

PROJECT STATEMENT

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
Facilities Administration
First Floor, Stevens T. Mason Building
P.O. Box 30026
Lansing, Michigan 48909

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| FILE NUMBER 071/10098.JNS | INDEX NUMBER(S) 44200 | COMPTROLLER OBJECT | APPROVAL DATE March 31, 2010 |
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DEPARTMENT

Technology, Management and Budget

AGENCY

DTMB Secondary Complex Facilities including Secretary of State Building, Michigan State Police Training Academy, Michigan State Police 1st District Headquarters, Central Energy Center, Operations Center, MDOT Warehouse and Training Center, General Office Building, General Services Building, MDOT Photo Lab, MDOT Construction and Technology Building, Vehicle and Travel Services Building, Michigan State Police Hazardous Materials Training Center, and Michigan State Police Forensic Laboratory

ADDRESS

State of Michigan Secondary Complex, Dimondale, Michigan

AGENCY CONTACT

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DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET PROJECT MANAGER

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PROJECT DESCRIPTION

*** SEE ATTACHED PROJECT DESCRIPTION ***

This Project is being funded through the American Recovery and Reinvestment Act. All work performed shall comply with the “Solicitation and Award Terms for Grant Agreements that include Funds under the American Recovery and Reinvestment Act of 2009, Public Law 111-5” and the “Addendum to Attachment A General Provisions American Recovery and Reinvestment Act Terms and Conditions”, both documents to be adopted as a part of the proposed Professional and Construction Services contracts and attached for your reference.

SPECIAL WORKING CONDITIONS

Work is being performed inside State of Michigan Facilities. Security clearances are required prior to start of work. All inspections shall be scheduled in advance with the Zone 5, 6 and 7 Facility Supervisor.

DESIRED SCHEDULE OF WORK

All work including Study, Design, Construction, Project Closeout and Final Payments must be completed no later than September 30, 2011.

LOCATION OF WORK AREAS

State of Michigan, Secondary Complex, Dimondale, Michigan

REFERENCE STANDARDS: This project will comply with all codes, standards, regulations, and workers' safety rules that are administered by federal agencies (EPA, OSHA, and DOT), state agencies (MIOSHA, DNR, and DPH), and any other local regulations and standards that may apply.

This form is required to be a part of the professional service contract. (Authority: 1984 PA 431)

Attachment(s)

Project Description

HVAC Building Automation System Upgrades,
Integration to a Centralized Tridium NiagaraAX framework, and
Integration of Building Level Energy Sub-Metering to NiagaraAX and Vykron Energy Suite
Various Buildings – State of Michigan, Secondary Complex
Dimondale, Michigan

The Interagency Agreement between the Department of Energy, Labor and Economic Growth and the Department of Management and Budget (now the Department of Technology, Management and Budget), describes the objective of this American Recovery and Reinvestment Act (ARRA) grant project as the implementation of energy building operations and maintenance controls and strategies at select buildings within the State of Michigan's Secondary Complex that include:

- heating, ventilation and cooling (HVAC) process efficiency improvements through retro-commissioning building automation system (BAS) upgrades and integration;
- implementation of semi-automated, continuous commissioning,; and
- preventive maintenance training and practice.

The building controls and systems for much of the State of Michigan Secondary Complex facilities date back to the 1970's. Some buildings have modernized control systems in preparation for integration to a centralized Tridium NiagaraAX framework via the State of Michigan Intranet. However, much of the mechanical systems and controls are past their respective design life cycle with little or no means to currently measure operational performance. The lack of modernized / intelligent controls has hampered the ability of the Department of Technology, Management and Budget Facilities Administration Operations Division staff to optimize building HVAC systems with related energy performance, and to detect system level malfunctions.

The primary purpose of this project is the upgrade of Building Automation System HVAC Controls for those buildings referenced by the Project Statement by adding new digital control systems as may be required, integrating these upgraded digital control systems to a centralized NiagaraAX based Building Management and Control System and developing Building Automation Systems graphics dashboards for each building.

In addition, this project includes the integration of building level energy sub-metering points (metering devices and Tridium JACE2 controllers have already been installed under a separate project) into the NiagaraAX Supervisor and Vykron Energy Suite including the development of Energy Metering reporting graphics dashboards for each building and for the Secondary Complex as a whole, as well as commissioning the energy metering devices once communications and application level configurations are established.

The Selected Professional will be tasked to analyze current HVAC control conditions and evaluate potential upgrade and NiagaraAX integration scenarios for the purpose of optimizing short term and long term goals that could include future growth of the NiagaraAX Framework to additional building systems such as lighting and others.

The following is provided for information only and summarizes the current state of Building Automation Systems in each of the selected buildings. This summary was prepared in part through analysis by ControlNET, L.L.C. and MDMB staff during preparation of the ARRA funding process after ControlNET and DMB Staff completed a very limited inspection of building automation systems in the fall of 2009.

Secretary of State Building

Year Constructed: 1969
Gross Area: 117,800 sq. ft. (interior)
No. of Floors: 3

The current Building Automation System (BAS) is a modern iteration of Siemens APOGEE and Insight installed in 2008 with AHU, CH system, HW system, and zone temperature controls as well as local building (only) Operator Work Station (OPERATOR WORK STATION). Points specified to be native BACnet under the 2008 upgrade project, and should be ready for integration. Ethernet network drops are in place for energy metering JACE panel.

Equipment Summary:

1. Air Handling Units (4)
2. Multi-Zone Air Handling Units (7)
3. Multi-Zone Actuators (48)
4. Reheat Coils (31)
5. Chilled Water Secondary Pumping System
6. Heating Systems (3)
7. Cabinet Unit Heaters (8)
8. Lighting Control (4 Zones)
9. Exhaust Fans (7)

Possible BAS Integration path and additional requirements:

1. Integrate the existing Siemens system into the NiagaraAX framework via BACnet/IP protocol.
2. Organize building Niagara object data in the AX Supervisor database system, and develop Dashboard.
3. May need assistance from Siemens to identify system points and control sequences as necessary.
4. Add / upgrade system monitoring points as necessary to meet retro / continuous commissioning plan requirements.

Michigan State Police Training Academy

Year Constructed: 1974
Gross Area: 132,100 sq. ft. (interior)
No. of Floors: 2 to 8

The Administrative Wing includes recently modernized Trane BAS with AHU and unit ventilators. A head end Operator Work Station is located in the Central Energy Center. Trane points are capable of serving BACnet points via Trane Comm 5 (which is LON based), but BACnet objects need to be created in the Building Control Units (BCUs) for integration to the NiagaraAX network. Remainder of building is aged Honeywell digital and pneumatic controls with no local Operator Work Station, only viewable by way of the Central Energy Center XBS work station.

Trane Controlled Equipment Summary:

1. Air Handling Units (2)
2. Fan Coil Units (20)

Honeywell Controlled Equipment Summary:

1. Air Handling AC Units (8)
2. Air Handling HV Units (6)
3. Chilled Water Secondary Pumping System (1)
4. Steam to Hot Water HX System (1)
5. Condensate Pump Status (2)
6. Misc. Monitoring Points (30)
7. Exhaust Fans (22)
8. Lighting / Miscellaneous Status Points (15)

Possible BAS Integration path and additional requirements:

1. Trane to create BACnet/IP points in the BCU for integration into the NiagaraAX framework.
2. Replace the existing Honeywell Delta style controls with new open protocol LON or BACnet controllers and instrumentation.
3. The existing pneumatic valve and control damper actuators shall remain and be controlled through a new open protocol digital to pneumatic control system.
4. All points shall be available for integration to the NiagaraAX framework.
5. All obsolete pneumatic control devices and instruments shall be removed.
6. Add / upgrade system monitoring points as necessary to meet retro / continuous commissioning plan requirements.
7. Integrate and commission energy sub-metering to the Vykon Energy Suite.

Michigan State Police 1st District Headquarters

Year Constructed: 1974
Gross Area: 11,800 sq. ft. (interior)
No. of Floors: 1

Work will not include Building Automation System integration, but will include Building Automation System commissioning, energy sub-metering integration to the Vykon Energy Suite and energy sub-metering commissioning.

Central Energy Center

Year Constructed: 1975
Gross Area: 61,300 sq. ft. (interior)
No. of Floors: 4

Work will include no Building Automation System integration, but will include energy sub-metering integration to the Vykon Energy Suite and energy sub-metering commissioning.

Operations Center

Year Constructed: 1974 / 2002
Gross Area: 340,200 sq. ft. (interior)
No. of Floors: 2

The Operations Center has a modern Honeywell XL5000 based system with local Operator Work Station and also web distributed EBI interface. The facility will need a C-bus integration methodology to communicate common building objects to the NiagaraAX Framework. Depending on quantity of points and bandwidth needs, the facility may need multiple interface devices.

Equipment Summary:

1. Air Handling Units (10)
2. Chilled Water Secondary Pumping System (1)
3. Steam to Hot Water HX System (1)
4. VAV Boxes (320)
5. Zone Managers (8)

Possible BAS Integration path and additional requirements:

1. Replace the Zone Managers with JACEs and connect to the existing E-bus. The existing XL10 E-bus controllers need to be smart II controllers to be compatible with standard LON protocol.
2. Integrate with the existing C-bus controllers with a Neopsis gateway. As of the fall of 2009, the functionality of the Neopsis gateway had not been tested nor had product pricing been established.
3. Add / upgrade system monitoring points as necessary to meet retro / continuous commissioning plan requirements.
4. Integrate and commission energy sub-metering to the Vykon Energy Suite.

MDOT Warehouse and Training Center

Year Constructed: 1975
Gross Area: 88,800 sq. ft. (interior)
No. of Floors: 2

Within the front office and warehouse, the existing NiagaraAX framework has been integrated to a Johnson Control, Inc. (JCI) NAE based system. The training center is running on a Honeywell XL5000 based system with C-bus communication which has the same inherent integration requirements as those of the Operations Center discussed above.

JCI Controlled Equipment Summary:

1. Air Handling Units (6)
2. Chilled Water Secondary Pumping System (1)
3. Steam to Hot Water HX System (1)
4. VAV Boxes (12)
5. Unit Heaters (32)
6. Exhaust Fans (3)

Honeywell C-Bus Controlled Equipment Summary:

1. Air Handling Units (1)
2. VAV Boxes (20)

Possible BAS Integration path and additional requirements:

1. Remove the NAE and install a JCI FX60.
2. Integrate the existing JCI product to the FX60.
3. Replace the Honeywell C-bus XL controller with an open protocol controller and expose all necessary points for integration to the NiagaraAX framework.
4. Remove the zone manager and connect the E-bus to the FX60. The existing XL 10 E-bus controllers need to be smart II controllers to be compatible with standard LON protocol.
5. Add / upgrade system monitoring points as necessary to meet retro / continuous commissioning plan requirements.
6. Integrate and commission energy sub-metering to the Vykon Energy Suite.

General Office Building

Year Constructed: 1976
Gross Area: 243,700 sq. ft. (interior)
No. of Floors: 3

The current BAS is a modern iteration of Siemens APOGEE and Insight 3.8.1 recently installed with AHU, CH system, HW system, and zone temp controls as well as a local building Operator Work Station. Points were specified to be native BACnet under the previous upgrade project, and should be ready for integration. Ethernet network drops are in place for the energy metering JACE panel.

Equipment Summary:

1. Air Handling Units (4)
2. Chilled Water Secondary Pumping System (1)
3. Steam to Hot Water HX System (2)
4. Domestic HX & Tank (1)
5. VAV Boxes (337)

Possible BAS Integration path and additional requirements:

1. Integrate the existing Siemens system into the NiagaraAX framework via BACnet/IP.
2. Organize BACnet data in the AX database by system.
3. May need assistance from Siemens to identify points if the points have non specific naming structure.
4. Add / upgrade system monitoring points as necessary to meet retro / continuous commissioning plan requirements.
5. Integrate and commission energy sub-metering to the Vykon Energy Suite.

General Services Building

Year Constructed: 1976
Gross Area: 145,800 sq. ft. (interior)
No. of Floors: 1

Upgrades to HVAC equipment and controls including the relocation and replacement of three air handling units and the installation of a new facility wide Honeywell Control System are ongoing at the General Services Building. Building Automation System integration to the NiagaraAX Framework and energy sub-metering data integration to the Vykron Energy Suite at the General Services Building are included as part of this project.

Prior to the ongoing HVAC equipment and controls upgrades, the General Services building automation system included a modern Trane system with a new rooftop air handling unit and a new chilled water secondary pumping system. The General Services Building automation system also included a variety of older Honeywell control systems with mezzanine level air handling units. Equipment within the General Services Building as of the fall of 2009 along and a possible Building Automation System integration path are as listed below. With the ongoing HVAC and controls upgrades, a number of the items listed in the possible BAS integration path will be significantly reduced in scope.

Trane Equipment Summary:

1. Air Handling Units (1)
2. Chilled Water Secondary Pumping System (1)
3. VAV Boxes (2)

Honeywell Equipment Summary:

1. Air Handling AC units (3)
2. Air Handling HV Units (4)
3. Chilled Water Secondary Pumping System (1)
4. Chiller with Isolation Valves / Pumps (1)
5. Steam to Hot Water HX System (1)
6. Lighting Zones (20)
7. Door Contact Monitor (16)

Possible BAS Integration path and additional requirements:

1. Trane to create BACnet/IP points in the BCU for integration into NiagaraAX framework.
2. Replace the existing Honeywell Delta style controls with new open protocol LON or BACnet controllers.
3. The existing pneumatic valve and control damper actuators shall remain and be controlled through the new open protocol control system.
4. All points shall be available for integration to the NiagaraAX framework.
5. All unused pneumatic control devices shall be removed.
6. Add / upgrade system monitoring points as necessary to meet retro / continuous commissioning plan requirements.
7. Integrate and commission energy sub-metering to the Vykron Energy Suite.

MDOT Photo Lab

Year Constructed: 1976
Gross Area: 27,500 sq. ft. (interior)
No. of Floors: 2

The MDOT Photo Lab was recently upgraded to a modern Trane BAS which is NiagaraAX framework integration ready.

Possible BAS Integration path and additional requirements:

1. Add / upgrade system monitoring points as necessary to meet retro / continuous commissioning plan requirements.
2. Integrate and commission energy sub-metering to the Vykron Energy Suite.

MDOT Construction and Technology Building

Year Constructed: 1977
Gross Area: 104,700 sq. ft. (interior)
No. of Floors: 3

A Legacy Andover Controls automation system is still in place and in service in portion of the MDOT Construction and Technology Building. There is no current staff capability to see or service this system. The Legacy Andover system does not include an Operator Work Station or portable interface for viewing points and status. Remaining portions of the MDOT Construction and Technology Building include a Honeywell Delta style system. It will be part of the Professional Services Contractor's scope of work to complete building inspections and a review of available documents to determine how these two systems serve the building and how they may be upgraded to integrate to the NiagaraAX framework.

Andover Controls Existing Equipment Summary:

1. Needs analysis and recommendation for upgrade and integration.

Honeywell Existing Equipment Summary:

1. Air Handling AC Units (4)
2. Air Handling HV Units (2)
3. Heat Recovery Unit (1)
4. Chilled Water Secondary Pumping System (1)
5. Steam to Hot Water HX System (1)
6. Condensate Pumps (2)
7. Exhaust Fans (55)
8. Misc. Status Monitors (30)
9. Space Temperature Monitors (12)
10. Lighting Control Zones (4)
11. Power Monitors (7)

Possible BAS Integration path and additional requirements:

1. Replace the existing Andover controls with new open protocol LON or BACnet controllers.

2. The existing Andover control valves and damper actuators shall remain and be controlled through the new open protocol control system.
3. Replace the existing Honeywell Delta style controls with new open protocol LON or BACnet controllers.
4. The existing Honeywell pneumatic valve and control damper actuators shall remain and be controlled through the new open protocol control system.
5. All points shall be available for integration to the NiagaraAX framework.
6. All unused pneumatic control devices shall be removed.
7. Add / upgrade system monitoring points as necessary to meet retro / continuous commissioning plan requirements.
8. Integrate and commission energy sub-metering to the Vykon Energy Suite.

Vehicle and Transportation Services Building

Year Constructed: 1988
Gross Area: 81,700 sq. ft. (interior)
No. of Floors: 2

The building control system is aged Honeywell digital and pneumatic controls with no local Operator Work Station or head end capability and with this system only viewable by way of the Central Energy Center XBS station.

Honeywell Existing Equipment Summary:

1. Air Handling AC Units (3)
2. Air Handling HV Units (20)
3. Make-Up Air Units (2)
4. Chilled Water Secondary Pumping System (1)
5. Steam to Hot Water HX System (1)
6. Exhaust Fans (24)
7. Domestic Hot Water System (1)
8. Misc. Monitoring Points (3)
9. Lighting Control Zones (20)
10. Car Wash Point Monitors (4)
11. Space Temperature Monitors (16)
12. Load Shed Points (13)

Possible BAS Integration path and additional requirements:

1. Replace the existing Honeywell Delta style controls with new open protocol LON or BACnet controllers.
2. The existing Honeywell pneumatic valve and control damper actuators shall remain and be controlled through the new open protocol control system.
3. All points shall be available for integration to the NiagaraAX framework.
4. All unused pneumatic control devices shall be removed.
5. Add / upgrade system monitoring points as necessary to meet retro / continuous commissioning plan requirements.
6. Integrate and commission energy sub-metering to the Vykon Energy Suite.

Michigan State Police Hazardous Materials Training Center

Year Constructed: 1991
Gross Area: 4,360 sq. ft. (interior)
No. of Floors: 1

The HAZMAT Training Center is a locally controlled building with propane fuel and electric DX air conditioning. There is no central utility providing either steam or chilled water.

Work will include no BAS integration, but will include commissioning and energy sub-metering integration to the Vykon Energy Suite and commissioning.

Michigan State Police Forensics Laboratory

Year Constructed: 2001
Gross Area: 81,400 sq. ft. (interior)
No. of Floors: 2

The Building Automation System is essentially the same Honeywell XL5000 with C-bus as the Operations Center with the same level of modern controls and integration requirements.

Honeywell Existing Equipment Summary:

1. Air Handling Units (2)
2. Exhaust Fans Pairs (5)
3. Chilled Water Secondary Pumping System (1)
4. Redundant Chillers (2)
5. Steam to Hot Water HX System (1)
6. VAV Boxes (240)
7. Unit Heaters (10)
8. Cabinet Unit Heaters (5)
9. Convector (10)
10. Phoenix Lab Controls 2/BACnet Integration (1)

Possible BAS Integration path and additional requirements:

1. Replace the zone managers with JACEs and connect to the existing E-bus. The existing XL 10 E-bus controllers need to be smart II controllers to be compatible with standard LON protocol.
2. Integrate with the existing C-bus controllers with a Neopsis gateway. As of the fall of 2009, the functionality of the Neopsis gateway had not been tested nor had product pricing been established.
3. Add / upgrade system monitoring points as necessary to meet retro / continuous commissioning plan requirements.
4. Integrate and commission energy sub-metering to the Vykon Energy Suite.

Attached to this Request for Proposal are .pdf floor plans for the buildings included within this project. These floor plans will also be available in autocad format to the Professional awarded this proposed study, design and construction administration contract.

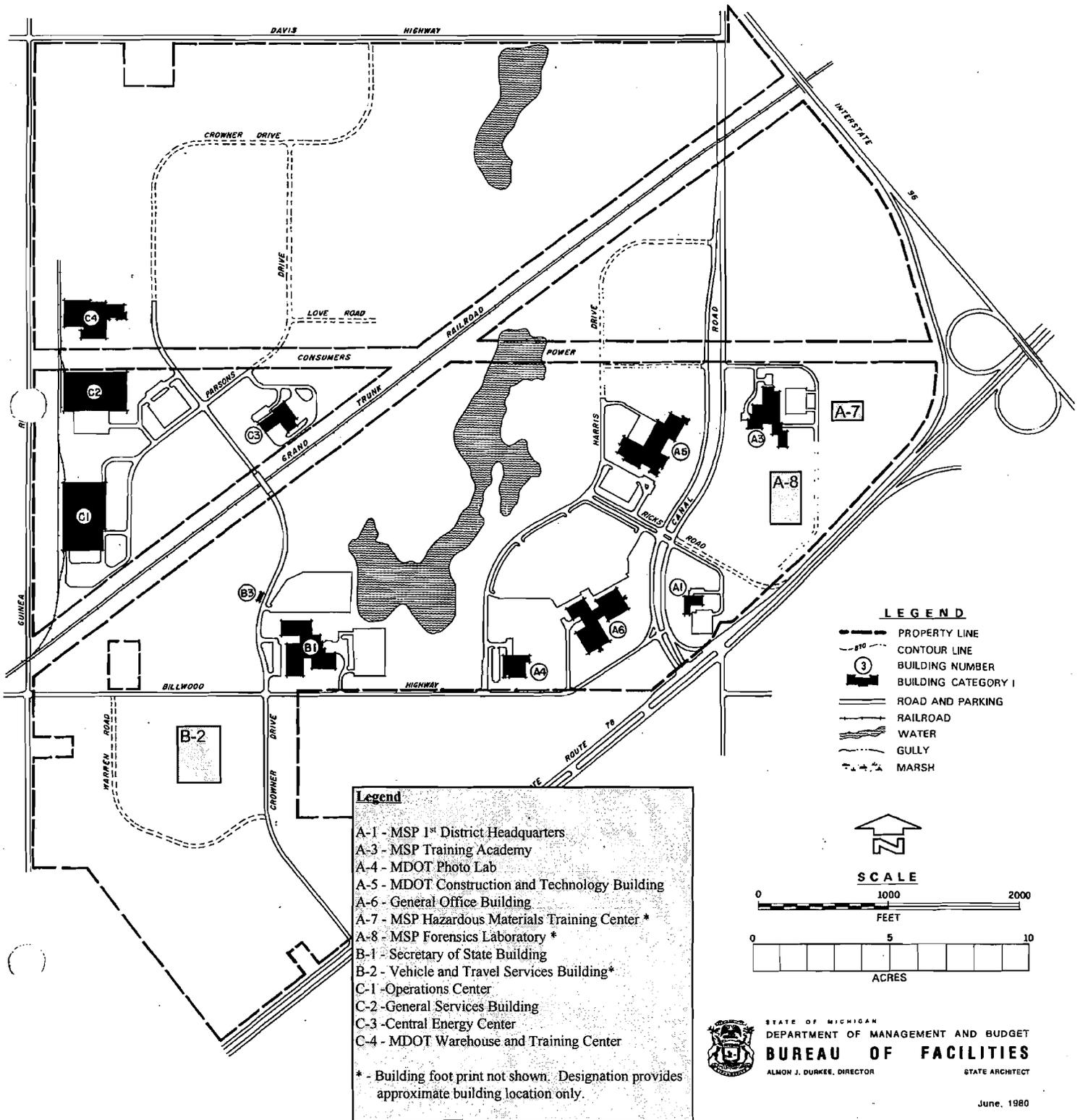
The State of Michigan, Department of Technology, Management and Budget is compiling a listing of documentation that will be available for this project including mechanical record drawings,

Operations and Maintenance Manuals, and Building Automation System Points Lists. A detailed listing of this documentation will be made available by future Addendum to this Request for Proposal.

SECONDARY GOVERNMENTAL COMPLEX

LANSING, MICHIGAN

ESTABLISHED 1966 — ACT 310



ATTACHMENT C

Addendum to Attachment A – General Provisions

SOLICITATION & AWARD TERMS FOR GRANT AGREEMENTS THAT INCLUDE FUNDS UNDER THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009, PUBLIC LAW 111-5

Grant Agreements must require recipients and sub-recipients to:

1. Maintain current registrations in the Central Contractor Registration (CCR) database.
<http://www.ccr.gov/>
2. Report quarterly on project activity status in addition to any reporting requirements that currently apply to recipients of federal funds
3. Follow Buy American guidelines (Sec. 1605 of ARRA Act and Sec. 5.020 of this document)
4. Implement wage rate requirements (Sec. 1606 of ARRA Act and Sec. 5.030 of this document)
5. Ensure proper accounting and reporting of Recovery Act expenditures in Single Audits.

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Terms and Conditions for American Recovery and Reinvestment (ARRA) of 2009 Funded Grants

5.000 Sub-Recipients Requirements

Grantee shall include these terms, including this requirement, in any of its subcontracts or subgrants in connection with projects funded in whole or in part with funds available under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5.

5.010 Reporting & Registration Requirements (Section 1512)

Division A, Title XV, Section 1512 of the ARRA outlines reporting requirements. Not later than ten calendar days after the end of each calendar quarter, the State must submit a report that, at a minimum, contains the information specified in Section 1512 of the ARRA. It is imperative all grants involving the use of ARRA funds include requirements that the Grantee supply the State with the necessary information to provide these reports (see RFP Section 1.042 Reports) in a timely manner. More detail will follow regarding the timing and submission of reports.

The Grantee's failure to provide complete, accurate, and timely reports shall constitute an "Event of Default". Upon the occurrence of an Event of Default, the state department or agency may terminate this grant upon 30 days prior written notice if the default remains uncured within five calendar days following the last day of the calendar quarter, in addition to any other remedy available to the state department or agency in law or equity.

5.020 Buy American Requirement (Section 1605)

5.022 REQUIRED Use of American Iron, Steel, and Other Manufactured Goods

(a) Definitions. As used in this Section 5.020 —

"Designated Country" means Aruba, Australia, Austria, Belgium, Bulgaria, Chile, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and United Kingdom.

"Designated country iron, steel, and/or manufactured goods" mean iron, steel and/or a manufactured good that:

- (1) Is wholly the growth, product or manufacture of a Designated Country; or
- (2) In the case of a manufactured good that consists in whole or in part of materials from another country, has been substantially transformed in a Designated Country into a new and different manufactured good distinct from the materials from which it was transformed.

"Domestic iron, steel and/or manufactured good" is iron, steel and/or a manufactured good that:

- (1) Is wholly the growth, product or manufacture of the United States; or
- (2) In the case of a manufactured good that consists in whole or in part of materials from another country, has been substantially transformed in the United States into a new and different manufactured good distinct from the materials from which it was transformed. There is no requirement with regard to the origin of components or subcomponents in manufactured goods or products, as long as the manufacture of goods occurs in the United States.

"Federal Agency" means the department or agency of the federal government that awarded funds to the State of Michigan from the ARRA that finance the project described in this RFP.

"Foreign iron, steel and/or manufactured good" means iron, steel and/or manufactured good that is not domestic or Designated country iron, steel and/or manufactured goods.

"Manufactured good" means a good brought to the construction site for incorporation into the building or work that has been--

- (1) Processed into a specific form and shape; or

(2) Combined with other raw material to create a material that has different properties than the properties of the individual raw materials.

"Public building" and "public work" means a public building of, and a public work of, a governmental entity (the United States; the District of Columbia; commonwealths, territories, and minor outlying islands of the United States; State and local governments; and multi-State, regional, or interstate entities which have governmental functions). These buildings and works may include, without limitation, bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, pumping stations, heavy generators, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals, and the construction, alteration, maintenance, or repair of such buildings and works.

"Steel" means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements.

(b) *Domestic preference.*

(1) This term and condition implements:

(i) Section 1605(a) of Division A, Title XVI of the ARRA by requiring that all iron, steel, and manufactured goods used in the public building or public work are produced in the United States; and

(ii) Section 1605(d) of Division A, Title XVI of the ARRA, which requires the application of the Buy American requirement in a manner consistent with U.S. obligations under international agreements. The restrictions of Section 1605 of the ARRA do not apply to Designated country iron, steel, and/or manufactured goods procured for projects with an estimated value of \$7,433,000 or more.

(2) The Grantee shall use only domestic or Designated country iron, steel and/or manufactured goods in performing work funded in whole or in part with funds available under the ARRA, except as provided in subparagraphs (3) and (4) of this paragraph (b).

(3) The requirement in paragraph (2) of this Section 5.022(b) does not apply to the material listed by the Federal Agency as follows: none

(4) The Federal Agency may add other iron, steel, and/or manufactured goods to the list in paragraph (b) (3) of this Section if the Federal government determines that—

(i) The cost of the domestic iron, steel, and/or manufactured goods would be unreasonable. The cost of domestic iron, steel, or manufactured goods used in the project is unreasonable when the cumulative cost of such material will increase the cost of the overall project by more than 25 percent;

(ii) The iron, steel, and/or manufactured good is not produced, or manufactured in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(iii) The application of section 1605 of the ARRA would be inconsistent with the public interest.

(c) *Request for determination of inapplicability of Section 1605 of the ARRA.*

(1)(i) Any Bidder's request to use foreign iron, steel, and/or manufactured goods in accordance with paragraph (b) (4) of this Section shall include adequate information for Federal Agency evaluation of the request, including—

(A) A description of the foreign and domestic iron, steel, and/or manufactured goods;

(B) Unit of measure;

(C) Quantity;

(D) Cost;

(E) Time of delivery or availability;

(F) Location of the project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign iron, steel, and/or manufactured goods cited in accordance with paragraph (b)(3) of this term and condition.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed cost comparison table in the format in paragraph (d) of this Section.

(iii) The cost of iron, steel, and/or manufactured goods material shall include all delivery costs to the construction site and any applicable duty.

(iv) Any Grantee's request for a determination submitted after ARRA funds have been obligated for a project for construction, alteration, maintenance, or repair shall explain why the Grantee could not reasonably foresee the need for such determination and could not have requested the determination before the funds were obligated. If the Grantee does not submit a satisfactory explanation, the Federal

Agency need not make a determination.

(2) If the Federal Agency determines after funds have been obligated for a project for construction, alteration, maintenance, or repair that an exception to section 1605 of the ARRA applies, the State will amend the grant to allow use of the foreign iron, steel, and/or relevant manufactured goods. When the basis for the exception is nonavailability or public interest, the amended grant shall reflect adjustment of the grant amount, redistribution of budgeted funds, and/or other actions taken to cover costs associated with acquiring or using the foreign iron, steel, and/or relevant manufactured goods. When the basis for the exception is the unreasonable cost of the domestic iron, steel, or manufactured goods, the State shall adjust the award amount or redistribute budgeted funds by at least the differential established in 2 CFR 176.110(a).

(3) Unless the Federal Agency determines that an exception to section 1605 of the ARRA applies, use of foreign iron, steel, and/or manufactured goods is noncompliant with section 1605 of the American Recovery and Reinvestment Act.

(d) **Data.** To permit evaluation of requests under subparagraph (b)(4) of this Section based on unreasonable cost, the Bidder shall include the following information and any applicable supporting data based on the survey of suppliers:

| FOREIGN AND DOMESTIC ITEMS COST COMPARISON | | | | |
|--|-----------------|----------|-----------------|--|
| Description | Unit of Measure | Quantity | Cost (Dollars)* | |
| Item 1: | | | | |
| Foreign steel, iron, or manufactured good | _____ | _____ | _____ | |
| Domestic steel, iron, or manufactured good | _____ | _____ | _____ | |
| Item 2: | | | | |
| Foreign steel, iron, or manufactured good | _____ | _____ | _____ | |
| Domestic steel, iron, or manufactured good | _____ | _____ | _____ | |
| [List name, address, telephone number, email address, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.] [Include other applicable supporting information.] [* Include all delivery costs to the construction site.] | | | | |

5.024 Notice of Required Use of American Iron, Steel, and Other Manufactured Goods

REQUIRED USE OF AMERICAN IRON, STEEL, AND MANUFACTURED GOODS—SECTION 1605 OF THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

(a) **Definitions.** "Designated country iron, steel and/or manufactured goods," "domestic iron, steel and/or manufactured goods", "Federal Agency", "Foreign iron, steel and/or manufactured good", "Manufactured good," "public building and public work," and "steel," as used in this Section, are defined in Section 5.022(a).

(b) **Requests for determinations of inapplicability.** A prospective Bidder requesting a determination regarding the inapplicability of section 1605 of the ARRA should submit the request to the Federal Agency in time to allow a determination before submission of applications or proposals. Bidders should provide a copy of this request to DELEG. The prospective applicant shall include the information and applicable supporting data required by paragraphs (c) and (d) of Section 5.022 of this RFP in the request. If Bidder has not requested a determination regarding the inapplicability of Section 1605 of the ARRA

before submitting its application or proposal, or has not received a response to a previous request, the applicant shall include the information and supporting data in the application or proposal. The Federal Agency is sole entity authorized to make determinations regarding the inapplicability of Section 1605 of the ARRA.

(c) Evaluation of project proposals.

If the Federal Agency determines that an exception based on unreasonable cost of domestic iron, steel, and/or manufactured goods applies, the State will evaluate a project requesting an exception to the requirements of section 1605 of the ARRA by adding to the estimated total cost of the project 25 percent of the project cost, if foreign iron, steel, or manufactured goods are used in the project based on unreasonable cost of comparable manufactured domestic iron, steel, and/or manufactured goods.

(d) Alternate project proposals.

(1) When a project proposal includes foreign iron, steel, and/or manufactured goods, other than Designated country iron, steel and/or manufactured goods, not listed in paragraph (b)(3) of the Section 6.022, the Bidder also may submit an alternate proposal based on use of equivalent domestic iron, steel, and/or manufactured goods.

(2) If an alternate proposal is submitted, the Bidder shall submit a separate cost comparison table prepared in accordance with paragraphs (c) and (d) of Section 5.022 of this RFP for the proposal that is based on the use of any foreign iron, steel, and/or manufactured goods for which the Federal Agency has not yet determined an exception applies.

(3) If the Federal Agency determines that a particular exception requested in accordance with paragraph (b) of Section 5.022 of this RFP does not apply, the State will evaluate only those proposals based on use of the equivalent domestic or designated country iron, steel, and/or manufactured goods, and the Grantee shall be required to furnish such domestic or designated country items.

5.030 Wage Rate Requirements (Section 1606)

All laborers and mechanics employed by grantees, subgrantees, contractors and subcontractors on projects funded in whole or in part with funds available under the ARRA shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality, as determined by the United States Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40 of the United States Code. (See ARRA Sec. 1606 & RFP Section 2.204 Prevailing Wage). The Secretary of Labor's determination regarding the prevailing wages applicable in Michigan is available at <http://www.gpo.gov/davisbacon/mi.html>.

5.040 Inspection & Audit of Records

The Grantee shall permit the United States Comptroller General or his representative or the appropriate inspector general appointed under section 3 or 8G of the Inspector General Act of 1998 or his representative (1) to examine any records that directly pertain to, and involve transactions relating to, this grant; and (2) to interview any officer or employee of the Grantee or any of its subcontractors/subgrantees regarding the activities funded with funds appropriated or otherwise made available by the ARRA.

5.050 Whistle Blower Protection for Recipients of Funds

Grantee shall not discharge, demote or otherwise discriminate against an employee for disclosures by the employee that the employee reasonably believes are evidence of: (1) gross mismanagement of a contract or grant relating to Covered Funds; (2) a gross waste of Covered Funds; (3) a substantial and specific danger to public health or safety related to the implementation or use of Covered Funds; an abuse of authority related to implementation or use of Covered Funds; or (5) a violation of law, rule, or regulation related to an agency grant (including the competition for or negotiation of a grant) or grant, awarded or issued relating to Covered Funds. In this Subsection, "Covered Funds" shall have the same meaning as set forth in Section 1553(g)(2) of Division A, Title XV of the ARRA.

(a) Recipient must post notice of the rights and remedies available to employees under Section 1553 of Division A, Title XV of the ARRA. (For the Michigan Civil Service Whistle Blowers Rule 2-10 link to: http://www.michigan.gov/mdcs/0,1607,7-147-6877_8155-72500--,00.html)

(b) The Grantee shall include the substance of this clause including this paragraph (b) in all subcontracts and subgrants.

5.060 Funding of Programs

The Grantee acknowledges that the programs supported with temporary federal funds made available by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, will not be continued with state financed appropriations once the temporary federal funds are expended.

5.070 Fixed Price- Competitively Bid

Grantee, to the maximum extent possible, shall award any subgrants or subcontracts funded, in whole or in part, with ARRA funds as fixed-price contracts through the use of competitive procedures.

5.080 Segregation of Costs

Grantee shall segregate obligations and expenditures of ARRA funds from other funding. No part of funds made available under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, may be commingled with any other funds or used for a purpose other than that of making payments for costs allowable under the ARRA.

5.090 Publication

All grant solicitations funded in whole or in part with ARRA funds will be posted on the respective DELEG bureau website. All grants resulting from the ARRA will be published on the State of Michigan's Recovery Web site, www.michigan.gov/recovery.

Grantee shall include the Michigan Recovery logo on all signage or other publications in connection with the activities funded by the State of Michigan through funds made available by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5.

5.100 Buy Michigan Preference

A preference is given to products manufactured or services offered by Michigan-based firms if all other things are equal and if not inconsistent with federal statute (see MCL 18.1261).

5.110 Non-Discrimination

The Grantee shall comply with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, and other civil rights laws applicable to recipients of Federal financial assistance (see RFP Section 2.201 Non-Discrimination).

5.120 Prohibition on Use of Funds

None of the funds made available under this grant may be used for any casino or other gambling establishment, aquarium, zoo, golf course, swimming pools, or similar projects.

5.130 False Claims Act

The Grantee shall promptly refer to an appropriate federal inspector general any credible evidence that a principal, employee, agent, contractor, sub-grantee, subcontractor or other person has committed a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving those funds.

5.140 Conflicting Requirements

Where ARRA requirements conflict with existing state requirements, ARRA requirements control.

5.150 Job Opportunity Posting Requirements

Grantee shall post notice of job opportunities created in connection with activities funded in whole or in part with ARRA funds in the Michigan Talent Bank, www.michworks.org/mtb.

ATTACHMENT D

ADDENDUM TO ATTACHMENT A GENERAL PROVISIONS
AMERICAN RECOVERY AND REINVESTMENT ACT TERMS AND CONDITIONS

5.020.1 Buy American Requirement (Section 1605)

-Designated country means:

- (1) A World Trade Organization Government Procurement Agreement country,
- (2) A Free Trade Agreement (FTA) country, or
- (3) A United States-European Communities Exchange of Letters country

Countries not in the Addendum to Part II include Bahrain, Canada, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Morocco, Nicaragua, Oman and Peru.

5.090.1 Publication

- a. You are encouraged to publish or otherwise make publicly available the results of the work conducted under the award.
- b. An acknowledgement of Federal support and a disclaimer must appear in the publication of any material, whether copyrighted or not, based on or developed under this project as follows:

Acknowledgement: "This material is based upon work supported by the Department of Energy under Award Number(s) DE-EE0000166."

Disclaimer: "This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, make any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."