Addendum 02

DOCUMENT 00 91 00

DATE: January 16, 2026

PROJECT: Allen Count Board of Developmental Disabilities – Miscellaneous Projects
2500 Ada Road
Lima, OH 45801

PROJECT #: 25092.00

OWNER: Board of Allen County Commissioners
204 N. Main Street, Suite 301
Lima, Ohio 45801

ARCHITECT: Garmann Miller
38 South Lincoln Drive
P.O. Box 71
Minster, Ohio 45865

TO: Prospective Bidders

This addendum form is a part of the Contract Documents and modifies the Bidding Documents dated January 8, 2026 with amendments and additions noted below.

Acknowledge receipt of this Addendum on the Bid Form. Failure to do so may disqualify the Bidder.

This addendum consists of 2 pages, 1 specification sections, 0 re-issued drawing sheets, 0 exhibits, prevailing wage packet, pre-bid meeting minutes and pre-bid sign-in sheet.

FOR INFORMATION ONLY

1. Pre-bid meeting minutes and the pre-bid meeting sign-in sheet are attached.

CHANGES TO THE PROJECT MANUAL

1. Section 23 0913 Instruments and Control Elements, Article 1.05 Summary, Paragraph B; Delete paragraph B and sub paragraphs 1 and 2 in their entirety.
2. Section 23 0913 Instruments and Control Elements, Article 1.05 Summary, Paragraph D; Delete paragraph D in its entirety.

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3. Section 23 0913 Instruments and Control Elements, Article 2.01 MANUFACTURERS, Paragraph B; Delete paragraph B in its entirety.

CHANGES TO THE DRAWINGS

1. N/A

ATTACHMENTS

The following attachments are included and are part of this addendum:

Pre-bid meeting minutes, pre-bid meeting sign-in sheet and prevailing wage package.

Specification Sections 23 0913.

END OF ADDENDUM

Pre-Bid meeting

Project name	Allen County Board of Developmental Disabilities – Miscellaneous Projects	GM project no.	25092.00
Meeting date	January 14, 2026	Meeting location	Conference Room

Items in **RED** denote additional items discussed/noted at the pre-bid meeting.

Outline

1. Attendees: Sign in sheet

2. Introductions

3. Project overview

General Construction:

School Building: Remove ceilings and reinstall for HVAC replacement work. Replace roof in areas shown on drawings.
Admin Building: N/A
Marimor Industries: Replace roof in areas shown on drawings.
Bus Barn: Replace all caulking/sealant on existing roof, trim, facia and other areas to seal exterior envelope.

Site Work:

School Building: N/A
Admin Building: Mill and Fill Asphalt
Marimor Industries: None
Bus Barn: Under alternate: Mill and Fill Asphalt

Plumbing Work:

School Building: Replace cast iron sanitary exposed within the crawl space and plumbing chase. Existing sanitary under slab shall be jetted and camera with video given to the owner.

HVAC Work:

School Building: Replace internal AHU's and Split Dx systems and piping. Replace roof top unit. Replace boilers and boiler controls. Tie AHU's, RTU and Boiler system into the existing control system.
Admin Building: N/A
Marimor Industries: Replace RTU and tie in the existing control as shown on the drawings. Replace small split systems as shown on the drawings.
Bus Barn: Replace PTAC unit within office space.

Electrical Work:

School Building: Provide electrical disconnection/reconnection for AHUs, CUs, RTU, and boiler system. Replace gymnasium lighting. Alternates for replacement of exterior building mounted lighting and pole lighting.
Admin Building: Alternates for replacement of exterior building mounted lighting and pole lighting.
Marimor Industries: Provide electrical disconnection/reconnection for RTU and split systems. Alternate for replacement of exterior building mounted lighting and pole lighting.
Bus Barn: Alternate for replacement of exterior building mounted lighting and pole lighting. Disconnect and reconnect of PTAC unit. Disconnect and reconnect of PTAC unit.

4. Bidding
   a. **Date: Thursday, February 5th, 2026**
   b. Bid Submission:
      i. Online Or Sealed Proposal are available.
         1. Electronic Bid Submission: QuestCDN (www.questCDN.com) – Reference QuestCDN Project number: 10010841
            a. Contractors using the Online Proposal option are required to be registered through Quest CDN in order to submit a bid and drawings can be downloaded at Quest CDN once registered
      ii. Also Sealed proposals will be received by the Board of Allen County Commissioners / Allen County Board of Developmental Disabilities, Attention Clerk of Commissioner's Board – Brittany Woods, 204 N. Main Street, Suite 301 Lima, Ohio 45801 until 1:00:00 PM on Thursday, February 5th, 2026.
   c. **Online Bids and Sealed Bids will be viewed at 1:00:00 PM on Thursday, February 5th, 2026. Bids will be opened publicly and read aloud by Architect and Owner.**
      i. The bid opening will be conducted in person only located at 204 N. Main Street, Suite 301 Lima, Ohio 45801 and will not be available virtually.
   d. Bid results will be available at that time to all bidders at QuestCDN.com as well as our website at creategm.com/bidding/
   e. Plans have been submitted to Lima/Allen County Building Department for review and permits, costs to be paid by owner.
      i. Electrical, Plumbing, and Mechanical permits are separate permits with separate fees.
         1. The contractor completing those portions of the work will have to submit applications to obtain the permits and is responsible for paying the permit fees.

5. Bid Categories
   a. General Construction – Base Bid (Single-Prime Contract)
      i. General Contractor is responsible for securing necessary subcontractors.
      ii. Bidders shall conform to the Ohio "Schedule of Prevailing Wage."
         1. The current Ohio Prevailing Wage Rates may be accessed from the Ohio

Department of Commerce, Wage & Hour Bureau's website.

6. Alternates
   a. Alternate #01 - Replace School Building Pole Lights: Replace light fixtures as shown on the drawings and noted in the specifications.
   b. Alternate #02 - Replace School Exterior Building Lights: Replace light fixtures as shown on the drawings and noted in the specifications.
   c. Alternate #03: Replace Administration Building Pole Lights: Replace light fixtures as shown on the drawings and noted in the specifications.
   d. Alternate #04: Replace Administration Exterior Building Lights: Replace light fixtures as shown on the drawings and noted in the specifications.
   e. Alternate #05: Replace Marimor Industries Pole Lights: Replace light fixtures as shown on the drawings and noted in the specifications.
   f. Alternate #06: Replace Marimor Industries Exterior Building Lights: Replace light fixtures as shown on the drawings and noted in the specifications.
   g. Alternate #07: Replace Bus Barn Building Pole Lights: Replace light fixtures as shown on the drawings and noted in the specifications.
   h. Alternate #08: Replace Bus Barn Exterior Building Lights: Replace light fixtures as shown on the drawings and noted in the specifications.
   i. Alternate #09: Asphalt around Bus Barn: Mill and Fill as show on the drawings and specifications.

7. Contingency amounts to be included in bid:
   i. Contingency Allowance: General Contract; Include the stipulated sum/price of $48,000.00 for use upon Owner's instructions.
   ii. Contingency Allowance: Roof Insulation; Include the stipulated sum/price of $9,000.00 to be used to purchase for use upon Owner's instructions.

8. Contracts will be administered by Garmann Miller
   a. All questions and correspondence to go through Garmann Miller
   b. All RFIs to go through Garmann Miller
   c. Pay applications to go to Garmann Miller
   d. Garmann Miller will schedule a pre-construction meeting with the contractor after the notice of award.

9. Schedule
   a. Tentative award date: TBD - February 19, 2026
   b. Start of construction: June 1, 2026
   c. Completion date: August 25, 2026
   d. Liquidated Damages – See article 8 in the supplementary conditions. This is required for public bid projects.

10. General conditions
   a. Waste Removal: Contractor responsibility

b. Prime Contractor
   i. Responsible for construction schedule and general supervision
   ii. Submit preliminary schedule 10 days after notice to proceed.
   iii. Responsible for scheduling and administering job meetings; prepare agenda, responsible for meeting minutes and distributing copies.
c. Job superintendent on site available via cell phone
d. Responsible for sanitary facilities
e. Barriers – Provide appropriate barriers to protect existing materials, equipment, and occupied areas from potential damage.
f. Fencing - A designated area of the parking lot has been set aside for construction staging, as shown in the attachment to this agenda.

11. Temporary electricity
    a. Contractor may use existing facility electricity. If additional electric is needed, above what is available on site, it will be at the contractor's expense to provide.
    b. Cost of electricity: By Owner

12. Temporary heating:
    a. Before Building Enclosure: The building is not considered enclosed until the exterior shell is complete with all openings covered (permanent or temporary). Each contractor must provide and pay for any temporary heat needed for their own work during this phase.
    b. After Building Enclosure: Once the building is enclosed, the HVAC contractor is responsible for temporary heat using either:
       i. Method A – Permanent System: Can be used if approved and properly maintained. HVAC contractor must handle operation, maintenance, filter replacement, and provide temporary controls if needed.
       ii. Method B – Portable Units: HVAC contractor may use portable heaters or similar equipment with proper setup, venting, and safety controls.
           1. We don't anticipate much will be needed, but if it is, Method B would be the preferred approach.
    c. If additional heat is required beyond what's available on site, it will be the contractor's responsibility to provide it at their own expense
    d. Cost of heating: By Owner

13. Temporary water
    a. Contractor may use existing facility water supply. If additional water is needed, what is available on site, it will be at the contractor's expense to provide.
    b. Cost of water: By Owner

14. Substitution request to be submitted 10 days prior to bid.

15. Correspondence
    a. Correspondence to run through the Garmann Miller
       i. Project Manager – Lee Westgerdes – lwestgerdes@creategm.com

ii. Construction Administration – Jason Fleming – jfleming@creategm.com
iii. Site – Kellen Mescher - kmescher@creategm.com
iv. Architecture – John Rausch – jrausch@creategm.com
v. Plumbing/HVAC – Adam Rickard – arickard@creategm.com
vi. Electrical – Chris Hess – chess@creategm.com

16. Additional hard copies of drawings available from DC Reprographics.

17. Open Discussion/Questions
    a. The Prevailing Wage Packet that was discussed at the meeting is attached for reference.
    b. The group walked each building and saw all areas of work.
    c. Any questions not asked at the pre-bid meeting can be sent to Lee Westgerdes – lwestgerdes@creategm.com

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Sign-in Sheet

Project Name: Allen County BDD - Miscellaneous Projects
GM Project No.: 25092.00
Meeting Location: Administration Building Conference Room
Meeting Date: 1/14/2025

Purpose: Pre-Bid Meeting

Attendees

☐	Name	John Rausch	Phone 419-628-4240
	Business/Title	GM / Architect	
	Email	jrausch@creategm.com	
☐	Name	Chris Hess	Phone 419-628-4240
	Business/Title	GM / Electrical Designer	
	Email	chess@creategm.com	
☐	Name	Kellen Mescher	Phone 419-628-4240
	Business/Title	GM / Site Designer	
	Email	kmescher@creategm.com	
☑	Name	Adam Rickard	Phone 419-628-4240
	Business/Title	GM / Mechanical Designer	
	Email	arickard@creategm.com	
☑	Name	Renee Kohler	Phone 419-221-1385
	Business/Title	ACBDD / Superintendent	
	Email	rkohler@acbdd.org	
☑	Name	Curtis Shepard	Phone 419-221-1385
	Business/Title	ACBDD / Director of Operations	
	Email	cshepherd@acbdd.org	
☑	Name	Christine Calvelage	Phone 419-221-1385
	Business/Title	ACBDD / Director of Business	
	Email	CCalvelage@acbdd.org	
☑	Name	Tim Richards	Phone 419-221-1385
	Business/Title	ACBDD / Maintenance Foreman	
	Email	trichards@acbdd.org	

@ creategm.com
Minster, OH | Columbus, OH | Indianapolis, IN

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☑	Name	Lee Westgerdes	Phone 419-628-4240
	Business/Title	GM / Project Manager/Mechanical Designer	
	Email	lwestgerdes@creategm.com	
☑	Name	Chris Monnin	Phone 419-628-4240
	Business/Title	GM / Principal	
	Email	cmonnin@creategm.com	
☐	Name	Jason Flemming	Phone 419-628-4240
	Business/Title	GM / Construction Administrator	
	Email	jflemming@creategm.com	
☑	Name	Melissa Ricker	Phone 419-221-1385
	Business/Title	ACBDD / Assistant Superintendent	
	Email	mricker@acbdd.org	
☑	Name	Kyle Fortkamp	Phone 419-778-7024
	Business/Title	Armcorp / Estimator	
	Email	kyle@armcorpinc.com	
☑	Name	Matt Niemeyer	Phone 419-605-5512
	Business/Title	Grand Lake Building Co.	
	Email	Matt@grandlakebuildingco.com	
☑	Name	Heidi McMahon	Phone 406-564-6962
	Business/Title	Dry Lane Construction	
	Email	Heidi@drylaneinc.com	
☑	Name	Gordon Fairchild	Phone 419-203-5987
	Business/Title	ATR Contractors	
	Email	gfairchild@atrcontractors.com	
☑	Name	Chris Overholt	Phone 419-238-0044
	Business/Title	ATR Contractors	
	Email	coverholt@atrcontractors.com	
☑	Name	Douglas A McDonald	Phone 419-576-8952
	Business/Title	Richland Co & Associates	
	Email	dm@richlandroofing.com	

☑	Name	Michael Joy	Phone 419-331-66941
	Business/Title	Sparta Elec.	
	Email	Jay@spartaelectricinc.com	
☑	Name	Nick Wise	Phone 815-994-1802
	Business/Title	Touchstone CPM / Estimator	
	Email	nickw@touchstonecpm.com	
☑	Name	Brent Muhlenkamp	Phone 419-678-2000
	Business/Title	Muhlenkamp Building Corporation	
	Email	brent-mbc@bright.net	
☑	Name	Matt Heyne	Phone 419-628-3600
	Business/Title	Heyne Construction	
	Email	Matt@heyneconstruction.com	
☑	Name	Sean Weber	Phone 419-203-9685
	Business/Title	Project Manager / New Idea Controls	
	Email	sweber@newideacontrols.com	
☑	Name	Ryan Moenter	Phone 419-230-3382
	Business/Title	ATR / Project Manager	
	Email	rmoenter@atrcontractors.com	
☑	Name	Larry Lee	Phone 419-692-2661
	Business/Title	E. Lee Construction Inc.	
	Email	Tami@eleeconstruction.com	
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ALLEN COUNTY BOARD OF DD

PREVAILING WAGE PACKET

TOPIC

Allen County Board of DD Procedure

Contractor Listing Form

Point of Contact Listing for Prevailing Wages Form

Prevailing Wage Notification of Employee

ACT Ohio Prevailing Wage Requirements

ALLEN COUNTY BOARD OF DEVELOPMENTAL DISABILITIES
PREVAILING WAGE PROCEDURE

I. Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting projects in excess of the Prevailing Wage Threshold, will follow the Prevailing Wage Procedure unless the project is done through the State of Ohio Cooperative Purchasing Program. Additionally, new construction in excess of the Prevailing Wage Threshold, will follow the Prevailing Wage Procedure unless it is done through the State of Ohio Cooperative Purchasing Program. Threshold limits can be found on the Ohio Department of Commerce Website under the Division of Labor & Worker Safety, Prevailing Wage Threshold Levels:
http://www.com.ohio.gov/laws/PrevailingWageThresholdLevels.aspx

II. Specifications for projects that meet the criteria stated above must include the wage rate determination and hourly rate schedules applicable to the job, as well as notice of Prevailing Wage requirements. Additionally, specifications must include the Project Name, Site Address, Contact Person, Contact Person's telephone number, the Prevailing Wage Coordinator, the Prevailing Wage Coordinator's telephone number, how the project is being funded, what the project consists of, projected costs, the expected Date of Contract and expected Date of Completion.

III. Prior to a Contract being awarded the following must be done:

a. the listing of "Debarred Contractor/Sub-Contractors in the State of Ohio" must be checked with the Secretary of State:
http://www.sos.state.oh.us/sos/upload/records/Contractor/Sub-Contractors.pdf

b. the State Auditor's Website must be checked for "Findings for Recovery":
http://www.auditor.state.oh.us/OnlineServices/FFR/default.htm

c. the Declaration Regarding Material Assistance/Non Assistance to a Terrorist Organization must be completed by the Contractor/Sub-Contractor:
http://www.homelandsecurity.ohio.gov/dma.asp

d. Bid Tabulation/Award must be submitted to the Ohio Department of Commerce – Wage & Hour Division via fax: 614-728-8639

e. A Pre-construction meeting must be held to accomplish the following:

1. Explain it is a Prevailing Wage Bid
2. Obtain a listing of the General Contractor/Sub-Contractor and all Sub-Contractor/Sub-Contractors
3. Obtain a listing of contacts for the General Contractor/Sub-Contractor and all Sub-Contractor/Sub-Contractors
4. Communicate Project and Board timetables, needs, etc. in order to continue to serve individuals with as few interruptions as possible

5. Answer questions

IV. At the Pre-construction meeting, a Prevailing Wage Packet will be distributed to the General Contractor and Sub-Contractors.

V. The completed "Prevailing Wage Notification to Employee" must be provided to the Prevailing Wage Coordinator for all employees the General or Sub-Contractors plan on using at the job site before work commences.

VI. The Prevailing Wage Coordinator/designee must visit the project site or main meeting area of the Contractor/Sub-Contractor to assure postings are displayed as required.

VII. In the event it is suspected that Contractor/Sub-Contractors are working more staff than reported or that wages are not being paid properly, the Prevailing Wage Coordinator/designee will interview Contractor/Sub-Contractor employees, as required by Prevailing Wage laws. Prevailing Wage Notification to Employee Sheets must be on hand or employees cannot work on site.

VIII. The Prevailing Wage Coordinator/designee will audit Certified Payroll Reports to assure proper wages are being paid and that they match the "Prevailing Wage Notification to Employee", as required.

IX. Upon completion of the project and after all wages pertaining the project have been paid, an "Affidavit of Compliance" is required from each Contractor/Sub-Contractor before final payment can be made.

X. If non-compliant issues arise at any time during the project, attempts will be made to remedy the situation and bring it into compliance. (example: not completing Certified Payroll Reports correctly) Issues that cannot be resolved and brought into compliance will be reported to the Ohio Department of Commerce, Division of Labor and Worker Safety.

Effective 08/22/2008
Revised 10/15/2013
Revised 05/31/2017
Revised 03/08/2022

Allen County Board of DD
Director of Business

ALLEN COUNTY BOARD OF DD

CONTRACTOR LISTING
(including Sub-Contractors)
2022 OFFICE RENOVATIONS 2550 ADA ROAD

BUSINESS NAME	
MAIN CONTACT NAME	
GENERAL OR SUB-CONTRACTOR	
MAILING ADDRESS	
OFFICE PHONE	
CELL PHONE	
E-MAIL ADDRESS	
FAX NUMBER	
BUSINESS NAME	
MAIN CONTACT NAME	
GENERAL OR SUB-CONTRACTOR	
MAILING ADDRESS	
OFFICE PHONE	
CELL PHONE	
E-MAIL ADDRESS	
FAX NUMBER	
BUSINESS NAME	
MAIN CONTACT NAME	
GENERAL OR SUB-CONTRACTOR	
MAILING ADDRESS	
OFFICE PHONE	
CELL PHONE	
E-MAIL ADDRESS	
FAX NUMBER	

*Duplicate as needed

ALLEN COUNTY BOARD OF DD

POINT OF CONTACT LISTING FOR PREVAILING WAGES

OFFICE RENOVATIONS 2250 ADA ROAD
2022

Contractor or Sub-Contractor Name_____

EMPLOYEE NAME	
MAILING ADDRESS	
OFFICE PHONE	
E-MAIL ADDRESS	
FAX NUMBER	
HOURS OF WORK	
EMPLOYEE NAME	
MAILING ADDRESS	
OFFICE PHONE	
E-MAIL ADDRESS	
FAX NUMBER	
HOURS OF WORK	
EMPLOYEE NAME	
MAILING ADDRESS	
OFFICE PHONE	
E-MAIL ADDRESS	
FAX NUMBER	
HOURS OF WORK	

This information must be completed for the General Contractor and each Sub-Contractor prior to the commencement of work.

Phone	419-221-1385 X 1207
Fax	419-225-5184 ATTN: Curtis Shepherd
E-mail	cshepherd@acbdd.org

*Please complete a sheet for each Contractor/Sub-Contractor

PREVAILING WAGE NOTIFICATION TO EMPLOYEE

Project Name:	Job Number:
Contractor:	
Project Location:	
Jobsite posting of prevailing wage rates located:	

Prevailing Wage Coordinator	Employee
Name:	Name:
Street:	Street:
City:	City:
State / Zip:	State / Zip:
Phone:	Phone:

You will be performing work on this project that falls under these classifications. You will be paid the appropriate rate for the type of work you are performing.

Classification	Prevailing Wage Rate Total Package	Minus Your Fringe Benefits	Your Hourly Base Rate

Hourly fringe benefits paid on your behalf by this company.

Fringe	Amount	Fringe	Amount
Health Insurance		Vacation	
Life Insurance		Holiday	
Pension		Sick Pay	
Bonus		Training	
Other		**TOTAL HOURLY FRINGES**	

Contractor's Signature:	Date:
Employee's Signature:	Date:

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Ohio Prevailing Wage Requirements

ACT Ohio ◆ 222 E. Town St., Columbus, OH 43215 ◆ www.actohio.org ◆ 614-228-5446 ◆ info@actohio.org

Prevailing Wage FAQs

What is Prevailing Wage?
Prevailing wage (PW) requires that workers on public improvement projects are paid the local industry standard wages and benefits.

- Prevailing wages (PW) must be paid in full without any deduction for food, lodging, transportation, use of tools, etc.
- Overtime must be paid at time and one-half the employee's base hourly rate. Fringe benefits are paid at straight time rate for all hours including overtime.

How does Prevailing Wage protect the local economy?
PW rates are set using the market labor rate for each county in Ohio. This ensures non-local contractors cannot submit artificially low project bids using cheaper, non-local labor.

The Ohio Department of Commerce Division of Industrial Compliance, Bureau of Wage and Hour Administration sets the threshold for PW projects.

"New" construction threshold for *Building* Construction:	**$250,000**
"Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" threshold level for *Building* Construction:	**$75,000**

As of January 1, 2018:

"New" construction that involves *roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction* threshold level has been adjusted to:	**$91,150**
"Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" that involves *roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction* threshold level has been adjusted to:	**$27,309**

A) Thresholds are to be adjusted biennially by the Director of the Ohio Department of Commerce.
B) Biennial adjustments to threshold levels are made according to the Building Cost for Skilled Labor Index published by McGraw-Hill's Engineering News-Record, but may not increase or decrease more than 3% for any year.

Questions about project thresholds can be directed to: Ohio Department of Commerce Division of Industrial Compliance, Bureau of Wage and Hour Administration at 614-644-2239 (www.com.ohio.gov).

What are the requirements?
Employers must:

1. pay prevailing wages, in amounts determined according to Ohio's Prevailing Wage Law;

2. generate and submit certified payroll reports to the Authority's Prevailing Wage Coordinator;

3. provide all employees with wage notification forms and submit executed copies to the Authority's Prevailing Wage Coordinator; and

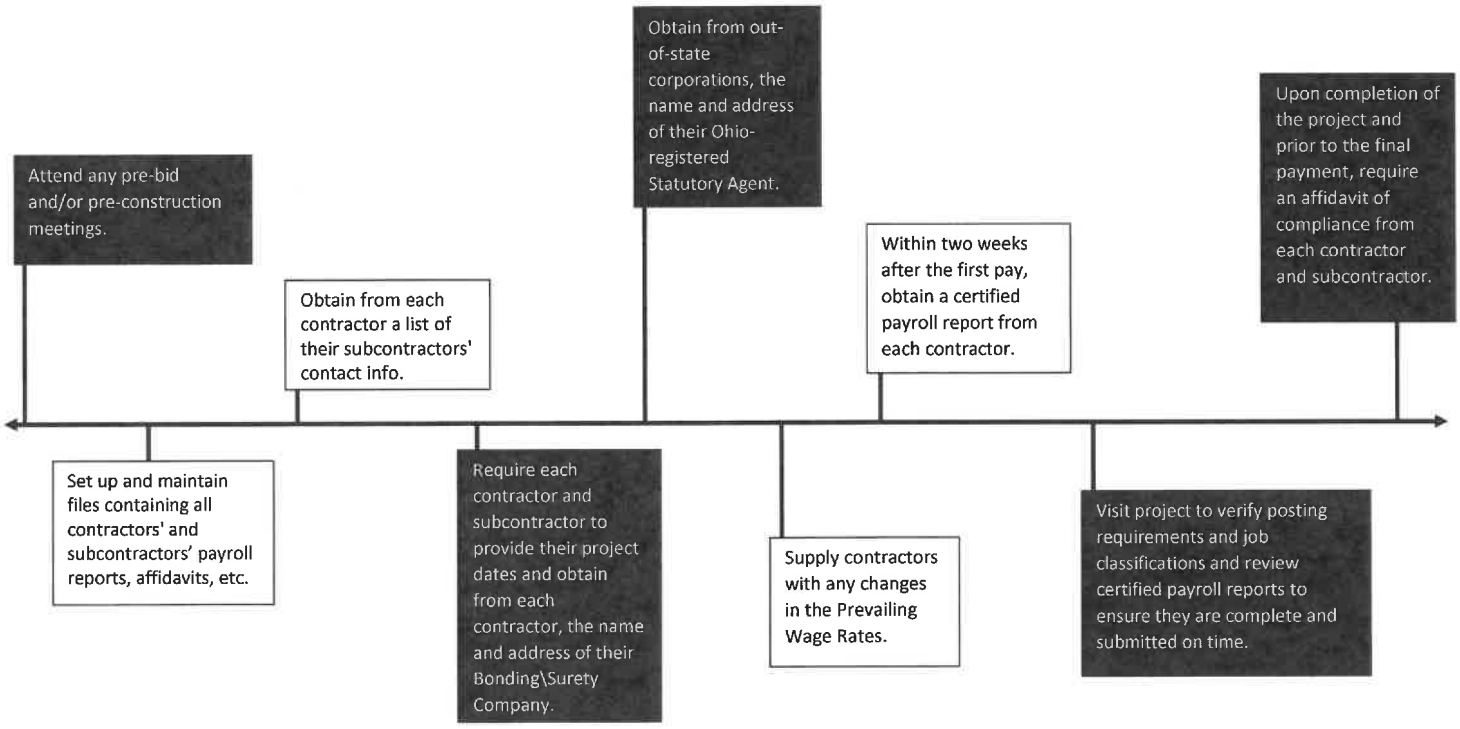
4. otherwise strictly comply with Ohio's Prevailing Wage Law.

Who is Covered Under Prevailing Wage law?
All employees of every contractor working on projects in Ohio that trigger Ohio's Prevailing Wage law. From truck drivers hauling equipment and materials, to electricians, plumbers, iron workers, and any other workers on the construction project.

This guide will take you, step by step, through these requirements. A full list of Contractor responsibilities is attached (Appendix A).

Violators are to be assessed the wages owed, plus a potential penalty of 100% of the wages owed by the Ohio Department of Commerce.

Prevailing Wage Project Compliance Timeline



Public Authority Responsibilities

Step 1: Appoint a Prevailing Wage Coordinator.
The Prevailing Wage Coordinator is required by law to be a local government employee. The Prevailing Wage Coordinator will handle coordination on ALL Prevailing Wage projects now and in the future.

Step 2: The Prevailing Wage Coordinator provides the general contractor and subcontractors working on the Prevailing Wage project:

- A sample certified payroll report (Appendix B, attached).
- Relevant prevailing wage rates, obtained from the public authority.
- Payroll Dates Form (Appendix C, attached)

PAYROLL DATES
PREVAILING WAGE LAW

Instructions to the Contractor: Please read the following and provide the required information noted on this form. This document must be submitted to the Prevailing Wage Coordinator for the public authority on or before your company begins any work under a contract for a public improvement. This requirement is also applicable to your subcontractors. Please make a copy of this document available to them. The prevailing wage laws state that contractors are responsible for their subcontractors.

_____ will begin performance under contract on the
(Name of Contractor)

_____ project on _____
(Name and Location of Project) (Start Date)

and will conclude work on said project on _____.
(End Date, if known)

In accordance with Section 4115.071 (C) of the Ohio Revised Code, listing of payroll dates, I hereby submit the following schedule of dates that my company is required to pay wages to its workers while on this project.
NOTE: If the life of the project is expected to be over three (3) months in length, provide only the days of the week your pay period starts and ends, plus the day you pay your workers.

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Day Pay Period Starts:_____ Day Pay Period Ends:_____

Pay Day:_____

I acknowledge that I am required by section 4115.071 (C) of the Ohio Revised Code that I must submit a copy of my company's certified payroll records for this project to the Prevailing Wage Coordinator of the public authority within two weeks of the initial pay date listed above. I further acknowledge that I am responsible to collect and submit my subcontractor's prevailing wage documents, including their certified payroll records in accordance with the law.

_____ _____
(Contractor's Signature and Title) (Company Name)

_____
(Date)

Public Authority Responsibilities

Step 3: Prevailing Wage Coordinator informs all contractors and subcontractors working on the project of their prevailing wage responsibilities.

- Contractors working under the contract provide PW notifications to employees (Appendix D, attached).
- The Prevailing Wage rate must be posted on the job site where it is accessible to all employees.
- Contractor must provide Prevailing Wage Coordinator with a list of all subcontractors including
    - name,
    - address, and
    - telephone number for each.

Contractors who do not pay into a fringe benefit funds on behalf of their employees must pay those fringes on the check as part of the employee's hourly rate. Contractors are required to pay the total Prevailing Wage rate (base rate per hour plus fringe benefits).

PREVAILING WAGE NOTIFICATION TO EMPLOYEE

Project Name:			Job Number:
Contractor:			
Project Location:			
Jobsite posting of prevailing wage rates located:			
Prevailing Wage Coordinator		Employee	
Name:		Name:	
Street:		Street:	
City:		City:	
State/ Zip:		State / Zip:	
Phone:		Phone:	
You will be performing work on this project that falls under these classifications. You will be paid the appropriate rate for the type of work you are performing.			
Classification	Prevailing Wage Rate Total Package	Minus Your Fringe Benefits	Your Hourly Base Rate
Hourly fringe benefits paid on your behalf by this company.			
Fringe	Amount	Fringe	Amount
Health Insurance		Vacation	
Life Insurance		Holiday	
Pension		Sick Pay	
Bonus		Training	
Other		TOTAL HOURLY FRINGES	
Contractor's Signature:			Date:
Employee's Signature:			Date:

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Prevailing Wage Coordinators should contact ACT Ohio at 614-228-5446 or info@actohio.org with any questions throughout the process.

Public Authority Responsibilities

Step 4: Contractor keeps full and accurate payroll records.
These should include, but are not limited to:

- Time cards, time sheets, daily work records, etc.
- Payroll ledger\journals and canceled checks\check register.
- Fringe benefit records (including program, address, account number, canceled checks).
- Records made in connection with the public improvement must not be removed from the State for one year following the completion of the project.
- Out-of-State Corporations must submit to the Ohio Secretary of State the full name and address of their Statutory Agent in Ohio.

Step 5: Contractors must submit weekly certified payroll reports to the Prevailing Wage Coordinator beginning no later than within two (2) weeks after the initial pay period (Appendix B, attached). Instructions for completing the certified payroll report are attached (Appendix E).

The failure to file or collect certified payroll records is a violation of ORC 4115. Violators are to be assessed the wages owed, plus a penalty of 100% of the wages owed by the Ohio Department of Commerce.

Certified Payroll Report - Part A
330 • Construction • Contractor Payment
State of Ohio Standard Forms for Public Facility Construction

EMPLOYER NAME AND ADDRESS	NAME OF GENERAL / PRIME CONTRACTOR	PROJECT NAME AND LOCATION (COUNTY)	CONTRACTING AUTHORITY (OR OWNER)
CHECK IF SUBCONTRACTOR ☐	WEEK ENDING ______	PAYROLL NUMBER ______ PAGE ______ of ______	PROJECT / CONTRACT NUMBER ______

1. NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g. LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	2. WORK CLASSIFICATION	3. RACE AND SEX	4. HOURS WORKED - DAY AND DATE								5. TOTAL PROJ HRS	6. BASE WAGE RATE	7. PROJ GROSS WAGES	8. FRINGES CASH ☐ APPROVED PLANS ☐ CASH AND APPROVED PLANS ☐					9. TTL HRS ALL JOBS	10. TOTAL GROSS ALL JOBS	11. TAXES WITHHELD	12. OTHER DEDUCTIONS	13. NET WAGES PAID
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My signature on this form signifies that I pay, or supervise the payment of the employees shown above. I am certifying: 1) That during the pay period reported on this form, all hours worked on this Project have been paid at the appropriate prevailing wage rate for the class of work done. 2) That the fringe benefits have been paid as indicated above. 3) That no rebates or deductions have been or will be made, directly or indirectly from the total wages earned, other than permissable deductions as defined in Ohio Revised Code Chapter 4115. 4) That apprentices are registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training. I understand that the willful falsification of any of the above statements may subject the Contractor or Subcontractor to civil or criminal prosecution. In addition, I have submitted the full Name, Social Security Number, and Address of each Worker on a separate sheet (Part B) to form the entire Certified Payroll Report required by Applicable Law.

Type or Print Name and Title ______________________ Signature ______________________ Date ____________

Public Authority Responsibilities

Step 6: The Prevailing Wage Coordinator reviews weekly reports to ensure workers are paid the correct wages/fringes.

Failure to file or collect certified payroll records is a violation of ORC 4115. Violators are to be assessed the wages owed, plus a potential penalty of 100% of the wages owed by the Ohio Department of Commerce.

- All certified payroll reports must include:
    - Employees' names, addresses, and social security numbers.
    - Corporate officers/owners/partners and any salaried personnel who do physical work on the project are considered employees. All rate and reporting requirements are applicable to these individuals.
    - Employees' work classification.
        - Be specific about the laborers and/or operators (Group)
        - For all apprentices, show level/year and percent of journeyman's rate
    - The number of hours worked in each day and the total number of hours worked each week for each employee.
    - Hourly rate for each employee.
        - The minimum rate paid must be the wage rate for the appropriate classification. The Department's Wage Rate Schedule sets this rate.
        - All overtime worked is to be paid at time and one-half for all hours worked more than forty (40) per week.
        - Where fringes are paid into a bona fide plan instead of cash, list each benefit and amount per hour paid to program for each employee.
        - When the amount contributed to the fringe benefit plan and the total number of hours worked by the employee on all projects for the year are documented, the hourly amount is calculated by dividing the total contribution of the employer by the total number of hours worked by the employee.
        - When the amount contributed to the fringe benefit is documented but not the total hours worked, the hourly amount is calculated by dividing the total yearly contribution by 2080.
    - Gross amount earned on all projects during the pay period.
    - Total deductions from employee's wages.
    - Net amount paid.

Public Authority Responsibilities

Step 7: PW coordinator responds to any public records request for records

- At the conclusion of the project the PW coordinator archives all the records and holds them for 2 years minimum.
- Contractor must complete an Affidavit of Compliance (Attached, Appendix F)

Department of Commerce
Division of Industrial Compliance

Bureau of Wage and Hour Administration
8606 Tussing Road - PO Box 4009
Reynoldsburg, OH 43068-9009
Phone: 614-644-2239 | Fax: 614-728-8639
TTY/TDD 800-750-0750
www.com.ohio.gov
An Equal Opportunity Employer and Service Provider

John R. Kasich, Governor
Andre T. Porter, Director

Affidavit Of Compliance

PREVAILING WAGES

I, _____
(Name of person signing affidavit) (Title)

do hereby certify that the wages paid to all employees of

_____
(Company Name)

for all hours worked on the

_____
(Project name and location)

project, during the period from _____ to _____ are in
(Project Dates)

compliance with prevailing wage requirements of Chapter 4115 of the Ohio Revised Code. I further certify that no rebates or deductions have been or will be made, directly or indirectly, from any wages paid in connection with this project, other than those provided by law.

_____
(Signature of Officer or Agent)

Sworn to and subscribed in my presence this _____ day of _____,

20_____.

_____ (Notary Public)

The above affidavit must be executed and sworn to by the officer or agent of the contractor or subcontractor who supervises the payment of employees. This affidavit must be submitted to the owner (public authority) before the surety is released or final payment due under the terms of the contract is made.

LAW1003

Questions about PW compliance can be directed to ACT Ohio 614.228.5446 or info@actohio.org.

PUBLIC AUTHORITY'S COMPLIANCE CHECKLIST FOR PREVAILING WAGE

Project:	Number:
Department:	Phone#:
PW Coordinator:	Phone#:
Architect/Engineer:	Phone#:
Contractor:	Phone#:
Contact Person:	Title:

General Contractor:	Prime Contractor:	Construction Mgr:

Date Completed		Compliance Item Description
	1.	Request Prevailing Wage Determination Schedule from ODOC-DIC-Wage & Hour
	2.	Received Prevailing Wage Determination Schedule
	3.	Incorporate Determination Schedule in Specs./Bidding Blanks
	4.	Incorporate notice of Prevailing Wage requirements in Invitation for Bids/Notice to Bidders
	5.	Incorporate Prevailing Wage requirements in Contract
	6.	Submit complete Invitation for Bid to ODOC-DIC-Wage & Hour
	7.	Invitation for Bids
	8.	Bid Opening
	9.	Check Listing of Violators
	10.	Award of Contract. (see note)
	11.	Submit Bid Tabulation/Award to ODOC-DIC-WAGE & HOUR
	12.	Notice to Successful Bidder
	13.	Work Commenced…(see note)
	14.	Appoint Prevailing Wage Coordinator
	15.	Received list of Subcontractors' names, addresses, phone #'s & email's
	16.	Received Payroll Date Schedule
	17.	Received Registered Apprenticeship Agreement Certifications
	18.	Received Deduction Agreements
	19.	Received Payroll Reports with Certification…(see attachment)
	20.	Visited project site
	21.	Received Changes to Determination Schedule
	22.	Notice to Contractors of Determination Schedule change
	23.	Request Final Compliance Affidavit from contractors & subcontractors
	24.	Received Final Affidavits from all contractors & subcontractors
	25.	Certify Final Payment

Note: If contract is not awarded or construction undertaken within 90 days from the date of establishment of the Prevailing Wage Rates, a re-determination of the Prevailing Wage Rates is required.

Department of Commerce
Division of Industrial Compliance

Bureau of Wage and Hour Administration
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Andre T. Porter, Director

PREVAILING WAGE CONTRACTOR RESPONSIBILITIES

This is a summary of prevailing wage contractors' responsibilities. For more detailed information please refer to Chapter 4115 of the Ohio Revised Code

General Information

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than $250,000 for new construction or $75,000 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting.

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than $84,314 for new construction that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction or $25,261 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting of a public improvement that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction.

a) Thresholds are to be adjusted biennially by the Administrator of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration

b) Biennial adjustments to threshold levels are made according to the Price Deflator for Construction Index, United States Department of Commerce, Bureau of the Census*, but may not increase or decrease more than 3% for any year

Penalties for violation

Violators are to be assessed the wages owed, plus a penalty of 100% of the wages owed.

Intentional Violations

If an intentional violation is determined to have occurred, the contractor is prohibited from contracting directly or indirectly with any public authority for the construction of a public improvement. Intentional violation means "a willful, knowing, or deliberate disregard for any provision" of the prevailing wage law and includes but is not limited to the following actions:

- Intentional failure to submit payroll reports as required, or knowingly submitting false or erroneous reports.
- Intentional misclassification of employees for the purpose of reducing wages.
- Intentional misclassification of employees as independent contractors or as apprentices.
- Intentional failure to pay the prevailing wage.
- Intentional failure to comply with the allowable ratio of apprentices to skilled workers as required by the regulations established by Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration.
- Intentionally employing an officer, of a contractor or subcontractor, that is known to be prohibited from contracting, directly or indirectly, with a public authority.

Responsibilities

A. Pay the prevailing rate of wages as shown in the wage rate schedules issued by the Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration, for the classification of work being performed.

1. Wage rate schedules include all modifications, corrections, escalations, or reductions to wage rates issued for the project.

2. Overtime must be paid at time and one-half the employee's base hourly rate. Fringe benefits are paid at straight time rate for all hours including overtime.
3. Prevailing wages must be paid in full without any deduction for food, lodging, transportation, use of tools, etc.; unless, the employee has voluntarily consented to these deductions in writing. The public authority and the Director of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration - must approve these deductions as fair and reasonable. Consent and approval must be obtained before starting the project.

B. Use of Apprentices and Helpers cannot exceed the ratios permitted in the wage rate schedules.
1. Apprentices must be registered with the U.S. Department of Labor Bureau of Apprenticeship and Training.
2. Contractors must provide the Prevailing Wage Coordinator a copy of the Apprenticeship Agreement for each apprentice on the project.

C. Keep full and accurate payroll records available for inspection by any authorized representative of the Ohio Department of Commerce, Division of Industrial Compliance, and Labor, Bureau of Wage and Hour Administration or the contracting public authority, including the Prevailing Wage Coordinator. Records should include but are not limited to:
1. Time cards, time sheets, daily work records, etc.
2. Payroll ledger\journals and canceled checks\check register.
3. Fringe benefit records must include program, address, account number, & canceled checks.
4. Records made in connection with the public improvement must not be removed from the State for one year following the completion of the project.
5. Out-of-State Corporations must submit to the Ohio Secretary of State the full name and address of their Statutory Agent in Ohio.

D. Prevailing Wage Rate Schedule must be posted on the job site where it is accessible to all employees.

E. Prior to submitting the initial payroll report, supply the Prevailing Wage Coordinator with your project dates to schedule reporting of your payrolls.

F. Supply the Prevailing Wage Coordinator a list of all subcontractors including the name, address, and telephone number for each.
1. Contractors are responsible for their subcontractors' compliance with requirements of Chapter 4115 of the Ohio Revised Code.

G. Before employees start work on the project, supply them with written notification of their job classification, prevailing wage rate, fringe benefit amounts, and the name of the Prevailing Wage Coordinator for the project. A copy of the completed signed notification should be submitted to Prevailing Wage Coordinator.

H. Supply all subcontractors with the Prevailing Wage Rates and changes.

I. Submit certified payrolls within two (2) weeks after the initial pay period. Payrolls must include the following information:
1. Employees' names, addresses, and social security numbers.
   (a) Corporate officers/owners/partners and any salaried personnel who do physical work on the project are considered employees. All rate and reporting requirements are applicable to these individuals.
2. Employees' work classification.
   (a) Be specific about the laborers and/or operators (Group)
   (b) For all apprentices, show level/year and percent of journeyman's rate
3. Hours worked on the project for each employee.

(a) The number of hours worked in each day and the total number of hours worked each week.

4. Hourly rate for each employee.
   (a) The minimum rate paid must be the wage rate for the appropriate classification. The Department's Wage Rate Schedule sets this rate.
   (b) All overtime worked is to be paid at time and one-half for all hours worked more than forty (40) per week.
5. Where fringes are paid into a bona fide plan instead of cash, list each benefit and amount per hour paid to program for each employee.
   (a) When the amount contributed to the fringe benefit plan and the total number of hours worked by the employee on all projects for the year are documented, the hourly amount is calculated by dividing the total contribution of the employer by the total number of hours worked by the employee.
   (b) When the amount contributed to the fringe benefit is documented but not the total hours worked, the hourly amount is calculated by **dividing the total yearly contribution by 2080.**
6. Gross amount earned on all projects during the pay period.
7. Total deductions from employee's wages.
8. Net amount paid.

J. The reports shall be certified by the contractor, subcontractor, or duly appointed agent stating that the payroll is correct and complete; and that the wage rates shown are not less than those required by the O.R.C. 4115.

K. Provide a Final Affidavit to the Prevailing Wage Coordinator upon the completion of the project.

Appendix B - Sample Certified Payroll Report

Certified Payroll Report - Part A

330 ▪ Construction ▪ Contractor Payment

State of Ohio Standard Forms for Public Facility Construction

EMPLOYER NAME AND ADDRESS	NAME OF GENERAL / PRIME CONTRACTOR	PROJECT NAME AND LOCATION (COUNTY)	CONTRACTING AUTHORITY (OR OWNER)
CHECK IF SUBCONTRACTOR[1] ☐	WEEK ENDING ______	PAYROLL NUMBER ______ PAGE[2] ____ of ____	PROJECT / CONTRACT NUMBER ______

1. NAME AND INDIVIDUAL[3] IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	2. WORK[4] CLASS-IFICA-TION	3. RACE AND SEX	4. HOURS WORKED - DAY AND DATE								5. TOTAL PROJ HRS	6. BASE WAGE RATE	7. PROJ GROSS WAGES	8. FRINGES: CASH ☐ APPROVED PLANS ☐ CASH AND APPROVED PLANS ☐					9. TTL HRS ALL JOBS	10. TOTAL GROSS ALL JOBS	11. TAXES WITH-HELD	12. OTHER DEDUC-TIONS	13. NET WAGES PAID
				M	T	W	TH	F	S	S				H&W	PENS	VAC	APP	OTHER					
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My signature on this form signifies that I pay, or supervise the payment of the employees shown above. I am certifying: 1) That during the pay period reported on this form, all hours worked on this Project have been paid at the appropriate prevailing wage rate for the class of work done. 2) That the fringe benefits have been paid as indicated above. 3) That no rebates or deductions have been or will be made, directly or indirectly from the total wages earned, other than permissable deductions as defined in Ohio Revised Code Chapter 4115. 4) That apprentices are registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training. I understand that the willful falsification of any of the above statements may subject the Contractor or Subcontractor to civil or criminal prosecution. In addition, I have submitted the full Name, Social Security Number, and Address of each Worker on a separate sheet (Part B) to form the entire Certified Payroll Report required by Applicable Law.

Type or Print Name and Title: ____________________ Signature: ____________________ Date: __________

F330-03Av0612 [1]If Subcontractor, provide Contractor name in space provided. [2]Attach additional pages as necessary. [3]Text will wrap. [4]Text will fit to cell.

Certified Payroll Report - Part B

330 • Construction • Contractor Payment

State of Ohio Standard Forms for Public Facility Construction

EMPLOYER NAME AND ADDRESS	NAME OF GENERAL / PRIME CONTRACTOR	PROJECT NAME AND LOCATION (COUNTY)	CONTRACTING AUTHORITY (OR OWNER)
CHECK IF SUBCONTRACTOR[1] ☐	WEEK ENDING _____	PAYROLL NUMBER _____ PAGE[2] _____ of _____	PROJECT / CONTRACT NUMBER _____

FULL NAME OF WORKER	SOCIAL SECURITY NUMBER[3]	STREET ADDRESS	CITY, STATE AND ZIP CODE

F330-03Bv0612 [1]If Subcontractor, provide Contractor name in space provided. [2]Attach additional pages as necessary. [3]For Public Records Requests, redact Social Security Numbers.

Appendix C - Payroll Dates Form

PAYROLL DATES
PREVAILING WAGE LAW

Instructions to the Contractor: Please read the following and provide the required information noted on this form. This document must be submitted to the Prevailing Wage Coordinator for the public authority on or before your company begins any work under a contract for a public improvement. This requirement is also applicable to your subcontractors. Please make a copy of this document available to them. The prevailing wage laws state that contractors are responsible for their subcontractors.

_____ will begin performance under contract on the
(Name of Contractor)

_____ project on _____
(Name and Location of Project) (Start Date)

and will conclude work on said project on _____.
(End Date, if known)

In accordance with Section 4115.071 (C) of the Ohio Revised Code, listing of payroll dates, I hereby submit the following schedule of dates that my company is required to pay wages to its workers while on this project.
NOTE: If the life of the project is expected to be over three (3) months in length, provide only the days of the week your pay period starts and ends, plus the day you pay your workers.

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

Day Pay Period Starts:_____ Day Pay Period Ends:_____

Pay Day:_____

I acknowledge that I am required by section 4115.071 (C) of the Ohio Revised Code that I must submit a copy of my company's certified payroll records for this project to the Prevailing Wage Coordinator of the public authority within two weeks of the initial pay date listed above. I further acknowledge that I am responsible to collect and submit my subcontractor's prevailing wage documents, including their certified payroll records in accordance with the law.

_____ _____
(Contractor's Signature and Title) (Company Name)

_____
(Date)

Appendix D - Prevailing Wage Notification to Employee

PREVAILING WAGE NOTIFICATION TO EMPLOYEE

Project Name:	Job Number:
Contractor:	
Project Location:	
Jobsite posting of prevailing wage rates located:	

Prevailing Wage Coordinator	Employee
Name:	Name:
Street:	Street:
City:	City:
State / Zip:	State / Zip:
Phone:	Phone:

You will be performing work on this project that falls under these classifications. You will be paid the appropriate rate for the type of work you are performing.

Classification	Prevailing Wage Rate Total Package	Minus Your Fringe Benefits	Your Hourly Base Rate

Hourly fringe benefits paid on your behalf by this company.

Fringe	Amount	Fringe	Amount
Health Insurance		Vacation	
Life Insurance		Holiday	
Pension		Sick Pay	
Bonus		Training	
Other		**TOTAL HOURLY FRINGES**	

Contractor's Signature:	Date:
Employee's Signature:	Date:

whpw1512

Appendix E - Instructions for Preparing Certified Payroll Reports

General

Contractors and subcontractors are required by law to submit certified payroll reports for work on projects covered by Ohio's Prevailing Wage Law. This form meets the reporting requirements established by Ohio Revised Code Chapter 4115. The use of this form is not mandatory, employers may submit their own forms provided that all of the required information is included. This form may be reproduced, or additional copies obtained from:

Ohio Department of Commerce Division of Industrial Compliance and Labor Bureau of Wage & Hour Administration 6606 Tussing Rd. P. O. Box 4009 Reynoldsburg, OH 43068-9009 Phone: (614) 644-2239

Certified Payroll Heading

Employer name and address: Company's full name and address. Indicate if the company is a subcontractor, if so list the name of the General or Prime. Project: Name and location of the project, including county. Contracting Public Authority: Name and address of the contracting public authority. Week Ending: Month, day, and year for last day of reporting period. Payroll # : Indicates first, second, third, etc. payroll filed by the company for the project. Page indicator: number of pages included in the report. Project Number: Determined by the public authority. If there is no number leave blank.

Information by Column

- 1. Employee Name, Address and Social Security number: This information must be provided for all employees that perform physical labor on the project. Corporate officers, partners, and salaried employees are considered employees and must be paid the prevailing rate. Individual sole proprietors do not have to pay themselves prevailing rate but must report their hours on the project.
- 2. Work Class: List classification of work actually performed by employee. If unsure of work classification, consult the Ohio department of Commerce, Wage and Hour Bureau. Employees working more than one classification should have separate line entries for each classification. Indicate what year/level for Apprentices. Be specific when using laborer and operator classifications; for example, Backhoe Operator or Asphalt Laborer.
- 3. Hours Worked, Day & Date: In the first row of column 3 enter days of pay period example; M T W TH F S S. The second row is for the date that corresponds with each day for the pay period. In the employee information section enter the number of hours worked on the prevailing wage project and which day the hours were worked. Separate rows are labeled for (ST) straight time hours and (OT) overtime hours. All hours worked after 40, must be paid at the appropriate overtime rate.
- 4. Project Total Hours : Total the hours entered for pay period.
- 5. Base Rate: Enter actual rate per hour paid to the employee. The overtime hourly rate is time and one-half the base rate listed in the prevailing wage schedule plus fringe benefits at straight time rate. The prevailing wage schedule lists the base rate plus fringe benefit amounts. These

amounts added together equal the total prevailing wage rate. Employers must pay this total amount in one of three ways.

  - Total rate may be paid in entirety in the base rate to the employee; in which case, the cash designation will be checked for fringe benefits.
  - Total rate may be paid as listed in prevailing wage rate schedule with total fringe amounts paid approved plans.
  - Total rate may be paid with a combination of base rate and fringe payments to approved plans in amounts other than those listed in schedule.

- 6. Project Gross: Enter total gross wages earned on the project for straight time and overtime. Project hours X base rate should equal project gross.
- 7. Fringes: If fringe benefits are paid in the hourly base rate, indicate this by marking the cash space. If fringe benefits are paid to approved plans as listed in the prevailing wage rate schedule, mark the space Approved Plans. If fringe benefits are paid partially in the base rate and partially to approved plans, mark the space Cash & Approved plans. List the hourly amount paid to approved plans for each fringe. If payments are not made on a per hour basis, calculate the hourly fringe credit by dividing the yearly employer contribution by the lesser of: hours actually worked in the year (these must be documented) or 2080. Fringe benefits include: Employer's share of health insurance, life insurance, retirement plan, bonus/profit sharing, sick pay, holiday pay, personal leave, vacation, and education/training programs.
- 8. Total Hours All Jobs: Total all hours worked during the pay period including non-prevailing wage jobs.
- 9. Total Gross All Jobs: Gross amount earned in the pay period for all hours worked.
- 10. Self explanatory.
- 11. Self explanatory.
- 12. Self explanatory.

Department of Commerce
Division of Industrial Compliance

Bureau of Wage and Hour Administration
6606 Tussing Road - PO Box 4009
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www.com.ohio.gov
An Equal Opportunity Employer and Service Provider

John R. Kasich, Governor
Andre T. Porter, Director

Affidavit Of Compliance

PREVAILING WAGES

I, _____
(Name of person signing affidavit) (Title)

do hereby certify that the wages paid to all employees of

_____
(Company Name)

for all hours worked on the

_____
(Project name and location)

project, during the period from _____ to _____ are in
(Project Dates)

compliance with prevailing wage requirements of Chapter 4115 of the Ohio Revised Code. I further certify that no rebates or deductions have been or will be made, directly or indirectly, from any wages paid in connection with this project, other than those provided by law.

_____
(Signature of Officer or Agent)

Sworn to and subscribed in my presence this _____ day of _____,

20_____.

_____ (Notary Public)

The above affidavit must be executed and sworn to by the officer or agent of the contractor or subcontractor who supervises the payment of employees. This affidavit must be submitted to the owner (public authority) before the surety is released or final payment due under the terms of the contract is made.

LAW1003

PREVAILING WAGE THRESHOLD LEVELS
IMPORTANT NOTICE

Before advertising for bids, contracting, or undertaking construction with its own forces, to construct a public improvement, the Public Authority shall have the Ohio Department of Commerce-Division of Industrial Compliance, Bureau of Wage and Hour Administration determine the prevailing rates of wages for workers employed on the public improvement. The wage determination must be included in the project specifications and printed on the bidding blanks where work is done by contract.

"New" construction threshold for *Building* Construction:	**$250,000**
"Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" threshold level for *Building* Construction:	**$75,000**

As of January 1, 2018:

"New" construction that involves *roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction* threshold level has been adjusted to:	**$91,150**
"Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" that involves *roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction* threshold level has been adjusted to:	**$27,309**

A) Thresholds are to be adjusted biennially by the Director of the Ohio Department of Commerce.
B) Biennial adjustments to threshold levels are made according to the Building Cost for Skilled Labor Index published by McGraw-Hill's Engineering News-Record, but may not increase or decrease more than 3% for any year.

If there are questions concerning this notification, please contact:

Ohio Department of Commerce
Division of Industrial Compliance
Bureau of Wage and Hour Administration
6606 Tussing Road, PO Box 4009
Reynoldsburg, Ohio 43068-9009
Phone: 614-644-2239
Fax: 614-728-8639
www.com.ohio.gov

SECTION 23 09 13
INSTRUMENTS AND CONTROL ELEMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Control panels.

B. Control Valves:
   1. Butterfly pattern.

C. Dampers.

D. Damper Operators:

E. Transmitters:

F. Pressure Independent Control Valves (PICCV)

G. Control valves.

H. Control valve operators

I. Control dampers.

J. Damper operators.

K. Transmitters

L. Building Automation System

M. Temperature Control Wiring

N. Miscellaneous accessories.

1.02 RELATED REQUIREMENTS

A. Section 23 0548 - Vibration and Seismic Controls.

B. Section 23 0519 - Meters and Gages: Thermometer sockets, gage taps.

C. Section 23 05 19 - Meters and Gauges for HVAC Piping: Thermometer sockets and gauge taps.

D. Section 23 0553 - HVAC Identification

E. Section 23 21 13 - Hydronic Piping: Installation of control valves, flow switches, temperature sensor sockets, and gauge taps.

F. Section 23 33 00 - Air Duct Accessories: Installation of automatic dampers.

1.03 REFERENCE STANDARDS

A. AMCA 500-D - Laboratory Methods of Testing Dampers for Rating; 2018.

B. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2024.

C. ASHRAE Standard 135-2008 BACnet Protocol.

D. ASHRAE Standard 90.1 - Energy Standard for Buildings Except Low-Rise Residential Buildings.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Control Diagrams
   1. Submit to the Architect/Engineer a complete system diagram, showing control connections and devices and their connection to other equipment, together with a clearly written description of the system and an outline of its function under conditions of operation.

2. Product Data: Provide description and engineering data for each control system component. Include sizing as requested. Provide data for each system component and software module.
3. Submittals shall be prepared on, or folded to, 8-1/2 inch by 11 inch size and bound in brochure form. Electronic form, pdf format, shall also be included.
4. DDC logic and control diagrams shall be included for all equipment and sequences of control. Include at a minimum all points shown on DDC control drawings. If any additional points are required to complete the sequence of operation, the control equipment needed to provide this information shall be provided.
5. Upon completion of the Work, provide the complete, accurate, and approved diagrammatic blueprinted layouts on the automatic control system specified herein and as installed. Layouts shall show all control equipment including job installation changes, and the function of each system shall be indicated. Layouts and descriptions shall be included in the project record set and in the operating and maintenance manuals.

C. Begin no work until submittals have been approved for conformity with design intent. Provide drawings as flash memory. When manufacturer's cutsheets apply to a product series rather than a specific product, clearly indicate applicable data by highlighting or by other means. Clearly reference covered specification and drawing on each submittal. General catalogs shall not be accepted as cut sheets to fulfill submittal requirements. Select and show submittal quantities appropriate to scope of work. Provide submittals within 12 weeks after contract award.

D. 100% completed points lists and sequences shall be submitted no later than the point at which system installation is 50% completed.

E. Product Data: Provide description and engineering data for each control system component. Include sizing as requested. Provide data for each system component and software module including, but not limited to the following equipment and components indicating arrangements, capabilities, range, voltage, horsepower, and construction.
1. Valves
2. Thermostats
3. Relays
4. Panels
5. Gauges
6. Sensors
7. Dampers
8. Switches
9. Pressure Controllers
10. DDC microprocessor
11. Unitary DDC controllers
12. Actuators
13. Wiring

F. Wiring diagrams and layouts for each control panel.

G. Floor plan schematic diagrams indicating field sensor, controller and power supply locations.

H. Shop Drawings: Indicate complete operating data, system drawings, wiring diagrams, and written detailed operational description of sequences. Submit schedule of valves indicating size, flow, and pressure drop for each valve. For automatic dampers indicate arrangement, velocities, and static pressure drops for each system.

I. Contractor shall make themselves familiar with the commissioning specification and include appropriate time to work with the commissioning agent.

J. Provide information noting items utilizing BACnet technology are BTL certified and listed.

K. Project Record Documents: Record actual locations of control components, including panels, thermostats, and sensors. Accurately record actual location of control components, including panels, thermostats, and sensors.
   1. Revise shop drawings to reflect actual installation and operating sequences.
   2. After drawings are finalized, provide drawings in pdf format. Include a list of all unit default safety and control settings, whether fixed or adjustable, as shipped from the factory. Where field modifications are required to meet the specification, provide all modification labor and materials, and submit a complete, detailed, step-by-step procedure for modifications.
   3. Drawings shall also be installed in workstation as web pages.

L. Operation and Maintenance Data: Include inspection period, cleaning methods, recommended cleaning materials, and calibration tolerances.
   1. As-built versions of the submittal product data.
   2. Names, addresses, and 24-hour telephone numbers of installing contractors and service representatives for equipment and control systems.
   3. Operator's manual with procedures for operating control systems: logging on and off, handling alarms, producing point/object reports, trending data, overriding computer control, and changing setpoints and variables.
   4. Programming manual or set of manuals with description of the programming language and syntax of statements for algorithms and calculations used of point/object database creation and modification, of program creation and modification, and editor use.
   5. Engineering, installation, and maintenance manual or set of manuals that explains how to design and install new points/objects, panels, and other hardware; how to perform preventive maintenance and calibration; how to debug hardware problems; and how to repair or replace hardware.
   6. Documentation of all programs created using custom programming language including setpoints, tuning parameters, and object database.
   7. Graphic files, programs and database on magnetic or optical media.
   8. List of recommended spare parts with part numbers and suppliers.
   9. Complete original-issue documentation, installation, and maintenance information for furnished third-party hardware, including computer equipment and sensors.
   10. Complete original-issue copies of furnished software, including operating systems, custom programming language, operator workstation software, and graphics software.
   11. Licenses, guarantee, and warranty documents for equipment and systems.
   12. Recommended preventive maintenance procedures for system components, including schedule of tasks such as inspection, cleaning, and calibration; time between tasks; and task descriptions.
   13. Operation & Maintenance manuals shall also be installed in workstation as web pages.

M. Warranty: Submit manufacturers warranty and ensure forms have been filled out in Allen County Board of Developmental Disabilities's name and registered with manufacturer.

N. After the control submittal has been reviewed and marked "No Exceptions Taken" by the design engineer, the controls contractor shall submit all graphics required for the temperature control system. The graphics shall be reviewed by the owner, commissioning agent, and the design engineer. The temperature control contractor shall not install any graphics until they have been reviewed and approved by the owner, commissioning agent and design engineer.

1.05 SUMMARY

A. General: The control system shall be as indicated on the drawings and described in the specifications.

B. ~~The intent of this specification and related sections is to provide a fully integrated, open, interoperable, peer-to-peer networked, distributed Direct Digital Control System. The following communication protocols are acceptable:~~
   1. ~~ANSI/ASHRAE Standard 135 BACnet - A Data Communication Protocol for Building Automation and Control Networks~~
   2. ~~ANSI/TIA/EIA-568-B Commercial Building Telecommunications Cabling Standard~~

C. The existing Direct Digital Control System (DDC) is Johnson Metasys framework. All new equipment controls will connect to this system.

D. ~~It is the Owner's express goal to maintain an open system that will allow products from various suppliers to be integrated into to a unified system in order to provide flexibility for expansion, maintenance, and service of the system. The Owner shall be the named license holder of all software associated with any and all incremental work on the project(s). In addition, the Owner shall receive ownership of all job specific configuration documentation, data files, and application-level software developed for the project. This shall include all custom, job specific software code and documentation for all configuration and programming that is generated for a given project and/or configured for use with the JACE, N4 Supervisor, and any related LAN / WAN / Intranet and Internet connected routers and devices. Any and all required IDs and passwords for access to any component or software program shall be provided to the Owner. The Owner shall determine which organizations to be named in the SI organization ID ("orgid") of all software licenses. Owner shall be free to direct the modification of the "orgid" in any software license, regardless of supplier, by Tridium Inc.~~

E. The Network Controller (NWC) shall connect to the Owner's local or wide area network, depending on configuration. Access to the system, either locally in each building, or remotely shall be accomplished through standard Web browsers and/or the N4 Supervisor, via the Internet and/or local area network.

F. Each NWC shall communicate to BACnet (B-AAC, B-ASC), devices and/or other open protocol systems/devices as described on the contract drawings and/or in the specifications.

G. Direct Digital Control (DDC) technology shall be used to provide the functions necessary for control of mechanical systems for Allen County Board of Developmental Disabilities.

H. Communication between the control panels and all work-stations shall be over a high speed 100 Mpbs (at minimum) Ethernet network. All nodes on this network shall be peers. The operator shall not have to know the panel identifier or location to view or control an object. Application Specific Controllers shall be constantly scanned by the network controllers to update point information and alarm information.
   1. The communication network wiring between control panels, and equipment controls with BACnet communication cards (chiller control panel, boiler control panels, domestic water heaters, and VFD's) shall be provided and installed by the temperature control contractor. The use of the owner's network for communication between devices shall be prohibited. Provide a single point of communication between the owner's network and the DDC control system network.

I. Temperature control contractor shall be responsible for the following:
   1. All wiring and communication downstream of the front end shall be provided with the DDC control system.
   2. Control of heating water system, air handling units, rooftop air handling units, and DX-Unit along with other miscellaneous equipment as denoted on drawings in accordance with requirements herein specified.
   3. Providing of control devices, valves, instruments, and the like, as herein specified and as required to comply with required sequences of automatic control.
   4. Providing of wiring for secondary control devices, relay switches, safety low limit controls, etc., and such interlock wiring required.

5. Provide all control wiring between all primary network controllers and equipment furnished with Bacnet control panels. Provide a single point connection to owner's LAN.
6. Coordinate communication requirements for the air handling units controls.
7. Tag all automatic controls, instruments, safeties, panels, actuators and relays. Key to control schematic. Refer to specification 23 0553 - HVAC Identification
8. Furnish adequate supervision on Work performed for him by others to insure proper operation and the neatest and best possible arrangement.
9. Testing and maintenance of system as herein specified.

J. The documentation is schematic in nature. The Contractor shall provide hardware and software necessary to implement the functions and sequences shown.

K. The Temperature control contractor shall provide the following control valves:
1. Air Handling Unit Heating Coils: Pressure Independent Characterized Control and balance valves with P/T ports or Pressure independent characterized control valves with seperate P/T ports on both side of valve.

1.06 QUALITY ASSURANCE

A. All materials and equipment used shall be standard components, regularly manufactured for the specified system. All systems and components shall have been thoroughly tested and proven in actual use of at least 2 years.

B. The temperature control contractor shall read all other Drawings and Specifications, become familiar with requirements and scope of the Project, and include such coordination work as may be required.

C. Designer Qualifications: Design system under direct supervision of a Control Engineer experienced in design of this work and is certified by control system manufacturer.

D. Installer Qualifications
1. Installing contractor shall have an established working relationship with control system manufacturer of not less than 5 years.
2. Installing contractor and his sub-contractors shall have successfully completed manufacturer's control system training. Provide certification of completed training, including hours of instruction and course outlines, with bid.
3. Installing contractor shall have an office within 75 miles of the project site and provide 24 hours response in the event of a customer call, 7 days per week, 365 days per year.

E. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., UL-916 Energy Managment Systems, UL-864UUKL Smoke Systems as suitable for the purpose specified and indicated and shall comply with NFPA 70.

F. Systems utilizing BACnet technology shall be BTL certified and comply with ASNI/ASHRAE Standard 135, BACnet - A Data Communication Protocol for building Automation and control networks.

G. Systems utilizing Lonworks shall not be permitted.

H. Damper components shall meet the requirements of AMCA 500.

I. Control systems shall meet the requirements of ASHRAE Standard 90.1.

J. Performance Standards. System shall conform to the following minimum standards over network connections:
1. Graphic Display. A graphic with 20 dynamic points/objects shall display with current data within 10 seconds.
2. Graphic Refresh. A graphic with 20 dynamic points/objects shall update with current data within 8 seconds.
3. Object Command. Devices shall react to command of a binary object within 2 seconds. Devices shall begin reacting to command of an analog object within 2 seconds.

4. Object Scan. Data used or displayed at a controller or workstation shall have been current within the previous 6 seconds.
5. Alarm Response Time. An object that goes into alarm shall be annunciated at the workstation within 45 seconds
6. Program Execution Frequency. Custom and standard applications shall be capable of running as often as once every 5 second. Select execution times consistent with the mechanical process under control.
7. Performance. Programmable controllers shall be able to completely execute DDC PID control loops at a frequency adjustable down to once per second. Select execution times consistent with the mechanical process under control.
8. Multiple Alarm Annunciation. Each workstation on the network shall receive alarms within 5 seconds of other workstations.

1.07 CONTRACTOR RESPONSIBILITIES

A. The temperature control contractor shall be responsible for final design drawings, installation of all control wiring and control devices in accordance with National Electric Code. The temperature control contractor shall also be responsible for startup and complete checkout, and commissioning of the systems.

B. This Contractor shall furnish complete drawings, component lists, specification sheets and sequences of operation to the Architect/Engineer for approval before start of installation.

C. All DDC logic diagrams shall be updated as built and included in the Operation and Maintenance Manuals for the Owner.

D. The temperature control contractor is responsible to use all room numbers developed and approved by the owner in the development of the temperature control system for this building.

E. The temperature Control Contractor shall provide labeling for all control system sensors, panels, actuators, etc. The label names shall match the point names given on the computer and as shown on the temperature control drawings.

F. The temperature control contractor shall contact the boiler manufacturer to integrate the cotnrol and monitoring points specified in the sequence of operations. The connection to the boiler controller shall be thru BACnet/IP, BACnet over ARCNET, BACnet MS/TP.

G. The temperature control contractor shall provide all control valves, balance and control valves, differential pressure controllers balance valves, as indicated on drawings.

H. Sizing of Valves: Valves shall be furnished to the Division 23- Mechanical Contractor who will mount them as piping is installed. Valves sizes shall be as recommended by the Temperature Control Contractor who shall be responsible for their proper sizing, regardless of indicated valve or line size on the drawings. Water valves shall not exceed 5 psi pressure drop, unless otherwise stipulated.

I. The temperature control contractor shall be responsible to provide AC Power Supplies as noted on the temperature control drawings. Temperature Control contractor shall be responsible to provide low voltage wiring from power supplies to VAR reheat box controllers. Submit wiring diagram as part of temperature control submittal.

1.08 PRE-SUBMITTAL MEETING

1.09 WARRANTY

A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

B. Correct defective Work within a one year period following owner acceptance of entire building.

C. Warranty shall also include any software upgrades available during the one (1) year period.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Connect to existing control system. Coordinate existing system requirements with the owner.

B. ~~The design intent is to provide a peer-to-peer networked, stand-alone, distributed control system with the capability to integrate both the ANSI/ASHRAE Standard 135-2008 BACnet protocol in one open, interoperable system. System shall be capable for future extension by other manufacturer's and shall not be write-protected.~~

C. Existing Control Manufacturer (Certified by BACnet testing laboratory):
   1. Johnson Controls - FX-80 - web-based Supervisory Controller

D. All temperature control systems shall be installed by the factory authorized installer or representative serving the Ohio, OH Area.

2.02 EQUIPMENT - GENERAL

A. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

2.03 CONTROL PANELS

A. Control cabinet/enclosure shall be extruded aluminum, galvanized steel or factory-hardened plastic with key locks and hinged doors. Electric panels shall be of code gauge steel construction with UL label. Panels shall be labeled with nameplates and legends as required.
   1. The control cabinet/enclosure shall be required to house devices not enclosed as a part of the DDC building automation system panels. Prewire with internal wiring terminated at labeled terminal strips. Thermometers and switches shall be mounted on the cover of the panel. Relays, transformers, and components shall be mounted inside the panel. Devices, whether interior or exterior, shall be provided with legend plates of engraved formica or equal. Cabinets shall be located as approved by the Architect/Engineer or as indicated on the Drawings.
   2. Local type panels need not contain graphic representations or symbols, unless specified below, but must contain approved nameplates, legends, etc., for each device.
   3. Where panels contain any wiring, panels shall be UL approved cubicles.

B. Provide common keying for all panels.

2.04 CONTROL VALVES

A. Pressure Dependent Control Valves
   1. Butterfly Pattern:
      a. Iron body, bronze disc, resilient replaceable seat for service to 250 degrees F lug ends, extended neck.
      b. Hydronic Systems:
         1) Rate for service pressure of 125 psig at 250 degrees F.
         2) Size for 1 psig maximum pressure drop at design flow rate.
   2. Ball Pattern:
      a. Up to 2 inches: Industrial quality with bronze bodies and female NPT threads. All valves shall have blowout proof stem design, glass-reinforced Teflon thrust seal washer and stuffing box ring with a minimum of 400 psi rating.
      b. Valves shall have equal percentage characteristics.

2.05 PRESSURE INDEPENDENT CHARACTERIZED CONTROL VALVES (PICCV)

A. Acceptable Manufacturers:
   1. Belimo
   2. Bell & Gossett
   3. Danfoss

4. IMI Hydronics / TA
5. Substitutions: See Section 01 6000 -

B. NPS 2 and Smaller: Forged brass body rated at no less than 400 PSI, chrome plated brass ball and stem, female NPT union ends, dual EPDM lubricated O-rings and a brass or TEFZEL characterizing disc.

C. Accuracy: The control valves shall accurately control the flow from 0 to 100% full rated flow with an operating pressure differential range of 5 to 50 PSI differential across the valve with a valve body accuracy of +/- 5% variance due to differential pressure fluctuation or +/- 10% total assembly error incorporating differential pressure fluctuation, manufacturing tolerances, and valve hysteresis

D. Flow Characteristics: Equal percentage characteristics.

E. All actuators shall be capable of being electronically programmed in the field by use of external computer software or a dedicated handheld tool for the adjustment of flow.

F. The manufacturer shall provide a published commissioning procedure following the guidelines of the National Environmental Balancing Bureau (NEBB) and the Testing Adjusting Balancing Bureau (TABB).

G. Provide P/T ports on both sides of PICCV valve if not included within valve.

H. The manufacturer shall provide a published commissioning procedure following the guidelines of the National Environmental Balancing Bureau (NEBB) and the Testing Adjusting Balancing Bureau (TABB).

I. A wet calibrated electronic flow meter shall provide dynamic feedback to measure flow and verify performance.

J. The control valve shall require no maintenance and shall not include replaceable cartridges.

2.06 DAMPERS - ALL EXCEPT RELIEF AIR APPLICATIONS

A. Dampers shall be low leakage type, as required to meet the requirements of ASHRAE Standard 90.1, not less than 22 gauge galvanized steel frames.

B. Performance: Test in accordance with AMCA 500-D.

C. Frames: Galvanized steel, welded or riveted with corner reinforcement, minimum 12 gage, 0.1046 inch.

D. Blades: Galvanized steel, maximum blade size 8 inches wide, 48 inches long, minimum 22 gage, 0.0299 inch, attached to minimum 1/2 inch shafts with set screws.

E. Blade Seals: Synthetic elastomeric or neoprene mechanically attached, field replaceable.

F. Jamb Seals: Spring stainless steel.

G. Shaft Bearings: Oil impregnated sintered bronze or nylon bushings.

H. Linkage Bearings: Graphite impregnated nylon or oil impregnated sintered iron.

I. Leakage: Dampers shall be low leakage dampers and shall be designed for tight shut-off such that for a 1500 FPM damper leakage does not exceed 1 percent at 6 inches w.g.

J. Maximum Pressure Differential: 6 inches wg.

K. Temperature Limits: Minus 40 to 200 degrees F.

L. Modulating dampers shall be opposed blade type.

M. Whenever possible, damper size shall match ductwork size. The Temperature Control Contractor shall verify air velocity and notify the engineer of sizing concerns prior to installation of dampers

N. Automatic dampers installed in equipment furnished by the manufacturer shall be checked for proper size and design by the Temperature Control Contractor. Should any features of these dampers appear to be unsatisfactory, full details shall be given to the Engineer in writing and suggestions made for any necessary corrections.

2.07 DAMPER OPERATORS

A. General: Provide smooth proportional control with "continuous control action" and sufficient power for air velocities 20 percent greater than maximum design velocity and to provide tight seal against maximum system pressures. Actuator response shall be linear in response to sensed load and damper stroke shall be smooth and efficient throughout it's entire range. Damper operators shall be electronic, direct coupled type designed for 100,000 full stroke cycles at rated torque, low voltage type. Provide spring return for two position control and for fail safe operation. Damper operators on outside air intakes shall spring return closed.
   1. Provide sufficient number of operators to achieve unrestricted movement throughout damper range.
   2. Provide one operator for maximum 25 sq ft damper section.
   3. Damper operators on outside air intakes and exhaust outlets where required shall be spring return closed.

B. Size for torque required for damper seal at load conditions with one actuator per damper section. Mechanically paralleled or ‘piggybacked’ actuators are not permitted.

C. Coupling: V-bolt dual nut clamp with a V-shaped toothed cradle. Aluminum clamps or set screws are not acceptable.

D. Overload Protection: Microprocessor or an electronic based motor controller providing burnout protection if stalled before full rotation is reached. The actuator shall be electronically cut off at full open to eliminate noise generation with the holding noise level to be inaudible.

E. Power Requirements: 0.23A (running) and 0.09A (holding) at 24V-ac or 27 VA (running) and 10 VA (holding) at 120V-ac.

F. Actuator timing shall be 15 sec.

G. Temperature Rating: Actuator shall have a UL555S listing by the damper manufacturer for 350ºF [250ºF].

H. Proportional Smoke Damper Actuators shall meet all requirements specified above and shall modulate 0-100% open in response to a 2-10vdc or 4-20mA control signal. A 2-10vdc feedback output shall provide a 2-10vdc signal for position indication.
   1. Power Requirements (Proportional): Maximum (running) 12 VA at 24-V ac or 8 W at 24-V dc. Maximum (holding) 5VA at 24-V ac or 3 W at 24-V dc.
   2. A manual override winder and locking mechanism shall be provided for override operation of the actuator on a loss of power.

2.08 RELAYS

A. Where required, provide relays for energizing or re-energizing the various branch circuits in response to master control panels. Relays shall be UL labeled and sized for not less than 140 percent of the connected amperage load. Relays shall be rated for the system voltage and have proper throw and poles.

2.09 TRANSMITTERS

A. Electronic Room Temperature Sensors
   1. Room Temperature Sensors shall be used in classrooms, office spaces, kitchen spaces, student dining, and gymnasiums.
   2. Temperature sensors shall be equal to PreCon type-IV thermistors utilizing a 20K ohm thermistor or platinum RTD's of 2000 ohm resistance.

3. Housing: Sensors shall be manufactured in a durable epoxy housing and shall be enclosed for protection from elements when installed in the sensors operating environment. The sensor cover shall be provided with tamperproof screws. Sensors shall not include a display or keypad.
4. Temperature sensors shall be provided with an override button that will switch the mechanical system into occupied mode of control. The sensors shall allow temperature adjustment of +/- 3 (adj.) degrees at room sensor and shall provide a digital readout panel.
5. Sensor cover shall be color "Pure White".

B. Electronic Duct Temperature Sensors
1. All duct sensors shall be true averaging type sensors with capillary lengths not less than 20 feet long. The only exceptions will be return air, and outdoor air sensors, which may be single point temperature sensors.
2. All duct sensors shall be installed within enclosures that are suitable for the application.

C. Safety Low Limit Thermostats
1. Automatic reset safety low limit thermostats with flexible sensing elements shall serpentine full length of duct or coil. Instrument to be sensitive to lowest temperature at any 12 inch increment on its 20 foot length. Thermostat shall have a range of 34 degrees F. to 60 degrees F. with a fixed 5 degrees F. differential. Provide one for every 20 square feet of coil.
    a. Safety low limit thermostats shall be capable of being reset through software at the building energy management computer.

D. Electronic Pressure Sensors
1. Provide pressure sensors and other pressure indicating sensors of commercial grade quality located at the point of measurement and installed according to the manufacturer's recommendations.
2. Provide pressure sensors of the direct acting or reverse acting, unidirectional or bidirectional type such that the BAS shall be able to convert input signal into a digital signal for use by the BAS.
3. Provide pressure sensors utilizing the smallest possible operating range which will sufficiently cover the range required for normal operating conditions.
4. Provide pressure sensors of the ultra precision type with a tolerance at 70 degrees F of no greater than plus/minus .8 percent of full scale and an end-to-end accuracy of plus/minus 2 percent of full scale.

E. Duct Differential Pressure/Air Velocity Transmitters
1. Differential Pressure/Air Velocity Transmitters shall be provided by the Temperature Control Contractor to monitor the difference between two pressures, duct air veloctiy and generate a linear output proportional to the difference in pressures.
2. Design range shall be -5 inches water column to 4 inches water column.
3. Minimum accuracy shall be +/-1.0 percent of calibrated span. Includes combined effects of linearity, hysteresis and repeatability.
4. Unit shall be provided with a LCD display.

F. Current Status Switch
1. Shall be capable of detecting changes in flow of current to motors in determining accurate and reliable equipment status.
2. Ampere rating for 2.5 - 135 amps continuous.
3. Sensor supply voltage shall be included from monitor conductor.
4. Minimum current required is 1 amp.
5. Trip setpoint shall be adjustable to +/- 1 percent of range.

2.10 BUILDING AUTOMATION SYSTEM

A. Connect to existing control system. Furnish a complete Direct Digital Control system.
   1. The entire system shall be totally DDC with electric/electronic actuation. No pneumatics shall be utilized except where noted on the associated drawings.
   2. The DDC System shall support the ASHRAE Standard 135-1995 BACnet protocol.
   3. The DDC System shall communicate to the owner's communication network thru a single point of data connection. All wiring and communication downstream of that single point of data connection shall be provided with the DDC control system.
   4. The system shall be backward compatible. Whenever a system upgrade is provided, the system shall be capable of communicating to existing device level controllers without the requirement to provide any new equipment and controllers.
   5. The system shall be capable of operating on the latest version of IE explorer, Firefox, or Google Chrome. System shall be capable of operating without JAVA.

B. The following HVAC equipment shall be controlled by the Building Automation System including sequences. A graphic shall be provided for each piece of equipment listed below:
   1. Air Handling Units.
   2. Rooftop Air Handling Units.
   3. Heating Water System.

C. Server Software
   1. Modify existing server software.
   2. Provide icon selection of users programs such as database programming and monitoring. Provide menus with highlighted active commands, context commands descriptions and help files. A standard mouse interface and normal keyboard operation shall access all programs. Provide continuous display of system status, and text monitoring screens with highlighted alarm conditions and report generation.
   3. Any action taken by an operator shall be logged to the systems status log to render an audit trail of operator actions. User access definitions shall be completely definable and modifiable by the system's manager.
   4. The Graphical User Interface (GUI) shall run on existing Microsoft Windows 7 or most recent.
   5. The GUI shall employ standard browsers including Windows Explorer and Firefox. It shall include a tree view (similar to Windows Explorer) for quick viewing of, and access to, the hierarchical structure of the database. In addition, menu-pull downs, and toolbars shall employ buttons, commands and navigation to permit the operator to perform tasks with a minimum knowledge of the HVAC Control System and basic computing skills. These shall include, but are not limited to, forward/backward buttons, home button, and a context sensitive locator line (similar to a URL line), that displays the location and the selected object identification.
   6. Real-Time Displays. The GUI, shall at a minimum, support the following graphical features and functions:
      a. Minimum Required Graphics:
         1) All setpoints shall be shown on the respected graphic page for each piece of equipment. All setpoints shall be adjustable and acceptable range of adjustment shall be noted in as-built sequence of operation.
         2) Home Screen with background image of school building or school logo and include following:
            (a) Information on current weather conditions
            (b) Link to building floor plan
            (c) Link to each individual air handling unit screen.
            (d) Link to chilled water plant screen.
            (e) Link to heating water plant screen.

(f) Link to energy dashboard.
(g) Link to alarms page
(h) Link to schedules page
(i) Snow Day Schedule Button.

3) Floor Plan: Overall floor plan shall be provided with units broke out in different colors. Link to each individual enlarged unit plan. Enlarged Unit plans shall contain:Unit shall Color graphic floor plan and zone floorplans showing all space temperatures.
   (a) Floor plan showing all spaces with room numbers matching owner's final room number designations.
   (b) Temperature of each space. Either space or text shall change color based on deviation away from setpoint. Space or text shall change to blue if room below setpoint by 2 F (adj) and change to red if above 2 F (adj) setpoint. Text to be green for space setpoint met.
   (c) Show space humidity at locations of space humidity sensors.
   (d) Link back to overall floor plan.
   (e) Link to equipment page serving the room by clicking on the individual space.
   (f) Link to alarm page.
4) Air Handling Unit Screen:
   (a) Graphic of equipment including heating / cooling coils, valves, dampers, fans, filters, airflow stations and other sensors. Graphic shall be dynamic
   (b) Heating Valve Position. If valve is a three-way valve, graphic to represent three way valve.
   (c) DX-Unit status
   (d) Fan operation including fan speed if variable speed.
   (e) Provide a link to VFD screen. On VFD screen provide in a table format all information from VFD.
   (f) Damper Positions.
   (g) Airflow values and temperature values as shown on temperature control drawing schematics.
   (h) If air handling unit is set up as a VAV air handling unit, include the following information:
      (1) Supply air temperature
      (2) Supply air temperature setpoint
      (3) Supply air static pressure
      (4) Supply air fan static pressure setpoint.
   (i) Link to associated heating water plant.
   (j) Link to sequence of operation page.
   (k) Link to alarm page.
   (l) Link back to overall floor plan.
5) Heating Water Plant Screen:
   (a) Graphic of plant including boilers, pumps, and piping between pumps and boilers. All graphics shall be dynamic.
   (b) Boiler firing rate, status. Include a link to a seperate page for each boiler. This seperate page shall include all information received from the boiler. Refer to boiler specification section for list of minimum data.
   (c) Pump operation including speed.
   (d) Heating water supply and return water temperatures as shown on the temperature control schematics.
   (e) Boiler alarms. Provide a link to the alarm page.

(f) Link to sequence of operation page.
(g) Link back to overall floor plan.

6) Alarms Page
(a) The system will be provided with a dedicated alarm screen. This screen will notify the operator of an alarm condition, and allow the operator to view details of the alarm and acknowledge the alarm.
(b) All critical alarms shall be wired so that unit fans, pumps, etc. cannot be turned on in hand mode when safety device is tripped.
(c) All critical alarms as determined by the owner shall be sent ot email accounts, cell phones, and pagers via text messaging capabilities.

7) Schedules Page
(a) Provide calendars for all air handling equipment.

b. The sequence of operations shall be located as a pull down feature at each piece of equipment or provide a link to a pdf document of the sequence of operations.
c. Provide As-Built wiring diagrams complete with material part numbers.
d. The operator interface shall allow users to access the various system schematics and floor plans via a graphical penetration scheme, menu selection or text-based commands. Dynamic temperature values, flow values and status indication shall be shown in their actual respective locations and shall automatically update to represent current conditions without operator intervention.
e. Graphic screens shall be developed using any drawing package capable of generating a GIF, BMP, or JPG file format. Use of proprietary graphic file formats shall not be acceptable. In addition to, or in lieu of a graphic background, the GUI shall support the use of scanned pictures.
f. Graphic screens shall contain objects for text, real-time values, animation, color spectrum objects or “thermo-graphics”, logs, graphs, HTML or XML document links, schedule objects, hyperlinks to other URL's, and links to other graphic screens.
g. Graphics shall support layering and each graphic object shall be configurable for assignment to a layer. A minimum of six layers shall be supported.
h. Modifying common application objects, such as schedules, calendars, and set points shall be accomplished in a graphical manner.
1) Schedule times will be adjusted using a graphical slider, without requiring any keyboard entry from the operator.
2) Holidays shall be set by using a graphical calendar, without requiring any keyboard entry from the operator.
3) Snow Day Operation shall be set by clicking on a "Snow Day" button located on screen of graphics.
i. Commands to start and stop binary objects shall be done by right-clicking the selected object and selecting the appropriate command from the pop-up menu. No entry of text shall be required.
j. Adjustments to analog objects, such as set points, shall be done by right-clicking the selected object and using a graphical slider to adjust the value. No entry of text shall be required.

7. System Configuration: At a minimum, the GUI shall permit the operator to perform the following tasks, with proper password access:
a. Create, delete or modify control strategies.
b. Add/delete objects to the system.
c. Tune control loops through the adjustment of control loop parameters.
d. Enable or disable control strategies.
e. Generate hard copy records or control strategies on a printer.
f. Select points to be alarmable and define the alarm state.

g. Select points to be trended over a period of time and initiate the recording of values automatically.

8. On-Line Help: Provide a context sensitive, on-line help system to assist the operator in operation and editing of the system. On-line help shall be available for all applications and shall provide the relevant data for that particular screen. Additional help information shall be available through the use of hypertext. All system documentation and help files shall be in HTML format.
9. Security: Each operator shall be required to log on to that system with a user name and password in order to view, edit, add, or delete data. System security shall be selectable for each operator. The system administrator shall have the ability to set passwords and security levels for all other operators. Each operator password shall be able to restrict the operators' access for viewing and/or changing each system application, full screen editor, and object. Each operator shall automatically be logged off of the system if no keyboard or mouse activity is detected. This auto log-off time shall be set per operator password. All system security data shall be stored in an encrypted format.
10. System Diagnostics. The system shall automatically monitor the operation of all workstations, network connections, building management panels, and controllers. The failure of any device shall be annunciated to the operator.

2.11 BUILDING AUTOMATION EQUIPMENT

A. System Network Controller is existing to remain.

B. Primary Controllers (Air Handling Units)
1. Each primary controller shall be a dedicated, stand-alone, microprocessor-based DDC controller that is BACnet certified (B-BC / B-AAC) with sufficient capacity to handle all points and programming associated with the control sequences as specified. In addition, each controller shall have a minimum 15% spare point capacity. Primary controllers shall be capable of being mounted within the equipment housing and shall have the capability to be programmed on-line and/or off-line (simulation capability) as required to meet unique HVAC application needs as well as the various ASHRAE control cycles. Primary controllers shall be capable of communicating global and critical variables to other primary controllers residing on the same network without the intervention of a higher level controller (Peer to Peer communication).
2. All devices shall meet the requirements of clause 22.1.5 of ASHRAE 135-2012. Use Analog inputs and outputs. If Analog Output objects are used, these must be writeable.
3. All primary controllers shall be application programmable and shall at all times maintain their certification. All control sequences within or programmed into the primary controller shall be stored in non-volatile memory, which is not dependent upon the presence of a battery to be retained.
4. Software incorporated into the controller shall include the following:
   a. Real time operating system software
   b. Real time clock/calendar and network time synchronization
   c. Primary control unit diagnostic software
   d. LAN/WAN communication software
   e. Alarm processing and buffer software
   f. Energy management software
   g. Data trending, reporting, and buffering software
   h. Input/output database (physical and virtual points)
5. Primary controller shall have expansion capability to support additional I/O requirements thru remote expansion input/output modules.
6. The controller shall have a mix of digital inputs (DI), digital Triac outputs (DO), analog outputs (AO), and universal inputs (UI).
   a. Analog outputs (AO) shall be capable of being configured as digital outputs (DO).

b. Input and Output wiring terminal strips shall be removable from the controller without disconnecting wiring.
c. Input and Output wiring terminals shall be designated with color coded labels.
d. Universal inputs shall be capable of being configured as binary inputs, resistive inputs, voltage inputs (0-10 VDC), or current inputs (4-20 mA).

7. The controller shall provide "continuous" automated loop tuning with an Adaptive Integral Algorithm Control Loop.
8. An RJ-11 type connection serial port shall allow a local portable operator terminal to access all program blocks and attributes for complete programmability. The port shall also support complete up/downloading capability.
9. All input/output and control parameters may be utilized or shared throughout the network. All primary controllers shall be accessible throughout the network.

2.12 TEMPERATURE CONTROL WIRING

A. The DDC System shall communicate to the owner's communication network thru a single point of data connection. All wiring and communication downstream of that single point of data connection shall be provided with the DDC control system.

B. Control wiring shall meet the requirements of Article 725, Class 1, Class 2, Class 3 Remote-Control, signaling, and power-limited circuits of the NEC.

C. Control wiring shall be UL listed plenum rated cable or installed in conduit. Wiring shall be routed in conduit where exposed to occupied spaces and in mechanical rooms. Conduit shall be 1/2 inch minimum size and shall be furnished and installed under this section. Exposed wiring in occupied spaces and mechanical rooms will not be accepted.

D. Concealed wiring and wiring in non-plenum ceiling cavities, which is operating under 100 volts, may be open wired if in compliance with Article 725, NFPA-70 (NEC). Open wiring shall be secured with plastic tie wraps to the permanent building structure as approved by the Architect/Engineer.

E. Terminations shall be performed by the Temperature Control Contractor.

F. Wire and conduit not indicated on the Drawings or in the Specifications, but required by the controls supplier, shall be paid for by the Temperature Control Contractor. This includes power supply wiring which is not indicated in the Division 26 drawings but which is necessary for system operation.

G. Temperature control cable is to be properly supported per industry standards and practices. Cable tray shall not be used for installation of temperature control wiring.
1. Bridle rings shall be used to support wiring in all return air plenums.

H. Temperature control wiring Color Identification Guide:
1. Wiring between AHU equipment, pumps, chillers, and miscellaneous equipment shall be white.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that existing systems are ready to receive work.

B. Beginning of installation means installer accepts existing conditions.

C. Sequence work to ensure installation of components is complementary to installation of similar components in other systems.

D. Coordinate installation of system components with installation of mechanical systems equipment such as air handling units and air terminal units.

E. Ensure installation of components is complementary to installation of similar components.

F. Coordinate installation of system components with installation of mechanical systems equipment such as air handling units and air terminal units.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Check and verify location of thermostats with plans and room details before installation. Locate bottom at 44 inches above floor. Align with lighting switches.

C. Mount freeze protection thermostats using flanges and element holders.

D. Provide guards on thermostats where indicated.

E. Provide valves with position indicators and with pilot positioners where sequenced with other controls.

F. Provide mixing dampers of opposed blade construction arranged to mix streams. Provide pilot positioners on mixed air damper motors.

G. Install damper motors on outside of duct in conditioned spaces. Do not install motors in locations at outdoor temperatures.

H. Mount control panels adjacent to associated equipment on vibration free walls or free standing angle iron supports. One cabinet may accommodate more than one system in same equipment room. Provide engraved plastic nameplates for instruments and controls inside cabinet and engraved plastic nameplates on cabinet face.

I. Install "hand/off/auto" selector switches to override automatic interlock controls when switch is in "hand" position.

J. Temperature control contractor shall make themselves familiar with the commissioning specification and provide all items for the commissioning agents use as noted.

3.03 SEQUENCE OF OPERATION

A. Refer to Specification Section 23 0993 for all equipment sequences of operation.

3.04 OCCUPIED / UNOCCUPIED ZONES

A. Manual Overrides:
   1. Provide manual, push button overrides as a part of each room temperature sensor. Pressing of override button will place zone on which sensor is located into a programmed override that is adjustable through the software.
   2. All zones shall include computer controlled overrides.

B. Refer to specification section 23 0993 for specified zones.

3.05 GUARANTEE

A. It is intended that the Temperature Control Contractor include as part of his bid two (2) year full service warranty. All labor and material shall be guaranteed against defects in workmanship for two (2) year period from the date of Substantial Completion and acceptance by the Owner. Any material proving defective shall be repaired or replaced during that period. This shall not, however, apply to material that has been damaged due to willful negligence.

B. The Contractor will provide hardware and software support during the two year guarantee after the date of acceptance. Hardware support includes replacing of any major or minor components, relays, sensors, etc., that fail to operate properly. Software support includes upgrading of software during warranty period such that system is loaded with latest available revision at end of warranty period.

C. Software support during the two year warranty shall include any programming changes to correct control operation resulting in alarms. All changes shall be cooresponded with the design engineer and owner.

D. Support is also defined to include Owner personnel training needed to operate the system effectively as outlined in this Specification. Explicitly included is the training needed to analyze a building's operation with a view to minimizing energy costs.

3.06 TRAINING

A. The Temperature Control Contractor shall, during the one-year guarantee period, provide no less than (4) 4-hour training sessions to be held at the building site after system is in full operation. A total of two 4 hour training sessions shall be given quarterly during the first 12 months of operation to familiarize maintenance personnel on the operation of the mechanical and control systems through the host computer.

B. Training shall include a hands on process to get owner involved with making changes, setting schedules, monitoring and acknowleding alarms, setting up trends, and monitoring trends.

C. All training shall be video-taped by the control Contractor. Two copies shall be turned over to the owner's maintenance staff.

3.07 SERVICE CHECKS

A. Prior to final inspection, this Contractor shall perform the following service work, including, but not limited to, the following items:
   1. Check and oil electric motors furnished under control system.
   2. Lubricate damper bearings as required.
   3. Check damper travel, adjust and tighten set screws.
   4. Lubricate valve stems, as required, check packing; repair as required.
   5. Calibration of instruments.
   6. Check and verify circuitry.
   7. Calibrate and checkout controllers, fusing, etc.
   8. Test and debug microprocessor and software.
   9. Startup and test operation of variable frequency drive with factory authorized personnel.

3.08 FINAL COMPLETION

A. When the work is completed, and at a time directed by the Owner or the Architect/Engineer, the Contractor shall carefully adjust all parts of the equipment and systems. This includes adjustment of automatic controls and safety devices, proper setting of adjustable devices, dampers and valves, and other necessary operations so the systems are fully operable and automatic in operation. Upon completion of the Work, notify the Owner, and/or Architect/Engineer that system is ready for final tests and inspection.

B. At the time of final inspection, this Contractor shall be represented by a person with the proper authority, who shall demonstrate, as directed by the Architect/Engineer, that his Work fully complies with the purpose and intent of the Specifications and Drawings. Labor, services, instruments, and tools necessary for demonstrations and tests shall be provided by the Contractor.

C. The Contractor shall test and adjust each instrument specialty and equipment furnished by him, prior to final acceptance. The Contractor shall demonstrate, for approval by the Architect/Engineer, that subsystems operate as a coordinated and properly functioning, integrated system.

D. The Contractor shall furnish labor, provide adjustments and incidentals necessary to obtain the desired and intended results.

E. The Contractor shall turn over a printed copy and electronic copy of the completed and debugged operating software to the Owner at the conclusion of the first year warranty.

F. The contractor shall provide a list of all devices and their addresses to the owner. This shall be included in the O&M manual.

END OF SECTION