CS-214
REV 8/2007

1. Position Code

State of Michigan
Civil Service Commission
Capitol Commons Center, P.O. Box 30002
Lansing, MI 48909

Federal privacy laws and/or state confidentiality requirements protect a portion of this information.

POSITION DESCRIPTION

This form is to be completed by the person that occupies the position being described and reviewed by the supervisor and appointing authority to ensure its accuracy. It is important that each of the parties sign and date the form. If the position is vacant, the supervisor and appointing authority should complete the form.

This form will serve as the official classification document of record for this position. Please take the time to complete this form as accurately as you can since the information in this form is used to determine the proper classification of the position. **THE SUPERVISOR AND/OR APPOINTING AUTHORITY SHOULD COMPLETE THIS PAGE.**

2. Employee's Name (Last, First, M.I.)	**8. Department/Agency** Technology, Management & Budget
3. Employee Identification Number	**9. Bureau (Institution, Board, or Commission)** State Facilities Administration
4. Civil Service Classification of Position Equipment Technician 12	**10. Division** Building Operations
5. Working Title of Position (What the agency titles the position) Building Automation Systems Specialist	**11. Section** Building Automation and Safety Services (BASS)
6. Name and Classification of Direct Supervisor Larry Kusnier, Elect. Technical Supervisor-13	**12. Unit** Building Intelligence Systems
7. Name and Classification of Next Level Supervisor Robert Weller, Departmental Manager 14	**13. Work Location (City and Address)/Hours of Work** Stevens T. Mason Building 925 W Ottawa St, Lansing, M Lansing MI 8:00 – 5:00 or some variation

14. General Summary of Function/Purpose of Position

Employees in this position must have a high level of expertise to perform entire building automation system analysis, programming, commissioning, and modification to ensure tenant comfort and energy efficiency in all facilities managed by the Department of Technology, Management & Budget. Serves as the lead on commissioning projects and mentors other staff. Creates and maintains partnerships with Facilities Supervisors and labor/trades staff for optimal customer service and efficiency while performing the above-mentioned duties in Zones 1 and 2 encompassing over 1,691,575 square feet of space and over 4,277 building tenants.

For Civil Service Use Only

15. Please describe your <u>assigned</u> duties, percent of time spent performing each duty, and explain what is done to complete each duty.

<u>Duty 1</u>

General Summary of Duty 1 **% of Time** **25**

Building Automation Systems (BAS) Analysis

Individual tasks related to the duty.

- Identify, establish, and collect relevant historical trend information from installed BAS devices
- Analyze system performance to diagnose operational deficiencies
- Solicit occupant input related to system performance and comfort levels
- Review energy consumption information and trends
- Compile and analyze findings to determine necessary corrective programming, commissioning, and modification measures
- Develop, compile, maintain and document configurations and diagrams of the following: databases, servers, computers, security, hardware devices, network systems, programs, utilities, and communication systems

<u>Duty 2</u>

General Summary of Duty 2 **% of Time** **25**

BAS Programming

Individual tasks related to the duty.

- Design, implement and modify BAS programs using software engineering tools
- Implement control strategies in numerous vendor-specific programming languages, utilizing graphical objects and line code
- Upgrade and maintain current firmware revisions in existing building automation system controllers
- Develop and execute tests to validate accuracy of program logic
- Debug and revise programs based on test results
- Install, test and prove applications in production environment
- Establish communication within the internal network, between devices and server in preparation for integration
- Eliminate conflicts between building level and network level functionality
- Sustain systematic version control of software and data backup at all times
- Cultivate library of custom programming files

<u>Duty 3</u>

General Summary of Duty 3 **% of Time** **20**

BAS Commissioning

Individual tasks related to the duty.

- Develop and execute commissioning plans in assigned area to ensure optimal HVAC system operation
- Review current design documentation
- Perform on-site, real-time system performance evaluations
- Validate proper systems operation using testing, calibrating and balancing equipment
- Provide direction to staff performing device-level testing and validation
- Identify components to be installed or replaced
- Accurately document commissioning activities
- Compile written reports communicating recommendations for system improvements
- Enter accurate data into the Maximo computerized maintenance management system

Duty 4

General Summary of Duty 4 **% of Time** **15**

BAS Modifications

Individual tasks related to the duty.

- Design specifications that meet performance objectives and system requirements
- Develop operational and installation procedures for communication systems, hardware, network, security, storage, and software
- Identify and quantify materials needed to execute system improvements
- Prepare installation plans and diagrams
- Develop cost estimates for systems development and upgrades
- Develop implementation processes in coordination with Telecom, Purchasing, building trades, IT, etc.
- Perform system upgrades and improvements
- Ensure engineering submittals and control system shop drawings comply with industry standards and best practices
- Coordinate field personnel in the networking and commissioning of building controls and intelligent metering devices
- Conduct periodic inspections of work in progress
- Advise construction project managers and contractors on interpretation of plans and specifications

Duty 5

General Summary of Duty 5 **% of Time** **10**

Service Response

Individual tasks related to the duty.

- Resolve complex tenant issues related to automated building control systems
- Provide technical support to staff
- Develop and implement effective alarm management strategies
- Follow up with tenants and other stakeholders on resolution of problems
- Maintain multiple HVAC vendor-specific workstation software applications
- Enter accurate data into the Maximo computerized maintenance management system

16. Describe the types of decisions you make independently in your position and tell who and/or what is affected by those decisions. Use additional sheets, if necessary.

- Organization of tasks to satisfactorily deliver required results and meet schedule.
- Decide when and how to verify accuracy of work and automated results.
- If and when equipment can be shut down and the consequences of such action.
- Building or space occupant comfort as affected by maintenance activity.
- Communicating changes to other trades, including supervisors, and building managers.
- Multiple energy source lockout and communication.

17. Describe the types of decisions that require your supervisor's review.

- Changes in process or procedure.
- Decisions having significant or widespread effects on others.
- The organization and content of the master plans.
- Leaving equipment offline.
- Significant program or software changes.
- Decisions requiring the use of un-allocated time or resources.
- Changes in policy or procedure.

18. What kind of physical effort do you use in your position? What environmental conditions are you physically exposed to in your position? Indicate the amount of time and intensity of each activity and condition.

High percentage of time spent working with computer equipment in typical office environment. There are times when the work is in the field, mechanical spaces, rooftops, basements, penthouses, in and/or near operating rotating machinery and other automatic equipment. May need to stand, climb, stoop, kneel, crawl, lift and bend. May need to operate hand and power tools. May occasionally be exposed to cold, wet, windy, and dark conditions. Penthouses, tunnels, scaffolding and ladders, power hoists, noise, dust, and smoke could be frequent work areas or conditions depending on the project.

19. List the names and classification titles of classified employees whom you immediately supervise or oversee on a full-time, on-going basis.

NAME	CLASS TITLE	NAME	CLASS TITLE

20. My responsibility for the above-listed employees includes the following (check as many as apply):

___Complete and sign service ratings. **___Assign work.**

___Provide formal written counseling. **___Approve work.**

___Approve leave requests. **___Review work.**

___Approve time and attendance. **___Provide guidance on work methods.**

___Orally reprimand. **___Train employees in the work.**

21. *I certify that the above answers are my own and are accurate and complete*.

_____ _____

Signature **Date**

NOTE: Make a copy of this form for your records.

TO BE COMPLETED BY DIRECT SUPERVISOR

22. Do you agree with the responses from the employee for Items 1 through 20? If not, which items do you disagree with and why?

Yes

23. What are the essential duties of this position?

- To ensure all building automation systems are serviced and maintained in optimal operating condition for all facilities managed by the DTMB.
- Work with other divisions, agencies and/or contractors to deliver and enhance system functionality.
- Maintain energy metering and monitoring capabilities.

24. Indicate specifically how the position's duties and responsibilities have changed since the position was last reviewed.

N/A

25. What is the function of the work area and how does this position fit into that function?

The function of the work unit is to provide safe, comfortable, and cost-effective facilities that allow our customers to provide their designated services to the people of the State of Michigan, and to provide maintenance and construction services on buildings to preserve the investment of the State of Michigan, DTMB. This position maintains energy metering and building automation controls for all facilities managed by the DTMB. This position is responsible for such things as data communications, system functionality, efficient operation, and data integrity of the Michigan Building Intelligence System (MI-BIS). This individual will also have full access to energy consumption information, trends and efficiencies, and critical system servers.

26. In your opinion, what are the minimum education and experience qualifications needed to perform the essential functions of this position.

EDUCATION:

Possession of an associate degree in electrical, electromechanical, or electronics engineering, computer science, engineering, or electronics technology.

EXPERIENCE:

Equipment Technician 12

Four years of experience in the installation, maintenance, troubleshooting, and repair of electrical and electronic equipment equivalent to an Equipment Technician, including two years equivalent to an Equipment Technician E10 or one year equivalent to an Equipment Technician 11.

Alternate Education and Experience

Equipment Technician 8 - 12

Four years of experience in the installation, maintenance, troubleshooting, and repair of electrical and electronic equipment may be substituted for the education requirement. This is in addition to the experience requirements for the specific levels.

A certificate from a two year, post-secondary, technical program in electrical, electromechanical, or electronics technology may be substituted for the education requirement.

KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- electrical and electro-mechanical principles
- analog and digital electronics
- electrical wiring.
- electrical control and relay systems.
- theory and characteristics of solid state devices.
- current developments in electronic equipment.
- fire alarm systems.
- basic mathematics.
- occupational hazards and safety precautions applicable to the work.

Skill in:

- using electrical and electronic testing equipment such as volt-ohmmeter, oscilloscope, integrated circuit tester, signal tracing equipment, logic probe, and soldering equipment.
- electronic and electro-mechanical equipment repair and maintenance.

Ability to:

- inspect and evaluate electrical and electronic equipment for proper operation and perform routine maintenance, cleaning, and adjustment.
- conduct electronic tests on equipment and to analyze and troubleshoot problems in equipment operation.
- disassemble and repair electrical and electronic equipment.
- calibrate electronic measuring instruments.
- interpret and follow plans, specifications, and instructions.
- prepare and maintain records related to the work.
- install and modify equipment.
- construct equipment designed by engineers.
- assist engineers in designing equipment.
- prepare specifications for equipment.
- communicate effectively.

Network communication, computerized controls, computer software systems, application programming, building mechanical systems, electrical, electronic, HVAC and pneumatics.

Knowledge and experience with the application and use of a CMMS system.

CERTIFICATES, LICENSES, REGISTRATIONS:

This position requires technical certification from any of the five following companies: Honeywell, Johnson Controls, Siemens, Trane and Tridium.

NOTE: ***Civil Service approval of this position does not constitute agreement with or acceptance of the desirable qualifications for this position.***

27. *I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.*

Supervisor's Signature **Date**

TO BE FILLED OUT BY APPOINTING AUTHORITY

28. Indicate any exceptions or additions to the statements of the employee(s) or supervisor.

N/A

29. *I certify that the entries on these pages are accurate and complete.*

Appointing Authority's Signature **Date**