**CONTRACT CHANGE NOTICE**

Change Notice Number **3**

to

Contract Number **071B3200099**

**CONTRACT SUMMARY**

<table>
<thead>
<tr>
<th>ITEM BANK SYSTEM LICENSE &amp; SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INITIAL EFFECTIVE DATE</strong></td>
</tr>
<tr>
<td>June 21, 2013</td>
</tr>
</tbody>
</table>

**PAYMENT TERMS**

<table>
<thead>
<tr>
<th>ALTERNATE PAYMENT OPTIONS</th>
<th><strong>DELIVERY TIMEFRAME</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ P-Card</td>
<td>☐ PRC</td>
</tr>
<tr>
<td>☐ Yes</td>
<td>☒ No</td>
</tr>
</tbody>
</table>

**MINIMUM DELIVERY REQUIREMENTS**

<table>
<thead>
<tr>
<th>DESCRIPTION OF CHANGE NOTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPTION</strong></td>
</tr>
<tr>
<td>☒</td>
</tr>
</tbody>
</table>

**CURRENT VALUE** | **VALUE OF CHANGE NOTICE** | **ESTIMATED AGGREGATE CONTRACT VALUE**
--- | --- | ---
$1,500,000.00 | $750,000.00 | $2,250,000.00 |

**DESCRIPTION**

Effective 12/11/2018, this contract is exercising the first two of four option years and is increased by $750,000 per the attached documentation. The program manager has changed to Andrew Middlestead. The contract administrator has changed to Marcy Sims. All other terms, condition, specification and pricing remain the same. Per contractor, agency, DTMB Procurement and State Administrative board approval on December 11, 2018.
1. Overview

The Michigan Item Bank System (IBS) is a joint computer system development project between the State of Michigan Department of Education (MDE) and Measurement Incorporated (MI). As spelled out in the original contract all system development that is deemed mutually beneficial by both parties is split as per contractual agreement.

The effort outlined in this document represents the ongoing development effort for the IBS. The work can be broken into the following categories:

- Enhancements
- Bug Fixes
- Technical Support
## 2. Ongoing Development Efforts In Detail

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Category</th>
<th>Category Description</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Enhancements</td>
<td>New system functionality or improvements in existing system functionality identified as required by MDE.</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Item Cluster Development</td>
<td>Completion of the initial effort to create a new test question (Item) type. A limited number of initial enhancements remain outstanding.</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Psychometrics</td>
<td>New statistical modeling requirements.</td>
<td></td>
</tr>
<tr>
<td>1.2.1</td>
<td>Psychometrics</td>
<td>Statistical modeling for item clusters.</td>
<td></td>
</tr>
<tr>
<td>1.2.2</td>
<td>Psychometrics</td>
<td>Statistics for new scoring model for TE items.</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>SQL Server Upgrade</td>
<td>The current SQL service pack will lose technical support in June of 2019. The IBS Server must be upgraded prior to the discontinuation of the service pack support.</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Audio File Uploads</td>
<td>Provide a process for systematic uploading of audio files into the IBS that are generated by outside vendors.</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Ongoing Targeted Efforts</td>
<td>This category includes all lower priority enhancements that are generally maintained in a change control or ticket backlog.</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>BUG Fixes</td>
<td>Application defects identified by both MI and MDE staff that require system development to resolve. Bug fixes either identified as needing immediate attention or for future releases are maintained through the change control or ticket backlog.</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>Technical Support</td>
<td>Work completed by MI staff that is not considered direct system development but is still required to ensure system development is accomplished.</td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>TAG/RPG Support</td>
<td>MI staff support to manage the ticket backlog inventory and develop system release plans.</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>Systems Support</td>
<td>MI Staff support of MDE staff IBS inquiries, which include such activities as explaining and troubleshooting issues system functionality.</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>Technical Documentation</td>
<td>MI Staff support to update and create technical documents that help IBS users better understand system functionality.</td>
<td></td>
</tr>
</tbody>
</table>
### 3. Definition Of Work

<table>
<thead>
<tr>
<th>Task</th>
<th>Effort (hours)</th>
<th>Hourly Rate</th>
<th>Cost</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements Gathering</td>
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<td>$80</td>
<td>$16,000</td>
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<tr>
<td></td>
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<td>$105</td>
<td>$8,400</td>
<td>Enterprise Architect</td>
</tr>
<tr>
<td>Design &amp; Develop</td>
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<td>$80</td>
<td>$8,000</td>
<td>Business Analyst</td>
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<td>$95</td>
<td>$3,800</td>
<td>Project Manager</td>
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<td></td>
<td>100</td>
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<td></td>
<td>500</td>
<td>$95</td>
<td>$47,500</td>
<td>Sr. Developer</td>
</tr>
<tr>
<td></td>
<td>4,000</td>
<td>$80</td>
<td>$320,000</td>
<td>Developer(s)</td>
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<tr>
<td>QA Testing</td>
<td>80</td>
<td>$80</td>
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<td>Business Analyst</td>
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<tr>
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<td>80</td>
<td>$95</td>
<td>$7,600</td>
<td>Project Manager</td>
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<td>Network Operations</td>
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<td>System Documentation</td>
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<td>$70</td>
<td>$2,800</td>
<td>Technical Writer</td>
</tr>
<tr>
<td></td>
<td><strong>9080</strong></td>
<td></td>
<td><strong>$750,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Task** | **Cost**
---|---
Requirements Gathering (RG) | $32,000
Design & Develop (D&D) | $389,800
QA Testing (QA) | $314,000
Production Implementation (PI) | $8,200
System Documentation (SD) | $6,000

**Total** | **$750,000**

RG – Working with the customer (Michigan Department of Education - Office of Educational Assessment and Accountability – OEAA) to identify the requirements for the system upgrades and enhancements based on OEAA’s requests for work.
D&D – Contractor will design and develop the computer code needed to create the functional changes or enhancements identified by OEAA.

QA – Quality Assurance testing is a multi-step process first performed by the contractor but includes user acceptance testing performed by OEAA staff but monitored by the contractor.

PI – The act of adding the new computer code into the existing application completed by the database administrators at the network operations center within the contractor’s organization.

SD – This will consist of two efforts in this FY. The first is the standard documentation provided to OEAA of the system enhancements including the task tracking system, functional requirement documents, and a limited number of technical documents. The second will be an update of the original technical guide for system operations.

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>System Development Schedule</th>
<th>Associated Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>Oct</td>
<td>Test Development Redesign</td>
<td>RG, D&amp;D, QA, PI, SD</td>
</tr>
<tr>
<td>2018</td>
<td>Nov</td>
<td>Test Development Redesign</td>
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</tr>
<tr>
<td>2018</td>
<td>Dec</td>
<td>Test Development Redesign</td>
<td>RG, D&amp;D, QA, PI, SD</td>
</tr>
<tr>
<td>2019</td>
<td>Jan</td>
<td>Composition Enhancements</td>
<td>RG, D&amp;D, QA, PI, SD</td>
</tr>
<tr>
<td>2019</td>
<td>Feb</td>
<td>Statistics Enhancements</td>
<td>RG, D&amp;D, QA, PI, SD</td>
</tr>
<tr>
<td>2019</td>
<td>Mar</td>
<td>SQL Server Upgrade</td>
<td>RG, D&amp;D, QA, PI, SD</td>
</tr>
<tr>
<td>2019</td>
<td>Apr</td>
<td>SQL Server Upgrade</td>
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</tr>
<tr>
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<td>May</td>
<td>SQL Server Upgrade</td>
<td>RG, D&amp;D, QA, PI, SD</td>
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<td>Jun</td>
<td>Item Cluster Final Work</td>
<td>RG, D&amp;D, QA, PI, SD</td>
</tr>
<tr>
<td>2019</td>
<td>Jul</td>
<td>Item Cluster Final Work</td>
<td>RG, D&amp;D, QA, PI, SD</td>
</tr>
<tr>
<td>2019</td>
<td>Aug</td>
<td>Audio File Upload Enhancement</td>
<td>RG, D&amp;D, QA, PI, SD</td>
</tr>
<tr>
<td>2019</td>
<td>Sep</td>
<td>Test Development Enhancement</td>
<td>RG, D&amp;D, QA, PI, SD</td>
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</table>
**CONTRACT CHANGE NOTICE**

Change Notice Number **2**

to

Contract Number **071B3200099C**

<table>
<thead>
<tr>
<th>CONTRACTOR</th>
<th>STATE</th>
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<tbody>
<tr>
<td>MEASUREMENT INCORPORATED</td>
<td>Program Manager</td>
</tr>
<tr>
<td>423 Morris Street</td>
<td>Tom Korkoske</td>
</tr>
<tr>
<td>Durham, NC 27701</td>
<td>517-241-4431</td>
</tr>
<tr>
<td>Henry Scherich</td>
<td><a href="mailto:KorkoskeT@michigan.gov">KorkoskeT@michigan.gov</a></td>
</tr>
<tr>
<td>919-683-2413</td>
<td>Contract Administrator</td>
</tr>
<tr>
<td><a href="mailto:hscherich@measinc.com">hscherich@measinc.com</a></td>
<td>Mike Breen</td>
</tr>
<tr>
<td>*******4255</td>
<td>(517) 284-7002</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:breenm@michigan.gov">breenm@michigan.gov</a></td>
</tr>
</tbody>
</table>

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**CONTRACT SUMMARY**

**ITEM BANK SYSTEM LICENSE & SERVICES**

<table>
<thead>
<tr>
<th>INITIAL EFFECTIVE DATE</th>
<th>INITIAL EXPIRATION DATE</th>
<th>INITIAL AVAILABLE OPTIONS</th>
<th>EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW</th>
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<tbody>
<tr>
<td>June 21, 2013</td>
<td>June 29, 2019</td>
<td>4 - 1 Year</td>
<td>June 20, 2019</td>
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<table>
<thead>
<tr>
<th>PAYMENT TERMS</th>
<th>DELIVERY TIMEFRAME</th>
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</thead>
<tbody>
<tr>
<td>P-Card</td>
<td>Direct Voucher (DV)</td>
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<tr>
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<table>
<thead>
<tr>
<th>ALTERNATE PAYMENT OPTIONS</th>
<th>EXTENDED PURCHASING</th>
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<tr>
<td>☐ Direct Voucher (DV)</td>
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<tr>
<td>☐ Other</td>
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**MINIMUM DELIVERY REQUIREMENTS**

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**DESCRIPTION OF CHANGE NOTICE**

<table>
<thead>
<tr>
<th>OPTION</th>
<th>LENGTH OF OPTION</th>
<th>EXTENSION</th>
<th>LENGTH OF EXTENSION</th>
<th>REVISED EXP. DATE</th>
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<tr>
<td>☐</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CURRENT VALUE</th>
<th>VALUE OF CHANGE NOTICE</th>
<th>ESTIMATED AGGREGATE CONTRACT VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$750,000.00</td>
<td>$750,000.00</td>
<td>$1,500,000.00</td>
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</table>

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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</table>

Effective October 2nd, this contract is increased by $750,000 per the attached documentation. The additional funding allows to continue NGSS implementation and maintain the required system maintenance. Program Manager has changed to Tom Korkoske. The contract administrator has changed to Michael Breen. All other terms, condition, specification and pricing remain the same. Per contractor, agency, DTMB Procurement and State Administrative board approval on October 24, 2017.
MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
IT SERVICES
STATEMENT OF WORK

Project Title: Item Bank System License and Services – Michigan Department of Education (MDE)

Period of Coverage: 10/01/2017 – 06-20-2019

Requesting Department: Michigan Department of Education
Date: 10/30/2017

Agency Project Manager: Tom Korkoske
Phone: 517-335-1696

DTMB Project Manager: Michael Breen
Phone: 517-284-7002

BACKGROUND: The intent of this change is to add funds for additional development work for the Michigan Item Bank System in support of online testing. Funds will be allocated to staffing (developers, QA, and support) at the rates identified in contract 071B3200099. Hours per resource are estimates based on effort needed for system enhancements.

PROJECT OBJECTIVE: To provide additional development to the Michigan Item Bank System.

SCOPE OF WORK, TASKS and DELIVERABLES:

The Measurement Inc team will work with MI MDE to provide the following deliverables:

- Computer Adaptive Testing (CAT)
- Technology Enhanced items, including TE interactions and user interface enhancements for the development and review of TE items, complaints, with the Question and Test Interoperability (QTI) specification
- Online testing accommodations such as glossing and translation, compliant with the Accessible Portable Item Protocol (APIP) specification.
- Any further enhancements needed to comply with legislative changes or business requirement changes.

OUT OF SCOPE:

Further request to modify the Item Bank System beyond the scope outlined above (substantive or cosmetic), requests for additional quarterly runs, further customization of metrics, or further changes required due to statute modifications that may be implemented prior to go live of this request are all considered out of scope.

PROJECT CONTROL AND REPORTS:

A bi-weekly progress report must be submitted to the Agency and DTMB Project Managers throughout the life of this project. This report may be submitted with the billing invoice. Each bi-weekly progress report must contain the following:

1. **Hours:** Indicate the number of hours expended during the past two weeks, and the cumulative total to date for the project. Also, state whether the remaining hours are sufficient to complete the project.

2. **Accomplishments:** Indicate what was worked on and what was completed during the current reporting period.

3. **Funds:** Indicate the amount of funds expended during the current reporting period, and the
cumulative total to date for the project.

SPECIFIC DEPARTMENT STANDARDS:

Agency standards, if any, in addition to DTMB standards.

COST SCHEDULE:

<table>
<thead>
<tr>
<th>Task</th>
<th>Effort (hours)</th>
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<td>$ 80</td>
<td>$16,000</td>
<td>Business Analyst</td>
</tr>
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<td>80</td>
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<td>Project Manager</td>
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<tr>
<td>Total</td>
<td>9,080</td>
<td></td>
<td>$750,000</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Payment will be based upon: Satisfactory acceptance of each Deliverable

Payment will be made on a time and material basis. DTMB will pay CONTRACTOR upon receipt of properly completed invoice(s) which shall be submitted to the billing address on the State issued purchase order not more often than monthly. DTMB Accounts Payable area will coordinate obtaining Agency and DTMB Project Manager approvals. All invoices should reflect actual work completed by payment date, and must be approved by the Agency and DTMB Project Manager prior to payment. The invoices shall describe and document to the State’s satisfaction a description of the work performed, the progress of the project, and fees. When expenses are invoiced, receipts will need to be provided along with a detailed breakdown of each type of expense.

Payment shall be considered timely if made by the DTMB within forty-five (45) days after receipt of properly completed invoices.

EXPENSES:

The State will NOT pay for any travel expenses, including hotel, mileage, meals, parking, etc.
PROJECT CONTACTS:

The designated Agency Project Manager is:

Tom Korkoske  
KorkoskeT@michigan.gov  
Michigan Department of Education  
Office of Accountability and Business Operations  
517-373-8629

The designated DTMB Project Manager is:

Michael Breen  
BreenM@michigan.gov  
Department of Technology, Management and Budget  
Procurement  
517-284-7002

LOCATION OF WHERE THE WORK IS TO BE PERFORMED:

Most of the activities related to this project will be performed out of the vendor’s offices located in Durham, NC. Portions of the work may be done in the vendor’s other office locations.

EXPECTED CONTRACTOR WORK HOURS AND CONDITIONS:

Work hours are not to exceed eight (8) hours a day, forty (40) hours a week. Normal working hours of 8:00 am to 5:00 pm are to be observed unless otherwise agreed to in writing.

No overtime will be permitted. State will not reimburse any travel cost incurred by Contractor.
STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PROCUREMENT
P.O. BOX 30026, LANSING, MI 48909
OR
525 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 1

to

CONTRACT NO. 071B3200099

between

THE STATE OF MICHIGAN

and

Measurement, Inc.
423 Morris Street
Durham, NC

NAME & ADDRESS OF CONTRACTOR

Henry Scherich
hscherich@measinc.com

PRIMARY CONTACT

PHONE

CONTRACTOR’S TAX ID NO.
(LAST FOUR DIGITS ONLY)

(919)683-2413

EMAIL

STATE CONTACTS

AGENCY

NAME

PHONE

EMAIL

PROGRAM MANAGER / CCI

MDE

Doug Collier
517-241-1640
collierd1@michigan.gov

CONTRACT ADMINISTRATOR

DTMB

David Hatch
517-284-7044
hatchd@michigan.gov

CONTRACT SUMMARY

DESCRIPTION: Item Bank System License and Services – Michigan Department of Education (MDE)

INITIAL EFFECTIVE DATE

INITIAL EXPIRATION DATE

INITIAL AVAILABLE OPTIONS

EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW

June 21, 2013

June 20, 2019

4, 1-year

June 20, 2019

PAYMENT TERMS

DELIVERY TIMEFRAME

NA

NA

ALTERNATE PAYMENT OPTIONS

☐ P-card

☐ Direct Voucher (DV)

☐ Other

☐ Yes

☒ No

EXTENDED PURCHASING

MINIMUM DELIVERY REQUIREMENTS

DESCRIPTION OF CHANGE NOTICE

EXERCISE OPTION?

LENGTH OF OPTION

EXERCISE EXTENSION?

LENGTH OF EXTENSION

REVISED EXP. DATE

☐

☐

☐

☐

CURRENT VALUE

VALUE OF CHANGE NOTICE

ESTIMATED AGGREGATE CONTRACT VALUE

$0.00

$750,000.00

$750,000.00

DESCRIPTION: Effective September 11, 2015, this contract is increased by $750,000.00 for per the attached change request and requirements. The addition of this money allows MDE to expand Item Bank to meet the legal requirements for transitioning to online testing. Contract Administrator is changed to David Hatch. All other terms, conditions, specifications, and pricing remain the same. Per contractor and agency agreement, DTMB Procurement approval, and State Administrative Board approval on September 10, 2015.
A. General Information

<table>
<thead>
<tr>
<th>Project ID/Acronym:</th>
<th>Item Bank</th>
<th>Date:</th>
<th>08/03/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlling Agency:</td>
<td></td>
<td>Modification Date:</td>
<td>08/03/2015</td>
</tr>
<tr>
<td>Prepared by:</td>
<td>MDE-DAS</td>
<td>Control Number (from Control Log):</td>
<td>00001</td>
</tr>
</tbody>
</table>

Privacy Information

This document may contain information of a sensitive nature. This information should not be given to persons other than those who are involved with this system/project or who will become involved during its lifecycle.

Change Control

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Author</th>
<th>Section(s)</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Pietro Semilero</td>
<td></td>
<td>Add funds to support development for online testing: computer adaptive testing, technology enhanced items, accommodations.</td>
</tr>
</tbody>
</table>
B. Requestor Information

Proposed Change Description and References

The intent of this change is to add funds to support additional development in the Michigan Item Bank System in support of online testing. Funds will be spent on staffing (developers, QA, and support) at the rates and the cost identified in contract 071B3200099. Costs and hours estimated based on effort needed for previous system enhancements. It should be noted for pricing that, according to the “Date” of this change request (see Section A.) and the expected completion date, we are in the third and fourth year of the contract.

Additional development for online testing will include:
  o Computer Adaptive Testing (CAT)
  o Technology Enhanced (TE) Items, including TE interactions and user interface enhancements for the development and review of TE items, compliant with the Question and Test Interoperability (QTI) specification
  o Online testing accommodations such as glossing and translation, compliant with the Accessible Portable Item Protocol (APIP) specification

Impact of Not Implementing Proposed Change

- Limited online functionality
- Lack of accommodations in online items

Alternatives

- None

C. Initial Review Results of the Change Request

<table>
<thead>
<tr>
<th>Initial Review Date:</th>
<th>07/09/2015</th>
<th>Assigned to:</th>
<th>Pietro Semifero</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approve for Impact Analysis: Full schedule</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reject</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defer Until:</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reason:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D. Initial Impact Analysis
Baselines Affected

- Additional lines of code added to software base

<table>
<thead>
<tr>
<th>Cost/Schedule Impact Analysis Required?</th>
<th>X</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Impact on Cost

- Estimated 18,650 hours of effort associated with the task of requirements gathering, development, testing, documenting, and project managing
- Total Estimated Cost $1,415,500
- State of Michigan Estimated Cost $750,000 (53% of Total Cost).

<table>
<thead>
<tr>
<th>Business Analyst</th>
<th>570 hours</th>
<th>(Requirements, Development, QA and Manual Support)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sr. Developer</td>
<td>660 hours</td>
<td>(Requirements, Development, QA Support and Code Promotion)</td>
</tr>
<tr>
<td>Developer</td>
<td>9,500 hours</td>
<td>(Development and QA Support)</td>
</tr>
<tr>
<td>QA Analyst</td>
<td>6,700 hours</td>
<td>(QA Support)</td>
</tr>
<tr>
<td>Project Manager</td>
<td>590 hours</td>
<td>(Project planning and Oversight)</td>
</tr>
<tr>
<td>Enterprise Architect</td>
<td>80 hours</td>
<td>(Technical guidance)</td>
</tr>
<tr>
<td>Technical Writer</td>
<td>500 hours</td>
<td>(Technical guidance)</td>
</tr>
<tr>
<td>Director of Network Operations</td>
<td>50 hours</td>
<td>(Code Promotion)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
<th>Effort (hours)</th>
<th>Hourly Rate</th>
<th>Cost</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements Gathering</td>
<td>360</td>
<td>75</td>
<td>27,000</td>
<td>Business Analyst</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>90</td>
<td>9,000</td>
<td>Sr. Developer</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>90</td>
<td>3,600</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Design &amp; Develop</td>
<td>40</td>
<td>75</td>
<td>3,000</td>
<td>Business Analyst</td>
</tr>
<tr>
<td></td>
<td>400</td>
<td>90</td>
<td>36,000</td>
<td>Sr. Developer</td>
</tr>
<tr>
<td></td>
<td>8,700</td>
<td>75</td>
<td>652,500</td>
<td>Developer</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>100</td>
<td>8,000</td>
<td>Enterprise Architect</td>
</tr>
<tr>
<td>QA Test</td>
<td>120</td>
<td>75</td>
<td>9,000</td>
<td>Business Analyst</td>
</tr>
<tr>
<td></td>
<td>6,600</td>
<td>75</td>
<td>495,000</td>
<td>QA Analyst</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>90</td>
<td>9,000</td>
<td>Sr. Developer</td>
</tr>
<tr>
<td></td>
<td>800</td>
<td>75</td>
<td>60,000</td>
<td>Developer</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>90</td>
<td>5,400</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Production Implementation</td>
<td>60</td>
<td>90</td>
<td>5,400</td>
<td>Sr. Developer</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>90</td>
<td>3,600</td>
<td>Project Manager</td>
</tr>
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<td></td>
<td>50</td>
<td>95</td>
<td>4,750</td>
<td>Network Operations</td>
</tr>
<tr>
<td>System Documentation</td>
<td>500</td>
<td>65</td>
<td>32,500</td>
<td>Technical Writer</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>75</td>
<td>3,750</td>
<td>Business Analyst</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>90</td>
<td>4,500</td>
<td>Project Manager</td>
</tr>
</tbody>
</table>
Impact on Schedule

- The estimated date of completion for technology enhanced testing is January 1, 2016.
- The estimated date of completion for glossing and translation is June 1, 2016.
- The estimated date of completion for computer adaptive testing is September 1, 2016.
- Features will be added progressively in an iterative development process.

Impact on Resources

- Resource requirements:
  - Project Manager
  - Enterprise Architect
  - Business Analyst
  - 2 Sr. Developers
  - 4 Developers
  - 2 QA Analysts
  - Director of Network Operations

Final Review Results

<table>
<thead>
<tr>
<th>Review Date:</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification:</td>
<td>High</td>
</tr>
</tbody>
</table>

E. Impact Analysis Results

Specific Requirements Definition

- Refer to attached requirements documentation. Further business requirements to be developed for Computer Adaptive Testing, translation, and further iterations refining tools developed.

<table>
<thead>
<tr>
<th>Additional Resource Requirements</th>
<th>Work Days</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Change Request</td>
<td>4 of 5</td>
<td>PMM-0014 (Rev. 07/2012)</td>
</tr>
</tbody>
</table>
Impact of Not Implementing the Change

- Functionality will not be available in the item bank

Alternatives to the Proposed Change

- N/A

Final Recommendation

- Approve

F. Approval Information

Governance Body: Include all accountable/impacted key project stakeholders.

Approval Signatures

<table>
<thead>
<tr>
<th>Role</th>
<th>Name/Title</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Business Owner</td>
<td>David Judd</td>
<td></td>
<td>7/3/15</td>
</tr>
<tr>
<td>Client Sponsor</td>
<td>Doug Collier</td>
<td></td>
<td>7/3/15</td>
</tr>
<tr>
<td>DTMB Sponsor</td>
<td>Glenn Gorton</td>
<td></td>
<td>7/21/15</td>
</tr>
<tr>
<td>DTMB Project Manager</td>
<td>Maria Thomas</td>
<td></td>
<td>7/22/15</td>
</tr>
<tr>
<td>Other Key Stakeholder</td>
<td>Henry Scherich</td>
<td></td>
<td>7/15/15</td>
</tr>
<tr>
<td>Other Key Stakeholder</td>
<td>Nelson Androes</td>
<td></td>
<td>7/18/15</td>
</tr>
</tbody>
</table>
General Information

| • System or Project ID/Acronym: | Michigan Item Bank System | • Creation Date: | 08/05/15 |
| • Client Agency: | | • Modification Date: | |
| • Author(s): | Drew McDaniel | • DTMB Authorized by: | |

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Change Control

1. Overview

Requirements are statements of business problems and/or needs in as much detail as will fully explain the problems and/or needs. Requirements are NOT statements of a solution to a problem or need. Requirement elements may include business, functional and technical detail. Each requirement must be stated as a unique objective that is:

- **Necessary** (i.e., absolute requirements that are to be verified are identified by “must” or “shall”)
- **Correct** (i.e., an accurate description of a feature or process)
- **Unambiguous** (i.e., can have only one interpretation)
- **Complete** (i.e., answers the questions who, what, when, where, why, and what if)
- **Consistent** (i.e., is not in conflict with other requirements)
- **Verifiable and Testable** (i.e., is stated in concrete terms and measurable quantities. Can be used to create one or more clear tests to verify the requirement has been met.)
- **Modifiable** (i.e., the structure and style of the requirement are such that any necessary changes to the requirement can be made easily, completely, and consistently)
- **Traceable** (i.e., the origin is clear and can be tracked in future development activities and tests)

2. Business and Functional Requirements Detail

<table>
<thead>
<tr>
<th>Business Req. No.</th>
<th>Detailed Requirement Description</th>
<th>Priority</th>
<th>Source</th>
<th>Status</th>
<th>Comment</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Business Req. No.</th>
<th>Detailed Requirement Description</th>
<th>Priority</th>
<th>Source</th>
<th>Status</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>The Item Bank System must support glossing for an arbitrary number of languages.</td>
<td>1</td>
<td>State of Michigan</td>
<td>Draft</td>
<td>Confirmed languages to support are English, Spanish and Arabic</td>
</tr>
<tr>
<td>1.01</td>
<td>Languages required for each item/context will be set at the program level.</td>
<td>1</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.02</td>
<td>Content Leads must be able to indicate that an item does not require glossing.</td>
<td>1</td>
<td>State of Michigan</td>
<td>Draft</td>
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<tr>
<td>1.03</td>
<td>Content Leads must be able to indicate that an individual language does not require glossing.</td>
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<td>State of Michigan</td>
<td>Draft</td>
<td></td>
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<tr>
<td>1.04</td>
<td>Content Leads, IWT Members, IWT Leaders, and Context Authors must be able to select the words/phrases in the item or context content to be glossed.</td>
<td>1</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.05</td>
<td>Content Leads must be able to select words/phrases in graphics to be glossed.</td>
<td>1</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.06</td>
<td>Content Leads must be able to copy selections made in the English glossing section to all other supported languages.</td>
<td>2</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.06a</td>
<td>If selections have already been made in a language, they should not be superseded by selections copied from English.</td>
<td>2</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.06b</td>
<td>English selections must only be copied to another language if the language has no preexisting selections.</td>
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<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>Business Req. No.</td>
<td>Detailed Requirement Description</td>
<td>Priority</td>
<td>Source</td>
<td>Status</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------------</td>
<td>----------</td>
<td>------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>1.07</td>
<td>Content Leads, IWT Members, IWT Leaders, and Context Authors must be able to enter glossed text for selected words or phrases in any language.</td>
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<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.08</td>
<td>Content Leads must be able to submit words or phrases selected for glossing in item content or graphics to translators.</td>
<td>1</td>
<td>State of Michigan</td>
<td>Draft</td>
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<tr>
<td>1.09</td>
<td>Translators must be able to enter glossed content for selected words or phrases in item content or graphics.</td>
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<td>State of Michigan</td>
<td>Draft</td>
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</tr>
<tr>
<td>1.10</td>
<td>Users of the translator role must have access to all languages required for glossing. Individual translators will only enter glossed text that they are responsible for.</td>
<td>1</td>
<td>State of Michigan</td>
<td>Draft</td>
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</tr>
<tr>
<td>1.11</td>
<td>Translators must be able to enter glossed content in each of the required languages for all selected words/phrases</td>
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<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.12</td>
<td>Translators must be able to attach an audio file to each piece of glossed text. Audio files are optional.</td>
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<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.13</td>
<td>Translators must be able to record an audio file for each piece of glossed text. Audio recordings are optional.</td>
<td>NA</td>
<td>State of Michigan</td>
<td>Draft</td>
<td>Not required</td>
</tr>
<tr>
<td>1.14</td>
<td>Translators must be able to submit glossed content for each language individually.</td>
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<td>State of Michigan</td>
<td>Draft</td>
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</tr>
<tr>
<td>1.15</td>
<td>Translators must be able to make comments on glossed content.</td>
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<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>Business Req. No.</td>
<td>Detailed Requirement Description</td>
<td>Priority</td>
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<td>Status</td>
<td>Comment</td>
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<td>--------</td>
<td>--------</td>
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</tr>
<tr>
<td>1.15a</td>
<td>Comments must be recorded at the language level.</td>
<td>2</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.15b</td>
<td>Comments left by translators must be saved and visible on the &quot;History&quot; tab.</td>
<td>2</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.16</td>
<td>Content Leads must be able to review glossed content submitted by the translators, IWT Members, IWT Leaders, and Context Authors.</td>
<td>1</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.17</td>
<td>Content Leads must be able to make comments on glossed content submitted by translators, IWT Members, IWT Leaders, and Context Authors.</td>
<td>2</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.17a</td>
<td>Comments must be recorded at the language level.</td>
<td>2</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.17b</td>
<td>A history of all comments must be saved and visible on the &quot;History&quot; tab.</td>
<td>2</td>
<td>State of Michigan</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>1.18</td>
<td>Glossing must be indicated on the Rendering Review screens.</td>
<td>1</td>
<td>State of Michigan</td>
<td>Draft</td>
<td>Specific words glossed and glossed text. Glossed words must be indicated in a way not otherwise used in IBS (dotted line outline? Highlighting is used for hot text).</td>
</tr>
</tbody>
</table>

### 3. Business Rules

<table>
<thead>
<tr>
<th>Business Rule No.</th>
<th>Business Rule Description</th>
<th>Status</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>Glossing may not take place while graphics are being revised.</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>2.00</td>
<td>Items or contexts may not be edited by anyone while glossing status is &quot;In Progress.&quot;</td>
<td>Draft</td>
<td>Item glossing status before Banked is still “N/A” and goes to “Pending” at Banked, even if the IWT Member/Context Author has entered glossed text.</td>
</tr>
<tr>
<td>Business Rule No.</td>
<td>Business Rule Description</td>
<td>Status</td>
<td>Comments</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------</td>
<td>--------</td>
<td>----------</td>
</tr>
<tr>
<td>3.00</td>
<td>If a graphic is edited after glossing is complete, the glossed content associated with the graphic must be deleted.</td>
<td>Draft</td>
<td>What happens to glossing if the text is edited after glossing is complete? To draft glossed text entered by an IWT Member /Context Author?</td>
</tr>
<tr>
<td>4.00</td>
<td>Graphics may not be revised while glossing status is “In Progress.”</td>
<td>Draft</td>
<td>Item glossing status before Banked is still “N/A” and goes to “Pending” at Banked, even if the IWT Member/Context Author has entered glossed text.</td>
</tr>
<tr>
<td>5.00</td>
<td>Glossing may begin when an item or context has reached &quot;Submitted&quot; maturity. (at this stage, the glossing status should be &quot;Pending&quot;)</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>6.00</td>
<td>Users of the Content Lead, Development Lead, IWT Member, IWT Leader, and Context Author roles may make glossing selections and enter and edit glossed content. Users of the Editor role may edit glossed content. Users of the BSC Facilitator, BSC Member, CAC Facilitator, and CAC Member roles will have read-only access to the Glossing tab.</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>7.00</td>
<td>Users of the Content Lead, Development Lead, Editor, Translator</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>8.00</td>
<td>The glossing process begins when a user makes the first selection in a language. (at this stage the glossing status should change to &quot;In Progress&quot;)</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>9.00</td>
<td>The glossing process may be skipped by indicating that an item does not require glossing. (at this stage the glossing status should change to &quot;Not Required&quot;)</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>9.01</td>
<td>Content Leads must be able to indicate that glossing is not required when the glossing status is either Pending or In Progress. If the glossing status is In Progress, the item must be removed from the Translator workqueue and the glossing status must be updated to &quot;Not Required&quot;</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>10.00</td>
<td>The glossing process ends when a Content Lead accepts all glossed content. (at this stage the glossing status should change to &quot;Complete&quot;)</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>11.00</td>
<td>During the glossing process, an item or context's &quot;next task&quot; must be &quot;Complete Glossing.&quot;</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>12.00</td>
<td>Content Leads may not sign off on a test map until glossing is complete for all items in the test map.</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>13.00</td>
<td>Content Leads must be able to view the glossing status of a test map on the &quot;Test Process&quot; screen.</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>Business Rule No.</td>
<td>Business Rule Description</td>
<td>Status</td>
<td>Comments</td>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>13.01</td>
<td>The glossing status of a test map must be visible in a column between &quot;Editor one-per review&quot; and &quot;Test map batch review.&quot; The column must be labeled &quot;Glossing.&quot;</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>13.01a</td>
<td>The system must display &quot;Complete&quot; if the glossing status of all items in the test map is &quot;Complete&quot; or &quot;Not Required.&quot;</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>13.01b</td>
<td>The system must display &quot;In Progress&quot; if the glossing status of at least one item in the test map is &quot;Pending,&quot; or &quot;In Progress.&quot;</td>
<td>Draft</td>
<td></td>
</tr>
<tr>
<td>13.02</td>
<td>Content Leads must be able to view the glossing status of all items in a test map and access the glossing functionality by clicking on the value in the Glossing column on the test process screen.</td>
<td>Draft</td>
<td></td>
</tr>
</tbody>
</table>
| 13.02a           | The glossing status of each item in the test map must be visible.                                                                                                                                                        | Draft    | Pending: The Content Lead has not made any selections or indicated that the item does not require glossing.  
In Progress: The Content Lead has made at least one selection and has not yet approved glossed content.  
Not Required: The Content Lead has indicated that glossing is not required for the item.  
Complete: The Content Lead has accepted all of the glossed content. |
| 13.02b           | Content Leads must be able to click on an item ID on the glossing status page and access the glossing functionality for that item.                                                                                       | Draft    |                                                                          |
| 14.00            | When an item or context is copied, all glossed content must be copied along with the original item content.                                                                                                             | Draft    |                                                                          |

3. Technical Requirements Detail

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A baseline consists of those things that serve as the basis for measurement or comparison. The functional baseline, sometimes called a system requirements baseline, is the main technical work product of the Requirements Definition Stage. The approved Requirements Specification document (SEM-0402) is the official agreement and authorization to use the requirements for the product design. Approval implies that the requirements are understood, complete, accurate, and ready to be used as the basis for the subsequent lifecycle stages. Once the requirements are identified and approved, any changes to the requirements must be managed under change control procedures established in the Software Configuration Management Plan. Approved changes must be incorporated into the Requirements Specification document.

**Approval Information**

**Final Approval Signatures**

<table>
<thead>
<tr>
<th>• Role</th>
<th>• Name/Title</th>
<th>• Signature</th>
<th>• Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Sponsor</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DTMB Sponsor</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Project Manager</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
State of Michigan
Michigan Item Bank System – Supporting Alt-Text for Graphics
Requirements Specification

General Information

- **System or Project ID/Acronym:** Michigan Item Bank System
- **Creation Date:** 9/11/15
- **Client Agency:**
- **Modification Date:**
- **Author(s):** Drew McDaniel
- **DTMB Authorized by:**

Privacy Information

This document may contain information of a sensitive nature. This information should not be given to persons other than those who are involved with this system/project or who will become involved during its lifecycle.

Change Control

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Author</th>
<th>Section(s)</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drew McDaniel</td>
<td>2, 3</td>
<td>First draft</td>
</tr>
<tr>
<td></td>
<td>Drew McDaniel</td>
<td>3</td>
<td>Updated technical requirement 2.0</td>
</tr>
<tr>
<td></td>
<td>Drew McDaniel</td>
<td>3</td>
<td>Added technical requirement 3.0</td>
</tr>
</tbody>
</table>
1. **Overview**

Requirements are statements of business problems and/or needs in as much detail as will fully explain the problems and/or needs. Requirements are NOT statements of a solution to a problem or need. Requirement elements may include business, functional and technical detail. Each requirement must be stated as a unique objective that is:

- **Necessary** (i.e., absolute requirements that are to be verified are identified by “must” or “shall”)
- **Correct** (i.e., an accurate description of a feature or process)
- **Unambiguous** (i.e., can have only one interpretation)
- **Complete** (i.e., answers the questions who, what, when, where, why, and what if)
- **Consistent** (i.e., is not in conflict with other requirements)
- **Verifiable and Testable** (i.e., is stated in concrete terms and measurable quantities. Can be used to create one or more clear tests to verify the requirement has been met.)
- **Modifiable** (i.e., the structure and style of the requirement are such that any necessary changes to the requirement can be made easily, completely, and consistently)
- **Traceable** (i.e., the origin is clear and can be tracked in future development activities and tests)

2. **Business and Functional Requirements Detail**

<table>
<thead>
<tr>
<th>Business Req. No.</th>
<th>Detailed Requirement Description</th>
<th>Priority</th>
<th>Source</th>
<th>Status</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Allow Media Designer role users to enter alt-text for all new graphics and graphics that have been sent for revision.</td>
<td>High</td>
<td>State of Michigan</td>
<td>Draft</td>
<td>See technical requirements</td>
</tr>
<tr>
<td>2.0</td>
<td>Allow Content Lead role users to view and edit alt-text for all graphics in an item. Alt-text should be editable at all points where attributes can be added or edited.</td>
<td>High</td>
<td>State of Michigan</td>
<td>Draft</td>
<td>See technical requirements</td>
</tr>
<tr>
<td>3.0</td>
<td>Allow Development Lead role users to view and edit alt-text for all graphics in an item. Alt-text should be editable at all points where attributes can be added or edited.</td>
<td>High</td>
<td>State of Michigan</td>
<td>Draft</td>
<td>See technical requirements</td>
</tr>
</tbody>
</table>
### 3. Technical Requirements Detail

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Media Designer role users must be able to enter alt-text for graphics on the “Submit Media Asset” page when fulfilling a new graphic request or editing an existing graphic.</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Alt-text for existing graphics selected from the library must be visible to and editable by the Media Designer on the “Submit Media Asset” page.</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Add a new radio button field labeled “Alt-Text?” directly under the brailable notes section and above the “Item Composition Layout” field. The options for this field should be “Yes” and “No.” This field must be optional.</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>The default value of the “Alt-Text?” field must be “Yes.”</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Add a new text entry field labeled “Alt-Text” directly under the “Alt-Text?” radio button field. This field must be optional.</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>If the value of the “Alt-Text?” radio button field is “Yes” the “Alt-Text” field must be required. If the value is “No” the “Alt-Text” field must be optional.</td>
<td>1.0</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1.6</td>
<td>The values of the “Alt-Text” fields must be saved in the database and associated to the graphic uploaded by the Media Designer at the time of entry.</td>
<td></td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>Content Lead and Development Lead role users must be able to view and edit alt-text for graphics on the “Attributes” page/tab. This requirement applies to both the item attributes tab and the context attributes tab (development pending).</td>
<td></td>
<td>2.0, 3.0</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Graphic alt-text and a preview of each graphic must be listed in a grid at the bottom of the “Attributes” page/tab above the “Item Composition Format” field.</td>
<td></td>
<td>2.0, 3.0</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Graphic alt-text must be editable at all stages in the workflow where item attributes are editable.</td>
<td></td>
<td>2.0, 3.0</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>Alt-text for graphics must be displayed as tooltip text when a user hovers over the graphic in the preview tab.</td>
<td></td>
<td>NA</td>
<td>New requirement requested 9/30/14.</td>
</tr>
</tbody>
</table>

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Approval Information

The signatures relay an understanding of the purpose and content of the document by those endorsing it.

| Approve | Approve with Modifications | Reject |

Comments:
State of Michigan

1. Michigan Item Bank System – Technology Enhanced Item Development

2. (Phase 2)

3. Requirements Specification

General Information

<table>
<thead>
<tr>
<th>System or Project ID/Acronym:</th>
<th>Michigan Item Bank System</th>
<th>Creation Date:</th>
<th>08/25/2015</th>
</tr>
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<tbody>
<tr>
<td>Client Agency:</td>
<td></td>
<td>Modification Date:</td>
<td></td>
</tr>
<tr>
<td>Author(s): Drew McDaniel</td>
<td></td>
<td>DTMB Authorized by:</td>
<td></td>
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<th>Status</th>
<th>Status Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>TE items developed in the Item Bank System must be able to progress between Submitted and Banked status.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Content Leads must be able to review, edit and Accept, Reject or send a TE item back to the IWT Member for revisions (Revise).</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Items in “Submitted” maturity must be able to be edited and saved without changing their maturity (save as draft).</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements.</td>
</tr>
<tr>
<td>Business Req. No.</td>
<td>Detailed Requirement Description</td>
<td>Priority</td>
<td>Source</td>
<td>Status</td>
<td>Status Date</td>
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</tr>
<tr>
<td>1.4</td>
<td>When a Content Lead Accepts a TE item that includes graphic requests, the system must automatically route it to the composition team for graphic fulfillment.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>When a Content Lead Accepts a TE item that does not include graphic requests, the system must automatically route it to the committee review process.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>Composition Leads must be able to view TE items that include graphic requests in their item workqueue.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements</td>
</tr>
<tr>
<td>2.1</td>
<td>Composition Leads must be able to filter based on the Item Type (TE, MC, CR, etc.) in the item workqueue.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements. See mockup “01_Comp_Lead_Workqueue”</td>
</tr>
<tr>
<td>2.2</td>
<td>If a Composition Lead selects “TE” in the item type filter list box they should be able to filter based on interaction included in the item.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements. See mockup “01_Comp_Lead_Workqueue”</td>
</tr>
<tr>
<td>2.3</td>
<td>Composition leads must be able to filter their media workqueue to list (1) only graphic requests in TE items, (2) graphic requests in traditional items or (3) all graphic requests</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>Measurement Inc. development team is investigating the most appropriate technical solution.</td>
</tr>
<tr>
<td>2.4</td>
<td>Composition Leads should be able to open TE items and assign graphic requests to Media Designers.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements</td>
</tr>
<tr>
<td>Business Req. No.</td>
<td>Detailed Requirement Description</td>
<td>Priority</td>
<td>Source</td>
<td>Status</td>
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<tr>
<td>3.0</td>
<td>Media Designers should be able to view graphic requests contained in TE items in their Media Workqueue.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements.</td>
</tr>
<tr>
<td>3.1</td>
<td>Media Designers must be able to filter their Media Workqueue by Item Type and Interaction (if TE is selected as the item type).</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements</td>
</tr>
<tr>
<td>3.2</td>
<td>Media Designers must be able to open a graphic request in a TE item from their Media Workqueue.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements</td>
</tr>
<tr>
<td>3.3</td>
<td>The Item Type and Context ID (if applicable) should be visible on the Submit Media Asset page.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4</td>
<td>Graphic requests within a TE item should be listed based on the section of the TE item in which the graphic request is included.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>For example, prompt, hotspots, options, etc.</td>
</tr>
<tr>
<td>3.5</td>
<td>Media Designers must be able to save TE Media requests while they’re in progress using a “Save Draft” button.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>Media Designers must be able to enter comments in the “Comments” field and submit them using a “Submit Comment” button.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements</td>
</tr>
<tr>
<td>Business Req. No.</td>
<td>Detailed Requirement Description</td>
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<td>Status</td>
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</tr>
<tr>
<td>3.7</td>
<td>When a Media Designer selects one of the listed graphic requests and clicks “Add/Fulfill” graphic, they must be able to upload the .EPS version of the graphic.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements.</td>
</tr>
<tr>
<td>3.8</td>
<td>The system must take the .EPS graphic uploaded by the Media Designer and automatically create a full-size .GIF version of the graphic for use in the Item Bank image library.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements. Alternate solutions may be preferable depending on sizing. Alternate solutions will require manually uploading graphic files separately. Due to changing business need, this requirement is no longer valid.</td>
</tr>
<tr>
<td>3.9</td>
<td>The system must take the .EPS graphic uploaded by the Media Designer and automatically create a thumbnail .GIF version of the graphic for use in the Item Bank image library.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements. Due to changing business need, this requirement is no longer valid.</td>
</tr>
<tr>
<td>3.91</td>
<td>The system must take the .EPS graphic uploaded by the Media Designer and automatically create an .SVG versions of the graphic for use in online delivery.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements. Due to changing business need, this requirement is no longer valid.</td>
</tr>
<tr>
<td>Business Req. No.</td>
<td>Detailed Requirement Description</td>
<td>Priority</td>
<td>Source</td>
<td>Status</td>
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<tr>
<td>3.92</td>
<td>When the .EPS has been uploaded and the .GIF and .SVG versions created, the Media Designer should be required to enter a title, description and keywords for the new graphic.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.93</td>
<td>The Media Designer should be able to replace the uploaded .EPS and generate new files if necessary.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.94</td>
<td>The Media Designer should be able to optionally upload a native version of the graphic.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements.</td>
</tr>
<tr>
<td>3.95</td>
<td>The Media Designer should be able to optionally upload a picture card.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements.</td>
</tr>
<tr>
<td>3.96</td>
<td>The Media Designer should be able to place the new media asset within the section of the item in which the media was requested by clicking the “Place Media” button.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.97</td>
<td>In TE items containing hotspotInteraction or graphicGapMatchInteraction, the Media Designer should be able to define coordinates for hotspots and/or drop zones.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements.</td>
</tr>
<tr>
<td>Business Req. No.</td>
<td>Detailed Requirement Description</td>
<td>Priority</td>
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<td>Status</td>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4.0</td>
<td>Development Leads, Content Leads, Composition Leads, Media Designers, Committee Facilitators, Committee Members and Editors should be able to view a preview of TE items developed in the Item Bank System on the “Preview” tab when working with an item.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements.</td>
</tr>
<tr>
<td>4.1</td>
<td>Previews of TE items will not be functional.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Previews of TE items will display all of the details and properties describing the function, layout and scoring logic of the item.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements</td>
</tr>
<tr>
<td>4.3</td>
<td>When a user views a preview of a TE item before graphics are fulfilled, the user should see the content of the original graphic request(s) in place of the final graphic.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
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<tr>
<td>4.4</td>
<td>Once graphics have been fulfilled, a user viewing a preview of a TE item should see the placed, final graphics.</td>
<td>High</td>
<td>State of Michigan</td>
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<tr>
<td>4.5</td>
<td>In TE items containing hotspotInteraction or graphicGapMatchInteraction, users should be able to see the locations of hotspots and/or drop zones on the preview tab.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements</td>
</tr>
<tr>
<td>4.6</td>
<td>Tooltips will be placed throughout previews of TE items to help explain TE item terminology.</td>
<td>High</td>
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<td>Business Req. No.</td>
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<tr>
<td>5.0</td>
<td>Committee Facilitators must be able to select and assign TE items and initiate committee reviews.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td>See technical requirements</td>
</tr>
<tr>
<td>6.0</td>
<td>Committee Members must be able to review TE items, make comments and recommend accepting, rejecting or revising the item.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.0</td>
<td>Committee Facilitators must be able to view committee member recommendations and comments, and be able to enter a consensus recommendation, content standards, taxonomy, comments and complete the reviews.</td>
<td>High</td>
<td>State of Michigan</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8.0</td>
<td>Editors must be able to review, enter comments and approve or recommend revisions to TE items.</td>
<td>High</td>
<td>State of Michigan</td>
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</table>

3. Technical Requirements Detail

<table>
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<tr>
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<tbody>
<tr>
<td>1.0</td>
<td>Content Leads and Development Leads must be able to edit items in “Submitted” status and save their changes without accepting the item by clicking on a “Save Draft” button on the Item Details tab.</td>
<td></td>
<td>1.3</td>
<td>See mockup “01_Comp_Lead_Workqueue”</td>
</tr>
<tr>
<td>3.0</td>
<td>Composition Leads must be able to filter their Item Workqueue by item type (including “TE”)</td>
<td></td>
<td>2.1</td>
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<td>-----------------------------------------------------------------------------------------------------</td>
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<tr>
<td>3.1</td>
<td>Composition Leads must be able to filter their Item Workqueue by included interaction if they have filtered by “TE” as the item type. Results returned should include all TE items that include at least one of the selected interaction.</td>
<td></td>
<td>2.2</td>
<td>See mockup “01_Comp_Lead _Workqueue”</td>
</tr>
<tr>
<td>3.2</td>
<td>The Item Type column in the Composition Lead’s Item Workqueue should display “TE” for all TE items in the list. It should also display the interactions included in each TE item.</td>
<td></td>
<td>2.0</td>
<td>See mockup “01_Comp_Lead _Workqueue”</td>
</tr>
<tr>
<td>4.2</td>
<td>Depending on the interaction included, pieces of a graphic request should be labeled based on the section in which the graphic request is located. For example, hotspots coming across as a single graphic request should be labeled, “Hotspot 1,” “Hotspot 2,” etc.</td>
<td></td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>The Item type and the interactions included in the item should be visible on the Assign Media Asset page.</td>
<td></td>
<td>2.4</td>
<td></td>
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<tr>
<td>6.0</td>
<td>The media type “TE Graphic” should be displayed for all TE items in the “Media Type” column of the Media Designer’s Media Workqueue.</td>
<td></td>
<td>3.0</td>
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</tr>
<tr>
<td>6.1</td>
<td>The Media Type column of the Media Workqueue should also display the included interactions in each TE Graphic request.</td>
<td></td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>6.2</td>
<td>The Media Designer should be able to filter their Media Workqueue by Media Type.</td>
<td></td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>6.3</td>
<td>The Media Designer should be able to filter their Media Workqueue by included interaction if they’ve selected “TE Graphic” as the Media Type.</td>
<td></td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>6.4</td>
<td>The Media Designer’s Media Workqueue should be sorted by Due Date, Program, Content Area, Grade, Media ID, in that order.</td>
<td></td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>6.4a</td>
<td>The Composition Lead’s Media Workqueue should be sorted by Due Date, Program, Content Area, Grade, Media ID, in that order.</td>
<td></td>
<td>3.2</td>
<td>Added to streamline code. Michigan agreed to this addition on 8/7/14.</td>
</tr>
<tr>
<td>7.0</td>
<td>Comments entered by the Media Designer and submitted using the “Submit Comment” button should be saved in the database and displayed in the Previous Media Comments section.</td>
<td></td>
<td>3.6</td>
<td></td>
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<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7.1</td>
<td>When the Media Designer clicks the “Submit Comment” button, the item should move to the Content Lead’s workqueue for review. Mandatory fields should not be validated. This process should mirror the standard submit and review process, but without the mandatory field check.</td>
<td></td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>7.2</td>
<td>Content Leads should be able to view items with media requests that have comments left by the Media Designer, respond with new comments and return the media for revisions.</td>
<td></td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>7.3</td>
<td>Content Leads must also be able to Accept media that has been submitted with comments and move the item to Committee Review without the media fulfilled. This requirement covers cases where media requests were erroneously included in an item, or the Content Lead decides to remove media from the item.</td>
<td></td>
<td>3.6</td>
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<td>8.0</td>
<td>The system should allow the Media Designer to select the .EPS file they want to upload and select whether the file is color or black and white.</td>
<td></td>
<td>3.7</td>
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<tr>
<td>8.1</td>
<td>After selecting the .EPS file to be uploaded, the Media Designer should be able to configure the settings for the automatically generated .GIF files (full size and thumbnail versions) Specific settings TBD</td>
<td></td>
<td>3.8, 3.9</td>
<td>Due to changing business need, this requirement is no longer valid.</td>
</tr>
<tr>
<td>8.2</td>
<td>After selecting the .EPS file to be uploaded, the Media Designer should be able to configure the settings for the automatically generated .SVG files. Specific settings TBD</td>
<td></td>
<td>3.91</td>
<td>Due to changing business need, this requirement is no longer valid.</td>
</tr>
<tr>
<td>8.3</td>
<td>Once the Media Designer has selected the .EPS file to be uploaded, selected color or black and white and configured the settings for the automatically generated .GIF and .SVG versions, they must be able to click the “Upload and Convert” button. The system will then upload the .EPS file and generate the .GIF and .SVG versions.</td>
<td></td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>8.4</td>
<td>The Media Designer must be able to bypass the upload and convert process and upload each version of the file manually by clicking the “Manually Upload Files” button.</td>
<td></td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>8.5</td>
<td>The Media Designer must be able to manually upload an optional native version of the graphic. The system must support any file type without restriction. (currently supported: .ai, .eps, .indd)</td>
<td></td>
<td>3.94</td>
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<tr>
<td>8.6</td>
<td>The Media Designer must be able to manually upload an optional picture card version of a graphic. The system must support the following file times for picture cards: .gif, .jpeg, .jpg, .png, .eps.</td>
<td>3.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.0</td>
<td>A new page should be available to the Media Designer that allows them to define coordinates for hotspots in hotspot interaction graphics and drop zones in graphic drag and drop interaction graphics.</td>
<td>3.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.1</td>
<td>The new page described in technical requirement 9.0 should be accessible after the Media Designer has uploaded the .EPS identified as containing hotspots or drop zones and all versions of the graphic have been generated by the system.</td>
<td>3.97</td>
<td></td>
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</tr>
<tr>
<td>9.2</td>
<td>The Media Designer should be able to access the page described in technical requirement 9.0 by clicking on a button labeled “Configure Hotspots/Drop Zones” on the “Submit Media Asset” page.</td>
<td>3.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.3</td>
<td>The graphic identified as the location for hotspots or drop zones should be visible on the “Place Hotspots and Drop Zones” page at full resolution.</td>
<td>3.97</td>
<td></td>
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<tr>
<td>9.4</td>
<td>Media Designers should be able to select a hotspot or drop zone from a list of all hotspots or drop zones in the interaction and define the coordinates. Hotspots or drop zones should be labeled using the contents of the original graphic request.</td>
<td>3.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.5</td>
<td>On the new “Place Hotspots and Drop Zones” page The Media Designer should be able to draw hotspot or drop zone boundaries by selecting one of three tools corresponding to shapes supported by QTI (circle, rectangle or polygon).</td>
<td>3.97</td>
<td></td>
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</tr>
<tr>
<td>9.6</td>
<td>Hotspot or drop zone boundaries should be visible using a clear outline and/or shading overlaying the graphic.</td>
<td>3.97</td>
<td></td>
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<tr>
<td>9.7</td>
<td>Media Designers should also be able to define a hotspot or drop zone’s coordinates by entering coordinate values in a series of text fields attached to each hotspot or drop zone.</td>
<td>3.97</td>
<td></td>
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<tr>
<td>9.8</td>
<td>When a Media Designer draws a hotspot or drop zone, the coordinate values should automatically appear in the associated text fields.</td>
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<tr>
<td>9.9</td>
<td>When a Media Designer enters coordinate values for a drop zone or hotspot, the corresponding shape should appear on the image automatically.</td>
<td>3.97</td>
<td></td>
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</tr>
</tbody>
</table>
| 9.91              | Depending on the selected shape tool, the system must require a different set of coordinates.  
|                   | Circle: X and Y coordinates for the center point and a radius length.  
|                   | Rectangle: X and Y coordinates for the top, left and bottom, right points.  
<p>|                   | Polygon: An arbitrary number of X and Y coordinates for each point.                                         | 3.97     |                     | Consistent with QTI capabilities. |
| 9.92              | Media Designers must be able to change the coordinates of a drop zone or hotspot after drawing the shape or entering coordinates the first time. | 3.97     |                     |          |
| 9.93              | Media Designers must be able to add and delete points from a polygon hotspot or drop zone.                   | 3.97     |                     | Measurement Inc. development team investigating technical feasibility. |
| 9.94              | Media Designers must be able to save the coordinates while they’re in progress using a “Save Draft” button. | 3.97     |                     |          |
| 9.95              | Media Designers must be able to submit final coordinates by clicking a “Submit Coordinates” button.         | 3.97     |                     |          |
| 9.96              | Media Designers must be able to hide and show the hotspot or drop zone overlays using a toggle switch on the “Place Hotspots or Drop Zones” page. This function is purely for the benefit of the Media Designer and should not affect the coordinate values or the hotspots or drop zones. | 3.97     |                     |          |
| 9.97              | Final coordinates submitted by the Media designer should be used in the exported QTI version of the item and used to visually indicate locations and sizes of hotspots and drop zones to any users viewing the “Preview” tab. | 3.97, 4.5 |                     |          |</p>
<table>
<thead>
<tr>
<th>10.0</th>
<th>The header of the “Preview” tab must contain the Item Type, number of interactions, and a list of included interactions in addition to the standard header data found on MC and CR items.</th>
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<td>11.0</td>
<td>Previews of items containing text drag and drop interactions (gapMatchInteraction) must include the following elements:</td>
<td></td>
<td>4.2</td>
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</tr>
<tr>
<td></td>
<td>• Item Introductory Text</td>
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<tr>
<td></td>
<td>• Interaction type (Text Drag and Drop)</td>
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<tr>
<td></td>
<td>• Prompt</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>• Interactive Text</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Draggable Text Options</td>
<td></td>
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<tr>
<td></td>
<td>• Regeneration information for each draggable option</td>
<td></td>
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<tr>
<td></td>
<td>• Interactivity and scoring notes</td>
<td></td>
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<tr>
<td>11.1</td>
<td>Previews of items containing hotspot interactions (hotspotInteraction) must include the following elements:</td>
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</tr>
<tr>
<td></td>
<td>• Item Introductory Text</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Interaction type (Hotspot)</td>
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<tr>
<td></td>
<td>• Prompt</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Graphic containing hotspots (or conceptual description)</td>
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<td></td>
<td>• Highlighted correct answers (if applicable)</td>
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<td></td>
<td>• Interactivity and scoring notes</td>
<td></td>
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<tr>
<td>11.2</td>
<td>Previews of items containing graphic drag and drop interactions (graphicGapMatchInteraction) must include the following elements:</td>
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<td>4.2</td>
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</tr>
<tr>
<td></td>
<td>• Item Introductory Text</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Interaction type (Graphic Drag and Drop)</td>
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<tr>
<td></td>
<td>• Prompt</td>
<td></td>
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<td></td>
<td>• Draggable object images (or conceptual descriptions)</td>
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<td></td>
<td>• Regeneration information for each draggable object</td>
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<td></td>
<td>• Unit values (if applicable)</td>
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<td></td>
<td>• Graphic containing drop zones (or conceptual description)</td>
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<td></td>
<td>• MatchMax and MatchMin information for each drop zone</td>
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<td></td>
<td>• Interactivity and scoring notes</td>
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</table>
| 11.3              | Previews of items containing hot text interactions (hotTextInteraction) must contain the following elements:  
- Item Introductory Text  
- Interaction type (Hot Text)  
- Prompt  
- Selectable text options (highlighted if applicable)  
- Highlighted selectable text options that make up the correct response (if applicable)  
- Interactivity and scoring notes | 4.2 | 4.2 | Design decision: Selectable text elements will be surrounded by a black box to make it easier for the user to discern where one selectable piece ends and another begins. (Discussed with Pietro Semifero on 5/30/14) |
| 11.4              | Previews of items containing match interactions (matchInteraction) must include the following elements:  
- Item Introductory Text  
- Interaction type (Match)  
- Prompt  
- Selectable objects (graphics) or options (text) in match set 1  
- Selectable objects (graphics) or options (text) in match set 2  
- Single- or multi-connect designation for each selectable object or option  
- Matches that make up the correct response  
- Interactivity and Scoring Notes | 4.2 | 4.2 | |
| 11.5              | Previews of items containing choice interactions (choiceInteraction) must include the following elements:  
- Item Introductory Text  
- Interaction type (Choice)  
- Prompt  
- All selectable options labeled A, B, C, etc.  
- Highlighted selectable options that make up the correct response (if applicable)  
- Interactivity and scoring notes | 4.2 | 4.2 | |
<p>| 12.0              | Committee Facilitators (BSC and CAC) must be able to filter their Item Workqueue by Item Type (including “Technology Enhanced” as a value). | 5.0 |  |  |</p>
<table>
<thead>
<tr>
<th>Technical Req. No.</th>
<th>Detailed Technical Requirement Description</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1</td>
<td>Committee Facilitators (BSC and CAC) must be able to filter their Item Workqueue by Interaction if “Technology Enhanced” is selected in the Item Type field.</td>
<td>5.0</td>
</tr>
<tr>
<td>12.2</td>
<td>When a Committee Facilitator is filtering their Item Workqueue by Interaction, they must be able to return items that include the selected interaction among others or items that only use the selected interaction. Items using only the selected interaction should be returned by default. The user must select a checkbox labeled “Inclusive” to return items that include the selected interaction, possibly among others.</td>
<td>5.0</td>
</tr>
<tr>
<td>12.3</td>
<td>The Item Type column in the Item Workqueue in the Committee Facilitator roles must display “TE” for TE items.</td>
<td>5.0</td>
</tr>
<tr>
<td>12.5</td>
<td>The Item Type column in the Item Workqueue in the Committee Facilitator roles must display the interactions included along with the number of each interaction if greater than one.</td>
<td>5.0</td>
</tr>
<tr>
<td>12.6</td>
<td>As a space saving measure, the “Reviews Completed” column should be shortened from “X Completed out of Y” to “X/Y.”</td>
<td>5.0</td>
</tr>
</tbody>
</table>

### 4. Functional Baseline

A baseline consists of those things that serve as the basis for measurement or comparison. The functional baseline, sometimes called a system requirements baseline, is the main technical work product of the Requirements Definition Stage. The approved Requirements Specification document (SEM-0402) is the official agreement and authorization to use the requirements for the product design. Approval implies that the requirements are understood, complete, accurate, and ready to be used as the basis for the subsequent lifecycle stages. Once the requirements are identified and approved, any changes to the requirements must be managed under change control procedures established in the Software Configuration Management Plan. Approved changes must be incorporated into the Requirements Specification document.

### Approval Information

The signatures relay an understanding of the purpose and content of the document by those endorsing it.

Requirements Specification 33 of 109 SEM-0402 (Rev. 07/2012)
<table>
<thead>
<tr>
<th>Approve</th>
<th>Approve with Modifications</th>
<th>Reject</th>
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Comments:

**Initial Approval Signatures**

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<th>Role</th>
<th>Name/Title</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Sponsor</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DTMB Sponsor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td></td>
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**Final Approval Signatures**

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<th>Role</th>
<th>Name/Title</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
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<tr>
<td>Client Sponsor</td>
<td></td>
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<tr>
<td>DTMB Sponsor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NOTICE
OF
CONTRACT NO. 071B3200099
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR: Measurement Inc.
423 Morris Street
Durham, NC 27701

PRIMARY CONTACT: Henry Scherich
PHONE: (919) 683-2413
EMAIL: Hscherich@measinc.com

STATE CONTACTS
AGENCY NAME PHONE EMAIL
MDE Doug Collier 517-241-4431 Collierd1@michigan.gov
DTMB Mark Lawrence 517-241-1640 Lawrencem@michigan.gov

CONTRACT SUMMARY:
DESCRIPTION:
Item Bank System License and Services – Department of Education

INITIAL TERM EFFECTIVE DATE INITIAL EXPIRATION DATE AVAILABLE OPTIONS
June 21, 2013 June 20, 2019 4, 1-year options

PAYMENT TERMS F.O.B SHIPPED SHIPPED FROM
N/A N/A N/A

ALTERNATE PAYMENT OPTIONS: AVAILABLE TO MiDEAL PARTICIPANTS
☐ P-card ☐ Direct Voucher (DV) ☐ Other ☐ YES ☒ NO

MINIMUM DELIVERY REQUIREMENTS:
N/A

MISCELLANEOUS INFORMATION:
N/A

ESTIMATED CONTRACT VALUE AT TIME OF EXECUTION: $0.00

THIS IS NOT AN ORDER: This Contract Agreement is awarded on the basis of our inquiry bearing the solicitation #084R3200029. Orders for delivery will be issued directly by the Department of Technology, Management & Budget through the issuance of a Purchase Order Form.
STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PROCUREMENT
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CONTRACT NO. 071B3200099
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR:  PRIMARY CONTACT  EMAIL
Measurement Inc.  Henry Scherich  Hscherich@measinc.com
423 Morris Street  Henry Scherich
Durham, NC 27701  (919) 683-2413

STATE CONTACTS

CONTRACT COMPLIANCE INSPECTOR:  AGENCY  NAME  PHONE  EMAIL
MDE  Doug Collier  517-241-4431  Collierd1@michigan.gov
BUYER:  DTMB  Mark Lawrence  517-241-1640  Lawrencem@michigan.gov

CONTRACT SUMMARY:

DESCRIPTION:
Item Bank System License and Services – Department of Education

<table>
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<tr>
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<th>INITIAL EXPIRATION DATE</th>
<th>AVAILABLE OPTIONS</th>
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<td>4, 1-year options</td>
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PAYMENT TERMS

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</table>

ALTERNATE PAYMENT OPTIONS:

☐ P-card  ☐ Direct Voucher (DV)  ☐ Other  ☐ YES  ☒ NO

MINIMUM DELIVERY REQUIREMENTS:

N/A

MISCELLANEOUS INFORMATION:

N/A

ESTIMATED CONTRACT VALUE AT TIME OF EXECUTION:  $0.00

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**Notice of Contract #:** 071B3200099

<table>
<thead>
<tr>
<th>FOR THE CONTRACTOR:</th>
<th>FOR THE STATE:</th>
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<tbody>
<tr>
<td>Measurement Inc.</td>
<td>Signature</td>
</tr>
<tr>
<td>Firm Name</td>
<td>Jeff Brownlee, Chief Procurement Officer</td>
</tr>
<tr>
<td>Authorized Agent Signature</td>
<td>Name/Title</td>
</tr>
<tr>
<td>Authorized Agent (Print or Type)</td>
<td>Enter Name of Agency</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
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</table>
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DEFINITIONS

24x7x365. 24 hours a day, seven days a week, and 365 days a year (including the 366th day in a leap year).

Additional Services/Deliverables. Any Services or Deliverables within the scope of the Contract, but not specifically provided under any Statement of Work

Audit Period. The seven-year period following Contractor's provision of any work under the Contract. See Section 2.110.

Authentication Process. As defined in Appendix B - Authentication Requirements.

BAA. The Bureau of Assessment and Accountability (formerly known as the Office of Educational Assessment and Accountability). The BAA currently consists of four offices: Office of Standards and Assessment (OSA), Office of Evaluation, Strategic Research and Accountability (OESRA), Office of Systems, Psychometrics, and Measurement Research (OSPMR), and Office of Assessment Business Operations (OABO).

Business Critical. Any function identified in any Statement of Work or SLA as Business Critical.

Business Day. Any day other than a Saturday, Sunday or State-recognized legal holiday from 8:00am EST through 5:00pm EST unless otherwise stated.

CAT. Computer Adaptive Testing, which provides a more precise (valid) measure of what a student has learned. Based on the student’s response to an item, the online testing system determines which item the student sees next.

Change Request. Has the meaning set forth in Section 2.024.

Chronic Failure. Has the meaning set forth in Section 2.240.

CMM Level 3. Level 3 of the Software Engineering Institute’s Capability Maturity Model for Software.


Contract Change Notice. Has the meaning set forth in Section 2.024.

Custom Software Deliverable. Any software developed by Contractor for the benefit of the State in connection with this Contract, including but not limited to the Authentication Process and all Future Enhancements.

Data Center. A facility used to house computer systems and associated components, such as telecommunications and storage systems. It generally includes redundant or backup power supplies, redundant data communications connections, environmental controls (e.g., air conditioning, fire suppression), and security devices.

Deliverables. Collectively, the Authentication Process and all Future Enhancements and all other documents, work product, and other tangible materials, that Contractor is required to or otherwise does provide to the State under this Contract and otherwise in connection with any Services, including any and all items specifically identified as Deliverables in any Statement of Work or Purchase Order, together with all ideas, concepts, processes, and methodologies developed in connection with a Statement of Work or Purchase Order issued under this Contract, irrespective of whether expressly provided in same.

Documentation. All user manuals, operating manuals, technical manuals and any other instructions, specifications, documents and materials, in any form or media, that describe the functionality, installation, testing, operation, use, maintenance, support and technical and other components, features and requirements of the IBS System, Authentication Process, or any Future Enhancements.

DTMB. The Michigan Department of Technology Management and Budget.

EA Solution Assessment. An Enterprise Architecture Solution Assessment, which is performed by DTMB in order to document architectural details of the proposed IT solution in order to determine compatibility with the State’s overall enterprise architecture.

Excusable Failure. Has the meaning given in Section 2.244.

Final Acceptance. Has the meaning set forth in Section 2.256.

Fiscal Year. October 1 through September 30 of the following calendar year.

FOIA. Has the meaning set forth in Section 2.037.

Future Enhancements. All updates, upgrades, enhancements, improvements and other modifications to the IBS System that Contractor is required to or otherwise does develop or otherwise provides under this Contract that are mutually beneficial to Contractor and the State, including but not limited to those specified in Section 1.104.A.4.

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).

Hosting Environment. As more fully described in Sections 1.103 and Appendix A - Business/Technical Requirements, includes all servers, server software, hosting platforms, storage space, telecommunications connectivity and equipment and other hardware, software, technology and other materials Contractor is required to, or otherwise does, use, provide or provide access to as part of Contractor’s requirement to host, support, and maintain the IBS System, implement the Authentication Process and develop and implement any Future Enhancements.


IBS System. The State’s Item Bank System software application, which is a web-based application that encompasses all of the following functions within a single framework: the Complete Item Development Life Cycle, Test Development Processes, and Test Composition Process.

IBS System Licenses. The software licenses for use of the IBS System granted to Contractor under Section 2.321.

IBS System Migration. Migration of the IBS System along with its Item Data to the Hosting Environment.

Incident. Any interruption in any function performed for the benefit of the State.

Intellectual Property Rights. All or any of the following: (a) patents, patent disclosures and inventions (whether patentable or not); (b) trademarks, service marks, trade dress, trade names, logos, corporate names and domain names, together with all of the goodwill associated therewith; (c) copyrights and copyrightable works (including computer programs), mask works and rights in data and databases; (d) trade secrets, know-
how and other confidential information; and (e) all other intellectual property rights, in each case whether registered or unregistered and including all applications for, and renewals or extensions of, such rights, and all similar or equivalent rights or forms of protection provided by applicable law in any jurisdiction throughout the world.

**Item Data.** Testing materials developed for the State by educational professionals to populate the IBS System, including data pertaining to the composition process flow and metadata.

**IT.** Information Technology

**Key Personnel.** Any personnel identified in Section 1.031 as Key Personnel.

**MDE.** Michigan Department of Education.

**New Work.** Any Services or Deliverables outside the scope of the Contract and not specifically provided under any Statement of Work, such that once added will result in the need to provide the Contractor with additional consideration. “New Work” does not include Additional Services/Deliverables.

**Notice of Election.** Has the meaning set forth in Section 2.146.

**Object Code.** Computer programs assembled or compiled in magnetic or electronic binary form on software media, which are readable and useable by machines, but not generally readable by humans without reverse assembly, reverse compiling, or reverse engineering.

**Production Ready.** Has the meaning set forth in Section 1.104.A.2.

**Project Plan.** Has the meaning set forth in Section 1.300.

**Project Work Breakdown Structure.** Has the meaning set forth in Section 1.301.

**Purchase Order.** Has the meaning set forth in Section 2.005.

**QTI.** Question & Test Interoperability.

**RFP.** A Request for Proposal designed to solicit proposals for services.

**Services.** Any of the services Contractor is required to or otherwise does provide under this Contract, including but not limited to (i) IBS System Migration, (ii) development and implementation of the Authentication Process, (iii) development and implementation of the Hosting Environment, (iv) development and implementation of all Future Enhancements, and (v) ongoing hosting, support, and maintenance of the IBS System in the Hosting Environment.

**SLA.** A Service Level Agreement, as set forth in Section 2.242.

**Source Code.** Computer programs written in higher-level programming languages, sometimes accompanied by English language comments. Source code is intelligible to trained programmers and may be translated into Object Code for operation on computer equipment through the process of compiling.

**Source Code Package.** Has the meaning set forth in Section 2.330.

**State.** The State of Michigan including its departments, divisions, agencies, offices, and employees.

**State Disclaimed Warranties.** Has the meaning set forth in Section 2.321.
State Location. Any physical location where the State performs work. State Location may include State-owned, leased, or rented space.

State Review Period. Is the State’s review period for Written Deliverables or Custom Software Deliverables, and has the respective meaning set forth in Section 2.254 and Section 2.255.

Stop Work Order. Has the meaning set forth in Section 2.180.

Subcontractor. A company selected by the Contractor to perform a portion of the Services, but does not include independent contractors engaged by Contractor solely in a staff augmentation role.

Successor Service Provider. Has the meaning set forth in Section 2.170.

SUITE. The State Unified Information Technology Environment.

System Testing. Has the meaning set forth in Section 2.252.

Transition Services. Has the meaning set forth in Section 2.170.

Unauthorized Removal. The Contractor’s removal of Key Personnel without the prior written consent of the State.

UAT. Means User Acceptance Testing performed by the State, as set forth in Section 2.255.

Work in Process. 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 the Contract.

Written Deliverables. A Deliverable that is in document form.

XML. Extensible Markup Language
Article I. Article 1 – Statement of Work (SOW)

(a) (b) 1.000 Project Identification

A) 1.001 PROJECT

The State of Michigan (the “State”) through the Michigan Department of Technology Management and Budget (DTMB) in partnership with the Michigan Department of Education (MDE) has issued this Contract to procure IT services for the IBS System.

Service and Deliverables

The State is contracting for the following Services and Deliverables in connection with the IBS System:
   A. Development and implementation of the Hosting Environment;
   B. Migration of the IBS System along with its Item Data to the Hosting Environment;
   C. Development of the Authentication Process for the IBS System;
   D. Ongoing hosting, support, and maintenance of the IBS System in the Hosting Environment; and
   E. Development and implementation of Future Enhancements to the IBS System.

Costs

This is a Contract for in-kind services. The aggregate cost of all Services and Deliverables over the six-year Contract term is estimated to be $5,000,999.06. Through a combination of direct contributions and credits, Contractor has agreed to cover 100% of the estimated aggregate cost of all Services and Deliverables under the Contract in exchange for the IBS System Licenses granted to Contractor under Section 2.321.

The following is a breakdown of the estimated costs and the corresponding reduction in credits associated with the Contract:

<table>
<thead>
<tr>
<th>Service/Deliverable</th>
<th>Total Cost</th>
<th>State’s Cost (1)</th>
<th>Charges Against State’s Credit</th>
<th>State’s Credit Balance (2)</th>
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<td>$63,750.00</td>
<td>$63,750.00</td>
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<td>$3,080,462.50</td>
<td>$3,080,462.50</td>
<td>$0</td>
</tr>
</tbody>
</table>
Notes:

(1) Contractor has agreed to cover 47% of the costs for (i) achieving Production Ready status, (ii) developing and implementing the Authentication Process, and (iii) developing and implementing any Future Enhancements. The State has agreed to cover 53% of the costs for these Deliverables. The State has agreed to cover 100% of the costs associated with IBS System Migration and Hosting Services.

(2) Contractor has agreed to provide the State with an initial credit of $3,080,462.50.

D) 1.002 BACKGROUND
The IBS System has received national recognition for streamlining test development and administration processes that are required for the development of large-scale assessments. In particular, the IBS System combines several test development and administration functions which have typically operated as stand-alone systems, or processes, in a traditional work environment. These include item development and review, item preparation (text and graphics) for presentation to students in print or online formats, inclusion of pilot and field-test statistics for development of test blueprints, and adjustment of test maps for multiple test forms based on test curve review.

Michigan’s educational system serves over 1.5 million students. The MDE and BAA are responsible for the development and administration of multiple K-12 student assessment programs, as well as the high-stakes use of the results of those programs for accountability and evaluation purposes. Therefore, the work performed by the State and assessment contractors must be of the highest quality and must conform to federal peer review guidelines, the most recent Standards for Educational and Psychological Testing as published by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education. In addition, all BAA assessments are subject to state and federal audit.

The State currently administers over 2 million assessments to students each year. With the recent adoption of education reform initiatives and the transition from paper-and-pencil to online testing by spring 2015, the BAA has initiated a number of technology-related systems that are designed to produce high-quality tests for all students by streamlining work flow processes, thus reducing resource requirements and resulting in process improvements. Two such systems, the BAA Secure Site and IBS System have received national recognition.

The IBS System encompasses a number of work flow processes that begin with the development of each item, or test question, that a student sees when taking an assessment. As a starting point, Michigan educators with an interest in item writing learn the steps for writing a high-quality item. Traditionally, this in-person training is conducted by test development experts and BAA staff. With implementation of the IBS System, trained item writers can use the IBS System’s web interface for the initial writing of the item, regardless of physical location, and can provide online responses to questions or requests for revisions.

All work on the IBS System is stored digitally; the history of a test item can be easily retrieved through the use of drop-down search buttons. Later, test items are rendered (text and graphics) that allow for digital import for use by an online contractor, using a standard file transport process. Ease of digital export/import processes for test items makes the introduction of Computer Adaptive Testing (CAT) for students far more feasible. CAT is projected to provide more precise (valid) measures of what a student has learned. Based on the student’s response to an item, the online testing system determines which item the student sees next. Since student learning varies from one content area to another, the number of items for CAT is much larger than a traditional paper-and-pencil test.

The IBS System is a web-based application that encompasses all of the following functions within a single framework:

- Complete Item Development Life Cycle – manages the entire workflow process and item versioning for all user roles contributing to the development of the item from item assignment through retirement of the item. This includes functionality for Item Assignment, Item Authoring, Content Review and Edification, Media Composition and linkage, Stimulus Creation and linkage, Scoring Rubrics and linkage, Committee Reviews, Editorial Review, addition of attributes (accommodated formats and
translations) and meta data (item statistics for each administration), Psychometric review, Data Review, and Test Bank pool inventory. Additionally there are advanced search capabilities on item elements, metadata, and stimuli; and the item versioning history is maintained and viewable through UI screens.

- **Test Development Processes** – includes functionality to build test blueprints (test specifications), select anchor or linking items, and auto generate a test map for multiple forms (the Item Bank System will select items that best fulfill the blueprint specifications), Content and Psychometric Review of the auto generated forms and statistical reports for each form generated by SAS (including Test Characteristic, Test Information, and Test Standard Error Curves), ability to rearrange or replace items in the test map, and monitor the test development workflow from blueprint creation through test map approvals by Content and Psychometric reviewers. Approval of the test maps initiates the Test Packager export. It should be noted that current capabilities generate a fixed form test, but the blueprint specification process will support creation of a Test Bank export process for adaptive testing.

- **Test Composition Process** – manages the process flow for all users involved in the Test Composition process including XML exports, review and approval of published item formats (OnePer) for each item within a test map. The approval process initiates the pre-production export of the OnePer in test booklet order for each form included in the test map, as well as Reader Scripts, translation formats, and other ancillary materials associated with items in the test map needed for production. The export process also supports XML export (Test Packager) for delivery to the online delivery engine, and is adaptable to export a Test Bank to interface with an adaptive engine.

- **User Maintenance** – manages the user IDs, demographic information and role assigned to each user ID. There are approximately 800 users in the system, 300 of which are active users. See Appendix B – Authentication Requirements for a list of roles supported in the IBS System.

(c) 1.100 Scope of Work and Deliverables

A) 1.101 IN SCOPE

The Contractor will be responsible for providing the following Services and Deliverables:

A. Development and implementation of the Hosting Environment;
B. Migration of the IBS System along with its Item Data to the Hosting Environment;
C. Development of the Authentication Process for the IBS System;
D. Ongoing hosting, support, and maintenance of the IBS System in the Hosting Environment; and
E. Development and implementation of Future Enhancements to the IBS System

A detailed description of the Services and Deliverables that the Contractor will provide is described in Sections 1.103 and Section 1.104, and is supported by Appendices A and B.

B) 1.102 RESERVED N/A

C) 1.103 HOSTING ENVIRONMENT

The Hosting Environment shall meet or exceed the requirements identified in this Section 1.103 Part A and Appendix A. State Data Center standards in quality and performance are provided below. 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).

All Services and Deliverables provided by Contractor under the Contract must comply with all applicable State IT policies and standards. Contractor is required to review all applicable links provided below and hereby represents and warrants that it will comply with such policies and procedures. These policies and procedures are available as follows:

1.103 Part A - Enterprise IT Policies, Standards and Procedures:
1. The State maintains and secures the IT Enterprise by applying change in measured and controlled processes which are documented and published.
2. In the event an exception to the standards is desired, this request must be submitted with justification in writing to the assigned contract manager or DTMB Project Manager. The State must approve these requests and agree to the changes in writing before work has begun.

The Michigan Administrative Guide to State Government:
http://www.michigan.gov/dmb/0,1607,7-150-9131_9347---,00.html

- State Policy 1335.00: Information Technology Access Control
- State Policy 1340.00: Information Technology Information Security
- State Policy 1345.00: Information Technology Network and Infrastructure

The State’s security environment leverages:
- Data base security
- Secured Socket Layers
- Database encryption for data at rest
- Encryption for data in transit

There is no public access to the IBS System. All State and contractual employees are required to have an application level login and password to access system functions. Any contract employee that accesses the system functions must adhere to all State security policies. For example, each contract employee must use his/her individual account with password, no shared accounts or passwords, and authorizations with least privileges based on need-to-know basis. Any additional State/BAA specific security requirements are stated in Appendix A – Business/Technical Requirements and Appendix B – Authentication Requirements.

In the event the Contractor or an individual representing the Contractor is granted access to State IT resources, this individual acknowledges and agrees to the State’s acceptable use policy:
http://www.michigan.gov/documents/dmb/1460.00_184733_7.pdf

1.103 Part B – DTMB IT eMichigan Web Development Standard Tools:
The State web presence is showcased at www.michigan.gov and the State desires to leverage this synergy to provide a common look and feel to those who visit State web sites. The current Item Bank System is compliant with the eMichigan standard. As part of the ongoing maintenance and Future Enhancements to the IBS System, the Contractor will be responsible for complying with the eMichigan look and feel standards.

View eMichigan Web Development Standards

1.103 Part C - The State Unified Information Technology Environment (SUITE):
SUITE is a methodology which includes standards, forms and templates for project management and systems engineering; see http://www.michigan.gov/suite.

- The Contractor shall conform to SUITE and adopt said processes and templates in performance of the project.
- The Contractor shall be familiar with SUITE in order to assist the DTMB Project Manager in completing required documentation and satisfying other SUITE requirements.

1.103 Part D - EA Solution Assessment
The Contractor will work with the State to finalize the EA Solution Assessment. The EA Solution Assessment must show all of Contractor’s environments for which the state is paying for as part of the hosting charges. All communication and protocols between servers must be identified.

1.103 Part E – IBS System’s current technical environment (Appendix B)
The IBS System’s current production environment is provided in the EA Solution Assessment.
HARDWARE – Database Server
Operating system Windows Server 2008 R2
Processor 4 x 4 @ 2.33 GHz (min)
Real memory 32 GB
Disk Space 240 GB
Network Up Speed 100 Mbps

HARDWARE – SAS Server
Operating system Windows Server 2008 R2
Processor 2 x 4 @ 3.0 GHz (min)
Real memory 64 GB
Disk Space 500 GB
Network Up Speed 100 Mbps

HARDWARE – Web/Application Servers
Operating system Windows Server 2008 R2
Processor 4 x 4 @ 2.33 GHz (min)
Real memory 8 GB
Disk Space 500 GB
Network Up Speed 100 Mbps

SOFTWARE
Visual Studio 2010, 3.5 Framework, C#.NET, ASP.NET
Microsoft Team Foundation Server 2008
SQL Server Enterprise Edition 2008, SP 3
IIS 7.5
SAS 9.2
ActivePDF ToolKit 2011 Professional
ActivePDF WebGrabber 2009 Enterprise
Telerik UI Controls 2009.3.1103.20

1.104 Work and Deliverable

1.104.A Milestones
The following is a list of Project milestones to be completed by Contractor:

1.104.A.1 Authentication Process
The Contractor is responsible for developing a new Authentication Process as defined in Appendix B - Authentication Requirements.

The State will provide the following:
- The latest application source code
- The latest database structure

The Contractor will deliver the following:
- Q/A environment
- New authentication process which will be validated by the State

1.104.A.2 Production Ready
The Contractor must provide the Hosting Environment and Services to support the IBS System, and have the IBS System fully operational with all existing Item Data and functionality available to end users by July 25, 2013 (“Production Ready”).
The State will provide the following:

- SQL backup of the IBS System database
- System interface requirements as specified in Appendix A - Business/Technical Requirements

The Contractor will deliver the following:

- Secure data transport method
- Data must be encrypted
- Production ready environment
- Fully functioning IBS System which will be validated by the State

The IBS System will be hosted in a commercially managed Data Center (TIER III or higher) with 98% uptime where users of the system can access the system 24x7x365 over the internet. The IBS System must be hosted in a secure and stable Data Center that has:

- Redundant power supply
- Bandwidth that can handle system traffic. The current system has 300 active users (85-100 concurrent users), averaging 100 daily visits with two million yearly page views. The system must be scalable to handle traffic spikes and incremental growth over time.
- Managed backup

Physical and/or virtual servers may be used. The State prefers that the IBS System be hosted on a dedicated server. Shared servers may be considered if the IBS System is co-hosted only with other applications that have equivalent or more stringent security requirements. (As listed within ESEA Elementary and Secondary Education Act (Pub.L. 89–10, 79 Stat. 27, 20 U.S.C. ch.70)). The Contractor shall provide the specifications on whether the server is physical or virtual, and, if a physical server, the date of purchase.

The IBS System must be hosted on hardware covered under manufacturer warranty. To prevent security breaches, Contractor must update all necessary patches in a timely manner to all the software used to successfully run the IBS System that will include but not be limited to the operating system, database, etc.

The Contractor shall be responsible for the secure hosting and operation of the IBS System. The Contractor shall be responsible for all breaches of security of sensitive data, including Personally Identifiable Information that resides on the IBS System’s database, per the terms of the State’s security policies and of the Michigan Identity Theft Protection Act (Act 452 of 2004, as amended).

Hardware refreshes shall not impact system performance or user access. The system must be available 24x7x365, except for mutually agreed scheduled maintenance.

1.104.A.3 Training Environment

The Contractor is responsible for providing a training environment with a suitable amount of data.

The Contractor will deliver the following:

- A training environment, co-hosted in the production environment, but with a separate user interface and database.
- Base data for all training activities. The content of the training database will be initially populated by data that exists in the IBS System. Whether the data is released or not will be at the discretion of the MDE.

1.104.A.4 Requirements Gathering for Future Enhancements

The Contractor is responsible for providing Future Enhancements to the IBS System. The following are examples of the type of enhancements that are planned for the IBS System once it is migrated to the Hosting Environment. The Contractor will be responsible for performing the necessary tasks to implement these enhancements (see Section 1.403 Change Management). Tasks will be determined and worked on by the staff designated in the Contract.
1. XML export for all items in a test map
2. Braille notes for contexts
3. Work queue additional filters or sort capabilities
4. Combine or split context graphic requests
5. Modify Search UI to allow filtering of flagged items by varying parameters
6. Technology Enhanced Items - Item development and export to support online delivery
7. Conform to QTI and APIP interoperability standards for all item types
8. Performance tasks
9. Mass item import
10. Mass item export
11. Modify blueprint to support more than two item types – dynamic
12. Statistics table driven
13. Dynamic DIF categories
14. Add equation editor
15. Add reporting groups to content libraries; export on test map
16. Capability to upload PDF attachment with graphic request
17. Simplify the image upload process – upload one image that will be replicated for the additional image types needed (e.g. upload eps image that will be replicated for web and thumbnail versions)
18. Allow other platform types for external user roles (MAC)
20. Interface with online delivery engine
21. Blueprint to allow items above or below grade level for interim assessments
22. Blueprint to allow taxonomy (depth of knowledge) specification for interim assessments

The State will provide the details of the changes that need to be made to the IBS System and it is the Contractor’s responsibility to analyze and provide a Change Request with an estimate and a level of effort required to make such changes. The Change Request must include details of the actual tasks that will be completed, estimated number of hours for each task, number of technical resources that will be used to develop, test and implement the changes. All Change Requests will have to be approved by the State before the work can begin. All requested changes will be developed and tested before deploying into the production environment.

The Contractor is responsible for providing training services for all Future Enhancements made to the IBS System. For minor enhancement releases, these services can be in the form of Web-Based Tutorials (WBTs), CDs, videos, and virtual classrooms. For major enhancement releases, classroom-based training services should be provided (Lansing, MI area). Other forms of training can be used to enhance the classroom based training. All training materials shall become the property of the State. The Contractor and State together will determine if classroom based training is necessary for a major release.

The Contractor will deliver the following:
- A training plan for each release;
- An editable, electronic version of all end user training materials in State standard software format;
- Training aids such as presentation outlines and audio-visual materials;
- WBTs, CDs, videos and virtual classrooms;
- Classroom based facilities in the Lansing, MI area as-needed.

**1.104.A.5 Software Maintenance Support**

In the day to day operation of the IBS System it is anticipated the system will require maintenance. The Contractor shall provide software break-fix maintenance for the IBS System to ensure the application continues to run error-free.
D) 1.201 CONTRACTOR STAFF, ROLES, AND RESPONSIBILITIES

Contractor Staff
The Contractor will provide sufficient staffing to provide the requested services and meet all requirements under this Contract. The Contractor shall be responsible for the continuous training of its staff. The Contractor shall train its staff and update system documentation, project document, and user manuals in a timely manner so the staff remains competent and knowledgeable in order to provide a high quality service to the State and its customers. Please refer to Appendix C – Staffing Plan Matrix and Organization Chart regarding Contractor’s staff.

The Contractor will identify 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.

Key Personnel
All Key Personnel may be subject to the State’s interview and approval process. Any key staff substitution must have the prior approval of the State. The State has identified the following as key personnel for this project.
- Project Manager – Jose Biggers
- Enterprise Architect – Travis Wicker
- Quality Assurance Analyst – Lisa Roberts
- Business Analyst – Drew McDaniel

Project Manager
The Contractor will provide a Project Manager to interact with the designated personnel from the State to insure a smooth transition to the new system. The Project Manager will coordinate all of the activities of the Contractor personnel assigned to the project and create all reports required by the State.

The Contractor’s Project Manager responsibilities include, at a minimum:
- Manage all defined Contractor responsibilities in the Scope of Services;
- Manage Contractor’s subcontractors, if any;
- Develop the Project Plan and schedule, and update as-needed;
- Serve as the point person for all project issues;
- Coordinate and oversee the day-to-day project activities of the project team;
- Assess and report project feedback and status;
- Escalate project issues, project risks, and other concerns;
- Review all project deliverables and provide feedback;
- Proactively propose/suggest options and alternatives for consideration;
- Utilize change control procedures;
- Prepare project documents and materials;
- Manage and report on the project’s budget.

Project Manager Requirements
- 7+ years of recent IT project management experience managing large scale application development and implementation projects.
- 3+ years of experience working on projects involving interfacing with the State of Michigan or that of a similar state-level system.
- 4 years of experience in analyzing, validating and documenting, project scopes, and business requirements.
• 4 years of experience in facilitating meetings with clients and stakeholders for software development projects.
• Demonstrated leadership ability in complex projects involving multiple vendors and in-house resources within all levels of an organization.
• Demonstrated experience with adherence to State’s Project Management Professional (PMP) methodology, or a similar project management methodology
• Current professional certification in Project Management, such as the PMP certification from the Project Management Institute or George Washington University is desired
• Must have knowledge of and experience with requirements gathering for web application development projects.
• Minimum 3 years of experience in the education field, implementing data management/decision support tools desired.
• Must be skilled in MS Project, MS Excel, MS Word, and MS PowerPoint.

Enterprise Architect
The Contractor’s Enterprise Architect responsibilities include, at a minimum:
• Solves complex issues that cross team boundaries, and improves existing implementation processes;
• Assures that all standards, models, designs and methodologies required by the State of Michigan are implemented and adhered to at the project level;
• Assists in strategic planning efforts from a technical perspective;
• Assists in troubleshooting applications systems, and performance and environmental concerns;
• Provides detailed impact analysis assessment for Enterprise Architecture components;
• Establishes procedures to enable tracking and enforcement of standards, including State standards;
• Identifies implementation risks; analyzes potential impact to enterprise and scheduled objectives; develops, submits and maintains enterprise critical path schedules; and initiates action to correct any deviations from this schedule;
• Makes recommendations for recommending programming languages, methodologies, and platforms.

Enterprise Architect Requirements
• 5+ years of experience in performing IT architectural assessments in projects similar in size, scope to this project.
• 5+ years of experience proposing new system architectural designs and technical specifications in projects similar in size and scope to this project.
• 5+ years of experience with Object Oriented design and development.
• 5+ years in developing systems with Microsoft SQL Server databases.

Quality Assurance Analyst
The Contractor’s Quality Assurance Analyst responsibilities include, at a minimum:
• Evaluates and tests new or modified software programs and software development procedures used to verify that programs function according to user requirements and conform to establishment guidelines;
• Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality of software economically and efficiently;
• Reviews new or modified program, including documentation, diagram, and flow chart, to determine if program will perform according to user request and conform to guidelines;
• Recommends program improvements or corrections to programmers;
• Reviews computer operating log to identify program processing errors. Enters instructions into computer to test program for validity of results, accuracy, reliability, and conformance to establishment standards;
• Observes computer monitor screen during program test to detect error codes or interruption of program and corrects errors;
• Identifies differences between establishment standards and user applications and suggests modifications to conform to standards;
• Sets up tests at request of user to locate and correct program operating error following installation of program. Conducts compatibility tests with vendor-provided programs;
• Monitors program performance after implementation to prevent reoccurrence of program operating problems and ensure efficiency of operation;
• Writes documentation to describe program evaluation, testing, and correction;
• May evaluate proposed software or software enhancement for feasibility. May develop utility program to test, track, and verify defects in software program. May write programs to create new procedures or modify existing procedures;
• May train software program users;
• Works independently to evaluate applications based on business/functional requirements and designs and develop test cases accordingly;
• Applies test methodology and product knowledge in the design of tests and testing strategies for the analysis and certification of products;
• Plans and conducts the analysis, inspection, design, test, and/or integration to assure the quality for large and complex projects;
• Communicates issues identified during quality assurance activities to development and provides recommended process improvements to management.

Quality Assurance Analyst Requirements
• Minimum 5 years in Software Quality Assurance in client server and web applications.
• Minimum 5 years testing custom .Net, Web applications developed with Microsoft ASP.NET and SQL.
• Minimum 5 years in the documenting of test plans, test cases, test results.
• Experience analyzing requirements and developing test cases.
• Advanced proficiency with all MS Office applications and Microsoft Visio.
• Strong written and communication skills.
• Experience interfacing with technology leadership as well as the business client.
• Experience in automated testing is desired

Business Analyst
The Contractor’s Business Analyst responsibilities include, at a minimum:
• Reviews, analyzes, and evaluates business systems and user needs. Formulates systems to parallel overall business strategies;
• Business Analyst/Consultant capabilities with 8 or more years of experience in the field or in a related area. Relies on experience and judgment to plan and accomplish goals;
• May lead and direct the work of others. May report directly to a project lead or manager. A wide degree of creativity and latitude is expected;
• Analyze new business processes to understand gaps in current system functionality;
• Responsible for developing and managing business and functional requirements within project teams or for system maintenance items;
• Gathers, analyzes, documents, validates and maintains business and functional requirements;
• Translates business requirements into use cases;
• Utilize requirements and system analysis techniques to evaluate business problems (i.e. interviews, site visits, shadowing, requirements elicitation sessions, etc.);
• Facilitates the prioritization of business requirements. Assists in issue prioritization, change management, and schedule changes;
• Facilitates, participates, and provides leadership in requirements elicitation sessions;
• Works collaboratively with technology team and the business to evaluate technology solutions;
• Assists with creating user documentation (release notes for business for maintenance items, training materials for the business, etc.);
• Balances multiple projects and timelines;
• Collects and disseminates requirements gathering status and information;
• Assists in training and production release support if necessary to ensure quality;
• Develops and sustains appropriate relationship with technology team and business partners.

Business Analyst Requirements
• Minimum 5 years working in the planning and forecasting of projects and documenting and gathering business, functional or technical requirements for software projects. (Must have worked on at least 1 full SDLC project.)
• Minimum 5 years project management skills and knowledge in project management and related methodologies (e.g. PMI, or other industry accepted standard).
• Advanced proficiency with all MS Office applications, MS Project and Visio.
• Skilled in User Experience (UX) Design, usability testing, wireframes and prototype development and its importance in the SDLC.
• Experience interfacing with technology leadership as well as the business client.
• Ability to facilitate sessions with the business client, communicate at a level appropriate to the audience, make oral and written reports and presentations.
• Strong written and communication skills.
• Current professional certification in Project Management is desired.

The Contractor will provide sufficient qualified staffing to satisfy the Services and Deliverables of this Contract.

E) 1.202 STATE STAFF, ROLES, AND RESPONSIBILITIES
The State will provide the following resources only on an as-needed basis for the Contractor’s use on this project:
• Conference room for business requirements gathering meetings and monthly/quarterly project status update meetings;
• Access to copier.

The State project team will consist of Subject Matter Experts (SME’s), an Agency Project Manager, and a DTMB Project Manager.

Subject Matter Expert
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;
• Facilitate UAT.

State Project Manager - (Agency)
BAA will provide a Project Manager who will be responsible for coordinating with the Contractor in determining the project needs. The State’s Project Manager 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 on invoices after the Agency Project Manager approves;
• 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.

DTMB Application Manager
DTMB will provide a Project Manager who will be responsible for the following:
• Coordinate the State IT resources necessary for the project;
• Facilitate coordination between various external contractors;
• Facilitate communication between different State departments/divisions;
• Approval for payment of invoices after the Agency Project Manager approves;
• Ensure the Contractor is adhering to DTMB policies and procedures;
• Supporting the management of the contract.

<table>
<thead>
<tr>
<th>Name</th>
<th>Agency/Division</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jon Rogozinski</td>
<td>DTMB</td>
<td>State Project Manager (DTMB)</td>
</tr>
<tr>
<td>Pat King</td>
<td>BAA</td>
<td>Subject Matter Expert</td>
</tr>
<tr>
<td>Mike Konzman</td>
<td>DTMB</td>
<td>State Project Manager - Agency</td>
</tr>
</tbody>
</table>

F) 1.203 RESERVED N/A

(d) 1.300 Project Plan

A) 1.301 PROJECT PLAN MANAGEMENT

Project Planning
Contractor will provide a Project Work Breakdown Structure (the “Project Work Breakdown Structure”) for all services to the State other than for hosting (see Section 1.104 Part A Section 1) and maintenance (see Section 1.104 Part A Section 3), including necessary time frames and Deliverables for the various stages of the project and the responsibilities and obligations of both the Contractor and the State.

1. Project Work Breakdown Structures will include the following:
• MS Project schedule,
• Internal milestones,
• Task durations,
• Deliverable target dates and critical paths,
• Project approach / Statement of Work,
• Scope statement with a description of the deliverables to be provided under this Contract,
• Assumptions and exclusions,
• Critical success factors,
• Initial resource plan with anticipated resources by organization, role, and responsibility,
• Initial risk plan,
• Initial communication plan,
• Anticipated hardware, materials, and supplies to be provided by the State in meeting the target dates established in a preliminary Project Plan.

See Section 1.501 for acceptance criteria.
Orientation Meeting
If requested by the State, within 7 calendar days from execution of the Contract, the Contractor will be required to attend an orientation meeting to discuss the content and procedures of the Contract. The meeting will be held in Lansing, Michigan, at a date and time mutually acceptable to the State and the Contractor. Travel will be reimbursed in accordance with Section 1.600.

Performance Review Meetings
The Contractor shall attend monthly or quarterly meetings (see Section 1.302) to review the Contractor’s performance under the Contract. The monthly or quarterly meetings will be held in Lansing, Michigan, or by teleconference, as mutually agreed by the State and the Contractor. Travel will be reimbursed in accordance with Section 1.600.

Project Control
1. The Contractor will carry out this project under the direction and control of DTMB.
2. Within 7 business days of the execution of the Contract, the Contractor will submit the Project Plan to the State project manager(s) for final approval. This Project Plan must be in agreement with Section 1.104, and must include the following (the “Project Plan”):
   a. The Contractor’s project organizational structure.
   b. The Contractor’s staffing table with names and title of personnel assigned to the project. This must be in agreement with staffing of accepted proposal. Necessary substitutions due to change of employment status and other unforeseen circumstances may only be made with prior approval of the State.
   c. The Project Work Breakdown Structure showing sub-projects, activities and tasks, and resources required and allocated to each.
3. The Contractor will manage the project in accordance with the State Unified Information Technology Environment (SUITE) methodology, which includes standards for project management, systems engineering, and associated forms and templates which is available at http://www.michigan.gov/suite.
   a. Contractor will use an automated tool for planning, monitoring, and tracking the Contract’s progress and the level of effort of any Contractor personnel spent performing Services under the Contract. The tool shall have the capability to produce:
      • Staffing tables with names of personnel assigned to Contract tasks;
      • Project Plan showing tasks, subtasks, deliverables, and the resources required and allocated to each (including detailed plans for all Services to be performed within the next 30 calendar days, updated weekly or biweekly as directed by the State PM);
      • Updates must include actual time spent on each task and a revised estimate to complete;
      • Graphs showing critical events, dependencies and decision points during the course of the Contract.
   b. Any tool(s) used by Contractor for such purposes must produce information of a type and in a manner and format that will support reporting in compliance with the State standards.

B) 1.302 REPORTS
Project Reporting:
As part of the initial IBS System Migration and for Future Enhancements, a bi-weekly Project status report is required from the Contractor to the State Project Manager on the topics of status, schedule, risks, issues, impediments, deliverables, change control, and accomplishments, beginning upon execution of the Contract for the duration of the contract unless otherwise agreed to.

Reporting topics will include but not limited to the following items.
• Project Status
• Planned % Complete
• Actual % complete
• Current SUITE stage
- Planned SUITE stage
- Planned Start Date
- Planned Finish Date
- Planned Hours
- Actual Start
- Actual Finish
- Actual Hours
- On Target for Completion (Y/N)
- New Forecast Completion Date
- # of Defects Identified
- # of Defects Resolved
- Pending Change Requests under the subheadings Corrective Actions and Enhancements
- Help desk issues
- Team Changes

Hosting and Maintenance Reporting:
Upon successful implementation and go-live of the IBS System, Contractor will provide the following:

- **Inventory Report**: The Contractor will provide a semi-annual inventory report for all hardware and software supplied by the Contractor, used to host and support the IBS System.
- **Disaster Recovery Plan Test Report**: The Contractor will provide an annual report detailing the execution of the IBS System's disaster recovery plan and testing of the Disaster Recovery Environment, including all issues encountered, interruptions to service, and identified remediations.
- **Help Desk Call Log**: The Contractor shall maintain a log of all calls made to the helpdesk, which shall be updated a minimum of once daily. The Contractor will fully document the complaints and problems reported. The log shall record the actions that were taken to resolve the issue and the date such issue was resolved. The log shall be available online to State staff to track the status of the issues.
- **System Usage and Maintenance Report**: The Contractor will provide a monthly report detailing Network and bandwidth issues, if any.
- **Maintenance Report**: The Contractor will provide a monthly report detailing scheduled maintenance for the upcoming month, and also all maintenance events, both scheduled and unscheduled, for the previous month. Contractor shall also calculate and report their adherence to Service Level Agreements.

(e) **1.400 Project Management**

A) **1.401 ISSUE MANAGEMENT**
The Contractor shall maintain an issue log in an agreed upon format, to document and track issues relating to the provision of services under this Contract. The Contractor shall communicate the status of issues to the State’s Project Manager weekly, as required or agreed and the status must contain the following minimum elements:

- Description of issue
- Status
- Date reported
- Resolution deadline
- Date resolved
- Project impact (schedule, resources)
- Priority
- Assigned To
- Related risk
- Notes

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The State will escalate issues for resolution as follows:
   - Level 1 – Business leads / Subject matter experts
   - Level 2 – Project Managers / Project Leadership Team
   - Level 3 – Executive Team

**B) 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 project. If the unknown becomes known or the event occurs, a risk may escalate to become an issue.

The Contractor is responsible for establishing a risk management plan including the identification and recording of risk items, prioritization of risks, definition of mitigation strategies, monitoring of risk items, and periodic risk assessment reviews with the State.

The Contractor will submit an initial risk management plan to the State for approval within seven (7) business days from execution of the Contract. The risk management plan will be in accordance with the State’s PMM methodology. The Contractor shall communicate the status of risks to the State's Project Manager weekly, as required or agreed and the status must contain the following minimum elements:

- Risk
- Status
- Date documented
- Controlled
- Impact
- Description
- Trigger Event
- Mitigation
- Likely Project Phase
- Owner

The Contractor is responsible for identification of risks throughout the life cycle of the project. Mitigating and/or eliminating risks will be the responsibility of the assigned party.

**C) 1.403 CHANGE MANAGEMENT**

Change management is defined as the process to communicate, assess, monitor, and control changes to system resources and processes. The State employs change management at the Project level and in its administration of the Contracts.

The Contractor must employ change management procedures to handle requests which impact schedule or resources and such things as “out-of-scope” requests or enhancements (see sample of enhancements in Section 1.104.A.4. Change Requests must be submitted to the Project Manager and shall be approved by the State in writing before they are implemented.

(f) **1.500 Acceptance**

**A) 1.501 CRITERIA**

All Deliverables (Written Deliverables and Custom Software Deliverables) require formal written approval by the State, in accordance with the procedures set forth in Section 2.250. 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 UAT, to be led by the State with the support and assistance of Contractor.
B) 1.502 FINAL ACCEPTANCE
For Custom Software Deliverables, Final Acceptance shall be considered to occur when the Custom Software Deliverable to be delivered has been approved by the State in writing in accordance with the procedures set forth in Section 2.250, and has been operating in production without any material deficiency for thirty (30) consecutive days. 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 Deliverable. For Written Deliverables, Final Acceptance shall be considered to occur when the State approves such Deliverable in writing in accordance with the procedures set forth in Section 2.250.

(g) 1.600 Costs and Payment
A) 1.601 COSTS
This is a Contract for in-kind services. The aggregate cost of all Services and Deliverables over the six-year Contract term is estimated to be $5,000,999.06. Through a combination of direct contributions and credits, Contractor has agreed to cover 100% of the estimated aggregate cost of all Services and Deliverables under the Contract in exchange for the IBS System Licenses granted to Contractor under Section 2.321.

The following is a breakdown of the estimated costs and the corresponding reduction in credits associated with the Contract:

<table>
<thead>
<tr>
<th>Service/Deliverable</th>
<th>Total Cost</th>
<th>State’s Cost (1)</th>
<th>Charges Against State’s Credit</th>
<th>State’s Credit Balance (2)</th>
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<tr>
<td>IBS System Migration</td>
<td>$63,750.00</td>
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<td>$63,750.00</td>
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<td>Production Ready and Authentication Process</td>
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<td>Hosting Services Year 3</td>
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<td>Hosting Services Year 4</td>
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<tr>
<td>Hosting Services Year 5</td>
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<td>Hosting Services Year 6</td>
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<td>Future Enhancements</td>
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<tr>
<td>Totals</td>
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<td>$3,080,462.50</td>
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<td>$0</td>
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</table>

Notes:
(1) Contractor has agreed to cover 47% of the costs for (i) achieving Production Ready status, (ii) developing and implementing the Authentication Process, and (iii) developing and implementing any Future Enhancements. The State has agreed to cover 53% of the costs for these Deliverables. The State has agreed to cover 100% of the costs associated with IBS System Migration and Hosting Services.
(2) Contractor has agreed to provide the State with an initial credit of $3,080,462.50.
A more detailed breakdown of estimated costs for specific Services and Deliverables under the Contract can be found in Appendix E - Cost Tables.

1.602 PAYMENTS

Migration, Production Ready and Authentication Process
- Completion of IBS System Migration, achieving Production Ready status and implementation of the Authentication Process will be charged on a time and materials basis, using the hourly rates in Cost Table 3 of Appendix E - Cost Tables.
- The State will be charged for 100% of the costs related to IBS System Migration.
- The State will be charged for 53% of the costs related to achieving Production Ready status and implementation of the Authentication Process.
- Payment will be in the form of a credit reduction against the State's initial credit balance of $3,080,462.50.

Hosting Services
- Hosting Services will be charged on a firm, fixed-price basis, using the costs shown in Cost Table 2 of Appendix E - Cost Tables. Costs will accrue monthly.
- Charges for Hosting Services shall not commence until acceptance of all Deliverables detailed in Section 1.104.A.1, Section 1.104.A.2 and Appendices A and B.
- Payment will be in the form of a credit reduction against the State's remaining credit balance.

Future Enhancements
- Future Enhancements will be determined within the individual project’s Statements of Work, based on the number of estimated hours and the Contractor’s not-to-exceed hourly rates detailed in Cost Table 3 of Appendix E - Cost Tables.
- If the Contractor and the State agree that a planned Future Enhancement is mutually beneficial, the State will be charged 53%.
- Payment will be in the form of a credit reduction against the State's remaining credit balance.

Travel
- Reimbursement for travel expenses, including hotel, mileage, meals, parking, etc. must be approved in writing by the State.
- If travel is determined by the State to benefit both the State and Contractor, then the State will be charged for 53% of the costs related to travel reimbursement. If travel is determined by the State to only benefit the State, then the State will be charged for 100% of the costs related to travel reimbursement.
- Payment will be in the form of a credit reduction against the State’s remaining credit balance.

Out-of-Pocket Expenses
- Contractor’s out-of-pocket expenses are not separately reimbursable by the State.

Statements of Work and Issuance of Purchase Orders for Future Projects
- Unless otherwise agreed by the parties, each Statement of Work will include:
  - Background
  - Project Objective
  - Scope of Work
  - Deliverables
  - Acceptance Criteria
  - Project Control and Reports
  - Specific Department Standards
  - Payment Schedule
  - Travel and Expenses
  - Project Contacts
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 a Statements of Work or Purchase Orders 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 Purchase Order issued against this Contract. Contractor shall perform in accordance with this Contract, including the Statements of Work/Purchase Orders executed under it.

**Invoicing**

If applicable, Contractor will submit properly itemized invoices to:

- DTMB – Financial Services  
  Accounts Payable  
  P.O. Box 30026  
  Lansing, MI 48909  
  or  
  DTMB-Accounts-Payable@michigan.gov  

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 commodities/hardware, including quantity ordered;  
- Date(s) of delivery and/or date(s) of installation and set up;  
- Price for each item, or Contractor’s list price for each item and applicable discounts;  
- Number of each item provided with extension subtotal amounts  
- Net invoice price for each item;  
- Shipping costs;  
- Other applicable charges;  
- Total invoice price; and  
- Payment terms, including any available prompt payment discount.

Incorrect or incomplete invoices will be returned to Contractor for correction and reissue.

**B) 1.602 RESERVED N/A**
Article II. Article 2 - Terms and Conditions

(a) 2.000 Contract Structure and Term

(B) 2.001 CONTRACT TERM
The Contract is for a period of six (6) years beginning June 20, 2013 through June 19, 2019. All outstanding Statement of Works must also expire upon the termination for any of the reasons listed in Section 2.150 of the Contract, unless otherwise extended under the Contract. Absent an early termination for any reason, Statement of Works issued but not expired, by the end of the Contract's stated term, shall remain in effect for the balance of the fiscal year for which they were issued.

B) 2.002 OPTIONS TO RENEW
The 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 four (4) additional one (1)-year periods.

C) 2.003 LEGAL EFFECT
Contractor accepts the Contract by signing two copies of the Contract and returning them to the DTMB-Procurement. 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 shall not be liable for costs incurred by Contractor or payment under the Contract, until Contractor is notified in writing that the Contract or Change Request has been approved by the State Administrative Board (if required), signed by all the parties.

D) 2.004 ATTACHMENTS & EXHIBITS
All Attachments and Exhibits affixed to any and all Statement(s) of Work, or appended to or referencing the Contract, are incorporated in their entirety and form part of the Contract.

E) 2.005 ORDERING
The State must issue an approved written Purchase Order (“Purchase Order”), Blanket Purchase Order, Direct Voucher or Procurement Card Order 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 specifically contained in that Purchase Order or Blanket Purchase Order's accompanying Statement of Work. Exact quantities to be purchased are unknown; however, the Contractor will be required to furnish all such materials and services as may be ordered during the Contract period. Quantities specified, if any, are estimates based on prior purchases, and the State is not obligated to purchase in these or any other quantities.

F) 2.006 ORDER OF PRECEDENCE
The Contract, including any Statements of Work, Appendices, 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 shall 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. The Contract may be modified or amended only by a formal Contract amendment.

G) 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.
H) 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.

I) 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.

(C) 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.

A) 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.

B) 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, shall survive the expiration or termination of the Contract.

(d) 2.020 Contract Administration

A) 2.021 ISSUING OFFICE
This Contract is issued by the State through DTMB and with the assistance of MDE. DTMB-Procurement is the sole point of contact in the State with regard to all procurement and contractual matters relating to the Contract. The DTMB-Procurement Contract Administrator for this Contract is:

Mark Lawrence
Department of Technology, Management and Budget
Mason Bldg., 2nd Floor
PO Box 30026
Lansing, MI 48909
Lawrencem1@michigan.gov
Phone: (517) 241-1638

B) 2.022 CONTRACT COMPLIANCE INSPECTOR
The Director of DTMB-Procurement 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. DTMB-Procurement 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:

Glenn Gorton
Business Relationship Manager, DTMB
Hannah Building
608 West Allegan St.
Lansing, MI 48909
gortong@michigan.gov
Phone: (517) 241-2368
C) 2.023 PROJECT MANAGER
The following individual will oversee the project:

Jon Rogozinski  
Information Technology Manager, DTMB  
Hannah Building  
608 West Allegan St.  
Lansing, MI  48909  
RogozinskiJ@michigan.gov  
Phone: (517) 241-6868

D) 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, Contractor shall provide a detailed outline of all work to be done, including tasks necessary to accomplish the Additional 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 before commencing performance of the requested activities it believes 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 and 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 2.024.

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 requires 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 Contractor believe the proposed Change 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 shall 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 rates in Cost Table 3 of Appendix E - Cost Tables 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 shall 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 shall be performed until the proposed Change has been specified in a duly executed Contract Change Notice issued by the Department of Technology, Management and Budget, Procurement.

(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.

E) 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 2.025; (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
DTMB Procurement
PO Box 30026
530 West Allegan
Lansing, Michigan 48909

Contractor: See Contract Cover Page

Either party may change its address where notices are to be sent by giving notice according to this Section 2.025.

F) 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 giving written notice.

G) 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 shall be deemed to be an employee, agent or servant of the State for any reason. Contractor shall be solely and entirely responsible for its acts and the acts of its agents, employees, servants and Subcontractors during the performance of the Contract.

H) 2.028 COVENANT OF GOOD FAITH

Each party shall act reasonably and in good faith. Unless stated otherwise in the Contract, the parties shall 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.
I) 2.029 ASSIGMENTS
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.

(e) 2.030 General Provisions
A) 2.031 RESERVED N/A
B) 2.032 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.
C) 2.033 CONTRACT DISTRIBUTION
DTMB-Procurement retains the sole right of Contract distribution to all State agencies and local units of government unless other arrangements are authorized by DTMB-Procurement.
D) 2.034 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 shall pay for all costs and expenses incurred in obtaining and maintaining any necessary easements or right of way.
E) 2.035 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.
F) 2.036 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.
G) 2.037 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”).

H) 2.038 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 shall provide the State with priority service for repair and work around in the event of a natural or man-made disaster.

(f) 2.040 Financial Provisions

(g) A) 2.041 FIXED PRICES FOR SERVICES/DELIVERABLES
Each Statement of Work 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 shall show verification of measurable progress at the time of requesting progress payments.

B) 2.042 ADJUSTMENTS FOR REDUCTIONS IN SCOPE OF SERVICES/DELIVERABLES
If the scope of the Services/Deliverables under any Statement of Work issued under the 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.

C) 2.043 SERVICES/DELIVERABLES COVERED
The State shall not be obligated to pay any amounts in addition to the charges specified in this Contract for all Services/Deliverables to be provided by Contractor and its Subcontractors, if any, under this Contract.

D) 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 shall 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 shall 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.
(c) Correct invoices shall 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) All invoices should reflect actual work done. Specific details of invoices and payments shall be agreed upon between the Contract Administrator and the Contractor after the proposed Contract Agreement has been signed and accepted by both the Contractor and the Director of Procurement, Department of Management & Budget. This activity shall occur only upon the specific written direction from DTMB-Procurement.

E) 2.045 PRO-RATION
To the extent there are Services that are to be paid for on a monthly basis, the cost of such Services shall be pro-rated for any partial month.
F)  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.

G)  2.047  FINAL PAYMENT
The making of final payment by the State to Contractor does not constitute a waiver by the State of any rights
or other claims as to the Contractor’s continuing obligations under the Contract, nor shall it constitute a waiver
of any claims by the State against the Contractor arising from unsettled claims or failure by the Contractor 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.

H)  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 shall be
made by electronic fund transfer (EFT).

(h) 2.050  Taxes
A)  2.051  EMPLOYMENT TAXES
Contractor shall collect and pay all applicable federal, state, and local employment taxes.

B)  2.052  SALES AND USE TAXES
Contractor shall register and 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.

(i)  2.060  Contract Management
A)  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.

B)  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 shall 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 shall notify the State of the proposed assignment, shall introduce the individual to the appropriate State representatives, and shall 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 shall 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 on 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.

C) 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 shall not be counted for a time as agreed to by the parties.

D) 2.064 CONTRACTOR PERSONNEL LOCATION
All staff assigned by Contractor to work on the Contract shall perform their duties either primarily at Contractor’s offices and facilities or at State facilities. Without limiting the generality of the foregoing, Key Personnel shall, 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.

E) 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.

F) 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 shall 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 shall 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 impede Contractor’s performance under this Contract with the requests for access.

**G) 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 shall 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 shall provide the Services/Deliverables directly or through its affiliates, subsidiaries, subcontractors or resellers. Regardless of the entity providing the Service/Deliverable, the Contractor shall 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.

**H) 2.068 CONTRACTOR RETURN OF STATE EQUIPMENT/RESOURCES**

The Contractor shall 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.

(j) **2.070 Subcontracting by Contractor**

**A) 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 shall 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.

**B) 2.072 STATE CONSENT TO DELEGATION**

Contractor shall not delegate any duties under this Contract to a Subcontractor unless the DTMB 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 shall 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 shall not be counted for a time agreed upon by the parties.

**C) 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 shall 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 shall 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.

D) 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.

E) 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.

(k) 2.080 State Responsibilities

A) 2.081 EQUIPMENT
The State shall provide only the equipment and resources identified in the Statement of Work and other Contract Exhibits.

B) 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 shall 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 shall 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.

(l) 2.090 Security

A) 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 shall be used to determine Contractor personnel eligibility for working within State facilities and systems. The investigations shall 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 shall be initiated by the State and shall be reasonably related to the type of work requested.

B) 2.092 SECURITY BREACH NOTIFICATION
If the Contractor breaches this Section 2.090, 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 shall 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 72 hours of becoming aware of the use or disclosure or the shorter time period as is reasonable under the circumstances.

C) 2.093 RESERVED N/A
2.100 Confidentiality

A) 2.101 Confidentiality

Contractor and the State each acknowledge that the other possesses and shall continue to possess confidential information that has been developed or received by it. As used in this Section, “Confidential Information” of Contractor means 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 means 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.

B) 2.102 Protection and Destruction of Confidential Information

The State and Contractor shall 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 shall (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 shall 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.

C) 2.103 Exclusions

Notwithstanding the foregoing, the provisions in this Section shall 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 shall 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.

D) 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.

E) 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**

A) **2.111 INSPECTION OF WORK PERFORMED**

The State's authorized representatives, at reasonable times and with 10 days prior notice, have the right to enter the Contractor's premises or any other places where work is being performed in relation to this Contract. The representatives may inspect, monitor, or evaluate the work being performed, to the extent the access will not reasonably interfere with or jeopardize the safety or operation of Contractor's systems or facilities. The Contractor must provide reasonable assistance for the State's representatives during inspections.

C) **2.112 RETENTION OF RECORDS**

(a) The Contractor must retain all financial and accounting records related to this Contract for a period of 7 years after the Contractor performs any work under this Contract (Audit Period).

(b) If an audit, litigation, or other action involving the Contractor's records is initiated before the end of the Audit Period, the Contractor must retain the records 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.

D) **2.113 EXAMINATION OF RECORDS**

(a) The State, upon 10 days' notice to the Contractor, may examine and copy any of the Contractor's records that relate to this Contract any time during the Audit Period. The State does not have the right to review any information deemed confidential by the Contractor if access would require the information to become publicly available. This requirement also applies to the records of any parent, affiliate, or subsidiary organization of the Contractor, or any Subcontractor that performs services in connection with this Contract.

(b) In addition to the rights conferred upon the State in paragraph (a) of this Section and in accordance with MCL 18.1470, DTMB or its designee may audit the Contractor to verify compliance with the Contract. The financial and accounting records associated with the Contract shall be made available to DTMB or its designee and the auditor general, upon request, during the term of the Contract and any extension of the Contract and for 3 years after the later of the expiration date or final payment under the Contract.

E) **2.114 AUDIT RESOLUTION**

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

F) **2.115 ERRORS**

(a) If an audit reveals any financial errors in the records provided to the State, the amount in error must be reflected as a credit or debit on the next invoice and subsequent invoices until the amount is paid or refunded in full. However, a credit or debit may not be carried forward for more than four invoices or beyond the termination of the Contract. If a balance remains after four invoices, the remaining amount will be due as a payment or refund within 45 days of the last invoice on which the balance appeared or upon termination of the Contract, whichever is earlier.

(b) In addition to other available remedies, if the difference between the State's actual payment and the correct invoice amount, as determined by an audit, is greater than 10%, the Contractor must pay all reasonable audit costs.

(o) **2.120 Warranties**

A) **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 this Contract, nor their use by the State shall 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 Technology, Management and Budget, Procurement.
B) 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.

C) 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 HOSTING SERVICES, AUTHENTICATION PROCESS AND FUTURE
ENHANCEMENTS
Contractor warrants the following with respect to the Hosting Services, Authentication Process and Future
Enhancements:

a) Contractor is possessed of superior knowledge with respect to the Hosting Services, Authentication
Process and Future Enhancements and is aware the State is relying on Contractor's skill and judgment
in providing and/or creating the Hosting Services, Authentication Process and Future Enhancements,
including access to and use of the IBS System;

b) Contractor warrants that (i) the Hosting Services, Authentication Process and Future Enhancements,
including access to and use of the IBS System, will conform in all material respects to the requirements
set forth in this Contract, any Appendices, Exhibits, and any order or Statement of Work issued
hereunder, and (ii) that such Hosting Services, Authentication Process and Future Enhancements shall
not infringe any third party proprietary rights including (without limitation) any trademark, trade name,
trade secret, copyright, moral rights, patents or similar intellectual property rights;

c) Contractor warrants that no corrections, work-arounds or future modifications to the Hosting Services,
Authentication Process or Future Enhancements provided by Contractor shall degrade the IBS System,
cause any other warranty to be breached, or require the State to acquire additional hardware
equipment or software;

d) Contractor warrants that all updates, changes, alterations or modifications to the IBS System, Hosting
Services and Authentication Process by Contractor will be compatible with, and will not materially
diminish the features or functionality of the IBS System, Hosting Services and/or Authentication
Process.

D) 2.125 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.

E) 2.126 EQUIPMENT WARRANTY
To the extent Contractor is responsible under this Contract for maintaining equipment/system(s), Contractor
represents and warrants that it shall maintain the equipment/system(s) in good operating condition and shall
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 shall pass through to the State any warranties obtained or available from the original equipment manufacturer, including any replacement, upgraded, or additional equipment warranties.

F) 2.127 EQUIPMENT TO BE NEW
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.

G) 2.128 PROHIBITED PRODUCTS
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 DTMB-Procurement has approved a Change Request pursuant to Section 2.024.

H) 2.129 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.

(p) 2.130 Insurance

A) 2.13.1 LIABILITY INSURANCE
For the purpose of this Section, "State" includes its departments, divisions, agencies, offices, commissions, officers, employees, and agents.

(a) The Contractor must provide proof that it has obtained the minimum levels of insurance coverage indicated or required by law, whichever is greater. The insurance must protect the State from claims that may arise out of, or result from, or are alleged to arise out of, or result from, the Contractor's or a Subcontractor's performance, including any person directly or indirectly employed by the Contractor or a Subcontractor, or any person for whose acts the Contractor or a Subcontractor may be liable.

(b) The Contractor waives all rights against the State for the recovery of damages that are covered by the insurance policies the Contractor is required to maintain under this Section. The Contractor's failure to obtain and maintain the required insurance will not limit this waiver.

(c) All insurance coverage provided relative to this Contract is primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State.

(d) The State, in its sole discretion, may approve the use of a fully-funded self-insurance program in place of any specified insurance identified in this Section.

(e) Unless the State approves otherwise, any insurer must have an A.M. Best rating of "A" or better and a financial size of VII or better, or if those ratings are not available, a comparable rating from an insurance rating agency approved by the State. All policies of insurance must be issued by companies that have been approved to do business in the State.
(f) Where specific coverage limits are listed in this Section, they represent the minimum acceptable limits. If the Contractor’s policy contains higher limits, the State is entitled to coverage to the extent of the higher limits.

(g) The Contractor must maintain all required insurance coverage throughout the term of this Contract and any extensions. However, in the case of claims-made Commercial General Liability policies, the Contractor must secure tail coverage for at least three (3) years following the termination of this Contract.

(h) The Contractor must provide, within five (5) business days, written notice to the Director of DTMB-Procurement if any policy required under this Section is cancelled. The notice must include the applicable Contract or Purchase Order number.

(i) The minimum limits of coverage specified are not intended, and may not be construed, to limit any liability or indemnity of the Contractor to any indemnified party or other persons.

(j) The Contractor is responsible for the payment of all deductibles.

(k) If the Contractor fails to pay any premium for a required insurance policy, or if any insurer cancels or significantly reduces any required insurance without the State’s approval, the State may, after giving the Contractor at least 30 days’ 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 require the Contractor to pay that cost upon demand.

(l) 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 Michigan Attorney General.

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

☑ (i) Commercial General Liability

Mineral Limits:
- $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; and
- $1,000,000 Each Occurrence Limit.

Deductible maximum:
- $50,000 Each Occurrence

Additional Requirements:
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 the insurance policy contains a waiver of subrogation by the insurance company.

The Products/Completed Operations sublimit requirement may be satisfied by evidence of the manufacturer’s Commercial General Liability Insurance. The manufacturer 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 and must provide evidence that the policy contains a waiver of subrogation by the insurance company.

☐ (ii) Umbrella or Excess Liability

Minimal Limits:
- $10,000,000.00 General Aggregate

Additional Requirements:
Umbrella or Excess Liability limits must at least apply to the insurance required in (i), General Commercial Liability. The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents as additional insureds on the certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.
(iii) Motor Vehicle
Minimal Limits:
If a motor vehicle is used in relation to the Contractor's performance, the Contractor must have vehicle liability insurance on the motor vehicle for bodily injury and property damage as required by law.

(iv) Hired and Non-Owned Motor Vehicle Coverage
Minimal Limits:
$1,000,000 Per Incident
Additional Requirements:
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.

(v) Workers’ Compensation
Minimal Limits:
The Contractor must provide Workers' Compensation coverage according to applicable laws governing work activities in the state of the Contractor's domicile. If the applicable coverage is provided by a self-insurer, the Contractor must provide proof of an approved self-insured authority by the jurisdiction of domicile.

For employees working outside of the state of the Contractor's domicile, the Contractor must provide certificates of insurance proving mandated coverage levels for the jurisdictions where the employees' activities occur.

Additional Requirements:
The Contractor must provide the applicable certificates of insurance and a list of states where the coverage is applicable. Contractor must provide proof that the Workers' Compensation insurance policies contain a waiver of subrogation by the insurance company, except where such a provision is prohibited or limited by the laws of the jurisdiction in which the work is to be performed.

(vi) Employers Liability
Minimal Limits:
$100,000 Each Incident;
$100,000 Each Employee by Disease
$500,000 Aggregate Disease

Additional Requirements:
The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents as additional insureds on the certificate.

(vii) Employee Fidelity (Crime)
Minimal Limits:
$1,000,000 Employee Theft Per Loss
Deductible Maximum:
$50,000 Per Loss

Additional Requirements:
Insurance must cover Forgery and Alteration, Theft of Money and Securities, Robbery and Safe Burglary, Computer Fraud, Funds Transfer Fraud, Money Order and Counterfeit Currency.
The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents as Loss Payees on the certificate.

☐ (viii) Professional Liability (Errors and Omissions)
Minimal Limits:
$3,000,000 Each Occurrence
$3,000,000 Annual Aggregate

Deductible Maximum:
$50,000 Per Loss

☑ (ix) Cyber-Liability Insurance with the following minimum limits:
Minimal Limits:
$1,000,000 Each Occurrence
$1,000,000 Annual Aggregate

Additional Requirements:
Insurance should cover (a) unauthorized acquisition, access, use, physical taking, identity theft, mysterious disappearance, release, distribution or disclosures of personal and corporate information; (b) Transmitting or receiving malicious code via the insured's computer system; (c) Denial of service attacks or the inability to access websites or computer systems.

The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents as additional insureds on the certificate.

☐ (x) Property Insurance

Property Insurance covering any loss or damage to the State-owned office space used by Contractor for any reason under this Contract, and the State-owned 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 State must be endorsed on the policy as a loss payee as its interests appear.

B) 2.13.2 SUBCONTRACTOR INSURANCE COVERAGE

Except where the State has approved a subcontract with other insurance provisions, the Contractor must require any Subcontractor to purchase and maintain the insurance coverage required in Section 2.13.1. Alternatively, the Contractor may include a Subcontractor under the Contractor's insurance on the coverage required in that Section. The failure of a Subcontractor to comply with insurance requirements does not limit the Contractor's liability or responsibility.

C) 2.13.3 CERTIFICATES OF INSURANCE

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 of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents are listed as additional insureds as required. The Contractor must provide DTMB-Procurement(or agency if agency issued RFP) with all applicable certificates of insurance verifying insurance coverage or providing, if approved, satisfactory evidence of self-insurance as required in Section 2.13.1. Each certificate must be on the standard "Accord" form or equivalent and MUST IDENTIFY THE APPLICABLE CONTRACT OR PURCHASE ORDER NUMBER.

(q) 2.140 Indemnification
A) 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.

B) 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.

C) 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.

D) 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 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.

E) 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.

F) 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 shall 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.

(r) **2.150 Termination/Cancellation**

**A)**

**B) 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 shall 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.

**C) 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, 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 shall 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 shall be deemed to have been a termination for convenience, effective as of the same date, and the rights and obligations of the parties shall be limited to that otherwise provided in this Contract for a termination for convenience.

D) 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, or (c) unacceptable prices for Additional Services or New Work requested 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 convenience must cease on the effective date of the termination.

E) 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 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 shall 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 shall 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.

F) 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.

G) 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 shall 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.
H) 2.157 RIGHTS AND OBLIGATIONS UPON TERMINATION

(a) Subject to any of Contractor’s transition responsibilities under Section 2.1700, 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.

I) 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.

(s) 2.160 Termination by Contractor

A) 2.161 TERMINATION BY CONTRACTOR

If the State materially breaches the Contract, then the Contractor will provide the State with written notice of the material 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. For purposes of this Section, a material breach shall mean the State has (i) breached its obligation to pay the Contractor undisputed amounts due and owing under this Contract, (ii) breached its other obligations under this Contract to an extent that makes it impossible or commercially impractical for the Contractor to perform the Services. In the event of a material breach by the State, the Contractor may terminate this Contract if the State does not cure the material breach within the time period specified in a written notice of breach.

(t) 2.170 Transition Responsibilities

A) 2.171 CONTRACTOR TRANSITION RESPONSIBILITIES

A. 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 will provide to the State or to the service provider selected by State (such service provider shall be known as the “Successor Service Provider”) assistance requested by the State to effect the orderly transition of the Services and Deliverables, in whole or in part, to the State or to the Successor Service Provider (such assistance shall be known as the “Transition Services”). The Transition Services will include: (a) developing a
plan for the orderly transition of the terminated Services and Deliverables from Contractor to the State or Successor Service Provider; (b) transferring the IBS System and Item Data to the State or Successor Service Provider in a format specified by the State; (c) transferring the IBS System and Item Data to the State or Successor Service Provider; (d) using commercially reasonable efforts to assist the State in acquiring any necessary rights to legally and physically access and use any third-party technologies and documentation then being used by Contractor in connection with the Services and Deliverables; (e) using commercially reasonable efforts to make available to the State any third-party services then being used by Contractor in connection with the Services; and, (f) such other activities that the State may request.

B. If the Contract is terminated for any reason other than for cause, the Transition Services shall be provided on a time and materials basis using the hourly rates in Cost Table 3 of Appendix E - Cost Tables.

C. If the Contract is terminated for cause, the Transition Services shall be provided at no charge to the State, or the State may elect to continue to use the Services for a period of no greater than six (6) months from the date of termination at a reduced rate of fifty (50%) percent off of the then-current Contract rates for the terminated Services.

D. All applicable terms and conditions of this Contract shall apply to the Transition Services. This Section shall survive the termination of this Agreement.

(u) 2.180 Stop Work

A) 2.181 STOP WORK ORDERS
The State may, at any time, by written Stop Work Order to Contractor (“Stop Work Order”), 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. 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 2.182.

B) 2.182 CANCELLATION OR EXPIRATION OF STOP WORK ORDER
The Contractor shall resume work if the State cancels a Stop Work Order or if it expires. The parties shall agree upon an equitable adjustment in the delivery schedule, the Contract price, or both, and the Contract shall 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.

C) 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 shall be deemed to be a termination for convenience under Section 2.153, and the State shall pay reasonable costs resulting from the Stop Work Order in arriving at the termination settlement. For the avoidance of doubt, the State shall not be liable to Contractor for loss of profits because of a Stop Work Order issued under this Section.

(v) 2.190 Dispute Resolution

A) 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.

**B) 2.192 INFORMAL DISPUTE RESOLUTION**

(a) All disputes between the parties shall be resolved under the Contract Management procedures in this Contract. If the parties are unable to resolve any dispute after compliance with the processes, the parties must meet with the Director of Procurement, DTMB, or designee, 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 at issue which the parties believe to be appropriate and germane in connection with its resolution. The representatives shall 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 shall 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 shall 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 Procurement, DTMB, or designee, shall 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 shall 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 shall not mediate disputes between the Contractor and any other entity, except state agencies, concerning responsibility for performance of work under the Contract.

**C) 2.193 INJUNCTIVE RELIEF**

The only circumstance in which disputes between the State and Contractor shall 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 that the damages to the party resulting from the breach shall 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.

**D) 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.

**w) 2.200 Federal and State Contract Requirements**

**A) 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.

C) 2.202 UNFAIR LABOR PRACTICES
Under 1980 PA 278, MCL 423.321, et seq., the State shall 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, shall 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.

D) 2.203 WORKPLACE SAFETY AND DISCRIMINATORY HARASSMENT
In performing Services for the State, the Contractor shall 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 shall 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.

E) 2.204 PREVAILING WAGE
Wages rates and fringe benefits to be paid each class of individuals employed by the Contractor, its subcontractors, their subcontractors, and all persons involved with the performance of this Contract in privity of contract with the Contractor shall not be less than the wage rates and fringe benefits established by the Michigan Department of Licensing and Regulatory Affairs, Wage and Hour Division, schedule of occupational classification and wage rates and fringe benefits for the local where the work is to be performed. The term Contractor shall include all general contractors, prime contractors, project managers, trade contractors, and all of their contractors or subcontractors and persons in privity of contract with them.

The Contractor, its subcontractors, their subcontractors and all persons involved with the performance of this contract in privity of contract with the Contractor shall keep posted on the work site, in a conspicuous place, a copy of all wage rates and fringe benefits as prescribed in the Contract. Contractor shall also post, in a conspicuous place, the address and telephone number of the Michigan Department of Licensing and Regulatory Affairs, the agency responsible for enforcement of the wage rates and fringe benefits. Contractor shall keep an accurate record showing the name and occupation of the actual wage and benefits paid to each individual employed in connection with this contract. This record shall be available to the State upon request for reasonable inspection.

If any trade is omitted from the list of wage rates and fringe benefits to be paid to each class of individuals by the Contractor, it is understood that the trades omitted shall also be paid not less than the wage rate and fringe benefits prevailing in the local where the work is to be performed.

(x) 2.210 Governing Law
A)  
B) 2.211 GOVERNING LAW
The Contract shall 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.

C) 2.212 COMPLIANCE WITH LAWS
Contractor shall comply with all applicable state, federal and local laws and ordinances in providing the Services/Deliverables.
D) 2.213 JURISDICTION

Any dispute arising from the Contract shall 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 conveniens or otherwise. Contractor agrees to appoint agents in the State of Michigan to receive service of process.

(y) 2.220 Limitation of Liability

A) 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 attorneys' fees awarded by a court in addition to damages after litigation based on this Contract.

(z) 2.230 Disclosure Responsibilities

A) 2.231 DISCLOSURE OF LITIGATION

Contractor shall 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) shall 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 shall 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 shall 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 shall 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 DTMB-Procurement.

(2) Contractor shall also notify DTMB Procurement 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 shall also notify DTMB-Procurement within 30 days whenever changes to company affiliations occur.

B) 2.232 RESERVED N/A

C) 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 shall be stored separately from other stock and marked conspicuously with labels indicating ownership by the State.

(aa) 2.240 Performance

A) 2.241 TIME OF PERFORMANCE

(a) Contractor shall 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 this Section 2.241, Contractor shall 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.

C) 2.242 SERVICE LEVEL AGREEMENTS (SLA)

(a) The State may issue future SLAs for each Statement of Work or Purchase Order issued under this Contract. The initial SLA for development and implementation of the Hosting Environment and for providing the Hosting Services is contained in Appendix A. The initial SLA for development and implementation of the Authentication Process is contained in Appendix B.

(b) The initial SLAs contained in Appendices A and B have been be completed with the following operational considerations (as will future SLAs issued under this Contract):

(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.

(c) “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.

(d) 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.

(e) All decimals must be rounded to two decimal places with five and greater rounding up and four and less rounding down unless otherwise specified.

E) 2.243 LIQUIDATED DAMAGES
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 2.152, 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.

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 2.152, the State may assess liquidated damages against Contractor as specified below.

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.

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.

F) 2.244 EXCUSABLE FAILURE
Neither party shall be liable for delays or any failure to perform the Services/Deliverables or this Contract due to causes beyond its reasonable control. Such delays include, but are not limited to, fire, explosion, flood or other natural catastrophe, governmental legislation, acts, orders, or regulation, strikes or labor difficulties, to the extent not occasioned by the fault or negligence of the delayed party (“Excusable Failure”). Any such excuse for delay shall last only as long as the event remains beyond the reasonable control of the delayed party. However, the delayed party shall use its best efforts to minimize the delays caused by any such event
beyond its reasonable control. Where Contractor fails to use its best efforts to minimize such delays, the delays shall be included in the determination of Service Level achievement under an SLA. The delayed party must notify the other party promptly upon the occurrence of any such event, or performance by the delayed party will not be considered excused pursuant to this Section, and inform the other party of its plans to resume performance. An Excusable Failure does not excuse Contractor from providing Services and fulfilling its responsibilities relating to the requirements of backup and recovery of Item Data. In no event shall any of the following constitute an Excusable Failure: (a) failure, inadequate performance, or unavailability of Contractor’s subcontractors, if any; or, (b) configuration changes, other changes, viruses, or other errors or omissions introduced, or permitted to be introduced, by Contractor that result in an outage or inability for the State to access or use the Services.

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 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.

(bb) 2.250 Approval of Deliverables

A) 2.251 DELIVERY OF DELIVERABLES

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 or implementing 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 or implementing 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 CMM Level 3 or its equivalent.

C) 2.252 CONTRACTOR SYSTEM TESTING

Contractor will be responsible for System Testing each Custom Software Deliverable in Contractor’s development environment prior to UAT and approval. Contractor’s System Testing (“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.

D) 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 UAT, 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.

E) 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 shall 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.

F) 2.255 PROCESS FOR APPROVAL OF CUSTOM SOFTWARE DELIVERABLES

The State will conduct User Acceptance Testing (“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.

The State Review Period for Custom Software Deliverables will be the number of days set forth in the applicable Statement of Work or otherwise agreed to 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.

G) 2.256 FINAL ACCEPTANCE
For Custom Software Deliverables, “Final Acceptance” shall be considered to occur when the Custom Software Deliverable to be delivered has been approved by the State in writing in accordance with the procedures set forth in this Section 2.250, and has been operating in production without any material deficiency for thirty (30) consecutive days. 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 Custom Software Deliverable. For Written Deliverables, Final Acceptance shall be considered to occur when the State approves such Deliverable in writing in accordance with the procedures set forth in this Section 2.250.

(ce) 2.260 Ownership

2.261 OWNERSHIP OF IBS SYSTEM
The State is and will be the sole and exclusive owner of all right, title and interest in and to the IBS System, including all Intellectual Property Rights therein.

2.262 OWNERSHIP OF DELIVERABLES
The State is and will be the sole and exclusive owner of all right, title and interest in and to all Deliverables, including all Intellectual Property Rights therein. In furtherance of the foregoing:

A. Contractor shall create all Deliverables as work made for hire as defined in Section 101 of the Copyright Act of 1976; and
B. to the extent any Deliverable or Intellectual Property Right therein does not qualify as, or otherwise fails to be, work made for hire, Contractor shall, and hereby does:

1. assign, transfer and otherwise convey to the State, irrevocably and in perpetuity, throughout the universe, all right, title and interest in and to such Deliverable, including all Intellectual Property Rights therein; and
2. irrevocably waive any and all claims Contractor may now or hereafter have in any jurisdiction to so-called "moral rights" or rights of droit moral with respect to the Deliverable.

Contractor shall, and shall cause Contractor’s personnel to, take all appropriate action and execute and deliver all documents, necessary or reasonably requested by the State to effectuate any of the provisions or purposes of this Section, or otherwise as may be necessary or useful for the State to prosecute, register, perfect, record or enforce its rights in or to any Deliverable or any Intellectual Property Right therein. Contractor hereby
appoints the State as Contractor's attorney-in-fact with full irrevocable power and authority to take any such actions and execute any such documents if Contractor refuses, or within a period deemed reasonable by the State otherwise fails, to do so.

A) **2.263 OWNERSHIP OF HOSTING ENVIRONMENT.**
B) **AS BETWEEN THE STATE AND CONTRACTOR, CONTRACTOR IS, AND WILL REMAIN, THE SOLE AND EXCLUSIVE OWNER OF ALL RIGHT, TITLE AND INTEREST IN AND TO THE HOSTING ENVIRONMENT, INCLUDING ALL INTELLECTUAL PROPERTY RIGHTS THEREIN.**

C) **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, including but not limited to all Item Data supplied by the State to Contractor. The Contractor will not use the State’s data for any purpose other than providing the Services or Deliverables, 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, shall 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 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.

(dd) **2.270 State Standards**

A) **2.271 EXISTING TECHNOLOGY STANDARDS**
The Contractor must adhere to all existing standards as described within the comprehensive listing of the State’s existing technology standards at [http://www.michigan.gov/dmb/0,4568,7-150-56355-108233--00.html](http://www.michigan.gov/dmb/0,4568,7-150-56355-108233--00.html).

B) **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://michigan.gov/cybersecurity/0,1607,7-217-34395_34476---00.html](http://michigan.gov/cybersecurity/0,1607,7-217-34395_34476---00.html). 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.

C) **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.
D) 2.274 ELECTRONIC RECEIPT PROCESSING STANDARD
All electronic commerce applications that allow for electronic receipt of credit/debit card and electronic check (ACH) transactions must be processed via the Centralized Electronic Payment Authorization System (CEPAS).

2.280 RESERVED N/A

(ee) 2.290 Environmental Provision

A) 2.291 ENVIRONMENTAL PROVISION

Energy Efficiency Purchasing Policy: The State seeks wherever possible to purchase energy efficient products. This includes giving preference to U.S. Environmental Protection Agency (EPA) certified ‘Energy Star’ products for any category of products for which EPA has established Energy Star certification. For other purchases, the State may include energy efficiency as one of the priority factors to consider when choosing among comparable products.

Environmental Purchasing Policy: The State of Michigan is committed to encouraging the use of products and services that impact the environment less than competing products. The State is accomplishing this by including environmental considerations in purchasing decisions, while remaining fiscally responsible, to promote practices that improve worker health, conserve natural resources, and prevent pollution. Environmental components that are to be considered include: recycled content and recyclables; energy efficiency; and the presence of undesirable materials in the products, especially those toxic chemicals which are persistent and bioaccumulative. The Contractor should be able to supply products containing recycled and environmentally preferable materials that meet performance requirements and is encouraged to offer such products throughout the duration of this Contract. Information on any relevant third party certification (such as Green Seal, Energy Star, etc.) should also be provided.

Hazardous Materials: For the purposes of this Section, “Hazardous Materials” is a generic term used to describe asbestos, ACBMs, PCBs, petroleum products, construction materials including paint thinners, solvents, gasoline, oil, and any other material the manufacture, use, treatment, storage, transportation or disposal of which is regulated by the federal, state or local laws governing the protection of the public health, natural resources or the environment. This includes, but is not limited to, materials the as batteries and circuit packs, and other materials that are regulated as (1) “Hazardous Materials” under the Hazardous Materials Transportation Act, (2) “chemical hazards” under the Occupational Safety and Health Administration standards, (3) “chemical substances or mixtures” under the Toxic Substances Control Act, (4) “pesticides” under the Federal Insecticide Fungicide and Rodenticide Act, and (5) “hazardous wastes” as defined or listed under the Resource Conservation and Recovery Act.

(a) The Contractor shall use, handle, store, dispose of, process and transport any material considered a Hazardous Material according to all federal, State and local laws. The State shall provide a safe and suitable environment for performance of Contractor’s Work. Before the commencement of Work, the State shall advise the Contractor of the presence at the work site of any Hazardous Material to the extent that the State is aware of the Hazardous Material. If the Contractor encounters material reasonably believed to be a Hazardous Material and which may present a substantial danger, the Contractor shall immediately stop all affected Work, notify the State in writing about the conditions encountered, and take appropriate health and safety precautions.

(b) Upon receipt of a written notice, the State will investigate the conditions. If (a) the material is a Hazardous Material that may present a substantial danger, and (b) the Hazardous Material was not brought to the site by the Contractor, or does not result in whole or in part from any violation by the Contractor of any laws covering the use, handling, storage, disposal of, processing, transport and transfer of Hazardous Materials, the State shall order a suspension of Work in writing. The State shall proceed to have the Hazardous Material removed or rendered harmless. In the alternative, the State shall terminate the affected Work for the State’s convenience.

(c) Once the Hazardous Material has been removed or rendered harmless by the State, the Contractor shall resume Work as directed in writing by the State. Any determination by the Michigan Department of Community Health or the Michigan Department of Environmental Quality that the Hazardous Material has
either been removed or rendered harmless is binding upon the State and Contractor for the purposes of resuming the Work. If any incident with Hazardous Material results in delay not reasonable anticipatable under the circumstances and which is attributable to the State, the applicable SLAs for the affected Work will not be counted in a time as mutually agreed by the parties.

(d) If the Hazardous Material was brought to the site by the Contractor, or results in whole or in part from any violation by the Contractor of any laws covering the use, handling, storage, disposal of, processing, transport and transfer of Hazardous Material, or from any other act or omission within the control of the Contractor, the Contractor shall bear its proportionate share of the delay and costs involved in cleaning up the site and removing and rendering harmless the Hazardous Material according to Applicable Laws to the condition approved by applicable regulatory agency(ies).

Labeling: Michigan has a Consumer Products Rule pertaining to labeling of certain products containing volatile organic compounds. For specific details visit http://www.michigan.gov/deq/0,1607,7-135-3310_4108-173523--,00.html

Refrigeration and Air Conditioning: The Contractor shall comply with the applicable requirements of Sections 608 and 609 of the Clean Air Act (42 U.S.C. 7671g and 7671h) as each or both apply to this contract.

Environmental Performance: Waste Reduction Program - Contractor shall establish a program to promote cost-effective waste reduction in all operations and facilities covered by this contract. The Contractor's programs shall comply with applicable Federal, State, and local requirements, specifically including Section 6002 of the Resource Conservation and Recovery Act (42 U.S.C. 6962, et seq.).

(ff) 2.300 RESERVED N/A

(gg) 2.310 Software Warranties

A) 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 the term of the Contract. In the event of a breach of this warranty, Contractor will promptly correct the affected Deliverable(s) at no charge to the State.

B) 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.

C) 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.

D) 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.

E) 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).

(hh) 2.320 Software Licensing

2.321 LICENSE OF IBS SYSTEM

Grant of Licenses

A. During the term of this Contract, the State hereby grants to Contractor the limited, non-exclusive, non-transferable and nonassignable right and license, to reproduce, adapt, display, or copy the IBS System and any related Future Enhancements in Source Code or Object Code form, for the sole purpose of (i) developing and implementing any Future Enhancements, (ii) developing and implementing the Authentication Process, and (iii) providing the required Hosting Services.

B. During the term of this Contract, the State hereby grants to Contractor the limited, non-exclusive, non-transferable and nonassignable right and license, to use the IBS System and any related Future Enhancements in Object Code form only, solely for Contractor's internal business purposes in the United States, which shall be limited to the following:

1. In the normal course of Contractor’s business which includes item development, administration of assessments (online and print), scoring and reporting activities.
2. In cases where Contractor is requested to only provide services for the hosting of assessment items and maintenance, Contractor will ensure that Contractor has received prior written approval from the State before providing such services. If approved, the State will grant the requesting party a limited, non-exclusive, non-transferable and nonassignable right and license, to use the IBS System and any related Future Enhancements for the sole purpose of receiving hosting and maintenance services from Contractor. Contractor will pay the State a mutually agreed upon value (in cash or in-kind services) in exchange for the State granting the requesting party such license.

C. Upon expiration of the Contract, the State hereby grants Contractor a perpetual, nonexclusive, nontransferable and nonassignable license (i) to use and modify the IBS System and any Future Enhancements in Source Code form to create Derivative Works and (ii) to use, manufacture, reproduce, have reproduced, sublicense, market and distribute the Derivative Works in Object Code form. The license granted in this Subsection C shall not commence until expiration of the Contract, and is contingent on the following conditions being met:

1. Contractor shall have spent an aggregate of $5,001,000 on all Services and Deliverables upon Contract expiration; or
2. If Contractor has spent less than an aggregate of $5,001,000 on all Services and Deliverables upon Contract expiration, then Contractor shall have paid the State in full, in readily available funds, the difference between the $5,001,000 and the actual amount spent by Contractor for all Services and Deliverables under the Contract.

D. Upon early termination of the Contract pursuant to Section 2.152 (Convenience), Section 2.154 (Non- Appropriation) or 2.156 (Approvals Rescinded), the State hereby grants Contractor a perpetual, nonexclusive, nontransferable and nonassignable license (i) to use and modify the IBS System and any related Future Enhancements in Source Code form to create Derivative Works and (ii) to use, manufacture, reproduce, have reproduced, sublicense, market and distribute the Derivative Works in Object Code form. The license granted in this Subsection C shall not commence until termination of the Contract, and is contingent on the following conditions being met:

1. Contractor shall have paid the State in full, in readily available funds, any remaining credit balance from the State’s initial credit of $3,080,462.50.

Restrictions and Requirements of Use
A. Except as expressly provided in this Section 2.321, no other license or right in the Source Code or IBS System is granted to Contractor under this Contract directly or by implication or otherwise. Without limiting the generality of the foregoing and notwithstanding anything to the contrary in this Contract, Contractor may not:

1. Remove any copyright notice, proprietary information notices, or other notice (collectively, “Copyright Notice”) provided by the State, including, without limitation, any Copyright Notice contained in the Source Code provided by the State; or

2. Assign, sublicense, lease, or in any other way transfer or disclose the Source Code or IBS System to any third party, including, without limitation: (i) to any customers; (ii) to independent contractors or developers; or (iii) as part of the Future Enhancements, unless specifically authorized in writing; or

3. Utilize the Source Code or IBS System in a manner to prepare, draft, or assist third parties in preparing or drafting software that is similar to the IBS System subject to this IBS System License that is intended for sale, license, or distribution to others (whether that distribution be for profit or free) in a manner that would compete directly or indirectly with the State’s products; or
4. Reproduce or use any part of the Source Code, Object Code, or IBS System except as provided in this Contract; or

5. Reproduce, modify, decompile, reverse engineer, disassemble, or otherwise reduce the IBS System to a human-readable form.

6. The restrictions set forth in Section shall apply equally to attempts to perform the restricted activities, regardless of whether or not any such attempt is successful.

Confidentiality and Security

A. Contractor agrees and acknowledges that the Source Code and the IBS System are: (i) proprietary to the State; (ii) of significant value to the State; (iii) not publicly available; (iv) contain trade secrets of the State; and (v) constitutes the confidential information of the State. Contractor shall comply with the following restrictions on use of the Source Code or IBS System and shall maintain the Source Code in accordance with the following security procedures:

1. Contractor shall use commercially reasonable measures to preserve the security and confidentiality of the Source Code including, without limitation, securing the network, server, hard drives, and other media on which the Source Code is stored or maintained.

2. Contractor shall limit access to the Source Code to its employees who have a need to access the Source Code for the purposes of exercising Contractor’s rights under this Contract. No employee may have access to the Source Code unless and until: (i) he or she has been apprised of and acknowledges the confidential and proprietary nature of the Source Code; (ii) has been trained with respect to the procedures designed to preserve its confidentiality; (iii) and is subject to a binding and enforceable obligation neither to use the Source Code (other than for purposes expressly permitted by this Contract) nor to disclose such Source Code to any person or entity other than a person similarly authorized to access the Source Code.

3. Contractor shall conduct periodic reviews to ensure compliance with the foregoing security requirements. The State shall have the right to conduct a review of Contractor on Contractor’s premises to ensure compliance with the foregoing security restrictions, including an inspection of the Contractor’s records and agreement maintained by Contractor pursuant to subsection 2 above, provided that the State provides at least three (3) business days prior written notice.

4. Contractor shall be jointly and severally responsible for any violation of any of the confidentiality obligations set forth in this Contract by any of its employees, contractors, and third parties acting on its behalf.

5. Contractor acknowledges and agrees that the State will suffer irreparable damage in the event of a breach by Contractor of the terms of this Section of the Contract and that the State will be entitled to injunctive relief (without the necessity of posting a bond or proving actual damages) in the event of any such breach.

Warranty Disclaimer

A. No warranty of any kind is being provided by the State, including, without limitation, any warranty that the IBS System and Source Code shall be free from defects in design, material, or workmanship. Contractor acknowledges that the IBS System and Source Code are of such complexity that they may have inherent defects. Contractor bears the entire risk regarding the quality and performance of the IBS System and Source Code.

B. CONTRACTOR ASSUMES TOTAL RESPONSIBILITY FOR THE USE OF THE IBS SYSTEM AND SOURCE CODE, AND THE IBS SYSTEM AND SOURCE CODE ARE PROVIDED ON AN “AS-IS” BASIS. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE IBS SYSTEM AND SOURCE CODE ARE PROVIDED WITHOUT WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND WHETHER ARISING UNDER LAW OR FROM COURSE OF PERFORMANCE, COURSE OF DEALING, OR USAGE OF TRADE (COLLECTIVELY, “STATE DISCLAIMED WARRANTIES”),
INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY EXCLUDED BY THE STATE AND FOREVER WAIVED BY LICENSEE. NO ADVICE OR INFORMATION GIVEN BY THE STATE SHALL CREATE A WARRANTY OR OBLIGATION OF THE STATE.

C. In the event that any of the State Disclaimed Warranties cannot be disclaimed or waived under applicable law, Contractor’s sole and exclusive remedy for breach of such Disclaimed Warranty will be the replacement of the IBS System and Source Code, at no additional cost to Contractor.

D. As stated above, the State does not warrant that the IBS System and Source Code do not infringe any patents, copyrights, or proprietary rights of a third party. If the IBS System or Source Code becomes the subject of a claim of infringement of a copyright, patent or other proprietary right, the State may, at its sole discretion: (1) obtain the right for the Contractor to continue using the IBS System and Source Code; (2) replace or modify the IBS System to make it non-infringing; or (3) withdraw the IBS System from the market with no further liability to the Contractor. The State shall not have any liability whatsoever for any claim of copyright or patent infringement or other proprietary right violations when such claims are based on Contractor’s use of a Derivative Works of the IBS System.

Effect of Termination of Contract
A. Upon termination of the Contract for any reason other than those specified in Section 2.152 (Convenience), Section 2.154 (Non-Appropriation) or Section 2.156 (Approvals Rescinded), all licenses granted under this Section shall immediately and automatically also terminate, and within ten (10) days after such termination, Contractor shall cease and desist all use of the IBS System, any and all Deliverables and Derivative Products and shall return to the State all full or partial copies of the IBS System, Deliverables and Derivative Products in Contractor’s possession or under its control not required by Contractor to perform any Transition Services.

Termination of IBS System License
A. The State may immediately terminate the IBS System Licenses granted under this Section if Contractor shall have receivership, insolvency, dissolution, liquidation, or similar proceedings (including without limitation the calling of a meeting of creditors of Contractor) instituted against it or a substantial part of its assets, and such proceedings shall not be dismissed within sixty (60) days.

B. The State may immediately terminate the IBS System Licenses granted under this Section in the event of a merger or sale of all or substantially all of the assets of Contractor to a third party without the consent of the State. However, Contractor shall notify the State in advance of any such pending merger or sale and the State shall have thirty (30) days to consent or refuse to consent. Consent shall not be unreasonably withheld. However, any person or entity who merges with or acquires all or substantially all of the assets of Contractor must agree to abide by and comply with all of the terms and conditions of this Contract. It is mutually agreed that if said successor fails to comply with the terms and conditions of this Contract, the State may consider said successor to be in breach of this Contract.

A) 2.323 LICENSE OF HOSTING ENVIRONMENT
During the term of this Contract and any transition period required by this Contract, Contractor hereby grants to the State a nonexclusive, royalty-free, irrevocable right and license throughout the world to access and use the Hosting Environment in connection with the Hosting Services. The State may grant sublicenses in all or any of the foregoing to State authorized service providers solely to enable such service providers to perform services for the State in connection with the Hosting Services.

B) 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.

(ii) **2.330 Source Code Package**

(ij)

A) **2.331 DEFINITION**

“Source Code Package” shall mean:

(a) A complete copy in machine-readable form of the Source Code and executable code of all Deliverables and the resulting modified IBS System, including any updates or new releases of the IBS System;

(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. Such instructions shall include precise identification of all compilers, library packages, and linkers used to generate executable code.

B) **2.322 DELIVERY OF SOURCE CODE TO STATE**

Contractor shall deliver the Source Code Package on a bi-annual basis to the DTMB. Notwithstanding the foregoing, if the State requires delivery of the Source Code Package on a more frequent basis, or on a specified date, then, upon written request of the State, Contractor shall deliver the Source Code Package to the DTMB on the date specified in the State’s written request. The DTMB contact person for receiving the Source Code Package is listed below:

Jon Rogozinski
Information Technology Manager, DTMB
Hannah Building
608 West Allegan St.
Lansing, MI 48909
RogozinskiJ@michigan.gov
Phone: (517) 241-6868

C) **2.333 SOURCE CODE INTO ESCROW**

In the event the State deems it necessary to enter into an escrow contract, then upon written request of the State, Contractor shall enter into an escrow contract on commercially reasonable terms subject to the provisions of this Contract within (30) thirty days of the State’s written request. Contractor shall deliver the Source Code Package to the named escrow agent, pursuant to the escrow contract.

D) **2.334 VERIFICATION**

The State reserves the right at any time, but not more than twice a year, either itself or through a third party contractor, upon thirty (30) days written notice, to seek verification of the Source Code Package.

E) **2.335 ESCROW FEES**

If the State and Contractor enter into an escrow contract, the State will pay all fees and expenses charged by the escrow agent.

F) **2.336 OWNERSHIP**

The State is and will be the sole and exclusive owner of all right, title and interest in and to the Deliverables, the IBS System and all related Source Code, including all Intellectual Property Rights therein.
### Article III. Appendix A – Business/Technical Requirements

<table>
<thead>
<tr>
<th>#</th>
<th>Requirement</th>
<th>General Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Contractor shall provide operational hosting and management of the IBS System, 24x7x365, except for agreed upon scheduled maintenance.</td>
<td></td>
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<tr>
<td>2.</td>
<td>Contractor shall host and maintain the system with an uptime of 98%, except for scheduled maintenance agreed upon with the State.</td>
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<tr>
<td>3.</td>
<td>The Contractor shall be responsible for installation and support of all software necessary for the operation of the IBS System.</td>
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<tr>
<td>4.</td>
<td>The Contractor shall be responsible for the procurement, installation and support of all hardware necessary for the operation of the IBS System.</td>
<td></td>
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<tr>
<td>5.</td>
<td>The Contractor shall be responsible for the procurement, installation and support of the operating system, database and associated software related to the IBS System. The Contractor shall not be responsible for maintaining State owned systems that import and or export data with the IBS System.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>The Contractor shall provide direct support (technical and business help desk) to all end users identified in section 1.104.A Section 3.</td>
<td></td>
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<tr>
<td>7.</td>
<td>The Contractor will be responsible for complying with the eMichigan look and feel standards.</td>
<td></td>
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<tr>
<td>8.</td>
<td>The Contractor shall proactively update the application to remain current with latest browser versions of Internet Explorer, Mozilla Firefox, Safari and Chrome.</td>
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<tr>
<td>9.</td>
<td>The Contractor shall pay the cost of providing, maintaining and repairing all systems.</td>
<td>Telecom - Hardware - Software</td>
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<tr>
<td>10.</td>
<td>The Contractor shall provide a toll-free telephone number or a toll free number for Technical Support and Help Desk.</td>
<td></td>
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<tr>
<td>11.</td>
<td>The Contractor shall provide, own and support all hardware necessary for the setup and operation of the IBS System.</td>
<td>Hardware</td>
</tr>
<tr>
<td>12.</td>
<td>The Contractor shall be responsible for ongoing system configuration, performance tuning and maintenance activities.</td>
<td></td>
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<tr>
<td>13.</td>
<td>The Contractor shall be responsible for capacity management including timely forewarning if the growth exceeds capacity limitations.</td>
<td></td>
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<tr>
<td>14.</td>
<td>The Contractor shall be responsible for disk space management including archival, restoration, space management, and performance monitoring.</td>
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<tr>
<td>15.</td>
<td>The Contractor shall be responsible for application database management to ensure integrity and optimal performance of the database.</td>
<td></td>
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<tr>
<td>16.</td>
<td>The Contractor shall be responsible for server performance and system response time. The system shall be able to support 1.5x the peak number of concurrent users in order to provide sufficient capacity for growth. The system shall also support 1.25x the peak transaction volume in order to provide sufficient capacity for growth.</td>
<td></td>
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<tr>
<td>17.</td>
<td>Contractor shall host the IBS System on hardware, covered under manufacturer warranty.</td>
<td></td>
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<tr>
<td>18.</td>
<td>Contractor shall conduct hosting hardware refreshes so as not to impact IBS System performance or user access.</td>
<td></td>
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<tr>
<td>19.</td>
<td>The proposed system architecture must be designed to provide a highly available environment. The solution should include virtualization, redundancy, fail-over, and load balancing of servers.</td>
<td></td>
</tr>
</tbody>
</table>
20. The Contractor’s solution shall provide the following environments for the IBS System – Production, Training and QA (Quality Assurance).

21. The Production Environment and Training Environment are permitted to share the same server environment. QA must have separate hardware for all servers, except for the Media Server and SAS servers.

22. The State prefers the solution be hosted on servers dedicated to the IBS System. Shared servers may be considered if the IBS System is co-hosted only with other applications that have equivalent or more stringent security requirements.

### Software

23. The Contractor shall be responsible for installation and support of application software, operating system and all related software necessary to run the IBS System.

24. The Contractor shall provide, at their expense, any and all licenses needed for the operation of the IBS System.

25. Contractor must update all necessary software patches in a timely manner for all software used to successfully run the IBS System that will include but not limited to the Operating system, Database, etc.

26. The Contractor must use Microsoft compatible technologies in the hosting, development and maintenance of the IBS System.

27. Any changes to the hardware or software solution must be approved by the State of Michigan DTMB, and follow required DTMB approval processes. This includes but is not limited to software and hardware upgrades.

28. The Contractor shall provide the State admin read-only access to all the tables and views on the production database server upon the State’s request.

29. The Production and QA environments may contain released and unreleased items, therefore the Production and QA environments require the use of authorized users only.

30. Only Released Items are permitted in the Training environment. Released Items are items that have been placed in tests which have been administered.

### Data Retention

31. The Contractor shall not purge data from the production database unless requested by the State.

### Data Conversion

32. Contractor will be responsible for uploading the IBS System data to the target environment database.

### Disaster Recovery

33. The Contractor shall provide a disaster recovery plan and environment for server hosting facilities and the IBS System, including application and database servers.

### System Backup and Recovery

34. The Contractor shall provide for a full backup of the IBS System including database, application and web servers.

35. The production servers shall be backed up fully on a weekly basis and incrementally on a daily basis. Backup data shall be retained for at least 30 days or as required by the BAA.

36. The system shall have the ability to allow for continued use of the system during backup.

37. The system shall use transactional log files to provide point-in-time recovery of data to the last completed transaction.

38. Upon failure, the contractor shall ensure that complete system is restored to its previous operational status within (4) hours after initiation of recovery process.

39. The Contractor shall maintain secure, off-site backup of the data and application.

### Technical Support and Help Desk
<p>| | |</p>
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<tbody>
<tr>
<td>40.</td>
<td>Call hold-times will not exceed three minutes.</td>
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<tr>
<td>41.</td>
<td>Answering machine service shall be available when help desk is not able to respond after three minutes of hold-time.</td>
</tr>
<tr>
<td>42.</td>
<td>All calls will be returned within 15 minutes.</td>
</tr>
<tr>
<td><strong>Hosting Center</strong></td>
<td></td>
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<tr>
<td>43.</td>
<td>The hosting sites shall have a physical environment plan including but not limited to UPS protection, backup power, temperature control, LAN, WAN and phone.</td>
</tr>
<tr>
<td>44.</td>
<td>The IBS System will be hosted on servers that are within the continental United States. Data must not travel outside of the Continental United States. None of the data should be stored outside the U.S, including backups and or any copies of the data.</td>
</tr>
<tr>
<td>45.</td>
<td>The State’s prefers the solution be hosted on a dedicated server. Shared servers may be considered if the IBS System is co-hosted only with other applications that have equivalent or more stringent security requirements.</td>
</tr>
<tr>
<td><strong>Security</strong></td>
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<tr>
<td>46.</td>
<td>Contractor shall protect the network from unauthorized or improper access by using firewall and intruder detection software.</td>
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<tr>
<td>47.</td>
<td>The Contractor’s Network Administration shall monitor, log and report all intrusion attempts.</td>
</tr>
<tr>
<td>48.</td>
<td>The Vendor shall provide controlled access to the physical site.</td>
</tr>
<tr>
<td><strong>Technical Support and Help Desk</strong></td>
<td></td>
</tr>
<tr>
<td>49.</td>
<td>The Contractor shall maintain a log of all calls made to the helpdesk and fully document the complaints and problems reported.</td>
</tr>
<tr>
<td>50.</td>
<td>The Contractor will update the log immediately, at the date and time an end-user places the call to the Help Desk.</td>
</tr>
<tr>
<td><strong>Reporting Issues to the BAA</strong></td>
<td></td>
</tr>
<tr>
<td>51.</td>
<td>The contractor shall report all operational issues and system failures to the State’s project managers within two hours or as required by the BAA. Examples include equipment failures, delays due to unexpected overloads etc.</td>
</tr>
</tbody>
</table>
(a) **Appendix B – Authentication Requirements**

The IBS System currently uses customized commercial software to authenticate users on the IBS System. The authentication software allows users to access multiple State tools with a single user ID and password. This custom authentication solution cannot be used in the IBS System hosted by the Contractor. Therefore, the Contractor must develop and implement a new Authentication Process for the IBS System when it is hosted in the Contractor’s environment (the "Authentication Process").

<table>
<thead>
<tr>
<th>#</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>1</td>
<td>Password length must have minimum of eight characters</td>
</tr>
<tr>
<td>2</td>
<td>Password must not be based on the user’s account name</td>
</tr>
<tr>
<td>3</td>
<td>Last ten previous passwords cannot be reused</td>
</tr>
<tr>
<td>4</td>
<td>Password cannot be changed more than once within a day</td>
</tr>
<tr>
<td>5</td>
<td>Maximum password age is 90 days</td>
</tr>
<tr>
<td>6</td>
<td>Password must meet three out of the following four criteria:</td>
</tr>
<tr>
<td></td>
<td>1. at least one upper case character (A-Z)</td>
</tr>
<tr>
<td></td>
<td>2. at least one lower case character (a-z)</td>
</tr>
<tr>
<td></td>
<td>3. at least one numerical character (0-9)</td>
</tr>
<tr>
<td></td>
<td>4. at least one special character (for example, !$#,%)</td>
</tr>
<tr>
<td>7</td>
<td>Account Lockout Threshold = 5 Invalid Attempts</td>
</tr>
<tr>
<td>8</td>
<td>Account Lockout Duration = 30 minutes</td>
</tr>
<tr>
<td>9</td>
<td>Reset Lockout Counter after = 30 minutes</td>
</tr>
<tr>
<td>10</td>
<td>Password Recovery shall follow industry standard best practices (For e.g. CAPTCHA) to minimize vulnerabilities against automated hacking scripts.</td>
</tr>
</tbody>
</table>

**System Administration**

<p>| 11 | The system will have a role for system administrator to maintain system settings and user account information. |
| 12 | The system interface for Authentication will integrate with the IBS System interface for Authorization. |
| 13 | The system will require the completion of user profile information to establish a user account.            |
| 14 | The system must allow administrators to clear the responses to user’s security questions. The administrators cannot see the answers, only clear them. |
| 15 | The system must allow administrators to reset a user’s passwords.                                           |
| 16 | The system counter for the following will be able to be set by a system administrator:                      |
|    | • password length                                                           |
|    | • password expirations                                                      |
|    | • lockout periods                                                           |
|    | • reset period                                                              |
|    | • Security question length                                                  |
| 17 | User Profile Security Questions will not be viewable to the System Administrator.                           |
| 18 | System will provide the ability to inactive/reactivate a user.              |
| 19 | System will provide reports to show:                                        |
|    | • Users – active and inactive                                               |
|    | • Users that logged in during a specified period                           |
|    | • Users that have not logged for a specific period of time.                 |
|    | • Password Change Report                                                    |
|    | • Failed attempt report                                                    |
|    | • Those locked out after they exceeded attempt                             |
|    | • Those locked out during a specified timeframe                            |</p>
<table>
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</table>
| **20** | The System will have a standard naming convention for User accounts.  
• The user account names must be unique  
• The current system uses the text preceding the ‘@’ in the email address. If that is not a unique ID, it appends a number after the text, starting at the number 1, or the next available number. It is not a requirement to maintaining this naming convention; however, the historical data mapping must be preserved in the new system. |
| **21** | The System Administrator will have the means of reviewing User requests to become a user of the Application (request originated from a public user):  
• the system administrator can reject the request, along with a reason, and the user will receive a notification  
• the system administrator can accept the request, and assign the user a role, and the user will receive a notification which allows them to create a user profile |
| **Password Recovery and System Security** |   |
| **22** | Users who have successfully answered the security question shall receive an email containing the link to the page which will allow creation of a new password.  
• The link shall be valid only for 24 hours.  
• The link shall contain a unique identifier for verification purposes by the system. If the user doesn’t return with the link enclosed in the email, the password change shall be denied. |
| **23** | The system will provide a means for a user to request a lost user ID by entering their email address and answering a minimum of one security question. If the user fails to answer the first question, one additional security question will be presented to the user. |
| **24** | The system will provide a means for users to recover a lost password by answering a minimum of one security question. If the user fails to answer the first question, one additional security question will be presented to the user. |
| **25** | The system will allow users to reset their passwords by answering a minimum of one security question. If the user fails to answer the first question, one additional security question will be presented to the user. |
| **26** | Store Password and Answer to security questions as encrypted value. |
| **27** | Validation of Security Questions will not be case sensitive or have leading or trailing spaces to the answer phrase. |
| **28** | The system must record the following attempts for validation  
• Login date/time  
• Validation Status (successful/unsuccessful)  
• Account ID that was passed in  
• Capture source IP Address |
| **User Profile Administration** |   |
| **29** | The system will have a login page with the following elements:  
• User Name  
• User Password (masked entry)  
• Ability to request a Forgotten User ID  
• Ability to request a Forgotten Password  
• Ability to request access to the IBS System  
• Contact information for support |
| **30** | The following will be required information to create a user profile and account:  
• First Name  
• Last Name  
• Email. Email address must be unique (no other user account, active or inactive, can have this email address, system must have some validation for the entry (example, must have the ‘@’ symbol in the text box with preceding and trailing text.)  
• Responses to 3 Unique Security Questions  
• Password. Require the user to specify the same password in two different text boxes. The password entry must be masked.  
• Work Phone Number |
| **31** | The following will be required information to create a user profile and account:  
• Email (secondary email) |
| **32** | The system will provide a list of defined security questions to choose from when setting up their user profile. |
### When a user’s email address is changed

When a user’s email address is changed, the system will send an email to the user’s old email address notifying them that their email address has been updated.

### Authentication User Interface

The user will be presented with the following options upon successful authentication:

- View/Edit User Profile
- Change Password

Upon successfully authentication, if the user account is in a password expiration status, the user will be required to change their password before allowing the use of the application.

### Migration of Item Bank User Accounts

The User Accounts must maintain their demographic information and role in the new authentication system. The user passwords will not be able to migrate to the system. Therefore, the vendor should propose a solution for providing authorization of the migrated users into the new system.

### Out of Scope

The User Interface will not have the ability to edit/add/delete/inactive System Security questions. The security questions will be stored in the database. The list of questions will be provided by DTMB to the Contractor.

### Authorization

The following Authorization functionality currently exists in the IBS System and is listed for informational purposes only.

Once a user is authenticated, the user ID is passed to the IBS System for authorization. The IBS System maintains a user ID to Role relationship which will continue in the vendor hosted IBS System. Users are granted rights based on the rights defined for the Role. Following is a list of the current Roles which will be maintained in the vendor hosted IBS System:

- Development Lead
- Content Lead
- Item Writer Team Leader
- Item Writer
- Context Author
- Bias and Sensitivity Committee (BSC) Facilitator
- BSC Member
- Content Advisory Committee (CAC) Facilitator
- CAC Member
- Field Review Lead
- Field Reviewer
- Composition Lead
- Media Designer
- Compositor
- Editor
- Renderer
- Reviewer
- Translator
- Operational Psychometrician
- Lead Psychometrician
- Psychometric Validator
- Executive
- System Administrator
- Data Management
- DBA
- Developer
- User Administrator
Appendix C – Staffing Plan Matrix and Organization Chart

* Red indicates key personnel
Please refer to Section 1.601 Costs and Payment

**Table 1: IBS System Migration and Production Ready**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Estimated Hours</th>
<th>State’s % of Project Cost</th>
<th>Cost</th>
<th>Acceptance Criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBS System Migration</td>
<td># 850</td>
<td>100%</td>
<td>$63,750.00</td>
<td>See Section 1.104 A.1 and Appendices A and B</td>
</tr>
<tr>
<td>Production Ready and Authentication Process</td>
<td># 2,950</td>
<td>53%</td>
<td>$117,263.00</td>
<td>See Section 1.104 A.1 and Appendices A and B</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong># 3,800</strong></td>
<td><strong>$ 181,013.00</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2: Hosting and Maintenance**

<table>
<thead>
<tr>
<th>Annual Hosting and Maintenance</th>
<th>Hosting Maintenance Cost ($)</th>
<th>Acceptance Criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>$ 214,000</td>
<td>1.103, 1.302, 104A.5 and Appendix A, B</td>
</tr>
<tr>
<td>Second Year</td>
<td>$ 120,000</td>
<td>1.103, 1.302, 104A.5 and Appendix A, B</td>
</tr>
<tr>
<td>Third Year</td>
<td>$ 124,000</td>
<td>1.103, 1.302, 104A.5 and Appendix A, B</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>$ 127,000</td>
<td>1.103, 1.302, 104A.5 and Appendix A, B</td>
</tr>
<tr>
<td>Fifth Year</td>
<td>$ 131,000</td>
<td>1.103, 1.302, 104A.5 and Appendix A, B</td>
</tr>
<tr>
<td>Sixth Year</td>
<td>$ 135,000</td>
<td>1.103, 1.302, 104A.5 and Appendix A, B</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 851,000.00</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Table 3: Staff Hours**

<table>
<thead>
<tr>
<th>Staffing Category</th>
<th>Hourly Rate Years 1 and 2</th>
<th>Hourly Rate Years 3 and 4</th>
<th>Hourly Rate Years 5 and 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice President, Information Technology</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Project Manager</td>
<td>$85</td>
<td>$90</td>
<td>$95</td>
</tr>
<tr>
<td>Advisory Project Manager</td>
<td>$70</td>
<td>$75</td>
<td>$80</td>
</tr>
<tr>
<td>Director of Network Operations</td>
<td>$90</td>
<td>$95</td>
<td>$100</td>
</tr>
<tr>
<td>Senior Application Developer</td>
<td>$85</td>
<td>$90</td>
<td>$95</td>
</tr>
<tr>
<td>Application Developer</td>
<td>$70</td>
<td>$75</td>
<td>$80</td>
</tr>
<tr>
<td>Business Analyst</td>
<td>$70</td>
<td>$75</td>
<td>$80</td>
</tr>
<tr>
<td>Quality Assurance Analyst</td>
<td>$70</td>
<td>$75</td>
<td>$80</td>
</tr>
<tr>
<td>Enterprise Architect</td>
<td>$95</td>
<td>$100</td>
<td>$105</td>
</tr>
<tr>
<td>Senior Technical Writer</td>
<td>$60</td>
<td>$65</td>
<td>$70</td>
</tr>
<tr>
<td>Call Center Manager **</td>
<td>$45</td>
<td>$50</td>
<td>$55</td>
</tr>
</tbody>
</table>

**The Call Center Manager bill rate includes the call center manager and two call center representatives.**
Notes:
1. Hourly rates provided in Table 3 are not-to-exceed rates for the duration of the Contract. “Estimated Hours” and “Extended Price” are non-binding. The State will utilize the firm fixed fully loaded hourly rates detailed above for each staff that will be used as fixed rates for responses to separate statements of work.
2. Contractor and the State agree that a Future Enhancement is mutually beneficial and the cost of the work would be shared. However, in no case shall the State’s percentage be greater than 53%.
3. The State reserves the right to add money for additional Future Enhancements and Services under this Contract as-needed.