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TO: MASTER CONTRACTORS

FROM: Dorothy M. Richburg  
Procurement Officer

RE: ADDENDUM 2 – RACE TO THE TOP (RTTT) AND MARYLAND  
LONGITUDINAL DATA SYSTEMS (MLDS) PERSONNEL SUPPORT  
SERVICES TORFP #R00B9200162

DATE: November 7, 2011

**GOOD MORNING and HAPPY MONDAY:**

In my haste to issue the minutes and other pertinent information to you in a timely manner, I neglected to include the revised TO Contractor Personnel Duties and Responsibilities and TO Contractor Proposed Personnel Minimum Qualifications I mentioned I would send in the Pre-Proposal Conference.

They are herewith attached. The questions and responses will be sent later today.

Thank you.

**YOU SHOULD RECEIVE 18 PAGES INCLUDING COVER SHEET  
IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL 410-767-0628 OR  
EMAIL [drichburg@msde.state.md.us](mailto:drichburg@msde.state.md.us)  
THANK YOU.**

**ALL RESPONSES MUST BE EMAILED TO  
[R00B9200162@msde.state.md.us](mailto:R00B9200162@msde.state.md.us).**

**PROPOSALS ARE DUE NO LATER THAN  
2:00 PM FRIDAY, NOVEMBER 18, 2011**

## 2.2 RESOURCE REQUIREMENTS

The TO Contractor(s) shall provide qualified resources for the following CATS II Labor Categories at up to the quantity defined roles (only one resume per Master Contractor per Labor Category):

- Labor Category 3 Senior Subject Matter Expert - 11 resources (may submit up to 5 resumes)
- Labor Category 4 Subject Matter Expert – 10 resources (may submit up to 5 resumes)
- Labor Category 10 Applications Programmer – 15 resources (may submit up to 5 resumes)
- Labor Category 20 Senior IT Professional – 2 resources (may submit up to 2 resumes)
- Labor Category 22 Senior Database Management Specialist – 4 resources (may submit up to 2 resumes)
- Labor Category 24 Quality Assurance Manager – 2 resources (may submit up to 2 resumes)
- Labor Category 44 Help Desk Manager – 1 resource (may submit up to 2 resumes)
- Labor Category 46 Junior Help Desk Specialist – 2 resources (may submit up to 2 resumes)
- Labor Category 56 Technical Writer – 4 resources (may submit up to 2 resumes)
- Labor Category 57 Project Control Specialist – 1 resource (may submit up to 2 resumes)
- Labor Category 58 Program Administration Specialist - 2 resources (may submit up to 2 resumes)
- Labor Category 59 Internet/intranet Site Developer Senior – 2 resources (may submit up to 2 resumes)
- Labor Category 64 Systems Design Architect – 3 resources (may submit up to 2 resumes)
- Labor Category 65 Systems Design Engineer – 13 resources (may submit up to 5 resumes)
- Labor Category 81 Senior Network Engineer – 2 resources (may submit up to 2 resumes)

MSDE requires resources to be available immediately upon Notice to Proceed.

The Master Contractor shall propose appropriate CATS II Master Contract labor categories to fulfill one or more of the required roles above. Master Contractors may propose only those labor categories for which they are approved under the CATS II Master Contract and for which maximum labor rates were provided.

## **2.3 TO CONTRACTOR PERSONNEL DUTIES AND RESPONSIBILITIES**

### **2.3.1 SENIOR SUBJECT MATTER EXPERT (Labor Category 3)**

Provide Senior Subject Matter Expert (SME) in the area of K12 applications and administration that demonstrate experience with state, county school systems. The K12 SME will work with the Division of Accountability and Assessment's Race to the Top (RTTT) and P-12LDS project team, MSDE Divisions, and Maryland LEAs to identify, design, and develop educational business accountability and performance metrics, reports, and dashboards which support specific areas listed below.

1. RTTT initiatives that need a SME to direct the implementation of :
  - a. Test Item Banks and Computer Adaptive Testing
  - b. Formative Assessment and/or
  - c. Educator Effectiveness
2. Assist RTTT/P-12LDS Development Team in collecting business intelligence reporting and calculation needs of stakeholders, and submit these needs to the MLDS business analyst for requirements creation.
3. Review reporting assurance required by the RTTT/P-12LDS grant and verifies that the grant reporting assurances.
4. Assist the LEAs and MSDE Divisions to design and develop accountability and performance reports, dashboards, and educational KPIs.
5. Assist stakeholders and end users in interpreting the application of identified RTTT project initiatives and milestones.
6. Demonstrates ability to quickly comprehend project scope and business requirements.
7. Effectively manage multiple priorities.
8. The K12 Senior Subject Matter Expert will work with the Division of Instruction's Race to the Top (RTTT) Online Instructional Toolkit project team, MSDE Divisions, and Maryland LEAs. The resource will contribute to the overall development of the online portal to the Instructional Improvement System, and manage the portal.
9. Plan and manage the overall development of the Online Instructional Toolkit through:
  - a. Identification of existing Toolkit items that can be adapted to support the Common Core Curriculum
  - b. Gather best practices and resources from classroom teachers throughout Maryland as well as from public domain sources, to include in the Toolkit, including multi-media resources
  - c. Define the toolkit item metatagging process
  - d. Manage the metatagging specialists implementing the process
  - e. Manage new and existing resources in the online portal by working with curriculum specialists, educators, and others across MSDE
  - f. Provide continuous improvement process recommendations to improve efficiency and quality
  - g. Assist with connected RTTT projects that either provide input to the Toolkit or host Toolkit resources

### **2.3.2 SUBJECT MATTER EXPERT (Labor Category 4)**

Provide Subject Matter Expert (SME) in the area of K12 applications and administration that demonstrate experience with state, county school systems. The K12 SME will work with the Division of Accountability and Assessment's Race to the Top (RTTT) and P-12LDS project team, MSDE Divisions, and Maryland LEAs to identify, design, and develop educational business accountability and performance metrics, reports, and dashboards which support specific areas listed below.

1. RTTT initiatives that need a SME to direct the implementation of :
  - a. Test Item Banks and Computer Adaptive Testing
  - b. Formative Assessment and/or
  - c. Educator Effectiveness
2. Assist RTTT/P-12LDS Project Team in implementing various tasks as outline in each RTTT/MLDS project.
3. Provide reporting assurance required by the RTTT/P-12LDS grant.
4. Assist the Project Team MSDE Divisions to design and develop implementation requirements for the LEA's.
5. Demonstrates ability to quickly comprehend project scope and business requirements.
6. Effectively manage multiple priorities.

### **2.3.3 APPLICATIONS PROGRAMMER (Labor Category 10)**

To develop and maintain OBIEE and Business Intelligence (BI) Reporting in Division of Accountability and Assessment's and Data Systems (DAADS). Support application in existing DAADS systems such as Educational Data Warehouse (EDW), reporting database, Educational Data Systems (EDS) and other DAADS relational and data mart data base structures and sets.

1. Review and document data structures, report data, and data quality processes of the educational data warehouse
2. Map, compare, and gap the MSDE educational data warehouse data structures to national data models to identify areas for modification and/or improvement.
3. Design new data structures for new RTTT reporting functionality.
4. Prepare Component Impact Summary for the eleven data domains, and associated processes
5. Participate with the MLDS team and document proposed data structure and processes changes based upon a redesign analysis
6. Prepare a Design Change Impact analysis summary for each data domain and associated processes for the proposed changes to that domain, for data structures, analytics, reports, and data quality routines, and design (1) data sets from SAS, data sets from Oracle tables, (2) KPIs, (3) physical layer connections to data sources, (4) metadata business layer, (5) presentation layer, (6) dashboards with graphics, (7) analytics, (8) alerts, (9) BI Publisher reports, and (10) OLAP cubes for educational data from the Educational Data Ware house or other MLDS data sources.
7. Prepare a Development Strategy Summary for each data domain, for the proposed changes to that domain and associated processes, for data structures, analytics, reports, and data quality routines.
8. Define, prepare, and develop; (1) data sets from SAS, data sets from Oracle tables, (2) KPIs, (3) physical layer connections to data sources, (4) metadata business layer, (5) presentation layer, (6) dashboards with graphics, (7) analytics, (8) alerts, (9) BI Publisher reports, and (10) OLAP cubes for educational data from the Educational Data Ware house or other MLDS data sources.
9. Create test plan cases for each data domain, for the proposed changes to that domain, for analytics, reports, and data quality routines.
10. Assist in testing change cases, and preparing test results, for each data domain, for the proposed changes to that domain, for analytics, reports, and data quality routines.
11. Assist in preparing conversion schedules, cut-over procedures, and cut-over component checklists.
12. Implement OBIEE dashboards, BI Publisher reports, and Oracle OLAP cubes in a production environment that can support 300 users.
13. Analyze and understands user requirements.
14. Modify existing software and creates appropriate Maryland SDLC documentation
15. Writes application software code and includes integrating with security subsystems maintained in Oracle Portal OID application.

16. Puts code into production.
17. Performs unit testing and support of quality assurance and user acceptance testing.
18. Creates technical documentation.
19. Design and program SAS Student name matching data strategies and statistical analyses.
20. Design and program SAS statistical programs.
21. Document SAS algorithms and procedures.
22. Create and manage large data sets.
23. Analyze and reconcile unmatched or exception data.
24. Develop and maintain SAS databases supporting analysis data activities.
25. Edit and modify SAS programs to perform logical edits in order to rectify data inconsistencies and anomalies.
26. Interpret and summarize analyses, and write reports.
27. Consult with program managers regarding data acquisition, analysis, and requirements.
28. Maintain data security for all collected data and processed.

#### **2.3.4 SENIOR IT PROFESSIONAL (Labor Category 20)**

This project requires the Contractor to provide the following services to support the Enhancement and expansion of Educator Information System (EIS) (1) Upgrade existing EIS Version 2011. (2) Enhance current business process that improve the reporting requirements and Data quality. (3) Expand the EIS to support RTTT reform Initiatives. The Contractor shall

1. Upgrade Current EIS Microsoft CRM Version 3.x to Microsoft Version 2011 in a parallel RTTT technology environment.
2. Design, customize, and implement Microsoft CRM 4.0 and/or 2011
3. Serve as the technical lead for CRM development and integration
4. Support full CRM systems life-cycle development including design, coding, and software documentation
5. Develop technical specifications based on functional requirements
6. Perform tests according to a given test plan and documents results
7. Perform basic support and debugging in test, development and production environments
8. Identify and escalate technical and management related issues and concerns
9. Provide system testing, maintenance, and integration leadership between legacy and future production systems
10. Define systems architecture and hardware requirements
11. Automate CRM processes and define workflows
12. Design, develop and administer SQL Server Database as it relates to the EIS upgrade and implementation
13. Integrate third party services/applications such as Oracle portal, SharePoint, Web Services, and BizTalk as necessary
14. Implement security policies and directive.
15. Enhance the Portal to accommodate new requirements, and improve usability, friendliness and effectiveness.
16. Integrate EIS with the Longitudinal Data System
17. Integrate EIS with Education Evaluation System which should automated input of evaluation data for all certificated staff
18. Implement IHE preparation program data collection requirements
19. Improve Data Quality and Storage; Reporting Capabilities; Workflow management process

20. Improve access to information, business process design, integration and Interface with external Organizations (CJIS, Verisign, etc) and interface and integration with the Longitudinal Data System and other Race to the Top technology projects.
21. Enhance /Expand ability to receive initiated background check status from the Criminal Justice Information System (CJIS).
22. Enhance /expand Interface with VeriSign Payment Pro to receive request payment as described
23. Enhance interfaces with external organizations in order to receive data for update in EIS.
24. Enhance/Expand ability to receive and upload transcripts from participating institutions in SPEEDE format.
25. Provide Professional Development Plan Alignment
26. Accommodate new LEA evaluation data requirements
27. Align Teacher Development plans with student outcome
28. Support for legislative changes and requirements
29. Expand support of advanced data mining support to access EIS data and provide reports for the Office of the Governor, legislators, etc.
30. Enhance existing reports Provide and additional reporting capabilities based on new functionalities and data

### **2.3.5 SENIOR DATABASE MANAGEMENT SPECIALIST (Labor Category 22)**

The Senior Database Management Specialist assists in preparing requirements and developing and implementing MDM, EDI, Batch, data transfers to support RTTT/MLDS projects in DAADS. This will assist DAADS and project development teams in collecting and writing requirements and procurements for data exchange between

P12 Longitudinal Data Systems (P12LDS), K12 Student Information Systems (SIS) and P13 higher education systems and workforce data.

1. Assist the RTTT Team in managing a new MSDE data collection from the 24 local school districts, including tracking large data files, managing the data validation process and file resubmission(s), collaborating the ETL and DBA resources, and communicating with local IT resources.
2. Support the selection of a technology approach, assess market tools and tools within MSDE DAADS, and evaluate SIF and Common Data Standards for Application Interface transaction record formats and methods.
3. Assist in the preparation of procurement documents for purchasing or building a data exchange
4. Performs stakeholder satisfaction surveys.
5. The candidate must also demonstrate all aspects of proper communication skills, both verbal and non-verbal.
6. Provide highly technical expertise and support in the use of DOITS.
7. Evaluate and recommend available DOITS products to support validated user requirements.
8. Defines file organization, indexing methods and security procedures for specific user applications.

### **2.3.6 QUALITY ASSURANCE MANAGER (Labor Category 24)**

Quality Assurance Manager will oversee software development of Division of Accountability and Assessment's and Data Systems (DAADS) RTTT/LDS project implementation. This oversight and direction will cover ETL data loading processes, portal and APEX development, OBIEE database, Business Intelligence reporting and dashboards. This QAM will be responsible for the day to day software development activities in supporting all RTTT/LDS projects.

1. Manages department and overall expectations pertaining to setting accurate schedules, costs and resources.
2. Ensures delivery against tasks and objectives
3. Provides necessary definition, development and deployment of product quality assurance strategy, addressing all phases of product development.
4. Directly supervises team , quality assurance engineers and testers including the preparation and delivery of staff performance evaluations
5. Establish and maintain policy for documentation of all products.  
Reviews documentation before is sent out to external and internal customers.
6. Implements ongoing quality improvement processes working with interdepartmental teams.
7. Maintains product consistency throughout product cycle, to include the design, define and build phases through quality checkpoints and testing.
8. Develop and manage quality assurance metrics for performance improvement of all teams.
9. Manages and responds to software quality assurance issues with related groups such as development, database, integration, and customer support.
10. Anticipates project release problems and takes corrective action, escalating as needed, to resolve and achieve commitments.
11. Assures the viability, functionality and effectiveness of essential tools and software.
12. Responsible of creating task and checklists for software deployment.
13. Orchestrates the delivery of software to customer visible environments.
14. Manages the planning and execution of product testing efforts, including all associated resources to meet committed delivery dates.
15. Works with project managers to support project schedules and resource allocation models for QA related projects and other activities such as software deployment, customer integration, and professional services validation.

### **2.3.7 HELP DESK MANAGER (Labor Category 44)**

Implement, maintain, and support the day to day support and training to help users navigate and use analytical reports, dashboards, and data entry applications. Build and implement a help desk to support all of Division of Accountability and Assessment's and Data Systems (DAADS) RTTT/MLDS projects.

1. Develop/provide user manuals, programmer maintenance manuals, and system design documentation to begin help desk activities
2. Provide user training in a variety of areas (e.g. analytical reports, dashboards, and data entry applications)
3. Analyze and implement the necessary technical software need to in order to support the end-users.
4. Assist the team in identifying any requirements and/or problems
5. Review implementation plans for applications to ensure that the system resources are available to support applications in both the long and short term
6. Develop standard operating procedures for the data center and associated systems/applications
7. Provide technical training on all functions of the system

### **2.3.8 JUNIOR HELP DESK SPECIALIST (Labor Category 46)**

Under the direction of the Help Desk Manager the Help Desk Specialist will support the day to day operation of the Division of Accountability and Assessment's and Data Systems (DAADS) RTTT/LDS helpdesk activities. These resources will provide tier 1 support of end-user applications via on-line and/or the telephone.

1. Activities will encompass: Answering Service Desk calls and logging each call into a Service Desk system (to be implemented)
2. Assess each problem and assist in resolving or escalating the issue.
3. Assist in developing training materials that will be used in conducting webinars, and workshops for end user training
4. Provide technical training on all functions of the system

### **2.3.9 TECHNICAL WRITER (Labor Category 56)**

Technical Writer and Developer for Race to the Top (RTTT) will produce materials, video, and a portal information. The technical writer must have experience with K12 online multi-media and print newsletter tools and development experience. The technical writer and developer will work with the Division of Accountability and Assessment's and Data Systems (DAADS) RTTT/ P-12LDS project team to design, and develop educational media, online portal contents, webinars, and newsletters.

1. Assist RTTT/P-12LDS Development Team in collecting multi-media business requirements from key stakeholders.
2. Assists in collecting and organizing information for preparation of user manuals, training materials, installation guides, proposals, and reports.
3. Translates technical information into clear, readable documents to be used by technical and non-technical personnel
4. Assist in the selection of existing training materials for display on the portal
5. Create online newsletter using Captivate
6. Create multimedia videos using one or more of the top multi-media tools suites.
7. Create webinar materials, schedule webinars, and post recorded webinar links on a portal
8. Create written content for an Oracle portal, and post the content.
9. Prepare steering committee, USDE and DoIT reports
10. Prepare and issue stakeholder satisfaction surveys using Survey Monkey

### **2.3.10 PROJECT CONTROL SPECIALIST (Labor Category 57)**

Serve a Project Control Specialist to support the Division of Accountability and Assessment's and Data Systems (DAADS) on Race to the Top (RTTT/MLDS) project teams in the support, administrative and maintenance of the project plans, budget, portal, workbooks and reports.

1. Support the Program Director and/or Project Manager with day to day support in all project control functions.
2. Planning, tracking, and analysis and reporting on budgets and project estimates
3. Maintain project budgets and support forecasting exercises.
4. Prepare written analysis of project with cost and scheduled variances.
5. Prepare financial deliverables as required for project for both internal and external use.
6. Assist with preparing proposals for staffing, hardware/software and/or IT related purchases (RFQ, RFR, RFP and TORFP)
7. Schedule meetings as needed. (Webex, GotoMeeting)
8. Monitors all consultants time of the project team
9. Process all invoices
10. Reconcile all invoices using the MSDE accounting reports and GRADS 360
11. May coordinate, monitor or supervise the activities of subordinates.
12. Develops and maintains all training materials related to the consultant on-boarding



### **2.3.11 PROGRAM ADMINISTRATION SPECIALIST (Labor Category 58)**

Serve as Program Administration Specialist to work with Division of Accountability, Assessment and Data Systems on the Race to the Top (RTTT)/P-12LDS project team to develop, administer, and maintain project plans, SDLC (System Development Life Cycle), and administrative documentation for the RTTT/P-12LDS grant projects.

1. Assists in maintaining and organizing of documentation for portal and portal management project workbooks.
2. Assists in maintaining specialized project plan documentation, and contract deliverables management of the RTTT/P-12LDS project
3. Assists in maintaining status documentation for MSDE, DoIT and USDE
4. Assists in maintaining and gathering of documentation for contract deliverables of the RTTT-DAADS project.
5. Assist in the document conversion from hardcopy to electronic of the RTTT/P-12LDS Documentation, and storage on the new electronic documentation on project's Oracle Portal (OBIEE and Business Intelligence)
6. Assist in the maintenance and storage of RTTT/P-12LDS project SDLC documentation, finance documentation, and human resources documentation of the project.
7. Tracking of RTTT/P-12LDS Project documents to meet the project's retention archival policy.
8. Maintain all documentation of timesheets, invoices, and procurement documentation.
9. Attend meetings and conference calls with MSDE staff on an as needed basis that supports the project
10. The candidates must also demonstrate all aspects of proper communication skills, both verbal and non-verbal. The candidate must possess good interpersonal and communication skills.

### **2.3.12 INTERNET/INTRANET SITE DEVELOPER SENIOR (Labor Category 59)**

This resource will design, implement and maintain web-based portals that provide educators in Maryland with access to a variety of online and face-to-face professional development tools that will help them develop their individual professional development plans, and provide opportunities for educators to collaborate online.

1. Must be able to translate application requirements into the design of complex web sites, including integrating web pages and applications.
2. Work collaboratively with other RTTT project teams to define and prepare portal requirement documents,
3. Develop technical and conceptual designs in accordance with RTTT portal requirements, Managing activities of the project team(s) and/or vendors as necessary;
4. Communicating regularly with stakeholders, including the Race to the Top Technical Program Director, relative to project accomplishments, milestones, issues, risks, and remediation actions;
5. Managing and assuring the successful attainment of all goals set out at the onset of the project.

### **2.3.13 SYSTEMS DESIGN ARCHITECT (Labor Category 64)**

Oversee the day to day operations of the Software Development Team of ETL, Portal and APEX development and OBIEE applications.

1. Assigns work assignments/tasks based upon the project schedule and priorities.
2. Design, Create and Implement appropriate technical documentation.

3. Perform quality test of applications.
4. Analyze complex K12 education accountability and performance reporting and data storage requirements with end users and developers,
5. Prepare data models that support the creation of K12 data structures, KPI development, and dashboard development in Oracle 11g and ERWIN
6. Create business data models in Oracle 11g, ERWIN, and Oracle OBIEE business model layer
7. Create data structures for relational, star schemas, and data marts schemas
8. Prepare and execute Informatica ELT programs to maintain and transform existing and new data sets
9. Design and define the system specifications, analyze malfunctions and develop solutions.
10. Assure maximum utilization of existing hardware, software and personal resources.
11. Establish and implement operational procedures and practices.
12. Develop long range plans and goals for performance.

#### **2.3.14 SYSTEMS DESIGN ENGINEER (Labor Category 65)**

To develop and maintain data structures and data in DAADS (Division of Accountability, Assessments and Data Systems) existing Educational Data Warehouse (EDW), OBIEE and Business Intelligence (BI) Reporting Edfacts reporting database, the Educational Data Operational Store, GIS Oracle Db. 11g and other DAADS relational and data mart database structures and sets.

1. Analyze complex K12 education accountability and performance reporting and data storage requirements with end users and OBIEE developers
2. Prepare data models that support the creation of K12 data structures, KPI development, and dashboard development in Oracle 11g using (ERWIN is used)
3. Create data structures for relational, star schemas, and data marts schemas. (ERWIN is used)
4. Prepare and execute Informatica ELT programs to maintain and transform existing and new data sets in and Oracle 11g environment
5. Create business data models in Oracle 11g, ERWIN, and Oracle OBIEE business model layer
6. Identify and resolve performance problems involving the applications databases and associated hardware.
7. Support and maintain operational procedures and practices.
8. Maintain database security and authentication.
9. Develop and monitor backup strategies.
10. Manage, plan, and configure data view for front-end processes.
11. Assist in setting long-range plans and goals for performance.
12. Design, update and implement new scripts and applications.
13. Provide operational and technical guidance as required.
14. Interact with developers on SQL, Oracle and DB2 support teams.
15. Develop and update reports using Cognos ® reporting tools.
16. Manage and support the entire data integration lifecycle using Informatica ®.
17. Develop and update reports using Microsoft Crystal Report and SQL Report.
18. Analyze and understands user requirements.
19. Modify existing software and creates appropriate Maryland SDLC documentation
20. Writes application software code and includes integrating with security subsystems maintained in Oracle Portal OID application.
21. Puts code into production.
22. Performs unit testing and support of quality assurance and user acceptance testing.
23. Creates technical documentation.

### **2.3.15 SENIOR NETWORK ENGINEER (Labor Category 81)**

The Network Engineer is to support the network infrastructure at DPSCS. Research, design, and implement networking infrastructure to support MSDE and DPSCS co-location. Develop requirements for configuration of development, testing, staging and production environments under RTTT/MLDS grants.

1. Perform complex design, engineering, implementation, and maintenance of the RTTT Local Area Network and/or Wide Area Network, and/or security infrastructure,
2. Size enterprise servers and bandwidth
3. Analyze network topologies.
4. Review and validate capacity projections and requirements for all relevant RTTT initiatives,
5. Coordinate the implementation of approved network designs, and the deployment and configuration of all enterprise systems as specified by MSDE,
6. Develop and maintain network architecture diagrams of RTTT network environments and/or security hardware and software deployed across the various RTTT environments,
7. Perform root cause and incident analysis on all outages, and define mitigation action to prevent reoccurrence.
8. Troubleshoot connectivity issues.
9. Research and recommend enterprise hardware, operating systems and supportive software.

## **2.7 TO CONTRACTOR PROPOSED PERSONNEL MINIMUM QUALIFICATIONS**

Proposed personnel must meet the minimum qualifications below for their proposed role. For minimum requirements, see CATS II Labor Category.

Personnel who do not meet minimum qualifications shall not be further evaluated (TORFP Section 4.2).

### **2.7.1 SENIOR SUBJECT MATTER EXPERT (Labor Category 3)**

The preferred candidate will meet the following criteria:

1. EDUCATION – BS REQUIRED, WITH MS OR PHD PREFERRED.
2. Minimum of three (3) years experience with K12 with test item banks, computer adaptive testing, formative assessments and/or educator growth and effectiveness.
3. Minimum of three (3) years experience implementing software application
4. Minimum of eight (8) years working in a K12 environment
5. Minimum of five (5) years experience as a teacher.
6. Ability to work with and apply Oracle Business Intelligence Enterprise suite, and Oracle Portal suite
7. Communication Skills: Fluent in oral and written communications.
8. Minimum of three (3) years experience preparing software requirements and specification documents At least five (5) years experience designing, successfully implementing and or managing a text, image and media file processing pipeline for digital content/resources to ensure the orderly management of the files/resources and their associated metadata.
9. Experience in metatagging and at least five (5) years of previous experience in content management required.
10. Familiarity with the Maryland Common Core State Standards and the Common Core metatags strongly preferred.
11. Familiarity with Learning Object Repositories required. Knowledge of DSpace and Google Docs strongly preferred.
12. Knowledge of technology and standards related to digital libraries, OpenURL, Metadata and Paradata, SCORM, OAI, MARC, Dublin Core, Web 2.0 principles and policies, and laws and regulation such as CIPA, Section 508 and ADA.
13. Experienced user of open source learning management systems such as Moodle, Sakai, etc. preferred.

### **2.7.2 SUBJECT MATTER EXPERT (LABOR CATEGORY 4)**

The preferred candidate will meet the following criteria:

1. EDUCATION – BS REQUIRED, WITH MS OR PHD PREFERRED.
2. Minimum of one (1) years experience with K12 item test banks, computer adaptive testing, formative assessments and/or educator growth and effectiveness.
3. Minimum of one (1) years experience implementing software application.
4. Minimum of four (4) years working in a K12 environment
5. Minimum of two (2) years experience as a teacher.
6. Communication Skills: Fluent in oral and written communications

### **2.7.3 APPLICATIONS PROGRAMMER (LABOR CATEGORY 10)**

The preferred candidate will meet the following criteria:

1. EDUCATION - BS in Computer Science required or related field.

2. Minimum of five (5) years verifiable experience developing OBIEE dashboards reports, analytics dashboards, alerts, physical connect strings, business layer model with dimensions and hierarchies, presentation layer development, and role based security.
3. Minimum of two (2) years verifiable experience developing BI Publisher reports.
4. Minimum of two (2) years verifiable experience developing OLAP cubes.
5. Minimum of two (2) years verifiable experience performing systems business and requirements analysis on data warehouse development projects.
6. Minimum of two (2) years verifiable experience working with end-users in defining and preparing system requirements, dashboard user interface design documents.
7. Minimum of two (2) years verifiable experience translating user requirements into data structure designs to relational 3N form, and Oracle OLAP cubes
8. Minimum of one (1) year OBIEE administration and management
9. Minimum of one (1) year project experience in developing educational OBIEE dashboards
10. Minimum of four (4) years experience programming in SQL
11. Minimum of one (1) year experience integrating APEX with OBIEE 10g
12. Minimum of one (1) year experience integrating APEX security calls with Oracle Portal 10g security
13. Minimum of one (1) project experience implementing APEX end-user login security layer and programming calls
14. Minimum of one (1) project experience implementing APEX in a Weblogic webserver environment
15. Minimum of three (3) years experience working with end users in defining SAS analysis requirements and performing SAS programming and statistical analysis.
16. Minimum of one (1) year experience in education data analysis.
17. Minimum of two (2) years experience creating and processing large SAS data sets.

#### **2.7.4 SENIOR IT PROFESSIONAL (Labor Category 20)**

The preferred candidate will meet the following criteria:

1. BS or Master's degree in computer science or an IT related field,
2. Seven (7) + years of overall IT experience developing and fielding automation solutions
3. Five (5) + years of experience with the full-range of systems engineering functions, including requirements analysis, traceability, test and evaluation, operations concepts, and systems prototyping preferred
4. Five (5) + years of experience .Net, SQL Server, SQL Reporting Services, and Web Services required
5. Five (5) + years of experience with Microsoft Dynamics CRM design, CRM System Architecture, customization, configuration, operation, and maintenance support required
6. One (1) + years leading CRM design and implementation efforts desired
7. Two (2) + years implementing Microsoft CRM for Education institutions desired
8. Two (2) years experience with web services
9. Two (2) years experience with C#, SSIS, Scribe, Ajax, JavaScript
10. Two (2) years experience with Workflow
11. Two (2) years experience with .NET 4 skills such as WCF, oData, Linq, JQuery and Silverlight
12. Two (2) years experience integrating MS Dynamics CRM with SharePoint, Scribe, Web Services, and BizTalk preferred
13. Ability to multi-task, think strategically, and provide subject matter expertise
14. A proven understanding of object oriented concepts and design.

## **2.7.5 SENIOR DATABASE MANAGEMENT SPECIALIST (Labor Category 22)**

The preferred candidate will meet the following criteria:

1. EDUCATION – BS REQUIRED, WITH MS PREFERRED IN COMPUTER SCIENCE or related field
2. Minimum of five (5) years of experience doing systems analysis and programming.
3. Minimum of five (5) years experience preparing software requirements and specification documents.
4. Minimum of five (5) years of experience planning, collecting requirements, designing data collection processes, and developing tracking methods.
5. Minimum of five (5) years of experience conducting operations of data collections, coordinating with submitters and technical resources, tracking data files, and managing resolution of issues, risks, and change controls
6. Communication Skills: Possess excellent oral and written communication skills
7. Four or more years experience with ability to evaluate database server hardware
8. Four or more years experience with ability to install/upgrade/migrate Oracle Database software and applications including weblogic, Obiee, Oracle Spatial, IDM, Websuite, WebCenter, Grid Control
9. One or more years with GIS software installation and integration into Oracle OBIEE
10. Four or more years experience with ability to plan a database
11. Four or more years experience with ability to read ERD and dimensional models and translate into table structures, keys, indexes
12. Four or more years experience with ability to read and write SQL and PL/SQL code
13. Two or more years experience with ability to use Erwin
14. Four or more years experience to access Oracle databases and view tables structures with Enterprise manager
15. Ability to use Enterprise Manager to monitor system performance
16. Four or more years experience with ability to write batch programs and use the alerts and scheduler features of Enterprise Manager to create automatic monitoring and management processes
17. Four or more years experience with ability open, close, copy, import and export databases.
18. Four or more years experience with ability to identify and tune both OS and Oracle SAG
19. Four or more years experience with ability to Backup and recover the database
20. Four or more years experience with ability to setup and perform snapshots and replication
21. Four or more years experience with ability to setup and manage RAC
22. Four or more years experience with ability to enroll users and applications
23. Minimum of two year experience with manage and monitor LOGS

## **2.7.6 QUALITY ASSURANCE MANAGER (Labor Category 24)**

The preferred candidate will meet the following criteria:

1. EDUCATION – BS REQUIRED in INFORMATION SYSTEMS OR RELATED FIELD
2. A minimum of eight (8) years experience as managing/implementation of projects
3. At least four (4) years in Dashboard development and oversight
4. Ten (10) years experience with system development left cycle (SDLC)
5. Knowledge of basic testing methodology and documenting test plans, execution results, and gathering and evaluating test metrics for test reporting
6. Working knowledge or experience with relational database structures and query techniques

7. Five (5) years experience and understanding of OBIEE and ORACLE environments, Unix-based shell (ksh) and SQL scripting.
8. Excellent written and verbal communication skills
9. Strong organizational and multi-tasking skills

#### **2.7.7 HELP DESK MANAGER (Labor Category 44)**

The preferred candidate will meet the following criteria:

1. Education – BS required, in Computer Science, Information Systems or related field.
2. A minimum of five (5) years experience in a Help Desk environment OR any equivalent combination of training and experience which provides the required knowledge, skills, and abilities.
3. Minimum one (1) year experience with on-line webinar systems such as Goto Meeting or Webex
4. In depth knowledge and understanding of Help Desk tools, processes and applications.
5. Experience providing support to end users via the phone and/or remote (e.g. web ex, remote desk top)
6. Knowledge/Experience with the software development life cycles.
7. Communication Skills: Possess excellent oral and written communication skills

#### **2.7.8 JUNIOR HELP DESK SPECIALIST (Labor Category 46)**

The preferred candidate will meet the following criteria:

1. Education – AS required, BS preferred in Computer Science, Information Systems or related field.
2. A minimum of two (2) years experience in a Help Desk environment OR any equivalent combination of training and experience which provides the required knowledge, skills, and abilities.
3. In depth knowledge and understanding of Help Desk tools, processes and applications.
4. Experience providing support to end users via the phone and/or remote (e.g. web ex, remote desk top)
5. Communication Skills: Possess excellent oral and written communication skills

#### **2.7.9 TECHNICAL WRITER (LABOR CATEGORY 56)**

The preferred candidate will meet the following criteria:

1. EDUCATION – BS, MS preferred
2. Minimum of five (5) years experience preparing multimedia communications materials
3. Minimum of two (2) years with Captivate, Adobe multi-media authoring tools or similar tools, and Survey Monkey
4. Minimum of two (2) years developing online newsletters
5. Minimum of two (2) years developing online training videos
6. Minimum of two (2) years writing training materials
7. Minimum of one (1) years experience with online webinar systems such as GoTo Meeting or Webex.
8. Evidence of formal education in developing training and education materials for end-users using computers
9. Some experience in a K12 environment preferred.

### **2.7.10 PROJECT CONTROL SPECIALIST (Labor Category 57)**

The preferred candidate will meet the following criteria:

1. EDUCATION – BS REQUIRED,
2. Three (3) years of experience working with project management tools and reporting systems.
3. Familiar with State of Maryland TORFPs and RFR contracts, work breakdown structures, and IT program status reporting.
4. Two (2) years of direct program experience in preparing management reports.
5. Two (2) years Experience with Oracle Business Intelligence Enterprise suite,
6. Two (2) years Experience with Oracle Portal suite and content management.
7. Two (2) years Experience with State of Maryland procurement and invoices practices
8. Two (2) years Experience with the preparation, development, and management of State of Maryland Department of Information Technology SDLC documentation.
9. Three (3) years Experience in support of project managers
10. Two (2) years Experience in developing and maintaining project schedules.
11. Proficient in use of Excel and MS-Office applications.
12. Communication Skills: Possess excellent oral and written communication skills.

### **2.7.11 PROGRAM ADMINISTRATION SPECIALIST (Labor Category 58)**

The preferred candidate will meet the following criteria:

1. EDUCATION – required Associates Degree
2. Minimum of three (3) years working with MS Office applications.
3. Three (3) years of experience working with financial systems, accounting worksheets, billing practices.
4. Minimum of five (5) years in clerical support role.
5. Minimum of five (5) years with invoice & budgeting practices

### **2.7.12 INTERNET/INTRANET SITE DEVELOPER SENIOR (Labor Category 59)**

1. EDUCATION – Bachelor's Degree
2. A minimum of three (3) years of object oriented software development experience designing, building and deploying custom application solutions required.
3. At least five (5) years designing and implementing web portals using standard development languages, technologies, and development methods including: HTML, UML, Java, and XML.
4. At least five (4) years of experience conducting software requirements mapping; application configuration and testing; and application interface design & testing.
5. At least five (4) years of experience working with design and/or delivery of online professional development courses preferred.
6. One (1) year experience working in a State agency environment with experience doing state procurements preferred.
7. At least five (5) years of web development experience using current web development and graphic tools, as well as Web Service and database administration

### **2.7.13 SYSTEMS DESIGN ARCHITECT (Labor Category 64)**

The preferred candidate will meet the following criteria:

1. Education - BS in computer science.



2. At least five (5) years of experience designing and developing data warehousing database star schemas, 3N data forms using Oracle 10 g and 11g database
3. At least five (5) years of experience designing and developing OLAP cubes
4. At least five (5) years of experience with Informatica ETL programming performing K12 educational data import and data transformations.
5. At least five (5) years of experience with installing and administrating an Informatica ETL application environment
6. At least five (5) years of experience programming in SQL and PL/SQL
7. At least four (4) years of experience analyzing user requirements and translating them into system data structure designs using ERWIN design tools and techniques (or similar design tools).
8. At least five (5) years of experience with OBIEE business layer modeling with skills in dimensions, hierarchies, parameters, alerts, drill downs, and custom calculations
9. At least three (3) years of experience analyzing user requirements and translating them into system designs using various design tools and techniques.
10. Possess the ability to lead program development and relational staff
11. Excellent verbal and written communication skills.

#### **2.7.14 SYSTEMS DESIGN ENGINEER (Labor Category 65)**

The preferred candidate will meet the following criteria:

##### **Part 1 ETL**

1. Education - BS in computer science or related field.
2. At least five (5) years of experience designing and developing data warehousing database star schemas, 3N data forms using Oracle 10 g and 11g database
3. At least five (5) years of experience with Informatica ETL programming data, data imports, and data transformations.
4. At least five (5) years of experience programming in SQL and PL/SQL
5. At least three (3) years of experience analyzing user requirements and translating them into system data structure designs
6. At least two (2) years of experience with installing and administrating an Informatica ETL application environment
7. Possesses verbal and written communication skills in order to work with end-users.

##### **Part II OBIEE**

8. Education - BS in computer science or related field.
9. At least five (5) years of experience designing and developing data warehousing database star schemas, 3N data forms using Oracle 10 g and 11g database
10. At least five (5) years of experience with OBIEE business layer modeling with skills in dimensions, hierarchies, parameters, alerts, drill downs, and custom calculations
11. At least three (3) years of experience analyzing user requirements and translating them into system designs using various design tools and techniques.
12. Possesses verbal and written communication skills in order to work with end-users.
13. At least five (5) years of experience designing and developing data warehousing database star schemas, 3N data forms, and OLAP cubes

### **2.7.15 NETWORK ENGINEER (Labor Category 82)**

The preferred candidate will meet the following criteria:

1. EDUCATION – BS REQUIRED IN INFORMATION TECHNOLOGY OR RELATED FIELD. MASTERS DEGREE PREFERRED
2. Experience in the design, deployment, and support of Local Area Networks, Wide Area Networks, and Virtual Private Network infrastructures.
3. Expert knowledge of industry standard network appliances (switches, routers and controllers) with demonstrated experience with all common transport and routing protocols.
4. A minimum of eight (8) years experience working in large complex network environments, two (2) of which should have been spent in an architectural or design capacity.
5. Possess proper communication skills, both verbal and non-verbal.
6. Expert knowledge of Microsoft Visio Professional (2010 preferred).
7. Network management, server management, security management, firewall management, and database management experience required.
8. Cisco Certified Network or Design Professional (CCNP), (CCDP) preferred.
9. Four (4) years experience working in K12 environment or government.

**DIDN'T THE RAVENS JUST SHOW OFF LAST NIGHT? 😊**

**PLEASE NOTE – RESPONSES SHOULD BE EMAILED TO  
[R00B9200162@msde.state.md.us](mailto:R00B9200162@msde.state.md.us)**