, of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended.
Work in Progress	A Deliverable that has been partially prepared, but has not been presented to the State for Approval.
Work Product	Refers to any data compilations, reports, and other media, materials, or other objects or works of authorship created or produced by the Contractor as a result of an in furtherance of performing the services required by this Contract.
CDX	Credential Data Exchange
CE	Continuing Education
CEPAS	Centralized Electronic Payment and Authorization System
CEPI	Center for Educational Performance and Information
CSPR	Consolidated State Performance Report
FERPA	Family Educational Records Privacy Act
FTE	Full Time Equivalence
IDEA	Individuals with Disabilities Education Authorization
ISD	Intermediate School Districts
L2K	License 2000
LEA	Local Education Agency
MDE	Michigan Department of Education
MDIT	Michigan Department of Information Technology
MEIS	Michigan Education Information System
MSDS	Michigan Student Data System
MTTC	Michigan Test for Teacher Certification
NASDTEC	National Association of State Directors of Teacher Education and Certification
NCES	National Center for Education Statistics
NCLB	No Child Left Behind
NES	National Evaluation Systems
OPPS	Office of Professional Preparation Services
PIC	Personal Identification Code
PSA	Public School Academies
REP	Registry of Educational Personnel
SB-CEU	State Board Continuing Education Units
SIF	Schools Interoperability Framework
SOM	State of Michigan
SRSD	Single Record Student Database
UIC	Unique Identification Codes
USED	United States Department of Education
SIF	Schools Interoperability Framework



Article 1 – Statement of Work (SOW)

1.000 Project Identification

1.001 Project Request

This contract is a fixed price/deliverable based contract to replace the Michigan Department of Education's (MDE's) current License 2000 (L2K) system with an "Online Teacher Certification System" and make it more compatible with the Center for Educational Performance and Information's (CEPI's) Registry of Educational Personnel (REP) system. This project will include business requirements, design, development and implementation, training, and maintenance & support. Services for future enhancements will also be included.

1.002 Background

Information contained in section 1.002 Background is for information purposes only. Specific scope items pertaining to the functional and technical scope of the system are specified in section 1.100 Scope of Work and Deliverables.

Michigan law requires that a person employed in an elementary or secondary school with instructional responsibilities shall hold a certificate, permit, or vocational authorization valid for the positions to which he/she is assigned. The L2K system processes teacher certification applications (both new and renewal) and issues certificates to educational personnel.

oMDE's Office of Professional Preparation Services (OPPS) fosters the educational achievement of all Michigan youth and adults, Pre-Kindergarten through 12th grade, by assuring that all professional school personnel complete quality preparation and professional development programs that meet standards established by the Michigan Legislature and the State Board of Education.

OPPS is responsible for evaluating & processing:

1. Rosters that it receives from the higher education (Michigan Teacher Preparation) Institutions recommending students who have undergone Preparatory Programs to become certified teachers, school administrators, school counselors and school psychologists.
2. Applications from teachers, school administrators, school counselors and school psychologists who complete out-of-state preparatory programs and would like to become certified in Michigan.
3. Requests from the school districts for temporary and/or emergency permits and school nurse applications.

OPPS is also responsible for maintaining the database of all the educational personnel who have met the requirements for certification in Michigan. OPPS is charged with issuing certificates (both new and renewals) in the following categories:

- Provisional teaching (New & Renewal)
- Professional teaching (New & Renewal)
- Vocational temporary / Interim occupational (New & Renewal)
- Occupational education (New & Renewal)
- Substitute teacher permit
- Full-year teacher permit
- Emergency permit
- Annual occupational authorization
- School psychologist (New & Renewal)
- School administrator (New & Renewal)
- School counselor (New & Renewal)
- School Nurse (Initial & Renewal)



Staff members of OPSS, MDE are currently using License 2000 (L2K), a proprietary application built by System Automation, for processing the Teacher Certification applications (both new and renewal) and issuing the certificates to educational personnel. The L2K system was purchased on or about August 2000 and replaced G-Link, a mainframe application.

L2K is a client/server system with MS SQL Server 2000 as the backend database.

As business requirements and technology are constantly changing and, since L2K was not addressing all the changing needs for processing teacher certification and licensing applications, MDIT had to develop various independent applications. These applications are used for collecting or gathering data from various entities such as Universities, Bank, Test Scores etc., and the same data get imported periodically into L2K. It is becoming difficult, if not impossible, for MDIT to make enhancements, modify/update user interface or generate customized reports due to the lack of source code for L2K. Also there is an abundance of obsolete data that is consuming valuable server space.

MDE's objective in replacing its L2K system is to ensure that all educational personnel seeking certification who meet all legal requirements are processed in an expedient and efficient manner, and to ensure that Michigan schools employ fully certified educators for positions requiring state licensure.

About CEPI & REP

Center for Educational Performance and Information (CEPI), within the Office of the State Budget, Department of Management and Budget, is responsible for the collection and reporting of data about Michigan's kindergarten through 12th grade (K-12) public schools and students. CEPI manages these educational data utilizing the Michigan Education Information System (MEIS). The Registry of Educational Personnel (REP) is one of six data sets managed by the (CEPI). The REP is one database component of MEIS. State and federal laws require Michigan's PK-12 public and nonpublic schools to collect and report data about students, personnel and individual schools. On behalf of state agencies that must provide reports to the state legislature and/or the federal government, CEPI coordinates the data collections with Intermediate School Districts (ISDs), Local Education Agencies (LEAs), Public School Academies (PSAs) and non-public schools in Michigan.

Data collected via the REP are used to meet the requirements of the federal *No Child Left Behind Act of 2001* (NCLB) and the Michigan Department of Education's accreditation initiative, *Education YES!*. It is also a critical element used for state and federal program reporting, including reports prepared to meet the required data submissions by the state to the United States Department of Education (USED) National Center for Education Statistics (NCES), and Education Data Exchange Network (EDEN) via the EdFacts reporting system. The REP is designed to collect basic employment elements relating to school personnel involved with the education of students, such as certification and degrees held, school/facility assignment, grade/educational setting and subject-level assignment(s), length of service within a school district, professional development data and other required information. Personnel data must be submitted via the Internet twice a year, in December and at the end of the school year (EOY). The data submitted in December are used by the MDE for three primary purposes: to report mandatory information to the USED related to the Consolidated State Performance Report (CSPR); to report information related to the Individuals with Disabilities Education Authorization (IDEA) to the USED; and to prepare data for comparison with the State Police and Federal Bureau of Investigation's databases on criminal convictions for the purposes of complying with the state's School Safety Laws. An additional important purpose for collecting the data is to conduct MDE's teacher certification audit. The EOY data are used to validate teaching assignments subsequent to the December collection cycle and to gather professional development data related to the instructional staff of the districts. This information is necessary for program oversight and for producing state and federal reports. The December data must be accurate as of the submission date in December. The EOY data must be accurate as of the last day of the school year for the ISD's, LEA's, and PSA's. The public school district year runs from July 1 to June 30.



Each record within the REP database has a Personnel Identification Code (PIC) that is created based upon a set of unique identifiers within each record. The PIC allows for unique identification of each school employee in the state of Michigan.

Each unique record in the REP database is submitted by the school district where the individual is employed. Each individual in the REP is provided with a Personnel Identification Code (PIC). If an individual is employed by more than one district, a record will appear in each district's REP dataset; however, only one PIC will be utilized for an individual employee regardless of the number of districts for which he/she is employed. Thus an individual PIC number may appear in the REP data sets submitted for multiple districts.

Currently, the PIC is established when an individual's employment data are entered into the REP. The record is stored in the district's REP file within the REP database. During each submission cycle of the REP, the school district is able to review each previously submitted record and then provide updates to the information via online submission or bulk upload. All of the existing data, whether entered online or by a bulk file upload procedure, can be edited online. Several records may be submitted via hypertext transfer protocol, secure (HTTPS).

REP's architecture includes

- VB.NET 2.0 Web Site
- SQL Server 2000/5 database back end
- Standard 3-tier architecture: web site is the user interface, and a separate assembly contains the business and data access layers

About L2K and REP Cross walk

A teacher certification number validation process was built by MDIT within the REP application. The process allows for validation of a certificate number when submitted by a school district and provides an instant verification of the validity of an educator's credential with L2K.

In addition to the teacher certification number validation process, a teacher certification audit crosswalk has been developed by CEPI, OPSS and MDIT. The crosswalk links the assignment codes used in the REP with the endorsement codes from L2K.

The crosswalk is complex and data elements change to meet state and federal reporting requirements. Changes occur when new endorsements are added to the L2K database or when assignment codes change due to new reporting requirements. Due to these changes, the crosswalk needs to be updated each submission cycle of the REP so that all assignment codes and teacher certification endorsements properly align between the two systems.

To address the above requirements of both L2K and REP, and to ensure that all educational personnel seeking new certification or renewal are continued to be processed in an expedient and efficient manner and also to generate customized reports, MDE seeks to develop a secured online system for Teacher Certification and Licensing, which can be accessed 24/7. This system should collect the data from different entities such as higher education (Michigan Teacher Preparation) Institutions, individuals requesting new certificates or renewal, school districts, MDE/OPSS, the bank, Michigan Test for Teacher Certification (MTTC); National Association of State Directors of Teacher Education and Certification (NASDTEC), etc. and store it in a single data store, that will also feed data to and/or receive data from the Registry of Educational Personnel (REP) system. System should allow access to the data by different agencies within the State of Michigan and also to other stakeholders/users. Data must be available to access or process by the user based on- the role of the user.

Also CEPI has an application called Credential Data Exchange (CDX) which is part of the REP system. The CDX is a Windows service application built by MDIT which enables a local district to obtain credential numbers, issue dates, expiration dates, endorsement codes, and institution codes for instructional personnel. When a school district wants to obtain credential information, the district



uploads a tab-delimited file containing the name, social security number, and date of birth of each personnel. The file upload is performed via a CDX upload page contained within the REP. The service connects to the L2K database and grabs the required information out of L2K based upon the details provided by the district. The service then appends that information to the record in the file. The district then obtains the results via a CDX download page within the REP.

MDE would like to move the CDX service out of REP and integrate it with the new Online Teacher Certification System and continue to provide this feature as a service to the school districts.

The basic architecture for CDX include:

- VB.NET 2.0 Windows Service w/ a SQL Server 2000/5 database
- Runs on web server
- User uploads file; service processes file using stored procedures in database; service creates XML file with results
- User returns to download result file; XML transformed into a formatted text file

The State seeks to have services begin upon execution of the Contract, with an implementation of the new modular system(s) to follow a mutually agreed upon project schedule.

This Contract will have a maximum term of **three (3)** years with **five (5)** optional **one (1)** year extensions.

1.100 Scope of Work and Deliverables

1.101 In Scope

The Contractor will:

1. Perform detailed requirements gathering based on the Business and Technical requirements provided in Appendix A and B attached to this Contract. This will include:
 - a. Visits to select local educational settings to analyze technical interoperability and business process requirements for interoperability. Such visits will be limited to the Lansing, Metro Detroit, or Ann Arbor, Michigan.
 - b. Development of a Business requirements Document, Use case documents that will be reviewed and approved by the State.
2. Design, Develop and Test a custom web-based scalable, modular .NET application that stores all the necessary data on a centralized SQL Server 2005 database. .
3. Develop installation scripts and assist MDIT staff to install the systems on MDIT servers.
4. Extract, clean, convert and migrate current data from L2K and G-Link into a centralized Online Teacher Certification System application database subject to approach and terms specified in section 1.104 Work and Deliverables.
5. Provide training for both technical staff and end users on the new Online Teacher Certification system.
6. Provide training for user, local agency and State program staff on the new Online Teacher Certification system. This includes assisting the MDE staff with the business process changes
7. Provide detailed technical and end user documentation of the new Online Teacher Certification system.
8. Perform an Initial implementation on a "pilot scale" that runs parallel with existing production systems for Higher Education Institutions, school districts identified by MDE.
9. Perform Full Rollout implementation of the application to all the remaining higher education institutions, school districts.
10. Provide Project Management services for the CONTRACTOR responsibilities identified above.
11. Provide Warranty for 60 calendar days after the full rollout implementation
12. Provide a post-implementation transition period to include:
 - a. Structured take-over of operations and maintenance by the State
 - b. Provide guidance to State as it performs business operations
 - c. Perform application software maintenance, troubleshooting assistance, and requested enhancements while training MDIT staff to take over these roles.



- d. Address low severity defects that did not affect the new system going into production.
 - e. Transfer knowledge and work with assigned MDIT personnel
13. Provide maintenance services for the remaining period of the 3 year contract. The maintenance services will be renewable for three(3) years
- a. Provide one Full-Time Equivalent (FTE) onsite to perform requested maintenance and enhancements or troubleshoot system defects under the direction of MDIT and MDE and assure smooth daily operations.
14. Provide an optional block of 2000 hours for future enhancements and/or legislative mandates
15. Provide the State timely notification of recommendation of any additional hardware and software requirements including the number of licenses that are not specifically outlined within the Software Recommendation/Requirements of the functional solution overview section of this Contract. Contractor will provide such notification at the end of System Design Milestone.

1.102 Out-of-Scope Items

The following items (inclusive and not limited to) are considered out-of-scope for this Project:

1. Any hardware or software needed will be procured by the State, unless mutually agreed upon through the change control process (see section 1.403 Change Management).
2. Installation of hardware onto the state's network and installation of software onto state-owned servers will be performed by state personnel.
3. Development of a student information system at the higher education institutions or school or district-level information management system (e.g., scheduling, grade reporting, and student report cards).
4. Performance of any application enhancement, defect-fixing activities of the existing applications. Contractor is not responsible for any application interfaces with current existing state systems other than those specified in section 1.104 Work and Deliverables section below.
5. Contractor will not be required to supply hardware or commercial software to the state.
6. CONTRACTOR will not provide any Help Desk Support.

What is expressly not stated within this Contract is out of scope and can be addressed through the Change Management process as needed.

1.103 Environment

The links below provide information on the State's Enterprise IT policies, standards and procedures which includes security policy and procedures, IT strategic plan, eMichigan web development and the State Unified Information Technology Environment (SUITE).

The State has methods, policies, standards and procedures that have been developed over the years. Contractor will provide solution that conforms to State IT policies and standards. All services and products provided as a result of this contract must comply with all applicable State IT policies and standards as of October 28th, 2008 to the extent described in the Technical Solution section under section 1.104 Work and Deliverables. The Contractor awarded the contract must request any exception to State IT policies and standards in accordance with MDIT processes. The State may deny the exception request or seek a policy or standards exception.

Contractor has reviewed all applicable links provided below as of October 28th 2008 and agrees to be in compliance.

Enterprise IT Policies, Standards and Procedures:

<http://www.michigan.gov/dit/0,1607,7-139-34305---,00.html>

All software and hardware items provided by the Contractor must run on and be compatible with the MDIT Standard Information Technology Environment. Additionally, the State must be able to maintain software and other items produced as the result of the Contract. Therefore, non-standard development tools may not be used unless approved by MDIT. The Contractor must request, in writing, approval to use non-standard software development tools, providing justification for the requested change and all



costs associated with any change. The State’s Project Manager and MDIT must approve any tools, in writing, before use on any information technology project.

It is recognized that technology changes rapidly. The Contractor may request, in writing, a change in the standard environment, providing justification for the requested change and all costs associated with any change. The State’s Project Manager must approve any changes, in writing, and MDIT, before work may proceed based on the changed environment.

• **Enterprise IT Security Policy and Procedures:**

<http://www.michigan.gov/dit/0,1607,7-139-34305-108216--,00.html>

- **The State’s security environment includes:**
- Single Authentication System as specified in Appendix B
- MDIT provided SQL security database.
- Secured Socket Layers.
- SecureID (State Security Standard for external network access and high risk Web systems)

• **IT Strategic Plan:**

<http://www.michigan.gov/dit/0,1607,7-139-30637-135173--,00.html>

• **IT eMichigan Web Development Standard Tools:**

http://www.michigan.gov/documents/Look_and_Feel_Standards_2006_v3_166408_7.pdf

• **The State Unified Information Technology Environment (SUITE):**

Includes standards for project management, systems engineering, and associated forms and templates – must be followed: <http://www.michigan.gov/suite>

Agency Specific Technical Environment

Hardware Listing

- Multiple HP Proliant DL380 G3 with 2 (Intel Xeon 3.06 GHz)Dual-Core; 4 GB memory; 3 X 36 GB Hard drives; RAID 5; Load balanced via content switch;
- Multiple HP Proliant DL560 G1 with 4 (Intel Xeon 2.0 GHz)Dual-Core; 4 GB memory; 3 X 36 GB Hard drives; RAID 5; Load balanced via content switch

**Operating Systems
Desktop**

- Windows 2003, Internet Information Services 6.0
- Dell Pentium with Windows XP

Workstations

Software Listing

- VB.Net 2.x and 3.0 framework
- C#.Net 2.x and 3.0 framework
- ASP.Net 2.x and 3.0 framework
- HTML
- JavaScript
- XML
- MS Office 2003
- Microsoft Project
- Visio

Database

- MS SQL Server 2005

Network

- MS Active Directory

Browser

- Internet Explorer 6.x, 7.x, Firefox

Reporting tools

- SQL Reporting Services 2005

Interfaces

- State of Michigan’s eMichigan Standards

Other

- REP

**systems/applications
requiring integration**

- SRSD/MSDS
- Special Education Approvals System



As the system will be developed onsite at a State facility, the State will provide all hardware and software licenses.

- **1.104 Work and Deliverables**

- I. **Services (work) to be Provided and Deliverables**

Contractor shall provide Deliverables/Services and staff, and otherwise do all things necessary for the complete and successful implementation of an online teacher certification application providing the functionality required in accordance with the approved business requirements and technical design documents approved during the course of this project.

In this statement of work and throughout this contract the term Michigan Department of Education (MDE), Michigan Department of Information Technology (MDIT) will also include the State of Michigan (State) and the term Contractor refers to Systems Technology Group Inc. (STG)

A. Requirements

Contractor’s solution will adhere to the requirements listed in Appendix A and B to the extent described in Appendix A and B and section 1.104.

Functional Requirements (Appendix A) – Functional requirements identify what the product or system must do to enable performance of work tasks and any applicable service levels.

Technical/General System Requirements (Appendix B) – Technical/general system requirements will identify what the solution or product must run on or integrate with, including any standards that must be met, security requirements, service levels and interfaces, Technical/general system requirements will also identify the general framework in which the system or product must work, such as: capacity requirements (number of users, concurrent users, number of transactions to be handled, peak usage), documentation, audit and backup and recovery.

Functional Requirements Scope (Appendix A)

Contractor has analyzed the information contained in the RFP, Appendix A and MDIT’s responses to vendor questions. The table below defines the functional boundaries of the application CONTRACTOR will develop. CONTRACTOR will work with MDE/MDIT subject matter experts to validate the estimated # of JAD sessions.

The “Functional Solution” section of this contract contains additional solution descriptions.

APP. A REF #	Appendix A - Requirement	CONTRACTOR SOLUTION MODULE GROUPING AND DESCRIPTION	ESTIMATED # OF JAD SESSIONS**	REMARKS
1-01	The proposed system must automate MDE/OPPS’s School Personnel certification process which include but are not limited to (1-02 through 1-09).	Apply for Certificate/Permit Module Individual applicants, higher education institutions, school districts will be able to either electronically submit or perform a bulk upload of the roster information. MDE users will be able to process the application details electronically. Given below are specific details for each requirement.	See Remarks	Covered in 1-02 through 1-09
1-02	Rosters that OPPS receives from the 32 Higher Education Institutions from the State of MI	Apply for Certificate/Permit Module	See Remarks	Will be covered in the JAD session for 3-07



APP. A REF #	Appendix A - Requirement	CONTRACTOR SOLUTION MODULE GROUPING AND DESCRIPTION	ESTIMATED # OF JAD SESSIONS**	REMARKS
	recommending students who have undergone Preparatory Programs to be certified teachers, School Administrators, School Counselors and School Psychologists. Some institutes may be recommending as low as 20 students and others as high as 600 to 700 students.	The higher education institutions will be able to either electronically submit or perform a bulk upload of the roster information. The system will be scalable to allow upload of up to 700 students.		
1-03	Applications that OPPS receives from Teachers, School Administrators, School Counselors and School Psychologists who are out-of-state and would like to get certified in Michigan.	Apply for Certificate/Permit Module The module will consist of screens that will allow out-of-state teachers, school administrators, counselors, psychologists to apply for a certification in the State of Michigan.	See Remarks	This requirement will be covered in the JAD session for 2-08
1-04	Applications that OPPS receives from Teachers, School Administrators, School Counselors and School Psychologists who would like to renew their existing certificates.	Apply for Certificate/Permit Module The module will consist of screens that will allow teachers, school administrators, counselors, psychologists to renew their existing certificates.	See Remarks	This requirement will be covered in the JAD session for 2-22
1-05	Requests that OPPS receives from the School Districts for Temporary and/or emergency permits and school nurse applications.	Apply for Certificate/Permit Module The module will consist of screens that will allow school districts apply for temporary, emergency permits and school nurse applications.	See Remarks	Will be covered in the JAD session for 4-01
1-06	Collect and process payments from all the applicants	Apply for Certificate/Permit Module The module will consist of screens, business components that will interface with CEPAS to collect and process payments from applicants.	2	Implemented through the CEPAS interface
1-07	Print Certificates/Licenses in batches and mail them to the individuals.	Application Processing Module The module will consist of code components that will send the certificate, license data to the Print batch or	0.5	



APP. A REF #	Appendix A - Requirement	CONTRACTOR SOLUTION MODULE GROUPING AND DESCRIPTION	ESTIMATED # OF JAD SESSIONS**	REMARKS
		subsystem. It should be noted that the current Print batch system will be leveraged.		
1-08	Currently approved SB-CEU sponsors (LEA's, ISD's, RESA's, Colleges/Universities, State Departments/agencies, government agencies and state professional organizations) to upload awarded SB-CEU's	Apply for Certificate/Permit Module Currently approved SB-CEU sponsors will be able to perform a bulk upload of SB-CEU information into the system.	See Remarks	Will be covered in the JAD session for 2-19
1-09	Maintain and update the database of all the personnels that OPPS has certified.	Application Processing Module The module will consist of screens and application code components that will permit the update and maintenance of certified personnel.	See Remarks	This is a global requirement. No separate JAD sessions necessary
1-10	Since business rules (e.g. Change in duration of the certificate or change in fees for certification) are updated throughout the year, the proposed solution must have a feature to customize business rules and should be modular enough to allow for business rule updating by a DIT resource without major re-programming efforts.	Global Framework Module The module will consist of screen, application code components, that provide the ability to customize parametric value driven business rules such as change in duration of the certificate or change in fees for certification through database tables. The system will use the values for such business rules from database tables rather than part of the application programs. System will provide ability to update those values through a user interface whose access will be controlled only to specific users based on roles.	See Remarks	This requirement applies to all functional areas and will be covered in all JAD sessions
2-01	Once the profile of an applicant is created, system must be able to pass certain parameters to the Michigan Student Data System (MSDS) to obtain the Unique Identification Code (UIC) for that particular individual.	Apply for Certificate/Permit Module The module will consist of application code components that will interface with the MSDS application to obtain a UIC for the applicant.	1	Will use the MSDS interface.



APP. A REF #	Appendix A - Requirement	CONTRACTOR SOLUTION MODULE GROUPING AND DESCRIPTION	ESTIMATED # OF JAD SESSIONS**	REMARKS
2-02	If the applicant graduated high school from any one of the Michigan School Districts or took the Michigan Merit Exam at a nonpublic school, then the system must check the MSDS (SRSD) system and obtain the UIC that was already assigned for this individual by the MSDS (SRSD) system and use the same UIC	<p>Apply for Certificate/Permit Module</p> <p>The module will consist of application code components that will interface with the MSDS application to obtain a UIC for the applicant.</p>	See Remarks	This requirement will be covered in the JAD session for 2-01
2-03	If the applicant graduated from a non Michigan School District, then the system must pass the parameters to MSDS so that a UIC can be created by MSDS for that applicant and system must be able to obtain the UIC that was created and assign it to the individual.	<p>Apply for Certificate/Permit Module</p> <p>The module will consist of application code components that will interface with the MSDS application to obtain a UIC for the applicant.</p>	See Remarks	This requirement will be covered in the JAD session for 2-01
2-04	For individuals who are already certified by MDE and currently in the L2K database, the Unique Identification Code (UIC) has to be obtained from MSDS after creating it in MSDS and assigned to all the individuals.	<p>Apply for Certificate/Permit Module</p> <p>The module will consist of application code components that will interface with the MSDS application to obtain a UIC for the applicant.</p>	See Remarks	This requirement will be covered in the JAD session for 2-01
2-05	System must be able to generate an application form that can be customizable according to the respective Higher Education Institution's requirements. Applicant's data that is already in the system/profile must be pre-populated into the application and also applicant must be able to fill additional information e.g. CPR/First Aid results; MTTC scores; type of teaching certificate that he or she is applying for certification; conviction questionnaire etc. Applicant must be able to use online (electronic) signature to submit the application through the system.	<p>Apply for Certificate/Permit Module</p> <p>The system will generate individual application forms that are tailored to the respective Higher Education institution of the individual. The application form will be pre-populated with data that is already in the application database.</p> <p>The applicants will be able to provide an online signature with an "I agree" check box and a provision for the applicant to type the name above a legal disclaimer</p>	2	
2-06	If the individual applicant is undergoing a Teacher Preparatory program in an institution that is approved by	<p>Application Processing Module</p> <p>After the submission of the</p>	1	



APP. A REF #	Appendix A - Requirement	CONTRACTOR SOLUTION MODULE GROUPING AND DESCRIPTION	ESTIMATED # OF JAD SESSIONS**	REMARKS
	MDE, then the system must route electronically the completed application form to the appropriate Institution that was identified by the applicant in the profile or the application so that the institution can review, validate and make a recommendation to MDE for certifying that individual in the appropriate category.	application by the individual applicant, the information will appear on the work list of the Higher Education user (on their home page) under the corresponding application type for the user to review, validate and recommend the individual for a certificate.		
2-07	Alternatively, applicant must be able to print the completed application and submit it through postal mail or in person to the institutions with any additional documents that are required by the institutions.	Apply for Certificate/Permit Module The applicant will also have the capability to manually print the application from the system and mail it to the institution for further processing.	See Remarks	This requirement will be covered in the JAD session for 2-06
2-08	If the individual's profile identifies that person as an out-of-state applicant, then the application form should be routed to MDE for review and processing. Applicant must be able to print a cover letter generated by the system identifying the applicant and attach it along with any additional documents that are required to be mailed for processing. Out of state applicants will submit the application to MDE and MDE will review and process it. MDE will not send the application to the out of state Higher education institutions for validation.	Apply for Certificate/Permit Module After an out-of-state applicant submits the application, the information will appear in the work list of the MDE user (on their home page) under the corresponding application type for the user to review and process. The applicant will also have the capability to manually print a cover letter generated by the system and mail it to MDE.	1	
2-09	System must be able to pre-qualify out-of-state applicants. Applicants must answer a questionnaire and based on the answers, system must be able to determine if the applicants are eligible and have all the required skills and background to get certified in the State of MI.	Apply for Certificate/Permit Module The module will consist of questionnaire that out-of-state applicants based will need to answer to screen of the applicant is eligible to get certified in the State of MI	See Remarks	This requirement will be covered along with 2-08
2-10	Out-of-state applicants must be able select institution's name and the state in which it is located from a drop down list from which their teaching certificates were	Apply for Certificate/Permit Module Both in-state and out-of-state applicants will be able to pick the higher education	See Remarks	This requirement will be covered along with 2-08



APP. A REF #	Appendix A - Requirement	CONTRACTOR SOLUTION MODULE GROUPING AND DESCRIPTION	ESTIMATED # OF JAD SESSIONS**	REMARKS
	<p>earned. If the out-of-state applicant is an international student, then the student must be able to enter the Institution name and country.</p>	<p>institution from which they obtained their teaching certificates. The international applicants will have text fields that they can populate. It should be noted that the higher education institution details should be available in the OTCS database.</p>		
2-11	<p>If the applicant selects "yes" for any of the conviction questionnaire on the application, then the applicant should be directed to a different page based on the business rules.</p>	<p>Apply for Certificate/Permit Module</p> <p>The application will have a business rule (edit) that will direct the user to another screen if the applicant enters "yes" to any of the conviction questions.</p>	0.5	
2-12	<p>Applicants must be able to make the payment either online using a Credit Card/Electronic Fund Transfer (EFT) or offline using a check.</p>	<p>Apply for Certificate/Permit Module</p> <p>The module will consist of screens, business components that will interface with CEPAS to collect and process payments from applicants</p>	See Remarks	<p>Implemented through the CEPAS interface. Already covered in 1-06</p>
2-13	<p>If the applicant decides not to make a credit card payment or Electronic Fund Transfer (EFT) then the system must generate a remittance statement according to the Bank's specifications that can be printed by the applicant and can be taken to the bank for making the payment. System must generate Statement # and the system must pre populate Applicant's name, address, Unique ID #, payment amount in the statement.</p>	<p>Apply for Certificate/Permit Module</p> <p>The system will generate a pre-defined remittance statement (according to Bank specifications) for applicants that do not want to make a credit card or EFT payment.</p>	1	
2-14	<p>System must post the payment details (either Credit Card/EFT or Manual payment) to the applicant's records.</p>	<p>Apply for Certificate/Permit Module</p> <p>Once a successful payment is made the applicant payment details in the OTCS database will be updated.</p>	0.5	
2-15	<p>System must be able to provide the status of the application processing to the applicant in their respective homepage.</p>	<p>Application Processing Module</p> <p>The applicant will be able to</p>	0.5	



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		view the status of his/her application at any time on their home page.		
2-16	System must generate reminder emails for users to automatically prompt them of upcoming events like certification renewal etc.	Apply for Certificate/Permit Module For a predefined set of business conditions (upcoming certification renewal) an automatic email will be generated to prompt users to take action.	0.5	
2-17	Applicants must be able to print the application.	Apply for Certificate/Permit Module The applicant will also have the capability to manually print the application from the system	0.5	
2-18	Applicants must be able to update the address, add employment history details and request for a name change. System must either store all of the previous names used and record the changes with a date and time stamp , or pass parameters to the MSDS UIC Master Table for retention.	Apply for Certificate/Permit Module The module will have screens that will let an applicant to update demographic information, employment history details, name change	0.5	
2-19	Applicants must be able to self-manage Continuing Education (CE) and Professional Development (PD) data.	Apply for Certificate/Permit Module The module will have screens that will let an applicant to update their continuing education, professional development data.	1	
2-20	Applicants must be able to submit Continuing Education (CE) and Professional Development (PD) data and the system must be able to forward the information to the appropriate school district for validation and approval.	Apply for Certificate/Permit Module The module will have screens that will let an applicant to send their continuing education, professional development data to the appropriate school district for validation and approval	See Remarks	Will be covered in the JAD session for 2-19
2-21	Applicants must be able to track and manage Professional Development and SB-CEU data	Apply for Certificate/Permit Module The module will have	See Remarks	Will be covered in the JAD session for 2-19



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		screens that will let an applicant to update their continuing education, professional development data.		
2-22	If the applicant already has a certification and he/she is applying for a renewal, system must check the eligibility for applying and also inform the applicant the type of certification that they are eligible to apply for. (e.g. if the applicant has a two-year provisional certificate, the only teaching certificate that applicant would be eligible for is a professional education certificate.)	Apply for Certificate/Permit Module The module will have business rules that will be checked for renewal applicants. The same will be displayed to the users for information	1	
2-23	An individual who is already certified must be able to apply for a duplicate certificate and pay the appropriate fee.	Apply for Certificate/Permit Module The module will have screens that will let an applicant apply for a duplicate certificate after paying the right fee.	0.5	
3-01	Based on the type of application (Provisional or Professional) the application must be directed to the appropriate Higher Education Institution user's account (Institution must be able to set up a work flow and assign roles, responsibilities and privileges to the internal users).	Security Module This will be implemented with a separate role for users that handle Provisional and professional application. The Higher education institution user will have a work list with all the pending applications of the type that he is authorized to review. For example a Higher Ed inst users that deals with Provisional certificates will have a work list with the relevant applications	1	
3-02	Every time the user from one of the Higher Education Institution logs in, the system must display the number of new applications that are received since the last log in and also the total applications that are received for that particular institution.	Application Processing Module The module will consist of a home page for the Higher Education institution staff with a work list consisting of new applications that have been received for that institution.	0.5	



APP. A REF #	Appendix A - Requirement	CONTRACTOR SOLUTION MODULE GROUPING AND DESCRIPTION	ESTIMATED # OF JAD SESSIONS**	REMARKS
3-03	Higher Education Institution users must be able to view the list of all the applications.	<p>Application Processing Module</p> <p>The module will consist of a home page for the Higher Education institution staff with a work list consisting of all applications that have been received and under process for the institution.</p>	0.5	
3-04	Higher Education Institution users must be able to open and view the individual application in a new window for processing.	<p>Application Processing Module</p> <p>The module will consist of a home page for the Higher Education institution staff with a work list consisting of all applications that have been received and under process for the institution. The user will be able to open and view the details of any individual application</p>	See Remarks	Will be covered in the JAD session for 3-05
3-05	Higher Education Institution users must be able to add additional information into the application (e.g. Degree, Certification type, Subjects, Major, Minor etc.) which will also become part of the profile and added to the database.	<p>Application Processing Module</p> <p>The module will consist of screens where the higher education institution user will be able to modify the application details that get stored in a centralized application database</p>	1	
3-06	Higher Education Institution users must be able to edit the demographic information of the applicant (First Name, Last Name, SSN, Address, Gender, Ethnicity etc).	<p>Application Processing Module</p> <p>The module will consist of screens where the higher education institution user will be able to modify the applicant demographic details that get stored in a centralized application database</p>	See Remarks	Will be covered in the JAD session for 3-05
3-07	Higher Education Institution users must be able to make single or multiple recommendations at a time through the user interface or must be able to upload a file with multiple recommendations (bulk upload). Also must be able to create customized reports.	<p>Application Processing Module</p> <p>The module will consist of screens where the higher education institution user will be able to make single or multiple recommendations at</p>	1	



APP. A REF #	Appendix A - Requirement	CONTRACTOR SOLUTION MODULE GROUPING AND DESCRIPTION	ESTIMATED # OF JAD SESSIONS**	REMARKS
		<p>a time.</p> <p>The user will also have access to relevant reports on the reports module.</p>		
3-08	<p>Once recommendations are submitted the Higher Education Institution user and accepted by the system, system must automatically calculate the fee for each individual applicant based on the Certification type and send an email to the applicant with the link to the payment page.</p>	<p>Application Processing Module</p> <p>The module will consist of application code components that will calculate the fee for each individual applicant that has been accepted, update his profile and send an email to the applicant.</p>	1	
3-09	<p>After the Higher Education Institution user submits the roster either via the user interface or by uploading the file, the system must generate a successful submission report if the submission was successful, or generate an error report, if there were in appropriate data in the fields of the file and the report must be displayed on the screen and also must be emailed to the appropriate user.</p>	<p>Application Processing Module</p> <p>The system will display a confirmation screen after a successful submission of the roster. The system will generate an error screen with the relevant errors if the roster submission was not successful.</p>	1	
3-10	<p>Higher Education Institution user must be able to make corrections to the roster in the file and re-upload the file or must be able to make the correction through the user interface.</p>	<p>Application Processing Module</p> <p>The system will let the user navigate to a screen where he/she can correct the errors on the roster file or online application from the error screen created for 3-09 requirement</p>	1	
3-11	<p>After a successful submission by the Higher Education Institution user, all the amendments to the roster can only be made by an authorized user at MDE and not by the Institution. System must provide a means to correspond with MDE and request the amendment or change and such requests must be stored and easily accessible for audit purposes in the future.</p>	<p>Application Processing Module</p> <p>The system will have a built-in workflow rule that will not let the higher education institution user update an application after the application has been submitted via a roster. The module will consist of a screen where the institution can request amendments to</p>		<p>Will be covered in the JAD session for 3-10</p>



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		submitted application forms.		
4-01	School districts must be able to request for temporary/substitute permits, vocational authorization, school nurse certificate etc. by logging into the system and through an online application process.	Apply for Certificate/Permit Module The module will have screens that will permit School districts to submit requests for temporary/substitute permits, vocational authorization, school nurse certificate etc.	1	
4-02	School districts must be able to generate reports that will provide the details of the permits, vocational authorization, school nurse certificate that they requested, issued and rejected.	Reports Module The system will have a reports module where this report can be generated on as-needed basis by the school districts.	3	The JAD session for this requirement will be conducted toward the end to gather requirements for all reports
4-03	Once the permits, authorizations or school nurse certificates are approved by MDE and issued to the School district or the individual, this information must also update the profile of that particular individual who got the approval to work. The name of the school district that requested; date of issue and expiration etc. must become part of the employment details of that individual.	Application Processing Module With a single centralized database, as MDE approves certificates, permits, authorizations, the information will automatically update the applicant profiles.	1	
4-04	School districts users must be able to add additional information into the application (e.g. Degree, Certification type, Subjects, Major, Minor etc.) which will also become part of the profile and added to the database.	Application Processing Module The module will consist of screens where the school district user will be able to modify the application details that get stored in a centralized application database	1	
4-05	School districts users must be able to edit the demographic information of the applicant (First Name, Last Name, SSN, Address, Gender, Ethnicity etc.) , and when appropriate, pass parameters back to the MSDS UIC Master	Apply for Certificate/Permit Module The module will consist of screens where the school district user will be able to modify the applicant demographic details that get	See Remarks	This requirement will be covered in the JAD session for 4-04



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	Table for storage.	stored in a centralized application database. The user will then be able to obtain a UIC by clicking on a link that invokes an appropriate MSDS interface.		
4-06	School districts users must be able to submit request for single or multiple permits or authorizations at a time through the user interface.	Apply for Certificate/Permit Module The module will consist of screens where the school district user will be able to make single or multiple recommendations at a time	See Remarks	This requirement will be covered in the JAD session for 4-07
4-07	Once permits or authorizations are submitted by the School districts and accepted by the system, system should automatically calculate the fee for each individual applicant based on the permit or authorization type and send an email to the applicant with the link to the payment page.	Apply for Certificate/Permit Module The module will consist of application code components that will calculate the fee for each individual applicant that has been accepted, update his profile and send an email to the applicant.	1	
4-08	After the School districts user finish submitting the request for permits or authorization or school nurse certificate either via the user interface or by uploading the file, system must generate a successful submission report if the submission was successful, or generate an error report, if there were in appropriate data in the fields of the file and the report must be displayed on the screen and also must be emailed to the appropriate user.	Apply for Certificate/Permit Module The system will display a confirmation screen after a successful submission of permit or authorization requests. The system will generate an error screen with the relevant errors if the roster submission was not successful.	1	
4-09	School districts users must be able to make corrections to the roster in the file and re-upload the file or must be able to make the correction through the user interface.	Apply for Certificate/Permit Module The system will let the user navigate to a screen where he/she can correct the errors on the roster file or online application from the error screen created for 4-08 requirement	1	
4-10	After a successful submission by the School districts users, all the amendments to the roster can	Application Processing Module	1	



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	only be made by an authorized user at MDE and not by the Institution. System must provide a means to correspond with MDE and request the amendment or change and such requests should be stored and easily accessible for audit purposes in the future.	The system will have a built-in workflow rule that will not let the higher education institution user update an application after the application has been submitted via a roster. The module will consist of a screen where the institution can request amendments to submitted application forms		
4-11	School Districts must be able to optionally submit, edit or append Continuing Education (CE) and Professional Development (PD) data for the individuals employed by that district.	Apply for Certificate/Permit Module The module will consist of screens where the school district users can submit, change Continuing education or Professional development data for individuals employed by the district	1	
4-12	System must have a customizable workflow capability where the Super user of MDE can assign roles and responsibilities of the individuals at MDE and also other users of the system.	Security Module CONTRACTOR will implement a secure role based authorization system that can be maintained only by MDE super users. The roles will be mapped to specific functions (delete, edit, add, view only) during the requirements gathering phase.	See Remarks	Will be covered in the JAD session for 3-01
4-13	Through a user interface, Super user must be able to add/update certification categories when they become available.	Global Functionality Module This module will consist of screens that will be used to add, update certification categories	2	
4-14	Through a user interface, Super users of the system must have the ability to identify (flag) the higher education institutions that are authorized to offer preparatory programs and the courses offered or add new courses. Must also be able to add new institutes and courses.	Global Functionality Module This module will consist of screens that will be used to identify institutions that can offer teacher preparatory programs and courses and add new courses, institutes.	See Remarks	Will be covered in the JAD session for 4-13
4-15	Super users at MDE must be able to edit the fee information for each category when there is an	Global Functionality Module This module will consist of	See Remarks	Will be covered in the JAD session for 4-13



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	increase or decrease in the fee.	screens that will be used to change the certification fees		
4-16	Based on the type of application (Provisional or Professional) the application should be directed to the appropriate user's account (MDE must be able to set up a work flow and assign roles, responsibilities and privileges to the internal users).	<p>Security Module</p> <p>This will be implemented with a separate role for MDE users that handle Provisional and professional application. The MDE user will have a work list with all the pending applications of the type that he is authorized to review. For example a MDE user that deals with Provisional certificates will have a work list with the relevant applications</p>	See Remarks	This requirement will be met through a suitable role that can be assigned by a super user. Covered with 3-01
4-17	Every time the user from MDE logs in, system must display the number of new applications and/or rosters that are received for processing since the last log in and also the total applications that are received. The system must also list the details for the substitute permits or vocational authorizations.	<p>Application Processing Module</p> <p>The module will consist of a MDE user home page that will have a work list consisting of details of a new applications, rosters, substitute permits, vocational authorizations that have been received.</p>	1	
4-18	<p>System must have a provision to track multiple stages of the application processing such as "pending payment", "pending evaluation", "approved".</p> <p>The following that are submitted to OPPS via the system must be placed under the "pending payment" mode.</p> <ul style="list-style-type: none"> • Applications (individuals requesting new certification or renewal of certification or duplicate certificates), • Rosters (from the higher education institutions) and • Substitute permits, preliminary employment authorization to work as a school counselor and vocational authorizations (from the School districts) 	<p>Application Processing Module</p> <p>The module will have business application code components that will process applications and change their status to "pending payment" based on the rules defined in this requirement.</p>	1	



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4-19	<p>Once the receipt of the payment is posted to the system,</p> <ol style="list-style-type: none"> 1) The applications that are received from the individuals requesting new certification or renewal of certification must be moved to "pending evaluation" mode so that the corresponding MDE user can start processing. 2) Requests for duplicate certificate from the individual; Rosters from the higher education institutions and Substitute permits, vocational authorization requests from the school districts must be automatically moved to the "approved" status 	<p>Application Processing Module</p> <p>The module will have business application code components that will process applications and change their status to "pending evaluation" or "approved" based on the rules defined in this requirement.</p>	1	
4-20	<p>Users must be able to view the list of all the applications, rosters, substitute permits and vocational authorizations.</p>	<p>Application Processing Module</p> <p>The module will consist of a MDE user home page that will have a list of all applications, rosters, substitute permits and vocational authorizations.</p>	See Remarks	Will be covered in the JAD session for 4-17
4-21	<p>MDE users must be able to open and view the individual application in a new window for processing.</p>	<p>Application Processing Module</p> <p>The module will consist of a MDE user home page that will have a list of all applications, rosters, substitute permits and vocational authorizations. The user will be able to view an individual application for processing.</p>	See Remarks	Will be covered in the JAD session for 4-22
4-22	<p>MDE users must be able to put in certification details and any additional information or comments into the application, which will also become part of the profile and added to the database.</p>	<p>Application Processing Module</p> <p>The module will consist of screens where a MDE user can input certification details</p>	1	



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		for an applicant. With a centralized database, the transaction will also update the individual's profile.		
4-23	MDE users must be able to nullify an endorsement on a certificate and also system must have the capability for the MDE user to suspend an individual's certificate for a period of time.	Application Processing Module The module will consist of screens where a MDE user can nullify or suspend an individual's certificate.	1	
4-24	In addition, if a certificate/permit has expired, the status of the certificate or permit should automatically change from "valid" to "expired." Also, if the person renews an expired certificate/permit, the system should automatically change the status back to "valid."	Application Processing Module The module will have a batch process that will check the certificate/permit validity date and change the status to "expired" for those certificates/permits that have expired.	1	
4-25	System must maintain history of certificates issued and endorsements earned (e.g., apparent date at which a certificate is issued or apparent date at which an endorsement is issued). It should not change to a date of most recent certification (renewal, provisional-to-professional) or endorsement (earning additional endorsement) activity.	Application Processing Module The centralized application database will have a history of certificates issued, endorsements earned (pending data archival rules). New certificates or permits will be recorded on a new row in the table and not update historical data.	1	
4-26	Based on a request for correction from either the individual or the institution, MDE user must be able to update or make changes to either the demographic information of the applicant (First Name, Last Name, SSN, Address, Gender, Ethnicity etc.) or the information submitted by the institution. All corrections must be logged and time and date stamped.	Application Processing Module The module will have screens where a MDE user can make amendment changes sent by the school districts, or higher education institutions. All transactions will be date, time stamped along with the user who made the changes.	1	
4-27	System must have the capabilities of customizable email templates.	Global Framework Module MDE users will be able to customize email templates based on a "macro" type templates.	1	



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4-28	The appropriate users at MDE must be able to upload the Criminal Conviction Report file from NASDTEC. If there is a match of SSN, System must send an alert to the appropriate user at MDE.	<p>Application Processing Module</p> <p>The module will have a batch process that can be invoked by appropriate MDE users to upload Criminal conviction report files from NASDTEC. As applications are evaluated by the system an alert will be sent to the processor if there is a match of the applicant on the criminal conviction records.</p>	1	
4-29	The appropriate users at MDE must be able to upload the Testing Scores file from MTTC. System must update the appropriate profiles of the applicant with the test scores automatically.	<p>Application Processing Module</p> <p>The module will have a batch process that can be invoked by appropriate MDE users to upload test scores from MTTC</p>	1	
4-30	Provide privacy control for access to MTTC performance of individuals in database; access to information about passing of MTTC tests or about specific numerical performance should not be accessible to anyone but the individual and to MDE staff who have a need-to-know for the purpose of issuing certificates and endorsements for which applicants have been recommended. MTTC performance information should not be used to construct an online accessible "highly-qualified" teacher status field.	<p>Security Module</p> <p>This requirement will be met through a suitable role that can be assigned by a super user. Only the assigned role will have access to the MMTTC performance of the individuals.</p>	See Remarks	Will be covered in Jad session for 3-01
4-31	<p>Once an MDE user approves a certificate, the system must be able to assign a number to the Certificate and also assign the issue and expiration dates of the certificate based on the type of the certificate. Also, system should send that certificate to be printed in batch along with the mailing addresses of the applicants.</p> <p>System should not print a</p>	<p>Application Processing Module</p> <p>The module will have application code components that will assign a certificate number, issue and expiry dates. The system will then send the details to the Print batch to print the certificates.</p> <p>The system will not permit</p>	1	



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	certificate in the following circumstances: if there is an alert triggered by the conviction report or there is no record or match of the MTTC results or if the MDE user puts a hold due to certain circumstances	the application to be approved if there is a conviction record or no MTTC scores are found.		
4-32	New system must be able to assign substitute permit numbers or authorization numbers and also assign the issue and expiration dates of such permits or authorizations.	Application Processing Module The module will have application code components that will assign a substitute permit /authorization number, issue and expiry dates.	See Remarks	Will be covered in the JAD session for 4-31
4-33	Users must be able to move the application from one category to another (e.g. while evaluating the application if the MDE user feels that he or she needs additional information from the applicant or the higher education institution or the school district and the application cannot be approved until the additional information is received, then the MDE user must be able to move the reviewed application to another folder like "Pending – Additional Information".) The system must automatically date and time stamp such a move.	Application Processing Module The module will have business application code components that will process applications and change their status to "pending – additional information" based on the rules defined in this requirement.	1	
4-34	MDE users must be able to send an email to the applicant or the higher education institution's user or the school district user via the system and or print a letter from the system and mail it. Such activities must become part of the audit trail.	Application Processing Module For pre-defined set of business rules or conditions the MDE users will be able to trigger emails to applicants, higher education institutions, school districts. The users can always print a system generated letter.	1	
4-35	Users must be able to generate customized reports based on the role of the user. See Reporting.	Reports Module The system will have a reports module where relevant report scan be generated on as-needed basis.	See Remarks	Will be covered in the JAD sessions for 4-02



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4-36	<p>The general public must be able to view the certification details of an individual from MDE’s website. Users must be able to search an individual’s record by last name, first name or certificate number. System should display only information that is considered as “Public Information”(e.g. Name, Previous Names used, type of certificate, certificate number, issue date and date of expiration, list of endorsements, recommended university, major & minor etc.)</p>	<p>Online Certificate Verification Module</p> <p>This module will consist of screens where public users will be able to search for certification details of an individual based on last name, first name, certificate number.</p>	1	
4-37	<p>SB-CEU sponsors must be able to enter SB-CEU information through a user interface for a single participant/applicant or upload a file with the SB-CEU information for several participants/applicants. System must update the appropriate profiles of the applicant with the SB-CEU information. Participants/Applicants can earn SB-CEU’s from more than one SB-CEU sponsor.</p>	<p>Apply for Certificate/Permit Module</p> <p>The SB-CEU sponsors will be able to either electronically submit or perform a bulk upload of the SB-CEU information. With a centralized database the information will update applicant SB-CEU information</p>	1	
4-38	<p>After submitting the SB-CEU information either via the user interface or by uploading the file, the system must generate a successful submission report if the submission was successful, or generate an error report, if there were in appropriate data in the fields of the file and the report must be displayed on the screen and also must be emailed to the appropriate user.</p>	<p>Apply for Certificate/Permit Module</p> <p>The system will display a confirmation screen after a successful submission of the SB-CEU information. The system will generate an error screen with the relevant errors if the SB-CEU information submission was not successful.</p>	0.5	
4-39	<p>User must be able to make corrections to the file and re-upload the file or must be able to make the correction through the user interface.</p>	<p>Apply for Certificate/Permit Module</p> <p>The system will let the user navigate to a screen where he/she can correct the errors on the SB-CEU information file or online application from the error screen created for 4-38 requirement</p>	0.5	



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4-40	Sponsors must be able to print a listing of individuals awarded SB-CEUs for the program approval record. All sponsors and SB-CEU records are monitored on a 3-year rotating basis to ensure compliance with SB-CEU program policies and criteria	Apply for Certificate/Permit Module The module will consist of a screen where SB-CEU sponsors will be able to print a list of individuals awarded SB-CEUs for the program approval record	0.5	
4-41	MDE user must be able to upload scanned documents/credentials that are received from the individuals and make it part of their profile and have the documents available to be viewed by the MDE staff for processing.			

** Each JAD session is estimated to run for two hours and it is estimated that there will be six JAD sessions each week. The remaining hours in a business week will be utilized to document the use cases, develop the User Interface prototype and prepare for the forthcoming sessions. The estimated number of sessions for each use case will be validated with the State during the engagement startup phase.

Technical/General System Requirements (Appendix B)

ID	TECHNICAL REQUIREMENTS	COMMENTS
1	SYSTEM ARCHITECTURE	
1-01	The system employs client/server or web-based architecture with an intelligent workstation client accessing a central database through software on a server.	CONTRACTOR will design a web-based .NET application that accesses a centralized application database (SQL Server 2005) for the Online Teacher Certification System Please refer to the "Technical Solution" section of CONTRACTOR Technical proposal for details.
1-02	The proposed system shall operate efficiently on both PC and Apple Mac systems and also with the following web browsers MS Internet Explorer 5.x, 6.x, or higher; FireFox 1.X or higher; Safari 3.X or higher, Opera 9.x or higher.	The proposed system will be adequately tested to function correctly on both PC and Apple Mac systems. The system will also be tested on Internet Explorer 5.x, 6.x; Firefox 1.x; Safari 3.x , Opera 9.x . Please note that State will be responsible to provide suitable testing environments per the approved schedule to perform the above tests.
1-03	The system places no limit on record size.	CONTRACTOR will not design the application database (SQL Server 2005) to enforce a constraint on the total number of rows. However performance considerations, technical limitations of SQL Server 2005, archiving requirements may limit the record size.
1-04	The software is expandable and portable, with specific reference to the system capacity requirements presented in this RFP.	CONTRACTOR's solution includes an application architecture that already provides extensibility and scalability



ID	TECHNICAL REQUIREMENTS	COMMENTS
1-05	<p>The system is fully self-contained and capable of being operated by State staff with no dependency on Vendor services for its routine operation.</p>	<p>The proposed web application will be built, tested and deployed on the State servers.</p> <p>CONTRACTOR will train and provide Knowledge transfer to the State MDE/MDIT staff.</p> <p>State MDIT staff will maintain the application on the Production environment.</p>
1-06	<p>The system server is compatible with the State's technical architecture and is sized suitable for the system specified.</p>	<p>CONTRACTOR will build the OTCS application on State approved .NET architecture.</p> <p>CONTRACTOR will design and develop the application under the assumption that the State server and network infrastructure of will be sufficiently deployed or upgraded (as necessary) to handle the higher volumes of user traffic accessing the application.</p> <p>Please refer to the "Technical Solution" section of CONTRACTOR Technical proposal for details.</p>
1-07	<p>The system is an open system, with no dependency on the use of specific models or models of equipment operating systems.</p>	<p>CONTRACTOR will build the OTCS application on .NET architecture. The application will be accessed through a web browser. Any end user equipment with a standard web browser can access the application.</p> <p>Please note that for application server purposes, the State required .NET architecture has found to be stable on the Windows operating system only.</p>
1-08	<p>The system is portable from one OS/RDBMS to another, i.e., from Unix to Windows 2000, or from one platform/OS to another, e.g., Sun Solaris to IBM AIX, etc.</p>	<p>The State can apply any industry standard RDBMS running on any operating system platform for storing system data.</p> <p>However, the application server can only be on a Windows platform since the State requires the solution to be developed in a .NET environment.</p>
1-09	<p>The system keeps a log of each transaction which alters the database. Logs are date and time stamped to allow the system to reconstruct activity for any period.</p>	<p>All database transactions will be logged, time stamped (including date).</p>
1-10	<p>The use of a modular framework as part of the main solution, meaning a set of components, wizards, classes, and libraries that minimize programming required to modify or customize the system.</p>	<p>Please refer to the "Technical Solution" section of this contract for details.</p>
1-11	<p>Development of the system must be structured. It must be possible to make use of version control and a fully scriptable build and deployment process.</p>	<p>CONTRACTOR will make use of the State standard version control system. State will be responsible to provide necessary software licenses. CONTRACTOR will provide an installation plan with the necessary details on build and deploy scripts, process. Please refer to the "Technical Solution" section of this contract for details.</p>



ID	TECHNICAL REQUIREMENTS	COMMENTS
2	PROGRAMMING LANGUAGE	
2-01	The system's client applications are written in .NET programming environment.	CONTRACTOR will develop the OTCS application on State standard .NET architecture. Please refer to the "Technical Solution" section of this contract for details.
2-02	The system offers Application Programming Interfaces (APIs) that enable the State to develop custom interfaces to all modules.	The system will be developed with industry practice .NET technology which provides re-usability of components. CONTRACTOR will work with state to identify all such reusable components across modules and will make them flexible either as web services or Application programming interfaces (APIs) to be used by State to develop custom interfaces.
3	RDBMS / APPLICATIONS / DATABASE MANAGEMENT	
3-01	The system is available with State's standard relational database management system	CONTRACTOR will design a web-based .NET application that accesses a State standard database (SQL Server 2005) for the Online Teacher Certification System
3-02	Full-text indexing and a full-text database search feature are available to provide easy retrieval of records.	The system will use Microsoft SQL Server's full-text indexing and full-text search features to provide easy retrieval of records. CONTRACTOR will work with State to identify such entities and attributes that would need these capabilities and will implement the same.
4	SECURITY	
4-01	All computer information systems and applications operate in a secure manner and comply with State Enterprise IT Security Policy and Procedures as found on the website: http://www.michigan.gov/dit/0,1607,7-139-34305-108216--,00.html	On the OTCS project, CONTRACTOR will develop a Security plan document that will document how the OTCS application will adhere to the State Enterprise IT Security Policy and Procedures
4-02	The system must ensure that the integrity and confidentiality of data is protected by safeguards to prevent release of information without proper consent.	On the OTCS project, CONTRACTOR will develop a Security plan document that will lay out how the OTCS data will be protected by safeguards to prevent unauthorized release.
4-03	System shall ensure a secure sign-on through user ID and password.	CONTRACTOR will design an authentication layer that will interface with MEIS or Tivoli (based on MDIT recommendation) to ensure a secure login of users through a userID and password.
5	SECURITY / ACCESS CONTROL	
5-01	The system provides security at database, workstation, and individual operator levels	On the OTCS project, CONTRACTOR will develop a Security plan document that will detail how security will be implemented at the database, workstation, user levels
5-02	The system provides secure access control based upon unique user login, for types of record (e.g., fund, order) as well as by function performed upon the record (e.g., Display, Add, Edit, Delete.)	CONTRACTOR will implement a secure role based authorization system that can be maintained by MDE super users. The roles will be mapped to specific functions (delete, edit, add, view only) during the requirements gathering phase



ID	TECHNICAL REQUIREMENTS	COMMENTS
5-03	<p>The system checks each user’s access privileges at login, and automatically disable or enables client functions (in real time) based upon the user’s profile</p>	<p>CONTRACTOR will implement a secure role based authorization system that can be maintained only by MDE super users. Upon login only those functions that are assigned to the logged in individual’s role will be available.</p>
5-04	<p>The system provides varying levels of access within the application, such as administrators, view only, or scheduling only.</p>	<p>CONTRACTOR will implement a secure role based authorization system that can be maintained only by MDE super users. The roles will be mapped to specific functions (delete, edit, add, view only) during the requirements gathering phase</p>
5-05	<p>The selected vendor will review the adequacy of current user roles and security for the system. In particular, a means will exist for adding new roles and removing or disabling existing roles.</p>	<p>CONTRACTOR will implement a secure role based authorization system that can be maintained only by MDE super users. The roles will be mapped to specific functions (delete, edit, add, view only) during the requirements gathering phase. CONTRACTOR will describe the process to add new roles, remove or disable existing roles.</p>
5-06	<p>MDE Help Desk must be able to access an administrative page to view the Authorized Users of the system. This role might also need to include the ability to edit/add users to the system.</p>	<p>CONTRACTOR will implement a secure role based authorization system that can be maintained (edit/add users) through a screen by MDE super users. MDE staff can specify during the role mapping if the MDE Help desk roles need to have the ability to add or edit users to the system</p>
5-07	<p>When users are removed, there accounts should be inactivated to preserve modification history (i.e., an audit trail).</p>	<p>CONTRACTOR will implement the user profiles within the Security module so that when users are inactivated, their user profile information is not deleted to preserve their transaction history</p>
5-08	<p>The new system will integrate with the State approved authentication system. The Online Teacher Certification system will need to have a security module to provide authorization for users. These users should be able to have multiple roles and role types for a single user account. The system will allow users to submit, view and edit only those particular data elements for which they have permissions.</p>	<p>CONTRACTOR will implement a Security Module that will have a Authentication layer (with MEIS or Tivoli, based on MDIT recommendation) and an Authorization layer (role based security).</p> <p>Please refer to the Security Module under the “Functional Solution” section of this contract for details.</p>
6	SECURITY/PASSWORD CONTROLS	
6-01	<p>The system provides an enforced minimum length for passwords.</p>	<p>The Authentication layer of the Security Module will detail the Security and Password controls to be used on the project. CONTRACTOR will work with the MDIT staff during System Design to establish a minimum length of the passwords.</p>
6-02	<p>The system provides an enforced requirement for user passwords to be</p>	<p>The Authentication layer of the Security Module will detail the Security and Password controls to be used on the</p>



ID	TECHNICAL REQUIREMENTS	COMMENTS
	automatically prompted for change after a defined period has passed, such as 30, 60 or 90 days.	project. CONTRACTOR will work with the MDIT staff during System Design to establish a frequency at which the password change needs to be enforced.
6-03	The system provides users with the capability to change their own passwords.	The application will have "Change Password" functionality to change their own passwords.
6-04	The system disables user ID's after a specified number (3) of consecutive invalid login attempts.	The application will be designed to disable a userID after a pre-defined number of consecutive invalid login attempts.
6-05	The system enters passwords in a non-display field.	As a standard practice, users will enter all passwords on non-display (non-clear text) fields
6-06	The system encrypts passwords when they are routed over the network.	The application will encrypt the passwords when they are routed over the network. On the OTCS project, CONTRACTOR will develop a Security plan document that will detail how security and password controls will be implemented
6-07	The system encrypts passwords in system storage.	On the OTCS project, CONTRACTOR will develop a Security plan document that will detail how security and password controls will be implemented
7	SECURITY/ACTIVITY LOGGING	
7-01	The system logs unauthorized access attempts by date, time, user ID, device and location.	CONTRACTOR will capture unauthorized login access details in a separate database table and/or in application logs.
7-02	The system maintains an audit trail of all security maintenance performed by date, time, user ID, device and location, with easy access to information.	CONTRACTOR will develop an authorization layer for role based access. An audit trail will be maintained for all security maintenance transactions performed.
7-03	Provides security reports of users and access levels.	CONTRACTOR will implement an authorization layer for role based security. The user profile and role details will be stored in the OTCS database and will be available to generate any reports
7-04	Provides detailed reports of backups completed and backups failed.	The database and log file backup schedule will be determined during the system design phase. MDIT technical staff will maintain the database and application servers.
8	SECURE SUBMISSION	
8-01	The system will accommodate bulk upload submissions by higher education institutions or school districts as well as the real-time keying in and adding or modification of single records.	Please refer to the "Functional Solution" and "Technical Solution" sections of this contract for details.
8-02	The system must support the secure transfer and exchange of data over the Internet by educational entities using a number of file formats including XML and comma delimited.	Please refer to the "Functional Solution" and "Technical Solution" sections of this contract for details..
8-03	The system must incorporate a web-based Error Check Program that provides feedback to the higher education institutions and school districts immediately following their	Please refer to the "Functional Solution" and "Technical Solution" sections of this contract for details.



ID	TECHNICAL REQUIREMENTS	COMMENTS
	upload. The solution must account for increased processing loads that will occur days prior to submission deadlines if any.	
8-04	The new system will adhere to the following general flow for uploading batch files:	See responses below
8-04a	Secure upload.	Please refer to the "Technical Solution" section of this contract for details.
8-04b	File will be error checked and reports provided for higher education institutions and school district review.	Please refer to the "Technical Solution" section of this contract for details.
8-04c	Unique ID resolution will occur (all records must have a Unique ID, and all records requiring resolution must be resolved before a file can be officially submitted).	Please refer to the "Technical Solution" section of this contract for details.
8-04d	Any errors must be corrected by the higher education institution or the district in their source systems and files must be re-uploaded.	Please refer to the "Technical Solution" section of this contract for details.
9	2. APPLICATION SPECIFICATIONS	
9-01	The application uses SOM standard relational database management system.	CONTRACTOR has proposed the use of SQL Server 2005 database for the application. Per the information provided in the RFP, SQL Server 2005 is a State of Michigan standard
9-02	The application will operate effectively on State hardware as defined by Vendor with Vendor-supplied upgrade recommendations.	CONTRACTOR will review and seek approval of the system design specifications from the MDIT technical staff prior to development. CONTRACTOR will also provide hardware recommendations to the State. State will be responsible to procure, install and configure hardware and software. CONTRACTOR will work with the State to perform Operations testing prior to deployment.
9-03	The application operates in a recognized SOM standard operating environment.	CONTRACTOR will review and seek approval of the system design specifications from the MDIT technical staff prior to development. As specified in the RFP, CONTRACTOR has proposed the use of Windows 2003 operating system. State will be responsible to provide hardware and software approved by MDIT
9-04	The application allows the State, from PC workstations, to access and update all necessary information to complete a transaction.	CONTRACTOR will design a web-based application for the OTCS that can be accessed from standard internet browsers on PC work stations.
9-05	The application allows for the accurate and timely input and extraction of State data.	CONTRACTOR will design a web-based application for the OTCS that can be accessed from standard internet browsers. All the data will be stored in a single centralized database that will be available to the State for report generation.
9-06	The application allows for processing of all State business identified in this SOW.	CONTRACTOR will design the OTCS application that meets all the business requirements identified in Appendix A. Please refer to the "Functional Scope" and "Functional Solution" sections of this contract for details of how



ID	TECHNICAL REQUIREMENTS	COMMENTS
		CONTRACTOR has mapped all the business requirements identified in Appendix A of the RFP in to the proposed OTCS application
9-07	The application provides data reporting capabilities identified in this SOW.	Please refer to the “Functional Solution” and “Technical Solution” sections of this contract for details on the Reports module. The data will be available from a single centralized OTCS database for any additional reports not identified in the proposal.
9-08	The application provides a Graphical User Interface (GUI) that is user-friendly and provides data, calculation, reporting, and communication capabilities to State users as identified in this SOW.	Please refer to the “Functional Solution” and “Technical Solution” sections of this contract for details. on the Reports module. The data will be available from a single centralized OTCS database
9-09	The application is modular in design to accommodate phased implementation and future expansion.	CONTRACTOR will design and develop the OTCS application based on industry standard frameworks and best practices for easy maintenance by State. CONTRACTOR will develop the OTCS application based on a MDIT approved System Design
9-10	The modularity allows the capabilities of the core systems to function without the entire system complement.	CONTRACTOR will design and develop the OTCS application based on a MDIT approved System Design and industry standard frameworks and best practices for easy maintenance by State.
9-11	Additional modules may be integrated into the system without a major impact to the installed components.	CONTRACTOR will design and develop the OTCS application based on a MDIT approved System Design and industry standard frameworks and best practices for easy maintenance by State.
9-12	All modules of the system are integrated and designed to work together using a single input and a common database with no redundant data entry or data storage.	CONTRACTOR will design a web-based application for the OTCS with all the data stored in a single centralized database that does not require redundant data entry or storage.
9-13	The system supports paperless processing through the use of electronic documents that are routed for electronic signatures through user-defined approval paths.	<p>CONTRACTOR will design the OTCS application based on the business requirements and processes defined in this contract.. The applications will be electronically routed to higher education institutions, MDE staff as defined in Appendix A for approvals. The users can also provide electronic signatures through the application.</p> <p>Please note that according to the requirement 2-07 in Appendix A users will have the ability to print application forms and send it to MDE with necessary documents.</p>
9-14	The system has the ability to accept batch entry from external sources while ensuring the same edits and validations as the online system.	The application will have the capability to do both online and batch entry of data. Please refer to the “Technical Solution” section of this contract for details..
9-15	Response times, at local and remote sites, for the major on-line processes stated above will meet or exceed the existing response times.	CONTRACTOR will design and develop the application without any significant degrade in performance at local and remote sites under the assumption that the server and network infrastructure will be sufficiently deployed or upgraded to handle volumes of user traffic accessing the application.
9-16	The application provides the	CONTRACTOR solution has provided for bulk upload



ID	TECHNICAL REQUIREMENTS	COMMENTS
	<p>capability of transferring data to and from the host/server to the client for processing on other software packages.</p>	<p>capabilities. The same can be leveraged for import to other software packages as long as the 3rd party software can accept the format in which the data is exported</p>
9-17	<p>The system provides the capability to access scanned images that are attached to various elements of the database.</p>	<p>The scanned images can either be stored as a blob in the database or linked from the database. CONTRACTOR will work with MDIT technical staff to provide access to the scanned images.</p>
10	<p>REPORTING</p>	
10-01	<p>The software delivers standard reports.</p>	<p>Please refer to the “Functional Solution” and “Technical Solution” section of this contract for details. on the Reports module for details on reports that will be provided using the SQL Reporting services. The data will be available from a single centralized OTCS database for any additional reports not identified in the proposal.</p>
10-02	<p>The system includes ad-hoc query and reporting tools.</p>	<p>CONTRACTOR will use SQL Reporting services for ad-hoc query and reporting.</p>
10-03	<p>The online query capability enables non-technical end-users to extract information.</p>	<p>System will provide online query capability which will enable non-technical end-users to extract information</p>
10-04	<p>The standard (e.g., regularly scheduled, recurring) reporting environment allows:</p>	<p>Responses provided below (10-04a through 10-04c)</p>
10-04a	<p>Standard reports to be scheduled, executed, viewed on-line, printed (centrally or remotely) and dispersed (including the use of report distribution management software)</p>	<p>Please refer to the “Functional Solution” and “Technical Solution” section of this contract for details on the Reports module for details on reports that will be provided using the SQL Reporting services. The data will be available from a single centralized OTCS database for any additional reports not identified in the proposal.</p>
10-04b	<p>Offices and work locations to control which standard reports they do and do not receive.</p>	<p>This requirement will be implemented using specific roles in the authorization module.</p>
10-04c	<p>The State to control the information that appears on standard reports so that data security is maintained.</p>	<p>CONTRACTOR will work with the MDE/MDIT staff to design the format and content of the standard reports and to ensure security.</p>
10-05	<p>The system provides methods for retaining and modifying previously built queries</p>	<p>System will provide ability to save, retrieve and modify the previously built queries.</p> <p>The data will be available from a single centralized OTCS database for any additional reports not identified in the proposal.</p>
10-06	<p>The system provides security and control mechanisms that prevent the abuse of ad hoc queries (e.g., attempted access to restricted data, attempted execution of a query that would run for several hours, etc.)</p>	<p>Please refer to the “Functional Solution” and “Technical Solution” section of this contract for details. on the Reports module for details on reports that will be provided using the SQL Reporting services.</p>
10-07	<p>The system provides the use of transaction databases, external files, or a "data warehouse" for ad-hoc reporting.</p>	<p>CONTRACTOR will use SQL Reporting services for ad-hoc query and reporting.</p>



ID	TECHNICAL REQUIREMENTS	COMMENTS
10-08	The system provides support for XML, CSV, Excel, and other helpful data download formats.	Please refer to the “Functional Solution” and “Technical Solution” section of this contract for details.on the Reports module for details on reports that will be provided using the SQL Reporting services.
10-09	The system provides build your own comma separated values (.csv) file” must be able to support large data sets.	Please refer to the “Functional Solution” and “Technical Solution” section of this contract for details.on the Reports module. The size of the data sets will be limited by the capabilities of the Microsoft Reporting Services 2005 framework
10-10	The system must be capable of interfacing with the state's e-mail system (i.e. MS Outlook and Novell GroupWise) in order to validate e-mail addresses (e.g. perhaps “pinging” to ensure an address is valid).	CONTRACTOR will implement a .NET email control to create and send email messages and interface with State mail servers. User profile information of State users can be set up by validating against the information available on the State LDAP.
10-11	The system must interface with the State’s email client (i.e. MS Outlook and Novell GroupWise) in such a way as to automatically generate and send email notification for select events.	For defined business rules or events, the application will generate and send email notifications or reminders. Such business rules or events will be defined during the requirements gathering phase.
10-12	The system must be capable of automatically generating and sending an email confirmation to an authorized user and the supervisor for that user’s following any addition, update or deletion of data by that authorized user.	The system will generate and send an email confirmation to necessary personnel for pre-defined business rules. Such business rules or events will be defined during the requirements gathering phase.
10-13	The new system must provide offline processing options. For example higher education institutions & school districts should be able to download their data, make desired changes and then upload all changes as a batch.	Prior to upload of roster data Higher education institutions and school districts can review information offline, make fixes and upload the changes via a bulk upload process.
11	AUDIT TRAIL	
11-01	The system enables the user to modify data entry transactions that have already been posted to the database while maintaining an audit trail of the change.	CONTRACTOR solution includes maintaining data with audit trail on the transaction records.
11-02	The system's internal control functionality ensures that the data entry and processing associated with a business event has been completed before updating the database.	Please refer to the “Technical Solution” section of this contract for details. System will perform all necessary edits before committing the same to the business database.
12	EDIT AND VALIDATION CONTROL	
12-01	The system includes comprehensive field edits to prevent incomplete or incorrect data from entering the system.	During the requirements gathering CONTRACTOR will work with the MDE subject matter experts to define field edits or data validation rules for all the screens to prevent incorrect or incomplete data entry.
12-02	The system ensures data integrity and controls processing without hard-coded logic.	CONTRACTOR will work with State business and technical experts to provide data integrity rules that will be designed in the application



ID	TECHNICAL REQUIREMENTS	COMMENTS
13	INTERFACES	
13-01	<p>The system has the ability to exchange data with other systems using the following mechanisms: online application to application, web services interface, FTP and SFTP, to and from magnetic media and using warehouse utilities to the State’s data warehouse.</p>	<p>CONTRACTOR has identified solutions to the external interfaces identified in the RFP. They include batch interfaces, API driven interfaces (including web services), secure FTP, database reads. Please refer to the “Technical Solution” section of this contract for details.</p>
13-02	<p>The system must provide real-time data transfer of data identified within this SOW.</p>	<p>CONTRACTOR will work with the State to understand this requirement better and provide an appropriate solution</p>
13-03	<p>System Interface: CEPAS - The State’s Centralized Electronic Payment and Authorization System (CEPAS) that integrates electronic receipt of credit card and electronic check transactions. Vendor will be responsible for building an interface to the Enterprise E-Payment Engine using API specifications and test the application and the Enterprise Payment Engine and obtain the necessary certifications that are required for the application to run in the production mode.</p>	<p>CONTRACTOR will work with the State MDIT and CEPAS interface technical experts to design, develop and test an interface to submit electronic payments via the CEPAS e-Payment engine.</p>
13-04	<p>System Interface: REP - CEPI’s Registry of Educational Personnel (REP) system, which collects basic employment details of educational personnel from the school districts, LEA’s etc. The new system will also feed data to and/or receive data from the REP system.</p>	<p>CONTRACTOR will work with the State MDIT and REP application technical experts to design, develop and test interfaces with the REP database to exchange relevant details of educational personnel.</p>
13-05	<p>System Interface: MSDS (SRSD) - CEPI’s Student Data System (MSDS) that may be in place during the development of this application. MSDS is currently under development and will be retiring the Single Record Student Database (SRSD) system that is presently being used. The SRSD system collects and stores student data from the various School Districts in a single record format. The data are collected three times during the year (Fall, Spring and End of Year).</p> <p>To report student data, education departments must accurately and securely track each student. In 2003, Michigan implemented a</p>	<p>CONTRACTOR will work with the State MDIT and MSDS application technical experts to design, develop and test interfaces with the REP database to exchange relevant student data.</p>



ID	TECHNICAL REQUIREMENTS	COMMENTS
	<p>unique student identification system. Each student is assigned a unique and secure number that moves with the student from grade to grade and school to school over the course of their academic career. This application validates and assigns Unique Identification Codes (UIC) to students. Students unable to be uniquely identified are displayed in a user interface that permits resolution to occur. The new system will also feed data to and/or receive data from the MSDS(SRSD) system.</p>	
13-06	<p>System Interface: Credential Data Exchange (CDX). The CDX is a Windows service application built by MDIT which enables a local district to obtain credential numbers, issue dates, expiration dates, endorsement codes, and institution codes for instructional personnel.</p> <p>Currently this application is part of CEPI's REP system. When a school district wants to obtain credential information, the district uploads a tab-delimited file containing the name, social security number, and date of birth of each personnel. The file upload is performed via a CDX upload page contained within the REP. The service connects to the L2K database and grabs the required information out of L2K based upon the details provided by the district. The service then appends that information to the record in the file. The district then obtains the results via a CDX download page within the REP.</p> <p>MDE would like to move the CDX service out of REP and integrate it with the new Online Teacher Certification System and continue to provide this feature as a service to the school districts.</p>	<p>Please refer to the "Functional Solution" and "Technical Solution" sections of this contract for details.</p>
14	<p>USER INTERFACES:</p>	
14-01	<p>In general, the user interface should reduce redundancy and extra</p>	<p>CONTRACTOR will design the User Interface screens after the JAD sessions based on the State of MI look and</p>



ID	TECHNICAL REQUIREMENTS	COMMENTS
	<p>keystrokes (e.g., if physical address and mailing address are the same, the user should not be required to type it in twice. The system should not allow non-numeric characters when entering phone/fax numbers).</p>	<p>feel standards and the considerations provided in this requirement. The UI prototypes will be reviewed and approval sought with the MDE staff prior to development.</p>
<p>14-02</p>	<p>Users must be able to access the system 24/7/365.</p>	<p>The application will be designed to be available 24/7/365 except for the regular scheduled maintenance hours. CONTRACTOR will work with the MDIT staff to define the maintenance hours.</p>
<p>14-03</p>	<p>Users (Higher Ed Institution; MDE Staff; Applicant; School/Districts; System Administrator) must be able to create user id and password by providing basic information like Last Name, First Name, E-mail address and select the type of user from a drop down menu. (Higher Ed Institution; MDE Staff; CEPI Staff; Applicant; School/Districts; System Administrator).</p>	<p>This will be developed as part of the Security Module. Please refer to the "Functional Solution" and "Technical Solution" section of this contract for details.</p>
<p>14-04</p>	<p>If the user identifies him or her as a representative of either higher education institution that is approved by MDE or as a Michigan school district, than the system must list the names of the higher education institutions or the school districts from which the user can choose that are appropriate.</p>	<p>This is will be available as part of the authentication layer of the Security Module for user profile setup of Higher Education users or school district users.</p>
<p>14-05</p>	<p>System must send an email to the user with the user id and temporary password so that the user can be validated.</p>	<p>This is will be available as part of the authentication layer of the Security Module after the setup of a user profile.</p>
<p>14-06</p>	<p>When the user logs in for the first time, system must be able to recognize the type of user and the system should direct the user to the appropriate page based on the role of the user, where user will be asked to change the password and update the profile.</p>	<p>This is will be available as part of the authentication layer of the Security Module after the setup of a user profile.</p>
<p>14-07</p>	<p>Every time a user logs in, system should recognize the user's role and direct the user to the appropriate home page based on the role.</p>	<p>CONTRACTOR will implement a secure role based authorization system that can be maintained only by MDE super users. The roles will be mapped to specific functions (delete, edit, add, view only) during the requirements gathering phase. When users login the system will let the user to perform only those functions allowed by the role.</p>
<p>14-08</p>	<p>System must allow the user to access and edit information based on the role. No user should be allowed to</p>	<p>CONTRACTOR will implement a secure role based authorization system that can be maintained only by MDE super users. The roles will be mapped to specific</p>



ID	TECHNICAL REQUIREMENTS	COMMENTS
	Delete any information but can Add or update. Certain Changes made by certain user will have to be approved by the Supervisor/super user.	functions (delete, edit, add, view only) during the requirements gathering phase. When users login the system will let the user to perform only those functions allowed by the role.
15	CAPACITY	
15-01	Current requirement lists 350,000 identified users. It is estimated that we will need between 10,000 and 35,000 concurrent users capacity.	<p>CONTRACTOR will design and develop the application to handle 350,000 users with a 10,000 – 35,000 concurrent users capacity under the assumption that the State server and network infrastructure of will be sufficiently deployed or upgraded (as necessary) to handle the higher volumes of user traffic accessing the application.</p> <p>State will be responsible to provide the necessary hardware and software licenses to deploy the application.</p> <p>Please note that as clarified by the State in its responses to the vendor questions, the 10,000 – 35,000 concurrent users represent the number of users logged in to the system and not server hits at an interval of seconds.</p> <p>Please note that system Performance is a function of various factors including Hardware capacity, network throughput, database performance, data volume and user concurrency and application design. CONTRACTOR will be responsible for performance issues to the extent they pertain to code developed by CONTRACTOR based on technical design approved by State. State will be responsible for all other factors.</p>
16	SYSTEM AUDITING	
16-01	The system has the ability to maintain a historical record of all changes made to any item within the system (e.g., data element, business rule, process control, software program), the ID of the person or process that made the change, the before images of the affected data records, and the date and time the change was made.	<p>The application code history (software program, business rule, process) will be maintained within the source code repository (Software configuration Management tool). All database transactions will be date and time stamped along with the userID of the person or process that made the change.</p> <p>CONTRACTOR will work with the MDIT staff to develop backup and recovery schedules for the database.</p>
16-02	The system must ensure that all system events for software, hardware, interfaces, operating system, network, etc. are written to a system event log in a manner that facilitates debugging of all system problems.	System will write all the system events pertaining to the developed application to the event log in a manner that will facilitate debugging of system problems.
16-03	The system offers the ability to query, view, filter, and sort the system audit trail. The system is able to store the queries.	System will provide ability to query, view, filter and sort system audit trail and will be provide mechanism to store queries.
16-04	The system has the ability to identify and track data back to its input source (e.g., imaged document, keyed from form, interface file, etc.).	The application database can include a field for each transaction that will specify the input data source – batch, online user input, interface



ID	TECHNICAL REQUIREMENTS	COMMENTS
16-05	The system has the ability to audit all override of edits and audits and identify the login ID, date, and time.	All database transactions will be date and time stamped along with the userID of the person or process that made the change. This will be used to audit the override of edits.
17	ERROR HANDLING	
17-01	The system must ensure that all errors are written to an error log.	CONTRACTOR will log all error messages to an application error log file.
17-02	The system must allow for an administrator to view, filter, sort, and search the error log.	CONTRACTOR will log all error messages to an application error log file. The log files will be accessible to predefined super users (e.g., system administrator) to review, filter, sort and search the log
17-03	The system must allow for an administrator to archive error log entries based upon user-defined criteria.	CONTRACTOR will log all error messages to an application error log file. The log files will be accessible to predefined super users (e.g., system administrator) to review, filter, sort and search the log. The super user will also be able to archive log files on a predefined schedule or as necessary.
17-04	The system must allow for a user to define an alert message to be executed upon the occurrence of an error.	The application will store all error messages in a table in the System database. MDE staff can define the error messages and CONTRACTOR can load these messages in database prior to deployment. These messages can be updated by the MDE staff as necessary.
18	BACKUP AND RECOVERY	
18-01	The system has the ability to provide point-in-time recovery of data to the last completed transaction.	This needs to be implemented through a proper hardware failure recovery solution. CONTRACTOR will propose a solution after better understanding this requirement
18-02	The system has the ability to allow for continued use of the system during backup.	This needs to be implemented through a proper hardware failure recovery solution. CONTRACTOR will propose a solution after better understanding this requirement
18-03	The system has the ability to provide a complete backup and recovery process for all database tables and system files.	This needs to be implemented through a proper hardware failure recovery solution. CONTRACTOR will propose a solution after better understanding this requirement
18-04	The system has the ability to create on request backups.	This needs to be implemented through a proper hardware failure recovery solution. CONTRACTOR will propose a solution after better understanding this requirement
18-05	The back up and archival features of the system proposed can be initiated automatically or by manual request.	This needs to be implemented through a proper hardware failure recovery solution. CONTRACTOR will propose a solution after better understanding this requirement
18-06	The system software and data must be able to be restored to its previous operational status within four (4) hours after initiation of recovery process.	This needs to be implemented through a proper hardware failure recovery solution. CONTRACTOR will propose a solution after better understanding this requirement
19	ADDITIONAL	
19-01	Source code shall be owned by the State.	With CONTRACTOR's solution, State will own the source code to maintain, and make modifications and/or enhancements
19-02	For the first year and all subsequent Contract years, the following services	Responses provided below (19-02a through 19-02d)



ID	TECHNICAL REQUIREMENTS	COMMENTS
	<p>are provided for the current version and one previous version of any Software provided with the deliverables, commencing upon installation of the deliverables or delivery of the Software:</p>	
19-02a	<p>Error Correction. Upon notice by the State of a problem with the Software (which problem can be verified), reasonable efforts to correct or provide a working solution for the problem.</p>	<p>CONTRACTOR will provide one FTE qualified resource who is familiar with the system to work onsite at the State's facilities to provide error correction of the OTCS application during the maintenance phase.</p>
19-02b	<p>Material Defects. The State will be notified of any material errors or defects in the deliverables known, or made known to the Contractor from any source during the Contract term that could cause the production of inaccurate, or otherwise materially incorrect, results and shall initiate actions as may be commercially necessary or proper to effect corrections of any such errors or defects.</p>	<p>CONTRACTOR will provide one FTE qualified resource who is trained and familiar with the system to work onsite at the State's facilities to fix material defects of the OTCS application during the maintenance phase</p>
19-02c	<p>Updates. All new releases and bug fixes for any software deliverable developed or published by the contractor and made available to its other customers at no additional charge will be provided to the State at no additional charge.</p>	<p>CONTRACTOR will design, develop and deploy a custom application for the requirements defined in the RFP. This requirement is typically applied to COTS products.</p>

Functional Solution Overview

Based on the OTCS requirements, Contractor has identified 7 key modules. They are:

1. Apply for Certificate/Permit Module
2. Application Processing Module
3. Online Certificate Verification Module
4. Security Module
5. Reports Module
6. Credential Data Exchange Module
7. Global Functionality Module

Apply for Certificate/Permit

This module consists of functions that permit individual applicants (both in state and out of state), Higher Education institutions and school districts to apply for a certificate (new and renewal), permit to become certified teachers, school administrators, school counselors, school psychologists and school nurses.

- Individuals seeking to take the Michigan Test for Teacher Certification (MTTC) or seeking certification or permits will be able to create and maintain a profile, submit new or renewal applications online and check on the status of their applications.
- Higher Education institutions such as universities, colleges will be able to submit their rosters online and using a bulk upload process.



- School districts will be able to submit requests for temporary permits or annual vocational authorization online and using a bulk upload process.
- Individuals seeking certificates or permits will be able to pay the relevant fee online using the CEPAS interface
- As an individual profile is created, the system will interface with MSDS to either generate a Unique Identification Code (UIC) if one is not available or obtain a UIC that has already been assigned to the individual
- Applicants will be able to submit Continuing Education (CE) and Professional Development (PD) data. The system will forward the information to the appropriate school district for validation and approval
- Currently approved SB-CEU sponsors (LEA's, ISD's, RESA's, Colleges/Universities, State Departments/agencies, government agencies and state professional organizations) will be able to upload awarded SB-CEUs
- Applicant will be able to print the completed application and submit it to the institutions with any additional documents that are required by the institutions
- Applicants will be able to check the status of their application on their homepage
- An individual who is already certified will be able to apply for a duplicate certificate and pay the appropriate fee

The application details will be stored in the OTCS database for further processing by appropriate MDE staff.

Application Processing

This module will consist of functions that will let the MDE staff process the applications submitted online by individuals, higher education institutions and school districts in a timely manner. The module will also permit Higher Education institution and School district staff to process applications directed to them prior to submitting them to the MDE. The module will let the MDE Staff set and track the multiple stages of the application processing such as "pending payment", "pending evaluation", "Pending – Additional Information", "approved". Upon approval of a certificate by a MDE user, the system will assign a number to the Certificate and also assign the issue and expiration dates of the certificate based on the type of the certificate. Also, the system will send that certificate to be printed in batch along with the mailing addresses of the applicants.

The MDE staff will also be able to perform support tasks that will assist them process an application such as:

- Upload scanned documents
- Modify applicant records
- Upload MTTC scores
- Upload conviction reports
- Process fee reports
- Send relevant data to a batch process to print certificates and licenses

The Higher Education and School District staff will be able to:

- Add additional information into the application (e.g. Degree, Certification type, Subjects, Major, Minor etc.) which will become part of the profile
- Edit the demographic information of the applicant
- Make single or multiple recommendations at a time online and through a bulk upload

Online Certificate Verification

This module will permit the general public to search and verify individual certificates and licenses online on the State's web site. Users will be able to search an individual's record by last name, first name or certificate number. System will display only information that is considered as "Public Information" (e.g. Name, Previous Names used, type of certificate, certificate number, issue date and date of expiration, list of endorsements, recommended university, major & minor etc.)

Security

This module will comprise of the authorization layer that will create and edit user profiles, assign users to roles using a role based functional access. MDE users that have the super user role (typically a Security Administrator) will be able to assign roles and responsibilities of the individuals at MDE and other users of the



system. Based on the assigned roles, each Higher Education/School district user will have access to the appropriate application. For example in the case of a Higher Education user that will only process provisional applications, an appropriate user role will be created that has access to only provisional applications. A Higher education/School district super user will be able to assign user roles to users within their jurisdiction. During the requirements development phase a detailed list of user roles and a user role to function mapping will be created. For a preliminary list of roles that CONTRACTOR has identified Refer to the “Primary Users” section provided below.

This module will also comprise of the authentication layer that will interface with the State approved authentication system (MEIS or Tivoli) to let users register and log in. MDE Staff, Applicants, School/Districts, System Administrators will be able to create user id and password by necessary information including Last Name, First Name, E-mail address and type of user.

Reports

Higher Education institutions, School districts and MDE staff will be able to generate customized reports based on the data available on the OTCS database. The reports can be standard batch reports or reports that are generated in real-time (24X7) out of a preselected set of parameters that can be specified in real-time (ad-hoc reports). The reports will have ability to be filtered by date. For example, all the teachers recommended for initial certification by a selected institution in 2004-2005, or between 2000 and 2005.

Typical reports will include:

- Details of the permits, vocational authorization, nurse certificate requested, issued and rejected by a school district.
- By teacher preparation institution and also by endorsement area within that, the number of candidates who completed programs and were recommended for endorsement.
- By teacher preparation institution, the number of candidates who completed elementary or secondary teacher preparation programs in each endorsement area. The programs data will also be broken out by majors, minors, or additional endorsements; by the year they completed the programs; if the recommendations were for 1st renewal of provisional certificates, 2nd renewal of provisional certificates, new professional certificates, or renewal of professional certificates; and disaggregated by ethnicity, gender, and institution, state and nation providing endorsement.
- A report for all new out-of-state certificates by elementary, secondary, and specialty endorsements. Identify institution, state/country where institution is approved for teacher education, certificate, endorsements, ethnicity and gender. Be able to sort by out-of-state institution and by state name.
- Report that lists the content area endorsements that were earned for initial certificates, renewed certificates, professional certificates, and any other certificate option; disaggregated by ethnicity, gender, and institution, state, and nation providing endorsement.

Credential Data Exchange

This module will comprise of business functions that will enable a school district to obtain credential numbers, issue dates, expiration dates, endorsement codes, and institution codes for instructional personnel. This will enable the school districts to submit regular reports to MDE about the instructional personnel based on the certification/licensure information available in the OTCS database.

Credential Data Exchange (CDX) is a Windows service developed by MDIT for a local district to obtain credential numbers, issue dates, expiration dates, endorsement codes, and institution codes for instructional personnel. The CDX module within the proposed application will leverage the code base from the existing CDX application to provide the same functionality through the application screens or a bulk upload process. The school district will be able to obtain credential information from the proposed application by uploading (or providing the same information individually online) a delimited file containing the name, social security number, and date of birth of each personnel.

As stated in MDE’s responses to vendor questions (RFP Q&A Document- Question 41), Contractor will attempt to leverage the existing CDX application code to provide the CDX functionality with the OTCS application.



State will make the CDX application code available to Contractor for analysis of possible reuse in accordance with the mutually agreed upon project schedule

Global Functionality Module

This module consists of Global functionality that affects all modules. They include:

- Master Data Maintenance - This will consist of screens that will be used to customize pre-selected list of business rules. This will include updates to certification categories, addition of new educational institutions, identification of higher education institutions that offer preparatory programs, courses offered, change fee information for each category of certificate. The list of business parameters that can be customized will be identified during the requirements development phase.
- Bulk File Uploads – This subsystem will have the necessary application components that will permit the higher education institutions, school districts, SB-CEU sponsors securely upload bulk files. The data could be comma delimited or in XML. Data validation and error detection will be carried out prior to the upload. Any errors detected must be corrected by the source users before they can be uploaded successfully. The system will generate a successful submission report after the data has been loaded to the application database.
- Form Generation – This functionality will let applicants generate electronic forms that can be printed and sent to MDE with the necessary documents.
- Online Help Document - CONTRACTOR will develop an Online Help document to provide screen and field-level help. It will also provide details on business rules specific to the screen and the actions that can be performed by the user.
- Customizable email templates
- Email Generation
- Audit Trail reports

Primary Users

The following list specifies the Primary users of the Online Teacher Certification System, based on CONTRACTOR's understanding. It should be noted that apart from the user types indicated below, MDE staff will have varying levels of access to the application.

- Individual Applicants
- Higher Education Institution users
- School district users
- MDE Application Processing staff
- MDE System Administrators
- MDE Security Administrators
- Public users

Technical Solution Overview

The proposed technical solution addresses the ITB requirements as a custom developed .NET enterprise web application. This architecture will further be refined based on discussions with MDIT staff and final architecture approval will be obtained from MDIT and MDE staff.

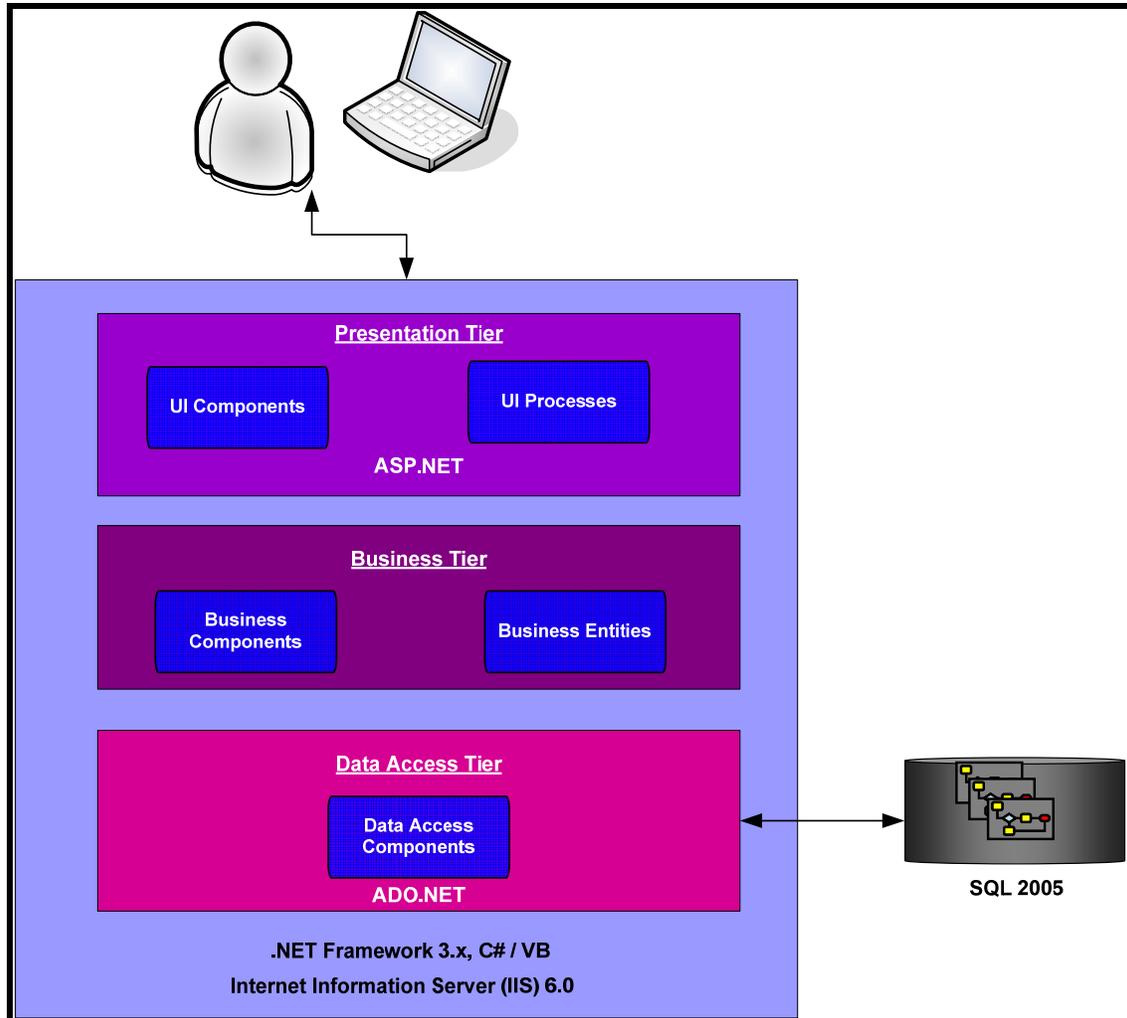
The application will be built on Microsoft's .NET Framework 3.x. It will be designed for deployment on Microsoft's Windows 2003 with IIS 6.0. It will use SQL Server 2005 as a back-end database to store and retrieve the data required. The application will use Microsoft's ADO.NET as the data layer with .NET framework Data Provider for SQL Server as the data provider.

Application Architecture Approach

To support such operational requirements as maintainability, reusability, scalability, robustness, and security of the application, it is imperative to logically design the system as a three Layered Services Application. All of the goals mentioned above can be achieved by basing the application on three layers: presentation, business, and data; along with components that implement the security, operational management, and communication policies needed for the application.



The following section provides an insight into the responsibilities of each layer, while highlighting the types of components that compose each layer: The application will primarily be composed of a Presentation tier, Business Service tier and Data access tier. The following diagram represents the different tiers.



The specific responsibilities of each layer are:

Presentation Tier

The presentation layer will provide the application with an intuitive and interactive user interface. Its responsibility will be to format and display data extracted from the lower layers and to capture and validate data supplied by users. CONTRACTOR will follow the State's UI standards for the presentation layer.

This layer will be composed of two types of components:

- **User Interface components:** These components primary responsibility is to render the presentation to the user.
- **User Interface Process Components:** These components deal with the presentation logic for providing navigation through web pages.

Business Tier

Business tier consist of business components and entities. The Business Components and Entities contain the business logic and manage the transactions. Business components implement business rules and perform business tasks. Business Entities are used to pass data between components.

**Data Access Tier**

Data Access Components will abstract the semantics of the underlying data store and data access technology. The data access logic component will typically provide methods to perform Create, Read, Update, and Delete (CRUD) operations relating to a specific business entity in the application. These methods will be designed to be used by the business layer and at times by the user interface components to render reference data.

Microsoft Enterprise Library 3.x

Microsoft Enterprise Library 3.x is a collection of reusable software components (application blocks) from Microsoft designed to assist software developers with common enterprise development challenges (such as logging, validation, data access, exception handling, and many others). If this is allowed as per State's standards, CONTRACTOR will make use of this library. If this library is not allowed, CONTRACTOR will develop custom components.

Solution for key technical requirements**Upload / Bulk Upload Rosters**

.Net FileUpload server control will be used to securely upload one or more files online in XML or comma separated value formats. CONTRACTOR will recommend an optimal number of files that can be bulk loaded online instead of one file at a time during technical design stage of the project. The uploaded files can be saved onto to a file server location or can be saved onto database tables. The files can even be bulk uploaded through FTP on to a file server location. CONTRACTOR will firm up the approach for upload / Bulk upload during technical design stage of the project after consultation with State's technical team. Upon upload of the files, the system will publish a report that will provide feedback on any errors in the file, so the entity that loads the data can fix and upload the data again. Each record that is uploaded will have a unique identification number. The error logs will indicate the records (by unique id) that need to be reviewed and fixed.

Business Rules Engine

Provides ability to customize parametric value driven business rules such as but not limited to change in duration of the certificate or change in fees for certification through database tables. The system will use the values for such business rules from database tables rather than part of the application programs. System will provide ability to update those values through a user interface whose access will be controlled only to specific users based on roles. It is assumed that the Business Rules engine is limited to providing ability to customize parametric values and not complex computational logic nor other edit rules.

As stated in MDE's responses to vendor questions (RFP Q&A Document- Question 20), the scope of the business rules engine will be limited to only screens where predefined business parameters can be changed. The capability will not include dynamic customization of business edits, routing rules and computational logic.

Upload Electronic Attachments

CONTRACTOR's proposed solution for electronic attachments is to save link to the scanned documents in the database tables. As an alternative, the uploaded files will be compressed and stored as a binary in the SQL Server 2005 database tables. Either solution does not include scanning of the uploaded files for viruses. CONTRACTOR will work with the State Technical experts to determine a suitable solution.

Data Migration

CONTRACTOR will use SQL Server Integration services to extract, transform and load (ETL) data from L2K and G-Link to the new system.

Ad-hoc Reporting

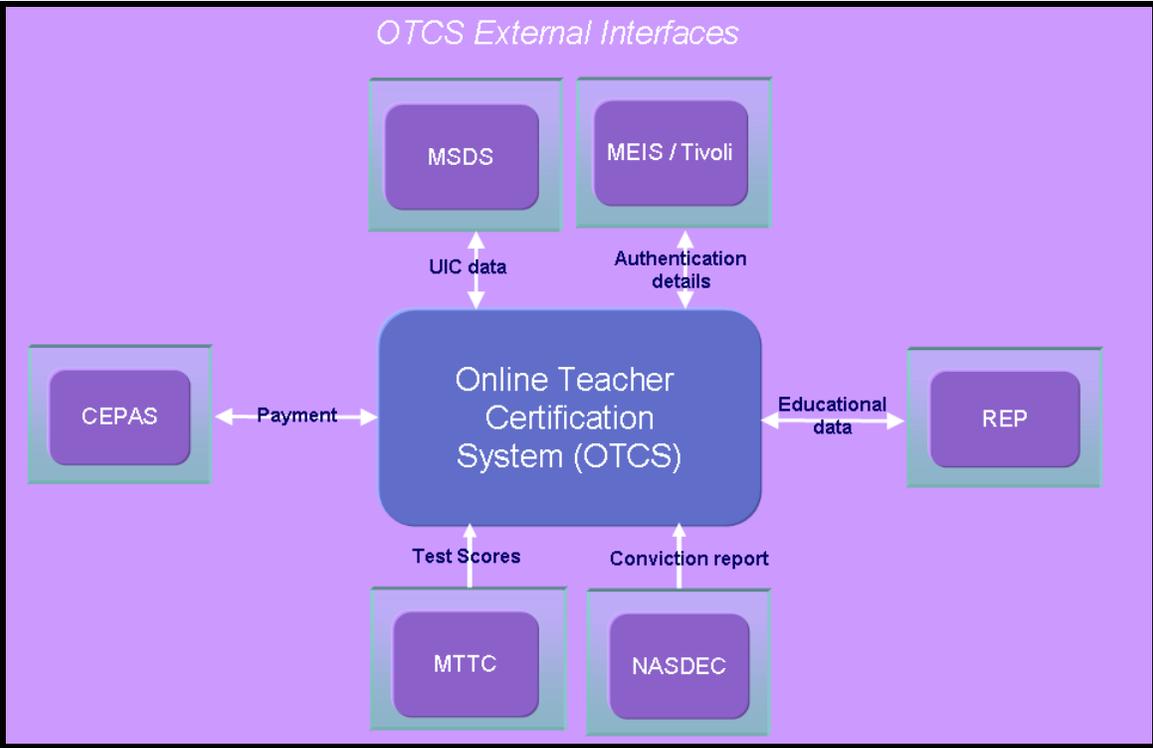
Contract will use Microsoft Reporting Services 2005 for comprehensive query and ad-hoc reporting. Report Builder provides ability to create reports based on a user-friendly report model created in Model Designer. Fully integrated with Microsoft SQL Server 2005 Reporting Services, Report Builder leverages the full reporting platform to bring ad hoc reporting to all users. Reports can either be scheduled and executed via



a batch process or viewed online and printed. The reports can be generated in CSV, XML, Excel or other standard reporting formats.

External Interfaces

The OTCS interfaces with several external systems are represented below.



The following table identifies OTCS interfaces with external systems.

OTCS External Interfaces	
Interface Name	Interface Description
MSDS	Two way interface with MSDS (SRSD) to obtain Unique Identification Code (UIC)
REP	Two way interface with REP database to send and receive educational data of educational personnel from School districts
CEPAS	Two way (Secure) Interface with CEPAS for credit card processing and online payment
MTTC	This will be implemented as a batch process to import the MTTC scores of the applicants in to the centralized OTCS database
Conviction Report	This will be implemented as a batch process to import the conviction records in to the centralized OTCS database
MEIS / Tivoli	The Authentication layer will be implemented as an interface to the MEIS system or Tivoli based on MDIT recommendation. The State is in the process of replacing MEIS (MDE's preferred solution) with Tivoli. State will identify a suitable authentication system prior to the commencement of the System Design phase.

STG will develop interfaces with CEPAS only for online payments (credit card), REP only to obtain the credential information and MSDS only to obtain and validate UIC's only.

Contractor assumes that the MSDS application and associated interfaces will be available in time for Integration testing with the OTCS application in accordance with the proposed schedule. STG expects that the MSDS application will be fully tested and all its defects will be fixed prior to the integration testing with OTCS.



The State will have completed MSDS system testing during Summer 2009 with implementation during Fall 2009.

Contractor assumes that the CEPAS interface technical experts will be available in time for System design, Integration testing with the OTCS application in accordance with the proposed schedule. Contractor expects that the CEPAS interface will be fully tested and all its defects will be fixed prior to the integration testing with OTCS.

Contractor assumes that the REP application and interface technical experts will be available in time for System design, Integration testing with the OTCS application in accordance with the proposed schedule. Contractor expects that the REP interfaces will be fully tested and all its defects will be fixed prior to the integration testing with OTCS.

Software Recommendation/Requirements

Contractor recommends using the following software to be used on this Project accordance with the provisions of section 1.103 of the ITB. Contractor will work with the State to finalize the list during the design phase of the project. CONTRACTOR will also work with the State to decide the development language (C# or VB.NET).

Components	Software Version
Web Server	IIS 6.0
Application Server	Windows 2003 Server
Database	SQL Server 2005
Development Language	C# / VB.NET
Web Technologies	ASP.NET, XML, Javascript, HTML
Reports	SQL Reporting Services 2005
IDE (Integrated Development Environment)	Visual Studio 2005 / 2008
.Net Framework	3.x
Network Protocol	TCP/IP, HTTP, HTTPS
Transport	HTTP
Email Notifications	SMTP
Network	MS Active Directory and State email id
Office Productivity Software	MS Office 2003, MS Visio
Project Schedule Reporting	MS Project
Look and Feel Standards	State of Michigan eMichigan standards
Testing Tools	State will provide all necessary testing tools for contractor to execute load and performance tests.
ETL Tools	SQL Server 2005-SQL Server Integration Services
Virtual Private Network	Software and tools needed for contractor personnel to access State environment thru VPN access
Configuration Management Software	Software and tools towards maintaining and managing software configuration including version control and check-in/check-out capability
Batch Job Scheduling Tools	Software and tools for scheduling batch jobs
Internet Access	Access to Internet Resources for Project purposes

B.Services

The following paragraphs provide details on some of the specific services contractor will provide during the project.

Data Migration Approach

CONTRACTOR understands that data migration from the existing L2000 and G-Link databases is critical to the success of the project. The section below describes CONTRACTOR’s approach to data migration from a legacy application to a new target system database. CONTRACTOR will work with the technical resources at



the MDE to understand the L2000 and G-Link data structure and tailor the approach defined here to meet the data migration needs at MDE.

CONTRACTOR will use SQL Server Integration services to extract, transform and load (ETL) data from L2K and G-Link to the new system. Based on State’s response to vendor’s questions, 7 years of L2K data and 10 years of G-Link data will be migrated.

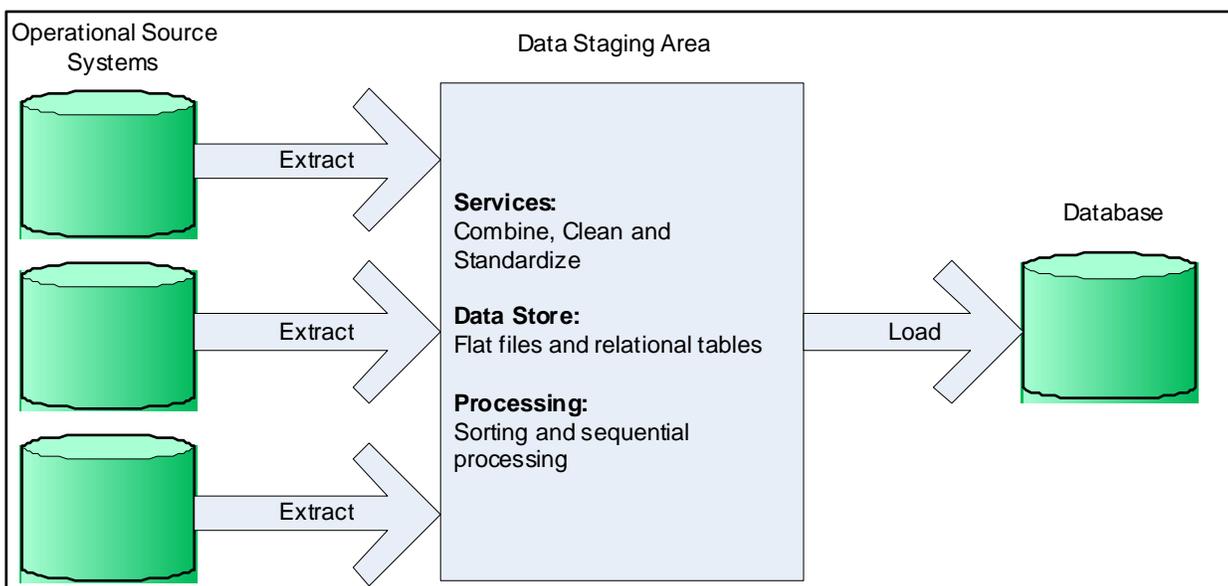
CONTRACTOR will perform a design of the new database during the System Design phase. During this phase, CONTRACTOR DBA will identify data to be extracted from L2K, G-Link files and cleansed. During application development CONTRACTOR will map the L2K and G-Link data to the new system data structure. CONTRACTOR will also work with State to perform data conversion, load and configure data to new the database structure. During Integration and System Testing, CONTRACTOR will test the data quality to ensure that the data has been migrated correctly. CONTRACTOR will repeat the data conversion, loading and migration prior to the Pilot Rollout and Full Implementation.

Assumptions

- The data to be migrated from the legacy is available in first normal form; this means that all the data elements in the data source are structured such that they are connected to a database key and can be accessed using the key values.
- The destination database is normalized to third normal form; this means that all data elements are traceable within the database through keys with tight referential integrity between parent and child tables.
- Tools such as SQL DTS will be used for ETL (extract-transformation-load). State will provide tools to perform ETL.

Process

The third normal form requires that each non-key column is dependent on the primary key and only the primary key. To satisfy third normal form, such records should be decomposed into different tables. The first step would be to identify such columns where one column depends on another column, which in turn depends on the primary key. The next step would be to identify destination table and column for the source tables. Once the transformation rules are determined, data is extracted from source onto a staging area and then transformed to destination using ETL tools. The following diagram depicts the ETL process for data migration:





Approach

CONTRACTOR's approach for migrating data from legacy systems to the target database is described below.

- Create a data staging area for data storage and to process the data. The data staging area will be either based on relational technology or could be delimited flat files. Staging area table structure will be identical to source systems without any normalization. The data staging area processing includes activities such as sorting and sequential processing.
- If the staging area is based on relational technology, the tables do not contain any foreign key constraints. Foreign key constraints are not required so as to eliminate any sequencing of the data flow onto the staging area.
- Perform data extraction from legacy source to staging area for the required historical time period. This data extraction work flow can follow any sequence as the tables are not constrained by foreign key reference.
- Identify the columns in the source table which is not dependant on the primary key to implement third normal form.
- Identify the source table and the destination table column mapping
- Identify all data transformation rules between the source and the destination. Primary transformation is to move the non-primary-key-dependant-columns to different tables. Other potential transformations includes cleansing the data (correct misspellings, dealing with missing elements, or parsing into standard formats), combining data from multiple sources, code value conversions, date time conversions, handling of nulls, default values, and de-duplicating data.
- Create destination database and the tables
- Prepare a list of master tables and referenced tables of the destination database
- The master tables and reference tables must be transformed first preceding the referencing tables. This will be implemented by creating precedence constraints through a work flow for sequencing the data flow.
- Create data transformation tasks, work flow tasks, data transformation rules through the ETL tool.
- Create an error logging mechanism to write any unsuccessful records. This data will have to be re-loaded after fixing the errors.
- Identify the master tables at the destination whose data is not available at the source. Populate data for any such master tables that are needed for data transformation.
- Perform data transformation from staging to destination
- Correct the unsuccessful records with the help of source system experts and create a mechanism to load those data through SQL scripts or through separate ETL tasks.
- Validate transformed data (using front end application if possible through the UAT process)

Contractor's estimation and data migration effort and schedule have been determined based on the following:

- Total number of legacy tables not exceeding 108 per information provided by the State during the RFP Q&A process
- Number of active tables requiring data cleaning : not exceeding 10 (per information provided by the State during L2k demo meeting); remaining data can be migrated to new data model with no additional cleansing but only model-to-model transformation
- No more that 40% of the 10 tables specified above will require data cleansing ; data cleansing will be limited to duplicate rows
- State SME's will provide guidance and support to Contractor team members towards determining transformation rules and resolving duplicate data rows

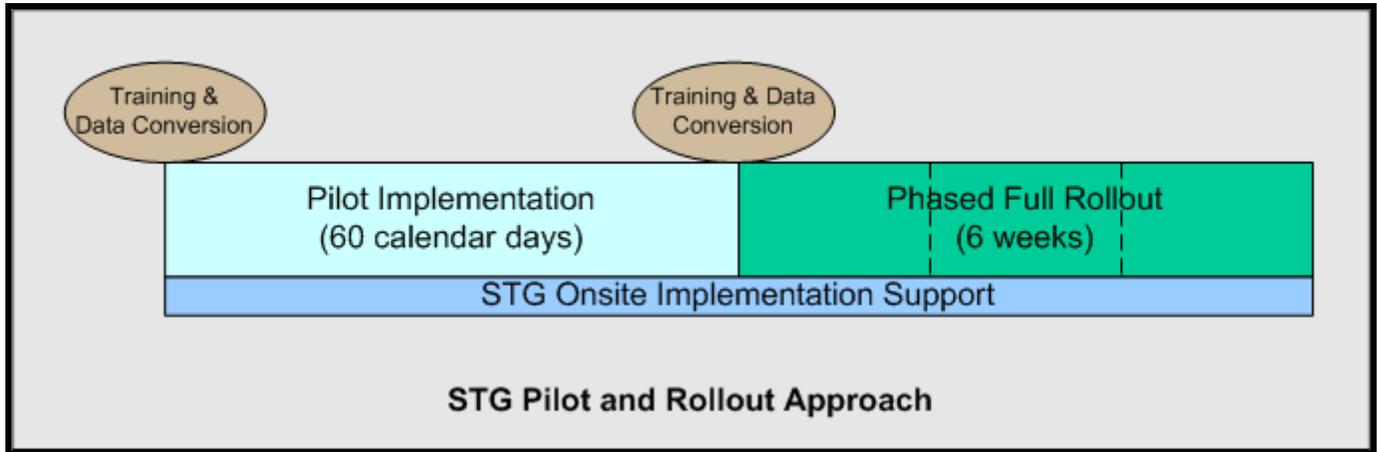
Contractor has included ninety-two man hours towards executing the coding, unit testing, data cleansing, system testing, user acceptance testing and implementation activities towards data migration mentioned above. Both State and Contractor agree that upon completion of Requirements Gathering and Functional Design Completed Milestone, contractor will develop a revised effort estimate towards executing the above specified tasks towards data migration. The above mentioned ninety-two man hours will be deducted from the



contractors revised increase in effort estimate towards data migration. The net effect of the increase in effort estimate will be addressed through the CCR process defined in section 1.403.

Pilot and Rollout Approach

The application will be rolled out to the users in 2 phases – a 60-calendar day Pilot implementation to select higher education institutions, school districts, MDE followed by a 6 week full implementation rollout to the entire user base. CONTRACTOR will develop an Installation Plan during the testing process that will contain a Pilot rollout plan and Full Implementation rollout plan. Given below is an implementation approach for both the phases provided below.



Pilot Implementation Approach

The first phase is the Pilot Implementation for 60 calendar days with three (3) higher education institutions and three (3) school districts and MDE. During this phase the new OTCS application will be run along with the old system.

- Schedule of tasks – The pilot rollout plan will provide a list of pilot implementation tasks and the associated schedule for each task.
- Resources required – The pilot rollout plan will provide a list of personnel, hardware, software resources that will be necessary for the Pilot implementation. CONTRACTOR will identify dependencies and work with the State to acquire the resources per the project schedule.
- Selection of Pilot Sites – CONTRACTOR will work with the State to identify the school districts and higher education institutions that will be part of the Pilot based on infrastructure, personnel, and caseload.
- Selection of Pilot Trainers to be trained: State will identify the Pilot trainers that will need to be trained on the usage of the system.
- Support Documentation – CONTRACTOR will provide the following support documentation to the trainees and support staff prior to the Pilot implementation:
 - User Manual
 - Online Help
 - Training Manual
 - Installation Manual
 - Installation Manual
 - Operations Manual
- Data cleansing, migration, loading and configuration for Pilot Sites - Prior to the Pilot, CONTRACTOR will perform data cleansing and migration of Production data to support the implementation at the Pilot sites. It should be noted that the data mapping and data transformation will have already been completed in the System Design phase. The data migration and testing of migrated data (of staging data) will have been completed in the System and Integration testing phases.



- Training – CONTRACTOR will provide training to the trainers identified. In addition the help desk support staff will be provided the necessary support documentation to handle support calls once the system is operational.
- User Setup – The pilot users from MDE, Higher education institutions, school districts will be setup initially during (or prior to the start of) the Pilot Implementation
- Pilot Rollout – The application will be rolled out to the Pilot users per the project schedule. The application link, online user guides will be communicated to the users either via email or a launch conference, meeting.
- Communication – CONTRACTOR will conduct weekly Pilot status meetings with the State Implementation team to coordinate activities, discuss status and resolve technical issues found during the pilot. These meetings could also include representatives from the Pilot sites. CONTRACTOR will also communicate with the State Project Managers to provide status and escalate issues. CONTRACTOR will also work with the State staff (MDIT and MDE) to plan the transition from the existing workflow to the new one.
- Post Implementation Support – CONTRACTOR will provide onsite post-implementation help to resolve workflow and application issues.

Full Rollout Approach

The second phase of the implementation is the Full Rollout phase, where the application will be rolled out to all the 32 higher education institutions and approximately 840 school districts. CONTRACTOR recommends a phased approach to the rollout of the application to the higher education institutions and school districts. The rollout could be completed over 6 weeks with 3 cycles of implementation. This will ensure that there is adequate staff to support the application as the 350,000 new users begin to use the system. During the release planning CONTRACTOR will validate this approach with the State prior to developing the Installation plan.

- Schedule of tasks – The full rollout plan (part of the Installation plan) will provide a list of implementation tasks and the associated schedule for each task.
- Resources required – The full rollout plan will provide a list of personnel, hardware, software resources that will be necessary for the full implementation. CONTRACTOR will identify dependencies and work with the State to acquire the resources per the project schedule.
- Selection of Trainers to be trained: State will identify the trainers that will need to be trained on the usage of the system.
 - Support Documentation – CONTRACTOR will update the support documentation based on the Pilot implementation
- Data cleansing, migration, loading and configuration - After the pilot completion and prior to the full rollout, CONTRACTOR will migrate the entire data from the current L2K system and G-Link Filemarker Production data files to the new OTCS database, perform data loading, configuration and test the application for accuracy. It should be noted that this is to ensure that the data for transactions that have been performed during the Pilot period by the entities that did not participate in the Pilot gets copied over to the new application database. For details on the process to be followed by CONTRACTOR for data cleansing and migration Refer to the “Data Migration Approach” described in the Technical Solution section.
- Training – CONTRACTOR will provide training to the trainers identified.
- Full Rollout – The application will be rolled out to all the users based on the installation plan. The application link, online user guides will be communicated to the users either via email or a launch conference, meeting.
- Communication – CONTRACTOR will conduct weekly status meetings with the State implementation team to coordinate activities, discuss status, resolve technical issues found during the rollout. CONTRACTOR will also communicate with the State Project Managers to provide status and escalate issues. CONTRACTOR will also work with the State staff (MDIT and MDE) to plan the transition from the existing workflow to the new one.
- Post Implementation Support – CONTRACTOR will provide onsite post-implementation help to resolve workflow and application issues. It is expected that most of the defects will originate as calls from the users. Upon receiving such a user call and identifying that this could be a potential defect, the call



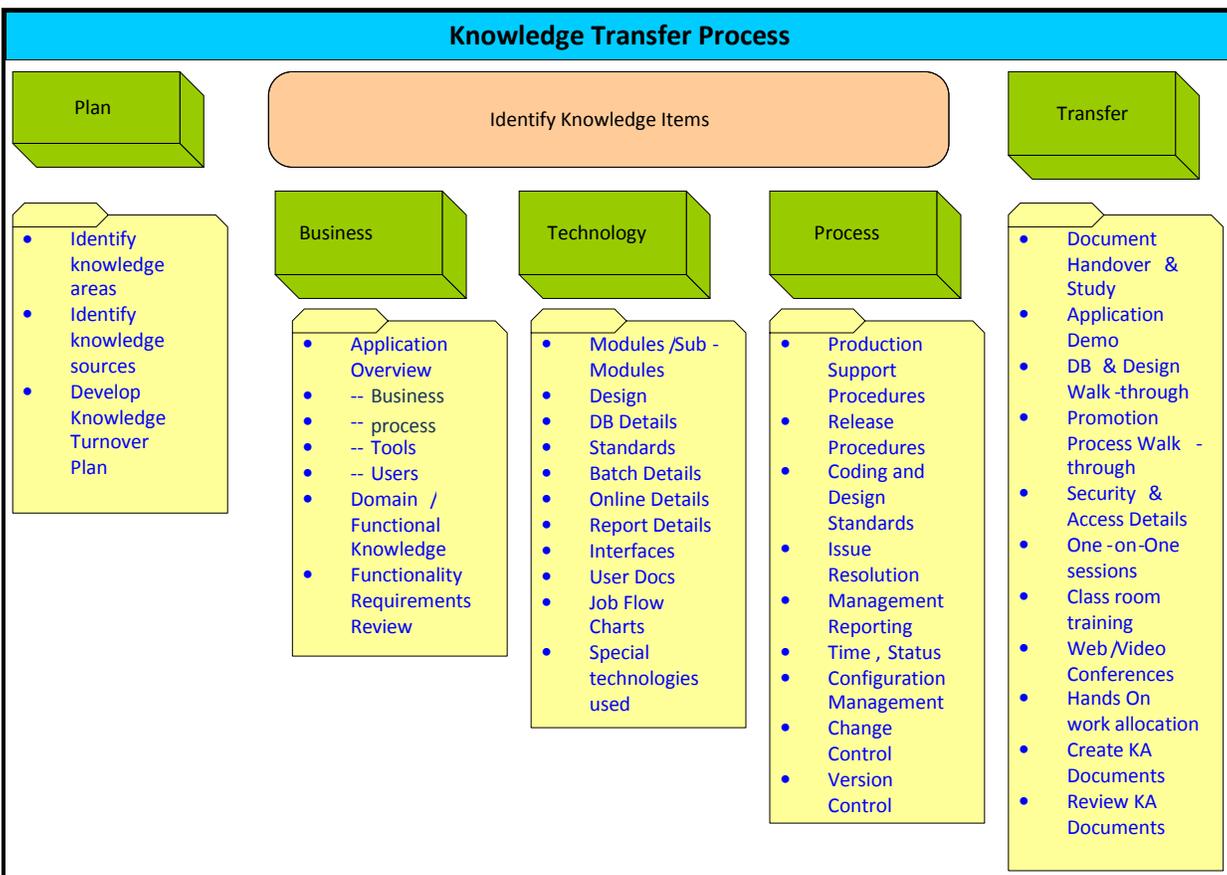
center representative will enter the details of the defect such as - Defect Description, Severity, business area, application screen, data input, Issue Type. A report of the defects that have been triaged as application defects will then be sent to the CONTRACTOR team for resolution.

Transition and Knowledge Transfer (KT) Approach

CONTRACTOR will provide knowledge transfer to State business and operation support staff during the Transition phase. State will assign necessary MDE (business) and MDIT (technical) personnel towards receiving the knowledge transfer from CONTRACTOR. Knowledge transfer will be performed by CONTRACTOR to State team through meetings, one-on-one sessions and document handover. The knowledge transfer will be limited to the business and technical aspects of the application developed/modified by CONTRACTOR.

STG will provide Transition over a one year period after the Warranty Milestone is completed. The transition phase is part of the Maintenance and Support phase. Therefore the CONTRACTOR resource providing maintenance support will also perform the transition activities. CONTRACTOR will provide progress reports on knowledge transfer activities on a monthly basis. CONTRACTOR will create a summary report describing the knowledge transfer performed by CONTRACTOR on each technical areas, accomplishments, corrective or remedial action taken, and risks in State’s assumption of full application support. CONTRACTOR will provide a summary report before 60 days of completion of the maintenance phase. CONTRACTOR will also update project documentation developed by CONTRACTOR to reflect the updated functionality of the system.

The following diagram illustrates CONTRACTOR’s knowledge transfer methodology:



Plan

This Knowledge Transfer (KT) process starts with a planning activity. CONTRACTOR team will work with State team to identify knowledge areas and sources and will develop a Knowledge Transfer (or Turnover) plan to



define the tasks and associated work assignments for the Knowledge transfer. This plan will be provided 90 days prior to the final statewide implementation date. It will include:

- Responsibilities of the respective parties (MDE, MDIT and CONTRACTOR) for each knowledge area
- Proposed transition schedule
- Level of resources required after transition.
- Backup plan for any failed transfers

Identify Knowledge Items

CONTRACTOR will identify the knowledge items for each application group. Knowledge items will be grouped into the following:

Business:

Business knowledge includes Business process overview, Application Overview and Application Domain / Functional Knowledge. Information such as Application portfolio, size, tools, end users, total users and concurrent users will be identified and documented under Application Overview.

Technology

Technology area knowledge includes details such as modules/sub-modules, design, database, standards, batch, online and reports. Technology information will be provided by conducting database and design walk-throughs' and by performing screen and database mapping activity. Technology knowledge transfer is limited to explanation of application components and associated documentation.

Process

Process area knowledge includes production support procedures, release procedures, issue resolution management, time/status reporting, configuration management, change control and version control.

Transfer

CONTRACTOR will provide all the available information and materials relevant to the project to State. CONTRACTOR will transfer knowledge on functional, technical and process areas through one-on-one sessions, and document walkthroughs

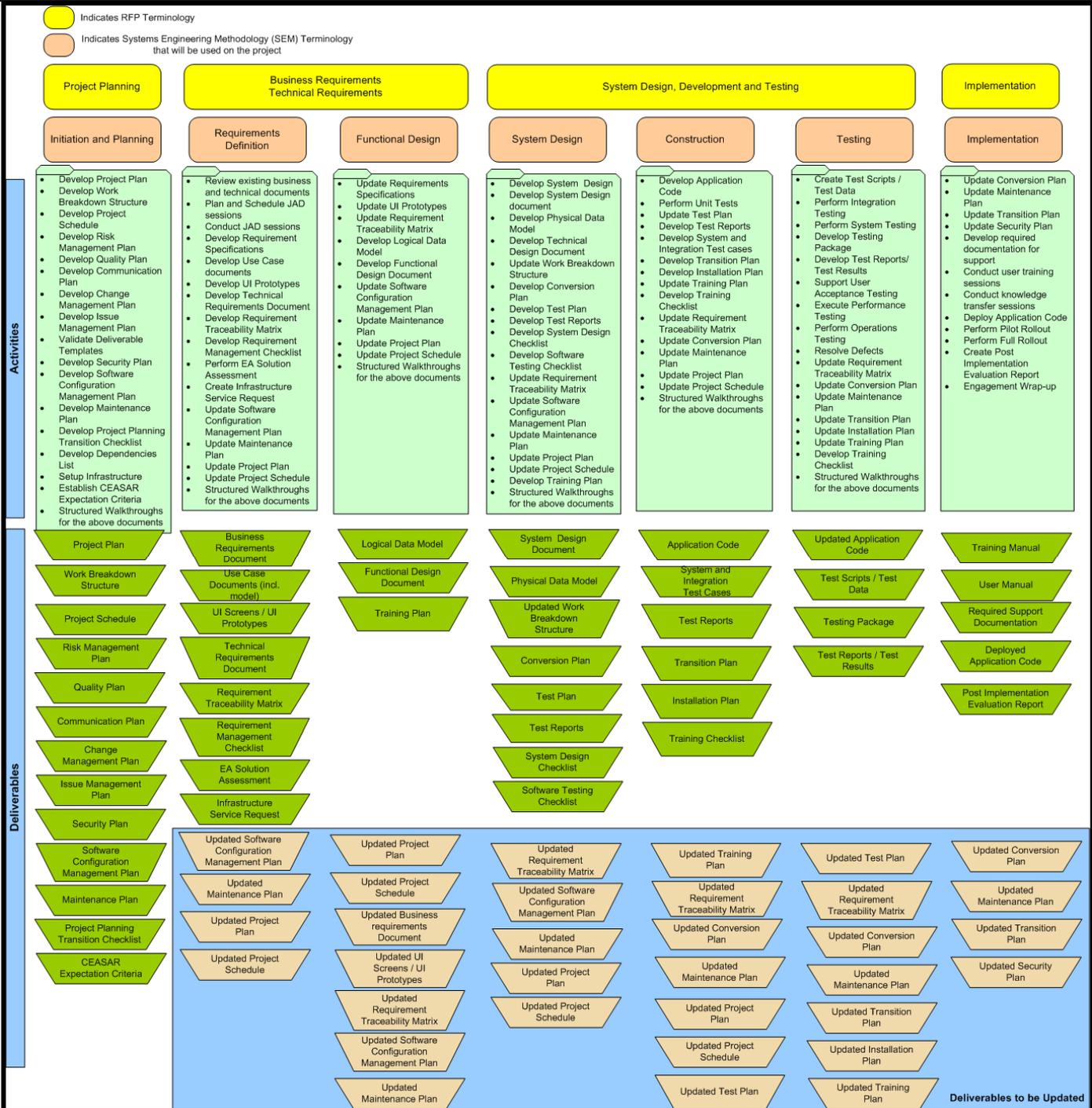
Software Development Approach

The following sections detail the Software Development Approach that CONTRACTOR will follow on this initiative.

CONTRACTOR will leverage State's Project Management Methodology (PMM), State's Systems Engineering Methodology (MDIT SEM) defined under the State Unified Information Technology Environment (SUITE) for the purpose of executing this project. Project teams are equipped with forms, templates and tools supported by these frameworks.

The diagram below provides a summarized view of the project process. The activities in the diagram and the deliverables have been described in detail in the following paragraphs. The sections describe in detail most of the common activities and all the associated deliverables for each stage of the project.

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Initiation and Planning Phase Activities and Deliverables

CONTRACTOR will assign a full-time Senior Project Manager for the purpose of this project. CONTRACTOR Senior Project Manager will follow the State’s Project Management Methodology framework including:

- Work / Task management
- Requirements management
- Resource Management
- Risk management
- Issue management
- Change management
- Quality Assurance and
- Configuration management



Orientation Meeting

CONTRACTOR team members will participate in a project kickoff (or orientation) meeting to be convened by the State Project Manager. This will involve the project team members from CONTRACTOR and State employees currently assigned to the project. This is to introduce existing team members to each other and to review the project goals and objectives.

Develop Project Plan

CONTRACTOR Project Manager will develop a project management plan with the following details:

- a. Software Development Approach:
 - Project deliverables - A description of the deliverables to be provided under this contract
 - Project roles and responsibilities – A roles and responsibility matrix with Identification of roles and responsibilities, including the organization responsible
 - Resource Requirements - The labor, hardware, materials and supplies required to be provided by the State in meeting the target dates established
- b. Quality Management Plan - Detailed in the “Develop Quality Plan” section below
- c. Project Schedule (in MS Project) – Detailed in the “Develop Project Schedule” section below
- d. Issues Management Plan – Detailed in the “Develop Issue Management Plan” section below
- e. Risk Management Plan – Detailed in the “Develop Risk Management Plan” section below
- f. Communication Plan - Detailed in the “Develop Communication Plan” section below

CONTRACTOR will submit the project plan for State’s approval on or before 5 business days of the project start date.

Develop Work Breakdown Structure

CONTRACTOR Project Manager will create a Work Breakdown Structure (WBS) identifying all WBS elements during this stage of the project. This Work Breakdown Structure will be incrementally updated throughout the Initiation and Planning Stage of the project and reviewed with the CONTRACTOR team and State team members.

Develop Project Schedule

CONTRACTOR Project Manager will create a proposed project schedule based on the Work Breakdown Structure, using an automated tool such as Microsoft Project identifying all tasks and deliverables to be performed, duration for each task, principal schedule milestones, and overall time of completion.

The project schedule will be reviewed with the Project Team and State Project Manager for accuracy and feasibility. CONTRACTOR Project Manager will update this schedule throughout the life of the project.

Develop Risk Management Plan

CONTRACTOR Project Manager and State Project Manager will mutually define the risks associated with the project. This includes business as well as technical risks surrounding the project. They will assess the probability of occurrence of these risks as well as the severity of the impact if they occur. Based on probability and severity, the risks will be prioritized for mitigation. A preliminary mitigation plan will be defined. This will be done based on the advice received from project team members. At the outset, Contractor categorize the project risks as business and technical. It is the responsibility of the entire project team (both CONTRACTOR and State) to proactively recognize and track these risks in a manner that best allows the project team to avoid or mitigate the risks so that the risks do not affect the goals of the project.

Risk Identification – During the Initiation and Planning Stage as well as throughout the project, the project team will identify risks that surround the project at any given point in time. These risks are grouped into Business and Technical risks. The risks are documented in a Risk Management Plan document.



Severity of Occurrence – For each risk item, the severity of occurrence of impact to the project is identified in terms of High, Medium and Low. The impact is visualized through discussions among relevant team members. Thresholds are established to qualify risks as High, Medium or Low

Probability of Occurrence – In addition to severity of occurrence, the probability of occurrence is assessed. This is based on the current situation in the project environment as well as past experiences within the client organization and projects based on similar technologies and processes. The probability of occurrence is categorized as High, Medium and Low.

Risk Priorities – Risk priorities are determined based on the probability of occurrence and severity of impact.

Mitigation Plan – Based on the risk priority, the steps to avoid or mitigate the risks are identified. This results in a series of action items for various project team members depending on the risk. All these action items are tracked through the project plan as tasks for follow up and completion.

Develop Quality Plan

CONTRACTOR Project Manger will develop a Quality Plan to include project scope summary, project deliverables, milestone checklist, acceptance criteria for deliverables, quality assurance activities to be performed during the project, project monitoring and control plans which address quality assurance activity areas identifying what and when audit reviews are required and how variance to acceptable criteria will be reported and resolved, and project team's quality responsibilities.

Develop Communication Plan

CONTRACTOR will develop a communication plan that summarizes when the team will meet with the State for progress review meetings, who needs to be part of such meetings, what status reports will be provided.

State Project Manager will be responsible for coordinating all State resources for the purpose of the execution of this project. State Project Managers will be the single point of contact for receiving deliverables, coordinating resources and addressing business and technical issues.

Develop Change Management Plan

CONTRACTOR understands that contract changes will need to be mutually agreed between the State and CONTRACTOR. The mutually agreed and approved contract changes will be submitted by the Contract Administrator to the Department of Management and Budget to be finally approved by the Purchasing Operation Director.

CONTRACTOR and State team will define the process for initiating, reviewing, approving and tracking project change requests. The process will be documented in the Change Management Plan. All changes to the scope will be handled by a Change Management Process defined in the plan.

Develop Issue Management Plan

CONTRACTOR Project Manager will develop an issue management plan to address project issues. The issue document / log will contain details including issue id, issue description, assigned to, date assigned, due date, priority, resource assigned, resolution date and resolution details. An escalation path will be identified in the plan for issues that need to be escalated further for resolution. CONTRACTOR will update the issue document / log and will provide the same along with the status report.

Validate Deliverable Templates

CONTRACTOR Project Manager will review the deliverable templates applicable for this project with the State Project Manger for the purpose of assessing detail and clarity in the templates. In cases where the State provided templates are not detailed enough and where State templates are not available, CONTRACTOR Project Manager will provide PRIDE® templates to the State Project Manager for review and will eventually use these templates for deliverables after obtaining approval from State Project Manager.



Develop Security Plan

CONTRACTOR will work with the State team to develop a Security Plan that will be incrementally updated throughout the life of the project. CONTRACTOR team will identify the Security Classification of this application based on the security needs and requirements provided by the State Subject Matter Experts and MDIT & Agency Security Policies, Standards and Procedures.

Develop Software Configuration Management Plan

CONTRACTOR Project Manger will develop a Software Configuration Management Plan based on the needs of the project and MDIT & Agency Policies, Standards and Procedures. This plan will identify Configuration Management Tools to be used, Roles and Responsibilities of the team, Project Configuration Management Tasks, Configuration Control, Configuration Audits and Reviews and Archival and Retrieval of Configuration items.

Develop Maintenance Plan

CONTRACTOR Project Manager and State Project Manager will mutually develop initial version of the Maintenance Plan identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production. This plan will be incrementally updated throughout the life of the project as and when additional data becomes available.

Develop Project Planning Transition Checklist

CONTRACTOR Project Manager will create Project Planning Transition Checklist at the end of the Initiation and Planning Stage of the project for the purpose of reviewing the Initiation and Planning Stage work products and obtaining approval to proceed to the next stage of the project. CONTRACTOR will use this checklist for transition planning.

Develop Dependencies List

CONTRACTOR and State team will identify and list the components / interfaces that the new system will depend on. CONTRACTOR and State will also develop a detailed dependencies list for tasks to be completed by State personnel / other vendors in accordance with the project schedule.

Setup Infrastructure

CONTRACTOR will perform its project responsibilities onsite at the State premises identified in the ITB. During the Engagement Startup stage, CONTRACTOR will work with the State to set up the project team member workstations, phone, network access. This includes:

- Allocation and set up of work stations for CONTRACTOR onsite team members
- Installing systems software
- Access to State network and internet
- Access to Email, phone

Establish CEASAR Expectation Criteria

During the Initiation and Planning Stage, CONTRACTOR Project Manager will meet with the State Project Manager to set up the CEASAR criteria. CEASAR (Customer Expectations and Satisfaction Assessment Report) is a soft process, above and beyond a Statement of Work, used to capture Contractor's customer's expectations from Contractor's team members in a project and provides a mechanism to assess and track the performance against the expectations.

Structured Walkthroughs of the above documents

CONTRACTOR will conduct Structured Walkthrough of the deliverables in this phase and review the deliverables with the State. CONTRACTOR will obtain Stage Exit Approvals before proceeding to the next Phase.



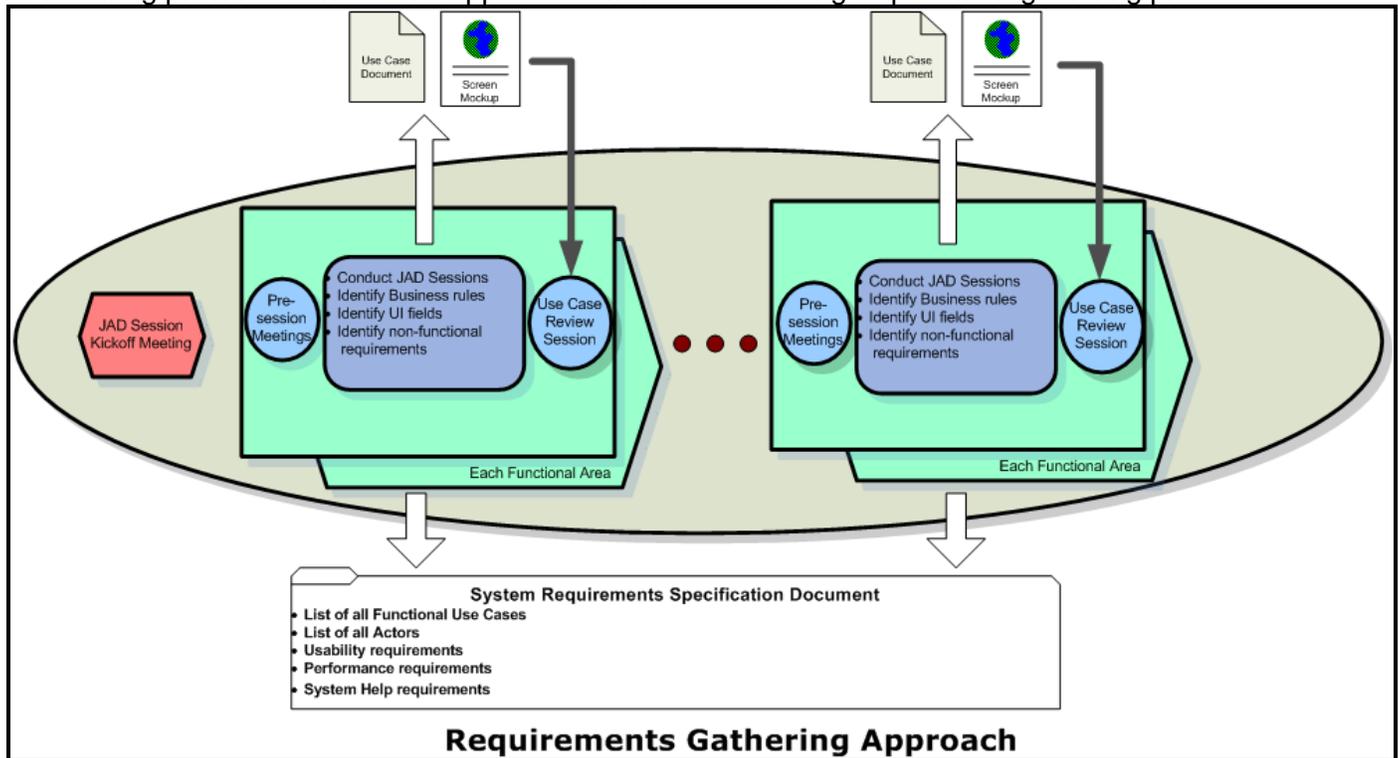
Deliverables:

Deliverable	Description	Format
Project Plan	Describes the project plan with an attachment of project schedule prepared in MS project.	MDIT SUITE PMM Template
Work Breakdown Structure	Identifies and Describes all WBS elements included in the Project Scope.	MDIT SUITE PMM Template
Project Schedule	Microsoft Project Plan identifying all tasks and deliverables to be performed, duration for each task, principal schedule milestones, and overall time of completion.	Microsoft Project Plan
Risk Management Plan	This document will identify the risks affecting completion of milestones and deliverables. This document will also identify the probability of the risk occurrence, its impact and available mitigation options.	MDIT SUITE PMM Template
Quality Plan	Quality Plan to include project scope summary, project deliverables, milestone checklist, acceptance criteria for deliverables, quality assurance activities to be performed during the project etc.	MDIT SUITE PMM Template
Communication Plan	Describes the process for communication during the project.	MDIT SUITE PMM Template
Change Management Plan	Defines the process for initiating, reviewing, approving and tracking change requests	MDIT SUITE PMM Template
Issue Management Plan	Identifies project issues, issue description, action items and issue resolution details.	MDIT SUITE PMM Template
Security Plan	Security Plan that identifies Security Classification of this application based on the security needs and requirements provided by the State Subject Matter Experts and MDIT & Agency Security Policies, Standards and Procedures.	MDIT SUITE SEM Template
Software Configuration Management Plan	This plan will identify Configuration Management Tools to be used, Roles and Responsibilities of the team, Project Configuration Management Tasks, Configuration Control, Configuration Audits and Reviews and Archival and Retrieval of Configuration items.	MDIT SUITE SEM Template
Maintenance Plan	Maintenance Plan identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production.	MDIT SUITE SEM Template
Project Planning Transition Checklist	Checklist to be used at the end of the Initiation and Planning Stage of the project for the purpose of reviewing the Initiation and Planning Stage work products and obtaining approval to proceed to the next stage of the project.	MDIT SUITE PMM Template
CEASAR Expectation Criteria	Customer Expectations and Satisfaction Assessment Report. The criteria will identify critical success factors, establish customer expectations and degree of importance, setup review dates, and communicate expectations to team members.	PRIDE [®] Template



Requirements Definition Phase Activities and Deliverables:

The following provides Contractor's approach towards accelerating requirement-gathering process:



Techniques:

CONTRACTOR will leverage the following techniques to accelerate the requirement gathering process:

- JAD Sessions – Joint Application Development (JAD) is a technique/process that allows the development, management and customer groups to work together to build a product. JAD refers to the joint process of collecting requirements and resolving issues as early as possible through a series of meetings. The benefits of JAD include:
 - **Saves time, eliminates process delays and misunderstandings and improves system quality**
 - **Reduces function creep, most of which results from poor initial requirements**
 - **Avoids the requirements from being too specific and too vague, both of which cause trouble during implementation and acceptance**
- User Interface Prototypes – UI Prototyping is an iterative analysis technique in which users are actively involved in the mocking-up of the UI for a system. The benefits of UI prototyping include:
 - **Explores the problem space with the stakeholders.**
 - **Explores the solution space of the system.**
 - **Communicate the possible UI design(s) of the system**
 - **A potential foundation from which to continue developing the system.**

Review existing business and technical requirements documentation:

CONTRACTOR Project team members will review the current business and technical requirements documentation (including Appendix A, B of the ITB) to understand the functionality of L2K and the applications built by MDIT around L2K to support its business processes. To clarify any questions, issues based on the review of the current state documentation CONTRACTOR will conduct user interviews. This will further enhance CONTRACTOR's understanding of the current system and business processes.



Plan and Schedule JAD sessions

CONTRACTOR Analysts will work with Agency business owner and other State subject matter experts to gather background information to develop session agenda, confirm the number of JAD sessions identified, requirement items that will be addressed at each JAD session, identify State SMEs required for each session, collect material necessary in preparation for the requirements sessions.

Kick-off JAD Sessions:

CONTRACTOR will conduct one (or more depending upon the number of Subject Matter Experts groups) JAD Sessions kick-off meeting(s) with the State Project Manager, SMEs and other related parties. The objectives of these meetings are to:

- Confirm scope of the application
- Explain the purpose of JAD sessions/workshops
- Plan and confirm the use case workshops
- Set objective for each workshop
- Notify and Invite participants - **The success of each workshop is dependent on the workshop participants. The State Project Managers should decide who the most appropriate people are to attend each workshop.**
- Set the expectations with respect to reviewing requirement deliverables and providing sign-offs.

Conduct JAD Sessions and Develop Use Case:

CONTRACTOR will conduct use case workshops with the subject matter experts. Prior to conducting JAD sessions CONTRACTOR PM will send a meeting notice with agenda to the session participants.

Use Cases are basically a method of capturing and validating functional requirements from the perspective of different classes of users of an application. Each use case defines a sequence of actions performed by the user while using the application. The use cases are documented in the form of Use Case diagrams and flow of events. The use case diagrams depict the interaction between the users (actors), processes (use cases) and systems (external interfaces). The use case method will be a very expeditious way of reviewing and confirming the requirements. It will also allow the project team to identify new requirements that may have been overlooked in the first round.

CONTRACTOR team members have adequate experience and training on conducting facilitated sessions with multiple participants. They follow good meeting management practices towards achieving meeting objectives. CONTRACTOR team will also use the following techniques in the workshops:

- **Parking Lot** - The parking lot is a place to 'park' issues that cannot be resolved in the workshop in a timely manner. It is a great help in moving the workshop along. Once an item is placed on the Parking Lot, there should be no other discussion on the issue. At the end of the workshop CONTRACTOR will review the Parking Lot to decide what, if any, action needs to be taken to resolve each issue.
- **Ground Rules** – CONTRACTOR will set ground rules (such as one conversation, one topic at a time, etc..) with the participants at the start of the workshop. During the workshop, if anyone steps out of line, CONTRACTOR facilitator will remind the offender of the Ground Rules.

After each Use Case session, CONTRACTOR analysts will document the use cases and submit to appropriate parties for review and approval. The turn around time for the use cases will depend on the size and complexity of the business processes analyzed.

CONTRACTOR understands that during the requirements gathering sessions, there will need to visits to upto 6 designated higher education institutions within the State of Michigan to analyse the analyze business process requirements and the technical interoperability. The State Project Manager will identify the institutions that will need to be visited and notify CONTRACTOR PM for planning purposes. CONTRACTOR will work with the State to complete the analysis of the business processes and interoperability of the technology being



developed. A total of 20 visits to facilities other than MDE facilities for project purposes will be included within scope of Contractor responsibilities; this includes school districts and higher education institutions within the State of Michigan.

Define Fields and Edits:

CONTRACTOR will identify required screens, fields and edits as part of the use case discussions. The defined screens, fields and edits will be used in developing the UI Prototype.

Identify User Interface Requirements:

CONTRACTOR will gather the user interface related requirements. This includes requirements with respect to screen controls such as drop down box, buttons, links etc. CONTRACTOR will meet with user groups to define the look and feel requirements for the application. The UI requirements will be in conformity with the State UI/Look and Feel standards. In cases where an exception is required, CONTRACTOR will submit the same to State Project Manager for necessary approvals.

Develop Requirements Specification / Business Requirements document:

CONTRACTOR will develop Requirements Specification Document for the new system that defines:

- TO-BE business process
- System Requirements
 - Functional
 - Input & Output
 - Performance
 - User Interface
 - System Interface
 - Communication
 - Backup and Recovery
 - Preliminary Implementation and System Test requirements
- Authentication and authorization requirements
- Reports

Develop Technical Requirements document:

CONTRACTOR will develop a Technical Requirements document including description of software, hardware, hosting, back-up, disaster recovery requirements. This document will be a subset of the Requirements Specification document.

Develop Requirements Traceability Matrix

CONTRACTOR will create initial version of the requirements Traceability matrix to trace the business requirements to system requirements and to test cases. This matrix will be incrementally updated throughout the life of the project.

Develop Requirements Management Checklist

CONTRACTOR will complete the Requirements Management Checklist. This checklist is intended to provide system owners, project managers, and other system development and maintenance professionals with guidance in identifying and planning requirement management activities. The checklist reflects recognized requirement management activities to be performed throughout the information systems project life cycle.

Perform EA Solution Assessment

CONTRACTOR team will work with the State MDIT staff to complete the EA Solution Assessment document (as necessary) with Enterprise Architecture Team.

Create Infrastructure Service Request

CONTRACTOR will work with the State MDIT staff to create (as necessary) Infrastructure Service Request identifying Technical Architecture (environments required), Technical requirements, Availability and



Recoverability requirements, Accessibility requirements, Performance requirements, Support Information, Initial Application Installation Plan, Procurement and Billing Information and Security Information.

Update Software Configuration Management Plan

CONTRACTOR Project Manger will update a Software Configuration Management Plan created in the previous phases of the project. This plan will identify Configuration Management Tools to be used, Roles and Responsibilities of the team, Project Configuration Management Tasks.

Update Maintenance Plan

CONTRACTOR Project Manager will update the Maintenance Plan created in the previous phases of the project identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production. This plan will be incrementally updated throughout the life of the project as and when additional data becomes available.

Update Project Plan

CONTRACTOR Project Manager will update the Project Plan created in the previous phases of the project.

Update Project Schedule

CONTRACTOR Project Manager will update the Project Schedule created in the previous phases of the project.

Structured Walkthroughs of the above documents

CONTRACTOR will conduct Structured Walkthrough of the deliverables in this phase and review the deliverables with the State. CONTRACTOR will obtain Stage Exit Approvals before proceeding to the next Phase.

Deliverables:

Deliverable	Description	Format
Requirements Specification / Business Requirements Document	A detailed description of business requirements of the system	MDIT SUITE SEM Template
Use Case Model	Use Case decomposition of the business requirements	MS Visio
Use Case Documents	Describes the actors, user action, system response, basic flow and alternate flows	MS Word
Application screen mockup / UI Screens/ User Interface Prototypes	Screen mockup (prototype) of the application to be developed; UI prototype will be provided as static HTML pages merely as a means of validating the screen content; it will not be a navigable demo nor will it contain any business logic.	HTML
Technical requirements document	Contains Technical and system interface specifications.	MS Word
Requirements Traceability Matrix	Describes the mapping between business requirements to system requirements and to test cases	MDIT SUITE SEM Template
Requirement Management Checklist	The checklist reflects recognized requirement management activities to be performed throughout the information systems project life cycle.	MDIT SUITE SEM Template
EA Solution Assessment	Present solution to the EA team for review and approval.	MDIT SUITE SEM Template
Infrastructure Service Request	Infrastructure Service Request based on Requirements Specification.	MDIT SUITE SEM Template
Previous Stage Deliverables that will be updated		
Updated Software	This plan will identify Configuration Management Tools to	MDIT SUITE



Configuration Management Plan	be used, Roles and Responsibilities of the team, Project Configuration Management Tasks, Configuration Control, Configuration Audits and Reviews and Archival and Retrieval of Configuration items.	SEM Template
Updated Maintenance Plan	Maintenance Plan identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production.	MDIT SUITE SEM Template
Updated Project Plan	Updated project plan	MDIT SUITE PMM Template
Updated Project Schedule	Updated project schedule	MS Project

Functional Design Phase Activities and Deliverables:

Update Requirements Specification / Business Requirements document:

CONTRACTOR will update Requirements Specification Document which includes Requirements Analysis Technique, System Requirements: Functional, Input & Output, Performance, User Interface, System Interface, Communication, Computer Security and Access, Backup and Recovery, Preliminary Implementation and System Test requirements.

Update Requirements Traceability Matrix

CONTRACTOR will update initial version of the requirements Traceability matrix created in the previous phase

Develop Logical Data Model:

CONTRACTOR will identify any new tables that may be necessary and will create logical data model. The Logical Data Model will contain:

- Entity relationship diagram (ERD)
- Data element dictionary (Entities, Attributes, Unique Identifiers, Primary Unique Identifiers, Relationships)

Develop Functional Design Document

CONTRACTOR will develop Functional Design Document describing Business Processes, System Users, Dependencies and Limitations, Configuration Identification, Data Design and Control, System Interface Design and Security Structure.

Update Software Configuration Management Plan

CONTRACTOR Project Manger will update a Software Configuration Management Plan created in the previous phases of the project. This plan will identify Configuration Management Tools to be used, Roles and Responsibilities of the team, Project Configuration Management Tasks, Configuration Control, Configuration Audits and Reviews and Archival and Retrieval of Configuration items.

Update Maintenance Plan

CONTRACTOR Project Manager will update the Maintenance Plan created in the previous phases of the project identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production. This plan will be incrementally updated throughout the life of the project as and when additional data becomes available.

Update Project Plan

CONTRACTOR Project Manager will update the Project Plan created in the previous phases of the project.



Update Project Schedule

CONTRACTOR Project Manager will update the Project Schedule created in the previous phases of the project.

Structured Walkthroughs of the above documents

CONTRACTOR will conduct Structured Walkthrough of the deliverables in this phase and review the deliverables with the State. CONTRACTOR will obtain Stage Exit Approvals before proceeding to the next Phase.

Deliverables:

Deliverable	Description	Format
Logical data model	Logical data model of any new tables describing entities and relationships	MS Visio
Functional Design Document	Describes Business Processes, System Users, Dependencies and Limitations, Configuration Identification, Data Design and Control, System Interface Design and Security Structure.	MDIT SUITE SEM Template
Previous Stage Deliverables that will be updated		
Updated Requirements Specification / Business Requirements Document	A detailed description of business requirements of the system	MDIT SUITE SEM Template
Updated Application screen mockup / UI Screens/ User Interface Prototypes	Screen mockup (prototype) of the application to be developed	HTML
Updated Requirements Traceability Matrix	Describes the mapping between business requirements to system requirements and to test cases	MDIT SUITE SEM Template
Updated Software Configuration Management Plan	This plan will identify Configuration Management Tools to be used, Roles and Responsibilities of the team, Project Configuration Management Tasks, Configuration Control, Configuration Audits and Reviews and Archival and Retrieval of Configuration items.	MDIT SUITE SEM Template
Updated Maintenance Plan	Maintenance Plan identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production.	MDIT SUITE SEM Template
Updated Project Plan	Updated project plan	MDIT SUITE PMM Template
Updated Project Schedule	Updated project schedule	MS Project

System Design Phase Activities and Deliverables:

Develop System Design

CONTRACTOR will validate and update the system design and hardware recommendations provided in this proposal with State's IT team. This includes reviewing and validating the hardware requirements for the test and production environments. State will be responsible for procuring and installing hardware stipulated in the recommendations. CONTRACTOR will conduct joint design sessions with MDIT technical staff and technical experts of the external interfaces, including REP, CEPAS, MSDS, MEIS.



Develop Physical Data Model

Based on the Logical Data Model detailed earlier, CONTRACTOR will develop a Physical Data Model for the SQL Server version approved by MDIT. The data model will be supported by detailed data dictionary that provides information on the tables, field definitions, rules, constraints, attributes, triggers, indexes of the new OTCS database.

Develop Data Migration routines

CONTRACTOR will perform a design of the new database during the System Design phase. During this phase, CONTRACTOR DBA will identify data to be extracted from L2K, G-Link files and cleansed. For the data that needs to be migrated, CONTRACTOR will also develop data transformation routines as described under the Data Migration Strategy.

Develop Technical Design document

CONTRACTOR will develop a system design document (or “Technical Solutions Document”) containing System Architecture, Data Design (Physical Data Model), Program Specifications including class models, modules and description of data flows. CONTRACTOR will also analyze if the current application components need to be replaced or can be leveraged and document the same.

As required in the ITB CONTRACTOR will also:

1. Translate requirements into a set of deliverables that can be used to drive and support the building of software artifacts; such as code, configuration data, and rules; with proper use of domain-related typing wherever possible.
 - i. Restrictions based on the underlying application framework must be clearly identified and explained.
 - ii. The design documents must be concise and accurate.
2. Include the following items:
 - i. Proposed schema
 - ii. A set of high-level classes to be implemented
 - iii. A textual description of algorithms to be deployed
 - iv. Business rules to be deployed
 - v. Configuration changes in the application or framework to enable the necessary functionality
 - vi. Business process diagrams
 - vii. Descriptions of common user interface objects such as menus and other navigational items

It should be noted that web page mockups, descriptions of UI objects (menus, navigational items) will be developed as part of the Use Case documents. Also the Unit Test plan and System Test plan are documents that will be developed during the Design Phase and Construction phase respectively. Refer to the “Develop Test Plan” section provided below.

Update Work Breakdown Structure

CONTRACTOR Project Manager will update a Work Breakdown Structure (WBS) created in the previous phases identifying all WBS elements during this stage of the project. This Work Breakdown Structure will be incrementally updated throughout the Initiation and Planning Stage of the project and reviewed with the CONTRACTOR team and State team members.

Develop Data Conversion Plan

CONTRACTOR will develop a Conversion Plan identifying Purpose, Conversion Activities including Conversion Tasks/Subtasks, Resources, Schedule, and Conversion Requirements including Input Data, Specifications, Output Data and quality assurance approach. This document will be updated through out the project and will detail all the data migration, cleaning tasks, and transformation routines.

Develop Test Plan

CONTRACTOR will develop a Test plan. The plan will describe the methodology for Unit test, System test, Regression test, Performance/Stress test, Integration test and User Acceptance testing. The test plan will contain testing approach, test scenarios, tools and environment to be used, security risks in each type of test,



resources needed from CONTRACTOR and State, schedule, approach for validation of test results and corrective action to fix issues and bugs.

Develop Test Reports

CONTRACTOR will develop initial Test Reports identifying Requirements to be Tested, Testing Types Applicable including Test Data and Expected Results, and Pass/Fail Criteria.

Develop System Design Checklist

CONTRACTOR will develop System Design Checklist intended to provide system owners, project managers, configuration managers, and other information system development and maintenance professionals with guidance in identifying and planning software design activities. The checklist reflects recognized design activities to be performed throughout the information system project life cycle.

Develop Software Testing Checklist

CONTRACTOR will develop Software Testing Checklist intended to provide system owners, project managers, configuration managers, and other information system development and maintenance professionals with guidance in identifying and planning testing activities. The checklist reflects recognized testing activities to be performed throughout the information system project life cycle.

Update Requirements Traceability Matrix

CONTRACTOR will update initial version of the requirements Traceability matrix created in the previous phase.

Update Software Configuration Management Plan

CONTRACTOR Project Manger will update a Software Configuration Management Plan created in the previous phases of the project. This plan will identify Configuration Management Tools to be used, Roles and Responsibilities of the team, Project Configuration Management Tasks, Configuration Control, Configuration Audits and Reviews and Archival and Retrieval of Configuration items.

Update Maintenance Plan

CONTRACTOR Project Manager will update the Maintenance Plan created in the previous phases of the project identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production. This plan will be incrementally updated throughout the life of the project as and when additional data becomes available.

Update Project Plan

CONTRACTOR Project Manager will update the Project Plan created in the previous phases of the project.

Update Project Schedule

CONTRACTOR Project Manager will update the Project Schedule created in the previous phases of the project.

Develop Training Plan

CONTRACTOR will develop a training plan which will include the subject areas (curriculum), training schedule and the number of hours needed. This will enable the State to schedule a training site and communicate the same to the State staff.

Structured Walkthroughs of the above documents

CONTRACTOR will conduct Structured Walkthrough of the deliverables in this phase and review the deliverables with the State. CONTRACTOR will obtain Stage Exit Approvals before proceeding to the next Phase.



Deliverables:

Deliverable	Description	Format
System Design document	System Design Document containing System Architecture, Data Design (Physical Data Model), Program Specifications including class models, modules and description of data flows.	MDIT SUITE SEM Template
Test Plan	Describes the methodology for Unit test, System test, Regression test, Performance/Stress test, Integration test and User Acceptance testing. The test plan will contain testing approach, test scenarios, tools and environment to be used, security risks in each type of test, resources needed from CONTRACTOR and State, schedule, approach for validation of test results and corrective action to fix issues and bugs.	MDIT SUITE SEM Template
Test Reports	Test Reports identifying Requirements to be Tested, Testing Types Applicable including Test Data and Expected Results, and Pass/Fail Criteria.	MDIT SUITE SEM Template
System Design Checklist	System Design Checklist intended to provide system owners, project managers, configuration managers, and other information system development and maintenance professionals with guidance in identifying and planning software design activities.	MDIT SUITE SEM Template
Software Testing Checklist	Software Testing Checklist intended to provide system owners, project managers, configuration managers, and other information system development and maintenance professionals with guidance in identifying and planning testing activities.	MDIT SUITE SEM Template
Training Plan	Describes the training plan	MDIT SUITE SEM Template
Previous Stage Deliverables that will be updated		
Updated Requirements Traceability Matrix	Describes the mapping between business requirements to system requirements and to test cases	MDIT SUITE SEM Template
Updated Software Configuration Management Plan	This plan will identify Configuration Management Tools to be used, Roles and Responsibilities of the team, Project Configuration Management Tasks, Configuration Control, Configuration Audits and Reviews and Archival and Retrieval of Configuration items.	MDIT SUITE SEM Template
Updated Maintenance Plan	Maintenance Plan identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production.	MDIT SUITE SEM Template
Updated Project Plan	Updated project plan	MDIT SUITE PMM Template
Updated Project Schedule	Updated project schedule	MS Project
Updated Work Breakdown Structure	Identifies and Describes all WBS elements included in the Project Scope.	MDIT SUITE SEM Template
Updated Data Conversion Plan	Conversion Plan will provide details on purpose, conversion Activities including Conversion Tasks/Subtasks, Resources, Schedule, and Conversion Requirements including Input Data, Specifications, Output Data, Validation, and Security Requirements.	MDIT SUITE SEM Template



Construction Phase Activities and Deliverables:

Develop Application Code

CONTRACTOR will develop the application code components as per requirement specifications, design, screen mockup and use case requirements. During this phase, CONTRACTOR will map the L2K and G-Link data to the new system data structure. CONTRACTOR will also work with State to perform data conversion, load and configure data to new the database structure.

Perform Data Migration, Cleansing

Based on the Data migration plan and the transformation rules identified during the design phase, CONTRACTOR will perform data migration and cleansing of the Staging data. This data will be used for System testing and UAT. State will provide guidance for data cleansing resolving conflicts including duplicates and other inconsistencies

Perform Unit Tests

CONTRACTOR will perform unit tests on the developed/modified programs. The purpose of these tests is only to test the correctness of the program logic at a screen/functional level. In addition, these tests will also test the navigation to the next application component in a business process sequence.

Update Test Plan

CONTRACTOR will update the Test plan created in the previous phases of the project. The plan will describe the methodology for Unit test, System test, Regression test, Performance/Stress test, Integration test and User Acceptance testing. The test plan will contain testing approach, test scenarios, tools and environment to be used, security risks in each type of test, resources needed from CONTRACTOR and State, schedule, approach for validation of test results and corrective action to fix issues and bugs.

Develop Test Reports

CONTRACTOR will develop initial Test Reports identifying Requirements to be Tested, Testing Types Applicable including Test Data and Expected Results, and Pass/Fail Criteria.

Develop System Integration Test Cases

CONTRACTOR will develop System Integration test cases for various business scenarios, security testing and transactions. CONTRACTOR will commence this activity during the Development Phase of the project and will conclude this before System Integration Testing. CONTRACTOR will work with appropriate subject matter experts to validate the test cases.

Develop Transition Plan

CONTRACTOR will develop an initial version of Transition Plan describing Project Objectives, System Description, Plan Objectives, Outstanding Issues, Infrastructure Services, Operation Scenarios, and Transition Planning.

Develop Installation Plan

CONTRACTOR will develop an initial version of Installation Plan describing Project Objectives, System Description, Roles and Responsibilities, Installation Environment, Installation Schedule, Change Control Procedure, Installation Test Procedure, Assumptions, Dependencies, Risks and Resource Requirements.

Update Training Plan

CONTRACTOR will update the training plan created in the previous phases of the project which will include the subject areas (curriculum), training schedule and the number of hours needed. This will enable the State to schedule a training site and communicate the same to the State staff.

Develop Training Checklist

CONTRACTOR will develop Training Checklist intended to provide system owners, project managers, configuration managers, and other information system development and maintenance professionals with guidance in identifying and planning training activities. The checklist reflects recognized training activities to be performed throughout the information system project life cycle.



Update Requirements Traceability Matrix

CONTRACTOR will update initial version of the requirements Traceability matrix created in the previous phase.

Update Data Conversion Plan

CONTRACTOR will update the Conversion Plan created in the previous phases of the project with the updates from “Perform Data Migration, Cleansing” task completed in this phase.The information will be used during the conversion of Production data in the later stages.

Update Maintenance Plan

CONTRACTOR Project Manager will update the Maintenance Plan created in the previous phases of the project identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production. This plan will be incrementally updated throughout the life of the project as and when additional data becomes available.

Update Project Plan

CONTRACTOR Project Manager will update the Project Plan created in the previous phases of the project.

Update Project Schedule

CONTRACTOR Project Manager will update the Project Schedule created in the previous phases of the project.

Structured Walkthroughs of the above documents

CONTRACTOR will conduct Structured Walkthrough of the deliverables in this phase and review the deliverables with the State. CONTRACTOR will obtain Stage Exit Approvals before proceeding to the next Phase.

Deliverables:

Deliverable	Description	Format
Application code	Application code including source code and conversion program developed as per design, screen mockup and use case documents	Code bundle
Test Reports	Test Reports identifying Requirements to be Tested, Testing Types Applicable including Test Data and Expected Results, and Pass/Fail Criteria.	MDIT SUITE SEM Template
Transition Plan	Describes Project Objectives, System Description, Plan Objectives, Outstanding Issues, Infrastructure Services, Operation Scenarios, and Transition Planning.	MDIT SUITE SEM Template
Installation Plan	Describes Project Objectives, System Description, Roles and Responsibilities, Installation Environment, Installation Schedule, Change Control Procedure, Installation Test Procedure, Assumptions, Dependencies, Risks and Resource Requirements	MDIT SUITE SEM Template
System Integration Test Cases	System Integration Testing test cases for various business scenarios.	MS Word
Training Checklist	Training Checklist intended to provide system owners, project managers, configuration managers, and other information system development and maintenance professionals with guidance in identifying and planning training activities.	MDIT SUITE SEM Template
Previous Stage Deliverables that will be updated		
Updated Requirements Traceability Matrix	Describes the mapping between business requirements to system requirements and to test cases	MDIT SUITE SEM Template



Updated Data Conversion Plan	Conversion Plan identifying Purpose, Conversion Activities including Conversion Tasks/Subtasks, Resources, Schedule, and Conversion Requirements including Input Data, Specifications, Output Data, Validation, and Security Requirements.	MDIT SUITE SEM Template
Updated Maintenance Plan	Maintenance Plan identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production.	MDIT SUITE SEM Template
Updated Test Plan	Identifies the methodology for testing	MS Word
Updated Project Plan	Updated project plan	MDIT SUITE SEM Template
Updated Training Plan	Describes the training plan	MDIT SUITE SEM Template
Updated Project Schedule	Updated project schedule	MS Project

Testing Phase Activities and Deliverables:

CONTRACTOR will fully complete/support the following tests prior to the deployment of the application code in the production environment:

- Unit testing
- Integration Testing
- System Testing
- User Acceptance Testing
- Performance Testing
- Operations Testing

A Test plan for entire project covering all functions will be created during the Design phase of the project. The Test plan will describe the methodology for Unit test, System test, Performance test, Integration test, Operations Testing and User Acceptance testing. The Test plan will contain testing approach, resources from CONTRACTOR and State, schedule, validation of test results and corrective action to fix issues and bugs. The Test plan will be finalized prior to the start of system testing.

Unit testing will be performed during the Construction / Development phase. The unit tested code will be installed on the State's Testing servers where CONTRACTOR will complete the System Integration testing. State will perform User Acceptance Testing against the Testing Servers. CONTRACTOR will support User-Acceptance Testing through defect resolution.

Develop Test Scripts / Test Data

CONTRACTOR will develop System Integration test cases (Test Scripts) and Create Test Data for various business scenarios, security testing and transactions. CONTRACTOR will commence this activity during the Development Phase of the project and will conclude this before System Integration Testing. CONTRACTOR will work with appropriate subject matter experts to validate the test cases.

CONTRACTOR will develop System Integration test cases for various business scenarios and transactions. CONTRACTOR will commence this activity during the development phase of the project and will conclude this before the beginning of System Integration testing. CONTRACTOR will work with appropriate subject matter experts to validate the test cases.

Perform Integration Testing

CONTRACTOR will work with the MDIT technical staff and other technical experts in charge of the external interfaces (including REP, CEPAS, MSDS, MEIS) of the the OTCS application to perform Integration tests.



CONTRACTOR will validate the results and will make corrective actions for issues (within OTCS) resulting from the integration tests. Integration testing is intended to test the integration of the application within its components and external interfaces. Integration testing will be executed at the test environment provided by State. State will need to ensure that the necessary interfaces are ready (developed and system tested) for testing in time for the integration testing. CONTRACTOR will identify start date of Integration testing in its project schedule.

Perform System Testing

CONTRACTOR will perform System tests, validate the results and will make corrective actions for issues resulting from the tests. System testing is intended to test the business functions of the application within its components and external interfaces. During Integration and System Testing, CONTRACTOR will test the data quality to ensure that the data has been migrated correctly. System testing will be executed at the test environment provided by State.

Develop Testing Package

CONTRACTOR will develop Testing Package. This package will contain Integration and System Test Checklist, Error Reporting and Tracking Checklist, Pre-Acceptance Checklist, and User Acceptance Checklist.

Develop Test Reports / Test Results

CONTRACTOR will develop Test Reports identifying Requirements to be Tested, Testing Types Applicable including Test Data and Expected Results, and Pass/Fail Criteria.

User Acceptance Testing

Test Data

CONTRACTOR will work with the State to prepare and load the entire test data needed to conduct user acceptance testing to the test databases before commencement of user acceptance testing. The UAT will be performed against the data that has been migrated from the existing L2K and G-Link databases. This will serve as the test of the migrated data. Any defects with the transformation routines will be fixed during this stage.

Online Help Document

CONTRACTOR will develop an Online Help document that will assist the users understand the business processes, how the processes are implemented in the system, provide screen and field-level help. The document will be available in an electronic format during UAT.

Support User Acceptance Tests

User Acceptance Tests will be performed by Business users and State will be responsible for performing UAT. State users will use the System Test Cases created during the development stages. The test cases will include scripts to test a complete student test cycle. State users can add more test cases to cover additional test scenarios if they deem necessary. State will assign necessary amount of testing resources to perform the user acceptance testing within the time-boxed duration of sixty calendar days. It is anticipated that there will be at least two test cycles within the allotted time-period. The User Acceptance Test is performed to validate the functionality of the entire system from a business usage perspective. State Project Manager will assist CONTRACTOR Project Manger in scheduling this activity within a time-boxed duration provided in a separate table in "Project Schedule" section. CONTRACTOR will assist State Business Customers in performing the User Acceptance Test by providing clarifications on application functionality.

CONTRACTOR will support UAT by:

- Provide business and technical assistance
- Monitoring system performance.
- Investigating why data was not processed.
- Monitoring computer resource usage.
- Participating in problem review meetings.
- Investigating problems and identifying potential problems.



- Answering user questions about the system.
- Investigating and ensuring user access to the system in the UAT environment.
- Generally helping the users execute tests and review results.

Test Environment

State will provide test environment for all testing purposes. This test environment shall contain all server tiers needed for operations including web access, web application, application server and database server. CONTRACTOR will deploy all application components to the test environment.

Resolve Defects

CONTRACTOR will fix application defects reported by the business users during user acceptance. CONTRACTOR will submit these fixes to the users for re-testing and validation. CONTRACTOR will track all UAT defects in a defects log and provide updates to State Project Manager. Metrics pertaining to progress of testing activities and defects will be tracked periodically towards managing the Testing phase effectively. For all project purposes, a defect is defined as instance of application behavior in the software code developed by CONTRACTOR, that represents a lack of compliance with the State of Michigan approved requirement specifications and associated technical design deliverables developed by CONTRACTOR.

Execute Performance Testing

CONTRACTOR will conduct performance/stress test on the application for peak loads after User acceptance Testing is complete. State will provide all the necessary software / tools necessary for executing the performance testing. Performance testing will be executed in the test environment provided by the State.

System Performance is a function of various factors including Hardware capacity, network throughput, database performance, data volume and user concurrency and application design. CONTRACTOR will be responsible for performance issues to the extent they pertain to code developed by CONTRACTOR based on technical design approved by State. State will be responsible for all other factors.

Contractor will design and develop the OTCS application under the assumption that the State server and network infrastructure will be sufficiently deployed or upgraded to handle the higher volumes of user traffic accessing the new application.

Perform Operations Testing

Operations Testing consists of testing technical operational of the application such as Startup, Shutdown, batch processing, error recovery, system backup and recovery procedures etc. CONTRACTOR will work with the State MDIT technical staff to perform Operations Testing in parallel with User Acceptance Testing (UAT) toward the latter half of UAT. This testing is typically performed on an environment that is similar to the Production environment. State will need to provide an environment that closely resembles the Production environment for this testing.

Update Requirements Traceability Matrix

CONTRACTOR will update initial version of the requirements Traceability matrix created in the previous phase.

Update Data Conversion Plan

CONTRACTOR will update the Conversion Plan created in the previous phases of the project with the results of the system testing and UAT. Any tweaks to the data transformation routines will be captured here. The lessons learned will be applied to the migration of data during Production deployment. identifying Purpose, Conversion Activities including Conversion Tasks/Subtasks, Resources, Schedule, and Conversion Requirements including Input Data, Specifications, Output Data, Validation, and Security Requirements.

Update Maintenance Plan

CONTRACTOR Project Manager will update the Maintenance Plan created in the previous phases of the project identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of



maintaining the application once released to production. This plan will be incrementally updated throughout the life of the project as and when additional data becomes available.

Update Transition Plan

CONTRACTOR will update Transition Plan created in the previous phases of the project describing Project Objectives, System Description, Plan Objectives, Outstanding Issues, Infrastructure Services, Operation Scenarios, and Transition Planning.

Update Installation Plan

CONTRACTOR will update Installation Plan created in the previous phases of the project describing Project Objectives, System Description, Roles and Responsibilities, Installation Environment, Installation Schedule, Change Control Procedure, Installation Test Procedure, Assumptions, Dependencies, Risks and Resource Requirements.

Update Training Plan

CONTRACTOR will update the training plan created in the previous phases of the project which will include the subject areas (curriculum), training schedule and the number of hours needed. This will enable the State to schedule a training site and communicate the same to the State staff.

Develop Training Checklist

CONTRACTOR will develop Training Checklist intended to provide system owners, project managers, configuration managers, and other information system development and maintenance professionals with guidance in identifying and planning training activities. The checklist reflects recognized training activities to be performed throughout the information system project life cycle.

Structured Walkthroughs of the above documents

CONTRACTOR will conduct Structured Walkthrough of the deliverables in this phase and review the deliverables with the State. CONTRACTOR will obtain Stage Exit Approvals before proceeding to the next Phase.

Deliverables

Deliverable	Description	Format
Application code (updated)	Application code developed as per design, screen mockup and use case documents	Code bundle
Test Scripts / Test Data	Test scripts containing the system integration test cases.	MS Word
Testing Package	Contains Integration and System Test Checklist, Error Reporting and Tracking Checklist, Pre-Acceptance Checklist, and User Acceptance Checklist.	MDIT SUITE SEM Template
Performance Test Results	Performance test the application for peak loads	MDIT SUITE SEM Template
Test Reports / Test Results	Test Report identifying tested test cases with results of the test	MDIT SUITE SEM Template
Training Checklist	Training Checklist intended to provide system owners, project managers, configuration managers, and other information system development and maintenance professionals with guidance in identifying and planning training activities.	MDIT SUITE SEM Template
Previous Stage Deliverables that will be updated		
Updated Requirements Traceability Matrix	Describes the mapping between business requirements to system requirements and to test cases	MDIT SUITE SEM Template
Updated Data Conversion Plan	Conversion Plan identifying Purpose, Conversion Activities including Conversion Tasks/Subtasks,	MDIT SUITE SEM Template



	Resources, Schedule, and Conversion Requirements including Input Data, Specifications, Output Data, Validation, and Security Requirements.	
Updated Maintenance Plan	Maintenance Plan identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production.	MDIT SUITE SEM Template
Updated Transition Plan	Describes Project Objectives, System Description, Plan Objectives, Outstanding Issues, Infrastructure Services, Operation Scenarios, and Transition Planning.	MDIT SUITE SEM Template
Updated Installation Plan	Describes Project Objectives, System Description, Roles and Responsibilities, Installation Environment, Installation Schedule, Change Control Procedure, Installation Test Procedure, Assumptions, Dependencies, Risks and Resource Requirements	MDIT SUITE SEM Template
Updated Training Plan	Describes the training plan	MDIT SUITE SEM Template
Updated Test Plan	Identifies the methodology for testing	MS Word

Implementation Phase Activities and Deliverables:

Pilot Implementation Phase

The application will rolled out to the users in 2 phases. The first phase is the Pilot Implementation for 60 calendar days with three (3) higher education institutions and three (3) school districts and MDE. During this phase the new OTCS application will be run along with the old system. State will select the school districts and higher education institutions that will be part of the Pilot.

Prior to the Pilot, CONTRACTOR will perform data cleansing and migration of Production data to support the implementation at the Pilot sites. It should be noted note that the data mapping and data transformation will have already been completed in the System Design phase. The data migration and testing of migrated data (of staging data) will have been completed in the System and Integration testing phases.

CONTRACTOR will also train the necessary users for the Pilot period. During the pilot CONTRACTOR will provide business and technical support of the new application at the Pilot sites.

Full Rollout Phase

After the pilot completion and prior to the Full rollout period, CONTRACTOR will again migrate the data from the current L2K system and G-Link Filemarker Production data files to the new OTCS database, perform data loading, configuration and test the application for accuracy. For details on the process to be followed by CONTRACTOR for data cleansing and migration refer to the “Data Migration Approach” described in the Technical Solution section.

CONTRACTOR will work with the State to schedule and coordinate the activities, identify and solve issues related to the full rollout of the application to all the 32 higher education institutions and approximately 840 school districts. CONTRACTOR will work with the State to plan the rollout of the application over a time-boxed duration specified in the “Time-boxed duration” of the Milestone Schedule.

Update Data Conversion Plan

CONTRACTOR will update the Data Conversion Plan created in the previous phases with the updates from the data conversion, migration of Production data completed during deployment.



Update Maintenance Plan

CONTRACTOR Project Manager will update the Maintenance Plan created in the previous phases of the project identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production. This plan will be incrementally updated throughout the life of the project as and when additional data becomes available.

Update Transition Plan

CONTRACTOR will update Transition Plan created in the previous phases of the project describing Project Objectives, System Description, Plan Objectives, Outstanding Issues, Infrastructure Services, Operation Scenarios, and Transition Planning.

Update Security Plan

CONTRACTOR Project Manager will update the Security Plan created in the previous phases of the project. CONTRACTOR team will identify the Security Classification of this application based on the security needs and requirements provided by the State Subject Matter Experts and MDIT & Agency Security Policies, Standards and Procedures.

Develop required documentation for support

CONTRACTOR will develop the following documentation for application support. CONTRACTOR will provide all the documents to State prior to implementation date.

- User Manual
- Online Help
- Training Manual
- Installation Manual
- Technical Design documents (including Data dictionary, physical data model, Module specifications)
- Installation Manual
- Operations Manual

Deploy application code

CONTRACTOR will work with the State Technical staff to deploy all the application code components in the production environment as part of deployment. CONTRACTOR will follow the state's configuration management system for deploying code.

Prior to the deployment of the code, CONTRACTOR will migrate the production data to the new data structure using the data transformation routines, clean, load and configure data.

Provide Training

Approach

CONTRACTOR will provide training to the users and trainers on the application end-user functionality on a "Train-the Trainer" basis for 10 sessions as specified by the State in its responses to vendor questions, CONTRACTOR estimates that of the 10 sessions 2 to 3 sessions will be completed prior to Pilot implementation and the remaining sessions will be completed during Pilot implementation for the users included in the full rollout. For the training of the Technical Staff refer to the Knowledge Transfer section below. Training will be provided prior to pilot for the Pilot users and during the pilot for the users affected by the full rollout.

Materials

CONTRACTOR will develop the following documentation for the training:

- Training Plan
- User Manual
- Powerpoint presentation



The documentation will be provided in an electronic format to the State. Paper copies will be provided as necessary. An online help guide will be provided for use by the users during UAT. Refer to the Testing phase for details on the online help document.

CONTRACTOR will also develop a Help Desk Guide with processes and scripts to support the new application, data and workflow. CONTRACTOR will share interim versions of the Guide with the State. The Final document will be provided prior to the Pilot, with updates made as necessary after Pilot. All training manuals, training plans and other documentation provided become the property of the State.

Create Post Implementation Evaluation Report

CONTRACTOR will create Post Implementation Evaluation Report containing General Information, Staffing and Skills, Project Organizational Structure, Schedule Maintenance, Cost Management, Risk Management, Quality Control, Change Management, Communications Management, Customer Expectation Management and Lessons Learned.

Provide Knowledge Transfer to Operations

CONTRACTOR will provide knowledge transfer to State technical staff during this phase of the project. State will assign necessary personnel towards receiving the knowledge transfer from CONTRACTOR. Knowledge transfer will be performed by CONTRACTOR to State team through meetings, one-on-one sessions and document handover. This activity will be performed in parallel to Training the MDE trainees.

CONTRACTOR will have provided the Technical Architecture documents, Installation Manual and Operations manual to the technical staff prior to the Knowledge Transfer meetings. CONTRACTOR will update these documents as necessary during the course of the contract.

Deliverables:

Deliverable	Description	Format
Training Manual	Training material for conducting training	MS Word
User Manual	User Manual describing the system	MS Word
Source Code documentation	Line and Block documentation of the source code	Code bundle
Application code (updated)	Application code developed as per design, screen mockup and use case documents	Code bundle
Post Implementation Evaluation Report	Describes Project Process during the course of the project.	MDIT SUITE PMM Template
Previous Stage Deliverables that will be updated		
Updated Data Conversion Plan	Conversion Plan identifying Purpose, Conversion Activities including Conversion Tasks/Subtasks, Resources, Schedule, and Conversion Requirements including Input Data, Specifications, Output Data, Validation, and Security Requirements.	MDIT SUITE SEM Template
Updated Maintenance Plan	Maintenance Plan identifying Scope of Maintenance, Maintenance Team Roles and Responsibilities, Assumptions, Constraints and Dependencies, Management Approach and Technical Approach for the purpose of maintaining the application once released to production.	MDIT SUITE SEM Template
Updated Transition Plan	Describes Project Objectives, System Description, Plan Objectives, Outstanding Issues, Infrastructure Services, Operation Scenarios, and Transition Planning.	MDIT SUITE SEM Template
Updated Security Plan	Security Plan that identifies Security Classification of this application based on the security needs and requirements provided by the State Subject Matter Experts and MDIT & Agency Security Policies, Standards and Procedures.	MDIT SUITE SEM Template



Warranty Phase Activities & Deliverables

Warranty

- a. CONTRACTOR will provide a warranty provision for the products and services resulting from this statement of work beginning when application is installed in the production environment.
- b. CONTRACTOR will provide warranty of 60 calendar days from the date the relevant application components are deployed in production environment.
- c. During the warranty period, CONTRACTOR will correct any defective element of the application that fails to perform in accordance with the requirements as defined in the approved requirement specifications and associated technical design.
- d. For the purpose of warranty, a defect is defined as instance of application behavior that represents a lack of compliance with the approved requirement specifications and associated technical design developed by CONTRACTOR (significant or material defects). CONTRACTOR will fix such defects identified during the warranty periods at no additional cost to the State.
- e. The State agrees to notify CONTRACTOR of such defects within three (3) days of occurrence of such defect in the production environment. The State will appropriately triage the defect and ascertain that it requires CONTRACTOR repair.
- f. Corrective action by CONTRACTOR may include, but is not limited to repairing or replacing the nonconforming element.
- g. This warranty is limited to the extent such defects do not meet the business functionality that is represented in the State approved requirement specifications and associated technical design. This warranty is limited to those defects that are directly attributed to software code developed by CONTRACTOR. This warranty does not cover for any issues pertaining to system throughput and performance to the extent such issues are not attributed to the code developed by the contractor.
- h. CONTRACTOR is not responsible for any defects arising from components not developed by CONTRACTOR and/or other components / interfaces that have been developed or modified by others.
- i. In the event deployment of application components is delayed due to reasons attributed to the State, then warranty for the relevant application components will begin from the date the application was accepted under the user acceptance test process.
- j. CONTRACTOR is not responsible for providing any warranty on components should any component or work product be modified by anyone other than CONTRACTOR personnel assigned by CONTRACTOR's Project Manager during the period of warranty.

Engagement Wrap-up Activities and Deliverables

CONTRACTOR will perform the project closure activities:

- Receive CEASAR Evaluation. Refer to the CEASAR section in the document for detailed information on the CEASAR process
- Document Lessons Learned – CONTRACTOR will conduct a meeting with State team members to discuss lessons learned from the project. These are used to make improvements in future projects.

Maintenance Phase activities and deliverables

CONTRACTOR will provide one qualified resource that is trained and familiar with the system to work onsite at the State's facilities to support the OTCS application during the maintenance phase. This resource will be the single point of contact for project issues during the maintenance period during regular business hours of MDE (7 AM - 6 PM EST). Upon State's notification of any maintenance issue or an enhancement, the CONTRACTOR resource will work with the MDE, MDIT to investigate resolutions or solutions. It should be noted that resolutions will depend on the severity of the problem. All releases to the Production environment will be according a mutually agreed schedule with MDIT, MDE. CONTRACTOR will provide the following services for the system support / maintenance phase of the project:



- System Maintenance and Enhancement Activities:
 - Any routine file maintenance to update any information required for operation of the system such as data changes, constructing new edits, investigating batch job failures, investigating and correcting application defaults, repairing jobs run incorrectly, repairing problems due to system software failures, repairing problems due to operator or schedule error, rectifying problems due to web page, program, object, class, scripts, control language, or database errors, repairing security problems, repairing and restoring corrupted files, table structures, and databases, rectifying incorrect documentation, and repairing problems due to jobs run with incorrect data.
 - Plan and assist MDIT to perform the installation, including configuration, setup and testing of the Online Teacher Certification System
- Adaptive and Preventive Maintenance Activities:
 - Upgrades or patches of the application server, Windows components, java virtual machine, operating system, RDMBS, or other system and application software.
 - Software modifications and upgrades necessary because of expiring vendor support.
 - Hardware, database, or application conversions that do not modify user functionality.
 - One-time loads or reformats of user data.
 - Report distribution changes.
 - Disaster recovery plan activities.
- Performance Maintenance Activities:
 - Improve the performance, maintainability, or other attributes of an application system.
 - Data table restructuring.
 - Data purges and or archiving to reduce/improve data storage.
 - Run time improvements.
 - Replace utilities to reduce run time.
 - Potential problem correction.
 - Data set expansions to avoid space problems.

CONTRACTOR is available for optional renewal of the maintenance past the initial maintenance period for subsequent years. Such requests should be made by the State Project Manager to the CONTRACTOR in advance so appropriate resource can be assigned to the project when necessary.

Other Services - Future Enhancement Activities and Scope Modifications

CONTRACTOR will provide enhancements to the OTCS application by utilizing the optional reserved bank of 2000 hours. CONTRACTOR understands that future enhancements will be implemented as follows: The State will prepare a statement of work that describes the enhancement and present it to CONTRACTOR. CONTRACTOR will respond with a work plan to implement the enhancement along with the number of hours by staffing category necessary to execute the work. The State will review the proposal and if acceptable will issue a purchase order for the work. Upon approval of the purchase order, CONTRACTOR will commit the necessary resources to implement the enhancements.

The contractor's price specified under 1.601 Compensation and Payment does not include the price towards the above specified optional reserve bank of 2000 hours.

The State intends to establish funding for optional reserved bank of 2000 hours for Other Services - Future Enhancement Activities and Scope Modifications to the contract, Actual funding for enhancements may occur on a yearly basis, and there is no guarantee as to the level of funding, if any, available to the project.

Change Management, Section 1.403 of this Contract, provides pricing for the optional reserved bank of 2000 hours.

System enhancements / scope modifications include changes to the system that are necessary to meet:

- a. New State policy requirements,
- b. New Federal regulations,



- c. New technology requested by the State, or
- d. Accommodate new or updated interfaces requested by the State.

Deliverable(s)

- Updated Application Source Code Artifacts - The Contractor will follow the agreed upon procedures to modify, test, and implement code.
 - Updated Documentation
 - Updated Training and Transition of Knowledge of SOM support staff
 - a. The Contractor will update any documentation that has been previously created by the Contractor to reflect the updated and enhanced functionality of the application/system.
 - b. The Contractor will provide updated versions of all systems, user, training, and operations documentation prior to the implementation date.
 - c. Documentation must meet all requirements of the approved Documentation Standards Plan and be provided in electronic and hard copy, if requested by State.
 - d. Documentation includes:
 - i. Complete system documentation.
 - ii. User manuals (administrator and authorized user).
 - iii. Training manuals.
 - iv. Glossary
 - v. Updates to the Help Desk Guide to reflect new functionality as it is released.
 - vi. All operations procedures not covered in a user manual and requested by the State.

Milestone Schedule

The estimated completion dates (business days from the project start date) are listed below for the significant Project Milestones:

Milestone/Deliverable Schedule	Deliverables	Estimated Completion Date (Business days from Start date of Project)
Engagement Startup	<ul style="list-style-type: none"> • Project Plan • Work Breakdown Structure • Project Schedule • Risk Management Plan • Quality Plan • Communication Plan • Change Management Plan • Issue Management Plan • CEASAR criteria • Dependencies List 	5
Requirements Gathering and Functional Design Completed	<ul style="list-style-type: none"> • Business Requirements Document • Use Case documents • UI Prototype screens • Technical Requirements Document • Logical Data Model • Requirement Traceability Matrix 	55
System Design Completed	<ul style="list-style-type: none"> • System Design Document • Functional Design Document • Physical Data Model • Test Plan 	90
Development and Unit Test Completed	<ul style="list-style-type: none"> • Application Code components • System Integration Test Cases 	185



System and Integration Testing Completed	<ul style="list-style-type: none"> • Tested Application Code components • System Test Report • Training Plan 	225
User Acceptance Testing Completed	<ul style="list-style-type: none"> • Tested Application Code components • User Acceptance Test Report • Performance Test Report • Training Plan 	279
Deployment Completed	<ul style="list-style-type: none"> • Training • Training Manual • User Manual • Installation Manual • Operations Manual • Deployed Application Code • Data Migration Output 	289
Pilot Completed	<ul style="list-style-type: none"> • Pilot Implementation Report 	333
Full Rollout Completed	<ul style="list-style-type: none"> • Full Rollout Implementation Report 	363
Warranty Completed	<ul style="list-style-type: none"> • Warranty Defects log with list and status of defects 	407
Transition Completed	<ul style="list-style-type: none"> • Knowledge Transfer Report 	657

The Contractor assumes that there will be no time gap between any two subsequent activities.

Time boxed activities:

The Contractor has proposed the following time boxed activities for the different stages of the project in the interest of managing to the project schedule and the timeline that the State provided. The Contractor and the State will validate the durations suggested by the Contractor after requirements gathering and will mutually address the impact to the schedule/cost and process the same through the Change Management Process. The State will not be responsible for shortening the below time boxed durations to the extent delays or quality issues are caused solely by the contractor.

Activities listed as time-boxed activities will be performed only to the extent possible within the allocated time duration. Both the Contractor and State personnel will apply diligent efforts towards completing these activities in its entirety within the allotted time-boxed durations. Below time-boxed schedule

The following table illustrates the time boxed activities for the different stages of the project. The following table illustrates the time boxed activities for the different stages of the project.

Activity	Time boxed duration	Description
User Acceptance Testing and Operations Testing	44 business days	User Acceptance testing and Operations Test are performed in parallel within the time boxed duration
Performance Testing	10 business days	Performance testing is performed within the time boxed duration
Training and Deployment	10 business days	Training and Deployment are performed together within the time boxed duration
Pilot Implementation	44 business days	Pilot Implementation is performed within this time-boxed duration
Full Rollout Implementation	30 business days	Full rollout Implementation is performed within this time-boxed duration



1.200 Roles and Responsibilities

1.201 Contractor Staff, Roles, and Responsibilities

A. Contractor Staff

The Contractor has identified a **Single Point of Contact (SPOC)**. The duties of the SPOC shall include, but not be limited to:

- supporting the management of the Contract,
- facilitating dispute resolution, and
- advising the State of performance under the terms and conditions of the Contract.

The State reserves the right to require a change in the current SPOC if the assigned SPOC is not, in the opinion of the State, adequately serving the needs of the State.

Contractor Single Point of Contact	Mr. Shanta Santaprakash Vice President Systems Technology Group, Inc. Voice: 248.643.9010 ext. 111 Email: shanta@stgit.com
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The Contractor fully understands the strategic importance of this initiative. Considering the same, it is very critical that the resources assigned to the project are of high caliber in technical and professional competence. Contractor will provide a team of consultants that is sufficient to meet the project deliverables, timeline and skills identified in the table below stated in this contract.

Contractor will not intentionally re-assign staff from this project team. Should such removal cause a delay in project schedule or affect contractor’s ability to complete deliverables and milestones per project schedule and this statement of work or in such a manner as to cause undue costs to the State.

The Contractor retains the right to manage, control, direct, assign all the Contractor’s resources servicing this contract so that the Contractor can achieve the objectives and deliverables as stated in this proposal and under this contract. Hence, the Contractor will not be subject to any liquidated damages listed under section 2.243 (b), (c) and (d) with respect to the Contractor personnel.

- The Contractor will notify the State of any changes to the Contractor's personnel for positions identified in the table below. For those replacements that occur after the project has commenced, Contractor will provide the following information to the State:
 - Notify the State which resource is being replaced and reason for replacement
 - Notify the State of any risks contractor believes such replacement will have on contractor's ability to complete the deliverables in accordance with the schedule stated in this agreement. . If such risks are identified by the contractor, contractor will provide a risk mitigation plan to the State.
 - Notify the State of new replacement resource name and provide a resume. Such new replacement resource will have necessary skills to ensure that the contractor team collectively continues to possess the skills identified in the table below.

Position	Project Responsibilities
<u>Project Manager / Trainer</u> Minimum 3 years project management experience in IT projects of similar size & scope.	The Contractors Project Manager / Trainer will interact with the designated personnel from the State to insure a smooth transition to the new system. The project manager/trainer will coordinate all of the activities of the Contractor personnel assigned to the project. The Contractor's project manager/trainer lead responsibilities include:



Position	Project Responsibilities
<p>Minimum 3 years of professional experience directing & facilitating information technology developers.</p> <p>Minimum 3 years technical experience as systems architect, technical lead or senior analyst.</p> <p>Possession of a bachelor's degree preferably in information technology, engineering or business or equivalent experience.</p> <p>Project Management Professional (PMP) certification preferred but not required.</p> <p>Minimum 2 years experience in developing and providing training and training materials</p> <p>Minimum 2 years experience in identifying training needs of potential participants.</p>	<p><u>Management Responsibilities</u></p> <ul style="list-style-type: none"> • Operational management of project • Manage the daily project activities of CONTRACTOR project team • Communicate project status as specified in the communication plan • Maintain and update project schedule • Identify issues, risks, concerns and work with State, CONTRACTOR team to identify resolutions, mitigation plans • Escalate unresolved issues, risks • Monitor changes in scope, schedule and invoke change management process as necessary • Ensure the completeness, accuracy, and integrity of deliverables whether developing or reviewing • Interacts with State Project Manager for the purpose of IT coordination (quality, standards, interfaces etc.) • Coordinate with State personnel for project processes and technology related matters. • Assist in preparing and attending meetings to discuss various issues, as well as perform analysis of these issues and develop proposed solutions • Provide information for Executive Review. • Insure all program and system documentation is complete before approvals and payments are made. <p><u>Technical Responsibilities</u></p> <ul style="list-style-type: none"> • Participate in Use Case sessions • Participate in technical review sessions with clients and technical teams • Develop test strategies and test plans • Conduct training sessions • Co-ordinate and participate in development and testing activities. <p><u>Training Responsibilities</u></p> <ul style="list-style-type: none"> • Develop training material including training plan, training presentation • Develop Support documentation including Instructor's manual, User Manual, Training Manual, Help Desk Guide, Online User Interface Guide • Ensure documents created by other CONTRACTOR project team member for quality and consistency. • Provides business process training to end users, MDE staff (for pilot and full rollout users)
<p>Senior/Expert Analyst The senior position requires three to five years experience in application development analysis and the expert position requires six to eight years of up to date current experience.</p>	<p><u>Management Responsibilities</u></p> <ul style="list-style-type: none"> • Reports to the Contractor Project Manager <p><u>Technical Responsibilities</u></p> <ul style="list-style-type: none"> • Work with technical teams towards developing technical architecture model • Design and develop API, Web Services Interfaces • Develop logical diagrams to interpret functional requirements • Develop specifications for the physical deployment of the System • Identify product components and interfaces



Position	Project Responsibilities
<p>Minimum of 3 years experience in the design, development & implementation in the proposed application language/architecture.</p> <p>Minimum of 3 to 5 years experience in directing, facilitating & issue resolution</p> <p>Minimum of 2 years experience in quality assurance</p>	<ul style="list-style-type: none"> • Identify major reuse approaches and sources • Work with interfacing application specialists in relation to application integration strategies • Communicate and get agreement in various architecture options to be followed for the project • Ensure that the technical components definition complies with the technical architecture standards • Develop a technical architecture model based on technical strategy and technical needs of the application • Conduct & participate in technical review sessions with clients and technical teams • Develop Test Strategies and Test Plans • Lead development and testing activities. • Conduct code review activities <p><u>Quality Assurance responsibilities</u></p> <ul style="list-style-type: none"> • Develop deliverables standards including document deliverables and program deliverables • Review deliverables for adherence to standards • Perform sample code reviews • Perform System Testing • Work with State on Integration Testing • Conduct Performance Testing • Support User Acceptance Testing • Work with State on Operations Testing <p><u>Training/Knowledge Transfer Responsibilities</u></p> <ul style="list-style-type: none"> • <u>Conduct Technical training/knowledge transfer sessions</u> • <u>Conduct System Administrator training sessions</u> • Develop training material for Technical training, System administrator sessions • Develop/Update Technical documentation
<p><u>DataBase Administrator</u></p> <p>Minimum 5 years of experience working with SQL and relational databases.</p> <p>Minimum 3 years experience with configuration management, including version control integrated within a software development life cycle in SQL Server.</p> <p>Minimum 2 years in scripting build processes for large application, including SQL scripting for</p>	<p><u>Database Administration Responsibilities</u></p> <ul style="list-style-type: none"> • Work with the project team to identify data requirements • Develop data modeling methodologies • Map data from different sources • Identify data elements • Develop logical and physical data models <p><u>Data Migration Responsibilities</u></p> <ul style="list-style-type: none"> • Identify data to be extracted from L2K, G-Link files and cleansed • Map L2K and G-Link data to the new system data structure • Work with State to perform data conversion • Load and configure data to new database



Position	Project Responsibilities
<p>performing database modifications/updates.</p> <p>Possession of a bachelor's degree preferably in information technology, engineering or business. A master's degree with appropriate certifications is preferred but not required.</p>	
<p><u>Enterprise Architect</u></p> <p>Experience in performing IT architectural assessments in projects similar in size and scope to this project.</p> <p>Experience proposing new system architectural designs and technical specifications in projects similar in size and scope to this project.</p> <p>Minimum 3 years experience in architectural design and systems analysis and design with a wide range of operating systems, databases and development tools.</p> <p>Minimum 3 years experience with Object Oriented design and development.</p> <p>Minimum 3 years experience with SQL Server databases.</p>	<p><u>Analyst Responsibilities</u></p> <ul style="list-style-type: none"> • Conduct Use Case sessions • Develop Use Case models • Conduct & participate in technical review sessions with clients and technical teams • Develop design deliverables • Develop technical and end user documentation Documents • Develop test strategies and test plans • Conduct training sessions • Conduct knowledge transfer sessions <p><u>Common Management Responsibilities</u></p> <ul style="list-style-type: none"> • Manage developer teams • Provide guidance and clarification to developers • Provide status reports <p><u>Quality Assurance responsibilities</u></p> <ul style="list-style-type: none"> • Develop deliverables standards including document deliverables and program deliverables • Review deliverables for adherence to standards • Perform sample code reviews • Perform System Testing • Assist User Acceptance Testing • Co-ordinate development and testing activities <p><u>Technical Architecture Specific</u></p> <ul style="list-style-type: none"> • Responsible for reviewing approved business requirements and identifying strategy for technical architecture • Work with technical teams (IT representatives) towards identifying technical architecture components

B. On Site Work Requirements

**1. Location of Work**

The work is to be performed, completed, and managed at the following locations:

**Hannah Building
608 W. Allegan
Lansing, MI 48909**

2. Hours of Operation:

- a. Normal State working hours are 8:00 a.m. to 5:00 p.m. EST, Monday through Friday. No overtime will be authorized or paid.
- b. The State will attempt to provide to the Contractor team members access to State project site facilities between the hours of 7:00 a.m. to 6:00 p.m. EST, as needed during the course of the project.
- c. The State is not obligated to provide State management of assigned work outside of normal State working hours.
- d. Contractor shall observe the same standard holidays as State employees. The State does not compensate for holiday pay.

3. Travel:

- a. No travel or expenses will be reimbursed. This includes travel costs related to training provided to the State by Contractor. All training provided by contractor will occur in Lansing, Michigan.
- b. Travel time will not be reimbursed.

4. Additional Security and Background Check Requirements:

Contractor must present certifications evidencing satisfactory Michigan State Police Background checks ICHAT and drug tests for all staff identified for assignment to this project.

In addition, proposed Contractor personnel will be required to complete and submit an RI-8 Fingerprint Card for the National Crime Information Center (NCIC) Finger Prints, if required by project.

Contractor will pay for all costs associated with ensuring their staff meets all requirements.

1.202 State Staff, Roles, and Responsibilities

The State will provide the following resources for the Contractor's use onsite for this project:

- Work space
- Minimal clerical support
- Desk
- Telephone
- PC workstation (laptops)
- Printer
- Access to copiers and fax machine
- All hardware needed to develop, test, and implement this project
- All software specified in this Contract; any further additions to software will be provided based on mutual agreement through a CCR process
- State email addresses
- Access to state network including after hours access thru Virtual Private Network (VPN), pending State approval process.

Contractor will provide laptops to contractor personnel. State will allow for contractor provided laptops to access to the State of Michigan network and State VPN network towards accessing State network resources for executing contractor responsibilities.



The State project team will consist of Executive Subject Matter Experts (SME's), project support, and a MDIT and Agency project manager:

• Executive Subject Matter Experts

The Executive Subject Matter Experts representing the business units involved will provide the vision for the business design and how the application shall provide for that vision. They shall be available on an as needed basis. The Executive SME's will be empowered to:

- Resolve project issues in a timely manner
- Review project plan, status, and issues
- Resolve deviations from project plan
- Provide acceptance sign-off
- Utilize change control procedures
- Ensure timely availability of State resources
- Make key implementation decisions, as identified by the Contractor's project manager, within 48-hours of their expected decision date.

• Name	• Agency/Division	• Title
Flora Jenkins	MDE Professional Preparation Services; Teacher/Administrator Certification	Director
Krista Ried	MDE	Agency Business Owner

• State MDIT Project Manager(s)

MDIT will provide a Project Manager(s) who will be responsible for the State's infrastructure and coordinate with the Contractor in determining the system configuration.

The State's Project Manager(s) will provide the following services:

- Provide State facilities, as needed
- Coordinate the State resources necessary for the project
- Facilitate coordination between various external contractors
- Facilitate communication between different State departments/divisions
- Provide acceptance and sign-off of deliverable/milestone
- Review and sign-off of timesheets and invoices
- Resolve project issues
- Escalate outstanding/high priority issues
- Utilize change control procedures
- Conduct regular and ongoing review of the project to confirm that it meets original objectives and requirements
- Document and archive all important project decisions
- Arrange, schedule and facilitate State staff attendance at all project meetings.

• Name	• Agency/Division	• Title
Maria Ouellette	MDIT	Project Manager
Mohamed Peeran	MDIT	Project Manager - Contracto

MDIT shall provide a Contract Administrator whose duties shall include, but not be limited to, supporting the management of the Contract.

• Name	• Agency/Division	• Title
Ann Lindberg	MDIT/Agency Services - MDE	Contract Administrator



Additional State Responsibilities

1. The State will be responsible for coordinating the availability and cooperation of all parties / vendors for the purpose of providing necessary information required for this project at appropriate times when needed during the project. The Contractor's Project Manager will develop a schedule of SME requirements during the Engagement Startup phase. This includes information pertaining to Michigan Student Data System (MSDS), Registry of Education Personnel (REP), Centralized Electronic Payment and Authorization System (CEPAS) as well as other interfacing systems
2. The State Project Manager will be responsible for distributing the Contractor's deliverables to the appropriate State personnel (including 3rd party agents if required).
3. The State Project Manager will be responsible for coordinating the review and approval activities for the deliverables submitted in accordance with the project plan.
4. The State will be responsible for providing necessary meeting room facilities for conducting project meetings including work sessions during the course of the project.
5. The State Subject Matter Experts (SME's) and technical personnel will be available, actively participate, and perform duties per the mutually agreed upon project plan for providing Contractor with information necessary for contractor to complete its scope of responsibilities in accordance with the mutually agreed upon project plan. Such project plan will be in accordance with the milestone schedule and time boxed activities stated in this contract.
6. State is responsible for coordinating the dependencies with all State agencies and 3rd parties and ensure that the dependent activities are completed in accordance with the contractor proposed schedule
7. The State MDIT Project Manager will act as a single point of contact for the purpose of coordinating the definition of requirements and associated information including those pertaining to participating agencies, other interfacing business entities and 3rd party agencies.
8. State understands the importance of delivering this project on time and within budget, and will provide the appropriate subject matter experts from MDIT, MDE, and DMB CEPI during the requirements gathering and design of the application phases. Each State resource will be available to provide contractor with business and/or technical clarifications, issue resolutions and provide business and/technical details in order for contractor to complete the deliverables and milestones in accordance with the milestone schedule specified in this contract.

1.300 Project Plan

1.301 Project Plan Management

Orientation Meeting: CONTRACTOR will attend orientation meeting in Lansing, Michigan to discuss the content and procedures of the Contract at no cost to State

Performance Review Meeting: Project performance will be reviewed during weekly status meetings and Monthly Steering committee meetings. CONTRACTOR will attend these meetings either at Lansing, MI or by teleconference at no cost to State

CONTRACTOR Project Manager will meet with State Project Manager and other designated State personnel on a weekly basis (or as per the mutually agreed frequency) to review the status of the project, review performance and address project issues. CONTRACTOR will submit status reports to State Project manager as per the mutually agreed frequency. CONTRACTOR project manager will communicate all issues requiring escalation to CONTRACTOR Delivery Executive. State will provide to CONTRACTOR team members necessary access to State facilities for the purpose of attending meeting and working on other project matters. CONTRACTOR Project Manager and State Project Manager will mutually develop a communication plan that describes the process for communication during the project.

**Project Control:**

- CONTRACTOR will execute the project under the direction and control of the MDE and MDIT.
- CONTRACTOR will leverage State's Project Management Methodology (PMM), State's Systems Engineering Methodology (MDIT SEM) defined under the State Unified Information Technology Environment (SUITE). Project teams are equipped with forms, templates and tools supported by these frameworks
- CONTRACTOR submitted a Preliminary Project Plan with their proposal. CONTRACTOR will submit an updated Project plan to the State project managers for approval within 10 working days of the Project Kickoff meeting. The plan will be progressively elaborated as the project moves through the different stages.
- Refer to the "Develop Project Plan" section above for the content to be included in the Project Plan
- CONTRACTOR will use MS Project to record and report the project schedule.

Reports: CONTRACTOR will discuss project status reporting format at the orientation meeting and once both parties agree to the format of the report, CONTRACTOR will follow that format for the duration of the contract.

In summary, CONTRACTOR will provide the following reports:

- Weekly Project Status – through weekly status reports
- Monthly Updated project plan – Updated Microsoft Project schedule
- Summary of activity during the period – Included in weekly status report
- Accomplishments – included in weekly status report
- Deliverables Status – included in weekly status report
- Schedule Status – included in weekly status report and updated project schedule file
- Action Items Status – Action Item Log
- Issues – Issues Log
- Change Control – Change Control Log
- Maintenance Activity – List of defects and issues under maintenance log

1.400 Project Management**1.401 Issue Management**

An issue is an identified event that if not addressed may affect schedule, scope, quality, or budget.

The Contractor shall maintain an issue log for issues relating to the provision of services under this Contract. The issue management log must be communicated to the State's Project Manager on an agreed upon schedule, with email notifications and updates. The issue log must be updated and must contain the following minimum elements:

- Description of issue
- Issue identification date
- Responsibility for resolving issue.
- Priority for issue resolution (to be mutually agreed upon by the State and the Contractor)
- Resources assigned responsibility for resolution
- Resolution date
- Resolution description

Issues shall be escalated for resolution from level 1 through level 3, as defined below:

Level 1 – Business leads

Level 2 – Project Managers

Level 3 – Executive Subject Matter Experts (SME's)



1.402 Risk Management

A risk is an unknown circumstance or event that, if it occurs, may have a positive or negative impact on the Contract. Risk management generally involves (1) identification of the risk, (2) assigning a level of priority based on the probability of occurrence and impact to the project, (3) definition of mitigation strategies, and (4) monitoring of risk and mitigation strategy.

To meet this requirement, the Contractor will adhere to the following risk management plan. A risk management plan format will be submitted to the State for approval within twenty (20) business days after the effective date of the contract. Once both parties have agreed to the format of the plan, it shall become the standard to follow for the duration of the contract. The plan must be updated bi-weekly, or as agreed upon. The risk management plan will be developed in accordance with the State's PMM methodology and the PMBOK® (Project Management Institute).

Develop Risk Management Plan

The Contractor Project Manager and Agency Project Manager will mutually define the risks associated with the project. This includes business as well as technical risks surrounding the project. They will assess the probability of occurrence of these risks, the severity of the impact if they occur, and prioritize them for mitigation. A preliminary mitigation plan will be defined based on the advice received from project team members. At the outset, Contractor categorizes the project risks as business and technical. It is the responsibility of the project team (Contractor and state) to proactively recognize and track these risks in a manner that best allows the project team to avoid or mitigate the risks so that the risks do not affect the goals of the project.

Risk Identification

During the engagement startup phase as well as throughout the project, the project team will identify risks that surround the project at any given point in time. These risks are grouped into Business and Technical risks. The risks are documented in a Risk Management Plan document.

Severity of Occurrence

For each risk item, the severity of occurrence of impact to the project is identified in terms of High, Medium and Low. The impact is visualized through discussions among relevant team members. Thresholds are established to qualify risks as High, Medium or Low.

Probability of Occurrence

In addition to severity of occurrence, the probability of occurrence is assessed. This is based on the current situation in the project environment as well as past experiences within the client organization and projects based on similar technologies and processes. The probability of occurrence is categorized as High, Medium and Low.

Risk Priorities

Risk priorities are determined based on the probability of occurrence and severity of impact.

Mitigation Plan

Based on the risk priority, the steps to avoid or mitigate the risks are identified. This results in a series of action items for various project team members depending on the risk. All these action items are tracked through the project plan as tasks for follow up and completion.

1.403 Change Management

Change management is defined as the process to communicate, assess, monitor, and control all changes to system resources and processes. The State also employs change management in its administration of the Contract.



If a proposed contract change is approved by the Agency, the Contract Administrator will submit a request for change to the Department of Management and Budget, Purchasing Operations Buyer, who will make recommendations to the Director of Purchasing Operations regarding ultimate approval/disapproval of change request. If the DMB Purchasing Operations Director agrees with the proposed modification, and all required approvals are obtained (including State Administrative Board), the Purchasing Operations Buyer will issue an addendum to the Contract, via a Contract Change Notice. **Contractors who provide products or services prior to the issuance of a Contract Change Notice by the DMB Purchasing Operations, risk non-payment for the out-of-scope/pricing products and/or services.**

The Contractor must employ change management procedures to handle such things as “out-of-scope” requests or changing business needs of the State while the migration is underway.

The Contractor will employ the change control methodologies to justify changes in the processing environment, and to ensure those changes will not adversely affect performance or availability.

The Contractor will employ the following change management procedures for items deemed out-of-scope. The Contractor will issue a Change Control Request (CCR) whenever the project suffers from an impact caused by a change in requirements or scope or assumptions stated in this document. Within the CCR, all changes to effort, time and resources associated with the scope change will be identified for the State. The CCR will describe the effect on effort, cost and schedule. Either the Contractor or the State can raise a CCR at any time and the state may use the CCR process as a method to identify costs associated with desired scope changes or with the underlying impact. The Contractor may assess a separate cost to the State for the development of CCR information subject to the mutual agreement between the State and the Contractor. The CCR must be approved by both the State and the Contractor before any work begins; the Contractor will not be reimbursed for any activity associated with the CCR before it has been approved by State. The State will be responsible for such additional costs incurred by the Contractor to complete such deliverables and milestones using the following hourly rates when determining costs to the State for Change Control Request's (CCR). Hourly rates are defined in US Dollars.

No.	Resource Type	Hourly Rate
I	Project management	\$125.00
	Business analysts	\$95.00
	System analysts	\$95.00
	Programmer/developers	\$75.00
	System administrators	\$95.00
	Database administrators	\$115.00
	Q/A Manager	\$95.00
	Security specialist	\$90.00
	Testers	\$75.00
	Technical writers	\$70.00
	CM specialists	\$85.00
	System Architects	\$115.00
	Network engineer/administrator	\$65.00
	Software Architects	\$115.00
	CM specialists	\$85.00
	Project assistants	\$65.00
	Web developers/Senior Programmer Analysts	\$85.00
	Application trainers	\$85.00
	Others: (List) below):	\$
	Senior Technical Architects	\$115.00 per hour



1.500 Acceptance

1.501 Criteria

The following criteria will be used by the State to determine Acceptance of the Services and Deliverables provided under this SOW.

1. All tasks listed under 1.104 Work and Deliverable are completed.
2. Each requirement defined in the Approved use cases and/or technical design documents has been reviewed and accepted by the Agency Project Manager.
3. Training for users and administrators is complete (as described in section 1.104 work and deliverables)
4. Knowledge transfer to agency staff is completed as per the project plan
5. No significant defects exist that would prohibit the successful use of any function.

Before delivering any deliverable to the state, the Contractor will first:

1. Perform all required quality assurance activities
2. Verify that the deliverable is complete and in conformance with its specifications
3. Certify that
 - a. It has performed such quality assurance activities
 - b. It has performed all applicable testing
 - c. It has corrected all defects discovered during such quality assurance activities and testing, and
 - d. The deliverable is in a suitable state of readiness for the state's review and approval.

The following criteria will be used by the State to determine acceptance of the deliverables provided under this contract. The criteria cover both the delivery and transition phases. The delivery phase includes the release of approved code into MDE software production stream. The transition phase includes Contractor providing knowledge transfer as specified in the project schedule.

- A. **Document Deliverables** - Documents include, but are not limited to plans, design documents, project schedules, user guides, and procedure manuals.
 1. Documents are dated and in electronic format, compatible with State of Michigan software in accordance with Article 1.103.
 2. Documents are reviewed and updated throughout the development process to assure requirements are delivered in the final product.
 3. Draft documents are not accepted as final deliverables.
 4. MDE and MDIT will review business documents and provide feedback within five business days from the date of submission of the deliverables for review.
 - a. Approvals will be written and signed by State MDIT Project Manager.
 - b. Unacceptable issues will be documented and submitted to the Contractor.
 - c. After issues are resolved or waived, the Contractor will resubmit documents for approval within schedule agreed to by both parties that meets the goals of the project and the overall project schedule as stipulated in this contract.
- B. **Software Deliverables** - Software includes, but is not limited to, software product developed under this statement of work.
 1. Beta software is not accepted as final deliverable.
 2. The software will be reviewed and accepted in accordance with the requirements of the contract
 3. Software is installed and configured, with assistance from MDIT, in an appropriate environment (e.g. development, conversion, QA testing, UAT testing, production, and training).
 4. Contingency plans, de- installation procedures, and software are provided by the Contractor and approved by State MDIT Project Manager.



5. Final acceptance of the software will depend on the successful completion of UAT and associated warranty period described in Section 1.104.
 6. MDE and MDIT will review test software, data, and results per schedule agreed to by both parties that meets the State approved requirement specifications and associated technical design developed by contractor for this project and the overall project schedule as stipulated by this statement of work.
 - a. Approvals will be written and signed by State MDIT Project Manager.
 - b. Unacceptable issues will be documented and submitted to the Contractor.
 - c. After issues are resolved or waived, the Contractor will resubmit test software, data and results for approval within 30 days of receipt.
 7. Software source code, where applicable, is reviewed by MDIT during knowledge transfer for readability, structure, and configuration management.
 - a. Approvals will be written and signed by State MDIT Project Manager.
 - b. Unacceptable issues will be documented and submitted to the Contractor.
 - c. After issues are resolved or waived, the Contractor will resubmit source code for approval.
- C. **Service Deliverables** - Services include, but are not limited to training and data migration.
1. The services will be accepted in accordance with the requirements of the contract.
 2. Both the MDE and MDIT will review a Request for Approval of Services within a mutually agreed upon timeframe from completion or implementation.
 - a. Approvals will be written and signed by State MDIT Project Manager.
 - b. Unacceptable issues will be documented and submitted to the Contractor.
 - c. After issues are resolved or waived, the Contractor will resubmit a Request for Approval of Services for approval within schedule agreed to by both parties that meets the goals of the project and the overall project schedule as stipulated in the statement of work.
 3. MDIT and MDE will review migrated and configured data in accordance with the timeline mutually agreed upon with the contractor .
 - a. Approvals will be written and signed by State MDIT Project Manager.
 - b. Unacceptable issues will be documented and submitted to the Contractor.
 - c. After issues are resolved or waived, the Contractor will resubmit a request for approval within 30 days of receipt.
 4. MDIT and MDE staff are properly trained and supplied with the proper documentation to support, upgrade, monitor, operate, and configure the application in accordance with the requirements of this contract.
 5. The Contractor and State will need to conduct an end-to-end testing of the system, and the Contractor will need to adequately resolve all defects identified during the scheduled testing event. A defect is defined as instance of application behavior that represents a lack of compliance with the State approved requirement specifications and associated technical design developed by contractor.
 6. All defects found as a result of the testing must be corrected. Contractor will only be responsible to resolve defects to the extent such defects are associated with the deliverable produced by the contractor under this contract. State will be responsible for all other defects. Final Acceptance will not be withheld due to defects associated with State's responsibility.

Each of the above will be formally approved by signature of the State MDIT Project Manager.

State will provide Final acceptance upon completion of all deliverables, completion of all tasks in the project plan as approved, completion of all applicable inspection and/or testing procedures, completion of all applicable staff training and knowledge transfer activities, receipt of applicable documentation.



1.600 Compensation and Payment

1.601 Compensation And Payment

State shall pay Contractor an amount not to exceed USD \$1,898,012 (One Million Eight Hundred Ninety Eight thousand, and Twelve Dollars) for the performance of all activities necessary for or incidental to the performance of work as set forth in this contract.

The Contract is a firm, fixed-priced, deliverable-based contract. Any such price reduction must in be in accordance with the mutual consent between the State and the Contractor.

Payment will be made based on an acceptance of a deliverable. Deliverables will be either physical deliverables (documents) or service deliverables and will be invoiced upon acceptance of the deliverable. The pricing for the deliverables is all-inclusive. Any expenses the Contractor expects to incur were built into the price for the deliverable. The State will not pay for travel costs. Travels costs expected were estimated as a component of the Contractor pricing and included with the Contractor's pricing submitted to the State.

The Contractor will not be paid for any additional costs attributable to corrections of any errors or omissions that have been determined by the state's Project Managers to be occasioned by the Contractor. Payments will not be made until work is accepted subject to the information contained in section 1.104 and associated assumptions agreed upon in this statement of work.

All prices/rates quoted in this contract will be firm for the duration of the Contract. No price changes will be permitted.

The Contractor has based pricing on the following information:

- The Contractor's estimations and team size have been based on the information, requirements and details provided herein. If the requirements specified in the documents and subsequent communication change, then the estimates, plans, resource levels, and/or costs may be adjusted accordingly. Any such changes will be pursuant to mutual agreement between State and the Contractor.
- Contractor's price, estimates and schedule have been determined based on State of MI, MDIT technology standards as of October 28th, 2008 and other technical parameters specifically included in this Statement of Work.
- Should delays caused by the State have an impact on the Contractor's ability to complete deliverables and milestones in accordance with the price and/or timelines stated in this contract, then the State and the Contractor will make every effort to re-structure work plans to mitigate additional costs to the Contractor by rescheduling activities, operating activities in parallel and accelerating other activities. However, if the delays result in an extension of the project past the scheduled end dates per this contract or if the delays result in additional resource costs to contractor, then the Contractor will use the Change Control Request (CCR) process as stated in section 1.403 to identify additional costs and impact to the project schedule caused by the State's delay and to request payment for those costs. The State will be responsible for such additional costs incurred by the contractor to complete such deliverables and milestones.
- Contractor assumes appropriate facilities (desk, workstation, phone, printer, software, hardware, etc.) are available, configured and operational at contract commencement. This includes development software tools, office productivity tools and other workstation software packages required for Online Teacher Certification System development, testing or project management.
- Contractor assumes that the target hosting state environment for Online Teacher Certification System complies with the State Office of Enterprise Security and Enterprise Architecture standards. Contractor's price does not include time, effort or resources required to implement additional hardware or architecture changes to the Online Teacher Certification application hosting environment mandated by OES or EA.



- Contractor assumes the State is responsible for disaster recovery plans and infrastructure necessary to restore Online Teacher Certification System operation or work-in progress, in the event of disaster or other large scale production infrastructure failure.
- Contractor agrees that the state has the right to hold back an amount equal to ten percent on each milestone invoiced that will be released upon completion of the Full Rollout Completed milestone. Holdback is not applicable to any work completed beyond the Full Rollout Completed milestone or for any work associated with Change Control Requests.

The following table provides the payment schedule.

Milestone/Deliverable Schedule	Deliverables	Estimated Completion Date (Business days from Start date of Project)	Payment Amount (USD)
Engagement Startup	<ul style="list-style-type: none"> • Project Plan • Work Breakdown Structure • Project Schedule • Risk Management Plan • Quality Plan • Communication Plan • Change Management Plan • Issue Management Plan • CEASAR criteria • Dependencies List 	5	\$100,000
Requirements Gathering and Functional Design Completed	<ul style="list-style-type: none"> • Business Requirements Document • Use Case documents • UI Prototype screens • Technical Requirements Document • Logical Data Model • Requirement Traceability Matrix 	55	\$400,000
System Design Completed	<ul style="list-style-type: none"> • System Design Document • Functional Design Document • Physical Data Model • Test Plan 	90	\$400,000
Development and Unit Test Completed	<ul style="list-style-type: none"> • Application Code components • System Integration Test Cases 	185	\$200,000
System and Integration Testing Completed	<ul style="list-style-type: none"> • Tested Application Code components • System Test Report • Training Plan 	225	\$200,000
User Acceptance Testing Completed	<ul style="list-style-type: none"> • Tested Application Code components • User Acceptance Test Report • Performance Test Report • Training Plan 	279	\$150,000
Deployment Completed	<ul style="list-style-type: none"> • Training • Training Manual • User Manual • Installation Manual • Operations Manual • Deployed Application Code • Data Migration Output 	289	\$40,000



Pilot Completed	<ul style="list-style-type: none"> Pilot Implementation Report 	333	\$30,000
Full Rollout Completed	<ul style="list-style-type: none"> Full Rollout Implementation Report 	363	\$30,000
Warranty Completed	<ul style="list-style-type: none"> Warranty Defects log with list and status of defects 	407	\$8,862
Transition , Maintenance and Support Services Completed	After conclusion of warranty period as specified in the schedule above, State will pay contractor a sum of \$19,950 for each month for 17 months. This is towards one full time equivalent resource to be assigned by Contractor onsite at State's facilities towards the above Transition and Maintenance and Support services. This amount will not be subject to any hold back.		\$339,150
Total Contract Value			\$1,898,012

Optional Maintenance

Optional Maintenance and Support Services 12 Month Period 1	If the State exercises the optional extension(s) after the initial maintenance period, the State will pay contractor on a monthly basis, a sum of \$19,950 per month for 12 months for Transition and Maintenance and Support services. This is towards one full time equivalent resource to be assigned by Contractor onsite at State's facilities towards the above Maintenance and Support services. This amount will not be subject to any hold back.; This price is based on the State extending a minimum 12 month period.		\$239,400
Optional Maintenance and Support Services 12 Month Period 2	If the State exercises the optional extension(s) after the initial maintenance period, the State will pay contractor on a monthly basis, a sum of \$19,950 per month for 12 months for Transition and Maintenance and Support services. This is towards one full time equivalent resource to be assigned by Contractor onsite at State's facilities towards the above Maintenance and Support services. This amount will not be subject to any hold back. This price is based on the State extending a minimum 12 month period		\$239,400

The Contractor will submit an invoice based on approved deliverables per the above payment schedule. The invoice will include copies of Delivery Signoff Slips pertaining to the milestone / deliverable being invoiced.

If the State terminates the contract, the State will pay the Contractor all professional fees towards time expended by Contractor until the effective date of such Termination per the following:



For the milestone in progress at the time of communication of termination, the amount payable will be determined on the basis of number of expired days in relation to the total duration for the next milestone in the invoicing schedule. Amount payable for current milestone = Fees for the milestone multiplied by (number of expired days divided by total duration for the current milestone)

All fees including hold backs if any for all completed milestones as of the date of communication of the termination will be payable to the Contractor per amounts stated in the payment schedule outlined in the table above.

- The parties agree that the Services/Deliverables to be rendered by Contractor pursuant to this Contract (and any future amendments of it) will be defined and described in detail in Statements of Work or Purchase Orders (PO) executed under this Contract. Contractor shall not be obliged or authorized to commence any work to implement a Statement of Work until authorized via a PO issued against this Contract. Contractor shall perform in accordance with this Contract, including the Statements of Work/Purchase Orders executed under it.

- **Invoicing**

Contractor will submit properly itemized invoices to the "Bill To" Address on Purchase Order. Invoices must provide and itemize, as applicable:

- Contract number;
- Purchase Order number
- Contractor name, address, phone number, and Federal Tax Identification Number;
- Description of any deliverables;
- Date(s) of delivery;
- Maintenance charges;
- Net invoice price for each item;
- Other applicable charges;
- Total invoice price; and

The State will pay maintenance and support charges on a monthly basis, in arrears. Payment of maintenance service/support of less than one (1) month's duration shall be prorated at 1/30th of the basic monthly maintenance charges for each calendar day per 2.044 (Invoicing and Payment – In General).



Article 2, Terms and Conditions

2.000 Contract Structure and Term

2.001 Contract Term

This Contract is for a period of **three** years beginning **April 20, 2009** through **April 19, 2012**. All outstanding Purchase Orders must also expire upon the termination (cancellation for any of the reasons listed in **Section 2.130**) of the Contract, unless otherwise extended under the Contract. Absent an early termination for any reason, Purchase Orders issued but not expired, by the end of the Contract's stated term, will remain in effect for the balance of the fiscal year for which they were issued.

2.002 Options to Renew

This Contract may be renewed in writing by mutual agreement of the parties not less than 30 days before its expiration. The Contract may be renewed for up to **5** additional **one**-year periods.

2.003 Legal Effect

Contractor shall show acceptance of this Contract by signing two copies of the Contract and returning them to the Contract Administrator. The Contractor shall not proceed with the performance of the work to be done under the Contract, including the purchase of necessary materials, until both parties have signed the Contract to show acceptance of its terms, and the Contractor receives a contract release/purchase order that authorizes and defines specific performance requirements.

Except as otherwise agreed in writing by the parties, the State assumes no liability for costs incurred by Contractor or payment under this Contract, until Contractor is notified in writing that this Contract (or Change Order) has been approved by the State Administrative Board (if required), approved and signed by all the parties, and a Purchase Order against the Contract has been issued.

2.004 Attachments & Exhibits

All Attachments and Exhibits affixed to any and all Statement(s) of Work, or appended to or referencing this Contract, are incorporated in their entirety and form part of this Contract.

2.005 Ordering

The State will issue a written Purchase Order, Blanket Purchase Order, Direct Voucher or Procurement Card Order, which must be approved by the Contract Administrator or the Contract Administrator's designee, to order any Services/Deliverables under this Contract. All orders are subject to the terms and conditions of this Contract. No additional terms and conditions contained on either a Purchase Order or Blanket Purchase Order apply unless they are also specifically contained in that Purchase Order or Blanket Purchase Order's accompanying Statement of Work.

2.006 Order of Precedence

The Contract, including any Statements of Work and Exhibits, to the extent not contrary to the Contract, each of which is incorporated for all purposes, constitutes the entire agreement between the parties with respect to the subject matter and supersedes all prior agreements, whether written or oral, with respect to the subject matter and as additional terms and conditions on the purchase order must apply as limited by **Section 2.005**.

In the event of any inconsistency between the terms of the Contract and a Statement of Work, the terms of the Statement of Work will take precedence (as to that Statement of Work only); provided, however, that a Statement of Work may not modify or amend the terms of the Contract, which may be modified or amended only by a formal Contract amendment.



2.007 Headings

Captions and headings used in the Contract are for information and organization purposes. Captions and headings, including inaccurate references, do not, in any way, define or limit the requirements or terms and conditions of the Contract.

2.008 Form, Function & Utility

If the Contract is for use of more than one State agency and if the Deliverable/Service does not meet the form, function, and utility required by that State agency, that agency may, subject to State purchasing policies, procure the Deliverable/Service from another source.

2.009 Reformation and Severability

Each provision of the Contract is severable from all other provisions of the Contract and, if one or more of the provisions of the Contract is declared invalid, the remaining provisions of the Contract remain in full force and effect.

2.010 Consents and Approvals

Except as expressly provided otherwise in the Contract, if either party requires the consent or approval of the other party for the taking of any action under the Contract, the consent or approval must be in writing and must not be unreasonably withheld or delayed.

2.011 No Waiver of Default

If a party fails to insist upon strict adherence to any term of the Contract then the party has not waived the right to later insist upon strict adherence to that term, or any other term, of the Contract.

2.012 Survival

Any provisions of the Contract that impose continuing obligations on the parties, including without limitation the parties' respective warranty, indemnity and confidentiality obligations, survive the expiration or termination of the Contract for any reason. Specific references to survival in the Contract are solely for identification purposes and not meant to limit or prevent the survival of any other section

2.020 Contract Administration

2.021 Issuing Office

This Contract is issued by the Department of Management and Budget, Purchasing Operations and MDIT/Michigan Department of Education (collectively, including all other relevant State of Michigan departments and agencies, the "State"). Purchasing Operations is the sole point of contact in the State with regard to all procurement and contractual matters relating to the Contract. The Purchasing Operations Contract Administrator for this Contract is:

Steve Motz
Purchasing Operations
Department of Management and Budget
Mason Bldg, 2nd Floor
PO Box 30026
Lansing, MI 48909
Email motzs@michigan.gov
Phone 517/ 241-3215

2.022 Contract Compliance Inspector

The Director of Purchasing Operations directs the person named below, or his or her designee, to monitor and coordinate the activities for the Contract on a day-to-day basis during its term. **Monitoring Contract activities does not imply the authority to change, modify, clarify, amend, or otherwise**



alter the prices, terms, conditions and specifications of the Contract. Purchasing Operations is the only State office authorized to change, modify, amend, alter or clarify the prices, specifications, terms and conditions of this Contract. The Contract Compliance Inspector for this Contract is:

Ann Lindberg
MDIT Agency Services
Cadillac Place, Suite #9-350
3032 West Grand Boulevard
Detroit, MI 48202
(313)456-3218
lindberga@michigan.gov

2.023 Project Manager

The following individual(s) will oversee the project:

Glenn Gorton
Client Services Director – DIT Agency Services MDE, CEPI
Hannah Building, 1st Floor
608 West Allegan
Lansing, MI 48933
(517) 241-2368
gortong@michigan.gov

2.024 Change Requests

The State reserves the right to request from time to time any changes to the requirements and specifications of the Contract and the work to be performed by the Contractor under the Contract. During the course of ordinary business, it may become necessary for the State to discontinue certain business practices or create Additional Services/Deliverables. At a minimum, to the extent applicable, the State would like the Contractor to provide a detailed outline of all work to be done, including tasks necessary to accomplish the Services/Deliverables, timeframes, listing of key personnel assigned, estimated hours for each individual per task, and a complete and detailed cost justification.

If the State requests or directs the Contractor to perform any Services/Deliverables that are outside the scope of the Contractor's responsibilities under the Contract ("New Work"), the Contractor must notify the State promptly, and before commencing performance of the requested activities, that it believes the requested activities are New Work. If the Contractor fails to notify the State before commencing performance of the requested activities, any such activities performed before the Contractor gives notice shall be conclusively considered to be in-scope Services/Deliverables, not New Work.

If the State requests or directs the Contractor to perform any services or provide deliverables that are consistent with and similar to the Services/Deliverables being provided by the Contractor under the Contract, but which the Contractor reasonably and in good faith believes are not included within the Statements of Work, then before performing such services or providing such deliverables, the Contractor shall notify the State in writing that it considers the services or deliverables to be an Additional Service/Deliverable for which the Contractor should receive additional compensation. If the Contractor does not so notify the State, the Contractor shall have no right to claim thereafter that it is entitled to additional compensation for performing that service or providing that deliverable. If the Contractor does so notify the State, then such a service or deliverable shall be governed by the Change Request procedure in this Section.

In the event prices or service levels are not acceptable to the State, the Additional Services or New Work shall be subject to competitive bidding based upon the specifications.



1. Change Request at State Request
If the State should require Contractor to perform New Work, Additional Services or make changes to the Services that would affect the Contract completion schedule or the amount of compensation due Contractor (a "Change"), the State shall submit a written request for Contractor to furnish a proposal for carrying out the requested Change (a "Change Request").
2. Contractor Recommendation for Change Requests:
Contractor shall be entitled to propose a Change to the State, on its own initiative, should it be of the opinion that this would benefit the Contract.
3. Upon receipt of a Change Request or on its own initiative, Contractor shall examine the implications of the requested Change on the technical specifications, Contract schedule and price of the Deliverables and Services and shall submit to the State without undue delay a written proposal for carrying out the Change. Contractor's proposal will include any associated changes in the technical specifications, Contract schedule and price and method of pricing of the Services. If the Change is to be performed on a time and materials basis, the Amendment Labor Rates shall apply to the provision of such Services. If Contractor provides a written proposal and should Contractor be of the opinion that a requested Change is not to be recommended, it shall communicate its opinion to the State but shall nevertheless carry out the Change as specified in the written proposal if the State directs it to do so.
4. By giving Contractor written notice within a reasonable time, the State must be entitled to accept a Contractor proposal for Change, to reject it, or to reach another agreement with Contractor. Should the parties agree on carrying out a Change, a written Contract Change Notice must be prepared and issued under this Contract, describing the Change and its effects on the Services and any affected components of this Contract (a "Contract Change Notice").
5. No proposed Change must be performed until the proposed Change has been specified in a duly executed Contract Change Notice issued by the Department of Management and Budget, Purchasing Operations.
6. If the State requests or directs the Contractor to perform any activities that Contractor believes constitute a Change, the Contractor must notify the State that it believes the requested activities are a Change before beginning to work on the requested activities. If the Contractor fails to notify the State before beginning to work on the requested activities, then the Contractor waives any right to assert any claim for additional compensation or time for performing the requested activities. If the Contractor commences performing work outside the scope of this Contract and then ceases performing that work, the Contractor must, at the request of the State, retract any out-of-scope work that would adversely affect the Contract.

2.025 Notices

Any notice given to a party under the Contract must be deemed effective, if addressed to the party as addressed below, upon: (i) delivery, if hand delivered; (ii) receipt of a confirmed transmission by facsimile if a copy of the notice is sent by another means specified in this Section; (iii) the third Business Day after being sent by U.S. mail, postage pre-paid, return receipt requested; or (iv) the next Business Day after being sent by a nationally recognized overnight express courier with a reliable tracking system.

State:

State of Michigan
Purchasing Operations
Attention: Douglas Collier
PO Box 30026
530 West Allegan
Lansing, Michigan 48909

Contractor:

Contractor: Systems Technology Group, Inc. (STG)
Name: Mona Aggarwal, Vice President Finance Administration
Address: 3155 W. Big Beaver Road, Suite 220, Troy, Michigan 48084-3007



Either party may change its address where notices are to be sent by giving notice according to this Section.

2.026 Binding Commitments

Representatives of Contractor must have the authority to make binding commitments on Contractor's behalf within the bounds set forth in the Contract. Contractor may change the representatives from time to time upon written notice.

2.027 Relationship of the Parties

The relationship between the State and Contractor is that of client and independent contractor. No agent, employee, or servant of Contractor or any of its Subcontractors must be or must be deemed to be an employee, agent or servant of the State for any reason. Contractor will be solely and entirely responsible for its acts and the acts of its agents, employees, servants and Subcontractors during the performance of the Contract.

2.028 Covenant of Good Faith

Each party must act reasonably and in good faith. Unless stated otherwise in the Contract, the parties will not unreasonably delay, condition or withhold the giving of any consent, decision or approval that is either requested or reasonably required of them in order for the other party to perform its responsibilities under the Contract.

2.029 Assignments

Neither party may assign the Contract, or assign or delegate any of its duties or obligations under the Contract, to any other party (whether by operation of law or otherwise), without the prior written consent of the other party; provided, however, that the State may assign the Contract to any other State agency, department, division or department without the prior consent of Contractor and Contractor may assign the Contract to an affiliate so long as the affiliate is adequately capitalized and can provide adequate assurances that the affiliate can perform the Contract. The State may withhold consent from proposed assignments, subcontracts, or novations when the transfer of responsibility would operate to decrease the State's likelihood of receiving performance on the Contract or the State's ability to recover damages.

Contractor may not, without the prior written approval of the State, assign its right to receive payments due under the Contract. If the State permits an assignment, the Contractor is not relieved of its responsibility to perform any of its contractual duties, and the requirement under the Contract that all payments must be made to one entity continues.

If the Contractor intends to assign the contract or any of the Contractor's rights or duties under the Contract, the Contractor must notify the State in writing at least 90 days before the assignment. The Contractor also must provide the State with adequate information about the assignee within a reasonable amount of time before the assignment for the State to determine whether to approve the assignment.

2.030 General Provisions

2.031 Media Releases

News releases (including promotional literature and commercial advertisements) pertaining to the RFP and Contract or project to which it relates shall not be made without prior written State approval, and then only in accordance with the explicit written instructions from the State. No results of the activities associated with the RFP and Contract are to be released without prior written approval of the State and then only to persons designated.

**2.032 Contract Distribution**

Purchasing Operations retains the sole right of Contract distribution to all State agencies and local units of government unless other arrangements are authorized by Purchasing Operations.

2.033 Permits

Contractor must obtain and pay any associated costs for all required governmental permits, licenses and approvals for the delivery, installation and performance of the Services. The State must pay for all costs and expenses incurred in obtaining and maintaining any necessary easements or right of way.

2.034 Website Incorporation

The State is not bound by any content on the Contractor's website, even if the Contractor's documentation specifically referenced that content and attempts to incorporate it into any other communication, unless the State has actual knowledge of the content and has expressly agreed to be bound by it in a writing that has been manually signed by an authorized representative of the State.

2.035 Future Bidding Preclusion

Contractor acknowledges that, to the extent this Contract involves the creation, research, investigation or generation of a future RFP; it may be precluded from bidding on the subsequent RFP. The State reserves the right to disqualify any bidder if the State determines that the bidder has used its position (whether as an incumbent Contractor, or as a Contractor hired to assist with the RFP development, or as a Vendor offering free assistance) to gain a competitive advantage on the RFP

2.036 Freedom of Information

All information in any proposal submitted to the State by Contractor and this Contract is subject to the provisions of the Michigan Freedom of Information Act, 1976 Public Act No. 442, as amended, MCL 15.231, et seq (the "FOIA").

2.037 Disaster Recovery

Contractor and the State recognize that the State provides essential services in times of natural or man-made disasters. Therefore, except as so mandated by Federal disaster response requirements, Contractor personnel dedicated to providing Services/Deliverables under this Contract will provide the State with priority service for repair and work around in the event of a natural or man-made disaster.

2.040 Financial Provisions**2.041 Fixed Prices for Services/Deliverables**

Each Statement of Work or Purchase Order issued under this Contract shall specify (or indicate by reference to the appropriate Contract Exhibit) the firm, fixed prices for all Services/Deliverables, and the associated payment milestones and payment amounts. The State may make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly, in amounts approved by the Contract Administrator, after negotiation. Contractor must show verification of measurable progress at the time of requesting progress payments.

2.042 Adjustments for Reductions in Scope of Services/Deliverables

If the scope of the Services/Deliverables under any Statement of Work issued under this Contract is subsequently reduced by the State, the parties shall negotiate an equitable reduction in Contractor's charges under such Statement of Work commensurate with the reduction in scope.

2.043 Services/Deliverables Covered

For all Services/Deliverables to be provided by Contractor (and its Subcontractors, if any) under this Contract, the State shall not be obligated to pay any amounts in addition to the charges specified in this Contract.



2.044 Invoicing and Payment – In General

- a. Each Statement of Work issued under this Contract shall list (or indicate by reference to the appropriate Contract Exhibit) the prices for all Services/Deliverables, equipment and commodities to be provided, and the associated payment milestones and payment amounts.
- b. Each Contractor invoice will show details as to charges by Service/Deliverable component and location at a level of detail reasonably necessary to satisfy the State's accounting and charge-back requirements. Invoices for Services performed on a time and materials basis will show, for each individual, the number of hours of Services performed during the billing period, the billable skill/labor category for such person and the applicable hourly billing rate. Prompt payment by the State is contingent on the Contractor's invoices showing the amount owed by the State minus any holdback amount to be retained by the State in accordance with **Section 1.064**.
- c. Correct invoices will be due and payable by the State, in accordance with the State's standard payment procedure as specified in 1984 Public Act No. 279, MCL 17.51 et seq., within 45 days after receipt, provided the State determines that the invoice was properly rendered.
- d. Contract Payment Schedule
 1. MDIT request for deliverable-based payment.

The Contractor may submit requests for payment of deliverable-based payments not more frequently than monthly, in a form and manner acceptable to the **MDIT Project Manager**. Unless otherwise authorized by the **MDIT Project Manager**, all performance-based payments in any period for which payment is being requested shall be included in a single request, appropriately itemized and totaled.
 2. Approval and payment of requests.

The Contractor shall not be entitled to payment of a request for performance-based payment prior to successful accomplishment of the event or performance criterion for which payment is requested. The Contract Administrator shall determine whether the event or performance criterion for which payment is requested has been successfully accomplished in accordance with the terms of the contract. The Contract Administrator may, at any time, require the Contractor to substantiate the successful performance of any event or performance criterion, which has been or is represented as being payable.

The approval by the Contract Administrator of a request for performance-based payment does not constitute an acceptance by the Government and does not excuse the Contractor from performance of obligations under this Contract.

2.045 Pro-ration

To the extent there are any Services that are to be paid for on a monthly basis, the cost of such Services shall be pro-rated for any partial month.

2.046 Antitrust Assignment

The Contractor assigns to the State any claim for overcharges resulting from antitrust violations to the extent that those violations concern materials or services supplied by third parties to the Contractor, toward fulfillment of this Contract.

2.047 Final Payment

The making of final payment by the State to Contractor does not constitute a waiver by either party of any rights or other claims as to the other party's continuing obligations under the Contract, nor will it constitute a waiver of any claims by one party against the other arising from unsettled claims or failure by a party to comply with this Contract, including claims for Services and Deliverables not reasonably known until after acceptance to be defective or substandard. Contractor's acceptance of final payment by the State under this Contract shall constitute a waiver of all claims by Contractor against the State for payment under this Contract, other than those claims previously filed in writing on a timely basis and still unsettled.

**2.048 Electronic Payment Requirement**

Electronic transfer of funds is required for payments on State Contracts. Contractors are required to register with the State electronically at <http://www.cpexpress.state.mi.us>. As stated in Public Act 431 of 1984, all contracts that the State enters into for the purchase of goods and services shall provide that payment will be made by electronic fund transfer (EFT).

2.050 Taxes**2.051 Employment Taxes**

Contractors are expected to collect and pay all applicable federal, state, and local employment taxes, including the taxes.

2.052 Sales and Use Taxes

Contractors are required to be registered and to remit sales and use taxes on taxable sales of tangible personal property or services delivered into the State. Contractors that lack sufficient presence in Michigan to be required to register and pay tax must do so as a volunteer. This requirement extends to: (1) all members of any controlled group as defined in § 1563(a) of the Internal Revenue Code and applicable regulations of which the company is a member, and (2) all organizations under common control as defined in § 414(c) of the Internal Revenue Code and applicable regulations of which the company is a member that make sales at retail for delivery into the State are registered with the State for the collection and remittance of sales and use taxes. In applying treasury regulations defining “two or more trades or businesses under common control” the term “organization” means sole proprietorship, a partnership (as defined in § 701(a) (2) of the Internal Revenue Code), a trust, an estate, a corporation, or a limited liability company.

2.060 Contract Management**2.061 Contractor Personnel Qualifications**

All persons assigned by Contractor to the performance of Services under this Contract must be employees of Contractor or its majority-owned (directly or indirectly, at any tier) subsidiaries (or a State-approved Subcontractor) and must be fully qualified to perform the work assigned to them. Contractor must include a similar provision in any subcontract entered into with a Subcontractor. For the purposes of this Contract, independent contractors engaged by Contractor solely in a staff augmentation role must be treated by the State as if they were employees of Contractor for this Contract only; however, the State understands that the relationship between Contractor and Subcontractor is an independent contractor relationship.

2.062 Contractor Key Personnel

- a. The Contractor must provide the Contract Compliance Inspector with the names of the Key Personnel.
- b. Key Personnel must be dedicated as defined in the Statement of Work to the Project for its duration in the applicable Statement of Work with respect to other individuals designated as Key Personnel for that Statement of Work.
- c. The State will have the right to recommend and approve in writing the initial assignment, as well as any proposed reassignment or replacement, of any Key Personnel. Before assigning an individual to any Key Personnel position, Contractor will notify the State of the proposed assignment, will introduce the individual to the appropriate State representatives, and will provide the State with a resume and any other information about the individual reasonably requested by the State. The State reserves the right to interview the individual before granting written approval. In the event the State finds a proposed individual unacceptable, the State will provide a written explanation including reasonable detail outlining the reasons for the rejection.
- d. Contractor must not remove any Key Personnel from their assigned roles or the Contract without the prior written consent of the State. The Contractor’s removal of Key Personnel without the prior written consent of the State is an unauthorized removal (“Unauthorized Removal”). Unauthorized



Removals does not include replacing Key Personnel for reasons beyond the reasonable control of Contractor, including illness, disability, leave of absence, personal emergency circumstances, resignation or for cause termination of the Key Personnel's employment. Unauthorized Removals does not include replacing Key Personnel because of promotions or other job movements allowed by Contractor personnel policies or Collective Bargaining Agreement(s) as long as the State receives prior written notice before shadowing occurs and Contractor provides 30 days of shadowing unless parties agree to a different time period. The Contractor with the State must review any Key Personnel replacements, and appropriate transition planning will be established. Any Unauthorized Removal may be considered by the State to be a material breach of the Contract, in respect of which the State may elect to exercise its termination and cancellation rights.

- e. The Contractor must notify the Contract Compliance Inspector and the Contract Administrator at least 10 business days before redeploying non-Key Personnel, who are dedicated to primarily to the Project, to other projects. If the State does not object to the redeployment by its scheduled date, the Contractor may then redeploy the non-Key Personnel.

Section 2.062 Contractor Key Personnel is not applicable to this contract.

2.063 Re-assignment of Personnel at the State's Request

The State reserves the right to require the removal from the Project of Contractor personnel found, in the judgment of the State, to be unacceptable. The State's request must be written with reasonable detail outlining the reasons for the removal request. Additionally, the State's request must be based on legitimate, good faith reasons. Replacement personnel for the removed person must be fully qualified for the position. If the State exercises this right, and the Contractor cannot immediately replace the removed personnel, the State agrees to an equitable adjustment in schedule or other terms that may be affected by the State's required removal. If any incident with removed personnel results in delay not reasonably anticipatable under the circumstances and which is attributable to the State, the applicable SLAs for the affected Service will not be counted for a time as agreed to by the parties.

2.064 Contractor Personnel Location

All staff assigned by Contractor to work on the Contract will perform their duties either primarily at Contractor's offices and facilities or at State facilities. Without limiting the generality of the foregoing, Key Personnel will, at a minimum, spend at least the amount of time on-site at State facilities as indicated in the applicable Statement of Work. Subject to availability, selected Contractor personnel may be assigned office space to be shared with State personnel.

2.065 Contractor Identification

Contractor employees must be clearly identifiable while on State property by wearing a State-issued badge, as required. Contractor employees are required to clearly identify themselves and the company they work for whenever making contact with State personnel by telephone or other means.

2.066 Cooperation with Third Parties

Contractor agrees to cause its personnel and the personnel of any Subcontractors to cooperate with the State and its agents and other contractors including the State's Quality Assurance personnel. As reasonably requested by the State in writing, the Contractor will provide to the State's agents and other contractors reasonable access to Contractor's Project personnel, systems and facilities to the extent the access relates to activities specifically associated with this Contract and will not interfere or jeopardize the safety or operation of the systems or facilities. The State acknowledges that Contractor's time schedule for the Contract is very specific and agrees not to unnecessarily or unreasonably interfere with, delay or otherwise impeded Contractor's performance under this Contract with the requests for access.

2.067 Contract Management Responsibilities

Contractor shall be responsible for all acts and omissions of its employees, as well as the acts and omissions of any other personnel furnished by Contractor to perform the Services. Contractor shall



have overall responsibility for managing and successfully performing and completing the Services/Deliverables, subject to the overall direction and supervision of the State and with the participation and support of the State as specified in this Contract. Contractor's duties will include monitoring and reporting the State's performance of its participation and support responsibilities (as well as Contractor's own responsibilities) and providing timely notice to the State in Contractor's reasonable opinion if the State's failure to perform its responsibilities in accordance with the Project Plan is likely to delay the timely achievement of any Contract tasks.

The Contractor will provide the Services/Deliverables directly or through its affiliates, subsidiaries, subcontractors or resellers. Regardless of the entity providing the Service/Deliverable, the Contractor will act as a single point of contact coordinating these entities to meet the State's need for Services/Deliverables. Nothing in this Contract, however, shall be construed to authorize or require any party to violate any applicable law or regulation in its performance of this Contract.

2.068 Contractor Return of State Equipment/Resources

The Contractor must return to the State any State-furnished equipment, facilities and other resources when no longer required for the Contract in the same condition as when provided by the State, reasonable wear and tear excepted.

2.070 Subcontracting by Contractor

2.071 Contractor full Responsibility

Contractor shall have full responsibility for the successful performance and completion of all of the Services and Deliverables. The State will consider Contractor to be the sole point of contact with regard to all contractual matters under this Contract, including payment of any and all charges for Services and Deliverables.

2.072 State Consent to delegation

Contractor shall not delegate any duties under this Contract to a Subcontractor unless the Department of Management and Budget, Purchasing Operations has given written consent to such delegation. The State shall have the right of prior written approval of all Subcontractors and to require Contractor to replace any Subcontractors found, in the reasonable judgment of the State, to be unacceptable. The State's request shall be written with reasonable detail outlining the reasons for the removal request. Additionally, the State's request shall be based on legitimate, good faith reasons. Replacement Subcontractor(s) for the removed Subcontractor shall be fully qualified for the position. If the State exercises this right, and the Contractor cannot immediately replace the removed Subcontractor, the State will agree to an equitable adjustment in schedule or other terms that may be affected by the State's required removal. If any such incident with a removed Subcontractor results in delay not reasonable anticipatable under the circumstances and which is attributable to the State, the applicable SLA for the affected Work will not be counted for a time agreed upon by the parties.

2.073 Subcontractor bound to Contract

In any subcontracts entered into by Contractor for the performance of the Services, Contractor shall require the Subcontractor, to the extent of the Services to be performed by the Subcontractor, to be bound to Contractor by the terms of this Contract and to assume toward Contractor all of the obligations and responsibilities that Contractor, by this Contract, assumes toward the State. The State reserves the right to receive copies of and review all subcontracts, although Contractor may delete or mask any proprietary information, including pricing, contained in such contracts before providing them to the State. The management of any Subcontractor will be the responsibility of Contractor, and Contractor shall remain responsible for the performance of its Subcontractors to the same extent as if Contractor had not subcontracted such performance. Contractor shall make all payments to Subcontractors or suppliers of Contractor. Except as otherwise agreed in writing by the State and Contractor, the State will not be obligated to direct payments for the Services other than to Contractor. The State's written approval of any Subcontractor engaged by Contractor to perform any obligation under this Contract



shall not relieve Contractor of any obligations or performance required under this Contract. A list of the Subcontractors, if any, approved by the State as of the execution of this Contract, together with a copy of the applicable subcontract is attached.

2.074 Flow Down

Except where specifically approved in writing by the State on a case-by-case basis, Contractor shall flow down the obligations in **Sections 2.031, 2.060, 2.100, 2.110, 2.120, 2.130, and 2.200** in all of its agreements with any Subcontractors.

2.075 Competitive Selection

The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the Contract.

2.080 State Responsibilities

2.081 Equipment

The State will provide only the equipment and resources identified in the Statements of Work and other Contract Exhibits.

2.082 Facilities

The State must designate space as long as it is available and as provided in the Statement of Work, to house the Contractor's personnel whom the parties agree will perform the Services/Deliverables at State facilities (collectively, the "State Facilities"). The Contractor must have reasonable access to, and unless agreed otherwise by the parties in writing must observe and comply with all rules and regulations relating to each of the State Facilities (including hours of operation) used by the Contractor in the course of providing the Services. Contractor agrees that it will not, without the prior written consent of the State, use any State Facilities or access any State information systems provided for the Contractor's use, or to which the Contractor otherwise gains access in the course of performing the Services, for any purpose other than providing the Services to the State.

2.090 Security

2.091 Background Checks

On a case-by-case basis, the State may investigate the Contractor's personnel before they may have access to State facilities and systems. The scope of the background check is at the discretion of the State and the results will be used to determine Contractor personnel eligibility for working within State facilities and systems. The investigations will include Michigan State Police Background checks (ICHAT) and may include the National Crime Information Center (NCIC) Finger Prints. Proposed Contractor personnel may be required to complete and submit an RI-8 Fingerprint Card for the NCIC Finger Print Check. Any request for background checks will be initiated by the State and will be reasonably related to the type of work requested.

All Contractor personnel will also be expected to comply with the State's security and acceptable use policies for State IT equipment and resources. See <http://www.michigan.gov/dit>. Furthermore, Contractor personnel will be expected to agree to the State's security and acceptable use policies before the Contractor personnel will be accepted as a resource to perform work for the State. It is expected the Contractor will present these documents to the prospective employee before the Contractor presents the individual to the State as a proposed resource. Contractor staff will be expected to comply with all Physical Security procedures in place within the facilities where they are working.



2.092 Security Breach Notification

If the Contractor breaches this Section, the Contractor must (i) promptly cure any deficiencies and (ii) comply with any applicable federal and state laws and regulations pertaining to unauthorized disclosures. Contractor and the State will cooperate to mitigate, to the extent practicable, the effects of any breach, intrusion, or unauthorized use or disclosure. Contractor must report to the State in writing any use or disclosure of Confidential Information, whether suspected or actual, other than as provided for by the Contract within 10 days of becoming aware of the use or disclosure or the shorter time period as is reasonable under the circumstances.

2.093 PCI DATA Security Requirements

Contractors with access to credit/debit card cardholder data must adhere to the Payment Card Industry (PCI) Data Security requirements. Contractor agrees that they are responsible for security of cardholder data in their possession. Contractor agrees that data can ONLY be used for assisting the State in completing a transaction, supporting a loyalty program, supporting the State, providing fraud control services, or for other uses specifically required by law.

Contractor agrees to provide business continuity in the event of a major disruption, disaster or failure.

The Contractor will contact the Department of Management and Budget, Financial Services immediately to advise them of any breaches in security where card data has been compromised. In the event of a security intrusion, the Contractor agrees the Payment Card Industry representative, or a Payment Card Industry approved third party, will be provided with full cooperation and access to conduct a thorough security review. The review will validate compliance with the Payment Card Industry Data Security Standard for protecting cardholder data.

Contractor agrees to properly dispose sensitive cardholder data when no longer needed. The Contractor will continue to treat cardholder data as confidential upon contract termination.

The Contractor will provide the Department of Management and Budget, Financial Services documentation showing PCI Data Security certification has been achieved. The Contractor will advise the Department of Management and Budget, Financial Services of all failures to comply with the PCI Data Security Requirements. Failures include, but are not limited to system scans and self-assessment questionnaires. The Contractor will provide a time line for corrective action.

2.100 Confidentiality

2.101 Confidentiality

Contractor and the State each acknowledge that the other possesses and will continue to possess confidential information that has been developed or received by it. As used in this Section, "Confidential Information" of Contractor must mean all non-public proprietary information of Contractor (other than Confidential Information of the State as defined below), which is marked confidential, restricted, proprietary, or with a similar designation. "Confidential Information" of the State must mean any information which is retained in confidence by the State (or otherwise required to be held in confidence by the State under applicable federal, state and local laws and regulations) or which, in the case of tangible materials provided to Contractor by the State under its performance under this Contract, is marked as confidential, proprietary or with a similar designation by the State. "Confidential Information" excludes any information (including this Contract) that is publicly available under the Michigan FOIA.

2.102 Protection and Destruction of Confidential Information

The State and Contractor will each use at least the same degree of care to prevent disclosing to third parties the Confidential Information of the other as it employs to avoid unauthorized disclosure, publication or dissemination of its own confidential information of like character, but in no event less than reasonable care. Neither Contractor nor the State will (i) make any use of the Confidential



Information of the other except as contemplated by this Contract, (ii) acquire any right in or assert any lien against the Confidential Information of the other, or (iii) if requested to do so, refuse for any reason to promptly return the other party's Confidential Information to the other party. Each party will limit disclosure of the other party's Confidential Information to employees and Subcontractors who must have access to fulfill the purposes of this Contract. Disclosure to, and use by, a Subcontractor is permissible where (A) use of a Subcontractor is authorized under this Contract, (B) the disclosure is necessary or otherwise naturally occurs in connection with work that is within the Subcontractor's scope of responsibility, and (C) Contractor obligates the Subcontractor in a written Contract to maintain the State's Confidential Information in confidence. At the State's request, any employee of Contractor and of any Subcontractor having access or continued access to the State's Confidential Information may be required to execute an acknowledgment that the employee has been advised of Contractor's and the Subcontractor's obligations under this Section and of the employee's obligation to Contractor or Subcontractor, as the case may be, to protect the Confidential Information from unauthorized use or disclosure.

Promptly upon termination or cancellation of the Contract for any reason, Contractor must certify to the State that Contractor has destroyed all State Confidential Information.

2.103 Exclusions

Notwithstanding the foregoing, the provisions in this Section will not apply to any particular information which the State or Contractor can demonstrate (i) was, at the time of disclosure to it, in the public domain; (ii) after disclosure to it, is published or otherwise becomes part of the public domain through no fault of the receiving party; (iii) was in the possession of the receiving party at the time of disclosure to it without an obligation of confidentiality; (iv) was received after disclosure to it from a third party who had a lawful right to disclose the information to it without any obligation to restrict its further disclosure; or (v) was independently developed by the receiving party without reference to Confidential Information of the furnishing party. Further, the provisions of this Section will not apply to any particular Confidential Information to the extent the receiving party is required by law to disclose the Confidential Information, provided that the receiving party (i) promptly provides the furnishing party with notice of the legal request, and (ii) assists the furnishing party in resisting or limiting the scope of the disclosure as reasonably requested by the furnishing party.

2.104 No Implied Rights

Nothing contained in this Section must be construed as obligating a party to disclose any particular Confidential Information to the other party, or as granting to or conferring on a party, expressly or impliedly, any right or license to the Confidential Information of the other party.

2.105 Respective Obligations

The parties' respective obligations under this Section must survive the termination or expiration of this Contract for any reason.

2.110 Records and Inspections

2.111 Inspection of Work Performed

The State's authorized representatives must at all reasonable times and with 10 days prior written request, have the right to enter Contractor's premises, or any other places, where the Services are being performed, and must have access, upon reasonable request, to interim drafts of Deliverables or work-in-progress. Upon 10 Days prior written notice and at all reasonable times, the State's representatives must be allowed to inspect, monitor, or otherwise evaluate the work being performed and to the extent that the access will not reasonably interfere or jeopardize the safety or operation of the systems or facilities. Contractor must provide all reasonable facilities and assistance for the State's representatives.



2.112 Examination of Records

For seven years after the Contractor provides any work under this Contract (the "Audit Period"), the State may examine and copy any of Contractor's books, records, documents and papers pertinent to establishing Contractor's compliance with the Contract and with applicable laws and rules. The State must notify the Contractor 20 days before examining the Contractor's books and records. The State does not have the right to review any information deemed confidential by the Contractor to the extent access would require the confidential information to become publicly available. This provision also applies to the books, records, accounts, documents and papers, in print or electronic form, of any parent, affiliated or subsidiary organization of Contractor, or any Subcontractor of Contractor performing services in connection with the Contract.

2.113 Retention of Records

Contractor must maintain at least until the end of the Audit Period all pertinent financial and accounting records (including time sheets and payroll records, and information pertaining to the Contract and to the Services, equipment, and commodities provided under the Contract) pertaining to the Contract according to generally accepted accounting principles and other procedures specified in this Section. Financial and accounting records must be made available, upon request, to the State at any time during the Audit Period. If an audit, litigation, or other action involving Contractor's records is initiated before the end of the Audit Period, the records must be retained until all issues arising out of the audit, litigation, or other action are resolved or until the end of the Audit Period, whichever is later.

2.114 Audit Resolution

If necessary, the Contractor and the State will meet to review each audit report promptly after issuance. The Contractor will respond to each audit report in writing within 30 days from receipt of the report, unless a shorter response time is specified in the report. The Contractor and the State must develop, agree upon and monitor an action plan to promptly address and resolve any deficiencies, concerns, and/or recommendations in the audit report.

2.115 Errors

If the audit demonstrates any errors in the documents provided to the State, then the amount in error must be reflected as a credit or debit on the next invoice and in subsequent invoices until the amount is paid or refunded in full. However, a credit or debit may not be carried for more than four invoices. If a balance remains after four invoices, then the remaining amount will be due as a payment or refund within 45 days of the last quarterly invoice that the balance appeared on or termination of the contract, whichever is earlier.

In addition to other available remedies, the difference between the payment received and the correct payment amount is greater than 10%, then the Contractor must pay all of the reasonable costs of the audit.

2.120 Warranties

2.121 Warranties and Representations

The Contractor represents and warrants:

- a. It is capable in all respects of fulfilling and must fulfill all of its obligations under this Contract. The performance of all obligations under this Contract must be provided in a timely, professional, and workman-like manner and must meet the performance and operational standards required under this Contract.
- b. The Contract Appendices, Attachments and Exhibits identify the equipment and software and services necessary for the Deliverable(s) to perform and Services to operate in compliance with the Contract's requirements and other standards of performance.
- c. It is the lawful owner or licensee of any Deliverable licensed or sold to the State by Contractor or developed by Contractor under this Contract, and Contractor has all of the rights necessary to



convey to the State the ownership rights or licensed use, as applicable, of any and all Deliverables. None of the Deliverables provided by Contractor to the State under neither this Contract, nor their use by the State will infringe the patent, copyright, trade secret, or other proprietary rights of any third party.

- d. If, under this Contract, Contractor procures any equipment, software or other Deliverable for the State (including equipment, software and other Deliverables manufactured, re-marketed or otherwise sold by Contractor under Contractor's name), then in addition to Contractor's other responsibilities with respect to the items in this Contract, Contractor must assign or otherwise transfer to the State or its designees, or afford the State the benefits of, any manufacturer's warranty for the Deliverable.
- e. The contract signatory has the power and authority, including any necessary corporate authorizations, necessary to enter into this Contract, on behalf of Contractor.
- f. It is qualified and registered to transact business in all locations where required.
- g. Neither the Contractor nor any Affiliates, nor any employee of either, has, must have, or must acquire, any contractual, financial, business, or other interest, direct or indirect, that would conflict in any manner or degree with Contractor's performance of its duties and responsibilities to the State under this Contract or otherwise create an appearance of impropriety with respect to the award or performance of this Agreement. Contractor must notify the State about the nature of the conflict or appearance of impropriety within two days of learning about it.
- h. Neither Contractor nor any Affiliates, nor any employee of either has accepted or must accept anything of value based on an understanding that the actions of the Contractor or Affiliates or employee on behalf of the State would be influenced. Contractor must not attempt to influence any State employee by the direct or indirect offer of anything of value.
- i. Neither Contractor nor any Affiliates, nor any employee of either has paid or agreed to pay any person, other than bona fide employees and consultants working solely for Contractor or the Affiliate, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this Contract.
- j. The prices proposed by Contractor were arrived at independently, without consultation, communication, or agreement with any other bidder for the purpose of restricting competition; the prices quoted were not knowingly disclosed by Contractor to any other bidder; and no attempt was made by Contractor to induce any other person to submit or not submit a proposal for the purpose of restricting competition.
- k. All financial statements, reports, and other information furnished by Contractor to the State as part of its response to the RFP or otherwise in connection with the award of this Contract fairly and accurately represent the business, properties, financial condition, and results of operations of Contractor as of the respective dates, or for the respective periods, covered by the financial statements, reports, other information. Since the respective dates or periods covered by the financial statements, reports, or other information, there have been no material adverse changes in the business, properties, financial condition, or results of operations of Contractor.
- l. All written information furnished to the State by or for the Contractor in connection with this Contract, including its bid, is true, accurate, and complete, and contains no untrue statement of material fact or omits any material fact necessary to make the information not misleading.
- m. It is not in material default or breach of any other contract or agreement that it may have with the State or any of its departments, commissions, boards, or agencies. Contractor further represents and warrants that it has not been a party to any contract with the State or any of its departments that was terminated by the State or the department within the previous five years for the reason that Contractor failed to perform or otherwise breached an obligation of the contract.
- n. If any of the certifications, representations, or disclosures made in the Contractor's original bid response change after contract award, the Contractor is required to report those changes immediately to the Department of Management and Budget, Purchasing Operations.

This section is limited to the extent of items listed in section 1.101 (In Scope) and section 1.104 Work and Deliverables and associated assumptions stated in this statement of work.

**2.122 Warranty of Merchantability**

Goods provided by Contractor under this agreement shall be merchantable. All goods provided under this Contract shall be of good quality within the description given by the State, shall be fit for their ordinary purpose, shall be adequately contained and packaged within the description given by the State, shall conform to the agreed upon specifications, and shall conform to the affirmations of fact made by the Contractor or on the container or label.

2.123 Warranty of Fitness for a Particular Purpose

When the Contractor has reason to know or knows any particular purpose for which the goods are required, and the State is relying on the Contractor's skill or judgment to select or furnish suitable goods, there is a warranty that the goods are fit for such purpose.

2.124 Warranty of Title

Contractor shall, in providing goods to the State, convey good title in those goods, whose transfer is right and lawful. All goods provided by Contractor shall be delivered free from any security interest, lien, or encumbrance of which the State, at the time of contracting, has no knowledge. Goods provided by Contractor, under this Contract, shall be delivered free of any rightful claim of any third person by of infringement or the like.

2.125 Equipment Warranty– Currently “Out of Scope” for this Contract

To the extent Contractor is responsible under this Contract for maintaining equipment/system(s), Contractor represents and warrants that it will maintain the equipment/system(s) in good operating condition and will undertake all repairs and preventive maintenance according to the applicable manufacturer's recommendations for the period specified in this Contract.

The Contractor represents and warrants that the equipment/system(s) are in good operating condition and operates and performs to the requirements and other standards of performance contained in this Contract, when installed, at the time of Final Acceptance by the State, and for a period of (1) one year commencing upon the first day following Final Acceptance.

Within 5 business days of notification from the State, the Contractor must adjust, repair or replace all equipment that is defective or not performing in compliance with the Contract. The Contractor must assume all costs for replacing parts or units and their installation including transportation and delivery fees, if any.

The Contractor must provide a toll-free telephone number to allow the State to report equipment failures and problems to be remedied by the Contractor.

The Contractor agrees that all warranty service it provides under this Contract must be performed by Original Equipment Manufacturer (OEM) trained, certified and authorized technicians.

The Contractor is the sole point of contact for warranty service. The Contractor warrants that it will pass through to the State any warranties obtained or available from the original equipment manufacturer, including any replacement, upgraded, or additional equipment warranties.

Section 2.125 is not applicable to this contract.

2.126 Equipment to be New – Currently “Out of Scope” for this Contract

If applicable, all equipment provided under this Contract by Contractor shall be new where Contractor has knowledge regarding whether the equipment is new or assembled from new or serviceable used parts that are like new in performance or has the option of selecting one or the other. Equipment that is assembled from new or serviceable used parts that are like new in performance is acceptable where Contractor does not have knowledge or the ability to select one or other, unless specifically agreed otherwise in writing by the State.



Section 2.126 is not applicable to this contract.

2.127 Prohibited Products – Currently “Out of Scope” for this Contract

The State will not accept salvage, distressed, outdated or discontinued merchandise. Shipping of such merchandise to any State agency, as a result of an order placed against the Contract, shall be considered default by the Contractor of the terms and conditions of the Contract and may result in cancellation of the Contract by the State. The brand and product number offered for all items shall remain consistent for the term of the Contract, unless Purchasing Operations has approved a change order pursuant to **Section 2.024**.

2.128 Consequences for Breach

In addition to any remedies available in law, if the Contractor breaches any of the warranties contained in this section, the breach may be considered as a default in the performance of a material obligation of this Contract.

2.130 Insurance

2.131 Liability Insurance

The Contractor must provide proof of the minimum levels of insurance coverage as indicated below. The insurance must protect the State from claims that may arise out of or result from the Contractor’s performance of services under the terms of this Contract, whether the services are performed by the Contractor, or by any subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.

The Contractor waives all rights against the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents for recovery of damages to the extent these damages are covered by the insurance policies the Contractor is required to maintain under this Contract.

All insurance coverage provided relative to this Contract/Purchase Order is PRIMARY and NON-CONTRIBUTING to any comparable liability insurance (including self-insurances) carried by the State.

The insurance must be written for not less than any minimum coverage specified in this Contract or required by law, whichever is greater.

The insurers selected by Contractor must have an A.M. Best rating of A or better, or as otherwise approved in writing by the State, or if the ratings are no longer available, with a comparable rating from a recognized insurance rating agency. All policies of insurance required in this Contract must be issued by companies that have been approved to do business in the State.

See www.michigan.gov/dleg.

Where specific limits are shown, they are the minimum acceptable limits. If Contractor’s policy contains higher limits, the State must be entitled to coverage to the extent of the higher limits.

The Contractor is required to pay for and provide the type and amount of insurance checked below:

- 1. Commercial General Liability with the following minimum coverage:
 - \$2,000,000 General Aggregate Limit other than Products/Completed Operations
 - \$2,000,000 Products/Completed Operations Aggregate Limit
 - \$1,000,000 Personal & Advertising Injury Limit
 - \$1,000,000 Each Occurrence Limit



The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents as ADDITIONAL INSUREDS on the Commercial General Liability certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

- 2. If a motor vehicle is used to provide services or products under this Contract, the Contractor must have vehicle liability insurance on any auto including owned, hired and non-owned vehicles used in Contractor's business for bodily injury and property damage as required by law.

The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents as ADDITIONAL INSUREDS on the vehicle liability certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

- 3. Workers' compensation coverage must be provided according to applicable laws governing the employees and employers work activities in the state of the Contractor's domicile. If a self-insurer provides the applicable coverage, proof must be provided of approved self-insured authority by the jurisdiction of domicile. For employees working outside of the state of qualification, Contractor must provide appropriate certificates of insurance proving mandated coverage levels for the jurisdictions where the employees' activities occur.

Any certificates of insurance received must also provide a list of states where the coverage is applicable.

The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company. This provision must not be applicable where prohibited or limited by the laws of the jurisdiction in which the work is to be performed.

- 4. Employers liability insurance with the following minimum limits:
 \$100,000 each accident
 \$100,000 each employee by disease
 \$500,000 aggregate disease
- 5. Employee Fidelity, including Computer Crimes, insurance naming the State as a loss payee, providing coverage for direct loss to the State and any legal liability of the State arising out of or related to fraudulent or dishonest acts committed by the employees of Contractor or its Subcontractors, acting alone or in collusion with others, in a minimum amount of one million dollars (\$1,000,000.00) with a maximum deductible of fifty thousand dollars (\$50,000.00).
- 6. Umbrella or Excess Liability Insurance in a minimum amount of ten million dollars (\$10,000,000.00), which must apply, at a minimum, to the insurance required in Subsection 1 (Commercial General Liability) above.
- 7. Professional Liability (Errors and Omissions) Insurance with the following minimum coverage: three million dollars (\$3,000,000.00) each occurrence and three million dollars (\$3,000,000.00) annual aggregate.
- 8. Fire and Personal Property Insurance covering against any loss or damage to the office space used by Contractor for any reason under this Contract, and the equipment, software and other contents of the office space, including without limitation, those contents used by Contractor to provide the Services to the State, up to its replacement value, where the office space and its contents are under the care, custody and control of Contractor. The policy must cover all risks of direct physical loss or damage, including without limitation, flood and earthquake coverage and coverage for computer hardware and software. The State must be endorsed on the policy as a loss payee as its interests appear.



2.132 Subcontractor Insurance Coverage

Except where the State has approved in writing a Contractor subcontract with other insurance provisions, Contractor must require all of its Subcontractors under this Contract to purchase and maintain the insurance coverage as described in this Section for the Contractor in connection with the performance of work by those Subcontractors. Alternatively, Contractor may include any Subcontractors under Contractor's insurance on the coverage required in this Section. Subcontractor(s) must fully comply with the insurance coverage required in this Section. Failure of Subcontractor(s) to comply with insurance requirements does not limit Contractor's liability or responsibility.

2.133 Certificates of Insurance and Other Requirements

Contractor must furnish to DMB Purchasing Operations, certificate(s) of insurance verifying insurance coverage or providing satisfactory evidence of self-insurance as required in this Section (the "Certificates"). The Certificate must be on the standard "accord" form or equivalent. **The Contract Number or the Purchase Order Number must be shown on the Certificate Of Insurance To Assure Correct Filing.** All Certificate(s) are to be prepared and submitted by the Insurance Provider. All Certificate(s) must contain a provision indicating that coverage afforded under the policies WILL NOT BE CANCELLED, MATERIALLY CHANGED, OR NOT RENEWED without 30 days prior written notice, except for 10 days for non-payment of premium, having been given to the Director of Purchasing Operations, Department of Management and Budget. The notice must include the Contract or Purchase Order number affected. Before the Contract is signed, and not less than 20 days before the insurance expiration date every year thereafter, the Contractor must provide evidence that the State and its agents, officers and employees are listed as additional insured under each commercial general liability and commercial automobile liability policy. In the event the State approves the representation of the State by the insurer's attorney, the attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.

The Contractor must maintain all required insurance coverage throughout the term of the Contract and any extensions and, in the case of claims-made Commercial General Liability policies, must secure tail coverage for at least three years following the expiration or termination for any reason of this Contract. The minimum limits of coverage specified above are not intended, and must not be construed; to limit any liability or indemnity of Contractor under this Contract to any indemnified party or other persons. Contractor is responsible for all deductibles with regard to the insurance. If the Contractor fails to pay any premium for required insurance as specified in this Contract, or if any insurer cancels or significantly reduces any required insurance as specified in this Contract without the State's written consent, then the State may, after the State has given the Contractor at least 30 days written notice, pay the premium or procure similar insurance coverage from another company or companies. The State may deduct any part of the cost from any payment due the Contractor, or the Contractor must pay that cost upon demand by the State.

2.140 Indemnification

2.141 General Indemnification

To the extent permitted by law, the Contractor must indemnify, defend and hold harmless the State from liability, including all claims and losses, and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties), accruing or resulting to any person, firm or corporation that may be injured or damaged by the Contractor in the performance of this Contract and that are attributable to the negligence or tortious acts of the Contractor or any of its subcontractors, or by anyone else for whose acts any of them may be liable.

2.142 Code Indemnification

To the extent permitted by law, the Contractor shall indemnify, defend and hold harmless the State from any claim, loss, or expense arising from Contractor's breach of the No Surreptitious Code Warranty.



2.143 Employee Indemnification

In any claims against the State of Michigan, its departments, divisions, agencies, sections, commissions, officers, employees and agents, by any employee of the Contractor or any of its subcontractors, the indemnification obligation under the Contract must not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the Contractor or any of its subcontractors under worker's disability compensation acts, disability benefit acts or other employee benefit acts. This indemnification clause is intended to be comprehensive. Any overlap in provisions, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other provisions.

2.144 Patent/Copyright Infringement Indemnification

To the extent permitted by law, the Contractor must indemnify, defend and hold harmless the State from and against all losses, liabilities, damages (including taxes), and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties) incurred in connection with any action or proceeding threatened or brought against the State to the extent that the action or proceeding is based on a claim that any piece of equipment, software, commodity or service supplied by the Contractor or its subcontractors, or the operation of the equipment, software, commodity or service, or the use or reproduction of any documentation provided with the equipment, software, commodity or service infringes any United States patent, copyright, trademark or trade secret of any person or entity, which is enforceable under the laws of the United States.

In addition, should the equipment, software, commodity, or service, or its operation, become or in the State's or Contractor's opinion be likely to become the subject of a claim of infringement, the Contractor must at the Contractor's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if the option is not reasonably available to the Contractor, (ii) replace or modify to the State's satisfaction the same with equipment, software, commodity or service of equivalent function and performance so that it becomes non-infringing, or, if the option is not reasonably available to Contractor, (iii) accept its return by the State with appropriate credits to the State against the Contractor's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.

Notwithstanding the foregoing, the Contractor has no obligation to indemnify or defend the State for, or to pay any costs, damages or attorneys' fees related to, any claim based upon (i) equipment developed based on written specifications of the State; (ii) use of the equipment in a configuration other than implemented or approved in writing by the Contractor, including, but not limited to, any modification of the equipment by the State; or (iii) the combination, operation, or use of the equipment with equipment or software not supplied by the Contractor under this Contract.

2.145 Continuation of Indemnification Obligations

The Contractor's duty to indemnify under this Section continues in full force and effect, notwithstanding the expiration or early cancellation of the Contract, with respect to any claims based on facts or conditions that occurred before expiration or cancellation.

2.146 Indemnification Procedures

The procedures set forth below must apply to all indemnity obligations under this Contract.

- a. After the State receives notice of the action or proceeding involving a claim for which it will seek indemnification, the State must promptly notify Contractor of the claim in writing and take or assist Contractor in taking, as the case may be, any reasonable action to avoid the imposition of a default judgment against Contractor. No failure to notify the Contractor relieves the Contractor of its indemnification obligations except to the extent that the Contractor can prove damages attributable to the failure. Within 10 days following receipt of written notice from the State relating to any claim, the Contractor must notify the State in writing whether Contractor agrees to assume control of the defense and settlement of that claim (a "Notice of Election"). After notifying Contractor of a claim



and before the State receiving Contractor's Notice of Election, the State is entitled to defend against the claim, at the Contractor's expense, and the Contractor will be responsible for any reasonable costs incurred by the State in defending against the claim during that period.

- b. If Contractor delivers a Notice of Election relating to any claim: (i) the State is entitled to participate in the defense of the claim and to employ counsel at its own expense to assist in the handling of the claim and to monitor and advise the State about the status and progress of the defense; (ii) the Contractor must, at the request of the State, demonstrate to the reasonable satisfaction of the State, the Contractor's financial ability to carry out its defense and indemnity obligations under this Contract; (iii) the Contractor must periodically advise the State about the status and progress of the defense and must obtain the prior written approval of the State before entering into any settlement of the claim or ceasing to defend against the claim and (iv) to the extent that any principles of Michigan governmental or public law may be involved or challenged, the State has the right, at its own expense, to control the defense of that portion of the claim involving the principles of Michigan governmental or public law. But the State may retain control of the defense and settlement of a claim by notifying the Contractor in writing within 10 days after the State's receipt of Contractor's information requested by the State under clause (ii) of this paragraph if the State determines that the Contractor has failed to demonstrate to the reasonable satisfaction of the State the Contractor's financial ability to carry out its defense and indemnity obligations under this Section. Any litigation activity on behalf of the State, or any of its subdivisions under this Section, must be coordinated with the Department of Attorney General. In the event the insurer's attorney represents the State under this Section, the insurer's attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.
- c. If Contractor does not deliver a Notice of Election relating to any claim of which it is notified by the State as provided above, the State may defend the claim in the manner as it may deem appropriate, at the cost and expense of Contractor. If it is determined that the claim was one against which Contractor was required to indemnify the State, upon request of the State, Contractor must promptly reimburse the State for all the reasonable costs and expenses.

2.150 Termination/Cancellation

2.151 Notice and Right to Cure

If the Contractor breaches the contract, and the State in its sole discretion determines that the breach is curable, then the State will provide the Contractor with written notice of the breach and a time period (not less than 30 days) to cure the Breach. The notice of breach and opportunity to cure is inapplicable for successive or repeated breaches or if the State determines in its sole discretion that the breach poses a serious and imminent threat to the health or safety of any person or the imminent loss, damage, or destruction of any real or tangible personal property.

2.152 Termination for Cause

- a. The State may terminate this contract, for cause, by notifying the Contractor in writing, if the Contractor (i) breaches any of its material duties or obligations under this Contract (including a Chronic Failure to meet any particular SLA), or (ii) fails to cure a breach within the time period specified in the written notice of breach provided by the State
- b. If this Contract is terminated for cause, the Contractor must pay all costs incurred by the State in terminating this Contract, including but not limited to, State administrative costs, reasonable attorneys' fees and court costs, and any reasonable additional costs the State may incur to procure the Services/Deliverables required by this Contract from other sources. Re-procurement costs are not consequential, indirect or incidental damages, and cannot be excluded by any other terms otherwise included in this Contract, provided the costs are not in excess of 50% more than the prices for the Service/Deliverables provided under this Contract.
- c. If the State chooses to partially terminate this Contract for cause, charges payable under this Contract will be equitably adjusted to reflect those Services/Deliverables that are terminated and the State must pay for all Services/Deliverables for which Final Acceptance has been granted



provided up to the termination date. Services and related provisions of this Contract that are terminated for cause must cease on the effective date of the termination.

- d. If the State terminates this Contract for cause under this Section, and it is determined, for any reason, that Contractor was not in breach of contract under the provisions of this section, that termination for cause must be deemed to have been a termination for convenience, effective as of the same date, and the rights and obligations of the parties must be limited to that otherwise provided in this Contract for a termination for convenience.

2.153 Termination for Convenience

The State may terminate this Contract for its convenience, in whole or part, if the State determines that a termination is in the State's best interest. Reasons for the termination must be left to the sole discretion of the State and may include, but not necessarily be limited to (a) the State no longer needs the Services or products specified in the Contract, (b) relocation of office, program changes, changes in laws, rules, or regulations make implementation of the Services no longer practical or feasible, (c) unacceptable prices for Additional Services or New Work requested by the State, or (d) falsification or misrepresentation, by inclusion or non-inclusion, of information material to a response to any RFP issued by the State. The State may terminate this Contract for its convenience, in whole or in part, by giving Contractor written notice at least 30 days before the date of termination. If the State chooses to terminate this Contract in part, the charges payable under this Contract must be equitably adjusted to reflect those Services/Deliverables that are terminated. Services and related provisions of this Contract that are terminated for cause must cease on the effective date of the termination.

2.154 Termination for Non-Appropriation

- a. Contractor acknowledges that, if this Contract extends for several fiscal years, continuation of this Contract is subject to appropriation or availability of funds for this Contract. If funds to enable the State to effect continued payment under this Contract are not appropriated or otherwise made available, the State must terminate this Contract and all affected Statements of Work, in whole or in part, at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of termination to Contractor. The State must give Contractor at least 30 days advance written notice of termination for non-appropriation or unavailability (or the time as is available if the State receives notice of the final decision less than 30 days before the funding cutoff).
- b. If funding for the Contract is reduced by law, or funds to pay Contractor for the agreed-to level of the Services or production of Deliverables to be provided by Contractor are not appropriated or otherwise unavailable, the State may, upon 30 days written notice to Contractor, reduce the level of the Services or the change the production of Deliverables in the manner and for the periods of time as the State may elect. The charges payable under this Contract will be equitably adjusted to reflect any equipment, services or commodities not provided by reason of the reduction.
- c. If the State terminates this Contract, eliminates certain Deliverables, or reduces the level of Services to be provided by Contractor under this Section, the State must pay Contractor for all Work-in-Process performed through the effective date of the termination or reduction in level, as the case may be and as determined by the State, to the extent funds are available. This Section will not preclude Contractor from reducing or stopping Services/Deliverables or raising against the State in a court of competent jurisdiction, any claim for a shortfall in payment for Services performed or Deliverables finally accepted before the effective date of termination.

2.155 Termination for Criminal Conviction

The State may terminate this Contract immediately and without further liability or penalty in the event Contractor, an officer of Contractor, or an owner of a 25% or greater share of Contractor is convicted of a criminal offense related to a State, public or private Contract or subcontract.

2.156 Termination for Approvals Rescinded

The State may terminate this Contract if any final administrative or judicial decision or adjudication disapproves a previously approved request for purchase of personal services under Constitution 1963,



Article 11, § 5, and Civil Service Rule 7-1. In that case, the State will pay the Contractor for only the work completed to that point under the Contract. Termination may be in whole or in part and may be immediate as of the date of the written notice to Contractor or may be effective as of the date stated in the written notice.

2.157 Rights and Obligations upon Termination

- a. If the State terminates this Contract for any reason, the Contractor must (a) stop all work as specified in the notice of termination, (b) take any action that may be necessary, or that the State may direct, for preservation and protection of Deliverables or other property derived or resulting from this Contract that may be in Contractor's possession, (c) return all materials and property provided directly or indirectly to Contractor by any entity, agent or employee of the State, (d) transfer title in, and deliver to, the State, unless otherwise directed, all Deliverables intended to be transferred to the State at the termination of the Contract and which are resulting from the Contract (which must be provided to the State on an "As-Is" basis except to the extent the amounts paid by the State in respect of the items included compensation to Contractor for the provision of warranty services in respect of the materials), and (e) take any action to mitigate and limit any potential damages, or requests for Contractor adjustment or termination settlement costs, to the maximum practical extent, including terminating or limiting as otherwise applicable those subcontracts and outstanding orders for material and supplies resulting from the terminated Contract.
- b. If the State terminates this Contract before its expiration for its own convenience, the State must pay Contractor for all charges due for Services provided before the date of termination and, if applicable, as a separate item of payment under this Contract, for Work In Process, on a percentage of completion basis at the level of completion determined by the State. All completed or partially completed Deliverables prepared by Contractor under this Contract, at the option of the State, becomes the State's property, and Contractor is entitled to receive equitable fair compensation for the Deliverables. Regardless of the basis for the termination, the State is not obligated to pay, or otherwise compensate, Contractor for any lost expected future profits, costs or expenses incurred with respect to Services not actually performed for the State.
- c. Upon a good faith termination, the State may assume, at its option, any subcontracts and agreements for services and deliverables provided under this Contract, and may further pursue completion of the Services/Deliverables under this Contract by replacement contract or otherwise as the State may in its sole judgment deem expedient.

2.158 Reservation of Rights

Any termination of this Contract or any Statement of Work issued under it by a party must be with full reservation of, and without prejudice to, any rights or remedies otherwise available to the party with respect to any claims arising before or as a result of the termination.

2.160 Termination by Contractor

2.161 Termination by Contractor

If the State breaches the Contract, and the Contractor in its sole discretion determines that the breach is curable, then the Contractor will provide the State with written notice of the breach and a time period (not less than 30 days) to cure the breach. The Notice of Breach and opportunity to cure is inapplicable for successive and repeated breaches.

The Contractor may terminate this Contract if the State (i) materially breaches its obligation to pay the Contractor undisputed amounts due and owing under this Contract, (ii) breaches its other obligations under this Contract to an extent that makes it impossible or commercially impractical for the Contractor to perform the Services, or (iii) does not cure the breach within the time period specified in a written notice of breach. But the Contractor must discharge its obligations under **Section 2.160** before it terminates the Contract.



2.170 Transition Responsibilities

2.171 Contractor Transition Responsibilities

If the State terminates this contract, for convenience or cause, or if the Contract is otherwise dissolved, voided, rescinded, nullified, expires or rendered unenforceable, the Contractor agrees to comply with direction provided by the State to assist in the orderly transition of equipment, services, software, leases, etc. to the State or a third party designated by the State. If this Contract expires or terminates, the Contractor agrees to make all reasonable efforts to effect an orderly transition of services within a reasonable period of time that in no event will exceed **90** days. These efforts must include, but are not limited to, those listed in **Sections 2.141, 2.142, 2.143, 2.144, and 2.145.**

2.172 Contractor Personnel Transition

The Contractor must work with the State, or a specified third party, to develop a transition plan setting forth the specific tasks and schedule to be accomplished by the parties, to effect an orderly transition. The Contractor must allow as many personnel as practicable to remain on the job to help the State, or a specified third party, maintain the continuity and consistency of the services required by this Contract. In addition, during or following the transition period, in the event the State requires the Services of the Contractor's subcontractors or vendors, as necessary to meet its needs, Contractor agrees to reasonably, and with good-faith, work with the State to use the Services of Contractor's subcontractors or vendors. Contractor will notify all of Contractor's subcontractors of procedures to be followed during transition.

2.173 Contractor Information Transition

The Contractor agrees to provide reasonable detailed specifications for all Services/Deliverables needed by the State, or specified third party, to properly provide the Services/Deliverables required under this Contract. The Contractor will provide the State with asset management data generated from the inception of this Contract through the date on which this Contractor is terminated in a comma-delimited format unless otherwise requested by the State. The Contractor will deliver to the State any remaining owed reports and documentation still in Contractor's possession subject to appropriate payment by the State.

2.174 Contractor Software Transition

The Contractor must reasonably assist the State in the acquisition of any Contractor software required to perform the Services/use the Deliverables under this Contract. This must include any documentation being used by the Contractor to perform the Services under this Contract. If the State transfers any software licenses to the Contractor, those licenses must, upon expiration of the Contract, transfer back to the State at their current revision level. Upon notification by the State, Contractor may be required to freeze all non-critical changes to Deliverables/Services.

2.175 Transition Payments

If the transition results from a termination for any reason, the termination provisions of this Contract must govern reimbursement. If the transition results from expiration, the Contractor will be reimbursed for all reasonable transition costs (i.e. costs incurred within the agreed period after contract expiration that result from transition operations) at the rates agreed upon by the State. The Contractor will prepare an accurate accounting from which the State and Contractor may reconcile all outstanding accounts.

2.176 State Transition Responsibilities

In the event that this Contract is terminated, dissolved, voided, rescinded, nullified, or otherwise rendered unenforceable, the State agrees to reconcile all accounts between the State and the Contractor, complete any pending post-project reviews and perform any others obligations upon which the State and the Contractor agree.

- a. Reconciling all accounts between the State and the Contractor;



- b. Completing any pending post-project reviews.

2.180 Stop Work

2.181 Stop Work Orders

The State may, at any time, by written stop work order to Contractor, require that Contractor stop all, or any part, of the work called for by the Contract for a period of up to 90 calendar days after the stop work order is delivered to Contractor, and for any further period to which the parties may agree. The stop work order must be identified as a stop work order and must indicate that it is issued under this **Section 2.150**. Upon receipt of the stop work order, Contractor must immediately comply with its terms and take all reasonable steps to minimize incurring costs allocable to the work covered by the stop work order during the period of work stoppage. Within the period of the stop work order, the State must either: (a) cancel the stop work order; or (b) terminate the work covered by the stop work order as provided in **Section 2.130**.

2.182 Cancellation or Expiration of Stop Work Order

The Contractor must resume work if the State cancels a Stop Work Order or if it expires. The parties will agree upon an equitable adjustment in the delivery schedule, the Contract price, or both, and the Contract must be modified, in writing, accordingly, if: (a) the stop work order results in an increase in the time required for, or in Contractor's costs properly allocable to, the performance of any part of the Contract; and (b) Contractor asserts its right to an equitable adjustment within 30 calendar days after the end of the period of work stoppage; provided that, if the State decides the facts justify the action, the State may receive and act upon a Contractor proposal submitted at any time before final payment under the Contract. Any adjustment will conform to the requirements of **Section 2.024**.

2.183 Allowance of Contractor Costs

If the stop work order is not canceled and the work covered by the stop work order is terminated for reasons other than material breach, the termination must be deemed to be a termination for convenience under **Section 2.153**, and the State will pay reasonable costs resulting from the stop work order in arriving at the termination settlement. For the avoidance of doubt, the State is not liable to Contractor for loss of profits because of a stop work order issued under this Section.

2.190 Dispute Resolution

2.191 In General

Any claim, counterclaim, or dispute between the State and Contractor arising out of or relating to the Contract or any Statement of Work must be resolved as follows. For all Contractor claims seeking an increase in the amounts payable to Contractor under the Contract, or the time for Contractor's performance, Contractor must submit a letter, together with all data supporting the claims, executed by Contractor's Contract Administrator or the Contract Administrator's designee certifying that (a) the claim is made in good faith, (b) the amount claimed accurately reflects the adjustments in the amounts payable to Contractor or the time for Contractor's performance for which Contractor believes the State is liable and covers all costs of every type to which Contractor is entitled from the occurrence of the claimed event, and (c) the claim and the supporting data are current and complete to Contractor's best knowledge and belief.

2.192 Informal Dispute Resolution

- a. All disputes between the parties must be resolved under the Contract Management procedures in this Contract. If the parties are unable to resolve any disputes after compliance with the processes, the parties must meet with the Director of Purchasing Operations, DMB, or designee, for the purpose of attempting to resolve the dispute without the need for formal legal proceedings, as follows:
 - 1. The representatives of Contractor and the State must meet as often as the parties reasonably deem necessary to gather and furnish to each other all information with respect to the matter in



- issue which the parties believe to be appropriate and germane in connection with its resolution. The representatives must discuss the problem and negotiate in good faith in an effort to resolve the dispute without the necessity of any formal proceeding.
2. During the course of negotiations, all reasonable requests made by one party to another for non-privileged information reasonably related to the Contract will be honored in order that each of the parties may be fully advised of the other's position.
 3. The specific format for the discussions will be left to the discretion of the designated State and Contractor representatives, but may include the preparation of agreed upon statements of fact or written statements of position.
 4. Following the completion of this process within 60 calendar days, the Director of Purchasing Operations, DMB, or designee, must issue a written opinion regarding the issue(s) in dispute within 30 calendar days. The opinion regarding the dispute must be considered the State's final action and the exhaustion of administrative remedies.
- b. This Section will not be construed to prevent either party from instituting, and a party is authorized to institute, formal proceedings earlier to avoid the expiration of any applicable limitations period, to preserve a superior position with respect to other creditors, or under Section 2.193.
 - c. The State will not mediate disputes between the Contractor and any other entity, except state agencies, concerning responsibility for performance of work under the Contract.

2.193 Injunctive Relief

The only circumstance in which disputes between the State and Contractor will not be subject to the provisions of **Section 2.192** is where a party makes a good faith determination that a breach of the terms of the Contract by the other party is the that the damages to the party resulting from the breach will be so immediate, so large or severe and so incapable of adequate redress after the fact that a temporary restraining order or other immediate injunctive relief is the only adequate remedy.

2.194 Continued Performance

Each party agrees to continue performing its obligations under the Contract while a dispute is being resolved except to the extent the issue in dispute precludes performance (dispute over payment must not be deemed to preclude performance) and without limiting either party's right to terminate the Contract as provided in **Section 2.150**, as the case may be.

2.200 Federal and State Contract Requirements

2.201 Nondiscrimination

In the performance of the Contract, Contractor agrees not to discriminate against any employee or applicant for employment, with respect to his or her hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, ancestry, age, sex, height, weight, and marital status, physical or mental disability. Contractor further agrees that every subcontract entered into for the performance of this Contract or any purchase order resulting from this Contract will contain a provision requiring non-discrimination in employment, as specified here, binding upon each Subcontractor. This covenant is required under the Elliot Larsen Civil Rights Act, 1976 PA 453, MCL 37.2101, et seq., and the Persons with Disabilities Civil Rights Act, 1976 PA 220, MCL 37.1101, et seq., and any breach of this provision may be regarded as a material breach of the Contract.

2.202 Unfair Labor Practices

Under 1980 PA 278, MCL 423.321, et seq., the State must not award a Contract or subcontract to an employer whose name appears in the current register of employers failing to correct an unfair labor practice compiled under section 2 of the Act. This information is compiled by the United States National Labor Relations Board. A Contractor of the State, in relation to the Contract, must not enter into a contract with a Subcontractor, manufacturer, or supplier whose name appears in this register. Under section 4 of 1980 PA 278, MCL 423.324, the State may void any Contract if, after award of the



Contract, the name of Contractor as an employer or the name of the Subcontractor, manufacturer or supplier of Contractor appears in the register.

2.203 Workplace Safety and Discriminatory Harassment

In performing Services for the State, the Contractor must comply with the Department of Civil Services Rule 2-20 regarding Workplace Safety and Rule 1-8.3 regarding Discriminatory Harassment. In addition, the Contractor must comply with Civil Service regulations and any applicable agency rules provided to the Contractor. For Civil Service Rules, see <http://www.mi.gov/mdcs/0,1607,7-147-6877---.00.html>.

2.210 Governing Law

2.211 Governing Law

The Contract must in all respects be governed by, and construed according to, the substantive laws of the State of Michigan without regard to any Michigan choice of law rules that would apply the substantive law of any other jurisdiction to the extent not inconsistent with, or pre-empted by federal law.

2.212 Compliance with Laws

Contractor shall comply with all applicable state, federal and local laws and ordinances in providing the Services/Deliverables.

2.213 Jurisdiction

Any dispute arising from the Contract must be resolved in the State of Michigan. With respect to any claim between the parties, Contractor consents to venue in Ingham County, Michigan, and irrevocably waives any objections it may have to the jurisdiction on the grounds of lack of personal jurisdiction of the court or the laying of venue of the court or on the basis of forum non convenient or otherwise. Contractor agrees to appoint agents in the State of Michigan to receive service of process.

2.220 Limitation of Liability

2.221 Limitation of Liability

Neither the Contractor nor the State is liable to each other, regardless of the form of action, for consequential, incidental, indirect, or special damages. This limitation of liability does not apply to claims for infringement of United States patent, copyright, trademark or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the Contractor; to claims covered by other specific provisions of this Contract calling for liquidated damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on this Contract.

The Contractor's liability for damages to the State is limited to two times the value of the Contract or \$500,000 which ever is higher. The foregoing limitation of liability does not apply to claims for infringement of United States patent, copyright, trademarks or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the Contractor; to claims covered by other specific provisions of this Contract calling for liquidated damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on this Contract.

The State's liability for damages to the Contractor is limited to the value of the Contract.



2.230 Disclosure Responsibilities

2.231 Disclosure of Litigation

Contractor must disclose any material criminal litigation, investigations or proceedings involving the Contractor (and each Subcontractor) or any of its officers or directors or any litigation, investigations or proceedings under the Sarbanes-Oxley Act. In addition, each Contractor (and each Subcontractor) must notify the State of any material civil litigation, arbitration or proceeding which arises during the term of the Contract and extensions, to which Contractor (or, to the extent Contractor is aware, any Subcontractor) is a party, and which involves: (i) disputes that might reasonably be expected to adversely affect the viability or financial stability of Contractor or any Subcontractor; or (ii) a claim or written allegation of fraud against Contractor or, to the extent Contractor is aware, any Subcontractor by a governmental or public entity arising out of their business dealings with governmental or public entities. The Contractor must disclose in writing to the Contract Administrator any litigation, investigation, arbitration or other proceeding (collectively, "Proceeding") within 30 days of its occurrence. Details of settlements that are prevented from disclosure by the terms of the settlement may be annotated. Information provided to the State from Contractor's publicly filed documents referencing its material litigation will be deemed to satisfy the requirements of this Section.

If any Proceeding disclosed to the State under this Section, or of which the State otherwise becomes aware, during the term of this Contract would cause a reasonable party to be concerned about:

- a. the ability of Contractor (or a Subcontractor) to continue to perform this Contract according to its terms and conditions, or
- b. whether Contractor (or a Subcontractor) in performing Services for the State is engaged in conduct which is similar in nature to conduct alleged in the Proceeding, which conduct would constitute a breach of this Contract or a violation of Michigan law, regulations or public policy, then the Contractor must provide the State all reasonable assurances requested by the State to demonstrate that:
 1. Contractor and its Subcontractors will be able to continue to perform this Contract and any Statements of Work according to its terms and conditions, and
 2. Contractor and its Subcontractors have not and will not engage in conduct in performing the Services which is similar in nature to the conduct alleged in the Proceeding.
- c. Contractor must make the following notifications in writing:
 1. Within 30 days of Contractor becoming aware that a change in its ownership or officers has occurred, or is certain to occur, or a change that could result in changes in the valuation of its capitalized assets in the accounting records, Contractor must notify DMB Purchasing Operations.
 2. Contractor must also notify DMB Purchasing Operations within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership or officers.
 3. Contractor must also notify DMB Purchase Operations within 30 days whenever changes to company affiliations occur.

2.232 Call Center Disclosure

Contractor and/or all subcontractors involved in the performance of this Contract providing call or contact center services to the State must disclose the location of its call or contact center services to inbound callers. Failure to disclose this information is a material breach of this Contract.

2.233 Bankruptcy

The State may, without prejudice to any other right or remedy, terminate this Contract, in whole or in part, and, at its option, may take possession of the "Work in Process" and finish the Works in Process by whatever appropriate method the State may deem expedient if:

- a. the Contractor files for protection under the bankruptcy laws;
- b. an involuntary petition is filed against the Contractor and not removed within 30 days;
- c. the Contractor becomes insolvent or if a receiver is appointed due to the Contractor's insolvency;



- d. the Contractor makes a general assignment for the benefit of creditors; or
- e. The Contractor or its affiliates are unable to provide reasonable assurances that the Contractor or its affiliates can deliver the services under this Contract.

Contractor will fix appropriate notices or labels on the Work in Process to indicate ownership by the State. To the extent reasonably possible, materials and Work in Process must be stored separately from other stock and marked conspicuously with labels indicating ownership by the State.

2.240 Performance

2.241 Time of Performance

- a. Contractor must use commercially reasonable efforts to provide the resources necessary to complete all Services and Deliverables according to the time schedules contained in the Statements of Work and other Exhibits governing the work, and with professional quality.
- b. Without limiting the generality of **Section 2.241**, Contractor must notify the State in a timely manner upon becoming aware of any circumstances that may reasonably be expected to jeopardize the timely and successful completion of any Deliverables/Services on the scheduled due dates in the latest State-approved delivery schedule and must inform the State of the projected actual delivery date.
- c. If the Contractor believes that a delay in performance by the State has caused or will cause the Contractor to be unable to perform its obligations according to specified Contract time periods, the Contractor must notify the State in a timely manner and must use commercially reasonable efforts to perform its obligations according to the Contract time periods notwithstanding the State's failure. Contractor will not be in default for a delay in performance to the extent the delay is caused by the State.

2.242 Service Level Agreement (SLA)

- a. SLAs will be completed with the following operational considerations:
 - 1. SLAs will not be calculated for individual Incidents where any event of Excusable Failure has been determined; Incident means any interruption in Services.
 - 2. SLAs will not be calculated for individual Incidents where loss of service is planned and where the State has received prior notification or coordination.
 - 3. SLAs will not apply if the applicable Incident could have been prevented through planning proposed by Contractor and not implemented at the request of the State. To invoke this consideration, complete documentation relevant to the denied planning proposal must be presented to substantiate the proposal.
 - 4. Time period measurements will be based on the time Incidents are received by the Contractor and the time that the State receives notification of resolution based on 24x7x365 time period, except that the time period measurement will be suspended based on the following:
 - i. Time period(s) will not apply where Contractor does not have access to a physical State Location and where access to the State Location is necessary for problem identification and resolution.
 - ii. Time period(s) will not apply where Contractor needs to obtain timely and accurate information or appropriate feedback and is unable to obtain timely and accurate information or appropriate feedback from the State.
- b. Chronic Failure for any Service(s) will be defined as three unscheduled outage(s) or interruption(s) on any individual Service for the same reason or cause or if the same reason or cause was reasonably discoverable in the first instance over a rolling 30 day period. Chronic Failure will result in the State's option to terminate the effected individual Service(s) and procure them from a different vendor for the chronic location(s) with Contractor to pay the difference in charges for up to three additional months. The termination of the Service will not affect any tiered pricing levels.
- c. Root Cause Analysis will be performed on any Business Critical outage(s) or outage(s) on Services when requested by the Contract Administrator. Contractor will provide its analysis within two weeks of outage(s) and provide a recommendation for resolution.



- d. All decimals must be rounded to two decimal places with five and greater rounding up and four and less rounding down unless otherwise specified.

Section 2.242 Service Level Agreement is not applicable to this contract.

2.243 Liquidated Damages

a. The parties acknowledge that late or improper completion of the Work will cause loss and damage to the State, and that it would be impracticable and extremely difficult to fix the actual damage sustained by the State as a result. Therefore, Contractor and the State agree that if there is late or improper completion of the Work and the State does not elect to exercise its rights under **Section 2.141**, the State is entitled to collect liquidated damages in the amount of \$5,000.00 and an additional \$100.00 per day for each day Contractor fails to remedy the late or improper completion of the Work. This clause will not apply if such late or improper submission of contractor deliverables is attributed to the delays or errors caused by the State.

b. Unauthorized Removal of any Key Personnel

It is acknowledged that an Unauthorized Removal will interfere with the timely and proper completion of the Contract, to the loss and damage of the State, and that it would be impracticable and extremely difficult to fix the actual damage sustained by the State as a result of any Unauthorized Removal. Therefore, Contractor and the State agree that in the case of any Unauthorized Removal in respect of which the State does not elect to exercise its rights under **Section 2.141**, the State may assess liquidated damages against Contractor as specified below.

Section 2.243 (b) is not applicable to this contract.

c. For the Unauthorized Removal of any Key Personnel designated in the applicable Statement of Work, the liquidated damages amount is \$25,000.00 per individual if the Contractor identifies a replacement approved by the State under **Section 2.060** and assigns the replacement to the Project to shadow the Key Personnel who is leaving for a period of at least 30 days before the Key Personnel's removal.

Section 2.243 (c) is not applicable to this contract.

d. If Contractor fails to assign a replacement to shadow the removed Key Personnel for at least 30 days, in addition to the \$25,000.00 liquidated damages for an Unauthorized Removal, Contractor must pay the amount of \$833.33 per day for each day of the 30 day shadow period that the replacement Key Personnel does not shadow the removed Key Personnel, up to \$25,000.00 maximum per individual. The total liquidated damages that may be assessed per Unauthorized Removal and failure to provide 30 days of shadowing must not exceed \$50,000.00 per individual.

Section 2.243 (d) is not applicable to this contract.

2.244 Excusable Failure

Neither party will be liable for any default, damage or delay in the performance of its obligations under the Contract to the extent the default, damage or delay is caused by government regulations or requirements (executive, legislative, judicial, military or otherwise), power failure, electrical surges or current fluctuations, lightning, earthquake, war, water or other forces of nature or acts of God, delays or failures of transportation, equipment shortages, suppliers' failures, or acts or omissions of common carriers, fire; riots, civil disorders; strikes or other labor disputes, embargoes; injunctions (provided the injunction was not issued as a result of any fault or negligence of the party seeking to have its default or delay excused); or any other cause beyond the reasonable control of a party; provided the non-performing party and its Subcontractors are without fault in causing the default or delay, and the default or delay could not have been prevented by reasonable precautions and cannot reasonably be circumvented by the non-performing party through the use of alternate sources, workaround plans or other means, including disaster recovery plans.



If a party does not perform its contractual obligations for any of the reasons listed above, the non-performing party will be excused from any further performance of its affected obligation(s) for as long as the circumstances prevail. But the party must use commercially reasonable efforts to recommence performance whenever and to whatever extent possible without delay. A party must promptly notify the other party in writing immediately after the excusable failure occurs, and also when it abates or ends.

If any of the above-enumerated circumstances substantially prevent, hinder, or delay the Contractor's performance of the Services/provision of Deliverables for more than 10 Business Days, and the State determines that performance is not likely to be resumed within a period of time that is satisfactory to the State in its reasonable discretion, then at the State's option: (a) the State may procure the affected Services/Deliverables from an alternate source, and the State is not be liable for payment for the unperformed Services/ Deliverables not provided under the Contract for so long as the delay in performance continues; (b) the State may terminate any portion of the Contract so affected and the charges payable will be equitably adjusted to reflect those Services/Deliverables terminated; or (c) the State may terminate the affected Statement of Work without liability to Contractor as of a date specified by the State in a written notice of termination to the Contractor, except to the extent that the State must pay for Services/Deliverables provided through the date of termination.

The Contractor will not have the right to any additional payments from the State as a result of any Excusable Failure occurrence or to payments for Services not rendered/Deliverables not provided as a result of the Excusable Failure condition. Defaults or delays in performance by Contractor which are caused by acts or omissions of its Subcontractors will not relieve Contractor of its obligations under the Contract except to the extent that a Subcontractor is itself subject to an Excusable Failure condition described above and Contractor cannot reasonably circumvent the effect of the Subcontractor's default or delay in performance through the use of alternate sources, workaround plans or other means.

2.250 Approval of Deliverables

2.251 Delivery of Deliverables

A list of the Deliverables to be prepared and delivered by Contractor including, for each Deliverable, the scheduled delivery date and a designation of whether the Deliverable is a document ("Written Deliverable") or a Custom Software Deliverable is attached, if applicable. All Deliverables shall be completed and delivered for State review and written approval and, where applicable, installed in accordance with the State-approved delivery schedule and any other applicable terms and conditions of this Contract.

Prior to delivering any Deliverable to the State, Contractor will first perform all required quality assurance activities, and, in the case of Custom Software Deliverables, System Testing to verify that the Deliverable is complete and in conformance with its specifications. Before delivering a Deliverable to the State, Contractor shall certify to the State that (1) it has performed such quality assurance activities, (2) it has performed any applicable testing, (3) it has corrected all material deficiencies discovered during such quality assurance activities and testing, (4) the Deliverable is in a suitable state of readiness for the State's review and approval, and (5) the Deliverable/Service has all Critical Security patches/updates applied.

In discharging its obligations under this Section, Contractor shall be at all times (except where the parties agree otherwise in writing) in compliance with Level 3 of the Software Engineering Institute's Capability Maturity Model for Software ("CMM Level 3") or its equivalent.

This section is limited to the extent of items listed in section 1.101 (In Scope) and section 1.104 Work and Deliverables and associated assumptions stated in this statement of work.



2.252 Contractor System Testing

Contractor will be responsible for System testing each Custom Software Deliverable in Contractor's development environment prior to turning over the Custom Software Deliverable to the State for User Acceptance Testing and approval. Contractor's System Testing shall include the following, at a minimum, plus any other testing required by CMM Level 3 or Contractor's system development methodology:

Contractor will be responsible for performing Unit Testing and incremental Integration Testing of the components of each Custom Software Deliverable.

Contractor's System Testing will also include Integration Testing of each Custom Software Deliverable to ensure proper inter-operation with all prior software Deliverables, interfaces and other components that are intended to inter-operate with such Custom Software Deliverable, and will include Regression Testing, volume and stress testing to ensure that the Custom Software Deliverables are able to meet the State's projected growth in the number and size of transactions to be processed by the Application and number of users, as such projections are set forth in the applicable Statement of Work.

Contractor's System Testing will also include Business Function Testing and Technical Testing of each Application in a simulated production environment. Business Function Testing will include testing of full work streams that flow through the Application as the Application will be incorporated within the State's computing environment. The State shall participate in and provide support for the Business Function Testing to the extent reasonably requested by Contractor. Within ten (10) days before the commencement of Business Function Testing pursuant to this Section, Contractor shall provide the State for State review and written approval Contractor's test plan for Business Function Testing.

Within five (5) Business Days following the completion of System Testing pursuant to this **Section**, Contractor shall provide to the State a testing matrix establishing that testing for each condition identified in the System Testing plans has been conducted and successfully concluded. To the extent that testing occurs on State premises, the State shall be entitled to observe or otherwise participate in testing under this Section as the State may elect.

This section is limited to the extent of items listed in section 1.101 (In Scope) and section 1.104 Work and Deliverables and associated assumptions stated in this statement of work.

2.253 Approval of Deliverables, In General

All Deliverables (Written Deliverables and Custom Software Deliverables) require formal written approval by the State, in accordance with the following procedures. Formal approval by the State requires that the Deliverable be confirmed in writing by the State to meet its specifications, which, in the case of Custom Software Deliverables, will include the successful completion of State User Acceptance Testing, to be led by the State with the support and assistance of Contractor. The parties acknowledge that the approval process set forth herein will be facilitated by ongoing consultation between the parties, visibility of interim and intermediate Deliverables and collaboration on key decisions.

The State's obligation to comply with any State Review Period is conditioned on the timely delivery of Deliverables being reviewed. If Contractor fails to provide a Deliverable to the State in a timely manner, the State will nevertheless use commercially reasonable efforts to complete its review or testing within the applicable State Review Period.

Before commencement of its review or testing of a Deliverable, the State may inspect the Deliverable to confirm that all components of the Deliverable (e.g., software, associated documentation, and other materials) have been delivered. If the State determines that the Deliverable is incomplete, the State may refuse delivery of the Deliverable without performing any further inspection or testing of the



Deliverable. Otherwise, the review period will be deemed to have started on the day the State receives the Deliverable and the applicable certification by Contractor in accordance with this Section.

The State will approve in writing a Deliverable upon confirming that it conforms to and, in the case of a Custom Software Deliverable, performs in accordance with, its specifications without material deficiency. The State may, but shall not be required to, conditionally approve in writing a Deliverable that contains material deficiencies if the State elects to permit Contractor to rectify them post-approval. In any case, Contractor will be responsible for working diligently to correct within a reasonable time at Contractor's expense all deficiencies in the Deliverable that remain outstanding at the time of State approval.

If, after three (3) opportunities (the original and two repeat efforts), Contractor is unable to correct all deficiencies preventing State approval of a Deliverable, the State may: (i) demand that Contractor cure the failure and give Contractor additional time to cure the failure at the sole expense of Contractor; or (ii) keep this Contract in force and do, either itself or through other parties, whatever Contractor has failed to do, in which event Contractor shall bear any excess expenditure incurred by the State in so doing beyond the contract price for such Deliverable and will pay the State an additional sum equal to ten percent (10%) of such excess expenditure to cover the State's general expenses without the need to furnish proof in substantiation of such general expenses; or (iii) terminate this Contract for default, either in whole or in part by notice to Contractor (and without the need to afford Contractor any further opportunity to cure). Notwithstanding the foregoing, the State shall not use, as a basis for exercising its termination rights under this Section, deficiencies discovered in a repeat State Review Period that could reasonably have been discovered during a prior State Review Period.

The State, at any time and in its own discretion, may halt the UAT or approval process if such process reveals deficiencies in or problems with a Deliverable in a sufficient quantity or of a sufficient severity as to make the continuation of such process unproductive or unworkable. In such case, the State may return the applicable Deliverable to Contractor for correction and re-delivery prior to resuming the review or UAT process and, in that event, Contractor will correct the deficiencies in such Deliverable in accordance with the Contract, as the case may be.

Approval in writing of a Deliverable by the State shall be provisional; that is, such approval shall not preclude the State from later identifying deficiencies in, and declining to accept, a subsequent Deliverable based on or which incorporates or inter-operates with an approved Deliverable, to the extent that the results of subsequent review or testing indicate the existence of deficiencies in the subsequent Deliverable, or if the Application of which the subsequent Deliverable is a component otherwise fails to be accepted pursuant to **Section 2.080**.

This section is limited to the extent of items listed in section 1.101 (In Scope), section 1.104 Work and Deliverables, section 1.500 Acceptance and associated assumptions stated in this statement of work.

2.254 Process for Approval of Written Deliverables

The State Review Period for Written Deliverables will be the number of days set forth in the applicable Statement of Work following delivery of the final version of the Written Deliverable (failing which the State Review Period, by default, shall be five (5) Business Days for Written Deliverables of one hundred (100) pages or less and ten (10) Business Days for Written Deliverables of more than one hundred (100) pages). The duration of the State Review Periods will be doubled if the State has not had an opportunity to review an interim draft of the Written Deliverable prior to its submission to the State. The State agrees to notify Contractor in writing by the end of the State Review Period either stating that the Written Deliverable is approved in the form delivered by Contractor or describing any deficiencies that must be corrected prior to approval of the Written Deliverable (or at the State's election, subsequent to approval of the Written Deliverable). If the State delivers to Contractor a notice of deficiencies, Contractor will correct the described deficiencies and within five (5) Business Days resubmit the Deliverable in a form that shows all revisions made to the original version delivered to the



State. Contractor's correction efforts will be made at no additional charge. Upon receipt of a corrected Written Deliverable from Contractor, the State will have a reasonable additional period of time, not to exceed the length of the original State Review Period, to review the corrected Written Deliverable to confirm that the identified deficiencies have been corrected.

This section is limited to the extent of items listed in section 1.101 (In Scope), section 1.104 Work and Deliverables, section 1.500 Acceptance and associated assumptions stated in this statement of work.

2.255 Process for Approval of Custom Software Deliverables

The State will conduct UAT of each Custom Software Deliverable in accordance with the following procedures to determine whether it meets the criteria for State approval – i.e., whether it conforms to and performs in accordance with its specifications without material deficiencies.

Within thirty (30) days (or such other number of days as the parties may agree to in writing) prior to Contractor's delivery of any Custom Software Deliverable to the State for approval, Contractor shall provide to the State a set of proposed test plans, including test cases, scripts, data and expected outcomes, for the State's use (which the State may supplement in its own discretion) in conducting UAT of the Custom Software Deliverable. Contractor, upon request by the State, shall provide the State with reasonable assistance and support during the UAT process.

For the Custom Software Deliverables listed in an attachment, the State Review Period for conducting UAT will be as indicated in the attachment. For any other Custom Software Deliverables not listed in an attachment, the State Review Period shall be the number of days agreed in writing by the parties (failing which it shall be forty-five (45) days by default). The State Review Period for each Custom Software Deliverable will begin when Contractor has delivered the Custom Software Deliverable to the State accompanied by the certification required by this **Section** and the State's inspection of the Deliverable has confirmed that all components of it have been delivered.

The State's UAT will consist of executing test scripts from the proposed testing submitted by Contractor, but may also include any additional testing deemed appropriate by the State. If the State determines during the UAT that the Custom Software Deliverable contains any deficiencies, the State will notify Contractor of the deficiency by making an entry in an incident reporting system available to both Contractor and the State. Contractor will modify promptly the Custom Software Deliverable to correct the reported deficiencies, conduct appropriate System Testing (including, where applicable, Regression Testing) to confirm the proper correction of the deficiencies and re-deliver the corrected version to the State for re-testing in UAT. Contractor will coordinate the re-delivery of corrected versions of Custom Software Deliverables with the State so as not to disrupt the State's UAT process. The State will promptly re-test the corrected version of the Software Deliverable after receiving it from Contractor.

Within three (3) business days after the end of the State Review Period, the State will give Contractor a written notice indicating the State's approval or rejection of the Custom Software Deliverable according to the criteria and process set out in this **Section**.

This section is limited to the extent of items listed in section 1.101 (In Scope), section 1.104 Work and Deliverables, section 1.500 Acceptance and associated assumptions stated in this statement of work.

2.256 Final Acceptance

"Final Acceptance" shall be considered to occur when all Custom Software Deliverables are delivered and approved by the State and have been operating in production without any material deficiency for sixty (60) consecutive days. If a material defect is discovered within the sixty-day period, a mutually agreeable resolution will be determined at that time. If the State elects to defer putting a Custom Software Deliverable into live production for its own reasons, not based on



concerns about outstanding material deficiencies in the Deliverable, the State shall nevertheless grant Final Acceptance of the Project.

This section is limited to the extent of items listed in section 1.101 (In Scope), section 1.104 Work and Deliverables, section 1.500 Acceptance and associated assumptions stated in this statement of work.

2.260 Ownership

2.261 Ownership of Work Product by State

The State owns all Deliverables, as they are work made for hire by the Contractor for the State. The State owns all United States and international copyrights, trademarks, patents or other proprietary rights in the Deliverables.

2.262 Vesting of Rights

With the sole exception of any preexisting licensed works identified in the SOW, the Contractor assigns, and upon creation of each Deliverable automatically assigns, to the State, ownership of all United States and international copyrights, trademarks, patents, or other proprietary rights in each and every Deliverable, whether or not registered by the Contractor, insofar as any the Deliverable, by operation of law, may not be considered work made for hire by the Contractor for the State. From time to time upon the State's request, the Contractor must confirm the assignment by execution and delivery of the assignments, confirmations of assignment, or other written instruments as the State may request. The State may obtain and hold in its own name all copyright, trademark, and patent registrations and other evidence of rights that may be available for Deliverables.

2.263 Rights in Data

The State is the owner of all data made available by the State to the Contractor or its agents, Subcontractors or representatives under the Contract. The Contractor will not use the State's data for any purpose other than providing the Services, nor will any part of the State's data be disclosed, sold, assigned, leased or otherwise disposed of to the general public or to specific third parties or commercially exploited by or on behalf of the Contractor. No employees of the Contractor, other than those on a strictly need-to-know basis, have access to the State's data. Contractor will not possess or assert any lien or other right against the State's data. Without limiting the generality of this Section, the Contractor must only use personally identifiable information as strictly necessary to provide the Services and must disclose the information only to its employees who have a strict need-to-know the information. The Contractor must comply at all times with all laws and regulations applicable to the personally identifiable information.

The State is the owner of all State-specific data under the Contract. The State may use the data provided by the Contractor for any purpose. The State will not possess or assert any lien or other right against the Contractor's data. Without limiting the generality of this Section, the State may use personally identifiable information only as strictly necessary to utilize the Services and must disclose the information only to its employees who have a strict need to know the information, except as provided by law. The State must comply at all times with all laws and regulations applicable to the personally identifiable information. Other material developed and provided to the State remains the State's sole and exclusive property.

2.264 Ownership of Materials

The State and the Contractor will continue to own their respective proprietary technologies developed before entering into the Contract. Any hardware bought through the Contractor by the State, and paid for by the State, will be owned by the State. Any software licensed through the Contractor and sold to the State, will be licensed directly to the State.



2.270 State Standards

2.271 Existing Technology Standards

The Contractor will adhere to all existing standards as described within the comprehensive listing of the State's existing technology standards at <http://www.michigan.gov/dit>.

This section is limited to the extent of items listed in section 1.100 (Scope), 1.103, 1.104 and associated assumptions stated in this statement of work. Also see section 1.500.

2.272 Acceptable Use Policy

To the extent that Contractor has access to the State computer system, Contractor must comply with the State's Acceptable Use Policy, see <http://www.michigan.gov/ditservice>. All Contractor employees must be required, in writing, to agree to the State's Acceptable Use Policy before accessing the State system. The State reserves the right to terminate Contractor's access to the State system if a violation occurs.

2.273 Systems Changes

Contractor is not responsible for and not authorized to make changes to any State systems without written authorization from the Project Manager. Any changes Contractor makes to State systems with the State's approval must be done according to applicable State procedures, including security, access and configuration management procedures.

2.280 Extended Purchasing

2.281 MiDEAL (Michigan Delivery Extended Agreements Locally

Public Act 431 of 1984 permits DMB to provide purchasing services to any city, village, county, township, school district, intermediate school district, non-profit hospital, institution of higher education, community, or junior college. A current listing of approved program members is available at: www.michigan.gov/buymichiganfirst. Unless otherwise stated, the Contractor must ensure that the non-state agency is an authorized purchaser before extending the Contract pricing.

The Contractor will supply Contract Services and equipment to these local governmental agencies at the established State of Michigan contract prices and terms to the extent applicable and where available. The Contractor must send its invoices will be submitted to and pay the local unit of government on a direct and individual basis.

To the extent that authorized local units of government purchase quantities of Services and/or equipment under this Contract, the quantities of Services and/or equipment purchased will be included in determining the appropriate rate wherever tiered pricing based on quantity is provided.

2.282 State Employee Purchases / RESERVED

2.290 Environmental Provision /RESERVED

2.300 Deliverables

2.301 Software

A list of the items of software the State is required to purchase for execution the Contract is attached. The list includes all software required to complete the Contract and make the Deliverables operable; if any additional software is required in order for the Deliverables to meet the requirements of this Contract, such software shall be provided to the State by Contractor at no additional charge (except where agreed upon and specified in a Statement of Work or Contract Change Notice). The attachment also identifies certain items of software to be provided by the State.

**2.302 Hardware – Currently “Out of Scope” for this Contract**

A list of the items of hardware the State is required to purchase for execution the Contract is attached. The list includes all hardware required to complete the Contract and make the Deliverables operable; if any additional hardware is required in order for the Deliverables to meet the requirements of this Contract, such hardware shall be provided to the State by Contractor at no additional charge (except where agreed upon and specified in a Contract Change Notice). The attachment also identifies certain items of hardware to be provided by the State.

2.303 Equipment to be New – Currently “Out of Scope” for this Contract

If applicable, all equipment provided under this Contract by Contractor shall be new where Contractor has knowledge regarding whether the equipment is new or assembled from new or serviceable used parts that are like new in performance or has the option of selecting one or the other. Equipment that is assembled from new or serviceable used parts that are like new in performance is acceptable where Contractor does not have knowledge or the ability to select one or other, unless specifically agreed otherwise in writing by the State.

2.304 Equipment to be New and Prohibited Products – Currently “Out of Scope” for this Contract

The State will not accept salvage, distressed, outdated or discontinued merchandise. Shipping of such merchandise to any State agency, as a result of an order placed against the Contract, shall be considered default by the Contractor of the terms and conditions of the Contract and may result in cancellation of the Contract by the State. The brand and product number offered for all items shall remain consistent for the term of the Contract, unless Purchasing Operations has approved a change order pursuant to **Section 2.024**.

2.310 Software Warranties**2.311 Performance Warranty**

The Contractor represents and warrants that Deliverables, after Final Acceptance, will perform and operate in compliance with the requirements and other standards of performance contained in this Contract (including all descriptions, specifications and drawings made a part of the Contract) for a period of (90) ninety days. In the event of a breach of this warranty, Contractor will promptly correct the affected Deliverable(s) at no charge to the State.

This section is limited to the extent of items listed in section 1.101 (In Scope) and section 1.104 Work and Deliverables and associated assumptions stated in this statement of work.

2.312 No Surreptitious Code Warranty

The Contractor represents and warrants that no copy of licensed Software provided to the State contains or will contain any Self-Help Code or any Unauthorized Code as defined below. This warranty is referred to in this Contract as the “No Surreptitious Code Warranty.”

As used in this Contract, “Self-Help Code” means any back door, time bomb, drop dead device, or other software routine designed to disable a computer program automatically with the passage of time or under the positive control of a person other than the licensee of the software. Self-Help Code does not include Software routines in a computer program, if any, designed to permit an owner of the computer program (or other person acting by authority of the owner) to obtain access to a licensee’s computer system(s) (e.g. remote access via modem) for purposes of maintenance or technical support.

As used in this Contract, “Unauthorized Code” means any virus, Trojan horse, spyware, worm or other Software routines or components designed to permit unauthorized access to disable, erase, or otherwise harm software, equipment, or data; or to perform any other such actions. The term Unauthorized Code does not include Self-Help Code. Unauthorized Code does not include Software routines in a computer program, if any, designed to permit an owner of the computer program (or other



person acting by authority of the owner) to obtain access to a licensee's computer system(s) (e.g. remote access via modem) for purposes of maintenance or technical support.

In addition, Contractor will use up-to-date commercial virus detection software to detect and remove any viruses from any software prior to delivering it to the State.

2.313 Calendar Warranty

The Contractor represents and warrants that all software for which the Contractor either sells or licenses to the State of Michigan and used by the State prior to, during or after the calendar year 2000, includes or shall include, at no added cost to the State, design and performance so the State shall not experience software abnormality and/or the generation of incorrect results from the software, due to date oriented processing, in the operation of the business of the State of Michigan.

The software design, to insure calendar year rollover compatibility, shall include, but is not limited to: data structures (databases, data files, etc.) that provide 4-digit date century; stored data that contain date century recognition, including, but not limited to, data stored in databases and hardware device internal system dates; calculations and program logic (e.g., sort algorithms, calendar generation, event recognition, and all processing actions that use or produce date values) that accommodates same century and multi-century formulas and date values; interfaces that supply data to and receive data from other systems or organizations that prevent non-compliant dates and data from entering any State system; user interfaces (i.e., screens, reports, etc.) that accurately show 4 digit years; and assurance that the year 2000 shall be correctly treated as a leap year within all calculation and calendar logic.

2.314 Third-party Software Warranty

The Contractor represents and warrants that it will disclose the use or incorporation of any third-party software into the Deliverables. At the time of Delivery, the Contractor shall provide in writing the name and use of any Third-party Software, including information regarding the Contractor's authorization to include and utilize such software. The notice shall include a copy of any ownership agreement or license that authorizes the Contractor to use the Third-party Software.

2.315 Physical Media Warranty

Contractor represents and warrants that each licensed copy of the Software provided by the Contractor is free from physical defects in the media that tangibly embodies the copy. This warranty does not apply to defects discovered more than (30) thirty days after that date of Final Acceptance of the Software by the State. This warranty does not apply to defects arising from acts of Excusable Failure. If the Contractor breaches this warranty, then the State shall be entitled to replacement of the non-compliant copy by Contractor, at Contractor's expense (including shipping and handling).

2.320 Software Licensing

2.321 Cross-License, Deliverables Only, License to Contractor

The State grants to the Contractor, the royalty-free, world-wide, non-exclusive right and license under any Deliverable now or in the future owned by the State, or with respect to which the State has a right to grant such rights or licenses, to the extent required by the Contractor to market the Deliverables and exercise its full rights in the Deliverables, including, without limitation, the right to make, use and sell products and services based on or incorporating such Deliverables.

2.322 Cross-License, Deliverables and Derivative Work, License to Contractor

The State grants to the Contractor, the royalty-free, world-wide, non-exclusive right and license under any Deliverable and/or Derivative Work now or in the future owned by the State, or with respect to which the State has a right to grant such rights or licenses, to the extent required by the Contractor to market the Deliverables and/or Derivative Work and exercise its full rights in the Deliverables and/or Derivative Work, including, without limitation, the right to make, use and sell products and services based on or incorporating such Deliverables and/or Derivative Work.



2.323 License Back to the State

Unless otherwise specifically agreed to by the State, before initiating the preparation of any Deliverable that is a Derivative of a preexisting work, the Contractor shall cause the State to have and obtain the irrevocable, nonexclusive, worldwide, royalty-free right and license to (1) use, execute, reproduce, display, perform, distribute internally or externally, sell copies of, and prepare Derivative Works based upon all preexisting works and Derivative Works thereof, and (2) authorize or sublicense others from time to time to do any or all of the foregoing.

2.324 License Retained by Contractor

Contractor grants to the State a non-exclusive, royalty-free, site-wide, irrevocable, transferable license to use the Software and related documentation according to the terms and conditions of this Contract. For the purposes of this license, "site-wide" includes any State of Michigan office regardless of its physical location.

The State may modify the Software and may combine such with other programs or materials to form a derivative work. The State will own and hold all copyright, trademarks, patent and other intellectual property rights in any derivative work, excluding any rights or interest in Software other than those granted in this Contract.

The State may copy each item of Software to multiple hard drives or networks unless otherwise agreed by the parties.

The State will make and maintain no more than one archival copy of each item of Software, and each copy will contain all legends and notices and will be subject to the same conditions and restrictions as the original. The State may also make copies of the Software in the course of routine backups of hard drive(s) for the purpose of recovery of hard drive contents.

In the event that the Contractor shall, for any reason, cease to conduct business, or cease to support the Software, the State shall have the right to convert these licenses into perpetual licenses, with rights of quiet enjoyment, but subject to payment obligations not to exceed the then current rates.

2.325 Pre-existing Materials for Custom Software Deliverables

Neither Contractor nor any of its Subcontractors shall incorporate any preexisting materials (including Standard Software) into Custom Software Deliverables or use any pre-existing materials to produce Custom Software Deliverables if such pre-existing materials will be needed by the State in order to use the Custom Software Deliverables unless (i) such pre-existing materials and their owners are identified to the State in writing and (ii) such pre-existing materials are either readily commercially available products for which Contractor or its Subcontractor, as the case may be, has obtained a license (in form and substance approved by the State) in the name of the State, or are materials that Contractor or its Subcontractor, as the case may be, has the right to license to the State and has licensed to the State on terms and conditions approved by the State prior to using such pre-existing materials to perform the Services.

2.330 Source Code Escrow

2.331 Definition

"Source Code Escrow Package" shall mean:

- a. A complete copy in machine-readable form of the source code and executable code of the Licensed Software, including any updates or new releases of the product;
- b. A complete copy of any existing design documentation and user documentation, including any updates or revisions; and/or
- c. Complete instructions for compiling and linking every part of the source code into executable code for purposes of enabling verification of the completeness of the source code as provided below.



Such instructions shall include precise identification of all compilers, library packages, and linkers used to generate executable code.

2.332 Delivery of Source Code into Escrow

Contractor shall deliver a Source Code Escrow Package to the Escrow Agent, pursuant to the Escrow Contract, which shall be entered into on commercially reasonable terms subject to the provisions of this Contract within (30) thirty days of the execution of this Contract.

2.333 Delivery of New Source Code into Escrow

If at anytime during the term of this Contract, the Contractor provides a maintenance release or upgrade version of the Licensed Software, Contractor shall within ten (10) days deposit with the Escrow Agent, in accordance with the Escrow Contract, a Source Code Escrow Package for the maintenance release or upgrade version, and provide the State with notice of the delivery.

2.334 Verification

The State reserves the right at any time, but not more than once a year, either itself or through a third party contractor, upon thirty (30) days written notice, to seek verification of the Source Code Escrow Package.

2.335 Escrow Fees

The Contractor will pay all fees and expenses charged by the Escrow Agent.

2.336 Release Events

The Source Code Escrow Package may be released from escrow to the State, temporarily or permanently, upon the occurrence of one or more of the following:

- a. The Contractor becomes insolvent, makes a general assignment for the benefit of creditors, files a voluntary petition of bankruptcy, suffers or permits the appointment of a receiver for its business or assets, becomes subject to any proceeding under bankruptcy or insolvency law, whether domestic or foreign;
- b. The Contractor has wound up or liquidated its business voluntarily or otherwise and the State has reason to believe that such events will cause the Contractor to fail to meet its warranties and maintenance obligations in the foreseeable future;
- c. The Contractor voluntarily or otherwise discontinues support of the provided products or fails to support the products in accordance with its maintenance obligations and warranties.

2.337 Release Event Procedures

If the State desires to obtain the Source Code Escrow Package from the Escrow Agent upon the occurrence of an Event in this **Section**, then:

- a. The State shall comply with all procedures in the Escrow Contract;
- b. The State shall maintain all materials and information comprising the Source Code Escrow Package in confidence in accordance with this Contract;
- c. If the release is a temporary one, then the State shall promptly return all released materials to Contractor when the circumstances leading to the release are no longer in effect.

2.338 License

Upon release from the Escrow Agent pursuant to an event described in this **Section**, the Contractor automatically grants the State a non-exclusive, irrevocable license to use, reproduce, modify, maintain, support, update, have made, and create Derivative Works. Further, the State shall have the right to use the Source Code Escrow Package in order to maintain and support the Licensed Software so that it can be used by the State as set forth in this Contract.

**2.339 Derivative Works**

Any Derivative Works to the source code released from escrow that are made by or on behalf of the State shall be the sole property of the State. The State acknowledges that its ownership rights are limited solely to the Derivative Works and do not include any ownership rights in the underlying source code.