

December 20, 2017

# **Request for Proposal Network Equipment**

For

**TSD Bid # 9852  
Troy School District  
1140 Rankin  
Troy, MI 48083**

**Prepared by**

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SECTION 00 30 00 – BIDDING REQUIREMENTS – INSTRUCTION TO BIDDERS

PART 1 - GENERAL

1.1 REQUEST FOR PROPOSALS

- A. Troy School District is requesting proposals for a Wired and Wireless Data Communications Network (“RFP”). Bidders shall provide, install, configure, test and commission a fully operational wired and wireless network for all School District buildings. This project is also requesting E-rate funding for WAN Switches and equipment under Category 1 with all other switching and wireless equipment being applied for under Category 2.
- B. A complete list of the buildings (“Sites”) are provided in Attachment A and are incorporated herein by reference. **Bid documents may be obtained from the purchasing page (under Departments, Business Services) of the District’s web site at [www.troy.k12.mi.us](http://www.troy.k12.mi.us).**

- 1.2 **Due on or before 2:30 PM (local time) on January 23, 2018 (“Due Date”)**, the Owner will receive bid proposals for the project. The Owner will not consider or accept a bid proposal received after the due date for bid proposal submission. All bid proposals received after the due date will be returned by making them available to the respective Bidder, unopened, for said Bidder to pick-up at their sole cost and expense. Bid proposals shall be submitted to:

Todd Hensley, Purchasing Supervisor  
Troy School District  
Purchasing Department  
Facility Operations Building  
1140 Rankin  
Troy, Michigan 48083

1.3 PROPOSALS/QUOTES

- A. Four (4) “hard” copies and one (1) “soft” (electronic) copy on a USB “flash” drive of the proposals are to be submitted in sealed packaging, clearly marked: **“NETWORK EQUIPMENT SEALED BID”** for Troy School District and shall be identified with the Bidder’s name and address and the date and time of the bid proposal opening. The Owner is not responsible for any postal or delivery delays. No email, facsimile or other electronic bid proposals will be accepted.
- B. Proposals will be opened publicly immediately following the due date of the proposals

1.4 PROPOSAL FORMAT

- A. The Bid response shall be structured as follows:
  - 1. Section 1 – Submittal Letter, Executive Summary and Bid Bond
  - 2. Section 2 – Proposal Forms and Pricing

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3. Section 3 – Narratives, System Description, Information, and Brochures
  4. Section 4 - Bidder Qualifications, References
  5. Section 5 – Bidder’s Maintenance Contract
- B. The “hard copy” Bids shall be submitted on 8 1/2" by 11" paper, single sided, single spaced using 10 to 12-point print, in 3 ring binders, clearly labeled to show the Bidder's name.
- C. The “soft copy” Bid shall be in the same structure as the “hard copy” Bids, bound in a .pdf file, submitted on an USB “flash”, “Thumb” or similar drive with the hard copies.

1.5 SECURITY

- A. Each bid proposal must be accompanied by bid security in the form of a certified check or bid bond in the amount not less than 5% of the bid proposal amount, made payable to Troy School District or naming Troy School District as the obligee. Bid bonds shall be issued by a company licensed to do business in the State of Michigan

1.6 FAMILIAL DISCLOSURE AFFIDAVIT

- A. Each bid proposal must be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the owner or any employee of the Bidder and any member of the Board of Education or the Superintendent of Troy School District. The Board of Education will not accept a bid proposal that does not include this sworn and notarized disclosure statement.

1.7 AFFIDAVIT OF COMPLIANCE – IRAN ECONOMIC SANCTIONS

- A. Each bid proposal must be accompanied by the Iran Economic Sanctions Affidavit of Compliance in compliance with Michigan Public Act No. 517 of 2012. The Board of Education will not accept a bid proposal that does not include this sworn and notarized disclosure statement.

1.8 RESERVATION OF RIGHTS

- A. The Owner reserves the right, in its sole and absolute discretion (for this provision and all other provisions contained in this RFP), to accept or reject, in whole or in part, any or all bid proposal with or without cause, to waive any irregularities or informalities in this RFP process or any bid proposal, and to award the contract to other than the low bidder, when in the opinion of the Owner, such action will best serve the Owner's interests.

1.9 WITHDRAWAL OF BID PROPOSALS/QUOTES

- A. All bid proposals submitted shall not be withdrawn and shall be irrevocable for a minimum period of ninety (90) calendar days following the due date for receipt of bid proposals set forth above.

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1.10 REQUESTS FOR CLARIFICATION

1.11 Bidders may request that the School District clarify information contained in this RFP. All such requests must be made in writing via email to Eric Helsel, Convergent Technology Partners, at [jfoster@ctpartners.net](mailto:jfoster@ctpartners.net). Requests for Clarifications and inquiries may only be made via email. The deadline for all Requests for Clarification is per the schedule of events. The aggregated answers to all Requests for Clarification will be provided in an addendum to the RFP which will be issued and posted on the Purchasing page of the District website at [www.troy.k12.mi.us](http://www.troy.k12.mi.us) January 17, 2018 for all potential proposers to view.

1.12 RESTRICTION ON COMMUNICATION

- A. From the issue date of this RFP until a Contractor is selected and the contract is awarded a prospective Contractor shall not communicate about the subject of this RFP or a Contractor's bid proposal with the Owner, its Board of Education, or any individual member, administrators, faculty, staff, students, or employees, except for additional requests for clarification in accordance with the paragraph above.

1.13 RELEASE OF CLAIMS

- A. Each Bidder by submitting its Proposal releases the Owner from any and all claims arising out of, and related to, this RFP process and selection of a Contractor.

1.14 PROPOSAL COST

- A. Respondents of this RFP are responsible for any and all costs incurred by them or others acting on their behalf in preparing or submitting a bid proposal, or otherwise responding to this RFP, or any negotiations incidental to its bid proposal or this RFP.

1.15 COLLUSIVE BIDDING

- A. All Bidders certify that its bid proposal is made without any previous understanding, agreement or connection with any person, firm or corporation making a bid proposal for the same project and is in all respects fair, without outside control, collusion, fraud or otherwise illegal action.

1.16 DEFINITIONS

- A. Bid Documents are defined as the Instructions to Bidders, Schedule of Events, this RFP, including all Supplemental forms, Attachments, Appendices, Specifications, Drawings and Addenda and the Contract.
- B. Addenda are written or graphic instruments issued prior to the due date of bid proposals which modify or interpret the Bid Documents by additions, deletions, clarifications or corrections. All Addenda issued to Bidders prior to the due date of bid proposals shall become part of the Bid Documents and all bid proposals are to include the Project/Work therein described. Each Bid

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Proposal submitted shall list all Addenda that have been received prior to the due date of bid proposals.

- C. As used in these Instructions to Bidders, the term "Bid Proposal" means a bid proposal prepared and submitted in response to this RFP.
- D. As used in these Instructions to Bidders, the term "PSC" refers to the Professional Service Contractor and means Convergent Technology Partners and its assigned representative.
- E. Throughout this RFP and Contract, the "Owner" or "District" will be used to refer to District and bidders submitting bid proposals will be referred to as "Bidders" or "Vendors" and a successful Bidder or Vendor will be referred to as a "Contractor".

1.17 BIDDER'S REPRESENTATION

- A. Each Bidder, by submitting a Bid Proposal, represents that the Bidder has read and understands the Bid Documents and is familiar with the local conditions under which the project is to be performed. Bidders will be held to have compared the Sites with Bid Documents and have satisfied themselves to all conditions affecting the execution of the Work/Project.

1.18 EXAMINATION OF BID DOCUMENTS

- A. **A mandatory Bidder's conference will be held on January 9, 2018 at 2:00 p.m. (EST)** for the purpose of answering any questions from the Vendors and visiting the Sites. The location of the Bidder's conference is:

Troy School District  
Services Building  
4420 Livernois  
Troy, Michigan 48098

- B. Before submitting a Bid Proposal, each Bidder shall examine the RFP documents carefully and shall read the Specifications and the Bid Documents. Each Bidder shall gather complete information prior to bidding as to existing conditions and limitations under which the Work/Project is to be performed, and shall include in its Bid Proposal a sum to cover the cost of items necessary to perform the Work/Project as set forth in the Bid Documents.
- C. No allowance or additional fees will be made to a Bidder because of lack of such examination or knowledge. The submission of a Bid Proposal will be considered as conclusive evidence that the Bidder has made such examination. An on-site-inspection of the Sites during the Bidder's Conference will be for all Bidders and their subcontractors, if any. Vendors may use subcontractors in connection with the Work/Project performed under this RFP provided the Owner has approved the subcontractors. In using subcontractors, the Vendor agrees to be responsible for all their acts and omissions to the same extent as if the subcontractors were employees of the Vendor.

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- D. Bidders may make written request to the PSC for interpretation or correction of any ambiguity, inconsistency or error in the Bid Documents that are discovered. These questions shall be submitted to the PSC no later than January 15, 2018, 5:00 PM. Only a written interpretation or correction by Addendum shall be binding on Bidders. No explanations or interpretations requested or made orally will be considered binding. All questions will be responded to in writing and all addenda will be posted to Purchasing page of the District website at [www.troy.k12.mi.us](http://www.troy.k12.mi.us).

1.19 SUBSTITUTIONS

- A. Each Bid Proposal shall be based upon the materials and equipment described in the Bid Documents.
- B. Voluntary alternates as substitutions for materials and equipment will be considered and evaluated if the Base Bid includes specified materials and equipment. In addition to the Base Bid, the submission of voluntary alternates is acceptable. If a voluntary alternate is submitted for consideration, it shall be expressed on the Bid Form as an “add” or “deduct” amount from the Base Bid. If a voluntary alternate is submitted, the Bidder shall also submit sufficient information in the form of drawings, specifications, and a complete description of the proposed substitute, the cost savings or advantages. Additionally, provide the name of the material or equipment for which it is substituted, drawings, cuts, performance and test data and any other data or information necessary for a complete evaluation, sufficient for analysis of the alternate. The Owner reserves the right to unilaterally accept or reject, in whole or in part, any voluntary alternates.

1.20 BIDDING PROCEDURES

- A. All Bids Proposal must be submitted on the Bid Proposal Forms provided as part of the Bid Documents and in accordance with the Advertisement to Bid and Instructions to Bidders. Bidders must provide a complete list of proposed subcontractors (one per discipline) as indicated on the Bid Forms. Listing two or more subcontractors per discipline will be grounds for disqualification.
- B. All Bidders must provide a proposal for the Base Bid that meets or exceeds the specifications set forth in this RFP. However, all Bidders may suggest Alternates if it is felt that the alternate proposal better suits the intent of this RFP. Any Alternate must be listed as such with separate pricing sheets. Any variance of the feature/functionality of the Base Bid must be identified in any Alternates proposed.
- C. Prior to the due date for bid proposals, any Addenda will be available for inspection wherever the Bid Documents are kept available for that purpose. No Addendum will be issued later than January 17, 2018. It is each Bidders responsibility to ascertain prior to submitting a Bid Proposal that he/she has received all Addenda issued and shall acknowledge their receipt in their Bid Proposal Form.
- D. All Bids must be signed as follows:

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1. Corporations: Signature of an officer of the firm who is authorized to bind the corporation.
  2. Partnerships: Signature of one partner who is authorized to bind the firm and all of its Partners.
  3. Bids submitted by Joint Ventures shall be signed by one of the Joint Ventures and shall be accompanied by a certified copy of the Power of Attorney authorizing the individual signing to bind all the Joint Ventures. If a certified copy of the Joint Venture's certificate submitted with the Bid Proposal indicates that all Joint Ventures have signed, no authorization is required.
  4. Individuals signing on own behalf: No authorization is required.
  5. Individual signing on behalf of another: Power of Attorney or comparable evidence of authority shall accompany Bid.
- E. Bid proposals shall be prepared on unaltered Bid Forms, which are a part of this RFP. Bidders shall make no additional stipulations on the Bid Form nor qualify the Bid Proposal in any other manner. Unauthorized conditions, limitations, or provisions attached to the Bid Proposal will be cause for rejection of the Bid Proposal. If alterations by erasure or interlineations are made for any reason, explain over such erasure or interlineations with a signed statement from the Bidder. No additional charges, other than those listed on the Bid Proposal Form and Bid Supplemental Forms, shall be made. Prices quoted will include verification/coordination of order, all costs for shipping, delivery to all Sites, insurance, payment and performance bonds, unpacking, setup, installation, operation, testing, cleanup, training and all other requirements contained in the bid documents.
- F. Bids shall be submitted in a sealed envelope. Identified on the face of the envelope:
1. Project name
  2. Name and address of Bidder
  3. Notation "**NETWORK EQUIPMENT - SEALED BID**"
- G. No responsibility shall attach to the PSC, the Owner, or the authorized representatives of either one, for the premature opening of any Bid Proposal which is not properly addressed, delivered and/or identified. In such event, that Bid Proposal will not be considered and the Bidder will be automatically disqualified from consideration.
- H. Negligence in preparation, improper preparation, errors in and/or omissions in the Bid Proposal shall not relieve the Bidder from fulfillment of any and all applicable obligations and requirements of contained in the Bid Documents.

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- I. The Owner or PSC in making copies available of the Bid Documents to Bidders do so only for the purpose of obtaining bid proposals on the project and do not confer a license or grant of use to a Bidder for any other purpose.
- J. All Bidders must complete, sign and return the attached "FAMILIAL DISCLOSURE" and "IRAN ECONOMIC SANCTIONS AFFIDAVITS" with their Bid Proposal.
- K. Bidders must include a Bill of Material (BOM), in Excel format, with line item pricing for all components proposed, including, but not limited to material, maintenance and support with the total listed where indicated in the Bid Proposal Forms. The BOM must be broken down into the following categories:

Category 1 - WAN Products

These items must be broken down by building and identified as eligible or in-eligible under E-rate Category 1 funding.

Category 2 – Switching and Wireless Products

These items must be broken down by building and identified as eligible or in-eligible under E-rate Category 2 funding.

Failure to provide the BOM with line item pricing may result in disqualification of the Bid proposal. This does not preclude filling out the Unit Pricing Form, Supplemental B.

- L. The Owner considers this RFP legally binding and will require that this Request for Proposal and the Bid Proposal be incorporated by reference into any subsequent Contract between the Contractor and the Owner. It should be understood by the Bidder that this means that the Owner expects the Bidder to satisfy all of the requirements and specifications contained in the RFP. Any exceptions to the RFP must be explicitly noted in the Bid Proposal. Lack of listing all exceptions will be considered acceptance of all of the specifications as presented in this RFP

1.21 UNIVERSAL SERVICE FUND (USF) CONDITIONS

- A. The service provider's USF Service Provider Identification Number (SPIN) *must* be included in the Bid Proposal Form. Direct all questions regarding the USF requirements in this IFB to the Universal Service Administrative Company (USAC), Schools and Library Division (SLD) at (888) 203-8100.
- B. The specified products and/or services are to be provided for FY2018 (July 1, 2018-June 30, 2019) and must qualify for universal service discounts under the FY2018 universal service support mechanism, E-Rate.
- C. The USF eligible products and/or services identified on the USAC FY2018 Eligible Services List, which is incorporated herein by reference, must be identified separately from any and all "ineligible" products and/or services in the Bid.

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1.22 CONSIDERATION OF BIDS

- A. The Bidder acknowledges the right of the Owner to accept or reject any or all Bid proposals, in whole or in part, with or without cause, to waive any irregularities or informalities in this RFP process or any Bid Proposal, and to award the contract to other than the low bidder. In addition, the Bidder recognizes the right of the Owner to reject a Bid Proposal:
1. If the Bidder fails to furnish any required Bid Security, or to submit the data required by the Bid Documents; or
  2. If the Bid Proposal is in any way incomplete or irregular; or
  3. If the Bidder's performance was unsatisfactory under a prior contract for the construction, repair, modification, or demolition of a facility with the Owner, or a contractor in privacy of contract with the Owner, which was funded, directly or indirectly, by the Owner;
  4. If the Bidder was an employer of construction mechanics working on the construction of facilities funded, directly or indirectly, by the Owner through contracts under 1984 PA 431, MCL 18.1101 et seq; MSA 3.516 (101) et seq, and was determined by the Michigan Department of Labor to have failed to comply with a contractual provision requiring the payment of Department of Labor's prevailing wage or the maintenance of Department of Labor's prevailing wage or the maintenance of Department of Labor's apprentice-journeyman ratio determinations for construction mechanics for that facility.
  5. Other than price, bids will be evaluated on service transition, adherence to specifications, prior experience with the District, financial capability and experience with similar projects.
- B. The Owner shall have the right to accept alternates in any order or combination and to determine the lowest responsible Bidder on the basis of the sum of the base bid and the alternates accepted.
- C. Once the contract is awarded to the Contractor, the contract is contingent upon Troy School District Board of Education approval and the Contractor providing the Owner with any and all documents required by the RFP prior to commencement of the Work/Project (i.e. Insurance Certificates, Labor and Material Payment Bond and Performance Bond, etc.). Further, the Owner reserves the unrestricted right to reduce the contract amount by reducing the scope of Work/project and/or components. Any such action will be taken before specific work on a building or on a project component has commenced. Contract amount shall be reduced or increased based on the unit pricing values or canceled in its entirety.
- D. Bidders to whom an award of a contract is under consideration shall submit to the Owner upon his/her request a properly executed Contractor's Qualification Statement, AIA Document A305 or other information format specified by the Owner.

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1.23 BID SECURITY

- A. The Bid Proposal shall be accompanied by a Bid Security of a certified check or cashier's check payable to the Owner or by a satisfactory Bid Bond Entity naming the Owner as the obligee and executed by the Bidder and a surety company authorized to do business in the State of Michigan, in an amount identified in the Instructions to Bidders. The check or amount of Bid Bond shall be forfeited to the Owner upon failure of the Contractor to enter into the Contract. The Contractor's Bid security will be retained until the Contractor has signed the contract and has furnished the required Certificates of Insurance and other required Bonds and documents required by the RFP. Bonds signed by an Attorney-In-Fact must be accompanied by a certified and effectively dated copy of their Power of Attorney.
- B. The Owner reserves the right to retain the Bid security of all Bidders until the Contractor enters into the contract or until ninety (90) days after bid opening, whichever is later. If the Contractor refuses to enter into the Contract, the Owner may retain their Bid Security as liquidated damages but not as a penalty.

1.24 PERFORMANCE AND LABOR AND MATERIAL PAYMENT BONDS

- A. At or prior to delivery of the signed Contract, the Owner will require the Contractor to secure and post a Labor and Material Payment Bond and a Performance Bond including bonding for all subcontractors, each in the amount of 100% of the Contract Sum including bonding for all subcontractors. Surety shall be a company incorporated in the United States and must appear on the U.S. Treasury Departments approved surety list and be adaptable to the Owner. The Contractor shall obtain such bonds in a manner consistent with Michigan law.

1.25 TAXES

- A. Installation services for the tangible personal property purchased by the Owner is not subject to sales taxation. Moreover, the Owner is exempt from taxation on all tangible personal property purchased by the Owner for its use and consumption; however, this exemption would not apply to any materials required under the Bid Documents that are deemed to be a component of a construction/improvement project to the Owner's Sites/Facilities. All prices submitted on the Bid Proposal Form shall be inclusive of any and all applicable taxes.

1.26 PERMITS AND FEES

- A. All prices submitted on the Bid Proposal Form shall be inclusive of any and all applicable/required permits and fees.

1.27 MICHIGAN RIGHT-TO-KNOW LAW

- A. All Contractors must conform to the provisions of the Michigan Right-To-Know Law, 1986 PA 80, which requires employers to:

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1. Develop a communication program designed to safeguard the handling of hazardous chemicals through labeling of chemical containers, and development and availability of Material Safety Data Sheets.
  2. Provide training for employees who work with these chemicals; and
  3. Develop a written hazard communications program.
- B. The law also provides for specific employee rights. These include:
1. The right to be notified (by employer or Contractor posting) of the location of Material Safety Data Sheet (MSDS);
  2. The right to be notified (by employer or Contractor posting) of new or revised MSDS no later than five working days after receipt; and
  3. The right to request copies of MSDS from their employers or Contractors.
- C. Provisions of Michigan's Right-to-Know Law may be found in those sections of the Michigan Occupational Safety and Health Act (MIOSHA), which contain Right-to-Know provisions, and the Federal Hazard Community Standard, which is part of the MIOSHA Right-to-Know Law through adoption.

1.28 WITHDRAWAL OF BIDS

- A. A Bidder may withdraw its Bid Proposal by written request from an authorized Bidder representative, at any time prior to the due date of bid proposals.
- B. No Bidder may withdraw a Bid Proposal for a period of ninety (90) calendar days, following the due date for receipt of bid proposals, and all bid proposals shall be subject to acceptance by the Owner during this ninety (90) day period.

1.29 EXECUTION OF CONTRACT

- A. The Contractor to whom the contract is awarded shall, within ten (10) calendar days after Notice of Award and receipt of the contract from the Owner, execute and deliver required copies to the Owner.
- B. At or prior to delivery of the executed Contract, the Contractor to whom the contract is awarded shall deliver to the Owner those Certificates of Insurance required by the Bid Documents and such Labor and Materials Payment Bonds and Performance Bond as are required by Owner and any other documents required by this RFP.
- C. The Owner shall approve the provided Bonds and Certificates of Insurance before the Contractor may proceed with the Work/Project. Failure or refusal to provide Bonds, Certificates of Insurance or any other documents required by this RFP in a form(s) satisfactory to the Owner

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shall subject the Contractor to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.

1.30 POST BID INFORMATION

- A. Bid Form(s) shall be submitted as indicated in the Bid Documents. The Bid Form(s) requires all proposed subcontractors for the project to be named; no more than one per discipline.

1.31 TIME OF COMPLETION

- A. The Bidder agrees to complete the Work within the timeframes listed in the Schedule of Events.

1.32 PREVAILING WAGE REQUIREMENTS

- A. In any contract entered into pursuant to this RFP, the Contractor shall comply with the provisions of the PREVAILING WAGE LAW.

- 1. The Contractor will pay the latest prevailing wages and fringe benefits for all Work as required by State of Michigan/Public Act 166 dated 1965, as amended. The prevailing wage and fringe benefit rates under Michigan law are required for this project.

- B. Additionally, the Contractor is required to comply with all other provisions of the governing prevailing wage law, and shall ensure its subcontractors' compliance therewith.

- C. Allegations that individuals working on this project are not receiving compensation required by law are considered serious by the Owner. In order to expedite the resolution of prevailing wage complaints related to this project, the Owner has determined that the Michigan Fair Contracting Center ("MFCC") is the organization best equipped to expedite the investigation of these matters. Any person or entity (the "Complainant") who reasonably believes that a particular contractor, subcontractor, sub-subcontractor, supplier or other person or entity providing labor, materials, goods or services on this project (each, an "Employer") is not paying prevailing wages as required by applicable law may ask the MFCC to determine whether proper rates are being paid either by completing and submitting to MFCC a request for assistance (the "RFA") or by contacting MFCC by telephone at (734) 462-2330 or (877) 611-6322. The RFA can be downloaded electronically at <http://mifcc.org/Brochures/KnowYourRights.pdf> and delivered to MFCC by facsimile to (734) 462-2318 or by mail to P.O. Box 530492, Livonia, Michigan 48153-0492.

- D. Each and every Employer who is subject to an audit by MFCC pursuant to any RFA shall cooperate and comply fully with all requests, requirements and inquiries of MFCC. If, after investigation, MFCC determines that a Complainant's allegations are meritorious and the Complainant, MFCC and the Employer are unable to resolve the dispute following MFCC's determination, then, under the direction and with the assistance of MFCC, the Complainant shall file a Prevailing Wage Complaint (the "PWC") with the State of Michigan Department of Labor and Economic Growth Wage and Hour Division (the "Wage and Hour Division"). The PWC can be downloaded electronically at <http://mifcc.org/Brochures/PrevailingWageComplaint.pdf> and

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delivered by facsimile to (517) 322-6352 or by mail to 7150 Harris Drive, P.O. Box 30476, Lansing, Michigan 48909-7076.

- E. Upon commencement of the audit from MFCC, the Owner reserves the right to hold all payments, pending the conclusion of the audit. If the Wage and Hour Division determines that the Employer has violated any applicable prevailing wage law, then the Owner shall automatically be entitled to and will (a) withhold from such Employer any and all payments due and owing until the Employer remedies any and all violations cited by the Wage and Hour Division, and (b) back charge the Employer for all costs actually incurred in MFCC's audit of the Employer.
  - 1. The Owner shall keep a hard copy of these requirements posted at the project site at all times.
- F. The Contractor shall be financially responsible for the payment of prevailing wages by all subcontractors that are subject to the governing prevailing wage law for Work on the project.
- G. Because Work on this project is covered by the Michigan Prevailing Wage Act ("Act") the Contractor and its subcontractors that are governed by the applicable prevailing wage law shall pay all hours at the prevailing wage rates at the applicable hourly rate; no Work performed by or on behalf of the Contractor on this project will be paid on a lump sum basis or a piece rate basis in violation of the Act.
  - 1. The Contractor will pay its workers at wage and fringe benefit rates consistent with the Act regardless of whether the workers are classified as employees or independent contractors.
  - 2. The Contractor shall not misclassify any work assignments, but shall in each and every case follow proper jurisdictional assignments in compliance with the Act.
  - 3. The Contractor shall assure that any persons paid at apprentice rates under the Act are properly classified as apprentices by actual participation in a BAT certified program or as may otherwise be permitted by the Act.

1.33 EQUAL OPPORTUNITY

- A. The Contractor and all of its subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin.

PART 2 - EXECUTION

2.1 SITE REQUIREMENTS

- A. The Owner Sites are both instructional and administrative facilities that provide year-round services to their students, staff and the community. As such, activities in all buildings are critical

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to the provisioning of services to the students, staff and the community and shall not be interrupted by the Contractor's Work activities.

- B. The computer and telephone systems associated with this Work will not be taken off-line or removed from service during normal working hours without coordination of the Owner's IT department and the staff of affected buildings. Arrangements must be made by the Contractor to coordinate any such activities.
- C. The Contractor will be required to work around all of the conditions listed above, as well as working with the Owner's staff to minimize disruptions to normal Owner activities.
- D. Installation Guidelines
  - 1. All Work performed on this Project will be installed in accordance with the current edition of the National Electrical Code®, the current edition of the National Electrical Safety Code®, the current edition of the BICSI Telecommunications Distribution Methods Manual, the current edition of the BICSI Cabling Installation Manual, the latest issue of the ANSI/TIA/EIA Standards as published by Global Engineering Documents as TIA/EIA Commercial Building Telecommunications Standard, and all local codes and ordinances.

## 2.2 QUALITY ASSURANCE

- A. Project Manager
  - 1. The Contractor will provide a full-time Project Manager who will act as a single point of contact for all activities regarding this Project. The Project Manager must be a management employee and will not be involved in personally performing craft installation Work
  - 2. The Project Manager is required to attend necessary technology and construction meetings for coordination before Work is started and construction meetings once Work is in progress.
  - 3. The Project Manager will be required to make on-site decisions regarding the scope of the Work and any changes required by the Work.
  - 4. The Project Manager will be totally responsible for all aspects of the Work and shall have the authority to make immediate decisions regarding implementation or Owner approved changes to the Work.
- B. Compliance with Laws and Regulations
  - 1. The Contractor performance of the Work shall comply with all applicable federal, state, and local laws, rules, and regulations and Owner policies, procedure, rules and regulations. The Contractor shall give required notices, shall procure necessary governmental licenses and inspections, and shall pay without burden to the Owner, all

Troy School District  
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fees and charges in connection therewith unless specifically provided otherwise. In the event of violation, the Contractor shall pay all fines and penalties; including attorney's fees and other defense costs and expenses in connection therewith.

- C. Federal Communications Commission
  - 1. Equipment requiring FCC registration or approval shall have received such approval and shall be appropriately identified.
  
- D. Codes, Standards, and Ordinances
  - 1. All Work shall conform to the latest edition of the National Electrical Code®, the Building Code, and all local codes and ordinances, as applicable. ANSI/TIA/EIA-568-B and ANSI/TIA/EIA-569-A shall be adhered to during all installation activities. Methodologies outlined in the latest edition of the BICSI Telecommunications Distribution Methods Manual shall also be used during all installation activities. Should conflicts exist with the foregoing, the authority having jurisdiction for enforcement will have responsibility for making interpretation. The Contractor is wholly responsible to meet or exceed all codes, standards, regulation, manufacturer installation standards and industry best practices.

2.3 SAFETY

- A. The Contractor shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed in performing the Work. The Contractor shall at all times comply with the regulations set forth by federal, state, and local laws, rules, and regulations concerning "OSHA" and all applicable state labor laws, regulations, and standards. The Contractor shall indemnify and hold harmless the Owner from and against all liabilities, suits, damages, costs, and expenses (including attorney's fees and court costs) that may be imposed on the Owner because of the Contractor, or its subcontractor, or supplier's failure to comply with the regulations stated herein.

2.4 INSPECTION, ACCEPTANCE, AND TITLE

- A. Inspection and Acceptance will be upon successful installation unless otherwise provided. Title to/or risk of loss or damage to all items shall be the responsibility of the Contractor until acceptance by the Owner, unless loss or damage results from negligence by the Owner. If the materials or services supplied to the Owner are found to be defective or do not conform to the specifications, the Owner reserves the right to cancel the Contract upon written notice to and return products at the Contractor's expense, based upon the terms of the Contract.
  - 1. When the Owner is referred to in this section of the RFP relative to inspections, the Owner has designated the PSC as the party to perform such inspections on behalf of the Owner. Notwithstanding the above, the Owner may also perform such inspections along with the PSC.

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- B. The Owner shall at all times have access to the Work wherever it is in preparation or progress, and shall provide proper facilities for such access and for inspection.
- C. The Contractor shall not close up any Work until the Owner has inspected the Work. Should the Contractor close up the work prior to inspection by The Owner, the Contractor shall uncover the Work for inspection by the Owner at no cost to the Owner, and then recover the Work according to the specifications contained herein. The Contractor shall notify the Owner in writing when the Work is ready for inspection. The Owner will inspect the Work as expeditiously as possible after receipt of notification from the Contractor.

2.5 STATUS REPORTS, MEETINGS AND CONSTRUCTION COORDINATION

- A. It shall be the Contractor's responsibility to provide the Owner / PSC with written weekly project status reports while actively engaged in craft work and a summary report at the beginning of periods of inactivity between phases or construction delays noting status at that time and expected date of return to work in addition to the requirements listed below. These reports are required and shall include, but not be limited to:
  - B. Project completion percentage.
  - C. Any and all problems that were encountered.
  - D. Any foreseeable problems that may arise.
  - E. General status of the project
  - F. The Owner / PSC reserves the right to hold additional status meetings on a regular basis with the Contractor's Project Manager.

END OF SECTION

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SECTION 00 30 10 - SCHEDULE OF EVENTS

The following is a projected schedule of events for this project. The schedule may change depending upon the results of the responses and a final schedule will be established prior to contracting with the Contractor. Additionally, the final schedule shall be subject to change based on construction schedule and progress.

<b>EVENT</b>	<b>DATE</b>
Bid Release	Dec 20, 2017
Mandatory Bidder's Conference Date and time – 2:00 PM	Jan 9, 2018
Final Date and time for Questions – 5:00 PM	Jan 15, 2018
Final Addendum	Jan 17, 2018
Bid Due Date/time and Public Opening - 2:30 PM	Jan 23, 2018
Interviews	Jan 30-31, 2018
Contract Award	Feb 20, 2018
Earliest Project Start Date	Apr 1, 2018
Project Completion	Aug 4, 2018

End of Section

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SECTION 00 40 10 - BID PROPOSAL FORM

**OWNER:** Todd Hensley, Purchasing Supervisor  
Troy School District  
Purchasing Department  
Facility Operations Building  
1140 Rankin  
Troy, Michigan 48083

**PROJECT:** Network Equipment – Bid # 9852

**NAME OF BIDDER:** \_\_\_\_\_

**BASE BID:**

Lump sum bid for all work specified and shown on the drawings as indicated for base bid in the amount of:

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )

The Bid Proposal amount shall be shown in both words and figures. In the case of discrepancy, the amount shown in words shall govern.

**BASE BID:** The undersigned, having examined the Bid Documents and examined the conditions affecting the Work/Project, hereby proposes and agrees to furnish all of the labor, materials, and equipment and perform all work necessary to complete the Work/Project as required by the Bid Documents for the stipulated sum identified above and detailed in Supplemental A (Cost Analysis Worksheet). The Bid Documents set forth the terms and conditions upon which the Bidder will provide a "turnkey" solution for the installation and operation of the project for use by the Owner and represents and warrants that the design, operation and functionality of the project are in accordance with the Bid Documents. All prices provided by the Bidder on this Bid Proposal Form must include all cables, connectors, equipment etc. that are necessary to make the project fully operational for the intent and purpose stated in the Bid Documents

**BID SECURITY**

Enclosed herewith find (Certified Check)/ (Bid Bond) in the amount of \$\_\_\_\_\_ being five percent (5%) of the maximum Bid Proposal herein, made payable to Troy School District or naming Troy School District as obligee. The proceeds of which are to remain the property of Troy School District, if the Bidder does not, within ten (10) days after notice of the acceptance of Bid Proposal, enter into the Contract.

**TAXES**

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Please identify the amount, if any, of this Bid Proposal that has been attributed to sales or use tax. If an amount has been attributed to such tax, please identify which components of the Bid to which the tax has been attributed.

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**SUBCONTRACTORS**

Bidders must provide attach complete list of proposed subcontractors (one per discipline), if any are proposed to be utilized on the project. Listing two or more subcontractors per discipline will be grounds for disqualification.

**EXCEPTIONS**

Any Exceptions to the terms and conditions contained in the RFP or contract are identified below:

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**ADDENDA**

This RFP incorporates the following Addenda:

Addendum No. \_\_\_\_ Dated \_\_\_\_\_ Addendum No. \_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_ Dated \_\_\_\_\_ Addendum No. \_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_ Dated \_\_\_\_\_ Addendum No. \_\_\_\_ Dated \_\_\_\_\_

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**BID PROPOSAL FORM SUPPLEMENTS:**

The following Bid Form Proposal Supplements are attached hereto and are considered an integral part of this Bid Proposal Form:

- SUPPLEMENTAL A – Cost Analysis Worksheet
- SUPPLEMENTAL B – Unit Pricing
- SUPPLEMENTAL C – Mandatory Alternates
- SUPPLEMENTAL D – Voluntary Alternates
- SUPPLEMENTAL E – Familial Disclosure Affidavit
- SUPPLEMENTAL F – Iran Economic Sanctions Act Compliance Affidavit

**Vendor's USAC SPIN #** \_\_\_\_\_

**BIDDER NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**DATE:** \_\_\_\_\_

**TELEPHONE:** \_\_\_\_\_

**EMAIL ADDRESS:** \_\_\_\_\_

If award is made to our firm based upon our Bid Proposal, we agree to enter into the form of Contract with the School District in accordance with this Request for Proposal, the contract and our Bid Proposal.

My signature certifies that the Bid Proposal as submitted complies with all terms and conditions as set forth in this Request for Proposal, unless specifically enumerated as an exception as part of this Bid Proposal Form.

I hereby certify that I am authorized to sign as a Representative for the Firm:

\_\_\_\_\_  
(Authorized Signature)

\_\_\_\_\_  
(Title)

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SUPPLEMENTAL A - COST ANALYSIS WORKSHEET

**OWNER:** Todd Hensley, Purchasing Supervisor  
 Troy School District  
 Purchasing Department  
 Facility Operations Building  
 1140 Rankin  
 Troy, Michigan 48083

**BIDDER:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_  
 \_\_\_\_\_

**BASE BID BREAKDOWN**

Building	COMPONENT	Cost
Barnard Elementary	Material	
	Labor	
	Sub Total	
Bemis Elementary	Material	
	Labor	
	Sub Total	
Costello Elementary	Material	
	Labor	
	Sub Total	
Hamilton Elementary	Material	
	Labor	
	Sub Total	
Hill Elementary	Material	
	Labor	
	Sub Total	
Leonard Elementary	Material	
	Labor	
	Sub Total	
Martell Elementary	Material	
	Labor	
	Sub Total	

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Morse Elementary	Material	
	Labor	
	Sub Total	
Schroeder Elementary	Material	
	Labor	
	Sub Total	
Troy Union Elementary	Material	
	Labor	
	Sub Total	
Wass Elementary	Material	
	Labor	
	Sub Total	
Wattles Elementary	Material	
	Labor	
	Sub Total	
Baker Middle School	Material	
	Labor	
	Sub Total	
Boulan Park Middle School	Material	
	Labor	
	Sub Total	
Larson Middle School	Material	
	Labor	
	Sub Total	
Smith Middle School	Material	
	Labor	
	Sub Total	
Athens High School	Material	
	Labor	
	Sub Total	
Troy High School	Material	
	Labor	
	Sub Total	

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International Academy: East	Material	
	Labor	
	Sub Total	
Troy College & Career High School	Material	
	Labor	
	Sub Total	
Central Office	Material	
	Labor	
	Sub Total	
Services Building	Material	
	Labor	
	Sub Total	
Transportation Building	Material	
	Labor	
	Sub Total	
Facility Operations Building	Material	
	Labor	
	Sub Total	
Early Childhood Center	Material	
	Labor	
	Sub Total	
	Sub-Total Material	
	Sub-Total Labor	
	Total	
	Performance and Payment Bond	
	<b>Proposal Total</b>	

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SUPPLEMENTAL B - UNIT PRICING

All bid proposals shall include a detailed Bill of Materials that notes each item, part number, and unit price.

Provide this Bill of Materials, attached to and submitted with the Bid Proposal. These unit costs, which shall be considered firm pricing during the contract period and not subject to change, will be used to determine costs (**Inclusive of both labor and material**) for additions and deletions during the contract period and for a period of one (1) year thereafter. The Owner reserves the right to adjust any or all quantities at any time.

In addition to the required Bill of Materials, include the following Unit Prices (also include cost of associated licenses).

Item	Part Number	Unit Price
48 Port GigE POE+ w/ 2 10G SFP+		
48 Port GigE POE+ w/ 4 1G SFP		
12 Port 10G Fiber Switch		
10Gbase-LR SFP Module		
10GBase-LRM SFP Module		
802.11ac Wave 2 Access Point		
100Gbps Direct Attached Cable		
Single Mode 3 Meter Patch Cable		
Multi-mode 3 Meter Patch Cable		
Multi-mode 3 Meter Mode-Conditioning Patch Cable		
Stacking Cable		

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SUPPLEMENTAL C - MANDATORY ALTERNATES

Mandatory Alternate 1: ***None at this time***

Add/Deduct \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

Mandatory Alternate 2:

Add/Deduct \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

Mandatory Alternate 3:

Add/Deduct \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

Mandatory Alternate 4:

Add/Deduct \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

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SUPPLEMENTAL D - VOLUNTARY ALTERNATES

VOLUNTARY ALTERNATE 1:

Add/Deduct/No Change

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

VOLUNTARY ALTERNATE 2:

Add/Deduct/No Change

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

VOLUNTARY ALTERNATE 3:

Add/Deduct/No Change

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

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SUPPLEMENTAL E - FAMILIAL DISCLOSURE AFFIDAVIT

The undersigned, the owner or authorized officer of \_\_\_\_\_ (the "Bidder"), pursuant to the familial disclosure requirement provided in the Troy School District (the "District") Request for Proposal(s), hereby represents and warrants that, except as provided below, no familial relationships exist between the owner or any employee of the Bidder, and any member of the Board of Education of the School District or the Superintendent of the School District.

List any Familial Relationships:

BIDDER:

\_\_\_\_\_

By:

\_\_\_\_\_

Title:

\_\_\_\_\_

STATE OF MICHIGAN  
COUNTY OF \_\_\_\_\_

This instrument was acknowledged before me on the \_\_\_\_ day of \_\_\_\_\_, 2017, by

\_\_\_\_\_.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_ County, Michigan

My Commission Expires: \_\_\_\_\_

Acting in the County of: \_\_\_\_\_

SUPPLEMENTAL E FAMILIAL DISCLOSURE AFFADAVIT

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SUPPLEMENTAL F - AFFIDAVIT OF COMPLIANCE – IRAN ECONOMIC SANCTIONS ACT

Michigan Public Act No. 517 of 2012

The undersigned, the owner or authorized officer of the below named applicant (the “Applicant”), pursuant to the compliance certification requirement provided in the Troy School District (the “District”) Request For Proposals for Network Equipment (the “RFP”), hereby certifies, represents and warrants that the Applicant (including its officers, directors and employees) is not an “Iran linked business” within the meaning of the Iran Economic Sanctions Act, Michigan Public Act No. 517 of 2012 (the “Act”), and that in the event Applicant is awarded a contract as a result of the aforementioned RFP, the Applicant will not become an “Iran linked business” at any time during the course of performing the Work or any services under the contract.

The Applicant further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than \$250,000.00 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the School District’s investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a request for proposal for three (3) years from the date it is determined that the person has submitted the false certification.

APPLICANT:

Name of Applicant

By:

Title:

Date:

STATE OF Michigan

COUNTY OF \_\_\_\_\_ )

This instrument was acknowledged before me on the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by

\_\_\_\_\_.

\_\_\_\_\_, Notary Public \_\_\_\_\_ County, \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

Acting in the County of: \_\_\_\_\_

Troy School District  
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SECTION 27 21 29 – DATA COMMUNICATIONS SWITCHES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Appendixes, drawings and general provisions, including General and Supplementary Conditions, apply to this Section.
- B. Related Sections:
  - 1. Division 27 Section 27 21 33 Data Communications Wireless Access Points

1.2 SUMMARY

- A. Troy School District is soliciting proposals to purchase network equipment, installation, service and support for an upgrade to its existing data network to facilitate the installation of a District wide wired and wireless network.
- B. The existing network is all Extreme Networks equipment.
- C. The Owner has an existing IP scheme deployed throughout the network. It shall be the Contractor's responsibility to configure the network devices to integrate seamlessly with this scheme or work with the Owner to devise a new scheme if the Owner feels it would be beneficial to the network.
- D. The Contractor shall provide all network equipment, stacking/interconnect/expansion cables, miscellaneous parts and labor for a complete and operational network.
- E. Network electronics shall follow equipment manufacturer's recommendations, the requirements of the Specifications and Drawings, and all current edition or revisions of all applicable codes and standards as previously listed.
- F. The Contractor shall provide all patch cables required for a complete installation. The required number of patch cables will be identified post award and the cost of the patch cables will be paid out of a separate allowance specifically for patch cables. The total cost for patch cables does not need to be included in this proposal.
- G. Awarded Contractor must include all other peripheral equipment to install a complete network.
- H. Owner provided asset tags must be placed in a visible area on all equipment.
- I. With input from the Owner's personnel, review and recommend VLAN configurations and develop and implement a plan best suited to both meet the Owner's needs, and work with the existing data network.
- J. Awarded Contractor will provide a detailed testing methodology used to ensure the system/Project is functioning to manufacture specifications with its response. Other tests, specific to installed equipment, may be required to ensure functionality.
- K. All Bidders must provide a proposal for the Base Bid that meets or exceeds the specifications set forth in this RFP. However, all Bidders may suggest Alternates if it is felt that the alternate proposal better suits the intent of this RFP. Any Alternate must be listed as such with separate

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pricing sheets. Any variance of the feature/functionality of the Base Bid must be identified in any Alternates proposed.

L. Bidder Qualifications

1. Bidder Background

a. A Contract to provide the network will only be entered with a Contractor qualified by experience and financial stability.

2. The Contractor doing this Work shall be a reputable firm regularly doing this type of work with skilled, fully trained technicians and equipment capable of performing a first class installation in accordance with standard industry practices. All Contractor's technicians shall be factory certified for the Data Systems that they are to install and/or maintain.

3. The Contractor shall be a company that has installed medium to large Data Networking Systems for at least five years. All Bidders shall submit verifiable references including names and phone numbers of projects of a similar nature.

4. Manufacturer Affiliation

a. Bidder shall either be the manufacturer of the equipment proposed or a factory authorized distributor/contractor.

b. If not the manufacturer, the Bidders shall have a proven close and long-standing relationship with the manufacturer in order to demonstrate the Bidder's commitment to supporting the products proposed. Proof shall be supplied with the Bid Proposal in the form of a written guarantee from the manufacturer, stipulating that the manufacturer will provide support for the system if the Bidder is either unwilling or unable to do so at any time within 10 years of the installation of the LAN. This may also include documentation as to the number of years supplying the product, size of inventory, test and training center support, and etc.

M. Section Includes:

1. District Core Switch

2. Building Core Switches

3. Edge Switches

4. Network Management

1.3 SUBMITTALS

A. Product Data: For each type of product indicated, include material descriptions, dimensions of individual components and any unique qualities that might necessitate a change in rack or cabinetry. Include rated capacities, operating characteristics, and electrical characteristics.

B. Complete set of Network Schematic drawings

1.4 QUALITY ASSURANCE

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- A. Installer Qualifications: Cabling Installer must have personnel certified by Manufacturer.
- B. Project Manager
  - 1. The Contractor will provide a full-time Project Manager who will act as a single point of contact for all activities regarding this Project.
- C. Status Reports, Meetings and Construction Coordination.
  - 1. It shall be the Contractor's responsibility to provide the Owner with written weekly project status reports while actively engaged in craft work and a summary report at the beginning of periods of inactivity between phases or construction delays noting status at that time and expected date of return to work in addition to the requirements listed below. These reports are required and shall include, but not be limited to:
    - 2. Project completion percentage.
    - 3. Any and all problems that were encountered.
    - 4. Any foreseeable problems that may arise.
    - 5. General status of the Project
- D. The Owner reserves the right to hold additional status meetings on a regular basis with the Contractor's Project Manager.

1.5 COORDINATION

- A. Coordinate layout and installation of equipment with Owner's technology staff
- B. Meet jointly with Owner's technology staff to exchange information and agree on details of equipment arrangements and installation.
- C. Record agreements reached in meetings and distribute them to other participants.
- D. Coordinate location of power raceways and receptacles with locations of communications equipment requiring electrical power to operate.

PART 2 - PRODUCTS

2.1 SCOPE OF WORK

- A. The intent of the RFP is to provide the following:
  - 1. Network equipment to provide a 10Gbps backbone to all building MDF locations and from the MDFs to each IDF.
  - 2. Network equipment to provide 802.3at PoE+.
  - 3. Required network configuration on all equipment, including IP configuration, VLAN setup.
- B. GENERAL

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1. Provide and install all equipment for a complete and operational network per Project Specifications.
2. **Appendix A** contains the District Sites and requirements for port counts by building and closet.
3. All LAN switches shall be 48 port POE+, and provide POE+ to a minimum of 24 ports simultaneously. Contractor must provide 10/100/1000 copper ports in quantities identified in **Appendix A**.
4. All fiber cable to be used with the new switches shall be identified post award. Many cables will be re-used. Any new cables required by this installation will be purchased from the awarded Contractor as a separate purchase.
5. Bid Proposals will only be excepted from manufacturers who provide both the wired, wireless and network management software products. Manufacturers other than those listed must contact the PSC for approval.
6. Notwithstanding the above, the School District expects all supplies, materials equipment or products proposed by a Bidder to meet or exceed the Specifications set forth in this RFP. Further, it is the School District's intent that this RFP permit competition. Accordingly, the use of any patent, proprietary name or manufacturer's name is for demonstrative purposes only and is not intended to curtail competition. Whenever any supplies, material, equipment or products requested in this RFP are specified by patent, proprietary name or by the name of the manufacturer, unless stated differently, such specification shall be considered as if followed by the words "or comparable equivalent," whether or not such words appear. The School District, in its sole and absolute discretion, shall have the right to determine if the proposed equivalent products/brands submitted by Bidder meet the Specifications of this RFP and possess equivalent and/or better qualities. It shall be the Bidder's responsibility to notify the School District in writing if any Specifications or suggested comparable equivalent products/brands require clarification by the School District prior to the Due Date for Bid Proposals.

C. District Core Switches

1. Redundant Switches
2. Each Switch shall have redundant power supplies
3. Each switch shall have at a minimum 48 SFP+ ports capable of 10/25Gbps
4. Each switch shall have at a minimum 4 QSFP+ or QSFP28 ports capable of 40Gbps
5. Each switch shall have at a minimum 2 QSFP28 ports capable of 100Gbps
6. Each core switch shall provide a single 10G connection to each of the 25 buildings in the District.
7. District Core Switches will connect to each other using redundant 100Gbps connections

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8. Each District Core Switches shall connect to Wireless Controllers at a rate of 40Gbps
- D. Building Core Switches
1. Building core switches shall provide a minimum of Twelve (12) 10Gbps SFP+ ports
- E. Edge Switches
1. Edge switches are to be stacked with the top of the stack providing at least two (2) 10Gbps connections to the MDF
  2. Each edge switch shall provide 48 POE+ ports capable of delivering POE+ to a minimum of 24 ports simultaneously.
- F. Network Management
1. The District is looking for network management software capable of managing all of the network switching and wireless components
  2. The network management software must include the following features and functionality:
    - A. Must support an unlimited number of devices
    - B. Intuitive Management Interface
    - C. Windows and Web-based consoles, workspace views, dashboards
    - D. Dynamic Device Discovery
    - E. SNMP, IP Address Range, SNMP Scan, file import, and hosts file
    - F. Full SNMP v1-3 Functionality including security
    - G. WMI Monitoring Functionality
    - H. Visual Network Mapping
    - I. Network topology, subnets, devices, applications, and systems
    - J. Configurable Monitoring
    - K. Performance, passive, active, real-time, custom (scripted), monitoring templates, and bulk changes
    - L. Predictive Alerts
    - M. Customizable, up, down, and threshold (min/max), maintenance mode, device dependency, and escalation
- G. Network Access Control (NAC) Solution
1. System must come equipped to support approximately 40,000 devices.
  2. System must support 802.1x utilizing an internal RADIUS server and an internal certificate authority
  3. System must support device visibility through the utilization of probing to identify endpoints connected to the network
  4. System must support end user visibility through integration with identity providers such as Active Directory
  5. System must support a customizable guest services portal

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6. System must support integration with Mobile Device Management software
7. System must support anomalous activity detection
8. System must support granular control of mDNS/Bonjour traffic

PART 3 - EXECUTION

3.1 GENERAL

- A. Install all equipment in existing racks and cabinets per manufacturers recommendations and industry best practices.
- B. Provide and install new switches and equipment per the bill of materials and specifications.
- C. Provide and install new patch cables for all required connections for the new equipment.
- D. All patch cables shall be routed using cable management.
- E. Equipment shall be labeled as directed by the Owner's technology staff.
- F. Ensure that all equipment is grounded according to BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.
- G. Provide complete installation services for the Network Management and the Network Access Control Solution.

3.2 TESTING AND ACCEPTANCE

- A. All Bidders will provide in the narrative section a complete detailed acceptance test procedure covering the offered equipment, services and any peripherals in their response to this RFP.
  1. Installation Tests
    - a. During the installation, the Awarded Contractor will perform all tests necessary to ensure that the portions of the system/Project being installed are ready
    - b. The Contractor shall have qualified engineers onsite during the cutover and for a minimal period of 2 days post cutover to address and implementation or technical issues.
  2. Acceptance Tests
    - a. After cut-over of any portion of the system/Project, the Awarded Contractor will conduct acceptance tests consistent with factory system performance specifications to be supplied with the system prior to installation.
    - b. The Contractor will be required to identify testing procedures that validate system performance at the required performance levels as indicated in the specification. That may include but not be limited to testing multiple classrooms with the

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supported number of devices.

- c. Performance and reliability tests will be conducted, demonstrating acceptable performance over a full fourteen (14) day period after cut-over.
- d. Acceptance of the system/project will be granted after all equipment has passed the tests set forth by this RFP or the Contract, as well as all manufacturer recommended testing, and has been in operation fourteen (14) consecutive days without a major failure. The Owner and/or PSC shall be the sole judge of whether all conditions for final system/Project criteria have been met.

3.3 DOCUMENTATION

- A. Prior to final system/Project acceptance, the awarded Contractor will provide complete documentation formatted per the direction of the Owner, inventorying all hardware, to include but not limited to Model, location, MAC address, IP address. The exact format must receive sign off from the Owner. The Documentation package must provide the Owner with a comprehensive guide(s) for all operation, warranty, maintenance procedures for the “As-Built” system/Project.

3.4 TRAINING

- A. Awarded Contractor will provide, prior to cut-over, initial training in the use of the equipment for the technical staff including all installed systems. The cost of this initial training must be included in the Bid Proposal price.
- B. Training will be provided as part of the testing of the new system installation and configuration.
- C. Training will be required for approximately two of the Owner’s employees on the operation and configuration of the equipment.
- D. Contractor will provide a recommended list of additional courses that it feels would be advantages for the Owner’s technical staff to undertake.

END OF SECTION 27 21 29

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SECTION 27 21 33 – DATA COMMUNICATIONS WIRELESS ACCESS POINTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Appendixes, drawings and general provisions, including General and Supplementary Conditions, apply to this Section.
- B. Related Sections:
  - 1. Division 27 Section 27 21 29 Data Communications Switches

1.2 SUMMARY

- A. Troy School District is soliciting proposals to purchase network equipment, installation, service and support for an upgrade to its existing data network to facilitate the installation of a District wide wired and wireless network.
- B. The existing network is all Extreme Networks equipment.
- C. The Owner has an existing IP scheme deployed throughout the network. It shall be the Contractor's responsibility to configure the network devices to integrate seamlessly with this scheme or work with the Owner to devise a new scheme if the Owner feels it would be beneficial to the network.
- D. The Contractor shall provide all wireless network equipment, wire management, mounting clips and brackets, miscellaneous parts and labor for a complete and operational network.
- E. Wireless network electronics shall follow equipment manufacturer's recommendations, the requirements of the Specifications and Drawings, and all current edition or revisions of all applicable codes and standards as previously listed.
- F. The Contractor shall provide all patch cables required for a complete installation. The required number of patch cables will be identified post award and the cost of the patch cables will be paid out of a separate allowance specifically for patch cables. The total cost for patch cables does not need to be included in this proposal.
- G. Awarded Contractor must include all other peripheral equipment to install a complete network.
- H. Owner provided asset tags must be placed in a visible area on all equipment.
- I. With input from the Owner's personnel, review and recommend VLAN configurations and develop and implement a plan best suited to both meet the Owner's needs, and work with the existing network components.
- J. Awarded Contractor will provide a detailed testing methodology used to ensure the system/Project is functioning to manufacture specifications with its response. Other tests, specific to installed equipment, may be required to ensure functionality.
- K. All Bidders must provide a proposal for the Base Bid that meets or exceeds the specifications set forth in this RFP. However, all Bidders may suggest Alternates if it is felt that the alternate proposal better suits the intent of this RFP. Any Alternate must be listed as such with separate

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pricing sheets. Any variance of the feature/functionality of the Base Bid must be identified in any Alternates proposed.

L. Bidder Qualifications

1. Bidder Background

a. A Contract to provide the network will only be entered with a Contractor qualified by experience and financial stability.

2. The Contractor doing this Work shall be a reputable firm regularly doing this type of work with skilled, fully trained technicians and equipment capable of performing a first class installation in accordance with standard industry practices. All Contractor's technicians shall be factory certified for the Data Systems that they are to install and/or maintain.

3. The Contractor shall be a company that has installed medium to large Data Networking Systems for at least five years. All Bidders shall submit verifiable references including names and phone numbers of projects of a similar nature.

4. Manufacturer Affiliation

a. Bidder shall either be the manufacturer of the equipment proposed or a factory authorized distributor/contractor.

b. If not the manufacturer, the Bidders shall have a proven close and long-standing relationship with the manufacturer in order to demonstrate the Bidder's commitment to supporting the products proposed. Proof shall be supplied with the Bid Proposal in the form of a written guarantee from the manufacturer, stipulating that the manufacturer will provide support for the system if the Bidder is either unwilling or unable to do so at any time within 10 years of the installation of the LAN. This may also include documentation as to the number of years supplying the product, size of inventory, test and training center support, and etc.

M. Section Includes:

1. Wireless Access Points

2. Wireless Controllers

1.3 SUBMITTALS

A. Product Data: For each type of product indicated, include material descriptions, dimensions of individual components and any unique qualities that might necessitate a change in rack or cabinetry. Include rated capacities, operating characteristics, and electrical characteristics.

B. Complete set of Network Schematic drawings and heat maps

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Installer must have personnel certified by Manufacturer.

B. Project Manager

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1. The Contractor will provide a full-time Project Manager who will act as a single point of contact for all activities regarding this Project.

C. Status Reports, Meetings and Construction Coordination.

1. It shall be the Contractor's responsibility to provide the Owner with written weekly project status reports while actively engaged in craft work and a summary report at the beginning of periods of inactivity between phases or construction delays noting status at that time and expected date of return to work in addition to the requirements listed below. These reports are required and shall include, but not be limited to:
  2. Project completion percentage.
  3. Any and all problems that were encountered.
  4. Any foreseeable problems that may arise.
  5. General status of the Project

- D. The Owner reserves the right to hold additional status meetings on a regular basis with the Contractor's Project Manager.

1.5 COORDINATION

- A. Coordinate layout and installation of equipment with Owner's technology staff and/or PSC
- B. Meet jointly with Owner's technology staff and PSC to exchange information and agree on details of equipment arrangements and installation.
- C. Record agreements reached in meetings and distribute them to other participants.

PART 2 - PRODUCTS

2.1 SCOPE OF WORK

- A. The intent of the RFP is to provide the following:
  1. A robust wireless network to support a growing community of users and wireless devices.
  2. A testing methodology for determining the optimal number of access points to give
  3. Required network configuration on all equipment, including IP configuration, VLAN setup.
  4. Required configuration is the network management software
- B. GENERAL
  1. Provide and install all equipment for a complete and operational network per Project Specifications.
  2. **Appendix A** contains the District Sites and requirements for access points by building.

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3. Bid Proposals will only be excepted from manufacturers who provide both the wired, wireless and network management products. Vendors proposing a Manufacturer who does not meet this qualification must contact the PSC for approval.
4. Notwithstanding the above, the School District expects all supplies, materials equipment or products proposed by a Bidder to meet or exceed the Specifications set forth in this RFP. Further, it is the School District's intent that this RFP permit competition. Accordingly, the use of any patent, proprietary name or manufacturer's name is for demonstrative purposes only and is not intended to curtail competition. Whenever any supplies, material, equipment or products requested in this RFP are specified by patent, proprietary name or by the name of the manufacturer, unless stated differently, such specification shall be considered as if followed by the words "or comparable equivalent," whether or not such words appear. The School District, in its sole and absolute discretion, shall have the right to determine if the proposed equivalent products/brands submitted by Bidder meet the Specifications of this RFP and possess equivalent and/or better qualities. It shall be the Bidder's responsibility to notify the School District in writing if any Specifications or suggested comparable equivalent products/brands require clarification by the School District prior to the Due Date for Bid Proposals.

C. Access Points

1. 802.11ac Wave 2 Support
2. MU-MIMO 4x4, 3 spatial streams
3. Must support dual 5Ghz radios
4. Internal antenna
5. Supported frequency bands:
  - a. 5.150 to 5.250 GHz
  - b. 5.250 to 5.350 GHz
  - c. 5.470 to 5.725 GHz
  - d. 5.725 to 5.850 GHz
6. 802.11n high-throughput (HT) support
7. 802.11ac very high throughput (VHT) support
8. 802.11n/ac packet aggregation: A-MPDU, A-MSDU
9. 10/100/1000BASE-T Ethernet network interface (RJ-45)
10. Access points must be powered via industry standard PoE+ (802.3at)
11. WiFi certified for WLAN interoperability

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12. Access Point must support plug and play installation
13. System must support centrally-deployed configurations and upgrades
14. Access Points must support an 802.1x supplicant to prevent use by unwanted devices
15. Access Points must be securely configurable & monitored from a central location
16. Must support latest secure authentication and encryption standards
17. Must support a customizable, centralized Captive Portal.
18. Ceiling and wall mounted configurations

D. Wireless Controller

1. The wireless controller shall be comprised of at a minimum two hardware devices for redundancy
2. Each Wireless Controller shall have at a minimum 2 QSFP+ or QSFP28 ports capable of 40Gbps
3. Each Wireless Controller shall connect to each District Core Switch at a rate of 40Gbps
4. Licenses must be perpetual and portable to the next hardware generation

PART 3 - EXECUTION

3.1 GENERAL

- A. Install all equipment per manufacturers recommendations and industry best practices.
- B. Provide and install new access points switches per the bill of materials and specifications.
- C. New Access Points will be clipped to the ceiling grip using clips specifically intended for that purpose.
- D. Provide and install new patch cables for all required connections for the new equipment.
- E. All patch cables shall be routed using cable management.
- F. Equipment shall be labeled as directed by the Owner's technology staff.

3.2 TESTING AND ACCEPTANCE

- A. All Bidders will provide in the narrative section a complete detailed acceptance test procedure covering the offered equipment, services and any peripherals in their response to this RFP.
  1. Installation Tests
    - a. During the installation, the Awarded Contractor will perform all tests necessary to ensure that the portions of the system/Project being installed are ready

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- b. The Contractor shall have qualified engineers onsite during the cutover and for a minimal period of 2 days post cutover to address and implementation or technical issues.

2. Acceptance Tests

- a. After cut-over of any portion of the system/Project, the Awarded Contractor will conduct acceptance tests consistent with factory system performance specifications to be supplied with the system prior to installation.
- b. The Contractor will be required to identify testing procedures that validate system performance at the required performance levels as indicated in the specification. That may include but not be limited to testing multiple classrooms with the supported number of devices.
- c. Performance and reliability tests will be conducted, demonstrating acceptable performance over a full fourteen (14) day period after cut-over.
- d. Performance tests for the wireless network will include validation testing for the maximum number of classroom devices as specified in this RFP and ensuring performance at the specified levels. These tests will be held in adjacent classrooms using devices provided by the Owner.
- e. Acceptance of the system/project will be granted after all equipment has passed the tests set forth by this RFP or the Contract, as well as all manufacturer recommended testing, and has been in operation fourteen (14) consecutive days without a major failure. The Owner and/or PSC shall be the sole judge of whether all conditions for final system/Project criteria have been met.

3.3 DOCUMENTATION

- A. The Vendor will be required to provide a post installation survey and provide the Owner with heat maps showing the coverage and density of the installed system.
- B. Prior to final system/Project acceptance, the awarded Contractor will provide complete documentation formatted per the direction of the Owner, inventorying all hardware, to include but not limited to Model, location, MAC address, IP address. The exact format must receive sign off from the Owner. The Documentation package must provide the Owner with a comprehensive guide(s) for all operation, warranty, maintenance procedures for the “As-Built” system/Project.

3.4 TRAINING

- A. Awarded Contractor will provide, prior to cut-over, initial training in the use of the equipment for the technical staff. The cost of this initial training must be included in the Bid Proposal price.
- B. Training will be provided as part of the testing of the new system installation and configuration.
- C. Training will be required for approximately two of the Owner’s employees on the operation and configuration of the equipment.

END OF SECTION 27 21 33

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**APPENDIX A**  
**SITES AND EQUIPMENT REQUIREMENTS**



APPENDIX A  
SITES AND EQUIPMENT REQUIREMENTS

**Services Building (District Head-End)**

4420 Livernois Rd. Troy, MI 48098

Closet	Device	Count
MDF	Core - 48 Port SFP+ 10/25Gb, 4 QSFP+/QSFP28 40Gb, 2 QSFP+ 100Gb	2
MDF	Wireless Controllers	2
MDF	48 Port GigE w/ 4 10G SFP+	1
MDF	48 Port GigE POE+ w/ 2 10G SFP+	1
MDF	48 Port GigE POE+ w/ 4 1G SFP	7
MDF	10GBase-LR SFP Module	48
MDF	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Points	22

**Barnard Elementary**

3601 Forge, Troy, MI 48083

Closet	Device	Count
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	4
1	10Gbase-LR SFP Module	2
NA	802.11ac Wave 2 Access Point	46

**Bemis Elementary**

3571 Northfield Pkwy, Troy, MI 48084

Closet	Device	Count
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	3
1	10Gbase-LR SFP Module	2
NA	802.11ac Wave 2 Access Point	46

**Costello Elementary**

1333 Hamman, Troy, MI 48085

Closet	Device	Count
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	3
1	10Gbase-LR SFP Module	2
NA	802.11ac Wave 2 Access Point	40

APPENDIX A  
SITES AND EQUIPMENT REQUIREMENTS

**Hamilton Elementary**

5625 Northfield Pkwy, Troy, MI 48098

<b>Closet</b>	<b>Device</b>	<b>Count</b>
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	3
1	10Gbase-LR SFP Module	2
NA	802.11ac Wave 2 Access Point	46

**Hill Elementary**

4600 Forsyth, Troy, MI 48085

<b>Closet</b>	<b>Device</b>	<b>Count</b>
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	1
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	2
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	1
2	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	46

**Leonard Elementary**

4401 Tallman Dr. Troy, MI 48085

<b>Closet</b>	<b>Device</b>	<b>Count</b>
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	3
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	2
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	1
2	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	46

**Martell Elementary**

5666 Livernois, Troy, MI 48098

<b>Closet</b>	<b>Device</b>	<b>Count</b>
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	3

APPENDIX A  
SITES AND EQUIPMENT REQUIREMENTS

1	10Gbase-LR SFP Module	2
NA	802.11ac Wave 2 Access Point	42

**Morse Elementary**

475 Cherry St. Troy, MI 48083

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	1
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	2
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	2
2	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	48

**Schroeder Elementary**

3541 Jack Dr. Troy, MI 48084

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	3
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	2
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	46

**Troy Union Elementary**

1340 East Square Lake Rd. Troy, MI 48085

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	2
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	4
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	2
2	10GBase-LRM SFP Module	2
3	48 Port GigE POE+ w/ 2 10G SFP+	1
3	48 Port GigE POE+ w/ 4 1G SFP	1

APPENDIX A  
SITES AND EQUIPMENT REQUIREMENTS

3	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	45

**Wass Elementary**

2340 Willard Dr. Troy, MI 48085

Closet	Device	Count
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	3
1	10Gbase-LR SFP Module	2
NA	802.11ac Wave 2 Access Point	48

**Wattles Elementary**

3555 Ellenboro, Troy, MI 48083

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	3
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	2
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	45

**Troy College & Career High School**

201 W. Square Lake Rd. Troy, MI 48098

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	1
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	4
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	2
2	10GBase-LRM SFP Module	2
3	48 Port GigE POE+ w/ 2 10G SFP+	1
3	48 Port GigE POE+ w/ 4 1G SFP	1
3	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	38

**Baker Middle School**

APPENDIX A  
SITES AND EQUIPMENT REQUIREMENTS

1359 Torpey Dr. Troy, MI 48083

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	3
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	8
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	3
2	10GBase-LRM SFP Module	2
3	48 Port GigE POE+ w/ 2 10G SFP+	1
3	10GBase-LRM SFP Module	2
4	48 Port GigE POE+ w/ 2 10G SFP+	1
4	48 Port GigE POE+ w/ 4 1G SFP	2
4	10GBase-LRM SFP Module	2
5	48 Port GigE POE+ w/ 2 10G SFP+	1
5	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	75

**Boulan Park Middle School**

3570 Northfield Pkwy, Troy, MI 48084

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	6
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	4
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	1
2	10GBase-LRM SFP Module	2
3	48 Port GigE POE+ w/ 2 10G SFP+	1
3	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	69

**Larson Middle School**

2222 E. Long Lake Rd. Troy, MI 48085

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	6
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	4

APPENDIX A  
SITES AND EQUIPMENT REQUIREMENTS

2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	3
2	10GBase-LRM SFP Module	2
3	48 Port GigE POE+ w/ 2 10G SFP+	1
3	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	70

**Smith Middle School**

5835 Donaldson, Troy, MI 48085

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	6
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	2
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	1
2	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	69

**Athens High School**

4333 John R, Troy, MI 48085

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	7
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	8
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	4
2	10GBase-LRM SFP Module	2
3	48 Port GigE POE+ w/ 2 10G SFP+	1
3	48 Port GigE POE+ w/ 4 1G SFP	3
3	10GBase-LRM SFP Module	2
4	48 Port GigE POE+ w/ 2 10G SFP+	1
4	48 Port GigE POE+ w/ 4 1G SFP	3
4	10GBase-LRM SFP Module	2
5	48 Port GigE POE+ w/ 2 10G SFP+	1
5	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	186

**Troy High School**

APPENDIX A  
SITES AND EQUIPMENT REQUIREMENTS

4777 Northfield Pkwy, Troy, MI 48098

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	4
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	22
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	2
2	10GBase-LRM SFP Module	2
3	48 Port GigE POE+ w/ 2 10G SFP+	1
3	48 Port GigE POE+ w/ 4 1G SFP	3
3	10GBase-LRM SFP Module	2
4	48 Port GigE POE+ w/ 2 10G SFP+	1
4	48 Port GigE POE+ w/ 4 1G SFP	3
4	10GBase-LRM SFP Module	2
5	48 Port GigE POE+ w/ 2 10G SFP+	1
5	48 Port GigE POE+ w/ 4 1G SFP	2
5	10GBase-LRM SFP Module	2
6	48 Port GigE POE+ w/ 2 10G SFP+	1
6	10GBase-LRM SFP Module	2
7	48 Port GigE POE+ w/ 2 10G SFP+	1
7	10GBase-LRM SFP Module	2
8	48 Port GigE POE+ w/ 2 10G SFP+	1
8	10GBase-LRM SFP Module	2
9	48 Port GigE POE+ w/ 2 10G SFP+	1
9	10GBase-LRM SFP Module	2
10	48 Port GigE POE+ w/ 2 10G SFP+	1
10	48 Port GigE POE+ w/ 4 1G SFP	1
10	10GBase-LRM SFP Module	2
11	48 Port GigE POE+ w/ 2 10G SFP+	1
11	48 Port GigE POE+ w/ 4 1G SFP	1
11	10GBase-LRM SFP Module	2
12	48 Port GigE POE+ w/ 2 10G SFP+	1
12	48 Port GigE POE+ w/ 4 1G SFP	1
12	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	203

**International Academy: East**  
1291 Torpey Dr. Troy, MI 48083

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	3

APPENDIX A  
SITES AND EQUIPMENT REQUIREMENTS

1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	4
2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	10GBase-LRM SFP Module	2
3	48 Port GigE POE+ w/ 2 10G SFP+	1
3	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	57

**Central Office**

4400 Livernois Rd. Troy, MI 48098

Closet	Device	Count
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	10 Gbase-LRM SFP Module	2
1	48 Port GigE POE+ w/ 4 1G SFP	3
NA	802.11ac Wave 2 Access Point	11

**Transportation Building**

120 Hart St. Troy, MI 48098

Closet	Device	Count
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	10 Gbase-LR SFP Module	2
NA	802.11ac Wave 2 Access Points	4

**Facility Operations Building**

1140 Rankin, Troy, Michigan 48083

Closet	Device	Count
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	1
1	10Gbase-LR SFP Module	2
NA	802.11ac Wave 2 Access Point	9

**Early Childhood Center (To be completed by August 2019)**

W. Square Lake Rd. Troy, MI 48098 (New Site - Adjacent to Troy College and Career High School)

Closet	Device	Count
1	12 Port 10G Fiber Switch	1
1	48 Port GigE POE+ w/ 2 10G SFP+	1
1	48 Port GigE POE+ w/ 4 1G SFP	2
1	10Gbase-LR SFP Module	2
1	10GBase-LRM SFP Module	4

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2	48 Port GigE POE+ w/ 2 10G SFP+	1
2	48 Port GigE POE+ w/ 4 1G SFP	2
2	10GBase-LRM SFP Module	2
3	48 Port GigE POE+ w/ 2 10G SFP+	1
3	48 Port GigE POE+ w/ 4 1G SFP	2
3	10GBase-LRM SFP Module	2
NA	802.11ac Wave 2 Access Point	32

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**APPENDIX B**  
**PREVAILING WAGE DOCUMENTS**

**State of Michigan**

WHPWRequest@michigan.gov

**Official Request #:** 1405

**Requestor:** Troy School District

**Project Description:** Install, configure, test and commission a fully operational wired and wireless network district wide

**Project Number:** BID 9852 – Network Equipment

**Oakland County**

**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date:** 12/19/2017

**Contract must be awarded by:** 3/19/2018

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Classification Name Description	Last Updated	Straight Time and Hourly	a Double Half Time	Overtime Provision
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**Asbestos & Lead Abatement Laborer**

MLDC	9/7/2017			
Asbestos & Lead Abatement Laborer		\$41.30	\$55.23	\$69.16 H H H X X X D Y
<b>Apprentice Rates:</b>				
	Trainee 600 hours + 1 calendar year	\$30.22	\$33.28	\$41.73

*comment*

4 ten hour days @ straight time allowed Monday-Saturday, must be consecutive calendar days

**Asbestos, Lead and Mold Abatement, Hazardous Material Handler**

AS207	3/27/2017			
Asbestos, Lead and Mold Abatement, Hazardous Material Handler		\$40.75	\$54.25	\$67.75 H H H X X X D Y

*comment*

Four ten hour days @ straight time allowed Monday-Saturday, must be consecutive calendar days

**Boilermaker**

BO169	2/17/2015			
Boilermaker		\$54.70	\$81.08	\$107.45 H H H H H H D Y
<b>Apprentice Rates:</b>				
	1st 6 months	\$40.31	\$59.49	\$78.67
	2nd 6 months	\$41.45	\$61.21	\$80.95
	3rd 6 months	\$42.57	\$62.88	\$83.19
	4th 6 months	\$43.69	\$64.57	\$85.43
	5th 6 months	\$44.81	\$66.24	\$87.67
	6th 6 months	\$48.63	\$72.50	\$96.36
	7th 6 months	\$49.32	\$73.01	\$96.69
	8th 6 months	\$51.58	\$76.40	\$101.21

Official Request #: 1405

Requestor: Troy School District

Project Description: Install, configure, test and commission a fully operational wired

Project Number: BID 9852 – Network Equipment

County: Oakland

**Official Rate Schedule**

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**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

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Classification Name	Description	Last Updated	Straight Time and Hourly	Time and Half	a Double Time	Overtime Provision
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**Bricklayer**

BR1		10/15/2014				
Bricklayer, stone mason, pointer, cleaner, caulker			\$52.43	\$78.65	\$104.86	H H D H D D D D Y

**Apprentice Rates:**

First 6 months	\$31.87	\$47.81	\$63.74
2nd 6 months	\$33.72	\$50.60	\$67.44
3rd 6 months	\$35.57	\$53.37	\$71.14
4th 6 months	\$37.42	\$56.14	\$74.84
5th 6 months	\$39.27	\$58.92	\$78.54
6th 6 months	\$41.12	\$61.70	\$82.24
7th 6 months	\$42.97	\$64.46	\$85.94
8th 6 months	\$44.82	\$67.24	\$89.64

*comment make up day allowed*  
 Saturday for 5 day 8 hour week  
 Friday for 4 day 10 hour week  
 Four 10 hour days allowed M-TH

**Carpenter**

CA 687 D		7/5/2017				
Diver			\$67.26	\$87.51	\$107.76	X X H X X H H D Y

*comment make up day allowed*  
 Saturday, Four 10s allowed M-Sat; double time due when over 12 hours worked per day

CA 687 DT		7/5/2017				
Diver Tender			\$57.74	\$73.67	\$89.60	X X H X X H H D Y

*comment make up day allowed*  
 Saturday

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<u>Classification</u>		Last Updated	Straight Time and Hourly	Half	a Double Time	Overtime Provision
CA1045		7/5/2017				
	Carpet and Resilient Floor Layer, (does not include installation of prefabricated formica & parquet flooring which is to be paid carpenter rate)		\$51.94	\$73.28	\$94.62	X X H X X X D Y

**Apprentice Rates:**

1st 6 months	\$25.87	\$34.92	\$43.98
2nd 6 months	\$29.86	\$40.92	\$51.96
3rd 6 months	\$32.07	\$44.23	\$56.38
4th 6 months	\$34.27	\$47.52	\$60.78
5th 6 months	\$36.47	\$50.83	\$65.18
6th 6 months	\$38.69	\$54.16	\$69.62
7th 6 months	\$40.90	\$57.48	\$74.04
8th 6 months	\$43.10	\$60.77	\$78.44

CA687Z1		7/5/2017				
	Carpenter		\$58.62	\$74.55	\$90.48	X X H X X H H D Y

**Apprentice Rates:**

1st year	\$35.89	\$44.65	\$53.41
3rd 6 months	\$38.43	\$47.99	\$57.55
4th 6 months	\$40.94	\$51.29	\$61.65
5th 6 months	\$43.47	\$54.62	\$65.77
6th 6 months	\$46.01	\$57.96	\$69.91
7th 6 months	\$48.52	\$61.27	\$74.01
8th 6 months	\$51.04	\$64.58	\$78.12

*comment make up day allowed*

Saturdays, four 10s allowed Mon-Sat; double time due when over 12 hours worked per day

CA687Z1P		7/5/2017				
	Piledriver		\$58.62	\$74.55	\$90.48	X X H X X H H D Y

*comment make up day allowed*

Saturday, Four 10s allowed Monday-Saturday; double time due when over 12 hours worked per day .

Subdivision of county

worked per day .

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Classification	Last	Straight Time and		a	Overtime
Name      Description	Updated	Hourly	Half	Time	Provision

**Cement Mason**

BR1CM Cement Mason	11/3/2017		\$50.05	\$71.17	\$92.28	X X H H H H H D N
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**Apprentice Rates:**

1st 6 months	\$29.13	\$39.45	\$49.77
2nd 6 months	\$31.20	\$42.54	\$53.87
3rd 6 months	\$35.31	\$48.67	\$62.01
4th 6 months	\$39.46	\$54.85	\$70.23
5th 6 months	\$41.52	\$57.91	\$74.30
6th 6 months	\$45.67	\$64.10	\$82.52

CE514 Cement Mason	8/17/2016		\$48.55	\$68.40	\$88.24	H H D H H H H D N
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**Apprentice Rates:**

1st 6 months	\$28.17	\$38.03	\$47.88
2nd 6 months	\$30.14	\$40.98	\$51.82
3rd 6 months	\$34.09	\$46.91	\$59.72
4th 6 months	\$38.03	\$52.82	\$67.60
5th 6 months	\$39.99	\$55.75	\$71.52
6th 6 months	\$43.94	\$61.68	\$79.42

**Drywall**

PT-22-D Drywall Taper	8/25/2016		\$45.91	\$59.74	\$73.56	H H D H D D D D Y
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**Apprentice Rates:**

1st 3 months	\$32.08	\$38.99	\$45.90
2nd 3 months	\$34.85	\$43.14	\$51.44
2nd 6 months	\$37.62	\$47.30	\$56.98
3rd 6 months	\$40.38	\$51.44	\$62.50
4th 6 months	\$41.76	\$53.51	\$65.26

*comment      make up day allowed*

Four 10s allowed Monday-Thursday, Friday make-up day for bad weather or holidays

Official Request #: 1405

Requestor: Troy School District

Project Description: Install, configure, test and commission a fully operational wired

Project Number: BID 9852 – Network Equipment

County: Oakland

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**Official 2017 Prevailing Wage Rates for State Funded Projects**

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Classification Name      Description	Last Updated	Straight Time and Hourly	Half	a Double Time	Overtime Provision
<b>Glazier</b>					
GL-357 Glazier	8/24/2016	\$49.50	\$65.23	\$80.95	H H H H H H H D Y
<b>Apprentice Rates:</b>					
1st 6 months		\$33.77	\$41.63	\$49.49	
2nd 6 months		\$35.35	\$44.00	\$52.65	
3rd 6 months		\$38.49	\$48.71	\$58.93	
4th 6 months		\$40.06	\$51.07	\$62.07	
5th 6 months		\$41.64	\$53.43	\$65.23	
6th 6 months		\$43.21	\$55.79	\$68.37	
7th 6 months		\$44.78	\$58.15	\$71.51	
8th 6 months		\$47.93	\$62.87	\$77.81	

*comment*

If a four 10 hour day workweek is scheduled, four 10s must be consecutive, M-F.

**Heat and Frost Insulator**

AS25S Spray Insulation - Qualified Senior Sprayer, application of all products	3/31/2017	\$29.04	\$42.35		X X X H H H H H N
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**Heat and Frost Insulator and Asbestos Worker**

AS25 Heat and Frost Insulators and Asbestos Workers	6/3/2016	\$62.65	\$78.41	\$94.16	H H H H H H H D Y
<b>Apprentice Rates:</b>					
1st Year		\$46.90	\$54.78	\$62.66	
2nd Year		\$50.05	\$59.50	\$68.96	
3rd Year		\$53.20	\$64.23	\$75.26	
4th Year		\$56.35	\$68.96	\$81.56	

*comment*

Four 10s must be worked for a minimum of 2 consecutive weeks. OVERTIME is different on a four 10 week. OT is 2x for hours beyond 10. All hours on fifth day, M-F require time and one half. Sat first 8 hours, 1.5, all hours after 8 require double time.

Official Request #: 1405

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Classification	Last	Straight Time and	a Double	Overtime
Name Description	Updated	Hourly Half	Time	Provision

**Ironworker**

IR-25-F1	2/1/2017				
Fence, Sound Barrier & Guardrail erection/installation and Exterior Signage work		\$35.95	\$48.05	\$60.15	X X H X X X H D Y

**Apprentice Rates:**

60% Level		\$25.39	\$32.65	\$39.91
65% Level		\$26.71	\$34.58	\$42.44
70% Level		\$28.03	\$36.51	\$44.98
75% Level		\$29.35	\$38.42	\$47.50
80% Level		\$30.67	\$40.35	\$50.03
85% Level		\$31.99	\$42.28	\$52.56

*comment*

Four ten hour work days may be worked during Monday-Saturday.

IR-25-GZ2	7/5/2017				
Siding, Glazing, Curtain Wall		\$48.13	\$59.92	\$71.70	X X H H H H D D Y

**Apprentice Rates:**

Level 1		\$31.20	\$37.93	\$44.65
Level 2		\$33.31	\$40.67	\$48.02
Level 3		\$35.42	\$43.41	\$51.39
Level 4		\$37.54	\$46.16	\$54.77
Level 5		\$39.66	\$48.92	\$58.17
Level 6		\$41.78	\$51.67	\$61.55

*comment make up day allowed*

Friday, 4 tens may be worked Monday thru Thursday @ straight time.

IR-25-PE-Z1	3/31/2017				
Pre-engineered Metal Work		\$48.09	\$58.86	\$69.63	X X H X X X X D Y

**Apprentice Rates:**

Probation 1st Year		\$26.83	\$32.03	\$37.23
1st Level		\$28.96	\$34.92	\$40.88
2nd Level		\$28.96	\$34.92	\$40.88
3rd Level		\$31.08	\$37.79	\$44.50
4th Level		\$33.21	\$40.68	\$48.15
5th Level		\$35.33	\$43.55	\$51.77
6th Level		\$37.46	\$46.43	\$55.41

*comment make up day allowed*

4 tens allowed M-Th with Saturday make up day

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<u>Classification</u> Name Description	Last Updated	Straight Time and Hourly	a Double Time Half	Overtime Provision
IR-25-RF Reinforced Iron Work	7/5/2017	\$57.30	\$85.66	\$114.02 H H D H D D D D N
<b>Apprentice Rates:</b>				
Level 1		\$40.32	\$59.89	\$79.46
Level 2		\$42.68	\$63.43	\$84.18
Level 3		\$45.22	\$67.24	\$89.26
Level 4		\$47.75	\$71.04	\$94.32
Level 5		\$50.29	\$74.84	\$99.40
Level 6		\$50.29	\$74.84	\$99.40
<i>make up day allowed</i>				

IR-25-RIG Rigging Work	7/5/2017	\$63.51	\$95.00	\$126.49 H H H H H H H D N
<b>Apprentice Rates:</b>				
Level 1 & 2		\$38.22	\$56.16	\$74.85
Level 3		\$41.05	\$61.54	\$82.01
Level 4		\$43.87	\$65.76	\$87.65
Level 5		\$46.70	\$70.01	\$93.31
Level 6		\$49.53	\$74.25	\$98.97

IR-25-SD Decking	7/5/2017	\$55.47	\$82.87	\$110.26 X X H H H H D D Y
<i>comment make up day allowed</i>				
4 tens may be worked Monday thru Thursday @ straight time. If bad weather, Friday may be a make up day. If holiday celebrated on a Monday, 4 10s may be worked Tuesday thru Friday. Work in excess of 12 hours per day must be paid @ double time.				

IR-25-STR Structural, ornamental, welder and pre-cast	7/5/2017	\$63.64	\$95.12	\$126.60 H H H H H H D D Y
<b>Apprentice Rates:</b>				
Levels 1 & 2		\$38.22	\$56.99	\$75.75
Level 3		\$41.05	\$61.24	\$81.41
Level 4		\$43.87	\$65.46	\$87.05
Level 5		\$46.70	\$69.71	\$92.71
Level 6		\$49.53	\$73.95	\$98.37
Level 7		\$52.35	\$78.18	\$104.01
Level 8		\$55.18	\$82.43	\$109.67

Official Request #: 1405	<b>Official Rate Schedule</b>
Requestor: Troy School District	<b>Every contractor and subcontractor shall keep posted</b>
Project Description: Install, configure, test and commission a fully operational wired	<b>on the construction site, in a conspicuous place, a copy</b>
	<b>of all prevailing wage and fringe benefit rates</b>
	<b>prescribed in a contract.</b>
Project Number: BID 9852 – Network Equipment	
County: Oakland	

**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

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Classification	Last	Straight Time and	a Double	Overtime
Name Description	Updated	Hourly Half	Time	Provision

*comment make up day allowed*

4 tens may be worked Monday thru Thursday @ straight time. If bad weather, Friday may be a make up day. If holiday celebrated on a Monday, 4 10s may be worked Tuesday thru Friday. Work in excess of 12 hours per day must be paid @ double time.

IR-25-STR-D

7/5/2017

Industrial Door erection & construction

\$43.74 \$65.27 \$86.80 H H H H H H D D Y

*comment make up day allowed*

Friday for bad weather when 4 tens scheduled for M-Th. If holiday celebrated on M, 4 tens may be worked T-F. Work in excess of 12 hours per day must be paid @ double time.

**Laborer**

L1076-A-A

5/31/2017

Construction laborer, demolition laborer, mason tender, carpenter tender, drywall handler, concrete laborer, concrete chute and concrete bucket handler, and cement finisher tender, wall and ceiling material handler, plasterer tender, mortar mixer and plastering machine operator

\$44.76 \$63.69 \$82.61 H H H H H H D Y

**Apprentice Rates:**

0-1,000 work hours	\$38.67	\$54.55	\$70.43
1,001-2,000 work hours	\$39.89	\$56.38	\$72.87
2,001-3,000 work hours	\$41.11	\$58.21	\$75.31
3,001-4,000 work hours	\$43.54	\$61.86	\$80.17

*comment make up day allowed*

If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.

L1076-A-B

5/31/2017

Signal man (on sewer and caisson work); air, electric or gasoline tool operator (including concrete vibrator operator, acetylene torch and air hammer operator); Scaffold builder; Caisson worker

\$45.04 \$64.11 \$83.17 H H H H H H D Y

*comment make up day allowed*

If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.

L1076-A-C

5/31/2017

Lansing burner, blaster and powder man; air, electric or gasoline tool operator (Blast Furnace work or Battery Work)

\$45.55 \$64.87 \$84.19 H H H H H H D Y

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<i>comment</i>		<i>make up day allowed</i>				
		If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.				
L1076-A-D			5/31/2017	\$45.28	\$62.67	\$80.10 H H H H H H H D Y
		Furnace battery heater tenders, burning bar and oxy-acetylene gun				
<i>comment</i>		<i>make up day allowed</i>				
		If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.				
L1076-A-E			6/2/2017	\$39.31	\$55.51	\$71.71 H H H H H H H D Y
		Cleaner/sweeper laborer, furniture laborer - unloading of furniture to the point of installation, the setting in place or relocation of furniture.				
<i>comment</i>		<i>make up day allowed</i>				
		If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.				
L1076-A-F			6/2/2017	\$46.07	\$65.65	\$85.23 H H H H H H H D Y
		Expediter man, top and/or bottom man (Blast Furnace work or Battery Work)				
<i>comment</i>		<i>make up day allowed</i>				
		If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.				
LPT-1			6/17/2016	\$44.35	\$63.10	\$81.85 H H H H H H H D Y
		Plasterer Tender, Plastering Machine Operator				
		<b>Apprentice Rates:</b>				
		1,001 - 2,000 hours		\$39.53	\$55.87	\$72.21
		2,001 - 3,000 hours		\$40.73	\$57.67	\$74.61
		3,001 - 4,000 hours		\$43.15	\$61.30	\$79.45
<i>comment</i>		<i>make up day allowed</i>				
		If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.				

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Classification Name	Description	Last Updated	Straight Time and Hourly	Half	a Double Time	Overtime Provision
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**Laborer - Hazardous**

LHAZ-Z2-A		11/13/2017				
Class A Laborer - performing work in conjunction with site preparation and other preliminary work prior to actual removal, handling, or containment of hazardous waste substances not requiring use of personal protective equipment required by state or federal regulations; or a laborer performing work in conjunction with the removal, handling, or containment of hazardous waste substances when used of personal protective equipment level "D" is required.			\$44.76	\$63.69	\$82.61	H H H H H H H D Y

**Apprentice Rates:**

0-1,000 work hours	\$38.67	\$54.55	\$70.43
1,001-2,000 work hours	\$39.89	\$56.38	\$72.87
2,001-3,000 work hours	\$41.11	\$58.21	\$75.31
3,001-4,000 work hours	\$43.54	\$61.86	\$80.17

*comment make up day allowed*  
4 10s allowed M-Th or T-F; inclement weather makeup day Friday

LHAZ-Z2-B		11/13/2017				
Class B Laborer - performing work in conjunction with the removal, handling, or containment of hazardous waste substances when the use of personal protective equipment levels "A", "B" or "C" is required.			\$45.76	\$65.19	\$84.61	H H H H H H H D Y

**Apprentice Rates:**

0-1,000 work hours	\$39.42	\$55.68	\$71.93
1,001-2,000 work hours	\$40.69	\$57.58	\$74.47
2,001-3,000 work hours	\$41.96	\$59.48	\$77.01
3,001-4,000 work hours	\$44.49	\$63.28	\$82.07

*comment make up day allowed*  
4 10s allowed M-Th or T-F; inclement weather makeup day Friday

**Laborer Underground - Open Cut, Class I**

LAUC-Z1-1		9/7/2017				
Construction Laborer			\$38.92	\$49.96	\$60.99	X X X X X X X D Y

**Apprentice Rates:**

0-1,000 work hours	\$34.04	\$42.64	\$51.23
1,001-2,000 work hours	\$35.02	\$44.11	\$53.19
2,001-3,000 work hours	\$35.99	\$45.56	\$55.13
3,001-4,000 work hours	\$37.94	\$48.49	\$59.03

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Requestor: Troy School District  
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Classification Name Description	Last Updated	Straight Time and Hourly	Half	a Double Time	Overtime Provision
LAUCT-Z1-4 Class IV - Tunnel, shaft and caisson mucker, bracer man, liner plate man, long haul dinky driver and well point man.	9/7/2017	\$39.42	\$50.71	\$61.99	X X X X X X D Y
<b>Apprentice Rates:</b>					
0-1,000 work hours		\$34.42	\$43.21	\$51.99	
1,001-2,000 work hours		\$35.42	\$44.71	\$53.99	
2,001-3,000 work hours		\$36.42	\$46.21	\$55.99	
3,001-4,000 work hours		\$38.42	\$49.21	\$59.99	
-----					
LAUCT-Z1-5 Class V - Tunnel, shaft and caisson miner, drill runner, keyboard operator, power knife operator, reinforced steel or mesh man (e.g. wire mesh, steel mats, dowel bars)	9/7/2017	\$39.67	\$51.08	\$62.49	X X X X X X D Y
<b>Apprentice Rates:</b>					
0-1,000 work hours		\$34.60	\$43.48	\$52.35	
1,001-2,000 work hours		\$35.62	\$45.01	\$54.39	
2,001-3,000 work hours		\$36.63	\$46.52	\$56.41	
3,001-4,000 work hours		\$38.66	\$49.57	\$60.47	
-----					
LAUCT-Z1-6 Class VI - Dynamite man and powder man.	9/7/2017	\$40.00	\$51.58	\$63.15	X X X X X X D Y
<b>Apprentice Rates:</b>					
0-1,000 work hours		\$34.85	\$43.86	\$52.85	
1,001-2,000 work hours		\$35.88	\$45.40	\$54.91	
2,001-3,000 work hours		\$36.91	\$46.94	\$56.97	
3,001-4,000 work hours		\$38.97	\$50.04	\$61.09	
-----					
LAUCT-Z1-7 Class VII - Restoration laborer, seeding, sodding, planting, cutting, mulching and topsoil grading and the restoration of property such as replacing mail boxes, wood chips, planter boxes and flagstones.	9/7/2017	\$33.28	\$41.50	\$49.71	X X X X X X D Y
<b>Apprentice Rates:</b>					
0-1,000 work hours		\$29.81	\$36.30	\$42.77	
1,001-2,000 work hours		\$30.50	\$37.33	\$44.15	
2,001-3,000 work hours		\$31.20	\$38.38	\$45.55	
3,001-4,000 work hours		\$32.59	\$40.46	\$48.33	

Official Request #: 1405

Requestor: Troy School District

Project Description: Install, configure, test and commission a fully operational wired

Project Number: BID 9852 – Network Equipment

County: Oakland

**Official Rate Schedule**

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**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

**Contract must be awarded by: 3/19/2018**

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Classification	Last Updated	Straight Time and Hourly	Time and Half	a Double Time	Overtime Provision
Name	Description				

**Landscape Laborer**

LLAN-Z1-A	10/13/2015		\$28.98	\$40.04	\$51.09	X	X	H	X	X	X	H	D	Y
Landscape Specialist: includes air, gas, and diesel equipment operator, skidsteer (or equivalent), lawn sprinkler installer on landscaping work where seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintenance of landscape projects occurs.														

*comment*  
Sundays paid at time & one half. Holidays paid at double time.

LLAN-Z1-B	10/13/2015		\$24.76	\$33.71	\$42.65	X	X	H	X	X	X	H	D	Y
Skilled Landscape Laborer: small power tool operator, lawn sprinkler installers' tender, material mover, truck driver when seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintaining of landscape projects occurs														

*comment*  
Sundays paid at time & one half. Holidays paid at double time.

**Marble Finisher**

BR1-MF	10/20/2014		\$43.48	\$54.29	\$65.10	H	H	D	H	D	D	D	D	Y
Marble Finisher														
<b>Apprentice Rates:</b>														
			Level 1	\$19.04	\$25.12	\$31.20								
			Level 2	\$20.24	\$26.92	\$33.60								
			Level 3	\$27.01	\$33.96	\$40.90								
			Level 4	\$28.47	\$36.14	\$43.82								
			Level 5	\$29.99	\$37.84	\$45.70								
			Level 6	\$31.61	\$39.86	\$48.10								
			Level 7	\$33.30	\$41.59	\$49.87								
			Level 8	\$34.79	\$43.48	\$52.17								

*comment*  
A four ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.

Official Request #: 1405 Requestor: Troy School District Project Description: Install, configure, test and commission a fully operational wired Project Number: BID 9852 – Network Equipment County: Oakland	<p><b>Official Rate Schedule</b></p> <p><b>Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.</b></p>
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**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

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Classification Name	Description	Last Updated	Straight Time and Hourly	Half	a Double Time	Overtime Provision
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**Marble Mason**

BR1-MM		10/17/2014				
Marble Mason			\$50.29	\$64.51	\$78.72	H H D H D D D D Y
	<b>Apprentice Rates:</b>					
	Level 1		\$25.14	\$32.65	\$40.15	
	Level 2		\$28.20	\$36.49	\$44.78	
	Level 3		\$33.41	\$41.97	\$50.53	
	Level 4		\$36.15	\$45.66	\$55.17	
	Level 5		\$38.42	\$48.17	\$57.92	
	Level 6		\$42.07	\$53.56	\$65.05	
	Level 7		\$42.74	\$54.38	\$66.02	
	Level 8		\$43.67	\$55.78	\$67.88	

*comment*

A four ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.

**Operating Engineer**

EN-324-A120		6/7/2017				
Crane with boom & jib or leads 120' or longer			\$59.36	\$77.25	\$95.13	X X H H D D D D Y
	<i>comment</i>					
	Double time after 12 hours M-F					
EN-324-A140		6/7/2017				
Crane with boom & jib or leads 140' or longer			\$60.18	\$78.48	\$96.77	X X H H D D D D Y
	<i>comment</i>					
	Work in excess of 12 hours per day M-F shall be paid at double time.					
EN-324-A220		6/7/2017				
Crane with boom & jib or leads 220' or longer			\$60.48	\$78.93	\$97.37	X X H H D D D D Y
	<i>comment</i>					
	Work in excess of 12 hours per day M-F shall be paid at double time.					
EN-324-A300		6/7/2017				
Crane with boom & jib or leads 300' or longer			\$61.98	\$81.18	\$100.37	X X H H D D D D Y
	<i>comment</i>					
	Work in excess of 12 hours per day M-F shall be paid at double time.					
EN-324-A400		6/7/2017				
Crane with boom & jib or leads 400' or longer			\$63.48	\$83.43	\$103.37	X X H H D D D D Y

Official Request #: 1405

Requestor: Troy School District

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Project Number: BID 9852 – Network Equipment

County: Oakland

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**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

**Contract must be awarded by: 3/19/2018**

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<u>Classification</u>	<u>Name</u>	<u>Description</u>	<u>Last Updated</u>	<u>Straight Time and Hourly</u>	<u>a Double Half Time</u>	<u>Overtime Provision</u>
<i>comment</i> Work in excess of 12 hours per day M-F shall be paid at double time.						
EN-324-CW			6/7/2017			
	Compressor or welding machine			\$48.51	\$60.97	\$73.43 X X H H D D D D Y
<i>comment</i> Work in excess of 12 hours per day M-F shall be paid at double time.						
EN-324-FL			6/7/2017			
	Forklift, lull, extend-a-boom forklift			\$55.82	\$71.94	\$88.05 X X H H D D D D Y
<i>comment</i> Work in excess of 12 hours per day M-F shall be paid at double time.						
EN-324-FO			6/7/2017			
	Fireman or oiler			\$47.48	\$59.43	\$71.37 X X H H D D D D Y
<i>comment</i> Work in excess of 12 hours per day M-F shall be paid at double time.						
EN-324-RC			6/7/2017			
	Regular crane, job mechanic, concrete pump with boom			\$58.50	\$75.96	\$93.41 X X H H D D D D Y
<i>comment</i> Work in excess of 12 hours per day M-F shall be paid at double time.						
EN-324-RE			6/7/2017			
	Regular engineer, hydro-excavator, remote controlled concrete breaker			\$57.53	\$74.50	\$91.47 X X H H D D D D Y
	<b>Apprentice Rates:</b>					
		0-999 hours		\$46.53	\$58.76	\$70.97
		1,000-1,999 hours		\$48.28	\$61.38	\$74.47
		2,000-2,999 hours		\$50.02	\$63.99	\$77.95
		3,000-3,999 hours		\$51.77	\$66.62	\$81.45
		4,000-4,999 hours		\$53.51	\$69.22	\$84.93
		5,000-5,999 hours		\$55.26	\$71.85	\$88.43
<i>comment</i> Work in excess of 12 hours per day M-F shall be paid at double time.						

**Operating Engineer - Marine Construction**

GLF D			4/2/2014			
	Diver/Wet Tender/Tender/Rov Pilot/Rov Tender			\$52.80	\$79.20	\$105.60 H H H H H H H D N

Official Request #: 1405

Requestor: Troy School District

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County: Statewide

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**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

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<u>Classification</u>	<u>Last Updated</u>	<u>Straight Time and Hourly</u>	<u>a Double Time</u>	<u>Overtime Provision</u>
GLF-1 Diver/Wet Tender, Engineer (hydraulic dredge) <i>comment make up day allowed</i> Holiday pay = 2.5 times the straight hourly rate <u>Subdivision of county</u> all Great Lakes, islands therein, & connecting & tributary waters	1/23/2017	\$72.32	\$93.82	\$115.32 X X H H H H H D Y
GLF-2 Crane/Backhoe Operator, 70 ton or over Tug Operator, Mechanic/Welder, Assistant Engineer (hydraulic dredge), Leverman (hydraulic dredge), Diver Tender <i>comment make up day allowed</i> Holiday pay = 2.5 times the straight hourly rate <u>Subdivision of county</u> All Great Lakes, islands therein, & connecting & tributary waters	1/23/2017	\$70.82	\$91.57	\$112.32 X X H H H H H D Y
GLF-2B Friction, Lattice Boom or Crane License Certification <i>comment make up day allowed</i> Holiday pay = 2.5 times the straight hourly rate <u>Subdivision of county</u> All Great Lakes, islands, therein, & connecting & tributary waters	1/23/2017	\$72.32	\$93.82	\$115.32 X X H H H H H D Y
GLF-3 Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs or more), Tug/Launch Operator, Loader, Dozer on Barge, Deck Machinery <i>comment make up day allowed</i> Holiday pay = 2.5 times the straight hourly rate <u>Subdivision of county</u> All Great Lakes, islands therein, & connecting & tributary waters	1/23/2017	\$66.27	\$84.75	\$103.22 X X H H H H H D Y
GLF-4 Deck Equipment Operator, (Machineryman/Fireman), (4 equipment units or more), Off Road Trucks, Deck Hand, Tug Engineer, & Crane Maintenance 50 ton capacity and under or Backhoe 115,000 lbs or less, Assistant Tug Operator <i>comment make up day allowed</i> Holiday pay = 2.5 times the straight hourly rate <u>Subdivision of county</u> All Great Lakes, islands therein, & connecting & tributary waters	1/23/2017	\$60.07	\$75.45	\$90.82 X X H H H H H D Y

**Operating Engineer Steel Work**

EN-324-EF Forklift, 1 Drum Hoist <i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	6/8/2017	\$60.41	\$79.00	\$97.58 H H D H H H D D Y
EN-324-SW120 Crane w/ 120' boom or longer	6/7/2017	\$63.11	\$83.05	\$102.98 H H D H H H D D Y

Official Request #: 1405  
Requestor: Troy School District  
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Project Number: BID 9852 – Network Equipment  
County: Oakland

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**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

**Contract must be awarded by: 3/19/2018**

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<u>Classification</u>	<u>Name</u>	<u>Description</u>	<u>Last Updated</u>	<u>Straight Time and Hourly</u>	<u>a Double Half Time</u>	<u>Overtime Provision</u>
		<i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather				
EN-324-SW120-O		Crane w/ 120' boom or longer w/ Oiler	6/7/2017	\$64.11	\$84.55	\$104.98 H H D H H H D D Y
		<i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather				
EN-324-SW140		Crane w/ 140' boom or longer	6/7/2017	\$64.29	\$84.82	\$105.34 H H D H H H D D Y
		<i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather				
EN-324-SW140-O		Crane w/ 140' boom or longer W/ Oiler	6/7/2017	\$65.29	\$86.32	\$107.34 H H D H H H D D Y
		<i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather				
EN-324-SW220		Boom & Jib 220' or longer	6/7/2017	\$64.56	\$85.22	\$105.88 H H D H H H D D Y
		<i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather				
EN-324-SW220-O		Crane w/ 220' boom or longer w/ Oiler	6/7/2017	\$65.56	\$86.72	\$107.88 H H D H H H D D Y
		<i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather				
EN-324-SW300		Boom & Jib 300' or longer	6/7/2017	\$66.06	\$87.47	\$108.88 H H D H H H D D Y
		<i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather				
EN-324-SW300-O		Crane w/ 300' boom or longer w/ Oiler	6/7/2017	\$67.06	\$88.97	\$110.88 H H D H H H D D Y
		<i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather				
EN-324-SW400		Boom & Jib 400' or longer	6/7/2017	\$67.56	\$89.72	\$111.88 H H D H H H D D Y
		<i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather				

Official Request #: 1405

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Classification Name Description	Last Updated	Straight Time and Hourly	Half	a Double Time	Overtime Provision
EN-324-SW400-O Crane w/ 400' boom or longer w/ Oiler <i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	6/7/2017	\$68.56	\$91.22	\$113.88	H H D H H H D D Y
EN-324-SWCO Crane Operator, Job Mechanic, 3 Drum Hoist & Excavator <b>Apprentice Rates:</b> 0-999 hours 1,000-1,999 hours 2,000-2,999 hours 3,000-3,999 hours 4,000-4,999 hours 5,000 hours <i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	6/7/2017	\$62.75	\$82.51	\$102.26	H H D H H H D D Y
EN-324-SWCO-O Crane Operator w/ Oiler <i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	6/7/2017	\$63.75	\$84.01	\$104.26	H H D H H H D D Y
EN-324-SWCW Compressor or Welder Operator <i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	6/7/2017	\$55.30	\$71.33	\$87.36	H H D H H H D D Y
EN-324-SWHO Hoisting Operator, 2 Drum Hoist, & Rubber Tire Backhoe <i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	6/7/2017	\$62.11	\$81.55	\$100.98	H H D H H H D D Y
EN-324-SWO Oiler <i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	6/7/2017	\$53.89	\$69.22	\$84.54	H H D H H H D D Y
EN-324-SWTD50 Tower Crane & Derrick where work is 50' or more <i>comment make up day allowed</i> 4 10s allowed M-Th with Friday makeup day because of bad weather	6/7/2017	\$63.84	\$84.14	\$104.44	H H D H H H D D Y

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<u>Classification</u>		Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
Name	Description					
EN-324-SWTD50-O		6/7/2017				
Tower Crane & Derrick 50' or more w/ Oiler			\$64.84	\$85.64	\$106.44	H H D H H H D D Y
<i>comment</i>	<i>make up day allowed</i>					
	4 10s allowed M-Th with Friday makeup day because of bad weather					

**Operating Engineer Underground**

EN-324A1-UC1		9/7/2017				
Class I Equipment			\$55.54	\$71.56	\$87.57	H H H H H H D Y
	<b>Apprentice Rates:</b>					
	0-999 hours		\$44.09	\$55.30	\$66.52	
	1,000-1,999 hours		\$45.68	\$57.70	\$69.70	
	2,000-2,999 hours		\$47.28	\$60.09	\$72.90	
	3,000-3,999 hours		\$48.88	\$62.49	\$76.10	
	4,000-4,999 hours		\$50.49	\$64.91	\$79.32	
	5,000-5,999 hours		\$52.09	\$67.30	\$82.52	

EN-324A1-UC2		9/7/2017				
Class II Equipment			\$50.81	\$64.46	\$78.11	H H H H H H D Y

EN-324A1-UC3		9/7/2017				
Class III Equipment			\$50.08	\$63.37	\$76.65	H H H H H H D Y

EN-324A1-UC4		9/7/2017				
Class IV Equipment			\$49.51	\$62.52	\$75.51	H H H H H H D Y

EN-324A1-UMM		9/7/2017				
Master Mechanic			\$55.79	\$71.93	\$88.07	H H H H H H D Y

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Classification	Name	Description	Last Updated	Straight Time and Hourly	Half	a Double Time	Overtime Provision
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**Painter**

PT-22-P	Painter		10/3/2017	\$44.32	\$57.60	\$70.88	H H D H D D D D Y
				<b>Apprentice Rates:</b>			
				Year 1	\$31.04	\$37.68	\$44.32
				Year 2	\$33.70	\$41.67	\$49.64
				Year 3	\$36.35	\$45.64	\$54.94
				Year 4	\$40.34	\$51.63	\$62.92

*comment make up day allowed*

Four 10s allowed Monday-Thursday with Friday makeup day if job down due to weather, holiday or other conditions beyond the control of the employer, 8 hours of repaint work performed on Sunday shall be paid time & one half rate

**Painter - Sign Display**

PT-591	The trade jurisdiction consists of painting and other related surface finishing operations; lettering, and all operations so related; pictorial and graphic art work; screen process procedures; application of photographs, translates, refinished surface-type materials used in lieu of painted methods, display graphics; adhesive backed lettering and art work; sign hanging, sign installation, erection and construction; bulletin board construction; plastic sign fabrication; advertising displays and exhibits; and the preparing of surfaces for finishing of the same to include but not limited to application of filler of seams, grooves, nail and/or screw holes; and such area practices pertaining to the sign and display industry.		12/12/2017	\$19.94	\$29.93	\$39.88	X X X X X X D N
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**Pipe and Manhole Rehab**

TM247	General Laborer for rehab work or normal cleaning and cctv work-top man, scaffold man, CCTV assistant, jetter-vac assistant		4/17/2015	\$28.20	\$38.20		H H H H H H H N
TM247-2	Tap cutter/CCTV Tech/Grout Equipment Operator: unit driver and operator of CCTV; grouting equipment and tap cutting equipment		4/17/2015	\$32.70	\$44.95		H H H H H H H N

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Project Description: Install, configure, test and commission a fully operational wired

Project Number: BID 9852 – Network Equipment

County: Statewide

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**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

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<u>Classification</u>						
Name	Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
TM247-3		4/17/2015				
CCTV Technician/Combo Unit Operator:	unit driver and operator of cctv unit or combo unit in connection with normal cleaning and		\$31.45	\$43.07		H H H H H H H H N
TM247-4		4/17/2015				
Boiler Operator:	unit driver and operator of steam/water heater units and all ancillary equipment associated		\$33.20	\$45.70		H H H H H H H H N
TM247-5		4/17/2015				
Combo Unit driver & Jetter-Vac Operator			\$33.20	\$45.70		H H H H H H H H N
TM247-6		4/17/2015				
Pipe Bursting & Slip-lining Equipment Operator			\$34.20	\$47.20		H H H H H H H H N

**Pipefitter**

PF-636		7/12/2016				
Pipefitter, Steamfitter, Refrigeration & Air Conditioning Service			\$69.83	\$91.03	\$108.23	H H D H D D D D Y
	<b>Apprentice Rates:</b>					
	1st & 2nd periods		\$29.93	\$38.28	\$45.28	
	3rd period		\$31.93	\$41.28	\$49.28	
	4th period		\$33.18	\$43.16	\$51.78	
	5th period		\$34.43	\$45.03	\$54.28	
	6th period		\$35.68	\$46.90	\$56.78	
	7th period		\$36.93	\$48.78	\$59.28	
	8th period		\$37.93	\$50.28	\$61.28	
	9th period		\$38.93	\$51.78	\$63.28	
	10th period		\$40.36	\$53.92	\$66.14	

*comment*

Four 10s allowed during the week preceding, following and/or the week of a holiday.

Official Request #: 1405	<b>Official Rate Schedule</b>
Requestor: Troy School District	<b>Every contractor and subcontractor shall keep posted</b>
Project Description: Install, configure, test and commission a fully operational wired	<b>on the construction site, in a conspicuous place, a copy</b>
	<b>of all prevailing wage and fringe benefit rates</b>
	<b>prescribed in a contract.</b>
Project Number: BID 9852 – Network Equipment	
County: Oakland	

**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

**Contract must be awarded by: 3/19/2018**

**Page 25 of 30**

Classification Name      Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
<b>Plasterer</b>					
BR1P Plasterer	11/1/2012	\$45.04	\$67.56	\$90.08	H H H H H H H D N
		<b>Apprentice Rates:</b>			
		1st 6 months	\$32.11	\$48.17	\$64.22
		2nd 6 months	\$33.40	\$50.10	\$66.80
		3rd 6 months	\$34.69	\$52.04	\$69.38
		4th 6 months	\$37.28	\$55.92	\$74.56
		5th 6 months	\$39.87	\$59.81	\$79.74
		6th 6 months	\$42.45	\$63.68	\$84.90
<i>comment</i> Saturday	<i>make up day allowed</i>				
PL67 Plasterer	9/8/2010	\$44.72	\$60.11	\$75.50	H H H X D D D D N
		<b>Apprentice Rates:</b>			
		1st 6 months	\$29.33	\$37.02	\$44.72
		2nd 6 months	\$30.87	\$39.34	\$47.80
		3rd 6 months	\$32.41	\$41.64	\$50.88
		4th 6 months	\$35.49	\$46.26	\$57.04
		5th 6 months	\$38.56	\$51.16	\$63.76
		6th 6 months	\$41.64	\$55.49	\$69.34

Official Request #: 1405

Requestor: Troy School District

Project Description: Install, configure, test and commission a fully operational wired

Project Number: BID 9852 – Network Equipment

County: Oakland

**Official Rate Schedule**

**Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.**

**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

**Contract must be awarded by: 3/19/2018**

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Classification	Last	Straight Time and	a Double	Overtime
Name Description	Updated	Hourly Half	Time	Provision

**Plumber**

PL-98	7/18/2013													
Plumber		\$64.45	\$84.87	\$101.29	H	H	D	H	D	D	D	D	D	Y

**Apprentice Rates:**

Period 1	\$19.93	\$26.43	\$32.93
Period 2	\$23.90	\$31.40	\$38.90
Period 3	\$30.60	\$39.19	\$47.77
Period 4	\$31.23	\$40.13	\$49.03
Period 5	\$32.39	\$41.87	\$51.35
Period 6	\$33.54	\$43.59	\$53.65
Period 7	\$34.69	\$45.32	\$55.95
Period 8	\$35.86	\$47.07	\$58.29
Period 9	\$37.01	\$48.80	\$60.59
Period 10	\$38.16	\$50.53	\$62.89

*comment*

4 tens allowed M-Th or T-F; OT of time and one half required on 11th & 12th hour of any ten hour days

**Roofer**

RO-149-WOM	9/27/2016													
Commercial Roofer		\$55.93	\$70.93	\$85.93	X	X	H	X	X	H	H	D	N	

**Apprentice Rates:**

new apprentice	\$37.34	\$45.07	\$52.80
Apprentice 1	\$41.85	\$49.81	\$57.77
Apprentice 2	\$42.36	\$50.57	\$58.79
Apprentice 3	\$43.87	\$52.84	\$61.81
Apprentice 4	\$45.37	\$55.09	\$64.81
Apprentice 5	\$46.88	\$57.35	\$67.83
Apprentice 6	\$48.29	\$59.47	\$70.65
Apprentice 7	\$49.90	\$61.89	\$73.87
Apprentice 8	\$51.41	\$64.15	\$76.89

**Sewer Relining**

SR-I	11/24/2015													
Class I-Operator of audio visual CCTV system including remote in-ground cutter and other equipment used in conjunction with CCTV		\$43.66	\$59.01	\$74.36	H	H	H	H	H	H	H	D	N	

Official Request #: 1405

Requestor: Troy School District

Project Description: Install, configure, test and commission a fully operational wired

Project Number: BID 9852 – Network Equipment

County: Statewide

**Official Rate Schedule**

**Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.**

**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

**Contract must be awarded by: 3/19/2018**

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Classification Name	Description	Last Updated	Straight Time and Hourly	Half	a Double Time	Overtime Provision
SR-II		11/24/2015				
	Class II-Operator of hot water heaters and circulation system; water jettors; and vacuum and mechanical debris removal systems and those assisting.		\$42.13	\$56.72	\$71.30	H H H H H H D N

**Sheet Metal Worker**

SHM-80		7/27/2017				
	Sheet Metal Worker		\$65.75	\$84.06	\$102.36	H H D X D D D D Y
	<b>Apprentice Rates:</b>					
	1st & 2nd Periods		\$41.56	\$49.80	\$58.03	
	3rd & 4th Periods		\$43.39	\$52.55	\$61.69	
	5th & 6th Periods		\$45.21	\$55.28	\$65.33	
	7th & 8th Periods		\$47.06	\$58.04	\$69.03	

*comment*

A 4 10 schedule may be worked, 4 consecutive days Monday thru Friday.

SHM-80-A		10/4/2017				
	Architectural Sheet Metal Worker after 1,000 hours		\$44.98	\$57.56	\$70.13	H H D H D D D D Y
	<b>Apprentice Rates:</b>					
	1st 30 Working Days		\$26.67	\$38.88	\$51.08	
	>30 working days < 1000 hours		\$43.32	\$55.53	\$67.73	

Official Request #: 1405

Requestor: Troy School District

Project Description: Install, configure, test and commission a fully operational wired

Project Number: BID 9852 – Network Equipment

County: Oakland

**Official Rate Schedule**

**Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.**

**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

**Contract must be awarded by: 3/19/2018**

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Classification	Last	Straight Time and	a Double	Overtime
Name Description	Updated	Hourly Half Time	Time	Provision

**Sprinkler Fitter**

SP 704	7/31/2017												
Sprinkler Fitter		\$68.92	\$88.21	\$107.49	H	H	D	H	D	D	D	D	Y

**Apprentice Rates:**

1st Period	\$29.47	\$38.22	\$46.97
2nd Period	\$44.86	\$54.71	\$64.55
3rd Period	\$47.05	\$57.99	\$68.93
4th Period	\$49.24	\$61.27	\$73.31
5th Period	\$51.42	\$64.55	\$77.67
6th Period	\$53.61	\$67.83	\$82.05
7th Period	\$55.80	\$71.11	\$86.43
8th Period	\$57.99	\$74.40	\$90.81
9th Period	\$60.17	\$77.67	\$95.17
10th Period	\$62.36	\$80.95	\$99.55

*comment*

4 ten hour days allowed Monday-Friday  
Double time pay due after 12 hours worked M-F

**Terrazzo**

BR1-TRF	10/17/2014												
Terrazzo Finisher		\$43.97	\$55.03	\$66.08	H	H	D	H	D	D	D	D	Y

**Apprentice Rates:**

Level 1	\$19.04	\$25.12	\$31.20
Level 2	\$20.24	\$26.92	\$33.60
Level 3	\$27.01	\$33.96	\$40.90
Level 4	\$28.47	\$36.14	\$43.82
Level 5	\$29.99	\$37.84	\$45.70
Level 6	\$31.61	\$39.86	\$48.10
Level 7	\$33.30	\$41.59	\$49.87
Level 8	\$34.79	\$43.48	\$52.17

*comment*

A four ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.

Official Request #: 1405

Requestor: Troy School District

Project Description: Install, configure, test and commission a fully operational wired

Project Number: BID 9852 – Network Equipment

County: Oakland

**Official Rate Schedule**

**Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.**

**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

**Contract must be awarded by: 3/19/2018**

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<u>Classification</u>						
Name	Description	Last Updated	Straight Hourly	Time and Half	a Double Time	Overtime Provision
BR1-TRW		10/17/2014				
Terrazzo Worker			\$49.73	\$63.67	\$77.60	H H D H D D D D Y
	<b>Apprentice Rates:</b>					
	Level 1		\$25.14	\$32.65	\$40.15	
	Level 2		\$28.20	\$36.49	\$44.78	
	Level 3		\$33.41	\$41.97	\$50.53	
	Level 4		\$36.15	\$45.66	\$55.17	
	Level 5		\$38.42	\$48.17	\$57.92	
	Level 6		\$42.07	\$53.56	\$65.05	
	Level 7		\$42.74	\$54.38	\$66.02	
	Level 8		\$43.67	\$55.78	\$67.88	

*comment*

A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.

**Title**

BR1-TF		10/17/2014				
Tile Finisher			\$43.50	\$54.32	\$65.14	H H D H D D D D Y
	<b>Apprentice Rates:</b>					
	Level 1		\$19.04	\$25.12	\$31.20	
	Level 2		\$20.24	\$26.92	\$33.60	
	Level 3		\$27.01	\$33.96	\$40.90	
	Level 4		\$28.47	\$36.14	\$43.82	
	Level 5		\$29.99	\$37.84	\$45.70	
	Level 6		\$31.61	\$39.86	\$48.10	
	Level 7		\$33.30	\$41.59	\$49.87	
	Level 8		\$34.79	\$43.48	\$52.17	

*comment*

A four ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.

Official Request #: 1405

Requestor: Troy School District

Project Description: Install, configure, test and commission a fully operational wired

Project Number: BID 9852 – Network Equipment

County: Oakland

**Official Rate Schedule**

**Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.**

**Official 2017 Prevailing Wage Rates for State Funded Projects**

**Issue Date: 12/19/2017**

**Contract must be awarded by: 3/19/2018**

**Page 30 of 30**

Classification Name Description	Last Updated	Straight Time and Hourly	Time and Half	a Double Time	Overtime Provision
BR1-TL Tile Layer	10/17/2014	\$49.68	\$63.59	\$77.50	H H D H D D D D Y
<b>Apprentice Rates:</b>					
Level 1		\$25.14	\$32.65	\$40.15	
Level 2		\$28.20	\$36.49	\$44.78	
Level 3		\$33.41	\$41.97	\$50.53	
Level 4		\$36.15	\$45.66	\$55.17	
Level 5		\$38.42	\$48.17	\$57.92	
Level 6		\$42.07	\$53.56	\$65.05	
Level 7		\$42.74	\$54.38	\$66.02	
Level 8		\$43.67	\$55.78	\$67.88	

*comment*

A four ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.

**Truck Driver**

TM-RB1 on all trucks of 8 cubic yard capacity or less (except dump trucks of 8 cubic yard capacity or over, tandem axle trucks, transit mix and semis, euclid type equipment, double bottoms and low boys)	6/7/2016	\$44.10	\$48.81		H H H H H H H H Y
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TM-RB1A of all trucks of 8 cubic yard capacity or over	6/7/2016	\$44.20	\$48.96		H H H H H H H H Y
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TM-RB1B on euclid type equipment <i>make up day allowed</i>	6/7/2016	\$44.35	\$49.19		H H H H H H H H Y
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Official Request #: 1405

Requestor: Troy School District

Project Description: Install, configure, test and commission a fully operational wired

Project Number: BID 9852 – Network Equipment

County: Oakland

**Official Rate Schedule**

**Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.**



## STATE OF MICHIGAN

Wage and Hour Division

P.O. Box 30476 • Lansing, Michigan 48909-7976

Toll Free: 1-855-4MI-WAGE (1-855-464-9243)

[www.michigan.gov/wagehour](http://www.michigan.gov/wagehour)

### ***Informational Sheet: Prevailing Wages on State Projects***

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#### **REQUIREMENTS OF THE PREVAILING WAGES ON STATE PROJECTS ACT, PUBLIC ACT 166 OF 1965**

The State of Michigan determines prevailing rates pursuant to the Prevailing Wages on State Projects Act, Public Act 166 of 1965, as amended. The purpose of establishing prevailing rates is to provide minimum rates of pay that must be paid to workers on construction projects for which the state or a school district is the contracting agent and which is financed or financially supported by the state. By law, prevailing rates are compiled from the rates contained in collectively bargained agreements which cover the locations of the state projects. The official prevailing rate schedule provides an hourly rate which includes *wage and fringe benefit totals* for designated construction mechanic classifications. The overtime rates also include *wage and fringe benefit totals*. Please pay special attention to the overtime and premium pay requirements. Prevailing wage is satisfied when wages plus fringe benefits paid to a worker are equal to or greater than the required rate.

##### **State of Michigan responsibilities under the law:**

- The department establishes the prevailing rate for each classification of construction mechanic ***requested by a contracting agent*** prior to contracts being let out for bid on a state project.

##### **Contracting agent responsibilities under the law:**

- If a contract is not awarded or construction does not start within 90 days of the date of the issuance of rates, a re-determination of rates must be requested by the contracting agent.
- Rates for classifications needed but not provided on the Prevailing Rate Schedule, ***must*** be obtained ***prior*** to contracts being let out for bid on a state project.
- The contracting agent, by written notice to the contractor and the sureties of the contractor known to the contracting agent, may terminate the contractor's right to proceed with that part of the contract, for which less than the prevailing rates have been or will be paid, and may proceed to complete the contract by separate agreement with another contractor or otherwise, and the original contractor and his sureties shall be liable to the contracting agent for any excess costs occasioned thereby.

##### **Contractor responsibilities under the law:**

- Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing rates prescribed in a contract.
- Every contractor and subcontractor shall keep an accurate record showing the name and occupation of and the actual wages and benefits paid to each construction mechanic. This record shall be available for reasonable inspection by the contracting agent or the department.
- Each contractor or subcontractor is separately liable for the payment of the prevailing rate to its employees.
- The prime contractor is responsible for advising all subcontractors of the requirement to pay the prevailing rate prior to commencement of work.
- A construction mechanic ***shall only*** be paid the apprentice rate if registered with the United States Department of Labor, Bureau of Apprenticeship and Training and the rate is included in the contract.

##### **Enforcement:**

A person who has information of an alleged prevailing wage violation on a state project may file a complaint with the State of Michigan. The department will investigate and attempt to resolve the complaint informally. During the course of an investigation, if the requested records and posting certification are not made available in compliance with Section 5 of Act 166, the investigation will be concluded and a referral may be made to the local prosecuting attorney.



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## Informational Sheet: Prevailing Wages on State Projects

### General Information Regarding Fringe Benefits

**Certain** fringe benefits **may** be credited toward the payment of the Prevailing Wage Rate:

- If a fringe benefit is paid directly to a construction mechanic
- If a fringe benefit contribution or payment is made on behalf of a construction mechanic
- If a fringe benefit, which may be provided to a construction mechanic, is pursuant to a written contract or policy
- If a fringe benefit is paid into a fund, for a construction mechanic

When a fringe benefit is not paid by an hourly rate, the hourly credit will be calculated based on the annual value of the fringe benefit divided by 2080 hours per year (52 weeks @ 40 hours per week).

The following is an example of the types of fringe benefits allowed and how an hourly credit is calculated:

Vacation	40 hours X \$14.00 per hour = \$560/2080 =	\$\$.27
Dental insurance	\$31.07 monthly premium X 12 mos. = \$372.84 /2080 =	\$.18
Vision insurance	\$5.38 monthly premium X 12 mos. = \$64.56/2080 =	\$.03
Health insurance	\$230.00 monthly premium X 12 mos. = \$2,760.00/2080 =	\$1.33
Life insurance	\$27.04 monthly premium X 12 mos. = \$324.48/2080 =	\$.16
Tuition	\$500.00 annual cost/2080 =	\$.24
Bonus	4 quarterly bonus/year x \$250 = \$1000.00/2080 =	\$.48
401k Employer Contribution	\$2000.00 total annual contribution/2080 =	\$.96
<b>Total Hourly Credit</b>		<b>\$3.65</b>

Other examples of the types of fringe benefits allowed:

- Sick pay
- Holiday pay
- Accidental Death & Dismemberment insurance premiums

The following are examples of items that **will not** be credited toward the payment of the Prevailing Wage Rate

- Legally required payments, such as:
  - Unemployment Insurance payments
  - Workers' Compensation Insurance payments
  - FICA (Social Security contributions, Medicare contributions)
- Reimbursable expenses, such as:
  - Clothing allowance or reimbursement
  - Uniform allowance or reimbursement
  - Gas allowance or reimbursement
  - Travel time or payment
  - Meals or lodging allowance or reimbursement
  - Per diem allowance or payment
- Other payments to or on behalf of a construction mechanic that are not wages or fringe benefits, such as:
  - Industry advancement funds
  - Financial or material loans



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***Informational Sheet: Prevailing Wages on State Projects***

**OVERTIME PROVISIONS for MICHIGAN PREVAILING WAGE RATE COMMERCIAL SCHEDULE**

- Overtime is represented as a nine character code. Each character represents a certain period of time after the first 8 hours Monday thru Friday.

	Monday thru Friday	Saturday	Sunday & Holidays	Four 10s
First 8 Hours		<b>4</b>		
9th Hour	<b>1</b>	<b>5</b>	<b>8</b>	<b>9</b>
10th Hour	<b>2</b>	<b>6</b>		
Over 10 hours	<b>3</b>	<b>7</b>		

Overtime for Monday thru Friday after 8 hours:

the 1st character is for time worked in the 9th hour (8.1 - 9 hours)  
 the 2nd character is for time worked in the 10th hour (9.1 - 10 hours)  
 the 3rd character is for time worked beyond the 10th hour (10.1 and beyond)

Overtime on Saturday:

the 4th character is for time worked in the first 8 hours on Saturday (0 - 8 hours)  
 the 5th character is for time worked in the 9th hour on Saturday (8.1 - 9 hours)  
 the 6th character is for time worked in the 10th hour (9.1 - 10 hours)  
 the 7th character is for time worked beyond the 10th hour (10.01 and beyond)

Overtime on Sundays & Holidays

The 8th character is for time worked on Sunday or on a holiday

Four Ten Hour Days

The 9th character indicates if an optional 4-day 10-hour per day workweek can be worked **between Monday and Friday without paying overtime after 8 hours worked, unless otherwise noted in the rate schedule. To utilize a 4 ten workweek, notice is required from the employer to employee prior to the start of work on the project.**

- Overtime Indicators Used in the Overtime Provision:

H - means TIME AND ONE-HALF due  
 X - means TIME AND ONE-HALF due after 40 HOURS worked  
 D - means DOUBLE PAY due  
 Y - means YES an optional 4-day 10-hour per day workweek can be worked without paying overtime after 8 hours worked  
 N - means NO an optional 4-day 10-hour per day workweek *cannot* be worked without paying overtime after 8 hours worked

- EXAMPLES:

HHHHHHHDN - This example shows that the 1½ rate must be used for time worked after 8 hours Monday thru Friday (characters 1 - 3); for all hours worked on Saturday, 1½ rate is due (characters 4 - 7). Work done on Sundays or holidays must be paid double time (character 8). The N (character 9) indicates that 4 ten-hour days is not an acceptable workweek at regular pay.

XXXHHHHDY - This example shows that the 1½ rate must be used for time worked after 40 hours are worked Monday thru Friday (characters 1-3); for hours worked on Saturday, 1½ rate is due (characters 4 – 7). Work done on Sundays or holidays must be paid double time (character 8). The Y (character 9) indicates that 4 ten-hour days is an acceptable alternative workweek.



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**Informational Sheet: Prevailing Wages on State Projects**

**ENGINEERS - CLASSES OF EQUIPMENT LIST**

**UNDERGROUND ENGINEERS**

**CLASS I**

Backfiller Tamper, Backhoe, Batch Plant Operator, Clam-Shell, Concrete Paver (2 drums or larger), Conveyor Loader (Euclid type), Crane (crawler, truck type or pile driving), Dozer, Dragline, Elevating Grader, End Loader, Gradall (and similar type machine), Grader, Power Shovel, Roller (asphalt), Scraper (self propelled or tractor drawn), Side Broom Tractor (type D-4 or larger), Slope Paver, Trencher (over 8' digging capacity), Well Drilling Rig, Mechanic, Slip Form Paver, Hydro Excavator.

**CLASS II**

Boom Truck (power swing type boom), Crusher, Hoist, Pump (1 or more 6" discharge or larger gas or diesel powered by generator of 300 amps or more, inclusive of generator), Side Boom Tractor (smaller than type D-4 or equivalent), Tractor (pneu-tired, other than backhoe or front end loader), Trencher (8' digging capacity and smaller), Vac Truck.

**CLASS III**

Air Compressors (600 cfm or larger), Air Compressors (2 or more less than 600 cfm), Boom Truck (non-swinging, non-powered type boom), Concrete Breaker (self-propelled or truck mounted, includes compressor), Concrete Paver (1 drum, ½ yard or larger), Elevator (other than passenger), Maintenance Man, Mechanic Helper, Pump (2 or more 4" up to 6" discharge, gas or diesel powered, excluding submersible pump), Pumpcrete Machine (and similar equipment), Wagon Drill Machine, Welding Machine or Generator (2 or more 300 amp or larger, gas or diesel powered).

**CLASS IV**

Boiler, Concrete Saw (40HP or over), Curing Machine (self-propelled), Farm Tractor (w/attachment), Finishing Machine (concrete), Firemen, Hydraulic Pipe Pushing Machine, Mulching Equipment, Oiler (2 or more up to 4", exclude submersible), Pumps (2 or more up to 4" discharge if used 3 hrs or more a day-gas or diesel powered, excluding submersible pumps), Roller (other than asphalt), Stump Remover, Vibrating Compaction Equipment (6' wide or over), Trencher (service) Sweeper (Wayne type and similar equipment), Water Wagon, Extend-a-Boom Forklift.

**HAZARDOUS WASTE ABATEMENT ENGINEERS**

**CLASS I**

Backhoe, Batch Plant Operator, Clamshell, Concrete Breaker when attached to hoe, Concrete Cleaning Decontamination Machine Operator, Concrete Pump, Concrete Paver, Crusher, Dozer, Elevating Grader, Endloader, Farm Tractor (90 h.p. and higher), Gradall, Grader, Heavy Equipment Robotics Operator, Hydro Excavator, Loader, Pug Mill, Pumpcrete Machines, Pump Trucks, Roller, Scraper (self-propelled or tractor drawn), Side Boom Tractor, Slip Form Paver, Slope Paver, Trencher, Ultra High Pressure Waterjet Cutting Tool System Operator, Vactors, Vacuum Blasting Machine Operator, Vertical Lifting Hoist, Vibrating Compaction Equipment (self-propelled), and Well Drilling Rig.

**CLASS II**

Air Compressor, Concrete Breaker when not attached to hoe, Elevator, End Dumps, Equipment Decontamination Operator, Farm Tractor (less than 90 h.p.), Forklift, Generator, Heater, Mulcher, Pigs (Portable Reagent Storage Tanks), Power Screens, Pumps (water), Stationary Compressed Air Plant, Sweeper, Water Wagon and Welding Machine.



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## ***Informational Sheet: Prevailing Wages on State Projects***

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### **CARPENTER CRAFT JURISDICTION**

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Michigan recognizes the Carpenters for any and all work related to weatherization that has historically been the work of the Carpenter. This work shall include, but not be limited to: all work defined under the Federal Weatherization Assistance Program.

The jurisdiction of Carpenters, as to all work that has historically and traditionally been performed consisting of the milling, fashioning, joining, assembling, erecting, fastening or dismantling of all materials of wood, plastic, metal, fiber, cork, or composition and all other substitute materials, as well as the handling, cleaning, erecting, installing and dismantling of all machinery, equipment and all materials used by Carpenters.

The jurisdiction, therefore, extends over the following divisions and subdivisions of the trade: Carpenters and Joiners, Millwrights, Pile Drivers, Bridge, Dock and Wharf Carpenters, Underpinners, Timbermen, and Core-drillers, Shipwrights, Boat Builders, Ship-hand, Stair-Builders, Millmen, Wood and Resilient Floor Decorators, Floor Finishers, Carpet-layers, Shinglers, Siders, Insulators, Acoustic and Drywall Applicators, Sharers and House Movers, Loggers, Lumber and Sawmill Workers, Reed and Rattan Workers, Shingle Weavers, Casket and Coffin Makers, Railroad Carpenters and Car Builders, regardless of material used and all those engaged in the operation of woodworking or other machinery required in fashioning, milling or manufacturing of products used in the trade, and the handling, erecting and installing materials on any of the above divisions or sub-divisions, burning, welding and rigging incidental to the trade. When the term "Carpenter and Joiner" is used, it shall mean all the subdivisions of the trade. The trade autonomy of Carpenters therefore extends over the divisions and subdivisions of the trade, which are set forth as follows:

- (a) The framing, erecting and prefabrication of roofs, partitions, floors and other parts of buildings of wood, metal, plastic or other substitutes; application of all metal flashing used for hips, valleys and chimneys; the erection of Stran Steel section or its equal. The building and setting of all forms and centers for brick and masonry. The fabrication and erection of all forms for concrete and decking, the dismantling of same (as per International Agreement) when they are to be re-used on the job or stored for re-use. The cutting and handling of all falsework for fireproofing and slabs. Where power is used in the setting or dismantling of forms, all signaling and handling shall be done by carpenters. The setting of templates for anchor bolts for structural members and for machinery, and the placing, leveling and bracing of these bolts. All framing in connection with the setting or metal columns. The setting of all bulkheads, footing forms and the setting of and fabrication of, screeds and stakes for concrete and mastic floors where the screed is notched or fitted, or made up of more than one member. The making of forms for concrete block, bulkheads, figures, posts, rails, balusters and ornaments, etc.
- (b) The handling and erecting of rough material and drywall, the handling, assembly, setting and leveling of all fixtures, display cases, all furniture such as tables, chairs, desks, coat racks, etc., all de-mountable or moveable partitions such as Von wall, E Wall, Steel Case, Herman Miller, Haworth, American Seating, Westinghouse, Lazy Boy, rosewood, etc. All rebuilding, remodeling and setting up of all kinds of partitions, finished lumber, metal and plastic trim to be erected by Carpenters shall be handled from the truck or vehicle delivering same to the job by Carpenters.



## STATE OF MICHIGAN

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## ***Informational Sheet: Prevailing Wages on State Projects***

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### **CARPENTER CRAFT JURISDICTION**

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- (c) The building and moving of all scaffolding runways and staging where carpenters' tools are used, the building from the ground up of all scaffolds over fourteen (14) feet in height including metal and specially designed scaffolding. The building and construction of all hoists and derricks made of wood; the making of mortar boards, boxes, trestles, all shoring, razing and moving of buildings. Lift type trucks are to be considered a tool of the trade. Metal siding and metal roofing fall within the scope of jurisdiction for the carpenters.
- (d) The cutting or framing and fireproofing of the openings for pipes, conduits, ducts, etc., where they pass through floors, partitions, walls, roofs or fixtures composed in whole or in part of wood. The laying out of making and installation of all inserts and sleeves for pipes, ducts, etc., where carpenters' tools and knowledge are required. The making and installing of all wooden meter boards, crippling and backing for fixtures. The welding of studs and other fastenings to receive material being applied by carpenters.
- (e) The installation of all grounds, furring or stripping, ceilings and sidewalks, application of all types of shingling and siding, etc.
- (f) The installation of all interior and exterior trim or finish of wood, aluminum, kalamein, hollow or extruded metal, plastic, doors, transoms, thresholds, mullions and windows. The setting of jambs, bucks, window frames of wood or metal where braces or wedges are used. The installation of all wood, metal or other substitutes of casing, molding, chair rail, wainscoting, china closets, base of mop boards, wardrobes, metal partitions as per National Decisions or specific agreements, etc. The complete laying out, fabrication and erection of stairs. The making and erecting of all fixtures, cabinets, shelving, racks, louvers, etc. The mortising and application of all hardware in connection with our work. The sanding and refinishing of all wood, cork or composition floors to be sanded or scraped, filled, sized and buffed, either by hand or power machines. The assembling and setting of all seats in theaters, halls, churches, schools, auditorium, grandstands and other buildings. All bowling alley work.
- (g) The manufacture, fabrication and installation of all screens, storm sash, storm doors and garage doors; the installation of wood, canvas, plastic or metal awnings or eye shades, door shelters, jalousies, etc. The laying of wood, wood block and wood composition in floors.
- (h) The installation of all materials used in drywall construction, such as plasterboard, all types of asbestos boards, transite and other composition board. The application of all material which serves as base for acoustic tile, except plaster. All acoustical applications as per National Agreement or specific agreement.
- (i) The building and dismantling of all barricades, hand rails, guard rails, partitions and temporary partitions. The erection and dismantling of all temporary housing on construction projects.
- (j) The installation of rock wool, cork and other insulation material used for sound or weatherproofing. The removal of caulking and placing of staff bead and brick mold and all Oakum caulking, substitutes, etc., and all caulking in connection with carpentry work.
- (k) The installation of all chalk boards/marker boards.



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### **CARPENTER CRAFT JURISDICTION**

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- (l) The operation of all hand operated winches used to raise wooden structures.
- (m) The erection of porcelain enameled panels and siding.
- (n) The unloading and distribution of all furnished, prefabricated and built-up sections such as door bucks, window frames, cupboards, cabinets, store fixtures, counters and show cases or comparably finished or prefabricated materials, to the job sites or points of installation as used in the construction, alteration and remodeling industry.
- (o) The handling of doors, metal, wood or composite, partitions and other finished bulk materials used for trim from the point of delivery.
- (p) All processing of these materials and handling after processing.
- (q) The making up of panels and fitting them into walls, all bracing and securing, all removal of panels from the casting including all braces, whalers, hairpins, etc.
- (r) The handling and setting of all metal pans and sections from the stock piles of reasonable distance as required by job needs shall be performed by carpenters. The stripping of such metal pans, panels or sections is to be performed by carpenters.
- (s) The sharpening of all carpenter hand or power tools, or those used by carpenters.
- (t) The layout, fabrication, assembling of and erection and dismantling of all displays made of wood, metal, plastic, composition board or any substitute material; the covering of same with any type of material, the crating and un-crating, the handling from the point of unloading and back to the point of loading of all displays and other materials or components.
- (u) The same shall apply to all other necessary component parts used for display purposes such as turntables, platforms, identification towers and fixtures, regardless of how constructed, assembled or erected or dismantled.
- (v) The make-up, handling, cutting and sewing of all materials used in buntings, flags, banners, decorative paper, fabrics and similar materials used in the display decorative industry for draperies and back drops. The decorative framing of trucks, trailers and autos used as floats or moving displays. The slatting of walls to hand fabrics and other decorative materials, drilling of all holes to accommodate such installations. Setting up and removal of booths constructed of steel or aluminum tubing as stanchions, railings, etc., handling and placing of furniture, appliances, etc., which are being used to complete the booth at the request of the exhibitor. Fabricating and application of leather, plastic and other like materials used for covering of booths. The handling of all materials, fabricating of same. The loading and unloading, erecting and assembling at the exhibit of show area, also in or out of storage when used in booth decorations.



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### ***Informational Sheet: Prevailing Wages on State Projects***

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#### **CARPENTER CRAFT JURISDICTION**

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- (w) A display shall be construed as any exhibit or medium of advertising, open to private or public showing, which is constructed of wood, metal, plastic or any other substitute to accomplish the objectives of advertising or displaying.
- (x) Handling, fitting, draping, measuring and installation of fixtures and other hardwares for draperies, all manner of making, measuring, repairing, sizing, hanging and installation of necessary fixtures and hardware for shades and Venetian blinds.
- (y) Work consisting of cutting and/or forming of all materials in preparation for installing of floors, walls and ceilings; the installation of all resilient floor and base; wall and ceiling materials to include cork, linoleum, prefabricated, laminated, rubber, asphalt, vinyl, metal, plastic, seamless floors and all other similar materials in sheet, interlocking liquid or tile form; the installation of all artificial turf, the installation, cutting and/or fitting of carpets; installation of padding, matting, linen crash and all preformed resilient floor coverings; the fitting of all devices for the attachment of carpet and other floor, wall and ceiling coverings; track sewing of carpets, drilling of holes for sockets and pins, putting in dowels and slats; and all metal trimmings used; the installation of all underlayments, sealants in preparation of floors, walls and ceilings, the unloading and handling of all materials to be installed and the removal of all materials in preparing floors when contracted for by the employer, shall be done only by employees covered under this Agreement.
- (z) The installation of all sink-tops and cabinets, to include all metal trim and covering for same. All cork, linoleum, congo-wall, linewall, veos tile, plexiglass, vinawall tile, composition tile, plastic tile, aluminum tile and rubber in sheets or tile form and the application thereof. All bolta-wall and bolta-wall tile and similar products.
- (aa) The handling and placing of all pictures and frames and the assembly of bed frames and accessories. The hanging and placing of all signage.
- (bb) The installation of all framework partitions and trim materials for toilets and bathrooms made of wood, metal, plastics or composition materials; fastening of all wooden, plastic or composition cleats to iron or any other material for accessories.
- (cc) The erection of cooling towers and tanks.
- (dd) The setting, lining, leveling and bracing of all embedded plates, rails and angles. The setting of all stay in place forms.
- (ee) Environmental: Clean room, any type of environmental chamber, walk in refrigerated coolers and all refrigerated rooms or buildings.



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## **CARPENTER CRAFT JURISDICTION**

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### **PILE DRIVING AND CAISSON DRILLING**

(ff) All unloading, handling, signaling and driving of piles, whether wood, steel, pipe, beam pile, composite, concrete or molded in place, wood and steel sheeting, cofferdam work, trestle work, dock work, floating derricks, caisson work, foundation work, bridge work, whether old or new, crib work, pipe line work and submarine work. Cutting of all wood, steel or concrete pile, whether by machine or hand; welding and cutting, peeling, and heading of all wood pile, steel sheeting and wood sheeting. The erecting and dismantling of all pile driving rigs, also derricks whether on land or water; also the moving, shoring and underpinning of all buildings. The loading and unloading of all derricks, cranes and pile driving materials. The tending, maintenance and operation of all valves pertaining to the operation of driving of pile. All diving and tending essential to the completion of jurisdictional claims.

All work done in the established yards of the Company and all work not enumerated above, shall be handled and manned as the Employer decides.

The pile driver will unload all material shipped in by rail from the point that the rail car is spotted.

All cleaning and preparation of all piling prior to driving.

The welding and attachment of all boot plates, pile points, splice plates, connectors, rock crosses, driving crosses, driving rigs, point reinforcements and overboots.

The construction, reconstruction, repair, alteration, demolition and partial or complete removal of all marine work including, but not limited to, docks, piers, wharves, quays, jetties, cribs, causeways, breakwaters, lighthouses and permanent buoys, etc. (mixing and placing of concrete excepted).

The driving and pulling of all wood, steel and concrete foundation piles and sheet piling.

The heading, pointing, splicing, cutting and welding of all piles.

The placing of all wales, bolts, studs, lagging, rods and washers including the cutting, drilling, boring or breaking of all holes or openings thereof.

The removal of all materials and/or obstructions of any nature (rip-rap included) that retard or interfere with the driving of piles or with the placing of wales, bolts and rods.



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### ***Informational Sheet: Prevailing Wages on State Projects***

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## **CARPENTER CRAFT JURISDICTION**

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This is to be subject to the discretion of the contractor who may choose to use blasting specialists or other demolition specialists.

The handling on the job of all materials used in the work.

The manning of all floating equipment (towing equipment excepted) engaged in the work enumerated, including deck engines, except machinery manned by Operating Engineers.

The placing of all rip-rap, fill stone, bedding stone, cover stone and concrete blocks in connection with marine construction. Work normally performed by Employers, such as soil tests, shoring, underpinning of buildings, cribbing, driving of sheet piling, marine divers, tenders, underwater construction workers and similar operations shall continue to be included in the jurisdiction of this Agreement.

All burning, cutting, welding and fabrication of pipe, H-beams, sheet pile (metal or wood), done on the job site or in the yard of the Employer shall be done by pile drivers. The driving of bearing piles, sheet piling with heavy equipment, caissons, pile caps, auger drilling and boring, the setting up for load testing for any type of piling, all layout and spotting for piling, caisson and boring work, all earth retention, ditch boarding, installing tiebacks.

### **ASBESTOS ABATEMENT CARPENTERS**

(gg) All erection and maintenance of barriers and partitions used in the removing of asbestos or any abatement work. The abatement of any materials previously installed by the carpenter such as transite, ceiling and floor tiles. All operating and maintaining of current equipment used in any abatement work.

**Troy School District  
January 17, 2018**

**Request for Proposal  
Network Equipment – Bid #9852**

**Addendum 1**

**A1-1 NOTICE**

1. The bid documents are amended herein which adds to and/or supersedes conflicting or additional information in the Request for Proposal.
2. Work covered by this Addendum shall be subject to the Introduction, Terms and Conditions, and Technical Specifications.
3. Acknowledge this Addendum on the Cost Analysis Worksheet and include the cost of the work herein specified in the Bid.

**A1-2 MANDATORY PRE-BID MEETING 2PM, 1/9/18 – REVIEWED THE FOLLOWING**

1. General Items
  - a. Forklift upgrade of wired, wireless, network management and NAC
  - b. Vendors must bid a product from a single manufacturer; including wired, wireless, network management and NAC.
  - c. District is looking for a vendor to partner with long term
  - d. As part of the evaluation process we will develop a matrix with weighted responses for items that will be part of the evaluation. Price is heavily weighted but is not the only criterion
2. Instruction to Bidders 00 30 00
  - a. Part 1.1A – two categories of bid, Category 1 E-rate for the core switches and Category 2 E-rate for all other switches and wireless components
  - b. Part 1.11 – Explained that any questions that arose from the meeting would be answered in Addendum 1 along with any other requests for clarification. Dates and means of communication requests for clarification were reviewed

- c. Part 1.20K – Bidders must provide a Bill of Material (BOM) with a breakdown of products and prices by E-rate Category. Bidders must also identify any items that are not E-rate eligible

3. Section 00 30 10 - Schedule of Events: (Overall review)

**A1-3 QUESTIONS ARISING FROM PRE-BID MEETING**

Q1. If it is an OEM product is the acceptable?

A. Yes

Q2. Are the interview dates set in stone?

**A. No, it has been determined that the interview dates will now be held on February 2, 2018. We have changed the award date to March 20th. See the revised schedule of events. The selected vendors will be notified of interview times and locations.**

Q3. Does the wireless need to be controller based or cloud based?

A. It needs to be controller based. Specifications are in the RFP

Q4. Are we talking about upgrading cabling?

A. No, all existing cabling will be reused.

Q5. Will any APs be moved or will it just be a swap out?

A. For bidding purposes, it is a swap out. If through the coverage and density testing it is determined that other locations are necessary or APs need to be relocated, that will be handled via a change order.

**A1-4 REQUESTS FOR CLARIFICATION**

Q1. What is the warranty period for non-LLW items?

A. One year

Q2. Can you clarify the number of training hours expected/needed?

A. 80 required hours.

Q3. How many 10G connections are required from each building to the District core?

A. Two, there is one 10G connection from each District core switch to the building core switch.

- Q4. Does the District have a guess as to the average number of guest users in a given week?
- A. 50
- Q5. Regarding post installation WLAN surveys...if our solution will provide real-time heat map visibility, do we still need to perform physical, post surveys at each building?
- A. Yes
- Q6. Is the Owner requesting bids include new patch cords for all connected devices or only the new network devices e.g; fiber patch cables for optical links, or is this intended to mean new patch cables for all devices being connected to the new switches?
- A. There is no requirement for patch cables as part of the base bid. An allowance will be carried for all patch cables. Quantities will be determined post award.
- Q7. Is there an existing grounding and bonding bus bar at each install location?
- A. Assume that there is. You will not be held responsible for not connecting to a bus bar if one does not exist.
- Q8. Does the switch labeled "MDF 48 Port GigE w/ 4 10G SFP+" need to be stacked with the other eight access switches? Or is this a services block/DMZ switch that will uplink to the core separate from the access stack?
- A. The switch with 4 10G SFP+ ports is to be stacked with the other 7 while the switch with 2 10G SFP+ ports will uplink to the core and be utilized as the DMZ switch
- Q9. Are new Access Point cable drops required to the IDF or will existing or 3rd party drops be used?
- A. No new cable drops are required unless it is determined that additional APs are required. Those drops along with the APs will be handled through a change order process.
- Q10. Are new patch cables required at the AP locations or just at the IDF switch locations for APs?
- A. No new patch cables are required as part of the bid.
- Q11. Does the Owner require TACACS+ or RADIUS authentication for admin access to all your network devices? If so, do you have an existing solution for this or do you need us to include one in our proposal?
- A. Yes, it is required.

Q12. What is the Owner's existing RADIUS solution? If it is Cisco ISE, please provide a breakdown of existing licensing.

A. Yes, it is required. Existing is Extreme.

Q13. Is NAC required for Wired or both Wired and Wireless access?

A. yes

Q14. Does the Owner want pricing for the NAC solution? If pricing is required, please answer the following questions?

A. Yes

a. How many devices will need to authenticate via 802.1x authentication for the NAC solution?

40,000

b. How many devices will need to authenticate via MAB authentication for the NAC solution (i.e. IP Phones, Printers, APs, Time Clocks)?

3000

c. How many concurrent guest users will the NAC solution need to support?

2000

d. How many mobile devices managed via your MDM will need to authenticate via the NAC solution?

15000

e. Would you prefer virtual or physical appliances?

virtual

f. Would you like to see a 1, 3, or 5-year subscription term?

5

Q15. Is the Owner requesting bids include implementation of the NAC solution? If you require implementation, please answer the following questions?

A. Yes

a. Will the implementation be a production pilot or full production roll-out?

Full production

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- b. How many operating systems will the NAC solution need to support (i.e. Windows, Mac, Chrome, Linux)?

Mainly Windows & MAC

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- c. Does the Owner have a solution to push certificates and 802.1x settings to Mac devices?

Yes MDM

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- d. What is the Owner's current MDM solution?

Airwatch

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- e. Does the Owner have an existing stable PKI infrastructure? If so, does the Owner have user and machine certificates deployed to district owned assets?

No

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Q16. What are the requirements for Posture Checking end user workstations (for example is Anti- Virus up to date)?

A. Ensure that Anti-virus installed and up to date.

Q17. Does the NAC solution need to integrate into any other existing solutions (i.e. Tenable, InfoBlox, Cisco Firepower, Cisco AMP for Endpoints)?

A. Only same manufacturer systems and Active Directory

Q18. Does the solution have to support anomalous activity detection for wired and wireless? Also, is the Owner looking to detect anomalous activity at the authentication, network, or endpoint layer?

A. Yes. All.

#### **A1-5 REVISED SCHEDULE OF EVENTS**

##### **SECTION 00 30 10 - SCHEDULE OF EVENTS**

The following is a projected schedule of events for this project. The schedule may change depending upon the results of the responses and a final schedule will be established prior to contracting with the Contractor. Additionally, the final schedule shall be subject to change based on construction schedule and progress.

EVENT	DATE
Bid Release	Dec 20, 2017
Mandatory Bidder's Conference Date and time – 2:00 PM	Jan 9, 2018
Final Date and time for Questions – 5:00 PM	Jan 15, 2018
Final Addendum	Jan 17, 2018
Bid Due Date/time and Public Opening - 2:30 PM	Jan 23, 2018
Interviews – Times and locations to be announced	Feb 2, 2018
Contract Award	Mar 20, 2018
Earliest Project Start Date	Apr 1, 2018
Project Completion	Aug 4, 2018

End of Section

END OF ADDENDUM 1

**BID TABULATION SHEET**  
**Troy School District**  
**Network Equipment - Project #9852**  
**1/23/2018 @ 2:30PM**

Bidder	Bond	PA-232	Iran Affidavit	Base Bid Total	Voluntary Alternate 1	Voluntary Alternate 2
Presidio	x	x	x	\$1,805,226.40		
CDW	x	x	x	\$2,215,578.22		
Delta	x	x	x	\$1,835,891.19		
Sentinel	x	x	x	\$2,946,971.40		

John Foster  
 \_\_\_\_\_  
 Signed

Todd Hensley  
 \_\_\_\_\_  
 Verified