



THE CITY OF
MT. PLEASANT, MICHIGAN

CITY HALL

320 W. Broadway • 48858-2447
(989) 779-5300
(989) 773-4691 fax

PUBLIC SAFETY

804 E. High • 48858-3595
(989) 779-5100
(989) 773-4020 fax

PUBLIC WORKS

1303 N. Franklin • 48858-4682
(989) 779-5400
(989) 772-6250 fax

PRE-BID ADDENDUM NO. 1

Project Bid: 2010 Ranney Well Laterals Installation Bid

Bid Date: August 17, 2010
Time: 1:30 p.m.

Opening: Office of the City Clerk
City Hall
320 West Broadway St.
Mt. Pleasant, MI 48858

Addendum Issued By: Division of Public Works

Date Issued: August 12, 2010

Intent: 1. To add a line item for additions or subtractions to the cost per linear foot beyond the base cost amount.

Bid Proposal: Revised and attached

Specifications: No change

The below price shall include all labor, materials, overhead, profit, insurance, etc., to cover the finished work specified, and the Bidder agrees to perform all of the work described in the Specifications and/or shown on the Plans for the following price:

ITEM

NO. DESCRIPTION

	Quantity	Unit Price	Total
1. Installation of new 12-inch diameter gravel pack laterals including inspections and testing.	600 LF	\$ _____ LF (figures)	\$ _____
2. Cost per linear foot for additions or subtractions from base amount		\$ _____ LF (figures)	\$ _____

_____ and ____/100 Dollars.
(Total amount for work - written)

RESPECTFULLY SUBMITTED,

COMPANY NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

AREA CODE/TELEPHONE NUMBER _____ DATE _____

FAX NUMBER _____ EMAIL _____

Authorized Signature _____

Print or Type Name and Title _____



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(989) 772-6250 fax

PRE-BID ADDENDUM NO. 2

Project Bid: 2010 Ranney Well Laterals Installation Bid

Bid Date: August 17, 2010

Time: 1:30 p.m.

Opening: Office of the City Clerk
City Hall
320 West Broadway St.
Mt. Pleasant, MI 48858

Addendum Issued By: Division of Public Works

Date Issued: August 13, 2010

Intent: Alternate proposals to furnish, install, and develop 600 feet of new 12-inch natural packed well screened laterals will be accepted.

Bid Proposal: No change

Specifications: No change

[Ranney Well Laterals Install 2010 – Addendum 2]

City of Mt. Pleasant, Water Department
Mt. Pleasant, Michigan

Layne Christensen Co.
6360 Huntley Rd.
Columbus, OH 43229

Brechtel Radial Collector Wells
6425 State Route 656
Centerburg, OH 43011

2010 RANNEY WELL LATERALS INSTALLATION BID

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL
1	Installation of new 12-inch diameter gravel packed laterals including inspections and testing	600	LFT	\$939.00	\$563,400.00	\$1,196.46	\$717,876.00
2	Cost per linear foot for additions or subtractions from base amount		LFT	\$325.00		\$425.00	
TOTAL BID					\$563,400.00		\$717,876.00

ALTERNATE PROPOSAL

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL
1	Installation of new 12-inch diameter natural packed laterals including inspections and testing	600	LFT	\$809.00	\$485,400.00	\$1,143.73	\$686,238.00
2	Cost per linear foot for additions or subtractions from alternate amount		LFT	\$225.00		\$425.00	
TOTAL ALTERNATE BID					\$485,400.00		\$686,238.00

[Form01]

City of Mt. Pleasant, Michigan

CONTRACT DOCUMENTS

for Construction
of

2010 RANNEY WELL LATERALS INSTALLATION



JIM HOLTON
Mayor

KATHIE GRINZINGER
City Manager

Prepared By:
Division of Public Works

DUANE F. ELLIS, P.E.
DPW Director/City Engineer

July 2010

City of Mt. Pleasant, Michigan
TABLE OF CONTENTS

2010 RANNEY WELLS LATERALS INSTALLATION BID

Bidding Information

Notice to Bidders
Instructions to Bidders

Contract Documents

Proposal
Notice of Award
Agreement
Payment Bond
Performance Bond
Notice to Proceed

Specifications

Special Conditions

Supplemental Information

Contractor Insurance Requirements

Appendices

1. Hydrogeological Report
2. Federal Guidelines for Project

Site Map



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(989) 772-6250 fax

NOTICE TO BIDDERS

2010 RANNEY WELL LATERALS INSTALLATION BID AN ARRA FEDERALLY FUNDED PROJECT

The City of Mt. Pleasant, Michigan, is requesting sealed bids at the Office of the City Clerk, City Hall, 320 W. Broadway Street, Mt. Pleasant, Michigan 48858, until 1:30 p.m. (local time), on Tuesday, August 17, 2010, at which time and place the bids will be publicly opened and read. All bids shall be submitted in a sealed envelope, plainly marked "2010 Ranney Well Laterals Installation Bid – August 17, 2010."

Proposals are solicited on a unit price basis, for the following work:

Labor and materials to install, develop, inspect, and test three (3) new laterals on the City's existing Ranney Well

All bid proposals must be accompanied by a bid bond, bank cashier's check, bank draft, or certified check for not less than five percent (5%) of the bid price, made payable to the City of Mt. Pleasant.

To view and download complete Plans and Specifications at no charge, visit the City of Mt. Pleasant website at www.mt-pleasant.org/depts/engineering/biddinginfo.htm.

The City of Mt. Pleasant reserves the right to accept or reject any or all bids, to waive any irregularities in the bids, and to select the bid considered most advantageous to the city.

Malcolm Fox
Water Plant Superintendent
(989) 779-5426

Jeremy Howard
City Clerk

City of Mt. Pleasant, Michigan
INSTRUCTIONS TO BIDDERS

1. **Proposals**

Proposals must be made upon the forms provided therefore, with the Bid amount both written and shown in figures, and all other data required submitted.

The Proposal, bound together with all Proposal Documents, must be enclosed in a sealed envelope marked as specified in the Notice to Bidders for such Bid and clearly indicating the name and address of the Bidder and must be received by the City Clerk, City Hall, 320 West Broadway Street, Mt. Pleasant, Michigan 48858, no later than the time and date specified in the Notice to Bidders. At such specified time, Proposals shall be publicly opened and read aloud.

2. **Basis of Proposals**

Proposals are solicited on the basis of unit price(s) and/or lump sum(s), as specified on the Proposal form.

The City of Mt. Pleasant (also referred to as "Owner"), reserves the right to accept any Bid, to reject any or all Bids, to waive any irregularities in the Bids, and to select the Bid considered most advantageous to the city.

3. **Comparison of Bids**

In comparing Bids, consideration shall be given to the time proposed for completion of the Contract, qualifications of Bidder, price differentials, alternate Proposals for the alternate items listed in the Proposal (if applicable), and any other pertinent factors. **The City of Mt. Pleasant grants a preference to businesses located within the Mt. Pleasant City Limits. The preference given is a differential above the low bid if the low bid is not from a City of Mt. Pleasant bidder. The differential allowed is 3% of the total for bids between \$5,000 and \$9,999 and 2% of the total for bids over \$10,000. The maximum credit allowed is \$1500.00.** The Owner reserves the right to make an award to the Bidder whose Proposal is deemed to be in the best interest of the Owner.

4. **Time**

Time is of the essence in the performance of the Contract, and each Bidder, by submitting a Proposal, certifies his/her acceptance of the time allowed by the Contract for the completion of the work specified.

5. **Indemnification**

The Contractor shall save and hold harmless the city and its employees from and against all claims, damages, losses, or expenses, including attorney's fees, arising out of or resulting from the performance of the work; provided that any such claim, damage, loss or expense is caused in whole or in part by any negligent or willful act of omission of the contractor, subcontractor, employee, or anyone under their direction. The Contractor shall at his/her own expense, defend any and all such actions and shall pay all attorney's fees, costs, and expenses pertaining thereto.

6. **Bid Deposits**

Each Proposal shall be accompanied by a certified check, or a Bid Bond by a recognized Surety Company similar to a U. S. Government Standard Form Bid Bond, in the amount of five percent (5%) of the total amount of the Bid, made payable to the City of Mt. Pleasant, subject to forfeiture to the Owner in the event of failure on the part of the successful Bidder to enter into the attached form of agreement to do the work specified by said Proposal at the price and within the time stated therein. The Bid Deposit of all Bidders, except the three (3) lowest acceptable Bidders, shall be returned within two (2) weeks after opening of bids. The bid deposits of the three (3) lowest acceptable bidders shall be returned within 48 hours after the executed Contract(s) have been finally approved by the Owner.

7. **Liquidated Damages**

A liquidated damage clause, as given in the Contract form, provides that the Contractor shall pay the Owner as liquidated damages, and not as a penalty, the amount indicated in the Proposal for each and every calendar day that the Contractor may be in default of substantial completion of the work required under said Contract.

8. **Insurance and Bonds**

The successful Bidder will be required to execute (2) Bonds, in the form attached hereto, with Surety acceptable to the Owner and insurance, as follows:

- a. Bond in the amount of 100% of the Estimated Contract Price running to the City of Mt. Pleasant, Michigan, to insure the completion of the entire work, according to the statutes of the State of Michigan in effect at that time.
- b. Bond in the amount of 100% of the Estimated Contract Price running to the People of the State of Michigan for the protection of Subcontractors and Labor and Material Men, according to the statutes of the State of Michigan in effect at that time.
- c. Insurance in the amounts required by City Ordinance as specified in the Section 1 - General Construction Specifications, attached hereto.

The successful bidder shall be required to furnish for each set of executed Contract Documents, and conformed copies thereof, an original conformed Performance Bond, Labor and Materials Bond, Maintenance Bond, and Insurance Certificates.

9. **Permits and Local Codes**

The Owner shall procure the required permits for municipal sanitary sewer construction, municipal water system construction, and soil erosion control.

The Contractor shall obtain, at his/her expense, all other required local construction permits and shall comply with local building code and inspection requirements.

10. **Qualifications of Bidders**

It is the intent of the Owner to award the Contract to a Bidder fully capable, both financially and with regard to experience, to perform and complete all work in a satisfactory and timely manner. Evidence of such competency must be furnished on the forms included in the proposal, listing projects of similar difficulty, scope of work, and size, which the Bidder has satisfactorily undertaken and completed.

It is the intention of the City to award the contract to a Contractor whose ability and financial resources are fully equal to the task of performing the work in a satisfactory manner. With this in view, the Proposal calls for at least five (5) references, using specific names of persons to contact concerning the Contractor's ability to do this particular class of work. References from municipalities are preferred. The mere ability to furnish a Performance Bond shall not be accepted as sufficient evidence of responsibility on the part of the Bidder. The Bidder may also be required to furnish evidence of his current financial status.

11. **Interpretation of Documents**

If any Bidder is in doubt as to the true meaning of any part of the Plans, Specifications or any Contract Document, he/she may submit to the Owner a written request for an interpretation thereof. Any interpretation made in response to such a query shall be made only by Addendum, duly issued, and a copy of such Addendum shall be mailed or duly delivered to each prospective Bidder. The Owner shall not be responsible for any other explanation or interpretation of the Contract Documents. Alternative proposals that are suggested by bidders will be given consideration, if presented before the bid opening. If accepted, an addendum will be issued and sent out to all potential bidders, so that they may bid on the alternatives that have been identified.

12. **Execution of Bid Proposal**

A Bid Proposal, which is not signed by the individual making it, should have attached thereto a Power of Attorney evidencing authority to sign the Bid Proposal in the

name of the person for whom it is signed.

A Bid Proposal, which is signed by a partnership, shall be signed by all of the partners or by an Attorney-in-Fact. If signed by an Attorney-in-Fact, there should be attached to the Bid a Power of Attorney evidencing authority to sign the Bid Proposal in the name of the partnership and such Power of Attorney shall be signed by all partners of the partnership.

A Bid Proposal, which is signed for a corporation, should have the correct corporate name thereof and the signature of the President, or other authorized officer(s) of the corporation, manually written below the corporate name and on the line indicating "By: _____." If such a Bid Proposal is manually signed by an officer other than the President of the corporation, a certified copy of a Resolution of the Board of Directors evidencing the authority of such officer(s) to sign the Bid Proposal should be attached thereto. Such a Bid Proposal should also bear the attested signature of the Secretary of the corporation and an impression of the corporate seal.

13. **Execution of Contract**

The successful Bidder to whom an award is made shall be required to enter into a written agreement, in the form attached hereto, within ten (10) days after receipt of a Notice of Award and copies of the documents to be executed. In the event the successful Bidder fails to comply with this provision, he/she may be considered by the Owner to have abandoned all his/her rights and interests in the award and his/her certified check or amount of the Bid Bond may be declared to be forfeited to the Owner, and the Contract may be awarded to another.

14. **Bidder Responsibility For Conditions of Work and Site**

The Bidder, or his/her representative, shall make personal investigation of the site of work and of existing structures and shall determine to his/her own satisfaction the conditions to be encountered, the nature of the ground, the difficulties involved in making connections to existing structures and pipes, and any and all other factors affecting the work proposed under the Contract.

The Bidder to whom the Contract is awarded shall not be entitled to any additional compensation by reason of conditions being different from those anticipated or by reason of his/her failure to fully acquaint himself/herself with the conditions at the site affecting the work of the Contract.

15. **Changes in Work**

If any change is required to be made in the work of the Contract, a payment adjustment therefore shall be determined as specified in the "TECHNICAL SPECIFICATIONS, Section 1 - General Construction Specifications" of the Contract.

[Form24a]

City of Mt. Pleasant, Michigan
BID PROPOSAL
2010 RANNEY WELL LATERALS INSTALLATION
AN ARRA FEDERAL FUNDED PROJECT

TO: Office of the City Clerk
City Hall
320 W. Broadway Street
Mt. Pleasant, MI 48858

BID DATE: August 17, 2010
TIME: 1:30 p.m.

The undersigned, as Bidder, hereby declares that this bid is made in good faith without fraud or collusion with any person or persons bidding of the same Contract; that he has carefully read and examined the Contract Documents, including the Notice to Bidders, Instructions, Bond Forms, Technical and Detailed Specifications, and Contract Drawings, for the designated work and understands all of the same; that he, or his representative, has made such a personal investigation at the site as is necessary to determine the character and difficulties attending the execution of the proposed work; and he proposes and agrees that if this Proposal is accepted, he will contract with the Owner in the form of the Contract hereto annexed, to provide necessary machinery, tools, apparatus and other means of construction, including utility and transportation services, necessary to do all the work and furnish all the materials and equipment specified or referred to in the Contract Documents, including Addenda No. __, __, and __, in the manner and time therein prescribed, and according to the requirements of the Owner as therein set forth to furnish Contractor Bonds and Insurance required of the Contractor by the Contract Documents, and that he will take in full payment therefore the unit prices set forth in the following Proposal.

The Bidder understands that the Owner reserves the right to reject any or all bids, and to waive any irregularities in the bidding.

The Bidder agrees that his bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing time for receiving the bids.

Upon receipt of a written Notice of Award of the Bid, the Bidder shall execute the formal Contract Agreement attached hereto within ten (10) days and shall deliver to the Owner a Surety Bond or Bonds required. In the event the Contract and Bond are not executed within the time above set forth, the Bid Deposit attached in the sum of five percent (5%) of the Bid Proposal shall become the property of the Owner as liquidated damages for the delay and additional expense to the Owner caused thereby.

The Bidder hereby agrees to commence work under this Contract on or before the date to be specified in the written Notice to Proceed executed by the Owner and to fully complete the project as stipulated in the Special Conditions of these Specifications. The Bidder further agrees to pay as liquidated damages the sum indicated in the Special Conditions for each consecutive calendar day thereafter, until substantial completion, that is when all work items in the proposal are complete and notification of substantial completion of work items and final quantities is given to the Director of Public Works by the contractor.

The below price shall include all labor, materials, overhead, profit, insurance, etc., to cover the finished work specified, and the Bidder agrees to perform all of the work described in the Specifications and/or shown on the Plans for the following price:

ITEM
NO. DESCRIPTION

Installation of new 12-inch diameter gravel pack laterals including inspections and testing

Quantity	Unit Price	Total
600 LF	\$ _____ LF	\$ _____ (figures)

_____ and ____/100 Dollars.
(Total amount for work - written)

RESPECTFULLY SUBMITTED,

COMPANY NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

AREA CODE/TELEPHONE NUMBER _____ DATE _____

FAX NUMBER _____ EMAIL _____

Authorized Signature _____

Print or Type Name and Title _____

EXPERIENCE QUESTIONNAIRE
TO BE FURNISHED BY BIDDER
CITY OF MOUNT PLEASANT, MICHIGAN

The signatory of this proposal guarantees the truth and accuracy of all statements and of all answers hereinafter made.

1. How many years have you been in business as a contractor under your present name?

2. How many years have you been a principal officer of a firm under a different name?

Name of Firm _____

3. What projects of a similar nature has your organization contracted for within the past five years? (NOTE: Fill out each blank completely.)

Name of Owner & Location	Name/Address/Phone # of Person in Charge as Reference	Type of Work	Value of Work	Date Completed
-----------------------------	---	--------------------	---------------------	-------------------

1.

2.

3.

4.

5.

6.

City of Mt. Pleasant, Michigan
NOTICE OF AWARD

TO: _____

PROJECT description: _____

THE CITY OF MT. PLEASANT (CITY) has considered your BID submitted _____, for the above-described WORK in response to its NOTICE TO BIDDERS and INSTRUCTIONS TO BIDDERS.

You are hereby notified that your BID has been accepted for items in the amount of _____ Dollars (\$_____).

You are required by the INSTRUCTIONS TO BIDDERS to execute the AGREEMENT and furnish the required Contractor's PERFORMANCE BOND, PAYMENT BOND, and CERTIFICATES OF INSURANCE within ten (10) calendar days from the date of this NOTICE to you.

If you fail to execute said AGREEMENT and to furnish said BONDS within ten (10) days from the date of this NOTICE, said CITY will be entitled to consider all your rights arising out of the CITY'S acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The CITY will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the CITY.

Dated this ____ day of _____.

CITY OF MT. PLEASANT, MICHIGAN
Owner

By: _____
Duane F. Ellis, P.E., Director
Public Works Division

R E C E I P T O F N O T I C E

Receipt of the above NOTICE OF AWARD is hereby acknowledged this ____ day of _____.

Contractor

By: _____
(Print or Type Name and Title)

Signature

[Form02]

City of Mt. Pleasant, Michigan
AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, by and between the CITY OF MT. PLEASANT, MICHIGAN, a Michigan municipal corporation, whose principal offices are located at City Hall, 320 West Broadway Street, Mt. Pleasant, Michigan 48858, hereinafter referred to as CITY and _____ of _____ hereinafter referred to as CONTRACTOR, for the considerations stated herein, agree as follows:

1. The CONTRACTOR agrees to forthwith perform specified services in accordance with the Specifications attached hereto and incorporated herein by reference.
2. The CITY shall pay to the CONTRACTOR, and the CONTRACTOR shall accept as full payment for the performance of this work, subject to any additions or deductions provided for, the total contract price of _____ DOLLARS (\$_____). Such payment shall be made within thirty (30) days of receipt of any invoice, pending completion and acceptance of work performed.
3. In the event of any disagreement or controversy arising between the parties hereto as to the meaning of the Specifications, the interpretation of the proper execution of this contract, the amount of work to be performed, measurements and quantities, material(s) to be used, rate of progress, or other disputes under this contract, such disagreement or controversy shall be submitted to the Mt. Pleasant Division of Public Works, and the decision of the Director of Public Works shall be final.
4. All work shall be performed in strict compliance with the Specifications attached hereto.
5. In the event the CITY determines, at any time, that the work to be performed hereunder is not being performed in a good, substantial, workmanlike or timely manner, the CITY may suspend or terminate work hereunder without any liability to the CITY.
6. It is understood and agreed that the Notice to Bidders, Proposal, Specifications, and all Addenda prepared for this project are all essential documents of this contract and are incorporated as a part of this Agreement by reference.

7. In the event that any provision of any part of this contract conflicts with the provision(s) of another part of the contract, the provisions contained in the document first listed below, when applicable, shall govern:

- a) Agreement
- b) Addenda
- c) Special Conditions of Contract
- d) Contract Drawings
- e) Approved Shop and Working Drawings and Change Orders
- f) Contractor's Proposal and Bid Schedule
- g) Detailed Specifications
- h) Technical Specifications
- i) Instructions to Bidders
- j) Notice to Bidders

8. This agreement shall be binding upon the personal representatives, successors and assigns of the parties hereto.

In the WITNESS WHEREOF, the parties hereto have executed this document the day and year first above written.

WITNESS:

CITY OF MT. PLEASANT

By: _____
James Holton, Mayor

Jeremy Howard, City Clerk

WITNESSES:

Contractor

By: _____
[signature-authorized officer]

Print or Type Name & Title

[Form44]

City of Mt. Pleasant, Michigan
PAYMENT BOND
(Under Act 213 of 1963)

KNOW ALL MEN BY THESE PRESENTS, That _____, of _____, as PRINCIPAL, and _____, a Corporation, organized and existing under the laws of the State of _____, and duly authorized to transact business in the State of Michigan, as SURETY, are held and firmly bound unto THE CITY OF MT. PLEASANT, MICHIGAN, as obligee, and hereinafter called "OWNER", in the just and full sum of _____ Dollars (\$_____), lawful money of the United States of America, for the payment whereof, the PRINCIPAL and SURETY bind themselves, their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above PRINCIPAL has entered into a written contract with the OWNER, dated _____, for the work known as:

in accordance with the plans and specifications prepared by THE CITY OF MT. PLEASANT, DIVISION OF PUBLIC WORKS, Mt. Pleasant, Michigan, which contract is hereby referred to and made a part hereof as fully and to the same extent as if the same were entirely written herein; and

WHEREAS, this bond is given in compliance with and subject to the provisions of the Act 213 of the Public Acts of Michigan for the year 1963, as amended by subsequent acts to date.

NOW, THEREFORE, the conditions of this obligation are that if the PRINCIPAL and its subcontractors shall make all payments as they become due and payable of all amounts owing to subcontractors and to parties supplying labor or materials to the PRINCIPAL, or to its subcontractors, in the prosecution of the work provided for in said contract (intending to include herein all claimants as defined in Section 6 of Act 213 of 1963, as amended), then this obligation shall be void; otherwise, the same shall be in full force and effect; and

PROVIDED, that any alterations which may be made in the terms of the said contract, or in the work to be done under it, or any extension of the time for the performance of said contract or any other forbearance on the part of either part to the other, or the placing of an inspector or resident engineer thereon by the OWNER, shall not in any way release the PRINCIPAL and the SURETY, or either of them, their heirs, executors, administrators, successors, or assigns, from any liability hereunder. Notice to the SURETY of any alterations, extensions of or of any forbearance being hereby waived.

PAYMENT BOND -

IN WITNESS WHEREOF, signed and sealed this ____ day of _____.

WITNESSES:

PRINCIPAL: _____

By: _____ (Seal)

By: _____ (Seal)

SURETY: _____

By: _____ (Seal)

Title: _____

LOCAL ADDRESS OF AGENT FOR SURETY:

(Name)

(Street, City, State, ZIP Code)

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, That _____, of _____, as PRINCIPAL, and _____, a Corporation, organized and existing under the laws of the State of _____, and duly authorized to transact business in the State of Michigan, as SURETY, are held and firmly bound unto THE CITY OF MT. PLEASANT, MICHIGAN, as obligee, and hereinafter called "OWNER", in the just and full sum of _____ Dollars (\$_____), lawful money of the United States of America, for the payment whereof, the PRINCIPAL and SURETY bind themselves, their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above PRINCIPAL has entered into a written contract with the OWNER, dated _____, for the work known as:

in accordance with the plans and specifications prepared by THE CITY OF MT. PLEASANT, DIVISION OF PUBLIC WORKS, Mt. Pleasant, Michigan, which contract is hereby referred to and made a part hereof as fully and to the same extent as if the same were entirely written herein; and

WHEREAS, this bond is given in compliance with and subject to the provisions of the Act 213 of the Public Acts of Michigan for the year 1963, as amended by subsequent acts to date.

NOW, THEREFORE, the conditions of this obligation are such that if the PRINCIPAL shall, in all respects, well and truly keep and perform the said contract, and shall pay all sums of money due or to become due for any labor, materials, apparatus, fixtures or equipment furnished for the purpose of constructing the work provided in said contract, and shall defend, indemnify and save harmless the OWNER against any and all liens, encumbrances, damages, demands, expenses, costs and charges of every kind, except as otherwise provided in said contract documents, arising out of or in relation to the performance of said work and the provisions of said contract, and shall remove and replace any defects in the workmanship or materials, as provided by contract, then this obligation shall be null and void; otherwise, it shall remain in full force and effect; and

PERFORMANCE BOND -

PROVIDED, that any alterations which may be made in the terms of the said contract, or in the work to be done under it, or any extension of the time for the performance of said contract or any other forbearance on the part of either part to the other, or the placing of an inspector or resident engineer thereon by the OWNER, shall not in any way release the PRINCIPAL and the SURETY, or either of them, their heirs, executors, administrators, successors, or assigns, from any liability hereunder. Notice to the SURETY of any alterations, extensions of or of any forbearance being hereby waived.

IN WITNESS WHEREOF, signed and sealed this _____ day of _____.

WITNESSES: _____ PRINCIPAL: _____

_____ By: _____ (Seal)

_____ By: _____ (Seal)

SURETY: _____

_____ By: _____ (Seal)

_____ Title: _____

LOCAL ADDRESS OF AGENT FOR SURETY:

(Name)

(Street, City, State, ZIP Code)

[Form43]

City of Mt. Pleasant, Michigan

NOTICE TO PROCEED

TO: _____ DATE: _____

PROJECT description: _____

You are hereby notified to commence WORK by _____; in accordance with the CONTRACT dated _____ and you are to complete the WORK within _____ consecutive calendar days thereafter. The date of completion of all WORK IS _____.

CITY OF MT. PLEASANT, MICHIGAN
Owner

By: _____
Duane F. Ellis, P.E., Director
Division of Public Works

RECEIPT OF NOTICE

Receipt of the foregoing NOTICE TO PROCEED is hereby acknowledged this _____ day of _____.

Contractor

By: _____
(Print or Type Name and Title)

Signature

CITY OF MT. PLEASANT
2010 RANNEY WELL LATERALS INSTALLATION BID
An ARRA Federal Funded Project
SPECIFICATIONS

PART 1 - GENERAL

1.1 SCOPE:

A. The Contractor shall furnish all equipment, materials, labor, and appurtenances necessary for the installation of 600 feet of new 12-inch diameter gravel pack laterals and subsequent performance testing of the collector well in Mt. Pleasant, Michigan.

B. The Contractor and any Subcontractor shall comply with all laws, ordinances and codes, and rules and regulations of the Local and State Authorities having jurisdiction over any of the work specified herein.

C. While executing this scope of work, the Contractor shall employ reasonable precautions to prevent tampering with the collector or the entrance of foreign material into the caisson.

D. All materials utilized shall be new unless otherwise specifically provided for in the specifications. All workmanship and material shall meet or exceed the industry standards usually applied to such work.

E. Terms of the GENERAL, SUPPLEMENTAL, and other CONDITIONS of the Contract are hereby made part of this Section.

1.2 QUALIFICATIONS

A. The Contractor shall be actively engaged in the installation and/or rehabilitation of horizontal collector wells in the United States.

B. The Contractor shall provide documentation of his qualifications for the work at the request of the Owner.

1.3 COMPLETION OF WORK

A. Contractor shall initiate activities for the project within 30 days of receiving Notice to Proceed, and shall perform the work in an expeditious manner for timely completion of the project as required in the Special Conditions document.

B. Preference shall be given to the Bidder who can demonstrate the ability to successfully complete the project in a timely and efficient manner.

1.4 ACCESS AND RIGHT OF WAY

A. The Owner shall provide access to the site and the collector well. Work will be strictly confined to the area designated.

B. The Contractor shall be responsible for providing transportation of his personnel, equipment, and materials to and from the site and for providing ingress and egress inside the Collector.

1.5 COORDINATION

A. The Owner shall provide the following items:

1. 120 volt electric power for lighting and hand held power tools, and also 480 volt, 3 phase electric power for machinery and equipment. Owner personnel will make electrical connections available to the Contractor.

2. An approved site within 200 feet of the Collector for the temporary disposal of all sand, sediment, or other debris resulting from lateral installation and/or development.

3. Any permits and/or licenses, including temporary discharge permits, if required, during lateral cleaning and performance testing.

B. The Contractor shall be responsible for any additional items, including:

1. A sand settling tank for lateral installation and development.

2. All labor and equipment necessary to raise or remove existing piping and pumps, if required, for new lateral installation, and to replace same after installation is complete.

3. Restoration of all damaged areas in and around the Collector site. Areas shall be restored to the original condition as existed previous to the commencement of the work.

1.6 SAFETY

A. The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with this project. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to all persons on the jobsite.

- B. The Contractor shall utilize work procedures that minimize fire hazards to the extent practicable. Combustible debris and waste shall be collected and removed from the jobsite each day.

PART 2 — EXISTING LATERALS

2.1 SCOPE

- A. Contractor shall take all precautions to protect and preserve the current integrity of the existing laterals.
- B. While working in the bottom of the collector well caisson, Contractor shall close, cover, or otherwise restrict the entrance of foreign materials from entering the existing laterals.
- C. The Contractor shall locate and protect the existing building pilings.

PART 3 - NEW LATERAL INSTALLATION

3.1 SUBMITTALS:

- A. Contractor shall furnish details of lateral screen material, slot sizes, manufacturer and method of fabrication.
- B. Contractor shall provide grain size distribution curves and supplier of all gravel filter materials used for lateral installation, and shall supply samples of the gravel filter materials for independent laboratory testing as requested.
- C. Contractor shall identify method of screen installation, development, erosion and pollution control, and safe work plan.

3.2 LATERAL PORTS

- A. Port assemblies shall be fabricated for installation of projection pipe of sufficient diameter to allow installation of nominal 12-inch diameter lateral screens and surrounding gravel filter material, but in no case shall projection pipe have an inner diameter of less than 16 inches. Length of port assembly shall be sized for 18-inch caisson wall thickness.
- B. Ports shall be fabricated from ANSI Type 304 stainless steel, approximately 1/4-inch wall thickness, in accordance with Contractor's design.

C. Port assemblies shall be equipped with O-Rings to securely anchor and seal the lateral pipe to the caisson connection.

3.3 LATERAL SCREEN DESIGN AND CONSTRUCTION

A. A minimum of three new laterals collectively totaling 600 lineal feet shall be installed in the general orientations indicated on the site plan. The intent of these specifications is that the new laterals shall be installed, to the extent that space within the caisson permits, at an elevation equivalent to the tier of existing laterals at approximately 731 feet amsl. It is anticipated that one new lateral shall be projected generally southwest from the caisson, about 30° to 40° clockwise from existing Lateral #2; another new lateral shall be projected generally eastward from the caisson, about midway between existing Laterals #5 and #6; and a third new lateral shall be projected to the northeast from the caisson, about 30° counterclockwise from existing Lateral #6. The first two new laterals, to the southwest and east from the caisson, shall be projected as far as reasonably achievable, ideally with lengths equal to or greater than approximately 240 feet. The third new lateral, northeast from the caisson, shall be limited in length to the midpoint of the Chippewa River, approximately 115 feet from the caisson. Final directions and lengths of laterals shall be modified as necessary, on the basis of field conditions and as mutually agreed by the Contractor and Owner.

B. The Contractor shall provide a base bid for 600 feet of 12-inch diameter laterals, each assumed to be approximately 200 feet in length, and shall include a unit price for variations there from. The incremental per foot price shall include the cost of all materials and labor for projection pipe installation, screen installation, projection pipe retrieval, development, and disinfection.

C. Lateral projection pipe shall be of sufficient strength to withstand the stresses of projection into and withdrawal from the aquifer. If the projection pipe reaches refusal or if there is an indication of excessive jacking pressure before the desired length is achieved, the length of the lateral screens shall be reduced accordingly.

D. Lateral screens shall be nominally 12-inches in diameter and fabricated from Type 304 stainless steel. Lateral screens shall be fabricated to provide sufficient strength to resist external forces applied to it after installation and to minimize the likelihood of damage during installation.

E. Lateral screen slot sizes and corresponding gravel filters shall be determined by the Contractor subject to approval by the Owner to ensure efficient and sand free production of water. Slot sizes shall initially be estimated based upon formation samples obtained from previous test drilling and later finalized from materials encountered during lateral pipe projection. For general reference, grain size distribution curves for soil samples obtained during installation of test holes at the site are provided with this specification. This is provided to facilitate advance planning and minimize down time associated with waiting for well screen deliveries.

It is anticipated that slot sizes will likely range from 0.040 inches (40-slot) to 0.120 inches (120-slot).

- F. Each lateral shall include a maximum 10-foot length of Schedule 10S, Type 304 stainless steel blank pipe at the caisson end. Pipe to be welded shall be beveled at an angle of 45 degrees.

3.4 LATERAL INSTALLATION

- A. It is anticipated that the new lateral screens shall be installed, to the extent that space within the caisson and other physical limitations permit, as close as possible to the elevation of the centerline of the existing laterals, which is approximately 731 feet AMSL. Final lateral elevation shall be determined on the basis of field conditions and as mutually agreed by the Contractor and Owner.
- B. Installation of the lateral screens shall proceed initially by jacking blank projection pipe into the aquifer radially from the central caisson to the required distance from the caisson wall, or to refusal or indication of excessive jacking pressure. After the blank pipe has been projected, lateral screens and gravel filters shall be inserted into the entire length of the projection pipe and then the projection pipe shall be withdrawn.
- C. During installation of the blank projection pipe, formation samples shall be obtained at 5 to 10 foot intervals. Sieve analyses shall be performed on select samples and copies of the analyses provided to the Owner. The Contractor shall use the sieve analysis information to confirm well screen slot sizes.
- D. Each lateral shall be installed horizontally in a straight radial line throughout its full length. Maximum allowable deviation from horizontal shall be one projection pipe diameter per every 100 feet of projected length of the lateral. Procedures proposed by the Contractor for measuring lateral deflection in the field must be submitted to the Owner for approval prior to lateral installation.
- E. At the conclusion of lateral installation, all installation equipment and appurtenances shall be removed from the interior end of the screen pipe, the control valve shall be affixed to the interior end and the valve shall be closed to await development.

3.5 LATERAL DEVELOPMENT

- A. Each lateral screen shall be developed by over pumping, surging with water or air, jetting, or some combination of these methods. A detailed plan for lateral development shall be submitted to the Owner for approval prior to commencement of development.

B. Development shall be continued until sand production from each screen has reached stability and cannot be substantially improved by further development.

C. Contractor shall furnish equipment and measure sand production using a centrifugal sand separator or Rossum Sand Tester. Sand production less than 2 ppm during performance testing will indicate complete development.

3.6 LATERAL VALVES

A. During construction, a valve or blind flange shall be installed on each lateral so that the flow from that lateral can be controlled. Blind flanges (if utilized) shall be removed and stored as directed by the Owner after well development.

B. Valves shall be AWWA C509 cast iron, 200 psi working pressure, resilient seat gate valves with non-rising stems having a full pipe diameter opening and fitted with a 2-inch operating nut. A non-conducting gasket shall be placed between the cast iron valve flange and the type 304 stainless steel lateral assembly to minimize electrolytic corrosion caused by contact of dissimilar metals.

3.7 PERFORMANCE TESTING

A. Following installation and development of the new laterals, the Contractor shall conduct a minimum 48 hour pumping test at the Collector to evaluate the maximum and minimum yield of the well, The testing shall consist of two phases; an initial 24-hour period in which only the three newly installed laterals are open, followed by continuation with an additional 24-hour period with all laterals, new and existing, open. Prior to the start of test pumping, the Collector shall be shut down for a minimum recovery period of at least 36 hours. At the completion of test pumping, recovery in the Collector shall be monitored for 24 hours after pump shutdown,

B. Testing will be conducted utilizing the Contractor's pump(s) at a constant rate of approximately 2100 gpm (or other rate as determined by the supervising hydrogeologist). The Contractor shall monitor the rate of flow throughout the duration of the pumping test in accordance with Item C. below.

C. The Contractor shall install temporary discharge piping equipped with a freely discharging circular pipe orifice at a point of discharge at the Chippewa River. At this time, it is anticipated that the orifice size diameters will be on the order of a 12" x 9"; that is, a 9-inch diameter circular orifice on a 12-inch diameter discharge pipe tube. Thickness and fabrication of the orifice plate, as well as other orifice construction details, shall meet Hydraulic Institute Standards. Length of the pipe tube at the orifice shall be a minimum of 15 feet. Pressure behind the orifice shall be observed with a manometer tube installed 24 inches behind the orifice plate. The point of discharge is anticipated to be a maximum of 250 feet from the Collector.

D. The Contractor shall obtain hourly readings of the elevation of the River at the site during performance testing.

E. The Contractor shall install automatic water level recorders or transducers in the Collector caisson and any functional observation wells within 300 feet of the Collector caisson to continuously monitor water levels during the pumping test. In addition, water level measurements shall be obtained by hand at periodic intervals during the test at each location. All measurements of water level and drawdown shall be accurate within 0.01 foot.

F. Prior to reaching the end of the first 24-hour phase of test pumping, with only the new laterals open, an underwater inspection of the Collector shall be conducted to measure the relative flow rate and efficiency of each new lateral. Then subsequently, prior to the end of the complete 48-hour test period, with all new and existing laterals open, a second underwater inspection shall be conducted. These inspections shall include the following work items:

1. Color photographs and video of the section of each new lateral nearest the caisson interior (second inspection only).
2. Using a diver held flow meter, measurement of the relative flow rate and water temperature, from each lateral (both inspections).

G. Following completion of testing, a report shall be submitted detailing the procedures and results of the new lateral installation, results of performance testing and underwater inspection, and the long-term sustained yield projected for the Collector under maximum and minimum conditions.

H. All testing and data evaluation shall be performed under the direct supervision of a qualified hydrogeologist experienced in the design, construction, and testing of horizontal collectors.

3.8 DISINFECTION

A. Upon completion of performance testing, the Collector caisson shall be thoroughly cleaned of all foreign substances, including tools, grease, oil, and debris of any kind.

B. Following cleaning, the submerged portion of the caisson including the laterals shall be disinfected using a chlorine solution of such volume and strength and so applied that a concentration of at least 100 milligrams per liter shall be obtained in all submerged parts of the Collector caisson and throughout the length of each lateral. The chlorine solution shall be prepared and applied in such a manner as will meet AWWA Standards.

C. Surfaces within the caisson above the waterline shall be washed with a 200 milligram per liter chlorine solution.

D. After a minimum of 24 hours, the chlorine solution shall be pumped to waste until the chlorine residual is less than 5 PPM. The chlorine solution pumped to waste shall be dechlorinated as required.

City of Mt. Pleasant
2010 Ranney Well Laterals Installation Project
An ARRA Federally Funded Project
SPECIAL CONDITIONS

1. Project Schedule

Construction shall begin no sooner than October 4, 2010. The Contractor shall complete the laterals installation work no later than December 24, 2010. Liquidated damages in the amount of \$300/day will be charged to the Contractor after the completion date unless waived by the Owner.

2. Work Hours

The permitted work hours will be from 7:00 a.m. to 9:00 p.m., Monday through Saturday. No Sunday work will be allowed.

3. Holiday Schedule

No work will be completed during the following holidays:

November 24 and 25, 2010 Thanksgiving

4. Site Security

The Contractor is responsible for securing the Ranney Well building after each day of work. The building shall be locked and secured.

5. Materials Disposal

The Owner will provide a temporary disposal location for waste materials, according to the specifications. However, the Contractor is responsible for the final waste disposal. The Owner may provide a final disposal site for certain materials, such as sand and gravel. All waste materials must be properly disposed of within two (2) weeks of the completion of the project.

6. Funding Requirements

This project is funded through a CDBG Grant. The Contractor shall follow all requirements of the Grant, including the prevailing wage requirement and payroll reporting. (See Appendix 2)

7. Federal Payroll Reporting

Federal payroll reporting and prevailing wage are requirements for this project.

[Form30]

City of Mt. Pleasant, Michigan

ADMINISTRATIVE MEMO NO 8-78

Issued: October 10, 1978

Revised: June 21, 1989

Subject: **MINIMUM INSURANCE REQUIREMENTS FOR CONTRACTORS**

Summary Statement

The provision of adequate insurance by persons and businesses working for the city or on street right-of-way is essential to protect the public from the costs of injury or damage and to protect the city from unnecessary liability resulting from the acts of persons and businesses working for the city. Minimum insurance requirements are needed to provide this protection.

Memo

Persons or businesses which provide professional services to the city under the terms of a written contract or provide labor and/or material to accomplish work for the city or for others on or over street right-of-way or other city property shall carry insurance and bonds to protect the public and the City from exposure to unnecessary financial risks.

Prior to signing of contracts, issuance of purchase orders or permits, or other authorization to begin work, certificates of insurance evidencing the purchase of insurance in amounts not less than required by the Administrative memo or bid specifications, whichever is greater, shall be filed with City Clerk. Such certificates shall:

- a. Show that the insurance is currently in force and termination date of each policy.
- b. State the limits of liability of the policies covered by the certificate.
- c. Show that the City of Mt. Pleasant is to be specifically named in policy as an "additional insured" and should be issued to the City of Mt. Pleasant as the certificate holder.
- d. Provide that the City will receive not less than 10 days written notice of the cancellation of any listed policy.
- e. Be issued in the name of an insurance company authorized to conduct business in the State of Michigan.

Required bonds shall be filed with the City Clerk prior to the signing of contracts or other authorizations to proceed with work.

Insurance and bonds shall meet or exceed the following requirements. Exceptions to recognize more or less hazardous operations and financial risks should be considered and with approval of the City Manager may be made in specifications or contract requirements prior to awarding contracts or issuing purchase orders.

INSURANCE REQUIREMENTS

Type	Limit of Liability	Required of: City Contractor	Contractor On R-O-W
Worker's Compensation and Employer's Liability	Statutory Coverage B \$100,000	X	X
Public Liability (including products and completed operations liability)			
Bodily Injury	\$250,000 each person	X	X
	\$500,000 each accident	X	X
Property Damage	\$250,000 each accident	X	X
	\$250,000 each aggregate	X	X
Automobile Liability (including hired cars and automobile non-ownership)			
Bodily Injury	\$250,000 each person	X	X
	\$500,000 each occurrence	X	X
Property Damage	\$250,000 each accident	X	X
	\$250,000 each aggregate	X	X
Additional Insured Clause	City of Mt. Pleasant to be specifically named in policy as an "additional insured"	X	X
Excess Liability (Required unless risk occurrence is nominal)	\$1,000,000 each	X	

Persons or businesses engaged to provide labor and material in an amount in excess of \$10,000, or who will receive partial payments as work progresses will provide labor, performance and material bonds equal to the value of the work being performed. Such bonds are not required where the work to be done is of a type in which the failure to perform will not adversely affect the city's ability to function or increase the city's cost of completing the work.

REPORT OF TEST DRILLING AND RECOMMENDATIONS FOR COLLECTOR WELL LATERAL CONSTRUCTION FOR MT. PLEASANT, MICHIGAN

Introduction

The City of Mt. Pleasant, Michigan utilizes a horizontal collector well for water supply. Installed in 1962, and placed in service in 1963, the collector well was constructed with a 13-foot by 16-foot diameter caisson and seven 12-inch diameter laterals totaling 1271 feet. Slot sizes in the existing laterals are 1/4", 1/8" and 3/8" wide. The collector well initially furnished capacities on the order of 5 to 6 MGD and has been a reliable source of water supply for more than 45 years.

During the latter part of this extended period of service, the well progressively experienced some loss of performance, necessitating several maintenance efforts within the past 15 years. Recent inspections indicated that several of the existing laterals had aged and deteriorated to the extent that additional maintenance would no longer rejuvenate their performance. Currently the collector well provides about 3 MGD with about 90 percent or more of this flow provided from three laterals: No. 1, No. 2 and No. 6. These laterals, although currently productive, also can be expected to age with prolonged use.

Accordingly, the City has initiated an upgrade of the collector well. Specifically, the City seeks to install at least three new laterals to provide 3 MGD capacity. The purpose of this investigation was to install test borings and characterize aquifer sediments, from which recommendations regarding the orientation, length, and other construction aspects of the new laterals could be identified.

Synopsis of Field Investigation

As part of this field investigation, six test borings were installed using hollow-stem augers and split spoon samplers. All of these borings penetrated to the base of the aquifer, or to below the centerline of the existing tier of collector well laterals (at TH10-5). Locations of the borings are shown on Figure 1, and pertinent depths and elevations of the borings are identified on Table 1. Boring logs describing the soils encountered during drilling are provided also.

Three soil samples in vertical proximity to the potential new lateral projection horizon were submitted for sieve analyses. Grain size distribution curves for these samples are provided herein. These grain size distributions form the basis for determining preliminary slot sizes, artificial gravel filters, and other aspects of lateral construction.

Lateral Construction Recommendations

The existing centerline of laterals is at elevation 731 feet amsl. As shown on Table 1 summarizing characteristics at each test boring, this centerline of laterals is only several feet above the bottom of aquifer, and is actually below the bottom of the aquifer at TH10-3. However, there are several segments around the inside perimeter of the caisson where laterals were not previously projected. Two of these available open areas, one on the southwest side where the City owns property across the Chippewa River and also on the east side of the caisson, permit laterals of potentially greater lengths relative to the other directions. Assuming that there is sufficient working area for setting up jack equipment around the valves and risers on the existing laterals, it appears that 3 or 4 new laterals could be installed at about the same elevation as the centerline of the existing laterals, which would allow the maximum available drawdown.

There are several additional restrictions affecting the orientation and length of new laterals. First, the new laterals can not be projected beneath the surface reservoirs southeast of the caisson, to avoid any settlement or damage to these structures resulting from removal of soils during lateral projection. In addition, there are physical obstructions to avoid, including the piles beneath the collector well pumphouse foundation, the test piles installed south of the collector

well near TH10-3, and the foundation for the light pole east of the well. Finally, lateral projection in the areas northwest to northeast of the caisson may not extend beyond the property line, at the center of the Chippewa River.

In consideration of these restrictions, three potential, primary orientations for the new laterals have been selected, as shown in Figure 2 and described as follows:

- Southwestward from the caisson, approximately 30° to 40° clockwise of existing Lateral No. 2.
- Eastward from the caisson, between existing Laterals Nos. 5 and 6, along the south side of the access road.
- A shorter projection area northeast of the caisson, approximately 30° counterclockwise from Lateral No. 6.

The first two of these new lateral orientations, to the southwest and to the east, have the potential to extend relatively greater lengths of perhaps 240 feet or more, depending on projection pressures and soils encountered. The third referenced lateral orientation to the northeast will be restricted in length to the property line at the midpoint of the Chippewa River, which is estimated to be about 115 feet from the caisson. A comparable optional fourth location also has been considered in the area northwest of the collector well, about 30° to 40° counterclockwise from existing Lateral No. 1. If this fourth orientation is utilized, the ultimate lateral length will be similarly shorter, limited to the property line at the midpoint of the Chippewa River.

Regardless of orientation, it is apparent from the grain size distribution curves that the sediments above the projection horizon of 731 feet amsl typically become finer than those in which the existing laterals were projected. In many instances, these sediments are primarily uniform sand with little or no gravel. As shown in the left hand columns of the Table 2, summarizing the soil grain size characteristics, the median grain size of samples at higher

elevations was typically less than 1 mm, the 40-slot opening size. Therefore, to utilize larger slot openings as well as minimize the potential for sand migration into the laterals, we are recommending that the new laterals be constructed with gravel filters. Recommendations for gravel filter sizes and slot openings are provided in the table with respect to the corresponding samples obtained from each test hole.

To achieve a 3 MGD capacity with the new laterals, it is recommended that the total length of new lateral screens be at least 590 feet. Assuming three new laterals, this would suggest an average projection length of 200 feet. However, as mentioned above, greater lengths of 240 feet or more may be achievable in the southwest and east directions, whereas the lateral to the northeast (or northwest) would be limited to shorter lengths by the property line at the midpoint of the Chippewa River. For a capacity of 3 MGD, and with the total length of laterals of 590 feet, the average flow to the laterals will be about 3.5 gpm per lineal foot, which maintains an acceptable flow velocity.

Assuming the centerline of laterals is near elevation 731 feet amsl, maximum pumping level should be limited to about elevation 736 feet, to maintain about 4 or 5 feet of water over the top of the laterals. Accordingly, assuming a static water level (i.e. river level) of 760 feet amsl, there will be 24 feet of available drawdown.

In 1962, the specific capacity at the end of the 3-day test, with drawdowns approximately stable, was about 220 gpm per foot of drawdown. Post maintenance testing in 1994 reported a 12-hour specific capacity of 274 gpm/ft. Then, during post maintenance testing in 2000, the reported specific capacity at the end of 24 hours at 2135 gpm was about 200 gpm/ft. However, if the river level (759.65 ft) is used as the defacto static water level for that latter test, then with the observed pumping level at the end of the test (elevation 741.34 ft) the revised drawdown and specific capacity would be 18.31 feet and 116.6 gpm/ft of drawdown, respectively. Nevertheless, either of these specific capacities in conjunction with the 24 feet of available drawdown suggests 3 MGD would be available. A similar conclusion is obtained by applying the more theoretically precise proportionality equation, in which dewatering effects are

incorporated. Regardless, it should be noted that failure to achieve complete recovery after each cycle of pumping may progressively decrease this apparent potential performance.

Alternatively, calculations of capacity versus drawdown can be derived using assumed aquifer coefficients and properties. This approach is hindered by the lack of reported results from any detailed standard aquifer pumping tests before (or since) the initial well construction. Thus, "effective" aquifer coefficients and conditions must be interpreted primarily from the results of performance testing of the collector well, for which there are certain practical and theoretical restrictions as well as typically providing a relatively minimum amount of functional observation well data. Nonetheless, using estimated aquifer properties, calculations of capacity were attempted. Results of these calculations are shown in Figure 3, which indicates that the capacity at 24 feet of drawdown is slightly less than 3 MGD. Based on the range of error inherent in the assumptions used in these calculations, this calculated performance is probably within acceptable accuracy for assuming 3 MGD capacity.

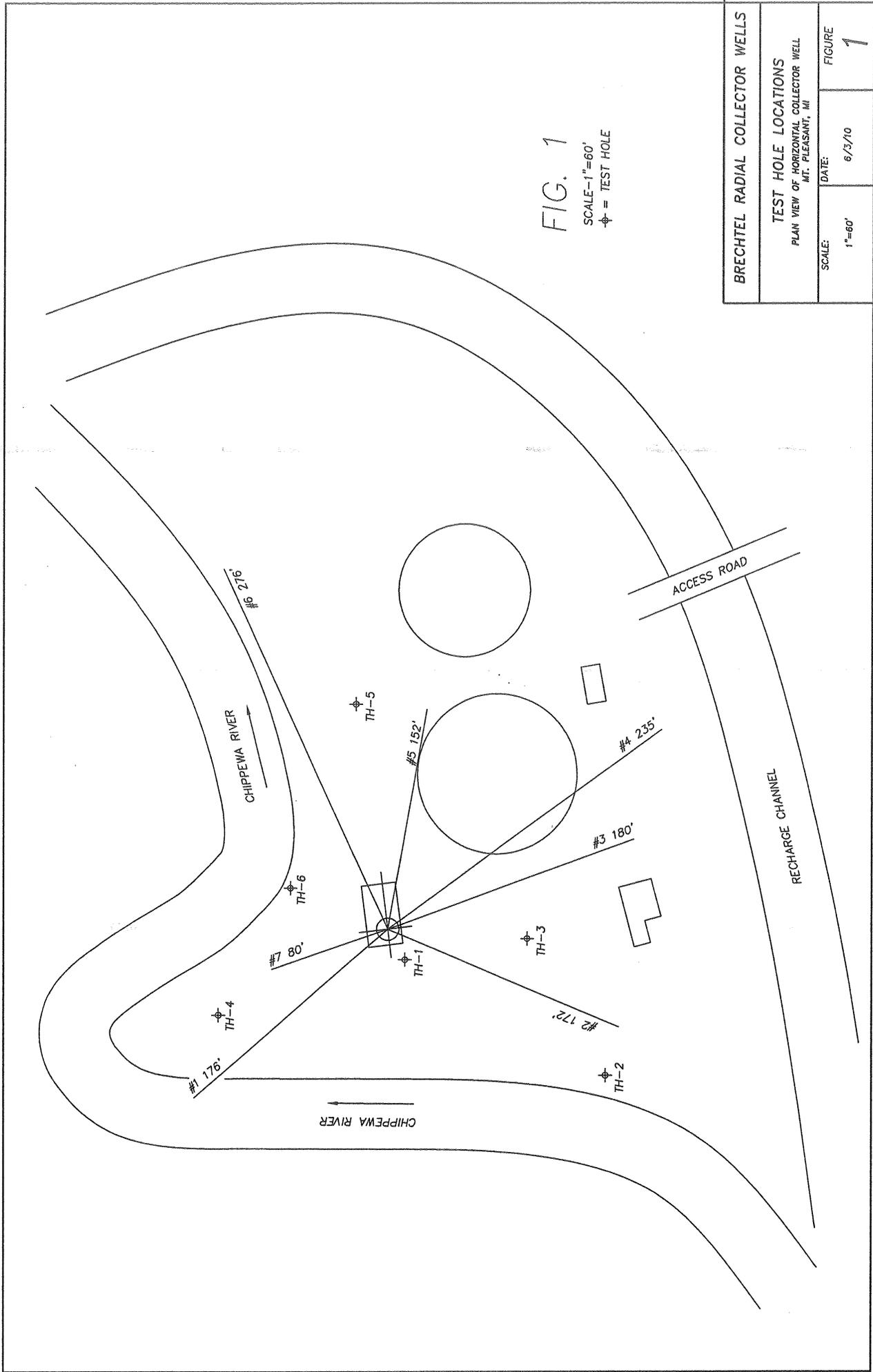
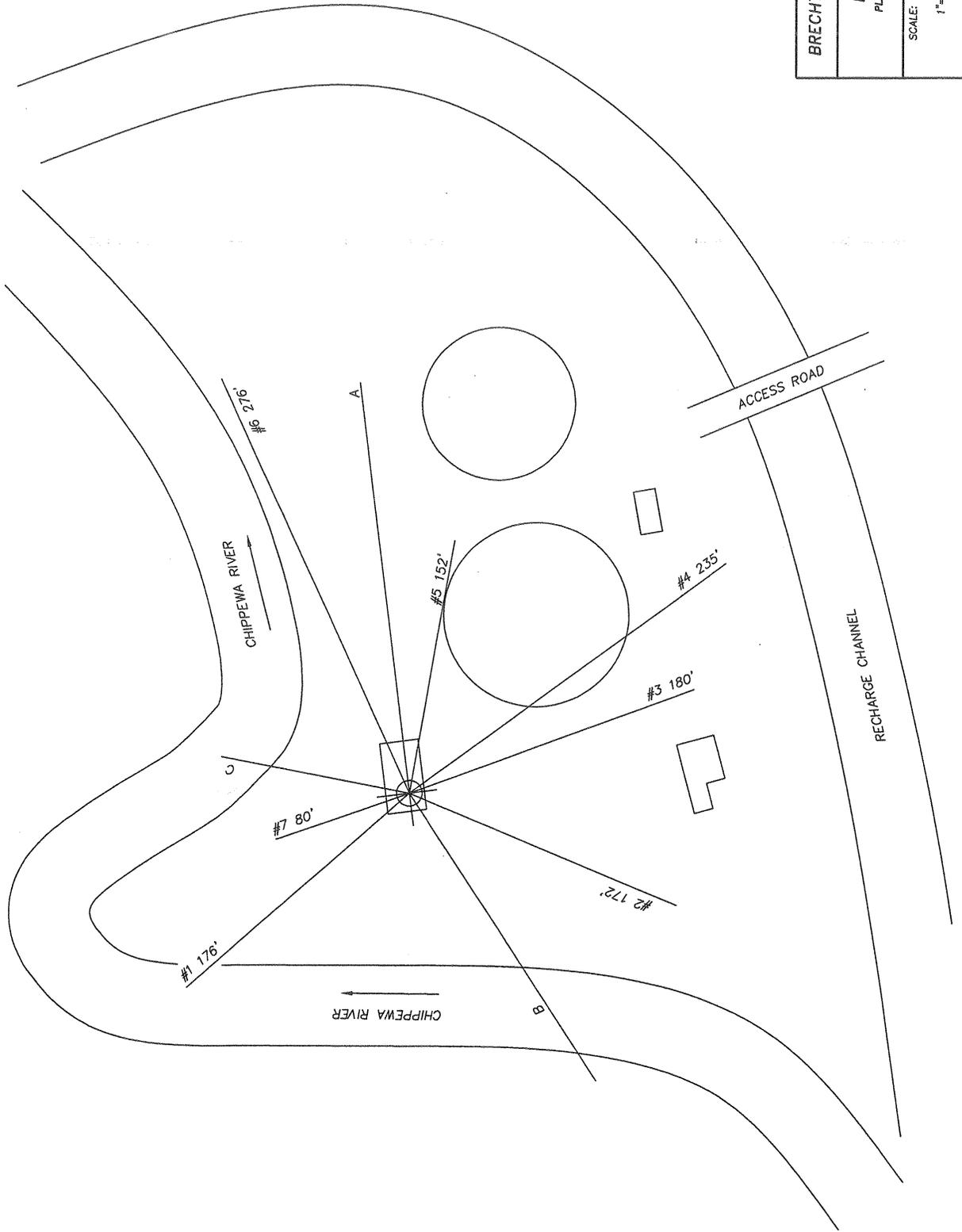


FIG. 1

SCALE-1"=60'
 ⊕ = TEST HOLE

BRECHTEL RADIAL COLLECTOR WELLS		
TEST HOLE LOCATIONS		
PLAN VIEW OF HORIZONTAL COLLECTOR WELL		
MT. PLEASANT, MI		
SCALE:	DATE:	FIGURE:
1"=60'	6/3/10	1



NOTE:
 LATERAL LENGTHS ARE
 FROM CAISSON O.D.
 NEW LATERALS ARE
 LABELED A, B, & C

FIG. 2

SCALE - 1" = 60'

BRECHTEL RADIAL COLLECTOR WELLS		
PROPOSED NEW LATERALS		
PLAN VIEW OF HORIZONTAL COLLECTOR WELL		
MT. PLEASANT, MI		
SCALE: 1"=60'	DATE: 6/3/10	FIGURE 2

TABLE 1

SUMMARY OF PERTINENT CHARACTERISTICS AT TEST HOLES
MT. PLEASANT, MI

Test Hole	Bottom of Aquifer	Elevations		Aquifer Thickness*	Distance From Caisson
		Grade	Bottom Ag.		
TH10-1	40.5'	769.1	728.6	31.4'	15'
TH10-2	34'	764.5	730.5	29.5'	180'
TH10-3	38'	771.1	733.1	26.9'	90'
TH10-4	32.8'	763.6	730.8	29.2'	125'
TH10-5	46'+	773.5	< 727.5	32.5'+	155'
TH10-6	36'	764.4	728.4	31.6'	67'

* Based on assumed static water level = river level at 760 ft amsl

TABLE 2

SUMMARY OF SOIL GRAIN SIZE CHARACTERISTICS
WITH APPROXIMATE SLOT SIZES AND GRAVEL FILTERS

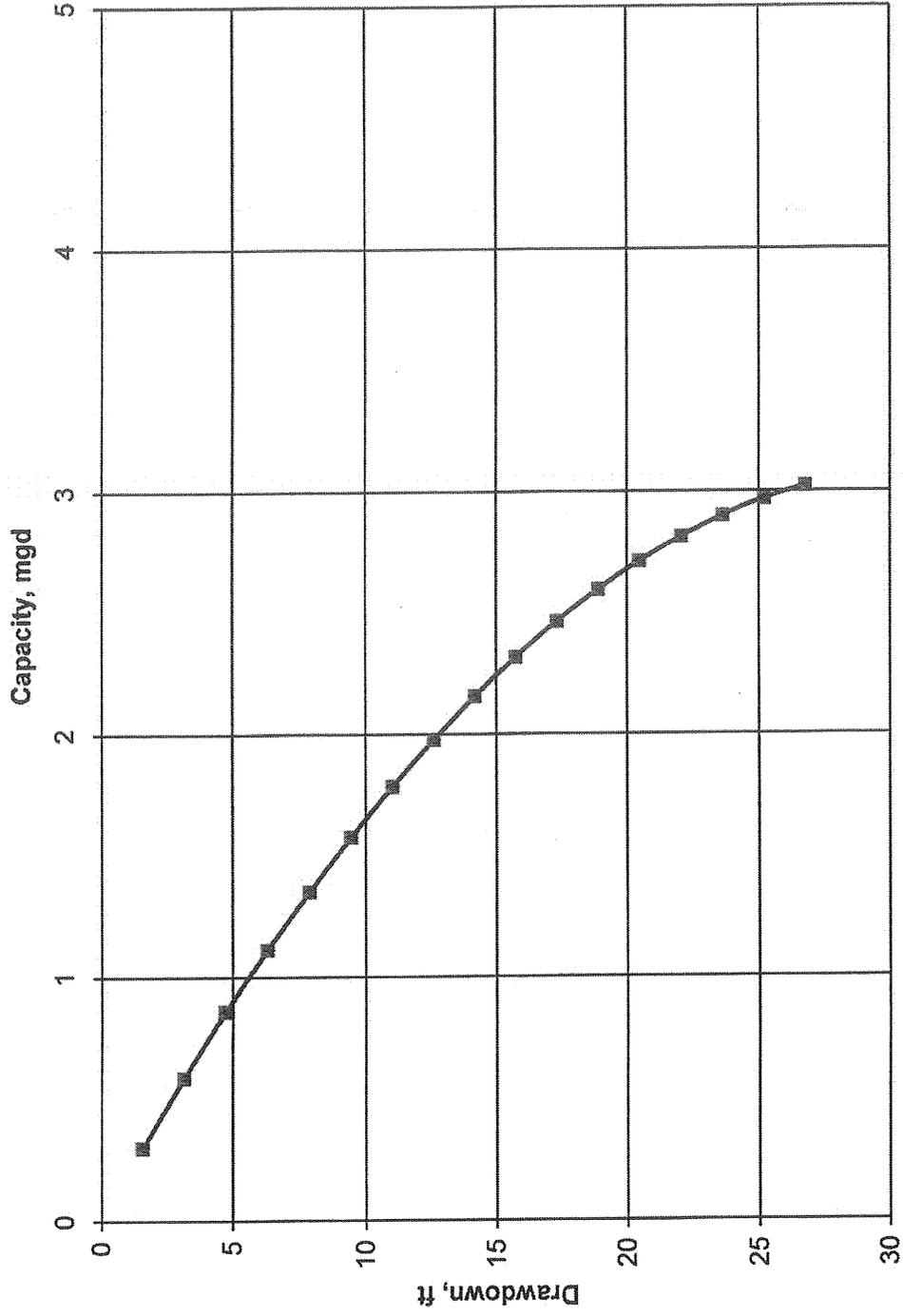
Mt. Pleasant, MI

Test Hole	Elevation	Grain Size, mm		C _u	Slot Size **	Gravel Size, mm
		d ₅₀	d ₃₀			
TH-1	737 - 735	0.85	0.40	6	60	1.5 - 2.5
	735 - 731	3.90	1.50	13.3	100 - 120	3 - 6
TH-2	736.5 - 734.5	0.27	0.20	2	40	1 - 2
	732.5 - 730.5	2.10	0.33	26.7	80	2 - 3
TH-3	737.1 - 735.1	2.20	0.65	12.8	100 - 120	3 - 6
	735.1 - 733.1*	0.69	0.42	4.2	60	1.5 - 2.5
TH-4	737.6 - 735.6	0.32	0.26	1.9	40	1 - 2
	735.6 - 731.6	4.30	1.15	19	100 - 120	3 - 6
TH-5	735.5 - 731.5	1.35	0.52	8	100 - 120	3 - 6
	731.5 - 727.5	1.50	0.69	6.1	100 - 120	3 - 6
TH-6	736.4 - 732.4	0.27	0.215	1.9	40	1 - 2
	732.4 - 728.4	3.10	1.35	11.7	100 - 120	3 - 6

* Bottom of aquifer at TH-3 is above proposed centerline of laterals

** Slot size in thousandths of an inch

Figure 3. Collector Well Capacity vs Drawdown



EQUAL OPPORTUNITY CLAUSE (EXECUTIVE ORDER 11246)

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advancements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept.

24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States." [Sec. 202 amended by EO 11375 of Oct. 13, 1967, 32 FR 14303, 3 CFR, 1966-1970 Comp., p. 684, EO 12086 of Oct. 5, 1978, 43 FR 46501, 3 CFR, 1978 Comp., p. 230]

SECTION 3 CLAUSE

1. All contractors and subcontractors and the City itself when acting as a contractor shall be asked to indicate a good faith effort to meet the Section 3 requirement by signing contracts which contain the clause set forth in 24 CFR 135.20(b) as follows:
 - A. The work to be performed under this contract is on a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u. Section 3 requires that to the greatest extent feasible opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the project.
 - B. The parties to this contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements.
 - C. The contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understanding, if any, a notice advising the said labor organization or workers' representative of his commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.
 - D. The contractor will include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the application for or recipient of Federal financial assistance, take appropriate action pursuant to the contract upon a finding that the subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development 24 CFR Part 135. The Contractor will not subcontract with any subcontractor where it has notice of knowledge that the latter has been found in violation of regulations under 24 CFR Part 135 and will not let any subcontract unless the subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.
 - E. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR Part 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of the contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance its successors, and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its contractors and subcontractors, its successors, and assigns to those sanctions specified by the grant or loan agreement or contract through which Federal Assistance is provided, and to such sanctions.

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) **Minimum Wages.** All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been

communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who

is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

General Decision Number: MI100049 07/02/2010 MI49

Superseded General Decision Number: MI20080049

State: Michigan

Construction Type: Heavy

County: Isabella County in Michigan.

HEAVY CONSTRUCTION PROJECTS (does not include airport or bridge construction projects, or sewer or water line work if it is incidental to a highway construction project)

Modification Number	Publication Date
0	03/12/2010
1	03/19/2010
2	07/02/2010

BRMI0010-008 10/01/2009

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 23.88	12.79

FOOTNOTE:

Paid Holiday: Fourth of July, if the worker is employed by the contractor in any period of seven working days before said holiday within the current calendar year.

ELEC0275-004 06/01/2008

TOWNSHIPS OF BLOOMFIELD, COLDWATER, DEERFIELD, FREMONT, GILMORE, NOTTAWA, ROLLAND AND SHERMAN:

	Rates	Fringes
ELECTRICIAN.....	\$ 26.75	6.49+25%

FOOTNOTE: Work 40' or more above ground, floor or flat roofs, except work on mechanical/hydraulic work platforms which are MIOSHA approved: 10% additional.

ELEC0557-002 06/01/2009

TOWNSHIPS OF COE AND LINCOLN:

	Rates	Fringes
ELECTRICIAN.....	\$ 31.13	15.52

FOOTNOTE: High work: Electrical work thirty-five feet (35') (to the work) above the ground or permanent floor, where a hazard exists: 15% per hour additional.

ELEC0692-003 06/01/2009

TOWNSHIPS OF CHIPPEWA, DENVER, ISABELLA, UNION, VERNON AND WISE:

	Rates	Fringes
ELECTRICIAN.....	\$ 29.46	7.20+26.33%

* ENGI0325-020 05/01/2010

	Rates	Fringes
OPERATOR: Power Equipment		
GROUP 1.....	\$ 28.39	18.90
GROUP 2.....	\$ 28.14	18.90
GROUP 3.....	\$ 27.04	18.90
GROUP 4.....	\$ 22.24	18.90
GROUP 5.....	\$ 21.64	18.90
GROUP 6.....	\$ 19.19	18.90
GROUP 7.....	\$ 17.49	18.90

FOOTNOTES:

Certified Crane Operator Premiums:

- a) Swing Boom Truck Operator over 12 tons-\$0.50 per hour
- b) Hydraulic Crane Operator 75 tons and under-\$0.75 per hour
- c) Hydraulic Crane Operator over 75 tons-\$1.00 per hour
- d) Lattice Boom Crane Operator-\$1.50 per hour

Crane operator with main boom and jib 300' or longer: \$1.50 per hour above the group 1 rate. Crane operator with main boom and jib 400' or longer: \$3.00 per hour above the group 1 rate.

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Crane operator with main boom and jib 400', 300', or 220' or longer. Tower crane operator with CCO certification for combined length of mast and boom 220' or longer

GROUP 2: Crane operator with main boom and jib 140' or longer, tower cranes (Operators without CCO certification, or less than 220' length), gantry crane, whirley derrick

GROUP 3: Regular equipment operator; crane, stiff leg derrick, scraper, dozer, grader, front end loader, hoist, job mechanic, concrete pump truck, hydro excavators

GROUP 4: Air tugger (single drum), material hoist, boiler operator, sweeping machine, winch truck, Bobcat and similar equipment, fork truck (over 20 ft. lift), elevators (when operated by an operating engineer)

GROUP 5: Pump, 6 in. or over; Well points, freeze systems, boom truck (non-swinging); end dumps and laser/power screed; concrete wire saw (20 h.p. and over), brock concrete breaker

GROUP 6: Air compressor, welder, generator, conveyor, pump under 6", grease person and fork truck (20 ft. lifting capacity or less when working on masonry work)

GROUP 7: Oiler, fire tender and heater operator

IRON0025-020 06/01/2009

	Rates	Fringes
IRONWORKER		
Ornamental and Structural...	\$ 29.26	27.62
Reinforced.....	\$ 26.83	24.26

PAIN1803-005 06/01/2009

	Rates	Fringes
PAINTER		
Work performed on water, bridges over water or moving traffic, radio and powerline towers, elevated tanks, steeple smoke stacks over 40 ft. of falling heights and recovery of lead-based paints.....	\$ 23.20	10.85
All other heavy construction.....	\$ 21.78	10.75

FOOTNOTES: Spray painting, sandblasting, blowdown associated with spraying and blasting, water blasting and work involving a swing stage, boatswain chair or spider: \$1.00

per hour additional. All work performed inside tanks, vessels, tank trailers, railroad cars, sewers, smoke stacks, boilers or other spaces having limited egress not including buildings, open top tanks, pits, etc.: \$1.25 per hour additional.

 SHEE0007-012 05/01/2008

	Rates	Fringes
SHEET METAL WORKER (Includes HVAC duct work; does not include sheeting for metal buildings).....	\$ 25.02	16.96

 SUMI1991-002 11/15/1991

	Rates	Fringes
BRICKLAYER.....	\$ 14.59	2.12
CARPENTER (excluding acoustical ceiling tile, batt insulation and drywall hanging).....	\$ 12.77	1.66
Laborers:		
Common laborer.....	\$ 10.93	2.10
Mason tender (brick).....	\$ 12.72	2.46
Power Equipment Operator		
Bulldozer.....	\$ 14.48	
ROOFER, Including Built Up, Composition and Single Ply Roofs.....	\$ 15.00	2.78
TRUCK DRIVER.....	\$ 9.08	.30

 WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
 =====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

 In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively

bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

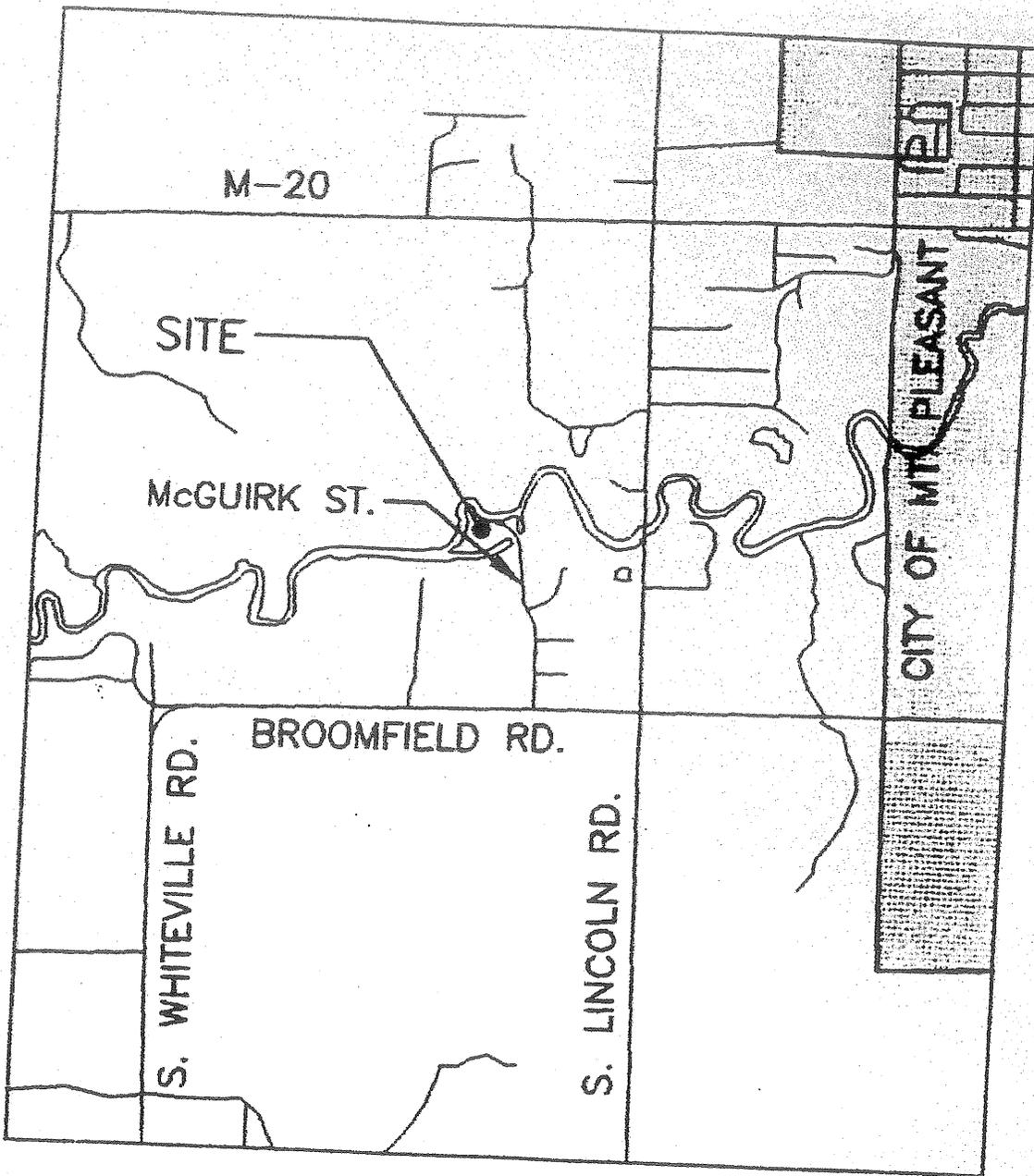
The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION



NORTH

LOCATION PLAN

NO SCALE