

Contract Documents for
Pere Marquette Park Recreational Improvements
City of Muskegon, Muskegon County, Michigan

A Michigan Natural Resources Trust Fund Grant Project
Relevant State & Federal Requirements Apply

Owner:



City of Muskegon

933 Terrace Street · Muskegon, MI 49440

Prepared by:

Westshore Consulting

2534 Black Creek Road · Muskegon, MI 49444

November 2018

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INVITATION FOR BIDS

Project: SP 91820 Pere Marquette Park Recreational Improvements

The City of Muskegon, Michigan will receive sealed bids until 2:00 p.m. local time on Tuesday January 15, 2019, at the City Clerk's Office, City Hall, 933 Terrace Street, Muskegon, Michigan, at which time and place all bids will be publicly opened and read aloud for the following items of work to include:

- 256 S.F. Bathhouse Addition
- 1,142 S.F. of 6-inch Concrete Sidewalk
- 4,800 S.F. Universally Accessible Playground

This project is funded with a Michigan Natural Resources Trust Fund Grant, relevant State and Federal requirements apply.

Electronic copies of Plans and Specifications may be obtained on or after Friday December 14, 2018 from the City of Muskegon website, or by request to the Engineering Department via phone or email; 231.724.6707 or engineering@shorelinecity.com. Printed copies can be obtained by request from the Engineering Department located at 1350 E. Keating Ave, Muskegon MI, 49442 for a cost of \$40.

An amount equal to five percent (5%) of the Bid must be submitted with each Bid Proposal in one of three forms acceptable to the City of Muskegon. Contract documents may be examined at the following locations:

Contract documents may be examined at the following locations:

- Public Services Building, 1350 E. Keating Ave., Muskegon MI 49442
- City of Muskegon website: www.shorelinecity.com
- Westshore Consulting, 2534 Black Creek Rd., Muskegon MI 49444
- Grand Rapids Builders Exchange, 678 Front Ave NW #330, Grand Rapids MI 49504

Attention is called to the fact that the City requires: the Contractor consider hiring local work force insofar as possible, not less than the salaries and wages set forth in the Specifications must be paid, 14% minority and 6.9% female are the goals established for participation in each trade, the Contractor must ensure employees and applicants for employment are not discriminated against based upon their race, creed, color, religion, sex, national origin, handicapped condition nor veteran background, and all pertinent regulations must be complied with. Bids may not be withdrawn within sixty (60) days after bid opening. The City of Muskegon reserves the right to reject any or all bids or to waive any informalities or irregularities in the bidding.

A Pre-Bid Conference will be held in the Conference Room at the City of Muskegon Public Services Building located at 1350 E Keating Avenue at 10:30am on, Friday, January 11, 2019 at which time and place any questions regarding this Project should be presented. Minutes from the Pre-Bid Conference will become an Addendum to the Contract.

CITY OF MUSKEGON, MICHIGAN
By: Ann Meisch, City Clerk

PUBLISH: 12/14/18

ADA POLICY

The City will provide necessary appropriate auxiliary aids services, for example, signers for the hearing impaired, audio tapes for the visually impaired, etc., for disabled persons who want to attend the meeting, upon twenty-four hour notice to the City.
Contact:

Ann Meisch, City Clerk
City of Muskegon, City Hall
933 Terrace Street, Muskegon, MI 49440
(231) 724-6705 or TDD (231) 724-6773

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION

Executive Order 11246

1. The Bidder’s attention is called to the “Equal Opportunity Clause” and the “Standard Adopted Equal Employment Specifications”.
2. The goals and the timetables for minority and female participation, expressed in percentage terms for the Contractor’s aggregate workforce in each trade on all construction work in the covered area, are as follows:

GOALS FOR PARTICIPATION IN EACH TRADE

TRADE	MINORITY	FEMALE
ALL	14%	6.9%

These goals are applicable to all the Contractor’s construction work (whether or not it is Federal or Federally-assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor’s compliance with the Executive Order and regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor’s goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
4. As used in this Notice, and in the Contract resulting from this solicitation, the “covered area” is the City of Muskegon, County of Muskegon, and State of Michigan.

PART 1 - BIDS

SECTION 1 – INSTRUCTIONS TO BIDDERS

1.0 INSTRUCTIONS TO BIDDERS

1.0.1 BIDS

- a. Bidding documents to be submitted must remain attached within this Contract Document.
- b. All bids submitted shall be on forms provided without alterations or interlineations and shall be subject to all requirements of these Instructions to Bidders and all the forms and Documents immediately following these Instructions in Section 2, Bid Proposal.
- c. All Bid Proposals submitted for consideration shall be enclosed in a sealed envelope which is clearly labeled "Bid Documents" with the Project name and/or number, the name of Bidder, the date and time of Bid Opening written on the envelope to prevent premature opening.
- d. If unit prices are requested, the Unit Price for each of the several items in the Bidder's proposal shall include its pro rata share of overhead so that the sum of the products obtained by multiplying the quantity for each item by the unit price represents the total bid. Should conditions make it necessary to revise the quantities, a limit will then be fixed for such increased or decreased quantities. Should the net monetary value of all such changes increase or decrease the original price by more than twenty-five percent (25%) negotiated price change shall be allowed, if warranted. Any bid not conforming to this requirement may be rejected.

1.0.2 BID GUARANTY

- a. No Bid will be considered unless it is accompanied by a Bid Guaranty of not less than five percent (5%) of the amount of the Bid to ensure the execution of the Contract and the furnishing of surety bond or bonds by the successful Bidder, as required by the Contract Documents. Cash deposits will not be accepted. Negotiable U.S. Government Bonds (at par value) and certified checks or bank drafts, made payable to the **City of Muskegon**, may be used, or a bid bond in the format provided which shall be secured by a guaranty or a surety company listed in the latest issue of U.S. Treasury Circular 570, and shall be within the maximum amount specified for such company in said Circular.
- b. Revised Bids submitted before the opening of Bids, whether forwarded by mail or telegraphic communication, if representing an increase in excess of two percent (2%) of the original bid, must have the Bid Guaranty adjusted accordingly; otherwise the Bid will not be considered.
- c. The Bid Guaranty of unsuccessful Bidders, or the amount thereof, will be returned as soon as practicable after the awarding of the contract. The Bid Guaranty of any Bidder withdrawing his/her Bid in accordance with the conditions set forth in Paragraph 13 hereof will be returned promptly.
- d. When telegraphic modifications of Bids are received as provided above, Bidders are cautioned that such modifications shall make the Bid as modified or amended subject to rejection if not explicit and/or in any sense are subject to misinterpretation.

1.0.3 ALTERNATIVE BIDS

No alternative bids will be considered unless alternative bids are specifically requested.

1.0.4 INTERPRETATIONS AND/OR ADDENDA

- a. No oral interpretation will be made to any Bidder as to the meaning of the Documents or any part thereof. A request for any interpretation will be in writing to the City of Muskegon, and any such request received seven (7) or more days before the scheduled Bid Opening will be considered.
- b. Every interpretation made will be in writing in the form of an Addendum to the Contract itself and, when issued, will be on file in the City Clerk's office at least five (5) days prior to the Bid Opening for each Bidder's review.

1.0.5 BIDDER'S RESPONSIBILITIES

- a. Site Inspection. Each Bidder will assume the responsibility for visiting the site of the proposed work and for fully acquainting himself/herself with the conditions existing there relating to construction and labor, and should fully inform himself/herself as to the facilities involved, the difficulties and restrictions attending the performance of the Contract.
- b. Knowledge of Bid and Contract Documents. The Bidder is responsible for thoroughly examining and familiarizing himself/herself with the Bid and Contract Documents, any Drawings, Specifications and Addenda.
- c. Addenda to Contract Documents. All Bidders will assume the responsibility to make inquiry as to the Addenda issued, knowing that all such Addenda become part of the Contract. All Bidders shall be bound by any Addenda whether or not it was received or reviewed.
- d. Claims on Basis of Failure to Receive or Review Information. A successful Bidder, through the execution of this Contract, shall in no way be relieved of any obligation due to his/her failure to receive or examine any form or legal instrument, or due to the failure to visit the site and acquaint himself/herself with the existing conditions.
The City Commission will be justified in rejecting any claims submitted on the basis of 5.a, b, or c above.

1.0.6 EQUAL OPPORTUNITY EMPLOYMENT REQUIREMENT - The attention of Bidders is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin, nor because the employee or applicant is a disabled or Viet Nam era veteran or otherwise handicapped, as outlined in Part 3, Section 2 of these Documents.

1.0.7 EMPLOYMENT AND PREVAILING WAGE AND SALARY REQUIREMENTS

N/A

1.0.8 SUBCONTRACTORS* - Any Bidder submitting a Bid shall include a list of proposed subcontractors on the form provided in Part 1, Section 2 of these Documents.

The attention of Bidders is called to the Contractor's liability for all subcontractors as provided in the various sections and paragraphs on these Documents, generally indicated by an asterisk (*) in the right-hand margin.

1.0.9 NON-COLLUSION AFFIDAVIT

- a. Each Bidder submitting a bid for work, or any portion thereof, covered by these Documents, shall execute an Affidavit to the effect that he/she has not colluded with any other person, firm or corporation in regard to any Bid submitted, in the same or similar format as provided in Part 1 Section 2 of these Documents.
- b. The successful Bidder shall secure an Affidavit to the same effect from any proposed subcontractor, before executing any subcontract, in the same or similar format as provided in Part 1, Section 2 of these Documents.

1.0.10 SECTION 3 CLAUSE (135.38) FOR FEDERALLY FUNDED PROJECTS

N/A

1.0.11 STATEMENT OF BIDDER’S QUALIFICATIONS; ADDITIONAL INFORMATION

- a. Upon request, each Bidder shall submit a Statement of Bidder’s Qualifications in accordance with the information requested in Part 1, Section 2, and, when specifically requested by the City, shall submit a detailed Financial Statement, particularly in lieu of a Performance Bond.
- b. Any Bidder shall furnish any data and information requested by the City Commission in its attempt to determine the ability of the Bidder to perform his/her obligations under the Contract.

1.0.12 TIME FOR RECEIVED BIDS - Bids received prior to the advertised hour of opening will be kept securely sealed. The official whose duty it is to open the Bids will decide when the specified time has arrived, and no Bid received thereafter will be considered.

1.0.13 WITHDRAWAL OF BIDS - Bids may be withdrawn on written or telegraphic request dispatched by the Bidder in time for delivery in the normal course of business prior to the time fixed for opening; provided that written confirmation of any telegraphic withdrawal over the signature of the Bidder is placed in the mail and post-marked prior to the time set for Bid opening.

1.0.14 OPENING OF BIDS - At the time and place fixed for the opening of Bids, the City Clerk will cause to be opened and publicly read aloud every Bid received within the time set for receiving Bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present in person or by representative.

1.0.15 AWARD OF CONTRACT - If the Contract is awarded, it will be awarded to the responsible Bidder submitting the lowest Bid complying with the conditions set forth in these Documents. The successful Bidder will be notified at the earliest possible date.

1.0.16 REJECTION OF BIDS; CITY’S RIGHTS

- a. The City Commission reserves the right to reject any and all Bids, and to waive any informality in Bids received, whenever such rejection or waiver is in its own best interest.
- b. The City Commission may consider as irregular and reject any Bid on which there is an alteration.
- c. The City Commission shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform his/her obligations under the Contract.
- d. The right is reserved to reject any Bid where an investigation of the available evidence and/or information provided does not satisfy the City Commission of the Bidder’s capacity to carry out the terms of the Contract.

1.0.17 EXECUTION OF CONTRACT AGREEMENT; PERFORMANCE AND PAYMENT BONDS

- a. Subsequent to the award and within ten (10) days after the Documents have been presented for signature, the successful Bidder shall execute the Agreement and deliver the requested number of copies to the City of Muskegon.
- b. Execution of the Agreement will require completion of the work in accordance with the Contract in its entirety.
- c. Upon delivery of the executed Contract Documents, the successful Bidder shall furnish the requisite bonds, in the penal sum not less than the amount of the Contract as awarded, as security for the faithful performance of the Contract and of the payment of all persons, firms or corporations to whom the Bidder as Contractor may become legally indebted, except as provided in paragraph (e) below.
- d. Such bonds shall be completed in accordance with the Instructions in Part 1 Section 2, and shall bear the same date as, or a date subsequent to, that of the Agreement.

The surety bond shall be signed by a guaranty or the surety company listed in the latest issue of the U.S. Treasury Circ. 570, and the penal sum shall be within the maximum specified for such company in said Circular.

- e. In cases where this Contract is \$50,000 OR LESS and the successful Bidder is unable to, or chooses not to, provide the appropriate Performance Bonds, the Bidder may submit four letters of sincere recommendation as to his/her prior performance to the City Manager for consideration in lieu of a Performance Bond, in basically the form described in Part 2 of these Documents. This action must be taken prior to the execution of the Contract Agreement and the four letters must be accompanied by a statement from the Bidder, which contains the minimum requirements indicated for "Statement of Bidder's Qualifications". Upon City Manager and/or City Commission acceptance of the letters in lieu of the Performance Bond, the Contract Agreement shall be so executed.
- f. Failure of the successful Bidder to execute such number of Contract Documents as requested, to supply the required bonds or letters of recommendation with the Bidder's statement, and/or to meet the prescribed time limits, shall constitute a default.
- g. Upon such default, the City Commission may either award the Contract to the next lowest responsible bidder or re-advertise for bids. The Commission may further charge against the defaulting Bidder the difference between the amount of his/her Bid and the amount for which a Contract for the work is subsequently executed, irrespective of whether the amount then exceeds the amount of the Bid Bond. If a more favorable bid is received by re-advertising, the defaulting Bidder shall have no claim against the City of Muskegon.

1.0.18 COMMENCEMENT NOTICE TO PROCEED

The Contractor shall commence work only upon delivery of a Notice to Proceed from the City. In the event the said notice is not delivered within ten (10) days of the date of this agreement, then the dates for completion and any other performance dates shall be adjusted without further agreement so that the performance and completion dates shall be delayed the number of days in excess of ten (10) after the execution of the contract during which the City did not deliver the notice.

SECTION 2 - BID PROPOSAL

1.1 CONTRACT BIDDER'S CHECKLIST

THIS FORM IS A REFERENCE TOOL FOR BIDDING CONTRACTORS

The following forms **MUST** be completed:

Form	Completed?	
	Yes	No
1. Transmittal Letter for Bid Proposal (must acknowledge addenda received)		
2. Bidder Certification and Agreement		
3. Bid Proposal Form		
4. Bid Bond Proposal (must be 5% of total bid)		
5. Non-Collusion Affidavit of Prime Bidder		
6. List of Proposed Sub-Contractors		
7. Disadvantaged Contractor Affidavit (if applicable)		

Actual Completion of All Required Forms is the **Sole Responsibility of the Bidder**

FAILURE TO COMPLETE THE NECESSARY FORMS MAY RESULT IN BID REJECTION.

1.2 TRANSMITTAL LETTER FOR BID PROPOSAL

Bidder/Company Name _____

Name & Title of Head of Company _____

Street Address _____

City, State, ZIP _____

Date _____

**CITY OF MUSKEGON, MICHIGAN
933 TERRACE ST.
MUSKEGON, MI 49443-0536**

RE: Project No: SP 91820

Project Title: Pere Marquette Park Recreational Improvements

To Whom It May Concern:

Having examined the Bid Specifications and Contract Documents, including all forms and instructions, and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, and having received and reviewed the following Addenda:

I/We hereby propose to furnish all labor, materials and supplies, and to construct the project in accordance with the Contract Documents and at the prices indicated in the attached Bid Proposal. Submitted prices are to cover all expenses incurred in performing the work required under the Contract Document, of which this letter and attached Proposal are a part.

In accordance with the Instructions to Bidders, all appropriate documents, forms, etc., have been properly completed and are attached hereto, along with the Bidder Certification and Agreement, List of Subcontractors, Non-Collusion Affidavits, and the proper Bid Guaranty.

I/We hereby respectfully submit the attached Bid Proposal for consideration by the City of Muskegon on the above-referenced Project.

Signature of Bidder/Representative

Printed Name and Title

1.3 BIDDER CERTIFICATION AND AGREEMENT

PART I. The Undersigned hereby agrees:

That he/she has examined the Bid Specifications/Contract Documents, including specifications, forms and instructions;

That he/she has received and reviewed the following Addenda:

That he/she has examined the Site of the proposed work and is familiar with all of the conditions surrounding the construction of the proposed project and the availability of materials and labor.

PART II. The Undersigned hereby agrees:

That he/she will enter into a contract to furnish the labor, materials, tools and construction equipment necessary for the full and complete execution of the work at and for the prices indicated in his/her official Bid Proposal, if said Proposal is accepted by the City;

That, at the time of execution of said Contract, he/she will furnish requisite bonds with such sureties (or letters of recommendation accompanied by a Bidder's Statement) for the faithful performance of the Contract, for the payment of all materials used therein, and for all labor expended thereon in accordance with the forms and instructions provided;

That he/she will construct the project in accordance with the Contract Documents within the specified time.

PART III. The Undersigned hereby agrees:

- **All work shall be completed in accordance with dates as shown in the Progress Clause or on other dates as agreed upon with the Engineer. However, once work has commenced the project shall be completed without interruption of normal working days unless authorized in writing by the Engineer.**

- **To comply with all applicable Adopted Guidelines and requirements, wage rates, labor standards, equal opportunity requirements, subcontract (or) requirements, and any other specifications indicated or referred to within these Contract Documents.**

The Undersigned herewith attaches an Affidavit in proof that he/she has not entered into a collusive agreement with any person in respect to this Bid or any other bid, or the submitting of bids for the Contract for which this Bid is submitted.

The Undersigned is prepared to submit a Statement of Bidder's Qualifications, a financial statement, and/or any information requested by the City.

PART IV

In regard to non-segregated facilities, the Undersigned certifies:

That he/she does not maintain or provide for any employees any segregated facilities at any of his/her establishments;

That he/she does not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained;

That he/she will not maintain or provide for employees any segregated facilities at any of his/her establishments, and that he/she will not permit employees to perform their services at any location under his/her control where segregated facilities are maintained.

The Undersigned hereby agrees:

That a breach of this section of the Bidders Certification will be a violation of the Equal Opportunity clause in any contract resulting from acceptance of this Bid.

That he/she will obtain identical certification from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause (unless already obtained for specific time periods), and that he/she will retain such certifications on file.

[As used in this section of this Bidder Certification, the term “segregated facilities” means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion or national origin, because of habit, local custom, or otherwise.]

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

SIGNED: _____ DATED: _____

(Printed name)

(Title)

(Company/Bidder)

(Company/Bidder Street Address)

(Company/Bidder City, State Zip)

1.4 BIDDER AGREEMENT

Proposal Due

(January _____ 15 , 2019 at 2 :00 P.M., Local Time)

The GENERAL CONTRACTOR PROPOSAL shall include and cover ALL CONSTRUCTION TRADES, including but not limited to; Plumbing, Mechanical, Electrical trades, and Site Work, as well as being responsible for all coordination between trades.

Please indicate Company name above.

Project: SP 91820 Pere Marquette Park Recreational Improvements

To: City of Muskegon
Muskegon, MI 49440
Attn: LeighAnn Mikesell

The undersigned represents that they have:

- A. Familiarized themselves with the local conditions affecting the cost of the work and with the Contract Documents, including Instructions to Bidders; Proposal Section; General, Supplementary and Special Conditions; etc., Drawings, Specifications and any Addenda issued and on file at the office of Westshore Consulting, 2534 Black Creek Road, Muskegon, MI 49444, and hereby proposes to perform everything required to provide and furnish all labor, materials, necessary tools, expendable equipment, and all utility and transportation services, etc., necessary to perform and complete in a workmanlike manner all of the Work required for the “Pere Marquette Park Recreational Improvements,” City of Muskegon, Muskegon County, Michigan.
- B. in accordance with the Contract Documents, including Addenda No. _____, _____, _____.
- C. Included with this proposal a Bid Bond, Certified or Cashier’s Check in the amount of five (5) percent or dollars (\$ _____).
- D. Reviewed the Work and fully understands the scope of the work required by interfacing Sub-Contractors, as well as that required by the General Contractor, all of which is covered in this Proposal.
- E. Agreed that their proposal, if accepted by the Owner, will be the basis for a contract directly with the Owner and to enter into such contract in accordance with the Intent of the Contract Documents.

Base Bid

The work described and specified shall be performed for the following Lump Sum amounts. The total amount shall constitute the Base Bid:

Item	Description	Qty	Unit	Unit Price	Total
1.	Provide & Install Playground Equipment, Surface & Concrete Subsurface	1	LSUM	\$	\$
2.	Bathhouse Improvements & Addition	1	LSUM	\$	\$
3.	Site Grading	1	LSUM	\$	\$
4.	Sidewalk Improvements	1	LSUM	\$	\$
5.	Provide & Install Two (2) Benches	1	LSUM	\$	\$
Total Base Bid				\$	

PLM Bond

The cost for the Performance Bond and Labor and Material Payment Bond for the Base Bid Work shall be _____ dollars (\$ _____) in addition to the Base Bid cost.

Voluntary Alternates

It is understood that if the following voluntary alternates are accepted, the base bid proposal will be adjusted accordingly:

Item	Description	(Note Add or Deduct)
No. 1:	_____	_____

No. 2:	_____	_____

No. 3:	_____	_____

Agreement

In submitting this bid, it is understood that the right is reserved by the Owner to reject any or all bids. It is agreed that this bid is binding for a period of sixty (60) days from the opening thereof.

Date: _____

Company Name: _____

Address: _____

Phone: _____

By: _____
(signature)

Title: _____
(type or print)

1.6 BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we the undersigned,

_____ as PRINCIPAL, and
(Name of Principal)

_____ as SURETY are held and firmly bound unto
(Name of Surety)

The City of Muskegon, Michigan, in the penal sum of _____

_____ dollars, (\$ _____) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has

submitted the Accompanying Bid, dated _____, 20____,

for _____.

NOW, THEREFORE, if the Principal shall not withdraw said Bid within the period specified for withdrawal; and shall within ten (10) days after the prescribed forms are presented for signature enter into a written Contract with the City of Muskegon in accordance with the Bid as accepted, and give bond with good and sufficient surety or sureties, as may be required for the faithful performance and proper fulfillment of such Contract; or

In the event of the withdrawal of said Bid within the period specified for withdrawal, or the failure to enter into such contract and give such bond within the time specified; and if the Principal shall pay the City of Muskegon the difference between the amount specified in said Bid and the amount for which the City of Muskegon may procure the required work or supplies or both, if the latter be in excess of the former.

THEN the above obligation shall be void and of no effect; otherwise shall remain in full force and virtue

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument

Under their several seals this _____ day of _____, 20____
the name and corporate seal of each corporate party being hereto affixed and these presents signed by its undersigned representative, pursuant to authority of its governing body.

In presence of

_____ (SEAL)
(Individual Principal)

Business Address including Zip Code

Partnership

Business Address including Zip Code Attest:

By: _____

(SEAL)

Corporate Principal

Business Address including Zip Code Attest:

By: _____

Affix
Corporate
Seal

Countersigned

By

Attorney-in-fact, State of _____

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____, Secretary of the Corporation named as Principal in the within Bond; that

_____, who signed the said Bond on behalf of the

Principal was then _____ of said Corporation; that I know his/her signature, and his/her signature thereto is genuine; and that said bond was duly signed, sealed, and attested to for and in behalf of said Corporation by authority of this governing body.

Affix
Corporate
Seal

By: _____

Title: _____

1.8 LIST OF PROPOSED SUBCONTRACTORS

Project Number: B 253

Project Name: Pere Marquette Park Recreational Improvements

To be submitted by each Bidder with Bid Proposal in accordance with Section 1. Before a subcontract is executed by the successful Bidder, the subcontractor must be approved by the City of Muskegon and the required documents executed in accordance with the Contract Documents.

1.	NAME OF FIRM	_____
	FIRM ADDRESS	_____

2.	NAME OF FIRM	_____
	FIRM ADDRESS	_____

3.	NAME OF FIRM	_____
	FIRM ADDRESS	_____

4.	NAME OF FIRM	_____
	FIRM ADDRESS	_____

5.	NAME OF FIRM	_____
	FIRM ADDRESS	_____

6.	NAME OF FIRM	_____
	FIRM ADDRESS	_____

7.	NAME OF FIRM	_____
	FIRM ADDRESS	_____

1.9 DISADVANTAGED CONTRACTOR AFFIDAVIT

Project Number: B 253

Project Name: Pere Marquette Park Recreational Improvements

Please provide the name(s) of all Disadvantaged subcontractors from whom you solicited bids for this project and additional information below.

Disadvantaged Contractor:	Contact Person:	Contact Method/Date:	Decision (Yes or No):
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

Of the Disadvantaged Contractors listed above, please indicate why they will not be used on this project.

Disadvantage Contractor:	Decision/Reason:
1. _____	_____ _____
2. _____	_____ _____
3. _____	_____ _____
4. _____	_____ _____

1.10 STATEMENT OF BIDDER'S QUALIFICATIONS

(To be submitted by the Bidder upon specific request of City of Muskegon unless in connection with Letters of Recommendation in lieu of Performance Bond as provided in Section 1, Paragraph 17(e). The Statement of Bidder's Qualifications as follows must accompany the four Letters.)

1.10.1 SUMMARY OF BIDDER'S INFORMATION TO BE PROVIDED:

Each of the following items must be responded to in writing, and the information provided thereby must be clear and understandable. Upon completion, the Statement must be signed by the Bidder in front of a Notary Public and notarized. The Bidder may supply such additional information as desired after responding to each of these items:

1. NAME OF BIDDER (Company, individual, etc.)
2. PERMANENT MAIN OFFICE ADDRESS OF BUSINESS INCLUDING ZIP CODE.
3. DATE BUSINESS WAS ESTABLISHED.
4. IF A CORPORATION, WHERE WAS IT INCORPORATED?
5. NUMBER OF YEARS ENGAGED IN CONTRACTING BUSINESS UNDER PRESENT NAME? FIRM OR TRADE NAME? UNDER A PREVIOUS NAME?
6. SCHEDULE OF OUTSTANDING CONTRACTS, showing amount of each contract and the anticipated completion date of each.
7. GENERAL CHARACTER OF WORK PERFORMED BY YOUR COMPANY.
8. HAS THIS COMPANY EVER FAILED TO COMPLETE ANY WORK AWARDED IT?
If so, WHERE AND WHY?
9. HAS THIS COMPANY EVER DEFAULTED ON A CONTRACT?
If so, WHERE ANY WHY?
10. LIST THE PROJECTS RECENTLY COMPLETED BY YOUR COMPANY, stating approximate cost of each and the month/year completed. Indicate which, if any, have provided your company with a Letter of Recommendation.
11. INDICATE EXPERIENCE IN CONSTRUCTION WORK SIMILAR TO THIS PROJECT.
12. LIST YOUR MAJOR EQUIPMENT AVAILABLE FOR THIS CONTRACT.
13. INDICATE BACKGROUND AND EXPERIENCE OF THE PRINCIPAL MEMBERS OF YOUR ORGANIZATION, INCLUDING OFFICERS.
14. INDICATE CREDIT AVAILABLE TO YOUR COMPANY.
15. LIST BANK REFERENCES. If a detailed financial statement is available attach it to this statement.

16. ARE YOU WILLING TO COMPLETE A DETAILED FINANCIAL STATEMENT AND FURNISH ANY OTHER INFORMATION REQUIRED AND REQUESTED BY THE CITY OF MUSKEGON?
17. INCLUDE THE FOLLOWING STATEMENT: “The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the City of Muskegon in verification of the recitals comprising this Statement of Bidder’s Qualifications.”
18. INCLUDE THE FOLLOWING AT THE END OF YOUR STATEMENT:
- Dated this _____ day of _____, 20____.
- COMPANY/BIDDER NAME
- SIGNATURE
- PRINTED NAME AND TITLE OF PERSON SIGNING
19. INCLUDE OFFICIAL NAME AND DATA FOR NOTARY PUBLIC TO NOTARIZE DOCUMENT.

1.11 DBE/MBE/WBE PROCUREMENT POLICY

1.11.1 POLICY STATEMENT: 2014-31 (e)

It is the policy of the City of Muskegon to assure that small disadvantaged business enterprises (DBE), minority business enterprises (MBE), and woman-owned business enterprises (WBE) are given the opportunity to participate in contracting and procurement for supplies, construction, equipment and services under federal contracts and collaborations.

This policy applies to all contracts/procurement for supplies, construction equipment and services under any federally contracted grant or cooperative agreement. The purpose is to ensure nondiscrimination in the solicitation, either by competitive bidding or negotiation, and award and administration of federally assisted contracts and collaborations.

Entities contracting or sub-contracting with the City of Muskegon shall comply with regulations relative to nondiscrimination in Federally-assisted programs as amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

During the performance of any contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the “contractor”) agrees, as follows:

1.11.2 STATEMENT OF NON-DISCRIMINATION

The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, sex, or national origin in the selection, retention, and treatment of subcontractors, including procurements of supplies, construction, equipment and services.

1.11.3 FAIR SHARE GOALS

All methods of solicitation shall include the following language to meet “Good Faith Effort” requirements as stated in the general provisions of EPA’s 40 CFR 33 of the Federal Regulation:

This contract is subject to the Environmental Protection Agency’s (EPA) “fair share policy,” which includes EPA-approved “fair share goals” for Disadvantaged Business Enterprise (DBE), Minority Business Enterprise (MBE) and Woman Business Enterprise (WBE) firms in the Construction, Supplies, Equipment, and Services procurement categories. EPA’s policy requires that applicants and prime contractors make a good faith effort to award a fair share of contracts, subcontracts and procurements to Minority Business Enterprise and Women-Owned Business Enterprise firms. Although EPA’s policy does not mandate that the fair share goals be achieved, it does require applicants and prime contractors to demonstrate use of the six affirmative steps, and adhere to the current fair share goals for the State of Michigan.

1.11.4 GOOD FAITH EFFORTS

(1) The City of Muskegon shall ensure DBE/MBE/WBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities by

maintaining a solicitation list of DBE/MBE/WBE businesses and notifying them whenever they are potential sources.

(a) Maintain and update a listing of qualified DBE/MBE/WBEs that can be solicited for construction, equipment, services and/or supplies on the City of Muskegon website.

(b) Provide listings to all interested parties who request copies of the bidding or proposing documents.

(c) Contact appropriate sources within our geographic area to identify DBE/MBE/WBEs for placement on our business listings.

(d) Utilize other DBE/MBE/WBE listings such as those of the States Minority Business Office, the Small Business Administration, Minority Business Development Agency (MBDA) of the Department of Commerce, EPA OSDBU, DOJ, HUD, DOT and Department of Homeland Security.

(e) Solicitation lists are available for review at all times via the city website.

(2) The City of Muskegon shall make information of forthcoming opportunities available to DBE/MBE/WBEs and arrange time for viewing of contracts and establish delivery schedules, where requirements permit, in a way that encourages and facilitates participation by DBEs, MBEs, and WBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days(federal projects) and 10 calendar days(local projects), before the bid or proposal closing date.

(a) Develop realistic delivery schedules which may provide for greater DBE/MBE/WBE participation.

(b) Advertise through the minority media in order to facilitate DBE/MBE/WBE utilization. Such advertisements may include, but are not limited to, contracting and subcontracting opportunities, hiring and employment, or any other matter related to the project.

(c) Advertise in general circulation publications, trade publications, State agency publications and minority and women's business focused media concerning contracting opportunities on our projects. Maintain a list of minority and/or women's business-focused publications that may be utilized to solicit DBE/MBE/WBEs.

(3) The City of Muskegon will consider in the contracting process whether firms competing for large contracts could subcontract with DBE/MBE/WBEs. The City of Muskegon will divide total requirements when economically feasible and practical into smaller tasks or quantities in order to increase opportunities for participation by DBE/MBE/WBEs in the competitive process.

(a) Perform an analysis to identify portions of work that can be divided and performed by qualified DBE/MBE/WBEs.

(b) Scrutinize the elements of the total project to develop economical units of work that are within the bonding range of DBE/MBE/WBEs.

(c) Conduct meetings, conferences, and follow-ups with DBE/MBE/WBE associations and minority media to inform these groups of opportunities to provide construction, equipment, services and supplies.

(4) The City of Muskegon will consider and encourage contracting with a consortium of DBE/MBE/WBEs when a contract is too large for one of these firms to handle individually.

(a) Notify DBE/MBE/WBEs of future procurement opportunities so they may establish bidding solicitations and procurement plans.

- (b) Provide DBE/MBE/WBEs trade organizations with succinct summaries of solicitations.
 - (c) Provide interested DBE/MBE/WBEs with adequate information about plans, specifications, timing and other requirements of the proposed projects.
- (5) Use the services and assistance of the Small Business Administration (SBA) and the Minority Business Development Agency (MBDA).
- (a) Use the services of outreach programs sponsored by the MBDA and/or the SBA to recruit bona fide firms for placement on DBE/MBE/WBE bidders lists to assist these firms in the development of bid packaging.
 - (b) Seek out Minority Business Development Centers (MBDCs) to assist recipients and prime contractors in identifying DBE/MBE/WBEs for potential work opportunities on projects
- (6) If the prime contractor awards subcontractors, the prime contractor is required to take the steps in subparagraphs (1)-(5) of this section.

1.11.5 DOCUMENTATION/REPORTING

The contractor shall provide all information and reports required by the Regulations, or directives issues pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the appropriate federal agency to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the appropriate State or Federal Agency, as appropriate, and shall set forth what efforts it has made to obtain the information.

1.11.6 NON – COMPLIANCE

Contractors, sub-contractors, and other associated entities failing to comply with the federal regulations legally required under contracts associated with Environmental Protection Agency (EPA), Housing and Urban Development (HUD), Department of Justice (DOJ), Department Of Transportation (DOT), or Department of Homeland Security (DHS) that have been granted to the City of Muskegon, may result in delayed closings, withholding the release of funds, or commitment cancellation.

PART 2 - AGREEMENT & BONDS

2.0 AGREEMENT

THIS AGREEMENT, made this ____th* day of _____, 20__ * by the City of Muskegon

And between _____

{a corporation organized and existing under the laws of the state of MICHIGAN};

or [a partnership consisting of _____];

or {an individual trading as _____};

Hereinafter called the “Contractor”, and the CITY OF MUSKEGON, MICHIGAN:

WITNESSETH, that the Contractor and the City of Muskegon, for the consideration stated herein, mutually agree as follows:

ARTICLE 1. Statement of Work. The Contractor shall furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment, and services, including utility and transportation services, and perform and complete all work required for the construction of the improvements embraced in this Contract, NAMELY:

and required supplemental work for the completion of this Project, all in strict accordance with the Contract, including all Addenda.

ARTICLE 2. The Contract Price. The City of Muskegon will pay the Contractor for the performance of this Contract and the completion of the work covered therein an amount in current funds not to exceed

Article 3. Contract. The executed contract shall consist of, but not be limited to, the following:

Invitation for Bids

Part 1- Bids

Section 1 – Instruction to Bidders

Section 2 – Bid Proposal

Part 2 – Agreement

Part 3 – General Specifications

Section 1 – Project Performance

Section 2 – Affirmative Action

Section 3 – Labor Standards/EEOC/Anti-Kickback

Act

Part 4 – Engineering Specifications

Part 5 – Project Special Specifications

Part 6 – MDOT Specifications

Part 7 – Appendice

This Agreement, together with other documents enumerated in this Article 3, which said other documents are as fully part of the Contract as if attached hereto or repeated herein, form the Contract between the parties hereto.

In the event any provision in any component part of this Contract conflicts with any provision of any other component part, the Contractor shall contact the City immediately in writing for a determination, interpretation and/or clarification of conflicting parts and priority of same. Said determination from the City shall be in writing and shall become an Addendum to this Contract

*Date contract awarded by the City Commission

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed in

5 original counterparts on the day and year first written above.

ATTEST:

CONTRACTOR

by _____

Printed Name and Title

ATTEST:

CITY OF MUSKEGON

Mayor

City Clerk

(SEAL)

CERTIFICATION (if applicable)

I, _____, certify that I am the _____ of the Corporation named as the Contractor herein;

That _____, who signed this Agreement on behalf of the

Contractor, was then _____ of said Corporation;

That said Agreement was duly signed for and in behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

SIGNED:

(CORPORATE SEAL)

printed name and title

2.1 PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____

_____, _____ as
Principal, and

_____,
as Surety, are held and firmly bound unto the City of Muskegon, its certain attorney, successors or assigns
(hereinafter called the Obligee), in the full and just sum of _____
dollars (\$ _____) lawful money
of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our
heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents:

WHEREAS, said Principal has entered into a certain contract with Obligee,

dated _____, 20____*, (hereinafter called the Contract) for: _____

_____ and the specifications for said work shall be deemed a part hereof as fully
as if set out herein:

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

- (a) If the Principal shall faithfully perform the Contract on his/her part, as of the time and in the manner therein provided; shall satisfy all claims and demands incurred in or for the same, or growing out of the same, or for injury or damages to persons or property in the performance thereof; shall fully indemnify and save harmless said Obligee from any and all cost and damage which the Obligee may suffer by reason of the Principal's failure to do so; and shall fully reimburse and par the Obligee any and all outlay and expense which it may occur by reason of such default; and
- (b) If, after completion and acceptance of the work by the Obligee, the Principal shall promptly remedy any defects in the work due to faulty materials or workmanship which shall appear within the period of one year from the date of completion and final acceptance of the work, and pay for any damage to said Obligee, to the State of Michigan, or to any municipal subdivision or local authority thereof to which the rights and privileges of said Obligee have passed or been assigned, then this obligation shall be null and void; otherwise it shall remain in full force and virtue.

The said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract to the work to be performed thereunder, or to the specifications accompanying the same, shall in any wise affect its obligations on this Bond; and it does thereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work or specifications.

It is hereby further stipulated and agreed that, if the Principal is a non-Michigan Corporation, neither the Principal nor the Surety shall be discharged from liability on this Bond, nor the bond surrendered, until such Principal files with the Obligee a certificate from the Michigan Department of Revenue evidencing the payment in full of all taxes, penalties and/or interest, and a certificate from the Unemployment Compensation Commission evidencing the payment of all unemployment compensation contributions, penalties and/or interest, due the State of Michigan from said Principal, or any non-Michigan corporation, subcontractor thereunder, or for which liability has accrued but the time for payment has not arrived.

SIGNED, SEALED AND DELIVERED IN _____ 5 _____ ORIGINAL COUNTERPARTS

THIS _____ DAY OF _____, 20 ____.

Individual Principals Sign Here:

In the Presence of:

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

Corporate Principals Sign Here:

Attest:

(Printed Name and Title)

Surety Sign Here:

Attest:

(Printed Name and Title)

The rate of premium charge is \$ _____ per thousand.

The total amount of premium charged is \$ _____
(to be filled in by the Corporate Surety).

2.2 LABOR & MATERIALMAN’S BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____,
_____,
as Principal, and

_____,
as Surety, are held and firmly bound unto the City of Muskegon, its certain attorney, successors or assigns (hereinafter called the Obligee) in the penal sum of _____ dollars (\$ _____) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents:

WHEREAS, said Principal has entered into a certain contract with said Obligee, dated _____, 20____, (hereinafter called the Contract) for: _____

_____ and the specifications for said work shall be deemed a part hereof as fully as if set out herein:

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that, if said Principal, all subcontractors to whom any portion of the work provided for in said Contract is sublet, and all assignees of said Principal and of such subcontractors, shall promptly make payment for all material furnished, labor supplied or performed, rental for equipment employed and services rendered by public utilities in or in connection with the prosecution of the work, whether or not said material, labor, equipment or services entered into become component parts of the work or improvement contemplated in said Contract, in any amendment, extension of, or addition to said Contract, then the above obligation shall be void; otherwise, it shall remain in full force and effect; PROVIDED, HOWEVER, that this Bond is subject to the following conditions and limitations:

- (a) All persons who have performed labor, rendered services or furnished materials or equipment, shall have a direct right of action against the Principal and Surety on this Bond, which right of action shall be asserted in proceedings instituted in the State in which such labor was performed, services rendered or materials furnished (or where labor has been performed, services rendered or materials furnished under said Contract in more than one state, then in any such states). Insofar as permitted by the laws of such State, such right of action shall be asserted in a proceeding instituted in the name of the Obligee to the use and benefit of the persons instituting such action and any or all other persons having claims hereunder; and any other person having a claim hereunder shall have the right to be made a party to such proceedings, but not later than one year after the complete performance of said Contract and final settlement thereof, and to have such claim adjudicated in such action and judgment rendered thereon; PROVIDED HOWEVER, that the Obligee shall not be liable for the payment of any costs or expenses of any such suit.
- (b) The Surety shall not be liable hereunder for any damages or compensation recoverable under any workmen’s compensation or employer’s liability statute.
- (c) In no event shall the Surety be liable for a greater sum than the penalty of this Bond, or subject to any suit, action or proceeding thereon, that is instituted later than one year after the complete performance of said Contract and final settlement thereof.
- (d) As used herein: The term “Person” refers to any individual, firm or corporation which has furnished materials, equipment or public utility services to be used on or incorporated in the work, or the prosecution thereof, provided for in said Contract or any amendment, extension of, or addition to said Contract; and/or to any person engaged in the prosecution of the work provided for in said Contract or any, extensions of, or addition to said Contract, who is an agent, servant or employee of the Principal or of any subcontractor, or any assignee of said Principal or any subcontractor; and also anyone so engaged who performs the work of a laborer or mechanic, regardless of any contractual relationship between the Principal or any subcontractor, or any

assignee of said Principal or subcontractor and such laborer or mechanic; BUT shall not include office employees not regularly stationed at the site of the work.

- (e) It is hereby further stipulated and agreed that, if the Principal is a non-Michigan corporation, neither the Principal nor the Surety shall be discharged from liability on this Bond, nor the Bond surrendered, until such Principal files with the Obligee a certificate from the Michigan Department of Revenue evidencing the payment in full of all taxes, penalties and/or interest due the State of Michigan from the Principal, or any non-Michigan corporation, subcontractor thereunder, or for which liability has accrued but the time for payment has not arrived.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, to the work to be performed thereunder, or to the specifications accompanying the same, shall in any wise affect the obligations of this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, the work thereunder, or the specifications.

SIGNED, SEALED AND DELIVERED IN _____ ORIGINAL COUNTERPARTS

THIS _____ DAY OF _____, 20_____.

In the Presence of:

Individual Principals Sign Here:

(Printed Name and Address)

(Printed Name and Address)

(Printed Name and Address)

ATTEST:

Corporate Principal Sign Here:

(Printed Name)

(Printed Name and Title)

(SEAL)

Surety Sign Here:

(Printed Name)

(Printed Name and Title)

DIRECTIONS FOR PREPARATION
2.3 PERFORMANCE, LABOR & MATERIALMEN'S BONDS

1. Individual sureties, partnerships, or corporations not in the surety business will not be acceptable.
2. The name of the Principal shall be shown exactly as it appears in the Contract.
3. The penal sum shall not be less than that required by the Specifications.
4. If the Principals are partners, or joint ventures, each member shall execute the bond as an individual, with his/her place of residence shown.
5. If the Principal is a corporation, the bond shall be executed under its corporate seal. If the corporation has no corporate seal, the fact shall be stated, in which case a scroll or adhesive seal shall be affixed following the corporate name.
6. The official character and authority of the person(s) executing the bond for the Principal, if a corporation, shall be certified by the Secretary or Assistant Secretary thereof under the corporate seal; OR
There may be attached copies of such corporation records as will evidence the official character and authority of the officer signing, duly certified by the Secretary or Assistant Secretary of the corporation, under the corporate seal, to be true copies.
7. The current Power-of-Attorney of the person signing for the surety company must be attached to the bond.
8. The date of the bond **MUST NOT BE PRIOR TO THE DATE OF THE CONTRACT.**
9. The following information must be placed on the bond by the surety company:
 - a. The rate of premium in dollars per thousand; and
 - b. The total dollar amount of the premium charged.
10. The signature of a witness shall appear in the appropriate place, attesting to the signature of each party to the bond.
11. Type or print the name underneath EACH SIGNATURE appearing on the bond.
12. An executed copy of the bond must be attached to each copy of the Contract (original counterpart) intended for signing.

2.4 LETTERS OF RECOMMENDATION IN LIEU OF PERFORMANCE BOND

In accordance with Section 1, four letters of sincere recommendation may be presented to the City Manager in lieu of a performance bond when this Contract is under the amount of \$50,000 and the successful Bidder cannot produce the appropriate performance bond.

To use letters of recommendation for this purpose, your intention to do so must be disclosed as part of your bid, so that a decision on acceptability can be made prior to the contract award.

The four letters are to be presented prior to the execution of the Contract Agreement and must be accompanied by the Statement of Bidder's Qualifications as outlined (Part 1, Section 2, Bid Proposal). Each of the four letters should contain no less than the following information:

THE LETTER OF RECOMMENDATION PACKAGE IS SUBJECT TO CITY MANAGER AND/OR CITY COMMISSION APPROVAL PRIOR TO LETTING THE BID OR EXECUTING THE AGREEMENT.

SUMMARY OF INFORMATION TO BE INCLUDED IN EACH LETTER OF RECOMMENDATION

1. On letterhead of the recommending company, including name, address and phone number of the recommending company.
2. Include reference to the name of the company being recommended.
3. Include a brief description of the type of each of the projects the recommended company performed, the total dollars contracted for each, and the date of construction start and completion under each contract.
4. Include a statement indicating how the company being recommended performed the work involved under the contracts, whether the recommended company accomplished the work satisfactorily and within the appropriate time limits of the contracts.
5. Indicate if there was any default on the part of or litigation as a result of the recommended company.
6. Indicate if, to the best of knowledge, all subcontractors and/or suppliers of labor or materials on each project were properly compensated by the company being recommended.
7. Include a statement the same as, or similar to the following:

"I, on behalf of my organization (or company by name) recommend this company (or the name of the company being recommended) as responsible and competent, and I believe they can capably perform construction work similar to that described in this letter in a timely and satisfactory manner."

PART 3 – GENERAL SPECIFICATIONS

SECTION 1 – PROJECT PERFORMANCE

GENERAL SPECIFICATIONS
3.0 PROJECT PERFORMANCE

3.0.1 ASSIGNMENT OR NOVATION

- a. The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities or responsibilities under this Contract without the written consent of the City of Muskegon; provided, however, that assignments to banks, trust companies or other financial institutions may be made without said consent.
- b. No assignment or novation of this Contract shall be valid unless it expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools and equipment supplied for the performance of the work under this Contract in favor of all persons, firms or corporations rendering such labor or services, or supplying such materials, tools or equipment.

3.0.2 CONFLICT OF INTEREST

- a. No official of the City of Muskegon who is authorized in such capacity and on behalf of the City to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving, any engineering, inspection, construction or material supply contract, or any subcontract, in connection with the construction of this Project shall become directly or indirectly interested personally in this Contract or in any part hereof.
- b. No officer, employee, architect, attorney, engineer or inspector of or for the City who is authorized in such capacity, and on behalf of the City, to exercise any legislative, executive, supervisory or other similar function in connection with the construction of this Project, shall become directly or indirectly interested personally in this Contract or in any part hereof, any material supply contract, any subcontract, any insurance contract, or any other contract pertaining to this Project.

3.0.3 CITY'S AUTHORITY

- a. The City of Muskegon shall designate and identify its Authorized Representative(s) and Inspectors.
- b. The Authorized Representative will be responsible for the execution of the work under this Contract. The Authorized Representative will determine the amount, quality, acceptability of materials, and fitness of the work to be paid for under this Contract. That Representative will decide all questions which may arise in relation to said work and the construction thereof. The City's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided.
- c. Inspectors will work under the direct supervision of the Authorized Representative. Inspectors will not be authorized to revoke, alter, enlarge or relax any of these specifications nor to change the plans in any particular. The Inspector on the work will inform the Authorized Representative as to the progress of the work, the manner in which it is being done, and the quality of the materials being used. He/She will also call to the attention of the Contractor any failure to follow the plans and specifications that may be observed. He/She shall have the authority to prevent any material from being used, and

to stop any work from being done, which he/she believes does not conform to the plans and specifications, until the Authorized Representative has an opportunity to inspect the material or work. In no instance shall any action or omission on the part of the Inspector relieve the Contractor of the responsibility of completing the work in accordance with the plans and specifications.

- d. In case any question shall arise between the parties hereto relative to said Contract, the determination or decision of the City shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this Contract affected in any manner, or to any extent, by such question.
- e. The City shall decide the meaning and intent of any portion of this Contract or any specifications therein where the same may be found obscure or in dispute. Any differences or conflicts in regard to the work which may arise between the Contractor under this Contract and other contractors performing work for the City shall be adjusted and determined by the City.

3.0.4 OTHER CONTRACTS

The City may award, or may have awarded, other contracts for additional work in the vicinity of this Project; and the Contractor shall cooperate fully with such other contractors by scheduling his/her own work with that to be performed under other contracts as may be directed by the City. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor as scheduled.

3.0.5 TERMINATION OF CONTRACT

- a. If the Contractor refuses or fails to prosecute the work with such diligence as will ensure its completion within the time specified, or as amended, in these Contract Documents, the City may, by written notice, terminate the Contractor's right to proceed with the work.
- b. Upon such termination, the City of Muskegon may take over the work and prosecute same to completion, by contract or otherwise, and may take possession of, and utilize in completing the work, such materials, tools, equipment and plant as may be on the site of the work and necessary to the completion thereof.
- c. The Contractor and the sureties to the Contract shall be liable to the City for any additional cost incurred by the City in its completion of the work, and shall further be liable for the liquidated damages for any delay in completion of work as provided by this Contract.

3.0.6 REVIEW BY AUTHORIZED REPRESENTATIVES

The City of Muskegon, its authorized representative(s) and/or agents shall at all times have access to, and be permitted to observe and review, all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, however, that all instructions and approval with respect to the work will be given to the Contractor by the City of Muskegon through its Authorized Representative.

3.0.7 GENERAL GUARANTY

- a. Final acceptance of the work will be acknowledged in writing to the Contractor by the City of Muskegon. Neither the final certificate of payment, any provision in the Contract, nor partial or entire use of the improvements embraced in this Contract by the City or the public shall constitute an acceptance of work not done in accordance with the Contract; nor shall such certificate, provision or use relieve the Contractor of liability in respect to any express warranties or responsibilities for faulty materials or workmanship.
- b. The period of guarantee shall not begin until the date of final written acceptance by the City of all work required. The Contractor shall promptly remedy any defects in the work and pay for the damage to other work resulting therefrom which shall appear within a period of twelve (12) months from the date of final acceptance of the work.

3.0.8 WARRANTY OF TITLE

- a. No material, supplies or equipment for the work shall be purchased subject to any chattel mortgage or under conditional sale or other agreement by which an interest therein, or in any part thereof, is retained by the seller or supplier.
- b. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and, upon completion of all work, shall deliver the same, together with all improvements and appurtenances constructed or placed thereon by him/her, to the City of Muskegon free from any claims, liens or charges.
- c. Neither the Contractor nor any person, firm or corporation furnishing any material and/or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance thereon.
- d. Nothing contained in this paragraph, however, shall impair:
 - i. The right of persons furnishing materials or labor to recover funds owed them under any bond given by the Contractor for their protection;
 - ii. Any rights under any law permitting such persons to look to funds due the Contractor yet in the hands of the City.
- e. The provisions of this Subsection 5 shall be inserted in all Subcontracts and material contracts; and notice of its provisions shall be given to all persons furnishing materials for the Project when no formal contract is entered into for such materials.

3.0.9 PATENTS

The Contractor shall hold and save the City of Muskegon, its officers and employees, harmless from liability of any nature or kind, including costs and expenses, for or on account of any patented or unpatented invention, process article, or appliance manufactured or used in the performance of the Contract, including its use by the City of Muskegon.

3.0.10 PAYROLLS AND BASIC RECORDS

- a. The Contractor will submit weekly a copy of all payrolls, basic records relating thereto, and completed forms as requested, to the City's Affirmative Action Department accompanied by a "Weekly Statement of Compliance". The prime Contractor shall be responsible for the submission of copies of payrolls of all Subcontractors. *

- b. The Contractor shall submit to the City such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the City may request from time to time concerning the work performed under this Contract.
- c. The Contractor shall withhold Muskegon City Income Taxes from each and every employee who is subject to same, and shall pay Contractor's Income Tax due, if any. Contractor shall further require the same of each Subcontractor, consultant or other pay with whom the contractor works or from whom contractor obtains goods or services for the project. Payroll submissions required by this agreement shall include full information showing said withholding. The City may withhold payments otherwise due to the contractor to assure compliance with this agreement or cure noncompliance.

3.0.11 SIGNS AS REQUIRED

- a. The signs that may be required for this project by the Department of HUD, the National Historic Preservation organizations, or other pertinent funding agencies which may require significant posting on the job site, will be provided and erected by the Contractor as incidental to the Contract.
- b. The Contractor shall maintain these signs in good condition throughout the life of this contract.

3.0.12 NATIONAL HISTORIC PRESERVATION ACT OF 1966

The Contractor agrees to contribute to the preservation and enhancement of structures and objects of historical, architectural or archaeological significance when such items are found and/or unearthed during the course of the project, and to consult with the State Historic Preservation Officer for recovery of the items: [Reference: National Historic Preservation Act of 1966 (80 Stat 915, 16 USC 470) and Executive Order No. 11593 of May 31, 1971] AND to assure Subcontractor's compliance as well.

3.0.13 CLEAN AIR ACT

The Contractor shall comply and shall require each of its Subcontractors employed in the completion of this project to comply with all applicable provisions of the Clean Air Act as amended by Public Law 91-604.*

3.0.14 SOIL EROSION AND SEDIMENT CONTROL ACTS

- a. Public Acts 346 and 347 as amended shall be observed and enforced while working under these documents. Necessary permits for both Acts shall be obtained by the City of Muskegon. Enforcement for Act 346 shall be by the Michigan Department of Natural Resources, and the enforcing agent for Act 347 shall be the City of Muskegon.
- b. The Contractor shall conduct his/her work in such a manner that soil, fuels, oil, bituminous materials, chemicals, sanitary sewage and other harmful materials resulting from the execution of this project are confined within project limits and prevented from entering watercourses, rivers, lakes or reservoirs. All applicable regulations of fish and wildlife agencies and statutes relating to the prevention and abatement of pollution shall be complied with during the performance of this contract. Operations shall be conducted in such a manner as to reduce erosion to the practicable minimum to prevent damaging sedimentation of watercourses, streams or lakes.*

- c. The Contractor shall be responsible for utilizing various measures of control in his/her own work and that of Subcontractors to prevent erosion and sediment damage. When applicable, these measures and requirements will be identified and provided on the plans or in the Special Specifications. They are, however, not to be considered all-inclusive, as additional protective measures may be required as the work progresses. No payment will be allowed for this work.

3.0.15 SOIL REMOVAL AND DUMPING ORDINANCE

Under City ordinance, a permit must be obtained from, and a \$150 fee paid to, the City of Muskegon Building Inspection Department IF excavated or excess soil materials become the property of the Contractor AND those materials are to be deposited as fill within the corporate limits of the City of Muskegon; OTHERWISE, no permit will be required of the Contractor while working on the Project covered by this Contract.

3.0.16 PERMITS AND CODES

- a. The Contractor shall give all notices required by and comply with all applicable laws, ordinances and codes of the local government. All construction work and/or utility installations shall comply with all applicable ordinances and codes including all written waivers. Before installing any work, the Contractor shall examine the drawings and the Specifications for compliance with applicable ordinances and codes, and shall immediately report any discrepancy to the City.
- b. Where the requirements of the drawings and Specifications fail to comply with such applicable ordinances and codes, the City will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated Unit Prices.
- c. Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with drawings, Technical or Special Specifications), the Contractor shall remove such work without cost to the City, but a Change Order may be issued to cover only the excess cost the Contractor would have been entitled to receive if the change had been made before he/she commenced work on the items involved.
- d. The Contractor shall at his/her own expense secure and pay for all necessary permits to execute the work from each involved governmental unit, whether it be the City of Muskegon, townships, County or State of Michigan. In some cases, certain permits will be obtained by the owner and will be so identified within the Special Specifications. All other permits are the responsibility of the Contractor.
- e. The Contractor shall comply with applicable local and state laws and ordinances governing the disposal of surplus excavation materials, debris and rubbish on or off the Project Site and commit to trespass on any public or private property in any operation due to or connected with the improvements embraced in this Contract.

3.0.17 TRAFFIC CONTROL

The Contractor shall at all time so conduct his/her work as to ensure the least possible obstruction to traffic. The safety and convenience of the general public and the residents

in or adjacent to the Project Site and the protection of persons and property shall be provided for by the Contractor. The Contractor shall provide and maintain adequate barricades, signs, lights and flags to warn and guide the public, and shall provide flagmen and watchmen when needed or when so ordered by the City in full accordance with the MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, published and revised from time to time by the Michigan Department of Transportation. The Contractor shall be responsible for compliance with this Item by all Subcontractors as well.*

3.0.18 REQUIRED PROVISIONS DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein; and, if through error or otherwise, any such provision is not inserted, or is incorrectly inserted, then upon the application of either party to this Contract, the Contract shall forthwith be physically amended to make such insertion or correction. This clause shall be included in all Subcontracts.*

3.0.19 COMMUNICATIONS

- a. All notices, demands, requests, instructions, approvals, proposals and claims must be in writing.
- b. Any notice to or demand upon the Contractor from the City relative to any part of this Contract shall be sufficiently considered given, and the service thereof completed, when said notice is posted, by certified or registered mail, to the Contractor at his/her last given address; or when said notice is delivered in person to the Contractor or authorized representative on the Project Site, at the office of the Contractor, or to any telegraph company for transmission with charges prepaid, in each case addressed to such office.
- c. All papers required to be delivered to the City of Muskegon shall be delivered to the Muskegon City Hall, to the attention of the Authorized Representative on this Project, and any notice to or demand upon the City shall be sufficiently given if so delivered, or if posted, by certified or registered mail, to 933 Terrace Street, Muskegon, Michigan 49443, or to any telegraph company for transmission with charges prepaid, in each case to the same address. Any such notice shall be deemed to have been given as of the time of the actual delivery or at the time of actual receipt, as the case may be.

3.0.20 REQUEST FOR SUPPLEMENTARY INFORMATION

It shall be the responsibility of the Contractor to make timely requests of the City for any additional information not already in his/her possession which should be furnished by the City under the terms of this Contract, and which he/she will require in the planning and execution of the work. Such requests may be submitted from time to time as the need arises, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, listing the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after the Contract award, and shall be as complete as possible at that time. The Contractor shall, upon request, furnish promptly any assistance and information the City may require in responding to these requests. The Contractor shall be fully responsible for any delay in his/her work or to others arising from his/her failure to comply fully with the provision of this Article.

3.0.21 PROGRESS SCHEDULE AND NOTIFICATION REQUIREMENTS

- a. Immediately after execution of the Agreement, the Contractor shall submit for approval a carefully prepared Progress Schedule showing the proposed dates of starting and completing each of the various sections of work. The work which the Contractor is required to perform under this Contract shall commence at the time stipulated by the City in its Notice to Proceed and shall be fully completed by the dates indicated in the Contract Agreement.
- b. The Contractor shall notify the City's Authorized Representative as to the exact time at which he/she proposes to begin any part of the work at least 48 hours in advance of any such start so that line and grade can be established and inspections provided.
- c. When work is to be done by City forces, in coordination with City forces, or if City of Muskegon utilities need to be located and/or marked, the Contractor shall provide at least 48 hours' advance notice to the City Department from which the work is requested.
- d. The Contractor shall notify "Miss Dig" 48 hours in advance of any work start to allow sufficient time for utility identification and location. The City of Muskegon is NOT a part of the "Miss Dig" program.
- e. Before permission can be granted by the Authorized Representative for street closures, it shall be the Contractor's responsibility to notify the police and fire departments and the Department of Public Works and Utilities.

3.0.22 PAYMENTS BY THE CONTRACTOR

- a. The Contractor shall provide and pay for all materials, labor, tools, equipment, water, lights, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fees or other expenses, and all other services and facilities of every nature necessary for the performance of this Contract and delivery of all improvements embraced therein within the specified time.
- b. The Contractor shall pay for all transportation and utility services not later than the 20th day of the calendar month following that in which services are rendered.
- c. The Contractor shall pay for all materials, tools, and other expendable equipment to the extent of 90% of the cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools and equipment are delivered at the Project Site, and the balance of cost thereof not later than the 30th day following the completion of that part of the work in or on which such materials, tools and equipment are incorporated or used.
- d. The Contractor shall pay to each of his/her Subcontractors, not later than the 5th day following each payment to the Contractor, the respective amounts allowed him/her on account of the work performed by the Subcontractors to the extent of each Subcontractor's interest therein.

3.0.23 SUBCONTRACTS

- a. The Contractor shall not execute an agreement with any Subcontractor or permit any subcontractor to perform any work included in this Contract until he/she has submitted a non-collusive affidavit from the subcontractor and received written approval of such subcontractor from the City of Muskegon.

- b. The Contractor shall be as fully responsible to the City of Muskegon for the acts and omissions of his/her Subcontractors, and of persons either directly or indirectly employed by them, as he/she is for the acts and omissions of persons directly employed by the Contractor.
- c. The Contractor shall cause appropriate provisions to be inserted in all Sub-contracts relative to compliance by each Sub- contractor with the provisions of this Contract.
- d. No proposed Subcontractor shall be disapproved by the City of Muskegon except for cause. Nothing contained in this Contract shall create any contractual relation between any Subcontractor and the City of Muskegon.

3.0.24 INSURANCE AND INDEMNITY

- a. Hold Harmless Agreements. To the fullest extent permitted by law, Contractor and Subcontractors agree to defend, pay in behalf of, indemnify, and hold harmless the CITY OF MUSKEGON, all elected and appointed officials, all employees and volunteers, all boards, commissions, and/or authorities and board members, including employees and volunteers thereof working on behalf of the CITY OF MUSKEGON against any and all claims, demands, suits, or loss, including all costs connected therewith, and for any damages which may be asserted, claimed or recovered against or from the CITY OF MUSKEGON and their elected and appointed officials, employees, volunteers, or others working on behalf of the CITY OF MUSKEGON by reason of personal injury, including bodily injury and death, property damage, including loss of use thereof, and/or the effects of or release of toxic and/or hazardous material which arises out of or is any way connected or associated with this contract. The obligation to defend and hold harmless extends to Contractor's employees, agents, subcontractors, assigns and successors.
- b. The contractor, or any of their subcontractors, shall not commence work under this contract until they have obtained the insurance required under this paragraph, and shall keep such insurance in force during the entire life of this contract. All coverage shall be with insurance companies licensed and admitted to do business in the State of Michigan and acceptable to the CITY OF MUSKEGON. The requirements below should not be interpreted to limit the liability of the Contractor. All deductibles and SIR's are the responsibility of the Contractor.
- c. **The Contractor shall procure and maintain the following insurance coverage:**
 - i. Workers' Compensation Insurance- The Contractor and Subcontractor shall procure and maintain during the life of this contract, Workers' Compensation Insurance, including Employers Liability Coverage in accordance with all applicable Statutes of the State of Michigan.
 - ii. Commercial General Liability Insurance - The Contractor shall procure and maintain during the life of this contract, Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability not less than \$1,000,000.00 per occurrence and aggregate combined. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractors Coverage; (D) Broad Form General Liability Extensions or equivalent, if not already included. Personal Injury, Bodily Injury and Property Damage coverage's shall be included (E) Deletion of all explosion, collapse and underground (SCU) exclusions, if applicable. The said insurance shall cover liability caused by the activities of any subcontractor.

- iii. Automotive Liability - The Contractor shall procure and maintain during the life of this contract Automotive Liability Insurance, including Michigan No-Fault Coverage's, with limits of liability for third party claims of not less than \$1,000,000.00 per occurrence or combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. The said insurance shall cover liability caused by the activities of any subcontractor.
 - iv. Additional Insured- Commercial General Liability and Automotive Liability Insurance, as described above, shall include an endorsement stating the following shall be "Additional Insureds" using the following language: "The CITY OF MUSKEGON and all elected and appointed officials, all employees and volunteers, all boards, commissions and/or authorities and board members, including employees and volunteers thereof. It is understood and agreed by naming The CITY OF MUSKEGON as additional insured, coverage afforded is considered to be primary and any other insurance The City of Muskegon may have in effect shall be considered secondary and/or excess.
 - v. Cancellation Notice- All policies as described above, shall include an endorsement stating that it is understood and agreed Thirty (30) days, Ten (10) days for non-payment of premium, Advance Written Notice of Cancellation, Non-Renewal, Reduction, and/or Material Change shall be sent to: CITY OF MUSKEGON ENGINEERING DEPARTMENT", PO Box 0536, Muskegon, MI 49443-0536
- d. Owner's and Contractor's Protective Liability- The Contractor shall procure and maintain during the life of this contract Owner's and Contractor's Protective Liability with limits of liability not less than \$1,000,000.00 per occurrence and/or aggregate, combined single limit. Personal injury, Bodily injury and Property Damage coverage's shall be included. The CITY OF MUSKEGON shall be "Named Insured" on this coverage. Thirty (30) day notice of cancellation to the CITY OF MUSKEGON shall be required. Said insurance shall cover liability caused by the activities of any subcontractor(s) either by means of a rider attached to the Prime Contractor's Certificate of Insurance indicating this coverage for subcontractors; or the subcontractor(s) shall submit their own Certificate of Insurance.
- e. Proof of Insurance Coverage - The Contractor and Subcontractors shall provide the CITY OF MUSKEGON at the time the contracts are returned by him/her for execution, a Certificate of Insurance as well as the required endorsements. In lieu of required endorsements, if applicable, a copy of the policy sections where coverage is provided for additional insured and cancellation notice would be acceptable. Copies or certified copies of all policies mentioned above shall be furnished. Certificates and policies endorsing the City of Muskegon as additional insured as listed below:
- i. Two (2) copies of Certificate of Insurance for
 - ii. Workers' Compensation Insurance;
 - iii. Two (2) copies of Certificate of Insurance for Commercial General Liability Insurance;
 - iv. Two (2) copies of Certificate of Insurance for Automotive Liability Insurance;
 - v. Original Policy, or original Binder pending issuance of policy, for Owner's and Contractor's Protective Liability Insurance;
 - vi. If so requested, Certified Copies of all policies mentioned above will be furnished.

- f. If any of the above coverage's expires during the term of this contract, the Contractor and Subcontractors shall deliver renewal certificates and/or policies to CITY OF MUSKEGON at least ten (10) days prior to the expiration date.

3.0.25 MATERIALS AND WORKMANSHIP

- a. Unless otherwise specifically provided for in the Technical or Special Specifications, all workmanship, equipment, materials and articles the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to as "equal to" any particular standard, the City of Muskegon will decide the question of equality.
- b. The City of Muskegon may require the Contractor to dismiss from this Project such employee(s) as the City of Muskegon may deem incompetent, careless, and/or insubordinate.

3.0.26 SUPERINTENDENCE BY CONTRACTOR

- a. Except where the Contractor is an individual and gives his/her personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the City of Muskegon, on the work at all times during working hours with full authority to act for the Contractor. The Contractor shall also provide adequate staff for the proper coordination and expediting of the work.
- b. The Contractor shall lay out his/her own work, and shall be responsible for all work executed by him/her under this Contract. He/She shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his/her failure to do so.

3.0.27 FITTING AND COORDINATION OF THE WORK

The Contractor shall be responsible for the proper fitting of all work, and for the coordination of the operations of all trades, subcontractors, or materialmen engaged upon this Contract. He/She shall be prepared to guarantee to each of his/her Subcontractors the locations and measurements which they may require for the fitting of their work to all surrounding work.

3.0.28 MUTUAL RESPONSIBILITY OF CONTRACTORS

- a. If, through acts or neglect on the part of the Contractor, any other contractor or any subcontractor shall suffer loss or damage on the work, the Contractor shall settle with such other contractor or subcontractor by agreement or arbitration, if such other contractor or subcontractor will so settle.
- b. If such other contractor or subcontractor shall assert any claim against the City of Muskegon on account of any damage alleged to have been so sustained, the City will notify the Contractor, who shall defend at his/her own expense any suit based upon such claim, and, if any judgment or claim against the City is allowed, the Contractor shall pay all costs and expenses in connection therewith.

3.0.29 CARE OF THE WORK

- a. The Contractor shall be responsible for all damages to person or property that occur as a result of his/her fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or part by payments made by the City.
- b. The Contractor shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays and holidays, from the time the work commences until final completion and acceptance, as needed.
- c. In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the City, is authorized to act at his/her own discretion to prevent such threatened loss or injury, and he/she shall so act. He/She shall likewise act if instructed to do so by the City. Any compensation claimed by the Contractor on account of such emergency work will be determined by the City as provided in this Contract regarding Change Orders.
- d. The Contractor shall avoid damage as a result of his/her operation to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he/she shall at his/her own expense completely repair any damage thereto caused by his/her operation.
- e. The Contractor shall shore up, brace, underpin, secure and protect, as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of, the Site which may be in any way affected by the excavations or other operations connected with the execution of this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before commencement of any work. The Contractor shall indemnify and save harmless the City of Muskegon from the damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the City may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

3.0.30 SURVEY MONUMENTS

- a. Survey monuments relative to governmental surveys such as a U.S. Coast and Geodetic and the City of Muskegon datum plane reference are to be preserved and left undisturbed by the Contractor. Land survey monuments such as Section corners, 1/4 and 1/8 corners, or other alignment points of reference, including property corners of individual parcels of land, are to be respected and left undisturbed. When found in conflict with proposed work, the Contractor shall immediately notify the Authorized Representative in charge of work, whereupon instructions shall be given to the Contractor for preservation of the Survey Point. If housings or boxes for protection are required, the City shall furnish to the Contractor at no cost the necessary materials. The Contractor, in turn, will install the materials at no cost to the City.
- b. If the Contractor damages or destroys known Survey Points of reference, the Contractor shall be responsible for replacement of the monument. The work must be accomplished by a registered land surveyor in accordance with accepted procedures for such work. The Contractor shall be responsible for all incurred costs.

3.0.31 SANITARY FACILITIES

The Contractor shall furnish, install and maintain ample sanitary facilities for the workers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes for the state and local government. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single-service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in accordance with existing and governing health regulations.

3.0.32 USE OF CITY WATER

Upon request and approval, the Contractor may obtain a water supply from the City of Muskegon fire hydrants at no cost, provided that the following conditions are met and exercised:

- i. The Contractor's superintendent shall obtain from the Water Department Superintendent a proper connection, including a meter to monitor usage.
- ii. The Contractor shall only use hydrant wrenches to open and close hydrants; pipe wrenches will not be allowed.
- iii. The hydrant shall be fully opened when used; volume shall be controlled by an independent hand valve.
- iv. The Contractor's release shall not be granted until the hydrant connection has been returned to the Water Department and such receipt acknowledged.

3.0.33 USE OF PREMISES

- a. The Contractor shall comply with all instructions of the City of Muskegon and the ordinances and codes of the local government regarding signs, advertising, traffic, fires, explosives, danger signals and barricades.
- b. The Contractor shall confine his/her equipment, storage of materials, and construction/demolition operations to the Contract limits as shown on the drawings and as prescribed by ordinances or permits, or as may be directed by the City, and shall not unreasonably encumber the Site or public rights-of-way with his/her materials and equipment.
- c. The Contractor and his/her Subcontractors may maintain such office and storage facilities on the Site as are necessary for the proper conduct of the work. These shall be located so as to cause no interference to any work to be performed on the Site. The City shall be consulted with regard to locations.
- d. The Contractor may furnish and maintain, during the execution of this Project, adequate facilities on the Site or adjacent thereto for the use of the City's representatives.
- e. Upon completion of the Project, or as directed by the City, the Contractor shall remove all such temporary structures and facilities as have been placed on the Site, these to become his/her property, and leave the Project Site in the condition required by the Contract.

3.0.34 PARTIAL USE OF SITE IMPROVEMENTS BY THE CITY

The City of Muskegon, at its election, may give notice to the Contractor and place in use those sections of improvements which have been completed, inspected and can be

accepted as complying with the Contract, if each such section is reasonably safe, fit and convenient, in the City's opinion, for the use and accommodation for which it was intended, PROVIDED THAT:

- i. The use of such sections in no way shall impede the completion of the remainder of the work by the Contractor;
- ii. The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections;
- iii. The use of such sections shall in no way relieve the Contractor of his/her liability due to having used defective materials or due to poor workmanship.

3.0.35 REMOVAL OF DEBRIS, CLEANING, ETC.

The Contractor shall periodically, or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Site and public rights of way reasonably clear. Upon completion of the work, he/she shall remove all temporary construction facilities, debris and unused materials provided for the work, and put the whole Site of the work and public rights of way in a neat and clean condition. Trash burning on the Site will be subject to prior approval of the City of Muskegon and existing state and local regulations.

3.0.36 ACCIDENT PREVENTION

- a. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the Site, which occur as a result of his/her prosecution of the work. The safety provisions of applicable laws and building, construction or demolition codes shall be observed, and the Contractor shall take, or cause to be taken, such additional safety and health measures as the City may determine to be reasonably necessary.
- b. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention of Construction", published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws.
- c. The Contractor shall maintain an accurate record of all cases of death, occupational disease and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under this Contract. The Contractor shall promptly furnish the City with reports concerning these matters.
- d. The Contractor shall indemnify and save harmless the City of Muskegon from any claims for damages resulting from personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this Contract.

3.0.37 SPECIFICATIONS AND DRAWINGS

- a. The City of Muskegon will furnish the Contractor without charge one (1) copy of the Contract Documents, including General, Technical and Special Specifications complete with plans, drawings, maps, etc. Additional copies requested by the Contractor will be furnished at cost.
- b. In case of discrepancy, figured dimensions shall govern over scaled dimensions; Bid Proposal over plans; plans over Special Specifications; and Special Specifications over General and Technical Specifications.

- c. When discrepancies are found in drawings or Specifications, the matter shall be immediately submitted to the City, without whose decision said discrepancy shall not be adjusted by the Contractor except at his/her own risk and expense.

3.0.38 SHOP DRAWINGS FROM THE CONTRACTOR

- a. All required shop drawings, machinery details, layout drawings, etc., shall be submitted to the City in three (3) copies for approval sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking, if necessary.
- b. The Contractor may proceed, only at his/her own risk, with manufacture or installation of any equipment or work covered by said Shop Drawings, etc., until they are approved. No claim by the Contractor for extension of the Contract Time will be granted by reason of the Contractor's failure in this respect.
- c. Any drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him/her for proper resubmission. If any drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his/her letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of Contract Price and/or Time; otherwise, the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been approved.
- d. If a shop drawing is in accord with the Contract or indicates only a minor adjustment, in the interest of the City, without involving a change in Contract Price and/or Time, the City may approve the drawing. Such approval shall be general, shall not relieve the Contractor from his/her responsibility for adherence to the Contract or for any error in the drawing, and shall contain substantially the following language:
- e. "The modification shown on the attached drawing is approved in the interest of the City of Muskegon to effect an improvement for the Project and is ordered with the understanding that it does not involve any change in the Contract Price or Time; that it is subject generally to all Contract stipulations and covenants; and that it is without prejudice to any and all rights of the City of Muskegon under the Contract and surety bond or bonds."

3.0.39 SAMPLES, CERTIFICATES AND TESTS

- a. The Contractor shall submit all equipment samples, certificates, affidavits, etc., as called for, or as required by the City, promptly after award of the Contract and acceptance of the Contractor's bond.
- b. The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required.
- c. No such material or equipment shall be manufactured or delivered to the Site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the City.
- d. Machinery, mechanical or other equipment, materials or articles installed or used without such prior City approval shall be at the risk of subsequent rejection.

- e. Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the Project for which it is intended, and the name of the producer. Each shall be accompanied by a certificate or letter from the Contractor which shall
 - i. State that the sample complies with the Contract requirements;
 - ii. Give the name and brand of the product and its place of origin;
 - iii. Give the name and address of the producer;
 - iv. Include or be accompanied by all specifications or other detailed information which will assist the City in determining the acceptability of the sample promptly;
 - v. Include the statement that all materials or equipment furnished for use in the Project will comply with the samples and/or certified statements.
- f. Where machinery, mechanical or other special equipment is to be installed under this Contract, the Contractor shall furnish each manufacturer's detailed specifications to the City for approval together with full information in regard to proposed installations.
- g. Materials specified by reference to the number or symbol of a specific standard, such as an A.S.T.M. Standard, a Federal specification or other similar standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in such reference. The Standards referred to shall have full force and effect as though printed herein.
- h. Approval of any materials shall be general only, and shall not constitute a waiver of the City's right to demand full compliance with Contract requirements. With regard to a general approval, the City may reject materials, equipment and accessories for cause after actual delivery to the City and such check tests have been made as deemed necessary in each instance, even though such materials and articles have been given general approval.
- i. The City's Authorized Representative may test such materials as deemed advisable on the Project Site.
- j. All tests by the City will be performed in such manner as not to delay the work unnecessarily, and shall be made in accordance with the provisions of the Specifications.
- k. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the Contract Time.
- l. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the City will have the right to cause their removal and replacement by proper materials, or to demand and secure such reparation by the Contractor as is equitable.
- m. Except as otherwise specifically stated in this Contract, the costs of sampling and testing will be divided as follows:
 - i. The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes;
 - ii. The Contractor shall assume all costs of re-testing materials which fail to meet Contract requirements;
 - iii. The Contractor shall assume all costs of testing materials offered in substitution for those found deficient; and
 - iv. The City of Muskegon will pay all other expenses for testing.
- n. Certificates of Compliance: In lieu of test samples and upon request of the City, the Contractor shall provide, upon delivery and through his/her supplier, a witnessed, notarized and signed certification complete with documented test results that the material

meets or exceeds the desired specifications. The signer of the certification must be titled officer of the material company, and the documented test results must be obtained through an independent testing laboratory. Costs for such documentation shall be borne by the Contractor.

3.0.40 INSPECTION BY THE CITY

- a. All materials and workmanship shall be subject to inspection, examination, and/or test by the City of Muskegon at any and all time during manufacture or construction and at any and all places where such manufacture or construction is carried on. The inspection of materials as a whole, or in part, will generally be made at the Project Site, subject to the provisions of paragraph b following.
- b. Inspection of materials and appurtenances to be incorporated in the improvements embraced in this Contract may be made at the place of production, manufacture or shipment whenever the quantity justifies it. Such inspection and acceptance, unless otherwise stated, shall be final, except in regard to (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud.
- c. The City shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Site and replaced with material of specified quality without charge therefor.
- d. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the City may, by contract or otherwise, have the defects remedied, or rejected materials removed from the project area, and charge the cost of the same against the monies which may be due the Contractor without prejudice to any other rights or remedies of the City.
- e. The Contractor shall notify the City sufficiently in advance of back-filling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the City, the Contractor shall uncover for inspection, and recover, such facilities all at his/her own expense, when so requested by the City of Muskegon.
- f. Should it be considered necessary or deemed advisable by the City at any time before final acceptance of the entire work to make an examination of work already completed by uncovering the same, the Contractor shall, on request, promptly furnish all necessary facilities, labor and/or material.
- g. If such work is found to be defective in any important or essential respect due to the fault of the Contractor or the fault of his/her Subcontractors, the Contractor shall defray all the expenses of such examination and or satisfactory reconstruction.
 - i. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus 15% of such costs to cover superintendence, general expenses and profit, shall be allowed the Contractor; and he/she shall be granted in addition a suitable extension of time if completion of the work under the entire Contract has been delayed on account of the additional work involved by such request.
 - ii. A semi-final inspection will be scheduled by the City when all construction has been completed.

- iii. When the City has accomplished its semi-final inspection, determined all deficiencies (if any) have been corrected, and the project is completed and functional, a final inspection will be scheduled.
- h. Neither inspection, testing, approval nor acceptance of the work in whole or in part by the City or its agents shall relieve the Contractor or his/her sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

3.0.41 CHANGES IN THE WORK

- a. Except for the purpose of affording protection against any emergency endangering life or property, the Contractor shall make no change in the materials used; in the specified manner of constructing and/or installing the Improvements; nor supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless pursuant to a written order from the City authorizing the Contractor to proceed with the change. No claim for an adjustment of the contract price will be valid unless so ordered.
- b. The City may make changes in the scope of the work required to be performed by the Contractor under the Contract; make additions thereto; or omit work therefrom without invalidating the Contract; without relieving or releasing the Contractor from any of his/her obligations under the Contract or any guarantee given by him/her pursuant to the Contract; without affecting the validity of the guaranty bonds; and without relieving or releasing the surety or sureties of said bonds.
- c. All such changes in work shall be executed under the terms of the original Contract as expressly provided for.
- d. In the case where unit prices ARE contained in the Agreement, the City may order the Contractor to proceed with desired changes in the work with the value of such changes being determined by the measured quantities involved and the applicable unit prices specified in the Contract, unless said changes increase or decrease the total contract price more than twenty-five percent (25%).

3.0.42 CHANGE ORDERS

- a. Change Orders shall be executed:
 - i. If applicable unit prices ARE NOT contained in the Proposal;
 - ii. If the total net change ordered by the City increases or decreases the contract price more than twenty-five percent (25%);
 - iii. If it becomes necessary to revise the completion date due to causes which are not the fault of the Contractor;
 - iv. Upon successful completion of the Project and after final quantities are in confirmation, a Change Order Balance shall be made out by the Authorized Representative and executed by both parties. This quantity balance shall identify the total project cost and allow the Contractor to present the written Request for Final Payment.
- b. **Acceptable Methods for Cost Determination:**
 - i. Unit Price Method – The City shall request and the Contractor shall submit a written proposal describing each individual unit of work and the unit price for each item.

- ii. Lump Sum Method – The City shall request and the Contractor shall submit a written proposal describing the work and the lump-sum price for the described work.
- iii. Cost-Plus, Limited Basis Method – If other methods are not acceptable and prompt agreement between the parties cannot be reached, the City may order the Contractor to proceed with the work on a cost-plus, limited basis. A Cost-Plus, Limited Basis is defined as the net cost of the Contractor’s labor, materials and equipment plus 15% of said net cost to cover overhead and profit. The total cost not to exceed an amount to be specified.
 - 1. Costs not eligible to be included in the Cost-Plus, Limited Basis are: Insurances, bonds, payroll costs for the Contractor’s officers or executives, managers, engineers, lawyers or administrative personnel. These typical costs are to be considered a part of the overhead factor.
- iv. City of Muskegon Credit Method – If the City deems it not expedient to require the Contractor to correct work not done in accordance with the Contract, the City may issue a Credit Change Order to create an equitable deduction from the Contract Price. Said deduction will be made by agreement between the Contractor and the City of Muskegon and subject to settlement, in case of dispute, as provided in these Documents.
- c. Change Order Procedure – After the Contractor’s proposal has been reviewed and found acceptable by both parties, the City will prepare a Change Order in accordance therewith for execution by the Contractor on the appropriate form required by the funding agency or by using the City of Muskegon change order form.
- d. **Change Order Procedure Documentation shall include:**
 - i. A detailed reason for and description of the work, its location, quantity, rate and method of payment as described above.
 - ii. A definite statement as to the resulting change in the Contract Price and/or time.
 - iii. The statement that all work involved in the change shall be performed in accordance with the Contract requirements except as modified by this Change Order.

3.0.43 DISPUTES AND CLAIMS

- a. All disputes arising under this Contract or its interpretation, except those disputes covered by Federal Labor Provisions, whether involving law or fact, or both, or extra work, and all claims for alleged breach of Contract shall be presented by the Contractor to the City for decision within ten (10) days of commencement of dispute.
- b. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim but shall state the facts surrounding the claim in sufficient detail to identify and prove the claim, together with its character and scope. In the meantime, the Contractor shall proceed with the work as directed.
- c. Any claim not presented within the time limit specified in Paragraph (a) above shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within then (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the City of notice thereof.

- d. After review of the claim, the City will decide upon action to be taken. Each decision by the governing body of the City of Muskegon will be in writing and will be mailed to the Contractor by registered mail, return receipt requested, directed to his/her last known address.
- e. If the Contractor does not agree with any decision of the City, he/she shall in no case allow the dispute to delay the work but shall notify the City promptly that he/she is proceeding with the work under protest, and he/she may then except the matter in question from the final release upon Request for Final Payment in substantially.

3.0.44 CLAIMS FOR EXTRA COST

- a. If the Contractor claims that any instructions by drawings or otherwise involve extra cost or extension of time, he/she shall, within ten (10) days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his/her protest thereto in writing to the City stating clearly and in detail the basis of this objection. No such claim will be considered unless so made.
- b. Claims for additional compensation for extra work due to alleged errors in ground elevations, contour lines, or bench marks will not be recognized unless accompanied by certified survey data made prior to the time the original ground was disturbed, which clearly shows that errors exist which resulted, or would result, in handling more material or performing more work than would be reasonably estimated from the drawings and maps issued.
- c. Any discrepancies which may be discovered between actual conditions and those represented by the drawings and maps shall at once be reported to the City, and work shall not proceed except at the Contractor's risk until written instructions have been received by him/her from the City.
- d. If, on the basis of the available evidence, the City determines that an adjustment of the Contract Price and/or Contract Time is justifiable, the procedure shall be as provided in Item 39 (Part 3, Section 1), Change Orders.

3.0.45 DELAYS AND LIQUIDATED DAMAGES

- a. Liquidated Damages for Delays. If the work is not completed within the time stipulated in this Contract, including any extensions of time for excusable delays as provided, the Contractor and/or his sureties shall be liable for and shall pay to the City of Muskegon sum of three hundred dollars (\$300.00) for each calendar day of delay as fixed, agreed and liquidated damages (it being impossible to determine the actual damages occasioned by the delay), commencing from the time stipulated for completion until such work is satisfactorily completed and accepted.
- b. Excusable Delays. The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work DUE TO:
 - i. Any acts of government, including controls or restrictions upon or requisitioning of materials, equipment, tools or labor by reason of war, national defense or any other national emergency;
 - ii. Any acts of the City of Muskegon;
 - iii. Causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault

or negligence of the Contractor including, but not restricted to: Acts of God or of the public enemy; acts of another contractor in the performance of some other contract with the City; fires; floods; epidemics; quarantine; restrictions; strikes; freight embargoes; and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions; and

- iv. Any delay of any Subcontractor occasioned by any of the causes specified in subparagraphs 1, 2 and 3 above.

PROVIDED, HOWEVER, that the Contractor promptly notify the City within ten (10) days in writing of the cause of the delay.

- c. Upon receipt of such written notification, the City shall ascertain the facts and the cause and extent of the delay. If, upon the basis of the facts and in compliance with the terms of this Contract, the delay is properly excusable, the City shall extend the time for completing the work for a period of time commensurate with the period of excusable delay through the execution of a written Change Order.

3.0.46 PAYMENTS TO THE CONTRACTOR

a. Partial Payments

- i. Partial payments will be made as specified herein for work completed and for fabricated or processed non-perishable materials delivered for the use on the project. Processing of payments will be completed as soon as practicable; however, no claim will be considered for late payment of estimates.
- ii. Partial payments will be issued on the second Friday of each month on the basis of the value of the work completed during the estimate period, less the percentage retained as specified herein, provided the written orders of the Engineer have been or are being fulfilled, provided the time for completion has not elapsed, and provided that at least one-half of the contract amount or \$1,000 has been earned during the estimate period. Said payments will be based upon estimates prepared by the Engineer of the value of the work performed, and estimates of the Engineer are subject to final balancing at the time of the final estimate. In the event that the prepared estimate is not submitted with sufficient time to process payment on the second Friday of the month, payment of the estimate will be processed for payment on the fourth Friday of the month. As a result, the Engineer's estimates may not be relied upon by a Contractor as a basis to make payment to a Subcontractor.
- iii. Before each payment by the City to the Contractor under this contract, the Contractor shall furnish the City with a certificate in duplicate, substantially to the effect that the Contractor and each Subcontractor has complied with the wage and other labor standards provisions of this contract. The Form of certificate to be used will be furnished by the City.
- iv. Before making any partial payment, the City may require the Contractor to present a verified written statement showing the amounts he/she owes for labor performed and materials furnished along with the names and addresses of the persons to whom which sums are due.
- v. In case the Contractor shall have sublet a part of the work, the statement shall also show the sum owed to the Subcontractor showing names and addresses of persons performing labor or furnishing material under that subcontract along with the respective amounts due such persons.

- vi. The City must pay the amounts due directly to the creditors of the Contractor or Subcontractor so listed, deducting the amount from that due the Contractor or Subcontractor.
 - vii. Partial payments made by the City to the Contractor are monies advanced for the purpose of assisting the Contractor to expedite the work under this contract. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the City.
 - viii. Any such partial payments shall not constitute a waiver of the right of the City to require the fulfillment of all terms of the contract, and the delivery of all improvements embraced therein, complete and satisfactory in all details.
- b. Withholding Payments
- i. The City may withhold from any payment otherwise due the Contractor so much as may be necessary to protect the City of Muskegon.
 - ii. The City may also elect to withhold any amounts the Contractor owes to any subcontractor or materials dealer for work performed or materials furnished by them.
 - iii. Any amount due to the City of Muskegon for liquidated damages, or other purposes as provided under the terms of this contract, shall be deducted from the final payment due the Contractor.
 - iv. The foregoing provisions shall be construed solely for the benefit of
 - v. the City of Muskegon and will not require the City Commission to determine or adjust any claims or disputes between the Contractor and his/her Subcontractors or materials dealers, or to withhold any monies for their protection unless the City Commission elects to do so.
 - vi. The failure or refusal of the City to withhold any monies from the
 - vii. Contractor shall in no wise impair the obligations of any surety or sureties under any bond or bonds furnished under this contract.
 - viii. Right of Setoff. The City is entitled by this agreement to set off and retain from any payment to the Contractor or any Subcontractor or material supplier, all amounts which are due and owing to the City of Muskegon from said Contractor, Subcontractor, or material supplier for any reason,. The said right or setoff also applies to any unpaid taxes to be collected by the City. This right of setoff shall be subject only to the right of a surety providing bonds or guarantees for the project be due and owing to a Subcontractor or material supplier, and which are required to be paid by the surety. If no claim against any such surety has been made, then this right of setoff shall be invoked.
 - ix. This right to setoff shall not apply in the case of non-management individuals employed by a Contractor or Subcontractor who have claims solely for wages earned in the performance of labor in this project. In the event there remain outstanding such claims for labor, the right of setoff shall be subordinate to such claims even though no claim against a surety has been made.
- c. Final Payment
- i. Final payment to the Contractor shall be made subject to the furnishing of a satisfactory release of all claims against the City arising under and by virtue of this contract, other than such claims as may be specifically excepted by the Contractor from the operation of release as provided under "Disputes and Claims".
 - ii. The Contractor shall prepare his/her Requisition for Final Payment after final inspection and acceptance by the City for all work under the contract.

- iii. The Contractor shall additionally secure the consent of his/her surety in regard to Final Payments as well as the retainage withheld by the City.
- iv. Requisition for Final Payment can be based upon the total project dollar amount as described in the required Balancing Change Order. The total amount of the final payment will be that amount agreed upon by the parties hereto MINUS all previous payments.
- v. Before making final payment, the City may require the Contractor to furnish releases or receipts from all Subcontractors having performed any work and from all persons having supplied materials, equipment installed on the project, and services to the Contractor.
- vi. If the City deems it advisable to make payment in part or full to the Contractor without requiring the furnishing of such releases or receipts, any payments so made shall in nowise impair the obligations or any surety or sureties furnished under this contract.

3.1 TIME CHANGE ORDER

Project No.: _____

Contract No.: _____

Contractor Information:

Company Name: _____

Street Address: _____

City, State Zip: _____

Contact Name: _____

Requested Time Change Order Date: _____

In connection with the above referenced Contract, dated: _____,
for the Project entitled: _____,

The following change is ordered, subject to conditions hereinafter set forth:

The Contract Time is extended _____ **calendar days from the original**

Contract Completion Date of: _____ **to:** _____.

The City of Muskegon has duly determined that:

- The delay was due to unforeseeable causes beyond your control and without your fault or negligence:
- Notice of the cause of the delay was given within the time and in the manner prescribed by the Contract.
- The causes of delay justify and require an extension of the time as herein provided as a matter of legal right without the assertion of a claim by the owner for (actual) (liquidated) damages because of the Contractor's failure to complete the work within the number of days specified by the Contract.

The aforementioned changes, and work affected thereby, are subject to all contract stipulation and covenants.

The Rights of the city of Muskegon are not prejudiced.

All claims against the City of Muskegon which are identical to or as a consequence of the aforementioned change are satisfied

Contractor Approval

City of Muskegon Approval

Authorized Representative Signature Date

Authorized Representative Signature Date

Printed Name Title

Printed Name Title

Prepared By Date

3.2 CONTRACT CHANGE ORDER

CONTRACTOR		CONTRACT						DATE	11/10/2017
								CHANGE ORDER	
								No.	1
ITEM OF WORK	UNIT	QUANTITY	QUANTITY	QUANTITY	QUANTITY	UNIT	AMOUNT	AMOUNT	
DESCRIPTION, REASON, LOCATION OF CHANGE	OF MEASURE	PROPOSAL	AS BUILT	INCREASE +	DECREASE -	COST	INCREASE	DECREASE	
1							\$0.00	\$0.00	
2							\$0.00	\$0.00	
3							\$0.00	\$0.00	
							TOTALS	\$0.00	\$0.00
CHANGE REQUEST EFFECIVE DATE:									
							ORIGINAL CONTRACT PRICE:	\$0.00	
							NET +/-	\$0.00	
							REVISED CONTRACT PRICE:	\$0.00	
ENGINEERING DEPARTMENT		CONTRACTOR APPROVAL				CITY OF MUSKEGON APPROVAL			
		AUTHORIZED REPRESENTATIVE AND DATE				AUTHORIZED REPRESENTATIVE AND DATE			
PREPARED BY		DATE		PRINTED NAME AND TITLE			PRINTED NAME AND TITLE		



3.3 CONTRACTOR'S CERTIFICATE & RELEASE REQUEST FOR FINAL PAYMENT

FROM: _____

TO: The City of Muskegon

RE: Contract No. _____

ENTERED INTO THE _____ DAY OF _____ BETWEEN THE CITY OF MUSKEGON,
933 Terrace Street, Muskegon, Michigan 49443, AND

(Contractor) (City) (State) (ZIP)

FOR THE PURPOSE OF: _____

(Name of Operations to be performed)

UNDER THE CONTRACT ENTITLED: _____

PROJECT NO. _____

LOCATED IN THE CITY OF MUSKEGON, MICHIGAN;

KNOW ALL MEN BY THESE PRESENTS:

1. The undersigned hereby certifies that there is due from and payable by the CITY OF MUSKEGON to the CONTRACTOR under the Contract and duly approved Change Orders and modifications THE BALANCE OF \$ _____.
2. The undersigned further certifies that in addition to the amount set forth in Paragraph 1, there are outstanding and unsettled the following items which the Contractor claims are just and due and owing by the City of Muskegon to the Contractor:
 - a. _____
 - b. _____
 - c. _____
 - d. _____

(Itemize claims and amounts due; if none, so state)

3. The undersigned further certifies that all work required under this Contract, including work required under Change Orders Nos. _____, has been performed in accordance with the terms thereof, and that there are no unpaid claims for materials, supplies or equipment and no claims of laborers or mechanics for unpaid wages arising out of the performance of this Contract, and that the wage rates paid by the Contractor and all Subcontractors were in conformity with the Contract provisions relating to said wage rates.
4. Except for the amounts stated under Paragraphs 1 and 2 hereof, the undersigned has received from the CITY OF MUSKEGON all sums of money payable to the undersigned under or pursuant to the above-mentioned Contract or any modification or change thereof.

*Date contract awarded by the City commission

(CONTRACTOR'S CERTIFICATE AND RELEASE – Continued)

5. That in consideration of the payment of the amount stated in Paragraph 1 hereof, the undersigned does hereby release the CITY OF MUSKEGON from any and all claims arising under or by virtue of this Contract, except the amount listed in Paragraph 2 hereof; provided, however, that if for any reason the City of Muskegon does not pay in full the amount stated in Paragraph 1 hereof, said deduction shall not affect the validity of this release, but the amount so deducted shall be automatically included under Paragraph 2 as an amount which the Contractor has not released but will release upon payment thereof.

The Contractor further certifies that upon the payment of the amount listen in Paragraph 2 hereof, and of any amount which may be deducted from Paragraph 1 hereof, the Contractor will release the City of Muskegon from any and all claims of any nature whatsoever arising out of said Contract or modification thereof, and will execute such further releases or assurances as the City may request.

IN WITNESS WHEREOF, the undersigned has signed and sealed this instrument this _____ day of _____, 20 _____ .

CONTRACTOR: _____

(SEAL)

BY _____

(Printed name and title of signer)

_____, the affiant signing this instrument, being first duly sworn on oath, deposes and says: First, that he/she is the

_____ (title) of the _____
(name of company)

Second, that he/she has read the foregoing certificate by him/her subscribed as _____ (title) of the _____.

Affiant further states that the matters and things stated are, to the best of his/her knowledge and belief, true.

Affiant: _____

Subscribed and sworn to before me this _____ day of _____, 20 _____

Notary

My commission expires _____

3.5 CONSENT OF SURETY

We, as surety on the above described contract, hereby give our consent to the payment to the Contractor as indicated above.

Date: _____

Signed: _____
(Attorney-in-fact)

NOTE: Two completed copies of this or similar form MUST BE SUBMITTED to and accepted by the City of Muskegon BEFORE REDUCTION OF 10% RETAINAGE AND FINAL PAYMENT WILL BE MADE.

***Date contract awarded by the city commission**

SECTION 2

3.6 AFFIRMATIVE ACTION

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO INSURE EQUAL EMPLOYMENT OPPORTUNITY AND
PROHIBITING DISCRIMINATION IN EMPLOYMENT**

(Federal Executive Order 11243)

Michigan: Elliot-Larson Civil Rights Act

This project is funded with a Michigan Natural Resources Trust Fund Grant, relevant State and Federal requirements apply.

The attention of bidders is particularly called to the requirements for ensuring that employees and applicants for employment are not discriminated against.

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

The contractor will not discriminate against any employee or applicant for employment because of religion, race, color, national origin, age, sex, height, weight, familial status, marital status, disability, sexual orientation or gender identity, or status as a Vietnam Era Veteran. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated fairly during employment, without regard to their religion, race, color, national origin, age, sex, height, weight, familial status, marital status, disability, sexual orientation or gender identity, or veteran background. Such action shall include, but not be limited to, the following: employment, promotion, demotion, or transfer; recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; selection for training, including apprenticeship.

SECTION 3

3.7 ADOPTED LABOR STANDARDS PROVISIONS

The following clause is applicable unless this contract is exempt under the rules and regulations of the Secretary of Labor issued pursuant to Executive Order No. 11246 of September 24, 1965 (30FR 12319), as amended. 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 natural 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 place, 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 advertisements for employees placed by or on behalf of the contractor, state that 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 September 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 the 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 canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with the procedures authorized in Executive Order No. 11246 of September 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 provision 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: Provide, 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.

3.8 EQUAL EMPLOYMENT OPPORTUNITY CLAUSE
(Incorporated by Reference)

The Equal Employment Opportunity Clause required under Executive Order 11246, the affirmative action commitment for disabled veterans and veterans of the Vietnam era, set forth in 41 CFR 60-250.4 the affirmative action clause for handicapped workers, set forth in 40 CFR 60-741.4 and the related regulations of the Secretary of Labor. 40 CFR Chapter 60, are incorporated by reference in this purchase order. By accepting this purchase order, vendor certifies that it complies with the authorities cited above, and that it does not maintain segregated facilities or permit its employees to perform services at locations where segregated facilities are maintained, as required by 41 CFR 60-1.8

3.9 ANTI-KICKBACK ACT

NOTICE TO CONTRACTORS: The Contractor shall comply with the applicable regulations of the Secretary of Labor, United States Department of Labor, made pursuant to the Copeland AntiKickback Act (Title 40 U.S.C., Section 276c), and any amendment or modifications thereof, shall cause appropriate provisions to be inserted in subcontracts to insure compliance therewith by all subcontractors subject thereto, and shall be responsible for the submission of affidavits required by subcontractor thereunder, except as said Secretary of Labor may specifically provide for reasonable limitations, variations, tolerance, and exemptions from the requirements thereof.

Copeland “Anti-Kickback” Act Policy

The Copeland “Anti-Kickback” Act prohibits contractors or subcontractors engaged in building construction or repair from persuading an employee to give up any part of the compensation to which he or she is entitled under his or her employment contract.

NOTICE TO MUNICIPAL EMPLOYEES: *Any employee who offers or approves the offer of a business consideration must ensure that it is ethical and proper in all respects. The offer of a business consideration cannot reasonably be interpreted as an attempt to gain an unfair business advantage or otherwise reflect negatively on the reputation of the City of Muskegon and/or the recipient. The business consideration shall not violate this anti-kickback policy.*

The City of Muskegon’s (Muskegon) staff, representatives, and contractors are prohibited from receiving unreasonable compensation from grantors, grantees, contractors, applicants, or any other person or individual for the purpose of receiving preferential treatment of any kind. The guidelines below define Muskegon’s policy toward kickbacks and the penalties for offering kickbacks to Muskegon employees, representatives or contractors.

Definition: “Kickback” for the purposes of this policy (excluding de minimis gifts), means substantial money, fees, commission, gifts, gratuity, object of value, or offer of employment, which is provided or offered, directly or indirectly, to any City of Muskegon employee, contractor or contracted employee, vendor or vendor employee, or consultant for the purpose of improperly obtaining or rewarding favorable treatment in connection with a City of Muskegon project or contract.

This policy prohibits any person or organization from:

Providing or attempting to provide or offering to provide kickbacks;
Soliciting, accepting or attempting to accept kickbacks; or
Including, directly or indirectly, the amount of kickbacks in any contract awarded by City of Muskegon, contractors, or subcontractors.

Any employee found to be in violation of this policy will be subject to an investigation by the City of Muskegon’s Compliance Officer to determine if the policy was infringed upon. Depending on the results of the investigation, appropriate discipline will be determined. The employee may be subject to civil or criminal penalties as provided under U.S. law.

Any applicant, grantee, contractor, consultant, or vendor in violation of this policy will be prohibited from participation in any City of Muskegon project, contract, or activity and may be subject to additional civil or criminal penalties as provided under U.S. law (Title 40 U.S.C., Section 276c).

Muskegon reserves the right to recover damages from any person who knowingly engages in such prohibited conduct and from any person whose employee, contractor, or subcontracted employee provides, accepts, or charges a kickback.

SECTION 4

3.10 PREVAILING WAGE

Prevailing Wage is Not Applicable in this contract.

PART 4 - PROJECT SPECIFICATIONS

PROGRESS CLAUSE

This project is funded with a Michigan Natural Resources Trust Fund Grant, relevant State and Federal requirements apply.

The Project shall not start until receiving the Notice to Proceed and agreeing on a date for starting with the City Engineer. The Contractor shall not start work before date designated as the starting date in the detailed Progress Schedule approved by the Engineer. In no case shall any work be commenced prior to receipt of formal Notice to Proceed from the City of Muskegon.

The sidewalk along the southern portion of the building and the site preparation work required for installation of the playground pad and equipment hall be completed by **April 01, 2019**.

The entire project shall be completed by **May 10, 2019**.

Failure by the Contractor to meet the above requirements and dates will result in the Contractor being assessed liquidated damages in accordance with section 108.10 of the 2012 Standard Specifications for Construction. Liquidated damages will continue to be assessed for each calendar day or portion of the day that this work remains incomplete even if these days extend beyond the typical seasonal shut-down date of November 14th.

The confirmed low bidder shall submit a detailed "Progress Schedule", (MDOT Form 1130 may be used), to the Project Engineer at the preconstruction meeting. After receiving, reviewing and approving the completed Progress Schedule, the Project Engineer shall sign and forward the approved Progress Schedule to the Contractor.

Lack of a timely submittal and approval of the Progress Schedule by the Contractor, will result in the Project Engineer delaying contract award per subsection 102.15 of the 2012 MDOT Standard Specifications for Construction.

The Progress Schedule shall include, as a minimum, the controlling work items for the completion of the project and the planned dates that these work items will be controlling operations. When specified in the Bidding Proposal, the date the project is to be opened to traffic, as well as the final project completion date, shall also be included in the Progress Schedule.

If the Bidding Proposal specifies other controlling dates, these shall also be included in the Progress Schedule.

Failure on the part of the Contractor to carry out the provisions of the Progress Schedule, as established, may be considered sufficient cause to prevent bidding future projects until a satisfactory rate of progress is again established.

The starting date, contract time, or completion date for this project may be adjusted by the City of Muskegon without imposing liquidated damages upon the receipt of satisfactory documented evidence that unforeseen delays have occurred. The procedure for Progress Schedule, Contract Time Extensions, and Liquidated Damages will be pursuant to Section 108 of the MDOT 2012 Standard Specifications for Construction

Special Provision for Playground Equipment

The City of Muskegon's preferred manufacturer for playground equipment is GameTime® a PlayCore Company.

The local sales representative for GameTime® is Sinclair Recreation, Inc. The sales associate's contact information is:

Mr. Richard Sinclair
Office: (800) 444-4954
Cell: (616) 836-2446
Fax: (616) 392-8634
Email: rich@sinclair-rec.com

Playground Equipment Supplier will be responsible for the installation of the complete playground, including the 60' x 80' concrete pad and playground surface. The site work contractor will need to grade the subsurface in preparation of the concrete pad.

Attachments:

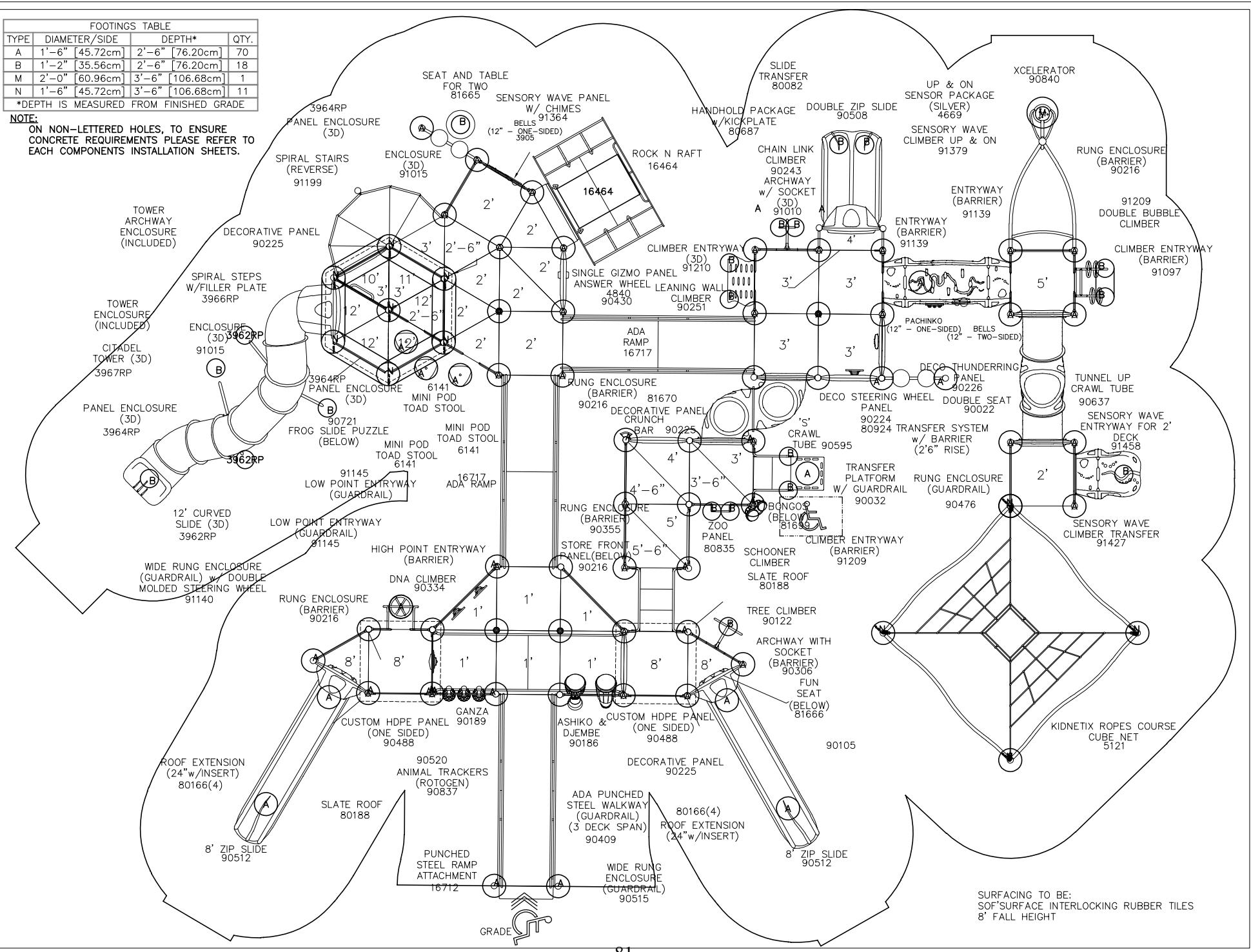
1. Playground Schematic for GameTime® Playground Equipment
2. Parts List for GameTime® Playground Equipment
3. Specifications and Installation Guidelines for GameTime® Playground Equipment (due to the size of this document, it is available for download on the City's website.

Alternate equipment manufacturers and equipment must be an approved equivalent.

FOOTINGS TABLE			
TYPE	DIAMETER/SIDE	DEPTH*	QTY.
A	1'-6" [45.72cm]	2'-6" [76.20cm]	70
B	1'-2" [35.56cm]	2'-6" [76.20cm]	18
M	2'-0" [60.96cm]	3'-6" [106.68cm]	1
N	1'-6" [45.72cm]	3'-6" [106.68cm]	11

*DEPTH IS MEASURED FROM FINISHED GRADE

NOTE:
ON NON-LETTERED HOLES, TO ENSURE CONCRETE REQUIREMENTS PLEASE REFER TO EACH COMPONENTS INSTALLATION SHEETS.



SURFACING TO BE:
SOF SURFACE INTERLOCKING RUBBER TILES
8' FALL HEIGHT

Qty	Part #	Description
1	3905	Bells 12" 1S
1	4669	Up & On Silver Sensor Package
1	4840	Answer Wheel Ass'Y
1	5121	Kidnetix – Cube Net
3	6141	Mini Pod Toad Stool
1	16464	Rock N Raft
10	16700	Ada49"Sq Punch Steel Deck
9	16701	Ada 49"Tri Punch Steel Dk
1	16712	Grade-1'-0"Deck Ramp
2	16717	147" Ada Ramp Link
4	16803	Ada Wide Triangular Platform
4	80000	49" Sq Punched Steel Deck
2	80001	49"Tri Punched Steel Deck
4	80076	Deck Flat Cap Pkg
3	80078	6"Stepped Platform
1	80082	Slide Transfer
8	80166	Roof Ext 24" W/Insert
2	80188	Slate Roof
1	80687	Handhold/Kick Plate Pkg
1	80835	Zoo Panel Encl
1	80924	Double Seat
1	81665	Seat And Table For Two
1	81666	Fun Seat
1	81670	Crunch Bar
1	81699	Bongos
1	90022	2'-6" Transfer System W/Barrier
1	90032	3' Transfer Platform W/Guardrail
1	90105	3'-6"/4' Schooner Climber
1	90122	8' Tree Climber
1	90186	Ashiko & Djembe Panel
1	90189	Ganza Panel
4	90216	Rung Enclosure W/Barrier, Above Dk

Qty	Part #	Description
1	90224	Decorative Panel Molded Steer Wheel
3	90225	Decorative Panel, Above Dk
1	90226	Decorative Panel Thunderring, Above Dk
1	90243	3' & 3'-6" Chain Link Climber
1	90251	3' Leaning Wall Climber
2	90262	4' Upright, Alum
1	90263	5' Upright, Alum
5	90264	6' Upright, Alum
4	90265	7' Upright, Alum
8	90266	8' Upright, Alum
8	90267	9' Upright, Alum
3	90268	10' Upright, Alum
4	90269	11' Upright, Alum
1	90270	12' Upright, Alum
3	90271	13' Upright, Alum
2	90272	14' Upright, Alum
8	90273	15' Upright, Alum
1	90306	Climber Archway W/Socket & Barrier
1	90334	8' Dna Climber
1	90355	Storefront Panel, Below Dk
1	90408	Ada Punched Steelway-Barrier (3 Dk)
1	90430	Decorative Panel W/Gizmo, Above Dk
1	90476	Rung Enclosure W/Guardrail, Above Dk
2	90488	Custom Panel (One Side), Above Dk
1	90508	4' Double Zip Slide, Std Dk
2	90512	8' Std Zip Slide
1	90515	Wide Rung Encl (Guardrail) (Above)
1	90520	Wide Rng Encl Dbl Mold S. Whl Gr Above
1	90595	S Crawl Tube
1	90637	Tunnel Up
1	90721	Frog Slide Puzzle-Gadget Pnl Below Dk
1	90837	Animal Tracker Roto Gen

Qty	Part #	Description
1	90840	Xcelerator
1	91010	Archway W/ Socket (3D)
2	91015	Enclosure (3D) Above Deck
1	91097	4/5' Double Bubble Climber
2	91139	Entryway – Barrier
1	91140	High Point Entryway – Barrier
2	91145	Low Point Entryway – Guardrail
1	91199	Spiral Stairs Reverse
2	91209	Climber Entryway – Barrier
1	91210	Climber Entryway - 3D
1	91364	Sensory Wave Panel w/ chimes
1	91379	PS S Wave Up & On LNK (5'-5'6)
1	91427	PS Sensory Wave Transfer (2')
1	91458	Sensory Wave Entryway for 2' Deck
1	3962RP	12' Curved Slide (W/ Slide Panel)
3	3964RP	Panel Enclosure (For 12' Tower)
1	3966RP	4' Spiral Stairs (Reverse)(W/Filler)
1	3967RP	Citadel Tower W/3D Panels
6	4044RP	Tower Extensions W/O Cap
1	4045RP	Tower Extensions W/ Cap
2	G90262	4' Upright, Galv
1	G90266	8' Upright, Galv
2	G90268	10' Upright, Galv
2	G90269	11' Upright, Galv
4	G90271	13' Upright, Galv
5	G90272	14' Upright, Galv

Special Provision for Benches

The City of Muskegon's preferred manufacturer for benches is GameTime® a PlayCore Company.

The local sales representative for GameTime® is Sinclair Recreation, Inc. The sales associate's contact information is:

Mr. Richard Sinclair
Office: (800) 444-4954
Cell: (616) 836-2446
Fax: (616) 392-8634
Email: rich@sinclair-rec.com

Bench Supplier will be responsible for the installation of the benches, including required footings.

The parts list for the proposed benches is attached.

Alternate bench manufacturers must be an approved equivalent.

GameTime Benches Part's List – Pere Marquette Park

Qty	Part #	Description
(2)	28009	Game Time - 6' P/S Bench W/Back Inground
(1)	Install	Installation - Installation of 2 Benches

PART 5 - TECHNICAL SPECIFICATIONS

Section 021200 Earthwork

Scope

The work to be performed under this section of the specifications shall include the furnishing of all labor, materials, equipment, transportation, and performing all operations involved in the excavation of all earthwork.

Part 1 - General

1.01 Related Documents

- A. Drawings and general provisions of Contract, including General and Special Conditions, apply to this Section.

1.02 Summary

- A. This Section includes the following:
 - 1. Preparing of Subgrade for Walks and Pavements
 - 2. Excavating and Backfilling of Trenches
- B. **Related Sections.** The following sections contain requirements that relate to this section.
 - 1. Section 023400 – Concrete Paving

1.03 References

- A. Michigan Department of Transportation (MDOT), *2012 Standard Specification for Construction*.
- B. State of Michigan Soil Erosion and Sedimentation Act of 1972, as amended, and all local ordinances.
- C. American Society for Testing and Materials (ASTM) applicable standards.

1.04 1.04 Definitions

- A. Excavation consists of removal of material encountered to subgrade elevations indicated, and subsequent disposal of materials removed.
- B. **Subgrade.** The undisturbed earth or the compacted soil layer immediately below granular subbase, or topsoil materials.
- C. **Subbase.** The compacted granular fill layer between the subgrade and the pavement base course material.
- D. **Structure.** Slabs, curbs or other man-made stationary features occurring above or below ground surface.

1.05 Submittals

- A. **Tests & Submittals.** See Special Conditions Section.

1.06 Quality Assurance

- A. **Codes & Standards.** Perform excavation work in compliance with applicable requirements of authorities having jurisdiction.
- B. **Testing & Inspection Services.** All required testing will be made by an independent testing laboratory retained by the Contractor.

1.07 Project Conditions

- A. **Existing Utilities.** Locate existing underground utilities in areas of excavation work. If utilities are indicated to remain in place, provide adequate means of support and protection during earthwork operations.

1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
- B. **Protection of Persons & Property.** Barricade open excavations occurring as part of this work and post with warning lights.
 1. Operate warning lights as recommended by authorities having jurisdiction.
 2. Protect utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
 3. Perform excavation by hand within drip line of large trees to remain. Protect root systems from damage or dry out to the greatest extent possible. Maintain moist condition for root system, and cover exposed roots with moistened burlap.

Part 2 - Materials

2.01 Soil Materials

- A. Satisfactory soil materials are defined as those complying with ASTM D 2487 soil classifications groups GW, GP, SW, and SP or soils meeting MDOT Specifications for Class II granular fill.
- B. **Subbase Material.** Naturally or artificially graded mixture as indicated below, unless otherwise shown differently on plans:
 1. ***Beneath Buried Piping, Conduit & Exterior Concrete Walks:*** 6 inches of clean, well-graded, thoroughly compacted sand, which meets MDOT Class II Granular Material Specifications or ASTM D 2487 Soil Classification Groups SW or SP.
- C. **Backfill & Fill Materials.** Unless otherwise called for on the Plans, satisfactory soil materials free of clay, rock or gravel larger than 2 inches in any dimensions, debris, waste, frozen materials, vegetation and other deleterious matter.

Part 3 - Construction Methods

3.01 3.01 Excavation

- A. Excavation is unclassified and includes excavation to subgrade elevations indicated, regardless of character of materials encountered.

3.02 Stability of Excavations

- A. **General.** Comply with local codes, ordinances, and requirements of agencies having jurisdiction.
- B. Slope sides of excavations to comply with local codes, ordinances, and requirements of agencies having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling.

3.03 Storage of Excavated Materials

- A. Stockpile excavated materials acceptable for backfill and fill where directed. Place, grade, and shape stockpiles for proper drainage.
 1. Locate and retain soil materials away from edge of excavations. Do not store within drip line of trees indicated to remain.

2. Dispose of excess excavated soil material and materials not acceptable for use as backfill or fill offsite.

3.04 Excavation for Structures

- A. Conform to elevations and dimensions shown within tolerance of plus or minus 0.10 foot, and extending sufficient distance from footings and foundations to permit placing and removal of concrete from work, installation of services, and other construction, and for inspection.
 1. **Excavation for Footings:** Do not disturb bottom of excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive other work.
 2. In case, through error, footing excavations are extended deeper than required, they shall be filled with additional concrete at no expense to Owner. Excavation shall not be raised by backfilling with soil.

3.05 Excavation for Pavements

- A. Cut surface under pavements to comply with cross-sections, elevations, and grades as indicated.

3.06 Trench Excavation for Pipes

- A. Excavate trenches to uniform width, sufficiently wide to provide ample working room and minimum of 6 to 9 inches of clearance on both sides of pipe or conduit.
- B. Excavate trenches and conduit to depth indicated, or required to establish indicated slope and invert elevations and to support bottom of pipe or conduit on undisturbed soil. Pipe bedding shall meet MDOT Class II Granular Material Specifications or ASTM D-2487 Soil Classification Groups SW or SP when trenching through existing granular material. Material shall be compacted to a minimum of 95% maximum dry density. Piping bedding shall meet MDOT 6AA Aggregate Specifications when trenching through existing clay materials and compacted in place. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.

3.07 Cold Weather Protection

- A. Protect excavation bottoms against freezing when atmospheric temperature is less than 35°F.

3.08 Backfill & Fill

- A. **General.** Place soil material in layers, to required subgrade elevations, for each area classification listed below using materials specified in this Specification Section.
 1. Under grassed areas, use satisfactory excavated or borrow material.
 2. Under walks and pavements, use subbase material, satisfactory excavated or borrow material, or combination.
 3. Under piping and equipment, use subbase materials where required over rock bearing surface and for correction of unauthorized excavation. Shape excavation bottom to fit bottom 90 degrees of cylinder.
- B. Backfill excavations as promptly as work permits, but not until completion of the following:
 1. Removal of concrete formwork.
 2. Removal of trash and debris from excavation.

3. Inspection, testing, approval, and recording locations of underground utilities have been performed and recorded.

3.09 Placement & Compaction

- A. **Ground Surface Preparation.** Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Plow strip, or brake up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond with existing surface.
 1. When existing ground surface has density less than that specified under "Compaction" for particular areas' classification, break up ground surface, pulverize, moisture-condition to optimum moisture content, and compact to required depth and percentage of maximum density.
- B. Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers. Backfill shall be free of frozen material and/or snow and ice.
- C. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. Compact each layer to required percentage of maximum dry density or relative dry density for each areas' classification. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
- D. Place backfill and fill materials evenly adjacent to structures, piping, or conduit to required elevations. Prevent wedging action of backfill against structures or displacement of piping or conduit by carrying material uniformly around structure, piping, or conduit to approximately same elevation in each lift.
- E. Control soil and fill compaction, providing minimum percentage of density specified for each area's classification indicated below. If soil density test indicates inadequate compaction; correct improperly compacted areas or lifts.
 1. ***Percentage of Maximum Density Requirements:*** Compact sand to not less than the following percentages of maximum density, in accordance with the Modified Proctor Test, ASTM D-1557.
 - a. Under structures, slabs, and pavements, compact top 12 inches of subgrade and each layer of backfill or fill material at 95 percent maximum density.
 - b. Under lawn or unpaved areas, compact top 6 inches of subgrade and each layer of backfill or fill material at 90 percent maximum density.
 - c. Under walkways, compact top 6 inches of subgrade and each layer of backfill or fill material at 95 percent maximum density.
 2. ***Percentage of Maximum Density Requirements:*** Compact gravel to not less than the following percentages of maximum density, in accordance with the Modified Proctor Test, ASTM D-1557.
 - a. Under pavements, compact top 6 inches of base and each layer of backfill or fill material at 98 percent maximum density.
 3. ***Moisture Control:*** Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade or layer of soil material. Apply water in minimum

quantity as necessary to prevent free water from appearing on surface during, or subsequent to, compaction operations.

- a. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
- b. Stockpile or spread soil material that has been removed because it is too wet to permit compaction. Assist drying by discing, harrowing, or pulverizing until moisture content is reduced to satisfactory value.

3.10 Grading

- A. **General.** Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated or between such points and existing grades.
- B. **Grading Outside Building Lines.** Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes and as follows:
 1. **Lawn or Unpaved Areas:** Finish areas to receive topsoil to within not more than 0.10 foot above or below required subgrade elevations.
 2. **Walks:** Shape surface of areas under walks to line, grade, and cross-section, with finish surface not more than 0.10 foot above or below required subgrade elevation.
- C. **Compaction.** After grading, compact subgrade surfaces to the depth and indicated percentages of maximum or relative density for each areas' classification.

3.11 Pavement Subbase Course

- A. **General.** Subbase course for pavements consists of placing subbase material, in layers or specified thickness, over subgrade surface to support pavement base course.
 1. Refer to Sections 023200 and 023400 for Paving Specifications.
- B. **Grade Control.** During construction, maintain lines and grades, including crown and cross-slope of subbase course.
- C. **Placing.** Place subbase course material on prepared subgrade in layers of uniform thickness, conforming to indicated cross-section and thickness. Maintain optimum moisture content form, compacting subbase material during placement operations.
 1. When compacted subbase course is indicated to be 6 inches thick or less, place material in single layer. When indicated to be more than 6 inches thick place material in equal layers, except no single layer more than 6 inches, or less than 3 inches in thickness when compacted.

3.12 Field Quality Control

- A. **Quality Control Testing During Construction.** Allow testing service to inspect and approve each subgrade and fill layer before further backfill or construction work is performed. Testing agency shall use applicable test procedures as site conditions dictate.
 1. Perform field density test by the nuclear method in accordance with ASTM D-2922.
- B. **Footing Subgrade.** For each strata of soil on which footings will be placed, perform at least one (1) test to verify required design bearing capacities.

- C. **Paved or Building Slab Areas.** Perform at least one (1) field density test of subgrade for every 2,000 square feet of paved area (Parking Lot) or building slab, but in no case fewer than three (3) tests. In each compacted fill layer, perform one (1) field density test for every 2,000 square feet of overlaying building slab or paved area, but in no case fewer than three (3) tests.
- 3.13 Erosion Control**
- A. Provide erosion control methods in accordance with requirements of authorities having jurisdiction.
- 3.14 Maintenance**
- A. **Protection of Graded Areas.** Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
 - B. Repair and reestablish grades in settled, eroded, and rutted areas to specified tolerances.
 - C. **Reconditioning Compacted Areas.** Where completed areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.
 - D. **Settling.** Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add backfill material, compact and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible.
- 3.15 Disposal of Excess & Waste Materials**
- A. **Removal from Owner's Property.** Remove waste materials, including unacceptable or excess excavated material, trash and debris and dispose of it off Owner's property.

End – Section 02110

Section 023400 Concrete Paving

Scope

The work to be performed under this section of the Specifications shall include the furnishing of all labor, materials, equipment, transportation, and performing all operations involved in the installation of Portland Cement Concrete Pavement.

Part 1 - General

1.01 Related Documents

- A. Drawings and general provisions of Contract, including General and Special Conditions, apply to this Section.

1.02 Summary

- A. This Section includes provisions for the following items:
 - 1. Concrete Sidewalks
 - 2. Surface Finish
 - 3. Curing
- B. **Related Sections.** The following sections contain requirements that relate to this section.
 - 1. Section 021200 – Earthwork

1.03 Quality Assurance

- A. To minimize irregularities in appearance and/or color of concrete, the cement, aggregates, admixtures, and water shall be obtained from the same source for the entire project.
- B. **Codes & Standards.** Comply with local governing regulations if more stringent than herein specified. All work, methods and materials shall be per MDOT *2012 Standard Specifications for Construction*, Division 6.
- C. All concrete mixtures shall come from a National Ready Mix Concrete Association (NRMCA) Certified Battery Plant.

1.04 Submittals

- A. Submit proposed design mix and strength history for each class of concrete to Owner's Representative for approval prior to commencement of work.
- B. Submit data for joint fillers, admixtures, curing compounds, and sealers.

1.05 Tests

- A. All required testing will be made by an independent testing laboratory retained by the Contractor.

1.06 References

- A. Michigan Department of Transportation (MDOT), *2012 Standard Specifications for Construction*
- B. American Society for Testing & Materials (ASTM), applicable standards
- C. American Concrete Institute (ACI), 301, 304, 306 and 318, latest editions

Part 2 - Materials

2.01 Concrete Materials

- A. Unless otherwise specified under Special Provisions, or noted on the Plans, the materials shall be of the type and quality specified below:
 - 1. **Cement:** Portland Cement, ASTM C150 Type 1A.
 - 2. **Fine Aggregate:** Clean and well graded, ASTM C33.

3. **Coarse Aggregate:** MDOT 6AA crushed gravel or stone.
4. **Water:** Clean, fresh, potable, and free of deleterious amounts of acids, alkalis, organic material, and/or dissolved or suspended substances of any kind.
5. **Admixtures:** MDOT approved calcium chloride concrete accelerator will be allowed to accelerate hardening in cold water.
6. **Exposed Aggregate for Walkways, etc.:** Shall be 5/8-inch aggregate in the gray, blue or blown color ranges. Aggregate shall meet ASTM C33 No. 67 with 60 to 65 percent of total aggregates being coarse aggregate.
7. **Retarder (for Exposed Aggregate):** Exposee-H (Chem Masters Corporation), Sikatard Rugasol (Sika Chemical Corporation), Retard (L&M Construction Chemical Company), or other approved equal concrete surface retarder. Depth of etch should be 1/8-inch to 1/4-inch deep.
8. **Sealer (for Exposed Aggregate):** Euco Super Rez Seal as manufactured by Euclid Chemical Company, Cleveland, Ohio.

2.02 Concrete Mix Design

- A. **Design of Mixture.** Concrete shall be MDOT P1 or MDOT S2.
- B. **Composition.** Concrete shall be composed of Portland cement, fine aggregate, coarse aggregate, water and approved admixture(s) to obtain strength, workability, and air entrainment as follows:
 1. **Maximum Size of Aggregate:** 1-inch.
 2. **Minimum Strength:** 3500-psi compressive strength at 28 days.
 3. **Minimum Cement Content:** 564 pounds per cubic yard, 6 sacks (94 lbs) per cubic yard.
 4. **Maximum Water Content:** Shall not exceed 6 US gallons per sack (94 lbs) of cement.
 5. **Maximum Slump:** 3-inches, plus or minus 1-inch.
 6. **Air Control:** Exterior concrete shall contain 6 percent entrained air, plus or minus 1 percent.
- C. **Rate of Hardening.** Concrete is designed assuming normal rate of hardening. When curing air is above 90°F, hardening rate shall be retarded. When air temperature is below 50°F, hardening rate shall be accelerated.

2.03 Form Materials

- A. **Concrete Curbs.** Steel or wood forms of an approved section shall be used throughout. Built-up, battered, bent, twisted, or broken forms shall be removed from the work. All forms shall be cleaned and oiled each time they are used.
- B. **Joint Filler.** ASTM D1751, bituminous type, 1/2-inch thick throughout.

2.04 Reinforcement

- A. As detailed on Drawings.

2.05 Accessories

- A. **Curing Compound.** Liquid curing-hardening compound without pigmentation, conforming to ASTM C309 Type 2.
- B. **Preformed Expansion Joint Filler.** ASTM D1751.

Part 3 - Construction Methods

3.01 Inspection

- A. Verify compacted subgrade is ready to support paving and imposed loads.
- B. Verify that gradients and elevations of base are correct.
- C. Beginning of installation means acceptance of existing conditions.

3.02 Preparation

- A. The Contractor shall take care to prevent the disruption of business activity within the project area.
- B. Moisten base to minimize absorption of water from fresh concrete.
- C. Subgrade, subbase, and base material shall be placed in same fashion as Asphalt Pavement (Section 023200).

3.03 Forming

- A. Place and secure forms to correct location, dimension, and profile. Form exposed corners tight and smooth to produce uniformly straight lines and tight edge joints.
- B. Assemble formwork to permit easy stripping and dismantling without impact, shock, or damage to concrete.
- C. Place joint fillers vertical in position, in straight lines.
- D. Coat contact surface of forms with an approved, nonresidual, low VOC, form coating compound before reinforcement is placed.

3.04 Joints

- A. **Sidewalk Paving.** Expansion jointing shall occur at intervals of no more than 40 feet, and as indicated on Drawings.
- B. **Control Joints.** Space control joints to form approximate square sections of pavement unless otherwise detailed. Score joint shall be to a depth of not less than $\frac{1}{4}$ the thickness of the slab. Score joints shall be clean and no more than $\frac{1}{4}$ -inch in width and shall be finished smooth and true to line.
- C. Jointing required in other concrete work shall be as detailed on Drawings.

3.05 Installation of Embedded Items

- A. **General.** Set and build into work, anchorage devices and other embedded items required for other work that is attached to or supported by cast-in-place concrete. Use setting drawings, diagrams, instructions, and directions provided by suppliers of items to be attached thereto.
- B. **Forms for Slabs.** Set edge forms, bulkheads, and intermediate screen strips for slabs to obtain required elevations and contours in finished surfaces. Provide and secure units to support screed strips using strike-off templates or compacting-type screeds.

3.06 Concrete Placement

- A. **Inspection.** Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast-in. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work.
- B. **General.** Comply with ACI 304, "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete", and as herein specified.
- C. **Concrete Temperature Limitations.** The concrete temperature shall be between 42°F and 90°F at the time of placement.

- D. **Elapsed Time.** The interval of time between the charging of the mixture and the completion of discharging of the concrete into the work shall not exceed that specified in the table that follows.
1. The time of charging is defined as the time the cement comes in contact with the mixing water or damp aggregates.
 2. When it is anticipated that the time interval between charging and completion of discharge may exceed 30 minutes, the concrete shall be continuously agitated.

<i>Maximum Time Interval between Charging of Mixer & Placing of Concrete, Minutes</i>			
<i>Type of Unit</i>	<i>Concrete Temperature (ASTM C 1064) °F</i>		
	<i>< 60°</i>	<i>60° - 84°</i>	<i>> 84°</i>
Open Top Trucks	30	30	30
Open Top Agitating Units	60	45	30
Closed Top Agitating Units & Truck Mixers	90	60	45
Truck Mixers & Closed Top Agitating Units with Concrete Containing Water-Reducing Retarding Mixture	120	90	70

- E. **Additional Water at Placement Site.** For concrete transported in truck mixtures, if additional mixing water is required to obtain the specified slump, and the truck mixer is not loaded in excess of its rated mixing capacity, water may be added. After all water is added, a minimum of 30 revolutions of the truck mixer drum at mixing speed will be required before discharge of any concrete. The additional water shall be added and the additional mixing completed at the site of the work within the maximum time interval as specified under MDOT 2012 Standard Specifications for Construction, Subsection 601.03.C.3.
- F. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete that has hardened sufficiently to cause the formation of seams or planes of weakness. If section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete to avoid segregation at its final location.
- G. **Cold-Weather Placing.** Comply with provision of ACI 306 and as follows. Protect concrete from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
1. **Heating of Ingredients for Concrete:** The ingredients for concrete shall be heated whenever necessary to produce concrete having a temperature of not less than 42°F. When the concrete ingredients are heated the concrete temperature shall not exceed 80°F, except when placed in insulated forms, when the temperature shall not exceed 70°F.

- a. Heated concrete shall be obtained by heating the water or aggregates, or both. Aggregates shall not be heated over 148°F. The water shall be mixed with the aggregates before the cement is added.
 - b. The aggregates shall be free of ice and frozen lumps at time of batching. Aggregates in stockpiles or bins shall be heated by steam or hot water coils, live steam, or by indirect hot air. Heating by direct flame will not be permitted for coarse aggregate. Accumulated condensation from heating shall be removed before batching operations to maintain slump within allowed limits.
2. **Concrete Accelerators:** When the air temperature is below 42°F, the Contractor may request authorization to use an accelerating admixture to accelerate the hardening of the concrete.
- a. Calcium chloride may be added manually as a solution or in a lump-free flake or pellet form. The method used shall ensure that the material is distributed uniformly and does not come in direct contact with dry cement.
 - b. Premixed liquid calcium chloride solutions delivered to the job shall meet the requirements below. Job-mixed calcium chloride solutions shall be mixed in the presence of the Inspector.
 - c. When the use of a calcium chloride admixture is authorized and the air temperature in the shade and away from artificial heat is from 38°F to 42°F, calcium chloride shall be added at the following rates for each 45kg of cement in the batch.
 - 77 percent Grade Calcium Chloride 450 g
 - 94 percent Grade Calcium Chloride 360 g
 - Job-Mixed Solutions 1L *
 - Premixed Solutions 0.76 L
- * Note: A liter of solution shall contain 475 g of 77 percent Grade, or 380 g of 94 percent Grade, Calcium Chloride.

- H. **Hot-Weather Placing.** When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.
- I. **Water-Reducing Admixtures.** Concrete mixtures containing an admixture shall meet the requirements for strength, slump, and air content as required for the respective grade of concrete without an admixture.
 - 1. When admixture is used, the dosage used shall not be less than the amount indicated on the MDOT's List of Approved Admixtures found in the Materials Sampling Guide. Admixture dosage rates shall be based on the total cementitious material (cement plus fly ash or ground granulated blast-furnace slag when used) in the concrete.
- J. **Air Content.** The use of air-detaining admixtures will not be permitted. All concrete shall be air-entrained and shall contain 6.5 ± 1.5 percent entrained air, except as follows:

1. For concrete furnished for placement by slip form methods and having a slump of 1.5-inch or less, the minimum entrained-air content permitted will be 4.5 percent.
 2. The air content of freshly mixed concrete will be determined by the Department's modification of Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method, ASTM C 231, or by the Volumetric Method, ASTM C 173. Samples will be taken by Department methods.
 3. The air content of freshly mixed concrete containing slag or other highly porous coarse aggregate will be determined by the volumetric methods, ASTM C 173. Samples will be taken by MDOT methods.
 4. When the Contractor adjusts the amount of air-entraining admixture used, the actual amount used per sack of cement or per batch of concrete shall be recorded on the first delivery ticket following the adjustment. The Contractor shall make such adjustments in the amount of air-entraining admixture used per batch as to secure the specified air content in the concrete.
 5. When concrete having low air content is received at the site of the work in truck mixers, the Contractor may add additional air-entraining admixture at the site, with additional mixing as necessary, until adjustments can be made at the batching plant.
- K. **Slump.** The slump of concrete mixes will be determined by the slump cone test ASTM C 143.
1. The slump of concrete shall not exceed 3-inch for all concrete pavement mixtures or 6-inch with addition of approved water reducer admixture.

3.07 Concrete Finishing

- A. **Standard Concrete Finish.** After striking off and consolidating concrete, smooth surface by screeding and floating. Use hand methods only where mechanical floating is not possible. Adjust floating to compact surface and produce uniform texture.
1. After floating, test surface for trueness with a 10 foot straightedge. Distribute concrete as required to remove surface irregularities, and refloat repaired areas to provide a continuous smooth finish.
 2. Work edges of slabs, gutters, back top edge of curb, and formed joints with an edging tool, and round to ¼-inch radius, unless otherwise indicated. Eliminate tool marks on concrete surface.
 3. After completion of floating and troweling when excess moisture or surface sheen has disappeared, complete surface finish, as follows:
 - a. Broom finish, by drawing a fine-hair broom across concrete surface, perpendicular to line of traffic. Repeat operation, if required, to provide a fine line texture.
 - b. On inclined slab surfaces, provide a coarse, non-slip finish by scoring surface with a stiff-bristled broom, perpendicular to line of traffic.
 - c. Burlap finish, by dragging a seamless strip of damp burlap across concrete, perpendicular to line of traffic. Repeat operation to provide a gritty texture.

- B. **Exposed Aggregate Concrete Finish.** Steel trowel smooth and even, with positive pitch to drain water. Spray, roll on or brush on retarder according to manufacturers recommendations. Moist cure immediately. Place net burlap fog spray as soon as retarder is applied. Keep surface damp until concrete is clean on following day. Remove retarded surface mortar with stiff brush and water flush with hose. Resume moist curing for additional 3 days after surface mortar has been removed. Then clean concrete with light acid wash, rinse with water and allow to dry thoroughly. Seal exposed surface with sealer. Allow 30 day curing time free from any traffic.
- C. Do not remove forms for 24 hours after concrete has been placed. After form removal, clean ends of joints and point up any minor honeycombed areas. Remove and replace areas or sections with major defects.

3.08 Curing

- A. Protect and cure finished concrete paving, complying with manufacturer's instructions. Use membrane-forming curing and sealing compound or approved moist-curing methods.

3.09 Quality Control Testing During Construction

- A. **Sampling Fresh Concrete.** ASTM C 172, except modified for slump to comply with ASTM C 94.
 1. ***Compression Strength Specimen:*** ASTM C 31, 1 set of 3 cylinders for each 100 cubic yards, or fraction thereof, of each mixture design of concrete placed in any 1 day. If required by the Owner, provide 2 additional sets of cylinders and store on site to be used later if required for verification of in-place concrete strength.
 2. ***Slump:*** ASTM C 143, 1 test at point of discharge for each compressive strength specimen or whenever consistency of concrete appears to vary.
 3. ***Air Content:*** ASTM C 173, volumetric method for lightweight or normal weight concrete; ASTM C 231, pressure method for normal weight concrete, 1 test at point of discharge for each compressive strength specimen and for each batch whenever consistency of concrete appears to vary.
 4. ***Concrete Temperature:*** 1 test at point of discharge for each compressive strength specimen and whenever consistency of concrete appears to vary.
 5. ***Compressive Strength Tests:*** ASTM C 39, 1 specimen tested at 7 days, 2 specimens tested at 28 days.

3.10 Cleanup

- A. All excess and waste material shall be disposed of legally off-site.
- B. Upon completion of work, leave area in clean condition.

End – Section 023400

**SECTION 00 0101
PROJECT TITLE PAGE**

**RESTROOM ADDITION FOR:
CITY OF MUSKEGON
PERE MARQUETTE PARK
3510 CHANNEL DRIVE
MUSKEGON, MI 49441**

**CONSTRUCTION HANDBOOK
A/E PROJECT NUMBER: 0404-15**

**PREPARED BY:
CONCEPT DESIGN STUDIO, INC.**

END OF SECTION

**SECTION 00 0102
PROJECT INFORMATION**

PART 1 GENERAL

1.01 PROJECT IDENTIFICATION

- A. A/E Project Number: 0404-15
- B. Project Name: Pere Marquette Restroom Addition, located at:
3510 Channel Drive.
Muskegon, MI 49441.
- C. The Owner, hereinafter referred to as City: City of Muskegon
 - 1. 933 Terrace Street
 - 2. Muskegon, MI 49443
- D. The Civil Engineer, hereinafter referred to as the Engineer: Westshore Consulting
 - 1. 2534 Black Creek Road
 - 2. Muskegon, MI 49444
 - 3. 231.777.3447
- E. The Architect, hereinafter referred to as the Architect: Concept Design Studio, Inc.
 - 1. 800 E. Ellis Road, Suite 508
 - 2. Norton Shores, Mi 49441
 - 3. 231.799.4838

1.02 PROCUREMENT TIMETABLE

- A. The City reserves the right to change the schedule or terminate the entire procurement process at any time.

1.03 PROCUREMENT DOCUMENTS

- A. Availability of Documents: Complete sets of procurement documents may be obtained:
- B. Documents may be viewed at TBD.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

**SECTION 00 0110
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END OF SECTION

**SECTION 01 2300
ALTERNATES**

PART 1 GENERAL

1.01 ACCEPTANCE OF ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at City's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

1.02 SCHEDULE OF ALTERNATES

- A. See Sheet T1.01 for description of each Alternate.
- B. Alternate No. 1 - Existing Plumbing Fixtures:
- C. Alternate No. 2 - Standing Seam Metal Roof:
- D. Alternate No. 3 - LED Lighting:
- E. Alternate No. 4 - Finishes:

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SITE CONDITIONS

- A. Bidders should visit the site and acquaint themselves with all existing conditions. Prior to bidding, bidders may make their own subsurface investigation to satisfy themselves as to site and subsurface condition, but all such investigations shall be performed only under time schedules and arrangements approved in advance by the Owner.
- B. All contractors shall examine the site of the construction for ground structures and all other pertinent conditions under which work is to be performed.
- C. Exercise extreme caution while performing work in the area of existing underground utility services and/or recently installed under ground work.
- D. Locate all underground utilities by careful hand excavation and provide all necessary and proper protection from damage during construction operations. Where underground services, utilities, structures, etc. are located on the drawings or given at the site, they are based on available records but are not guaranteed to be complete or correct. There are merely available for assistance.
- E. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the Owner immediately for directions as to proceed. Cooperate with the Owner and public and private utility companies in keeping their respective services and facilities in operation. Repair damaged utilities to the satisfaction of the utility Owner.
- F. Environmental report available upon request.

1.02 CHECKING LINES AND LEVELS

- A. All contractors shall thoroughly examine the existing conditions and be familiar with work to be performed as hereinafter specified and as outlined on Drawings.
- B. Each Contractor shall compare all levels given on drawings with actual levels and shall call attention to discrepancies if any occur.
- C. Each Contractor shall verify and document with the Architect/Engineer all lines and levels and be responsible for the proper location of all their work.

1.03 SAFETY

- A. The following material does not, in any way, relieve the Subcontractor or their employees, agents, or subcontractors of any safety responsibility. The Subcontractor shall assure compliance of their subcontractors or agents to site, Federal, State, and Local regulations. It does not relieve the Subcontractor of liability for negligence that would apply in the absence of this material. A Subcontractor shall at all times use good judgment and discretion about safety.
- B. The following safety information is supplementary to the information contained in the General Conditions and does not intend to take precedence over same.
- C. The Subcontractors and Subcontractor supervision unable or unwilling to secure safe performance by their employees are not acceptable, and will be removed from the project at the request of the General Contractor.
- D. Subcontractors and their subcontractor employees, who exhibit a poor attitude toward safe work practices or procedures will not be tolerated, and will be removed from the project at the request of the General Contractor.
- E. The requirements of the Michigan Occupational Safety and Health Act (MIOSHA) absolutely will be adhered to or the Subcontractor will furnish the General Contractor with an written variance from the MIOSHA authority.

1.04 CLEANING

- A. Included: Throughout the construction period, each Contractor shall maintain the site in a standard of cleanliness as described in this section.
- B. Related Work Described Elsewhere: In addition to standard described in this Section, comply with all requirements for cleaning up as described in various other sections of these specifications.
- C. Inspection: Conduct daily inspection, and more often if necessary, to verify that requirements of cleanliness are being met.
- D. Retain all stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the require protection of materials.
- E. Do not allow the accumulation of scrap, debris, waste material, and other items not required for construction of this work.
- F. Site: Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.
- G. Final Cleaning: Unless otherwise specifically directed, each Contractor is responsible for cleaning his own area/work.
- H. Site: Unless otherwise specifically directed, broom clean all paved areas on the site and all public paved areas directly adjacent to the site. Completely remove all resultant debris. Utilize magnetic roller around perimeter of building to pick up miscellaneous debris.
- I. Building: As necessary to his work, the Contractor shall provide services to vacuum all carpet and hard surface areas, damp mop all hard surface areas of floor, wipe with damp cloth all tiles and hard surface areas of walls and ceiling. Vacuum all construction dust off wood trim, millwork and equipment, clean windows and window frames (including removal of stickers/tags not required by codes), remove construction dust and damp mop all light fixtures and other suspended items.
- J. Cleaning Approval: Approval of final cleaning will be subject to Architect/Engineer(s) walk-through and punch list(s).

1.05 PROJECT RECORD DOCUMENTS

- A. Throughout progress of the work, each contractor shall maintain an accurate record of all changes in the Contract Documents, as described below.
- B. Upon completion of the work of this contract, transfer the recorded changes to a set of Record Documents, as described below.
- C. General: Each contractor shall delegate the responsibility for maintenance of Record Documents to one person on the contractor's staff as approved in advance by the Architect/Engineer.
- D. Accuracy of Records: Thoroughly coordinate all changes within the Record Documents, making adequate and proper entries on each page of specifications and each sheet of drawings and other documents where such entry is required to properly show the change. Accuracy of records shall be such that a future search for items shown in the Contract Documents may reasonably rely on information obtained from the approved Record Documents.
- E. Timing of Entries: Make all entries within 24 hours after receipt of information.
- F. Final Submittal: Prior to submitting Request for Final Payment, submit the final Record Documents of the Architect/Engineer and secure his approval.

1.06 FINAL RECORD DOCUMENTS

- A. General: The purpose of the final Record Documents is to provide factual information regarding all aspects of the work, both concealed and visible, to enable future modification of

design to proceed without lengthy and expensive site measurement, investigations, and examination.

- B. Transfer of Data to Other Documents: If the Documents have been kept clean successfully during progress of the Work, and if entries have been sufficiently orderly thereon to the approval of the Architect/Engineer, the job-set of those Documents will be accepted by the Architect/Engineer at the Architect/Engineer's usual charge for reproduction; carefully transfer the change data to the new copy and to the approval of the Architect/Engineer.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.
 - 2. Shop drawings.
 - 3. Samples for selection.
 - 4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.02 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for City.

3.03 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- D. Submit for City's benefit during and after project completion.

3.04 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.

- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.05 SUBMITTAL PROCEDURES

- A. General Requirements:
 - 1. Use a single transmittal for related items.
 - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
 - 3. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
 - 4. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 - 5. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - 6. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
 - a. Send submittals in electronic format via email to Architect.
 - 7. Schedule submittals to expedite the Project, and coordinate submission of related items.
 - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
 - 8. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
 - 9. Provide space for Contractor and Architect review stamps.
 - 10. When revised for resubmission, identify all changes made since previous submission.
 - 11. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
 - 12. Submittals not requested will not be recognized or processed.

3.06 SUBSTITUTIONS

- A. Approval is required for all substitutions.
- B. The Contract is based on the standards of quality established in the Contract Documents.
- C. All products proposed for use, including those specified by required attributes and performance shall require approval by the Owner before being incorporated into the work.
- D. Do not substitute materials, equipment, or methods unless such substitution has been specifically approved for this work by the Owner.
- E. Request for approval shall be submitted to the Architect/Owner a minimum of 10 days prior to bid date.

END OF SECTION

**SECTION 01 6000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

END OF SECTION

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.02 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.

PART 3 EXECUTION

2.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
- B. Do not begin removal until built elements to be salvaged or relocated have been removed.
- C. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- D. If hazardous materials are discovered during removal operations, stop work and notify Architect and City; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- E. Perform demolition in a manner that maximizes salvage and recycling of materials.

2.02 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.

2.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
- B. Remove existing work as indicated and as required to accomplish new work.
- C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, and _____): Remove existing systems and equipment as indicated.
- D. Protect existing work to remain.

2.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.

END OF SECTION

SECTION 03 2000
CONCRETE REINFORCING

PART 1 GENERAL

1.01 SUBMITTALS

- A. Shop Drawings: Comply with requirements of ACI SP-66. Include bar schedules, shapes of bent bars, spacing of bars, and location of splices.
- B. Manufacturer's Certificate: Certify that reinforcing steel and accessories supplied for this project meet or exceed specified requirements.

1.02 QUALITY ASSURANCE

PART 2 PRODUCTS

2.01 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).
 - 1. Plain billet-steel bars.
 - 2. Unfinished.
- B. Reinforcing Steel: ASTM A706/A706M, deformed low-alloy steel bars.
 - 1. Unfinished.
- C. Steel Welded Wire Reinforcement (WWR): Galvanized, deformed type; ASTM A1064/A1064M.
 - 1. Form: Flat Sheets.
 - 2. WWR Style: 6 x 12-W12 x W5.

2.02 FABRICATION

- A. Fabricate concrete reinforcing in accordance with CRSI (DA4) - Manual of Standard Practice.
- B. Locate reinforcing splices not indicated on drawings at point of minimum stress.

PART 3 EXECUTION

3.01 PLACEMENT

- A. Place, support and secure reinforcement against displacement. Do not deviate from required position.
- B. Do not displace or damage vapor barrier.
- C. Comply with applicable code for concrete cover over reinforcement.

END OF SECTION

SECTION 03 3000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
- B. Test Reports: Submit report for each test or series of tests specified.
- C. Submit all concrete mix proportions to the Engineer for Review prior to placing concrete. Proportion mix designs are defined in ACI 301, and include the following information for each concrete mix design:
 - 1. Method used to determine the proposed mix design.
 - 2. Gradation and quality of fine and coarse aggregates.
 - 3. Proportions of all ingredients including all admixtures added either at the time of batching or at the job site.
 - 4. Water-cementitious materials ratio.
 - 5. Slump - ASTM C143.
 - 6. Unit weight of Concrete - ASTM C138.
 - 7. Strength at 28 days - ASTM C39.
 - 8. Air Content - ASTM C231.
- D. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.

1.02 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and ACI 318.
- B. Follow recommendations of ACI 305R when concreting during hot weather.
- C. Follow recommendations of ACI 306R when concreting during cold weather.
- D. Follow standards of the American Society for Testing and Materials (ASTM), as cited.
- E. Follow recommendations of ACI-347 'Recommended Practice for Concrete Formwork', by the American Concrete Institute.
- F. Concrete Compression Samples.
 - 1. Take a minimum of four cylinders for each 50 cubic yards, or fraction thereof, of each mix design of concrete placed in each day.
 - 2. Sample Concrete per ASTM C172, mold cylinders per ASTM C31, cure cylinders for a 28 day strength, verification per ACI 301.
 - 3. Compression Tests:
 - a. Test 1 cylinder at 7 days.
 - b. Test 2 cylinders at 28 days.
 - c. Hold 1 cylinder in reserve for future testing, in case initial test cylinders do not meet intended design strength.
 - d. Discard reserve cylinder after 56 days, unless notified by Engineer that additional tests would be needed.
- G. Air Content Testing:
 - 1. Sample freshly mixed concrete per ASTM C173 and conduct 1 air content test per ASTM C231 or ASTM C173 for each premixed truck, w/ air entrained concrete delivered to the project.
- H. Evaluation and Acceptance of Concrete, ACI 301:
 - 1. Concrete Compression Tests will be evaluated by the engineer in accordance with ACI 301.

2. If the number of tests conducted is inadequate for evaluation of the concrete or test results for any type of concrete fail to meet the specified strength requirements, core tests may be required as directed by the Engineer, and shall be conducted per ACI 301.
 3. Should the tested, hardened concrete not meet the specifications, the Contractor is to pay for the Coring / Testing of the hardened concrete and / or the removal and replacement of the unacceptable materials.
- I. Compression Strength Reports:
1. Concrete supplier.
 2. Mix number and specification strength.
 3. Source and type of cement.
 4. Aggregate and admixtures used.
 5. Water content and water / cement ratio.
 6. Amount and the location of the pour in the structure.
 7. Truck number and time of transit.
 8. Time Mixed on the job.
 9. Time placement was started and completed.
 10. Amount of water added and water / cement ratio.
 11. Air content.
 12. Slump.
 13. Cement content.
 14. Method of concrete curing.
 15. Distinguish laboratory or on-site curing.
 16. Compression strength.
 17. Type of Fracture.
 18. Age at Testing.
 19. A statement as to whether the concrete complies with the specifications.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Formwork Design and Construction: Comply with guidelines of ACI 347R to provide formwork that will produce concrete complying with tolerances of ACI 117.
- B. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
 1. Form Facing for Exposed Finish Concrete: Contractor's choice of materials that will provide smooth, stain-free final appearance.
 2. Form Ties: Cone snap type that will leave no metal within 1-1/2 inches of concrete surface.

2.02 REINFORCEMENT MATERIALS

- A. Comply with requirements of Section 03 2000.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150/C150M, Type I - Normal Portland type.
- B. Fine and Coarse Aggregates: ASTM C33/C33M.
- C. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

2.04 ADMIXTURES

- A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.
- B. Air Entrainment Admixture: ASTM C260/C260M.
- C. Water Reducing Admixture: ASTM C494/C494M Type A.

2.05 ACCESSORY MATERIALS

- A. Underslab Vapor Retarder: Sheet material complying with ASTM E1745, Class A; stated by manufacturer as suitable for installation in contact with soil or granular fill under concrete slabs. The use of single ply polyethylene is prohibited.

2.06 BONDING AND JOINTING PRODUCTS

- A. Slab Construction Joint Devices: Combination keyed joint form and screed, galvanized steel, with rectangular or round knockout holes for conduit or rebar to pass through joint form at 6 inches on center; ribbed steel stakes for setting.

2.07 CURING MATERIALS

- A. Curing Compound, Naturally Dissipating: Clear, water-based, liquid membrane-forming compound; complying with ASTM C309.

2.08 CONCRETE MIX DESIGN

- A. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.
- B. Normal Weight Concrete:
 - 1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 3,000 pounds per square inch.

PART 3 EXECUTION

3.01 PREPARATION

- A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.
- B. Prepare existing concrete surfaces to be repaired according to ICRI 310.2R, _____.
- C. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in accordance to bonding agent manufacturer's instructions.

3.02 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304R.

3.03 FLOOR FLATNESS AND LEVELNESS TOLERANCES

- A. Minimum F(F) Floor Flatness and F(L) Floor Levelness Values:
 - 1. Exposed to View and Foot Traffic: F(F) of 20; F(L) of 15, on-grade only.
- B. Measure F(F) Floor Flatness and F(L) Floor Levelness in accordance with ASTM E1155 (ASTM E1155M), within 48 hours after slab installation; report both composite overall values and local values for each measured section.
- C. Correct the slab surface if composite overall value is less than specified and if local value is less than two-thirds of specified value or less than F(F) 13/F(L) 10.
- D. Correct defects by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.04 CONCRETE FINISHING

- A. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in height.
- B. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
 - 1. Decorative Exposed Surfaces: Trowel as described in ACI 302.1R; use steel-reinforced plastic trowel blades instead of steel blades to avoid black-burnish marks; decorative exposed surfaces include surfaces to be stained or dyed, pigmented concrete, surfaces to receive liquid hardeners, surfaces to receive dry-shake hardeners, surfaces to be polished, and all other exposed slab surfaces.

3.05 CURING AND PROTECTION

- A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

END OF SECTION

SECTION 04 2600
SINGLE-WYTHE UNIT MASONRY

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Provide data for decorative and pre-faced masonry units and fabricated wire reinforcement.

1.02 QUALITY ASSURANCE

- A. Comply with provisions of TMS 402/602, except where exceeded by requirements of the contract documents.

1.03 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards and as follows:
 - 1. Size: Standard units with nominal face dimensions of 16 x 8 inches and nominal depths as indicated on drawings for specific locations.
 - 2. Load-Bearing Units: ASTM C90, normal weight.
 - a. Hollow block, as indicated.
 - 3. Non-Loadbearing Units: ASTM C129.
 - a. Hollow block, as indicated.

2.02 MORTAR AND GROUT MATERIALS

- A. Masonry Cement: ASTM C91/C91M, Type N.
- B. Portland Cement: ASTM C150/C150M, Type I; color as required to produce approved color sample.
- C. Hydrated Lime: ASTM C207, Type S.
- D. Mortar Aggregate: ASTM C144.
- E. Grout Aggregate: ASTM C404.
- F. Water: Clean and potable.

2.03 REINFORCEMENT AND ANCHORAGE

- A. Reinforcing Steel: ASTM A615/A615M, Grade 40 (40,000 psi) yield strength, deformed billet bars; galvanized.
- B. Single Wythe Joint Reinforcement: Truss type; ASTM A1064/A1064M steel wire, hot dip galvanized after fabrication to ASTM A153/A153M, Class B; 0.1483 inch side rods with 0.1483 inch cross rods; width as required to provide not more than 1 inch and not less than 1/2 inch of mortar coverage on each exposure.

2.04 ACCESSORIES

- A. Flashing - Weep - Vent System: Polypropylene pan and bridge unit with polyester mesh drainage mats and bug guards; wall system size: 8 inch.

PART 3 EXECUTION

3.01 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.

- C. Concrete Masonry Units:
 - 1. Bond: Running.
 - 2. Coursing: One unit and one mortar joint to equal 8 inches.
 - 3. Mortar Joints: Concave.

3.02 PLACING AND BONDING

- A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.
- B. Lay hollow masonry units with face shell bedding on head and bed joints.

3.03 REINFORCEMENT AND ANCHORAGE

- A. Install horizontal joint reinforcement 16 inches on center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches.

3.04 MASONRY FLASHINGS

- A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted.
- B. Lap end joints of flashings at least 6 inches, minimum, and seal watertight with flashing sealant/adhesive.

3.05 LINTELS

- A. Install reinforced unit masonry lintels over openings where steel or precast concrete lintels are not scheduled.

3.06 GROUTED COMPONENTS

- A. Place and consolidate grout fill without displacing reinforcing.
- B. At bearing locations, fill masonry cores with grout for a minimum 12 inches either side of opening.

END OF SECTION

**SECTION 06 1000
ROUGH CARPENTRY**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- B. Lumber fabricated from old growth timber is not permitted.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16):
 - 1. Species: Any allowed under grading rules.
 - 2. Grade: No. 2.
- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

2.03 CONSTRUCTION PANELS

- A. Roof Sheathing: Oriented strand board wood structural panel; PS 2.
 - 1. Grade: Structural 1 Sheathing.
 - 2. Bond Classification: Exposure 1.
 - 3. Performance Category: 5/8 PERF CAT.
 - 4. Span Rating: 40/20.
 - 5. Edges: Tongue and groove.

2.04 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
- B. Building Paper: Water resistant Kraft paper.

2.05 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWWA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.02 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Install structural members full length without splices unless otherwise specifically detailed.
- C. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWC (WFCM) Wood Frame Construction Manual.

3.03 INSTALLATION OF CONSTRUCTION PANELS

- A. Subflooring/Underlayment Combination: Glue and nail to framing; staples are not permitted.
- B. Roof Sheathing: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
 - 1. Glue and screw to framing due to high wind location.

END OF SECTION

SECTION 06 1753
SHOP-FABRICATED WOOD TRUSSES

PART 2 PRODUCTS

1.01 TRUSSES

- A. Wood Trusses: Designed and fabricated in accordance with TPI 1 and TPI DSB-89 to achieve structural requirements indicated.
 - 1. Connectors: Steel plate.
 - 2. Structural Design: Comply with applicable code for structural loading criteria.
 - a. Truss and components to be designed for proper Exposure Factor due to High Wind Location.
 - 3. Roof Deflection: 1/240, maximum.

1.02 MATERIALS

- A. Lumber:
 - 1. Moisture Content: Between 7 and 9 percent.
 - 2. Lumber fabricated from old growth timber is not permitted.
- B. Steel Connectors: Hot-dipped galvanized steel sheet, ASTM A653/A653M Structural Steel (SS) Grade 33/230, with G90/Z275 coating; die stamped with integral teeth; thickness as indicated.

1.03 ACCESSORIES

- A. Wood Blocking, Bridging, Plates, and Miscellaneous Framing: Softwood lumber, any species, construction grade, 19 percent maximum and 7 percent minimum moisture content.
- B. Fasteners: Electrogalvanized steel, type to suit application.

PART 3 EXECUTION

2.01 ERECTION

- A. Install trusses in accordance with manufacturer's instructions and TPI DSB-89 and TPI BCSI 1; maintain a copy of each TPI document on site until installation is complete.
- B. Set members level and plumb, in correct position.

END OF SECTION

**SECTION 06 2000
FINISH CARPENTRY**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

2.02 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.

2.03 LUMBER MATERIALS

- A. Softwood Lumber: Cedar species, Rough sawn, maximum moisture content of 6 percent.

2.04 ACCESSORIES

- A. Primer: Alkyd primer sealer.
- B. Wood Filler: Solvent base, tinted to match surface finish color.

2.05 FABRICATION

- A. Shop assemble work for delivery to site, permitting passage through building openings.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.
- B. Set and secure materials and components in place, plumb and level.
- C. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

END OF SECTION

SECTION 07 0150.19
PREPARATION FOR RE-ROOFING

PART 1 GENERAL

1.01 PRICE AND PAYMENT PROCEDURES

- A. See Section 01 2200 - Unit Prices, for additional unit price requirements.
 - 1. Repair Existing Roof Wood Decking:
 - a. Basis of Measurement: By the square foot.

PART 2 PRODUCTS

2.01 COMPONENTS

- A. Refer to following sections for additional information on components relating to this work:
 - 1. Replacement and removal of existing roofing system in preparation for entire new roofing system, refer to Section 07 3113.
 - 2. Remove existing flashing and counterflashings in preparation for replacement of these materials as part of this work, refer to Section 07 6200 for material requirements.

2.02 MATERIALS

- A. Temporary Roofing Protection Materials:
 - 1. Contractor's responsibility to select appropriate materials for temporary protection of roofing areas as determined necessary for this work.
- B. Roofing Recover Materials:
 - 1. Contractor's responsibility to select appropriate materials for roofing re-cover as determined necessary for this work.

PART 3 EXECUTION

3.01 MATERIAL REMOVAL

- A. Remove only existing roofing materials that can be replaced with new materials the same day.
- B. Remove metal counter flashings.
- C. Remove damaged insulation and fasteners, cant strips, blocking.
- D. Repair existing wood deck surface to provide smooth working surface for new roof system.

3.02 INSTALLATION

- A. Coordinate scope of this work with requirements for installation of new roofing system, refer to Section 07 3113 for additional requirements.

END OF SECTION

SECTION 07 3113
ASPHALT SHINGLES

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Provide data indicating material characteristics.
- B. Provide Color Board of manufacturers standard colors for selection by Architect.

1.02 QUALITY ASSURANCE

1.03 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Provide lifetime manufacturer's warranty for coverage against black streaks caused by algae.
- D. Provide five year manufacturer's warranty for wind damage.

PART 2 PRODUCTS

2.01 ASPHALT SHINGLES

- A. Asphalt Shingles: Asphalt-coated glass felt, mineral granule surfaced, complying with ASTM D3462/D3462M.
 - 1. Fire Resistance: Class A, complying with ASTM E108.
 - 2. Wind Resistance: Class A, when tested in accordance with ASTM D3161/D3161M.
 - 3. Warranted Wind Speed: Not greater than 115 mph.

2.02 SHEET MATERIALS

- A. Eave Protection Membrane:
 - 1. Eave Protection Membrane: Self-adhering polymer-modified asphalt sheet complying with ASTM D1970/D1970M; 40 mil total thickness; with strippable treated release paper and polyethylene sheet top surface.
- B. Underlayment: Self-adhering rubber-modified asphalt sheet complying with ASTM D1970/D1970M; 22 mil total thickness; with strippable release film and woven polypropylene sheet top surface.

2.03 ACCESSORIES

- A. Roofing Nails: Standard round wire shingle type, galvanized steel, stainless steel, aluminum roofing nails, or copper roofing nails, minimum 3/8 inch head diameter, 12 gage, 0.109 inch nail shank diameter, 1-1/2 inch long and complying with ASTM F1667.
 - 1. Roofing Nails must be utilized per manufacturers recommendation for High Wind Exposure Location.

2.04 METAL FLASHINGS

- A. Metal Flashings: Provide sheet metal eave edge, gable edge, ridge, and ridge vents.
- B. Sheet Metal: Galvanized steel, as specified in Section 07 6200.

PART 3 EXECUTION

3.01 INSTALLATION - EAVE PROTECTION MEMBRANE

- A. Install eave protection membrane from eave edge to minimum 4 ft up-slope beyond interior face of exterior wall.

3.02 INSTALLATION - SHINGLES

- A. Install shingles in accordance with manufacturer's instructions manufacturer's instructions and NRCA (RM) applicable requirements.

- B. Place shingles in straight coursing pattern with 5 inch weather exposure to produce double thickness over full roof area, and provide double course of shingles at eaves.

END OF SECTION

SECTION 07 4113
METAL ROOF PANELS: ALTERNATE 02

PART 1 GENERAL

1.01 SUBMITTALS

- A. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
- B. Selection Samples: For each roofing system specified, submit color chips representing manufacturer's full range of available colors and patterns.

1.02 WARRANTY

- A. Finish Warranty: Provide manufacturer's special warranty covering failure of factory-applied exterior finish on metal roof panels and agreeing to repair or replace panels that show evidence of finish degradation, including significant fading, chalking, cracking, or peeling within specified warranty period of five years from Date of Substantial Completion.
- B. Waterproofing Warranty: Provide manufacturer's warranty for weathertightness of roofing system, including agreement to repair or replace roofing that fails to keep out water within specified warranty period of five years from Date of Substantial Completion.

PART 2 PRODUCTS

2.01 ARCHITECTURAL METAL ROOF PANELS

- A. Architectural Metal Roofing: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.
- B. Metal Panels: Factory-formed panels with factory-applied finish.
 - 1. Steel Panels:
 - a. Steel Thickness: Minimum 24 gage (0.024 inch).
 - 2. Profile: Standing seam, with minimum 1.0 inch seam height; concealed fastener system for field seaming with special tool.
 - 3. Texture: Smooth.
 - 4. Length: Full length of roof slope, without lapped horizontal joints.
 - 5. Width: Maximum panel coverage of 24 inches.

2.02 ATTACHMENT SYSTEM

- A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.
 - 1. Attachment system shall follow manufacturers recommendation for High Wind Exposure Location.

2.03 FINISHES

- A. Fluoropolymer Coating System: Manufacturer's standard multi-coat thermocured coating system, including minimum 70 percent fluoropolymer color topcoat with minimum total dry film thickness of 0.9 mil; color and gloss to match sample.

2.04 ACCESSORIES

- A. Underlayment for Wood Substrate: ASTM D226/D226M roofing felt, perforated type; covered by water-resistant rosin-sized building paper.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Overall: Install roofing system in accordance with approved shop drawings and panel manufacturer's instructions and recommendations, as applicable to specific project conditions.

Anchor all components of roofing system securely in place while allowing for thermal and structural movement.

- B. Accessories: Install all components required for a complete roofing assembly, including flashings, trim, moldings, closure strips, preformed crickets, caps, and ridge closures.

END OF SECTION

**SECTION 07 4646
FIBER-CEMENT SIDING**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Submit manufacturer's data sheets on each product to be used, including:
 - 1. Manufacturer's requirements for related materials to be installed by others.
 - 2. Installation methods, including nail patterns.

1.02 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 FIBER-CEMENT SIDING

- A. Soffit Panels: Panels made of cement and cellulose fiber formed under high pressure with integral surface texture, complying with ASTM C1186, Type A, Grade II; with machined edges, for nail attachment.
 - 1. Texture: Smooth.
 - 2. Length: 96 inches, nominal.
 - 3. Width: 48 inches.
 - 4. Thickness: 5/16 inch, nominal.
 - 5. Finish: Unfinished.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions and recommendations.
 - 1. Read warranty and comply with terms necessary to maintain warranty coverage.
- B. Over Wood Studs without Sheathing: Install siding over weather-resistive barrier, fastened into studs.
- C. Do not install siding less than 6 inches from surface of ground nor closer than 1 inch to roofs, patios, porches, and other surfaces where water may collect.

END OF SECTION

SECTION 07 6200
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SUBMITTALS

- A. Color Sample Chart: Manufacturer's standard colors and finishes for color selection.

1.02 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage, (0.0239 inch) thick base metal.
- B. Pre-Finished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage, (0.0239) inch thick base metal, shop pre-coated with PVDF coating.
 - 1. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
 - 2. Color: As selected by Architect from manufacturer's standard colors.

2.02 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

2.03 ACCESSORIES

- A. Fasteners: Galvanized steel, with soft neoprene washers.
- B. Primer: Zinc chromate type.
- C. Concealed Sealants: Non-curing butyl sealant.
- D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.
- E. Plastic Cement: ASTM D4586/D4586M, Type I.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted..
- B. Seal metal joints watertight.

END OF SECTION

**SECTION 07 9200
JOINT SEALANTS**

PART 2 PRODUCTS

1.01 JOINT SEALANT APPLICATIONS

- A. Scope:
1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
 - a. Wall expansion and control joints.
 - b. Joints between door, window, and other frames and adjacent construction.
 - c. Joints between different exposed materials.
 - d. Openings below ledge angles in masonry.
 - e. Other joints indicated below.
 2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
 - a. Joints between door, window, and other frames and adjacent construction.
 - b. Other joints indicated below.
 3. Do not seal the following types of joints.
 - a. Intentional weepholes in masonry.
 - b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
 - c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
 - d. Joints where installation of sealant is specified in another section.
 - e. Joints between suspended panel ceilings/grid and walls.
- B. Exterior Joints: Use non-sag non-staining silicone sealant, unless otherwise indicated.
- C. Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.
- D. Interior Wet Areas: Bathrooms and restrooms; fixtures in wet areas include plumbing fixtures.

1.02 JOINT SEALANTS - GENERAL

- A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.

1.03 NONSAG JOINT SEALANTS

- A. Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
1. Movement Capability: _____, minimum.
 2. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
- B. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; not expected to withstand continuous water immersion or traffic.
1. Movement Capability: Plus and minus 25 percent, minimum.

1.04 ACCESSORIES

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Install bond breaker backing tape where backer rod cannot be used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- E. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

END OF SECTION

SECTION 08 1116
ALUMINUM DOORS AND FRAMES

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Manufacturer's descriptive literature for each type of door; include information on fabrication methods.

PART 2 PRODUCTS

2.01 DOORS AND FRAMES

- A. Flush Aluminum Plank Doors: Aluminum internal framing and faces; no steel components.
 - 1. Thickness: 1-3/4 inches, nominal.
 - 2. Tubular aluminum stile extrusions with fluted face texture: 6063-T6 aluminum alloy.
 - 3. Finish: Class I - Natural anodized.
 - 4. Texture: Smooth.
 - 5. Weatherstripping: Replaceable pile type; at jambs and head of exterior doors.
 - 6. Hardware: Include door hardware as specified on Door / Finish Schedule.
- B. Aluminum Frames for Doors, Sidelights, or Transoms: Extruded aluminum, thermally broken hollow or C-shaped sections; no steel components.
 - 1. Frame Depth: 4-1/4 inches.
 - 2. Finish: Same as doors.
 - 3. Weatherstripping: Replaceable pile type; at jambs and head.
- C. Dimensions and Shapes: As indicated on drawings; dimensions indicated are nominal.
 - 1. Provide the following clearances:
 - a. Hinge and Lock Stiles: 1/8 inch.
 - b. Between Meeting Stiles: 1/4 inch.
 - c. At Top Rail and Bottom Rail: 1/8 inch.

2.02 COMPONENTS

- A. Flush Door Panels:
 - 1. Framing and Hardware Backup: Extruded aluminum tubing, 1/8 inch minimum thickness.
 - 2. Perimeter Edges: Extruded aluminum cap.
 - 3. Laminating Adhesive: Manufacturer's standard low-VOC materials.
- B. Frames: Extruded aluminum shapes, not less than 0.062 inch thick, reinforced at hinge and strike locations.
 - 1. Corner Brackets: Extruded aluminum, fastened with stainless steel screws.
 - 2. Trim: Extruded aluminum, not less than 0.062 inch thick, removable snap-in type without exposed fasteners.

2.03 MATERIALS

- A. Aluminum Sheet: ASTM B209 (ASTM B209M), alloy 5005, temper H14, stretcher leveled.
- B. Extruded Aluminum: ASTM B221 (ASTM B221M), alloy 6063, temper T5, or alloy 6463, temper T5.

2.04 FINISHES

- A. Class I Natural Anodized Finish: Clear anodic coating; AAMA 611 AA-M12C22A41, minimum dry film thickness 0.7 mils.

2.05 ACCESSORIES

- A. Replaceable Weatherstripping: AAMA 701/702 wool pile.
- B. Fasteners: Aluminum, non-magnetic stainless steel, or other material warranted by manufacturer as non-corrosive and compatible with aluminum components.

- C. Brackets and Reinforcements: Manufacturer's high-strength aluminum units where feasible, otherwise, non-magnetic stainless steel or steel hot-dip galvanized in compliance with ASTM A123/A123M.
- D. Bituminous Coating: Cold-applied asphaltic mastic, compounded for 30-mil thickness per coat.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and approved shop drawings.
- B. Set frames plumb, square, level, and aligned to receive doors. Anchor frames to adjacent construction in strict accordance with manufacturer's recommendations and within specified tolerances.
- C. Hang doors and adjust hardware to achieve specified clearances and proper door operation.

END OF SECTION

**SECTION 09 9000
PAINTING AND COATING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Scope: Finish all interior and exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
- B. Do Not Paint or Finish the Following Items:
 - 1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Floors, unless specifically so indicated.
 - 6. Glass.
 - 7. Concealed pipes, ducts, and conduits.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Provide all paint and coating products from the same manufacturer to the greatest extent possible.
- C. Paints:
 - 1. Behr Process Corporation: www.behr.com/#sle.
 - 2. Diamond Vogel Paints: www.diamondvogel.com/#sle.
 - 3. Duron, Inc: www.duron.com/#sle.
 - 4. Benjamin Moore & Co: www.benjaminmoore.com/#sle.
 - 5. PPG Paints: www.ppgpaints.com/#sle.
 - 6. Pratt & Lambert Paints: www.prattandlambert.com/#sle.
 - 7. Sherwin-Williams Company: www.sherwin-williams.com/#sle.

2.02 PAINTS AND COATINGS - GENERAL

- A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.
 - 1. Supply each coating material in quantity required to complete entire project's work from a single production run.
 - 2. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
 - 1. Provide coatings that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- C. Colors: As indicated on drawings

2.03 PAINT SYSTEMS - EXTERIOR

- A. Wood, Opaque, Alkyd, 3 Coat:
 - 1. One coat of alkyd primer sealer.

2. Semi-gloss: Two coats of alkyd enamel; _____.
- B. Concrete/Masonry, Opaque, Alkyd, 3 Coat:
 1. One coat of block filler.
 2. Semi-gloss: Two coats of alkyd enamel; _____.

2.04 PAINT SYSTEMS - INTERIOR

- A. Wood, Opaque, Alkyd, 3 Coat:
 1. One coat alkyd primer sealer.
 2. Semi-gloss: Two coats of alkyd enamel; Epoxy.
- B. Paint CI-OP-3A - Concrete/Masonry, Opaque, Alkyd, 3 Coat:
 1. One coat of block filler.
 2. Semi-gloss: Two coats of alkyd enamel; Epoxy.

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to coating application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.02 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- D. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

END OF SECTION

SECTION 10 2800
TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide products of each category type by single manufacturer.

2.02 MATERIALS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
- B. Stainless Steel Sheet: ASTM A666, Type 304.
- C. Stainless Steel Tubing: ASTM A269/A269M, Grade TP304 or TP316.

2.03 FINISHES

- A. Stainless Steel: Satin finish, unless otherwise noted.

2.04 COMMERCIAL TOILET ACCESSORIES

- A. See Finish Schedule of drawings for accessory specifications.
- B. Toilet Paper Dispenser: Four roll, surface mounted, for coreless type rolls.
- C. Waste Receptacle: By Owner.
- D. Soap Dispenser: By Owner
- E. Grab Bars: Stainless steel, smooth surface.
 - 1. Heavy Duty Grab Bars: Floor supports are acceptable if necessary to achieve load rating.
 - a. Push/Pull Point Load: Minimum 1000 pound-force, minimum.
 - b. Dimensions: 1-1/2 inch outside diameter, minimum 0.125 inch wall thickness, exposed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
 - c. Length and Configuration: As indicated on drawings.
- F. Sanitary napkin Dispenser: By Owner.

2.05 UNDER-LAVATORY PIPE AND SUPPLY COVERS

- A. Under-Lavatory Pipe and Supply Covers:
 - 1. Insulate exposed drainage piping including hot, cold, and tempered water supplies under lavatories or sinks to comply with ADA Standards.
 - 2. Exterior Surfaces: Smooth non-absorbent, non-abrasive surfaces.
 - 3. Color: White.

2.06 ELECTRIC HAND/HAIR DRYERS

- A. Electric Hand Dryers: Traditional fan-in-case type, with downward fixed nozzle.
 - 1. Operation: Automatic, sensor-operated on and off.
 - 2. Mounting: Surface mounted.
 - 3. Cover: Plastic.
 - a. Color: White.
 - b. Tamper-resistant screw attachment of cover to mounting plate.

2.07 DIAPER CHANGING STATIONS

- A. Diaper Changing Station: Wall-mounted folding diaper changing station for use in commercial toilet facilities, meeting or exceeding ASTM F2285.
 - 1. Material: Polyethylene.
 - 2. Mounting: Surface.
 - 3. Color: Gray.
 - 4. Minimum Rated Load: 250 pounds.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

END OF SECTION

SECTION 22 0523
GENERAL-DUTY VALVES FOR PLUMBING PIPING

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Provide data on valves including manufacturers catalog information. Submit performance ratings, rough-in details, weights, support requirements, and piping connections.
- B. Maintenance Materials: Furnish City with one wrench for every five plug valves, in each size of square plug valve head.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.

PART 2 PRODUCTS

2.01 APPLICATIONS

- A. Provide the following valves for the applications if not indicated on drawings:
 - 1. Shutoff: Ball, butterfly, gate, plug, or _____.
 - 2. Dead-End: Single-flange butterfly (lug) type.
- B. Required Valve End Connections for Non-Wafer Types:
 - 1. Steel Pipe:
 - a. 2 NPS and Smaller: Threaded ends.
 - 2. Copper Tube:
 - a. 2 NPS and Smaller: Threaded ends except where solder-joint valve-end option is indicated in valve schedules below.
- C. Domestic, Hot and Cold Water Valves:
 - 1. 2 NPS and Smaller:
 - a. Bronze and Brass: Provide with solder-joint ends.
 - b. Bronze Angle: Class 125, bronze disc.
 - c. Ball: One piece, full port, brass with brass trim.

2.02 GENERAL REQUIREMENTS

- A. Valve Pressure and Temperature Ratings: No less than rating indicated; as required for system pressures and temperatures.
- B. Valve Sizes: Match upstream piping unless otherwise indicated.
- C. Valve Actuator Types:
 - 1. Hand Lever: Quarter-turn valves 6 NPS and smaller except plug valves.
- D. Valve-End Connections:
 - 1. Threaded End Valves: ASME B1.20.1.
 - 2. Solder Joint Connections: ASME B16.18.
- E. General ASME Compliance:
 - 1. Solder-joint Connections: ASME B16.18.
- F. Source Limitations: Obtain each valve type from a single manufacturer.

2.03 BRONZE ANGLE VALVES

- A. Class 125: CWP Rating: 200 psig.; and _____.
 - 1. Comply with MSS SP-80, Type 1.
 - 2. Body: Bronze; ASTM B62, with integral seat and screw in bonnet.
 - 3. Ends: Threaded.
 - 4. Stem: Bronze.
 - 5. Disc: Bronze.
 - 6. Packing: Asbestos free.
 - 7. Handwheel: Bronze or aluminum.

2.04 BRASS BALL VALVES

- A. One-Piece, Reduced-Port with Brass Trim:
 - 1. Comply with MSS SP-110.
 - 2. Body: Forged brass.
 - 3. Ends: Threaded.
 - 4. Seats: PTFE or ____.
 - 5. Stem: Brass.
 - 6. Ball: Chrome-plated brass.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Provide unions or flanges with valves to facilitate equipment removal and maintenance while maintaining system operation and full accessibility for servicing.
- B. Provide separate valve support as required and locate valve with stem at or above center of piping, maintaining unimpeded stem movement.

END OF SECTION

**SECTION 22 1005
PLUMBING PIPING**

PART 1 GENERAL

1.01 SUBMITTALS

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Potable Water Supply Systems: Provide piping, pipe fittings, and solder and flux (if used), that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

2.02 SANITARY SEWER PIPING, BURIED BEYOND 5 FEET OF BUILDING

- A. Cast Iron Pipe: ASTM A74 extra heavy weight.
 - 1. Fittings: Cast iron.
 - 2. Joint Seals: ASTM C564 neoprene gaskets, or lead and oakum.
- B. PVC Pipe: ASTM D2665 or ASTM D3034.
 - 1. Fittings: PVC.
 - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

2.03 DOMESTIC WATER PIPING, ABOVE GRADE

- A. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), Drawn (H).
 - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
 - 2. Joints: ASTM B32, alloy Sn95 solder.

2.04 FLANGES, UNIONS, AND COUPLINGS

- A. Unions for Pipe Sizes 3 Inches and Under:
 - 1. Copper tube and pipe: Class 150 bronze unions with soldered joints.
- B. Flanges for Pipe Size Over 1 Inch:
 - 1. Copper Tube and Pipe: Class 150 slip-on bronze flanges; preformed neoprene gaskets.

2.05 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.
 - 1. Overhead Supports: Individual steel rod hangers attached to structure or to trapeze hangers.
 - 2. Trapeze Hangers: Welded steel channel frames attached to structure.
- B. Plumbing Piping - Drain, Waste, and Vent:
 - 1. Hangers for Pipe Sizes 1/2 Inch to 1-1/2 Inches: Malleable iron, adjustable swivel, split ring.
 - 2. Hangers for Pipe Sizes 2 Inches and Over: Carbon steel, adjustable, clevis.
- C. Plumbing Piping - Water:
 - 1. Hangers for Pipe Sizes 1/2 Inch to 1-1/2 Inches: Malleable iron, adjustable swivel, split ring.
 - 2. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.
- D. Hanger Fasteners: Attach hangers to structure using appropriate fasteners.

2.06 BALL VALVES

- A. Construction, 4 Inches and Smaller: MSS SP-110, Class 150, 400 psi CWP, bronze or ductile iron body, 304 stainless steel or chrome plated brass ball, regular port, teflon seats and stuffing box ring, blow-out proof stem, lever handle with balancing stops, solder, threaded, or grooved ends with union.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
- C. Install piping to maintain headroom, conserve space, and not interfere with use of space.
- D. Group piping whenever practical at common elevations.
- E. Copper Pipe and Tube: Make soldered joints in accordance with ASTM B828, using specified solder, and flux meeting ASTM B813; in potable water systems use flux also complying with NSF 61 and NSF 372.
- F. PVC Pipe: Make solvent-welded joints in accordance with ASTM D2855.

END OF SECTION

**SECTION 22 1006
PLUMBING PIPING SPECIALTIES**

PART 2 PRODUCTS

1.01 GENERAL REQUIREMENTS

- A. Specialties in Potable Water Supply Systems: Provide products that comply with NSF 61 and NSF 372 for maximum lead content.

1.02 DRAINS

- A. Floor Drain (FD-1):
 - 1. ASME A112.6.3; lacquered cast iron or stainless steel, two piece body with double drainage flange, weep holes, and round, adjustable nickel-bronze strainer.

1.03 CLEANOUTS

- A. Cleanouts at Interior Finished Floor Areas (CO-3):
 - 1. Lacquered cast iron body with anchor flange, reversible clamping collar, threaded top assembly, and round gasketed scored cover in service areas and round gasketed depressed cover to accept floor finish in finished floor areas.

1.04 HOSE BIBBS

- A. Interior Hose Bibbs:
 - 1. Bronze or brass with integral mounting flange, replaceable hexagonal disc, hose thread spout, chrome plated where exposed with handwheel, integral vacuum breaker in conformance with ASSE 1011.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Ensure clearance at cleanout for rodding of drainage system.

END OF SECTION

**SECTION 22 4000
PLUMBING FIXTURES**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Provide catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.

PART 2 PRODUCTS

2.01 GENERAL

- A. Potable Water Systems: Provide plumbing fittings and faucets that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

2.02 FLUSH VALVE WATER CLOSETS

- A. Water Closets: Vitreous china, ASME A112.19.2, floor mounted, siphon jet flush action, china bolt caps.
 - 1. Flush Valve: Concealed (back spud).
 - 2. Flush Operation: Sensor operated.
- B. Flush Valves: ASME A112.18.1, diaphragm type, complete with vacuum breaker stops and accessories.
 - 1. Sensor-Operated Type: Solenoid or motor-driven operator, low voltage hard-wired, infrared sensor with mechanical over-ride or over-ride push button.
 - 2. Concealed Type: Rough brass, exposed parts chrome plated, wall escutcheon, wheel handle stop.
- C. Seats:
 - 1. Solid black plastic, open front, extended back, self-sustaining hinge, brass bolts, with cover.
- D. Water Closet Carriers:
 - 1. ASME A112.6.1M; adjustable cast iron frame, integral drain hub and vent, adjustable spud, lugs for floor and wall attachment, threaded fixture studs with nuts and washers.

2.03 LAVATORIES

- A. Vitreous China Wall Hung Basin: ASME A112.19.2; vitreous china wall hung lavatory, 20 by 18 inch minimum, with 4 inch high back, rectangular basin with splash lip, front overflow, and soap depression.
- B. Sensor Operated Faucet: Cast brass, chrome plated, wall mounted with sensor located on neck of spout.
 - 1. Spout Style: Standard.
 - 2. Power Supply: Battery, easily replaceable, alkaline or lithium, minimum 200,000 cycles.
 - a. Low battery indicator warning light at 30 days remaining life and continuous light a 2 weeks.
 - 3. Mixing Valve: None, single line for tempered water.
 - 4. Water Supply: 3/8 inch compression connections.
 - 5. Aerator: Vandal resistant, 0.5 GPM, laminar flow device.
 - 6. Finish: Polished chrome.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install each fixture with trap, easily removable for servicing and cleaning.
- B. Install components level and plumb.
- C. Install and secure fixtures in place with wall supports and bolts.

END OF SECTION

SECTION 26 0513
MEDIUM-VOLTAGE CABLES

PART 2 PRODUCTS

1.01 MEDIUM-VOLTAGE CABLE

- A. Medium Voltage Cable: NEMA WC 70 rubber insulated cable.
 - 1. Voltage: 5 kV, grounded.
 - 2. Conductor: Copper, compact round, stranded, with foil conductor shield.
 - 3. Construction: Single conductor with metal wire insulation shielding.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Avoid abrasion and other damage to cables during installation.
- B. Use suitable lubricants and pulling equipment.
- C. Sustain cable pulling tensions and bending radii below recommended limits.
- D. Ground cable shield at each termination and splice.

END OF SECTION

SECTION 26 0533.13
CONDUIT FOR ELECTRICAL SYSTEMS

PART 2 PRODUCTS

1.01 CONDUIT APPLICATIONS

- A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70 and product listing.
- B. Unless otherwise indicated and where not otherwise restricted, use the conduit types indicated for the specified applications. Where more than one listed application applies, comply with the most restrictive requirements. Where conduit type for a particular application is not specified, use galvanized steel rigid metal conduit.
- C. Concealed Within Masonry Walls: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- D. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit or intermediate metal conduit (IMC).
- E. Exposed, Exterior: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or PVC-coated galvanized steel rigid metal conduit.
- F. Connections to Luminaires Above Accessible Ceilings: Use flexible metal conduit.

1.02 CONDUIT REQUIREMENTS

- A. Provide all conduit, fittings, supports, and accessories required for a complete raceway system.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

1.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.
- B. Fittings:
 - 1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.
 - 3. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

1.04 INTERMEDIATE METAL CONDUIT (IMC)

- A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.
- B. Fittings:
 - 1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.
 - 3. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

1.05 PVC-COATED GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit with external polyvinyl chloride (PVC) coating complying with NEMA RN 1 and listed and labeled as complying with UL 6.
- B. Exterior Coating: Polyvinyl chloride (PVC), nominal thickness of 40 mil.

- C. PVC-Coated Fittings:
 1. Manufacturer: Same as manufacturer of PVC-coated conduit to be installed.
 2. Non-Hazardous Locations: Use fittings listed and labeled as complying with UL 514B.
 3. Material: Use steel or malleable iron.
 4. Exterior Coating: Polyvinyl chloride (PVC), minimum thickness of 40 mil.
- D. PVC-Coated Supports: Furnish with exterior coating of polyvinyl chloride (PVC), minimum thickness of 15 mil.

1.06 FLEXIBLE METAL CONDUIT (FMC)

- A. Description: NFPA 70, Type FMC standard wall steel flexible metal conduit listed and labeled as complying with UL 1, and listed for use in classified firestop systems to be used.
- B. Fittings:
 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 2. Material: Use steel or malleable iron.

1.07 ELECTRICAL METALLIC TUBING (EMT)

- A. Description: NFPA 70, Type EMT steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.
- B. Fittings:
 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 2. Material: Use steel or malleable iron.
 3. Connectors and Couplings: Use compression (gland) or set-screw type.
 - a. Do not use indenter type connectors and couplings.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install galvanized steel rigid metal conduit (RMC) in accordance with NECA 101.
- D. Install intermediate metal conduit (IMC) in accordance with NECA 101.
- E. Install PVC-coated galvanized steel rigid metal conduit (RMC) using only tools approved by the manufacturer.
- F. Conduit Support:
 1. Secure and support conduits in accordance with NFPA 70 and Section 26 0529 using suitable supports and methods approved by the authority having jurisdiction.
 2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
- G. Connections and Terminations:
 1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
 2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
 3. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
 4. Provide insulating bushings or insulated throats at all conduit terminations to protect conductors.
- H. Penetrations:
 1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.

2. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
 3. Seal interior of conduits entering the building from underground at first accessible point to prevent entry of moisture and gases.
 4. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
 5. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty. Include proposed locations of penetrations and methods for sealing with submittals.
 6. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.
- I. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:
1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
 2. Where conduits are subject to earth movement by settlement or frost.
- J. Condensation Prevention: Where conduits cross barriers between areas of potential substantial temperature differential, provide sealing fitting or approved sealing compound at an accessible point near the penetration to prevent condensation. This includes, but is not limited to:
1. Where conduits pass from outdoors into conditioned interior spaces.
 2. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.

END OF SECTION

SECTION 26 0533.16
BOXES FOR ELECTRICAL SYSTEMS

PART 2 PRODUCTS

1.01 BOXES

- A. General Requirements:
 - 1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
 - 2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
 - 3. Provide products listed, classified, and labeled as suitable for the purpose intended.
 - 4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
 - 5. Provide grounding terminals within boxes where equipment grounding conductors terminate.
- B. Outlet and Device Boxes Up to 100 cubic inches, Including Those Used as Junction and Pull Boxes:
 - 1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
 - 2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
 - 3. Use suitable concrete type boxes where flush-mounted in concrete.
 - 4. Use suitable masonry type boxes where flush-mounted in masonry walls.
 - 5. Use raised covers suitable for the type of wall construction and device configuration where required.
 - 6. Use shallow boxes where required by the type of wall construction.
 - 7. Do not use "through-wall" boxes designed for access from both sides of wall.
 - 8. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
 - 9. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
 - 10. Boxes for Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire where required.
 - 11. Boxes for Ganged Devices: Use multigang boxes of single-piece construction. Do not use field-connected gangable boxes unless specifically indicated or permitted.
- C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches:
 - 1. Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
 - 2. Junction and Pull Boxes Larger Than 100 cubic inches:
 - a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install boxes in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards where mounting heights are not indicated.
- C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.
- D. Box Supports:
 - 1. Secure and support boxes in accordance with NFPA 70 and Section 26 0529 using suitable supports and methods approved by the authority having jurisdiction.

2. Provide independent support from building structure except for cast metal boxes (other than boxes used for fixture support) supported by threaded conduit connections in accordance with NFPA 70. Do not provide support from piping, ductwork, or other systems.
 - E. Install boxes as required to preserve insulation integrity.
 - F. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.
 - G. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.

END OF SECTION

**SECTION 26 5100
INTERIOR LIGHTING**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Shop Drawings:
 - 1. Indicate dimensions and components for each luminaire that is not a standard product of the manufacturer.
 - 2. Provide photometric calculations where luminaires are proposed for substitution upon request.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets including detailed information on luminaire construction, dimensions, ratings, finishes, mounting requirements, listings, service conditions, photometric performance, installed accessories, and ceiling compatibility; include model number nomenclature clearly marked with all proposed features.

1.02 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.

PART 2 PRODUCTS

2.01 LUMINAIRE TYPES

- A. Furnish products as indicated in luminaire schedule included on the drawings.

2.02 LUMINAIRES

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products that are listed and labeled as complying with UL 1598, where applicable.
- C. Provide products listed, classified, and labeled as suitable for the purpose intended.
- D. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.
- E. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, supports, trims, accessories, etc. as necessary for a complete operating system.
- F. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Coordinate locations of outlet boxes provided under Section 26 0533.16 as required for installation of luminaires provided under this section.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install products in accordance with manufacturer's instructions.
- D. Install luminaires securely, in a neat and workmanlike manner, as specified in NECA 500 (commercial lighting) and NECA 502 (industrial lighting).
- E. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.
- F. Bond products and metal accessories to branch circuit equipment grounding conductor.
- G. Install lamps in each luminaire.

END OF SECTION

SECTION 26 5600
EXTERIOR LIGHTING

PART 1 GENERAL

1.01 SUBMITTALS

- A. Shop Drawings:
 - 1. Indicate dimensions and components for each luminaire that is not a standard product of the manufacturer.
 - 2. Provide photometric calculations where luminaires are proposed for substitution upon request.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets including detailed information on luminaire construction, dimensions, ratings, finishes, mounting requirements, listings, service conditions, photometric performance, weight, effective projected area (EPA), and installed accessories; include model number nomenclature clearly marked with all proposed features.

1.02 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.

PART 2 PRODUCTS

2.01 LUMINAIRE TYPES

- A. Furnish products as indicated in luminaire schedule included on the drawings.

2.02 LUMINAIRES

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products that are listed and labeled as complying with UL 1598, where applicable.
- C. Provide products listed, classified, and labeled as suitable for the purpose intended.
- D. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.
- E. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, poles, foundations, supports, trims, accessories, etc. as necessary for a complete operating system.
- F. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Coordinate locations of outlet boxes provided under Section 26 0533.16 as required for installation of luminaires provided under this section.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install products in accordance with manufacturer's instructions.
- D. Install luminaires in accordance with NECA/IESNA 501.
- E. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.
- F. Bond products and metal accessories to branch circuit equipment grounding conductor.
- G. Install lamps in each luminaire.

END OF SECTION



Or Equivalent

SofSURFACES, Inc.
4393 Discovery Line
Petrolia, ON N0N 1R0
Canada

Toll Free (800) 263-2363
Phone (519) 882-8799
Fax (519) 882-2697
Website www.sofsurfaces.com
E-mail info@sofsurfaces.com

SECTION 027910

PLAYGROUND SURFACING TILES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Resilient, interlocking, playground safety surfacing tiles.

1.2 RELATED SECTIONS

- A. Special Provision For Playground Equipment.
- B. Section 023400 - Concrete Paving

1.3 REFERENCES

- A. ASTM C 67 – Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
- B. ASTM C 501 – Standard Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abrader.
- C. ASTM D 412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers--Tension.



- D. ASTM D 573 – Standard Test Method for Rubber-Deterioration in an Air Oven.
- E. ASTM D 624 – Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
- F. ASTM D 2047 – Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
- G. ASTM D 2859 – Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials.
- H. ASTM D 3676 – Standard Specification for Rubber Cellular Cushion Used for Carpet or Rug Underlay.
- I. ASTM E 303 – Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
- J. ASTM F 1292 – Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
- K. US Consumer Product Safety Commission (CPSC) Handbook for Playground Safety.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, including installation and subsurface instructions.
- B. Samples: Submit manufacturer's sample of 1 full tile.
- C. Test Reports: Submit certified test reports from qualified independent testing agency indicating results of the following tests:
 1. Impact Attenuation: ASTM F 1292.
 2. Freeze Thaw: ASTM C 67.
 3. Rubber Deterioration/Air Oven: ASTM D 573.
 4. Slip Resistance: ASTM D 2047 and E 303.
 5. Tensile Strength: ASTM D 412.
 6. Elongation at Break: ASTM D 412.
 7. Tear Strength: ASTM D 624.
 8. Peak Load: ASTM D 624.
 9. Density :ASTM D 3676.
 10. Taber Abrasion: ASTM C 501.
 11. Flammability: ASTM D 2859

- D. Certificate of Compliance: Submit manufacturer's certificate of compliance indicating materials comply with specified requirements.
- E. Manufacturer's Project References:
 - 1. Submit list of 15 successfully completed projects.
 - 2. Include project name and location, name of architect, and type and quantity of playground safety surfacing tiles furnished.
- F. Installer's Project References:
 - 1. Submit copy of manufacturer issued installation certification
- G. Maintenance Instructions: Submit manufacturer's maintenance and cleaning instructions.
- H. Warranty: Submit manufacturer's standard warranty.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer shall meet a minimum of 1 of the following 2 requirements.
 - 1. Continuously engaged in manufacturing of playground safety surfacing tiles of similar type to that specified, with a minimum of 10 years successful experience.
 - 2. Furnished a minimum of 15,000,000 square feet of playground safety surfacing tiles of similar type to that specified.
- B. Installer's Qualifications:
 - 1. Certified by manufacturer for installation of playground safety surfacing tiles.
 - 2. Approved by manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage:
 - 1. Store materials in accordance with manufacturer's instructions.
 - 2. Playground Safety Surfacing Tiles:
 - a. Store tiles in a dry area at a minimum temperature of 50 degrees F (10 degrees C) for a minimum of 72 hours before installation.
 - b. Protect tiles from direct sunlight before installation.
 - 3. Adhesive: Store adhesive in a dry area at a minimum temperature of 50 degrees F (10 degrees C).
- C. Handling: Protect materials during handling and installation to prevent damage.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Tile Temperature: Ensure surface temperature of playground safety surfacing tiles is a minimum of 50 degrees F (10 degrees C) at time of installation.
- B. Air Temperature: Ensure air temperature is a minimum of 40 degrees F (4 degrees C) for a minimum of 24 hours before and during installation.
- C. Tile or Air Temperatures: Consult manufacturer's installation instructions for modified installation procedure when tile or air temperatures are above 85 degrees F (29 degrees C).

1.8 WARRANTY

- A. Materials and Workmanship: Playground safety surfacing tiles shall be warranted for defects in materials and workmanship for the lifetime of the playground.
- B. Performance: Playground safety surfacing tiles shall be warranted to meet drop height performance requirements of ASTM F 1292 for the lifetime of the playground.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. sofSURFACES, Inc., 4393 Discovery Line, PO Box 239, Petrolia, Ontario N0N 1R0, Canada. Toll Free (800) 263-2363. Phone (519) 882-8799. Fax (519) 882-2697. Website www.sofsurfaces.com. E-mail info@sofsurfaces.com.

2.2 PLAYGROUND SURFACING TILES

- A. Tiles: Rubber Playground tiles
 - 1. Series: Plus
 - 2. Description: Resilient, interlocking, playground safety surfacing tiles.
 - 3. Compliance: Meet and exceed CPSC guidelines for impact attenuation.
 - 4. Material: Compression-molded, recycled rubber and binding agents.
 - 5. Tile Locking: U-shaped male and female configuration on all 4 sides to lock tiles to adjacent tiles.
 - 6. Top Edges: Chamfered.
 - 7. Tile Bottom: Hollow core stanchion pattern.
 - 8. Wear Layer:
 - a. **Plus Series:** Combination of elongated SBR rubber and granulated crumb rubber. Pigmentation used to achieve color. Minimum 0.375 inch thick.
 - 9. Size: 24 1/8" X 24 1/8" Nominal.
Installed size: 24" X 24"

- a. **Plus Series:** Combination of elongated SBR rubber and granulated crumb rubber. Pigmentation used to achieve color. Minimum 0.375 inch thick.
 - 9. Size: 24 1/8" X 24 1/8" Nominal.
Installed size: 24" X 24"
 - 10. Thickness:
 - a. Critical Fall Height 8 Feet: 4.25 inches.
 - 11. Minimum Weight Each Tile:
 - a. Plus Series:
 - 1) 4.25-Inch Thickness: 33.00 pounds.
 - 12. Colors:
 - a. Plus Series: Ocean Blue
 - 1) Multi Grain, Sandy Lane, Spring Meadow, Roasted Pepper, Bedrock, Blue Ice, Coral Clay, Green Slate, Rain Forest, Blue Spruce are common blends but you are able to customize to your preference.
- B. Test Results:
- 1. Impact Attenuation, ASTM F 1292:
 - a. g-max Score: Less than 125.
 - b. Head Injury Criteria (HIC) Score: Less than 700.
 - 2. Freeze Thaw, ASTM C 67: No deterioration.
 - 3. Rubber Deterioration/Air Oven, ASTM D 573: No deterioration.
 - 4. Slip Resistance:
 - a. ASTM E 303:
 - 1) Dry: 51 minimum.
 - 2) Wet: 44 minimum.
 - b. ASTM D 2047:
 - 1) Plus: 0.533.
 - 5. Tensile Strength, ASTM D 412:
 - a. Plus Series: .661 Mpa.
 - 6. Elongation at Break, ASTM D 412:
 - a. Plus Series 68.5 percent.
 - 7. Tear Strength, ASTM D 624:
 - a. Plus Series: 2.2 kNm
 - 8. Flammability:
 - a. Burning Pill, ASTM D 2859: Pass.
 - 9. Density, ASTM D 3676:
 - a. Plus Series: 817 kg/m3.
 - 10. Taber Abrasion, Wear index, ASTM C 501:
 - a. Plus Series: 205

2.3 ACCESSORIES

- A. Corners:
 - 1. Prefabricated outside and inside corners.
 - 2. Material: Same as playground safety surfacing tiles.

- B. Ramps:
 - 1. Prefabricated Ramps: "sofRAMP Jr."
 - 2. Prefabricated ADA-Compliant Ramps: "sofRAMP ADA".
 - 3. Material: Same as playground safety surfacing tiles.

- C. Adhesive: Furnished by manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive playground safety surfacing tiles. Notify Architect if areas are not acceptable. Do not begin installation until unacceptable conditions have been corrected.

3.2 PREPARATION

- A. Prepare subsurface in accordance with manufacturer's instructions to ensure proper slope, support and drainage for playground safety surfacing tiles.

- B. Concrete Subsurface:
 - 1. Concrete subsurface shall be as specified in Section 03300 (03 30 00).
 - 2. Apply light broom finish.
 - 3. Ensure concrete is sound with no loose material or cracks over 1/8 inch wide.
 - 4. Ensure concrete is a minimum of 10 days old.
 - 5. Test concrete for moisture in accordance with manufacturer's instructions to ensure it has sufficiently cured and is dry.
 - 6. Power wash existing concrete in accordance with manufacturer's instructions.
 - 7. Due to the porosity of the duraSAFE playground safety surfacing tiles, it is critical to ensure proper drainage or the tile surface may not stay level and may ultimately become damaged due to hydraulic pressure. If a concrete curb is placed around subsurface perimeter, provide weep holes, as necessary.

3.3 INSTALLATION

- A. Install playground safety surfacing tiles in accordance with manufacturer's instructions at locations indicated on the Drawings.

- B. Ensure prepared subsurface and tiles are dry and clean.



- C. Layout tile surface in accordance with manufacturer's instructions.
- D. Apply adhesive in accordance with manufacturer's instructions for tile-to-tile as well as tile-to-base for all keystone and strategic tile rows.
- E. Installation to be completed by a factory trained and certified installer.

3.4 FIELD QUALITY CONTROL

- A. Installed Surface Performance Test: ASTM F1292
 - 1. Perform impact attenuation testing according to ASTM F1292 in presence of Owner's representative within 30 days of installation.
 - a. Confirm Impact Attenuation Performance of Surfacing Tiles:
 - 1) g-max Score: Less than 125
 - 2) Head Injury Criteria (HIC) Score: Less than 700
 - 2. Test Equipment Operator Qualifications:
 - a. National Recreation and Parks Association/National Playground Safety Institute (NRPA/NPSI) Certified Playground Safety Inspector (CPSI).
 - b. Trained in the proper operation of Triax test equipment by competent agency.
 - 3. Determine compliance with ASTM F 1292, unless otherwise specified in this section.

3.5 CLEANING

- A. Remove adhesive spills from playground safety surfacing tiles in accordance with manufacturer's instructions.
- B. Clean tiles in accordance with manufacturer's instructions.

3.6 PROTECTION

- A. Protect playground safety surfacing tiles from foot traffic for a minimum of 12 hours after installation.
- B. Protect completed tiles from damage during construction.

MDNR Permanent Sign Requirement Information

Recognition signs

Recognition signs are mandatory program requirements for all project locations that have benefitted from Michigan Natural Resources Trust Fund or the Land and Water Conservation Funds. Please note that the 18" X 12" plaques are required and the medallions are optional and are being offered for Grantees that would like to incorporate the program logo into existing signage or to increase the public's awareness of these programs. To order a plaque click the link below. Once you enter the RMI Customer Portal, click on the menu button on the top left (triple stacked lines) and then click on On-line Plaque/Medallion Orders.

If you have any questions about this requirement, please contact your Grant Coordinator directly or you may contact Grants Management at 517-284-7268.

Order Recognition Sign Here:

http://www.rmi-printing.com/customer_portal/login.html?ut=b51a157e-dded-4020-945d-bdb93a2afb9



Michigan Natural Resources Trust Fund Plaques

This 12"X18" plaque is required on all MNRTF assisted sites.

These plaques are supplied pre-drilled for easy installation and all prices include delivery to your location. Each plaque comes with stainless steel security screws and matching drill bit for installation.

Quantity

@ \$209.80 ea.



Michigan Natural Resources Trust Fund Medallion

The Michigan Natural Resource Trust Fund Medallions come in 12" diameter, 8" diameter, and 6" diameter (all prices include delivery to your location). Each medallion is supplied pre-drilled with two holes for affixing and **are optional and may be purchased and installed in addition to the plaques.** Each Medallion is shipped with stainless steel security screws and matching drill bit for installation.

Quantity

Diameter

* REQUIRED

MUSKEGON COUNTY DEPARTMENT OF PUBLIC WORKS
SOIL EROSION AND SEDIMENTATION CONTROL (SESC)

131 E. APPLE AVENUE
MUSKEGON, MI 49442

PHONE: 231-724-6411

FAX: 231-724-6118

EMAIL: ribbensro@co.muskegon.mi.us

PROPERTY OWNER: City of Muskegon

MAILING ADDRESS: 933 Terrace, Muskegon, MI 49442

PHONE NO.: 231.724.6724

PROJECT DESCRIPTION: Play ground Additions

PROJECT ADDRESS: 1651 Beach Street, Muskegon, MI 49441

TOWNSHIP OR CITY: City of Muskegon

PROJECT PARCEL NO.: 61-24-205-734-0001-00

THIS PROJECT:

- Will be considered for/issued a permit after the Critical Dune Permit is issued.
- Will be considered for/issued a permit after the Natural Rivers zoning has been issued.
- Will be considered for/issued a permit after township zoning is obtained.
- Does not require a SESC permit because:
 - it is over 500 feet from water and less than 1 acre of disturbance
 - there is no earth disruption
 - there is less than 225 square feet of earth disruption
 - meets requirements of Part 91, Section 324.9115a for residential properties only

This written assurance form does not release the project from obtaining other applicable local, state or federal permits.

If project does not require an SESC permit, the owner/agent is required to use best management practices to prevent any sediment from leaving the site.

Department Approval Stamp:

Dated: 12.21.2017

APPROVED FOR
SOIL EROSION CONTROL ONLY
DEC 21 2017
MUSKEGON COUNTY
DEPT. OF PUBLIC WORKS
Robert J. Ribbens

MDEQ/USACE Joint Permit



NOTICE OF AUTHORIZATION

Permit Number: WRP011885 v. 1

Site Name: 61-1651 Beach St-Muskegon; Pere Marquette Park Recreational Improvements

Date Issued: June 18, 2018

Expiration Date: June 18, 2023

The Michigan Department of Environmental Quality, Water Resources Division, P.O. Box 30458, Lansing, Michigan 48909-7958, under provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; specifically:

- Part 31, Floodplain Regulatory Authority of the Water Resources Protection.
- Part 301, Inland Lakes and Streams.
- Part 303, Wetlands Protection.
- Part 315, Dam Safety.
- Part 323, Shorelands Protection and Management.
- Part 325, Great Lakes Submerged Lands.
- Part 353, Sand Dunes Protection and Management.

Authorized activity:

Expand an existing restroom building by 8 feet; Remove a section of concrete sidewalk and playground equipment; Install approximately 568 square feet of new concrete sidewalk adjacent to the restroom expansion; Install two sections of concrete walkway, each measuring 80 square feet in size; Grade sand, install a playground pad and playground equipment in an area measuring 60 feet by 80 feet in size within a Critical Dune Area. All work shall be done in accordance with attached plans and permit specifications.

To be conducted at property located in: Muskegon County, Critical Dune Area Section 28, Town 10N, Range 17W, City of Muskegon

Permittee:
LeighAnn Mikesell, City of Muskegon
933 Terrace Street
Muskegon, MI 49443

Nancy Cuncannan
Grand Rapids District Office
Water Resources Division
616-690-1229



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER RESOURCES DIVISION
PERMIT**

Issued To:

LeighAnn Mikesell, City of Muskegon
933 Terrace Street
Muskegon, MI 49443

Permit No.: WRP011885 v.1
Submission No.: HNC-NPKP-QG5MZ
Site Name: 61-1651 Beach St-Muskegon; Pere Marquette Park Recreational Improvements
Issued: June 18, 2018
Revised:
Expires: June 18, 2023

This permit is being issued by the Michigan Department of Environmental Quality (MDEQ), Water Resources Division, under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); specifically:

- | | |
|--|--|
| <input type="checkbox"/> Part 301, Inland Lakes and Streams | <input type="checkbox"/> Part 323, Shorelands Protection and Management |
| <input type="checkbox"/> Part 303, Wetlands Protection | <input type="checkbox"/> Part 325, Great Lakes Submerged Lands |
| <input type="checkbox"/> Part 315, Dam Safety | <input checked="" type="checkbox"/> Part 353, Sand Dunes Protection and Management |
| <input type="checkbox"/> Part 31, Water Resources Protection (Floodplain Regulatory Authority) | |

Permission is hereby granted, based on permittee assurance of adherence to State of Michigan requirements and permit conditions, to:

Authorized Activity:

Expand an existing restroom building by 8 feet; Remove a section of concrete sidewalk and playground equipment; Install approximately 568 square feet of new concrete sidewalk adjacent to the restroom expansion; Install two sections of concrete walkway, each measuring 80 square feet in size; Grade sand, install a playground pad and playground equipment in an area measuring 60 feet by 80 feet in size within a Critical Dune Area. All work shall be done in accordance with attached plans and permit specifications.

Resource Affected: Critical Dune Area
Property Location: Muskegon County, City of Muskegon, Town/Range/Section 10N17W28, Property Tax No. 61-24-205-734-0001-00; Pere Marquette Park

Authority granted by this permit is subject to the following limitations:


- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
- B. The permittee, in exercising the authority granted by this permit, shall not cause unlawful pollution as defined by Part 31 of the NREPA.
- C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.

- D. All work shall be completed in accordance with the approved plans and specifications submitted with the application and/or plans and specifications attached to this permit.
- E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved.
- F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with 2013 PA 174 (Act 174) and comply with each of the requirements of Act 174.
- G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits, or complying with other state statutes.
- H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
- I. Permittee shall notify the MDEQ within one week after the completion of the activity authorized by this permit by completing and forwarding the attached preaddressed postcard to the office addressed thereon.
- J. This permit shall not be assigned or transferred without the written approval of the MDEQ.
- K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific state act, federal act, and/or rule under which this permit is granted.
- L. All dredged or excavated materials shall be disposed of in an upland site (outside of floodplains, unless exempt under Part 31 of the NREPA, and wetlands).
- M. In issuing this permit, the MDEQ has relied on the information and data that the permittee has provided in connection with the submitted application for permit. If, subsequent to the issuance of a permit, such information and data prove to be false, incomplete, or inaccurate, the MDEQ may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- N. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents, and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representative of the permittee, undertaken in connection with this permit. The permittee's obligation to indemnify the State of Michigan applies only if the state: (1) provides the permittee or its designated representative written notice of the claim or cause of action within 30 days after it is received by the state, and (2) consents to the permittee's participation in the proceeding on the claim or cause of action. It does not apply to contested case proceedings under the Administrative Procedures Act, 1969 PA 306, as amended, challenging the permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.
- O. Noncompliance with these terms and conditions and/or the initiation of other regulated activities not specifically authorized shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, the MDEQ may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.
- P. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity from the MDEQ. Such revision request shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDEQ prior to being implemented.
- Q. This permit may be transferred to another person upon written approval of the MDEQ. The permittee must submit a written request to the MDEQ to transfer the permit to the new owner. The new owner must also submit a written request to the MDEQ to accept transfer. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties that includes all of the above information may be provided to the MDEQ. The MDEQ will review the request and, if approved, will provide written notification to the new owner.
- R. Prior to initiating permitted construction, the permittee is required to provide a copy of the permit to the contractor(s) for review. The property owner, contractor(s), and any agent involved in exercising the permit are held responsible to ensure that the project is constructed in accordance with all drawings and specifications. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by the permit.
- S. Construction must be undertaken and completed during the dry period of the wetland. If the area does not dry out, construction shall be done on equipment mats to prevent compaction of the soil.
- T. Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the County Enforcing Agent (CEA).

- U. Authority granted by this permit does not waive permit requirements under the authority of Part 305, Natural Rivers, of the NREPA. A Natural Rivers Zoning Permit may be required for construction, land alteration, streambank stabilization, or vegetation removal along or near a natural river.
- V. The permittee is cautioned that grade changes resulting in increased runoff onto adjacent property is subject to civil damage litigation.
- W. Unless specifically stated in this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of the water body are not authorized and shall not be constructed unless authorized by a separate permit or permit revision granted in accordance with the applicable law.
- X. For projects with potential impacts to fish spawning or migration, no work shall occur within fish spawning or migration timelines (i.e., windows) unless otherwise approved in writing by the Michigan Department of Natural Resources, Fisheries Division.
- Y. Work to be done under authority of this permit is further subject to the following special instructions and specifications:
 1. Authority granted by this permit does not waive permit or program requirements under Part 91 of the NREPA or the need to acquire applicable permits from the CEA. To locate the Soil Erosion Program Administrator for your county, visit www.mi.gov/degstormwater and select "Soil Erosion and Sedimentation Control Program" under "Related Links."
 2. The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state, or federal approval or authorization necessary to conduct the activity.
 3. No fill, excess soil, or other material shall be placed in any wetland, floodplain, or surface water area not specifically authorized by this permit, its plans, and specifications.
 4. This permit does not authorize or sanction work that has been completed in violation of applicable federal, state, or local statutes.
 5. The permit placard shall be kept posted at the work site, in a prominent location at all times for the duration of the project, or until permit expiration.
 6. This permit is being issued for the maximum time allowed and no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by the MDEQ, will be for a five-year period beginning on the date of issuance. If the project is not completed by the expiration date, a new permit must be sought.
 7. Notification shall be provided to the MDEQ by telephone 72 hours prior to commencing construction, vegetation removal, or grading activity. Contact: Nancy Cuncannan at cuncannann@michigan.gov or 616-690-1229.
 8. All raw areas in resulting from the permitted construction activity shall be effectively stabilized with native seed in a sufficient quantity and manner to prevent erosion with the dunes and any potential siltation to surface waters or wetlands.
 9. All slopes steeper than one-on-three (33%) must not be disturbed. Impacting the dunes is not authorized outside of the permitted use including activities such as driving machinery on slopes steeper than one-on-three (33%), or storing (permanently or temporarily) machinery, soil, materials, equipment, or removed vegetation, on any slopes steeper than one-on-four (25%).
 10. Altering the crest and the area lakeward of the crest by placing retaining walls or other regulated structures, removing soil or vegetation, lowering or raising the elevation of the crest, placing materials or soils lakeward of the crest on the lakeward facing bluff is not permitted.
 11. The construction of porches, decks, landscaping (with the exception of planting native dune vegetation), on-grade walkways, on-grade stairways, and retaining walls including the placement of boulders, are considered uses, and not permitted unless specified in the authorized activities of the permit and depicted on the approved plans.
 12. All earth moving, and contour changes must occur within 10 feet of the permitted use.
 13. Vegetation changes are not authorized more than 10 feet outside of the permitted use. All disturbed areas shall be re-vegetated with native dune species and stabilized with temporary measures before or upon commencement of the permitted use and maintained until permanent measures are in place. The

removal and re-establishment of vegetation must be in accordance with the submitted vegetation assurance.

14. The tree pest, hemlock woolly adelgid (HWA), is known to infest hemlock and tiger-tail spruce trees in this county. The Michigan Department of Agriculture and Rural Development (MDARD) has issued a quarantine on the movement of all branches, boughs, any tree part bearing twigs and needles and uncomposted, chipped/shredded/ground parts that include twigs and needles. Issuance of this permit does not obviate the need to obtain approval to move hemlock and tiger-tail spruce parts off the project site prior to commencement of construction activity as stated in the quarantine effective on July 5, 2017 by authority of Public Act 72 of 1945, as amended. In Allegan and Ottawa counties contact MDARD Region 2 Supervisor Mike Hansen, hansenmg@michigan.gov or 269-429-0669. In Muskegon and Oceana counties contact MDARD Region 1 Supervisor John Hill, hillj1@michigan.gov or 231-922-5233.
15. If possible, do not cut or trim oak trees during the growing season. If you must prune or remove these trees, do not conduct this work between April 15 and August 15. Avoid moving downed wood off-site from oak, ash, and American beech trees to avoid spreading diseases.
16. The permitted use and development shall provide for disposal of storm water without serious soil erosion and without sedimentation to any waterbody or wetland.
17. The transport of building materials/excavated sand and access to and from the site shall be via the existing roadways. A separate temporary driveway or access road is not permitted for construction activities.
18. Excavated sand should be left on site if possible. Excess excavated clean sand must be deposited in a critical dune area on the beach above the ordinary high-water mark (OHWM) of 580.5 feet IGLD85, or on-site in areas with slopes less than one-on-three (33%) which do not contain woody vegetation or as noted on the site plan. Machinery is not permitted to be driven down the lakeward facing bluff, on slopes steeper than one-on-three (33%) or in the water of the lake for the purpose of depositing the excess sand. Sand shall not be left in piles.
19. All excess woody debris, concrete, building materials, or other types of soil must be deposited off site, outside of the critical dune area.
20. Sand shall not be excavated within the Critical Dune Area for the purpose of obtaining backfill.
21. Stairway(s)/walkway(s) must be constructed elevated above grade, on a hand dug post foundation, a maximum of five (5) feet in width and shall not have a roof or walls.
22. Underground utility lines must be placed in areas with slopes less than one-on-four (25%) or the lines must be installed using the directional bore method or by hand digging. If the directional bore method is used, the bore pits must be located in areas with slopes less than one-on-four (25%). The disturbed areas must be stabilized and repaired with temporary measures before or upon commencement of the permitted use and shall be maintained until permanent measures are in place. Trenching areas with slopes steeper than one-on-four (25%) is not permitted.
23. All man-made debris that has been compromised by erosion and is threatening to be discarded below the Ordinary High-Water Mark of a Great Lake, such as stairways, decks, catch basins, septic systems, pool foundations, buildings, sheds, pipes, and concrete, must be removed and deposited in an upland location outside of the Critical Dune Area.

Issued By: 
Nancy Cuncannan
Grand Rapids District Office
Water Resources Division
616-690-1229

cc: City of Muskegon Clerk
Muskegon County CEA
Wade VandenBosch, Agent