According to the Attorney General, interrupting a public meeting in Michigan with hate speech or profanity could result in criminal charges under several State statutes relating to Fraudulent Access to a Computer or Network (MCL 752.797) and/or Malicious Use of Electronics Communication (MCL 750.540). According to the US Attorney for Eastern Michigan, Federal charges may include disrupting a public meeting, computer intrusion, using a computer to commit a crime, hate crimes, fraud, or transmitting threatening communications. Public meetings are monitored, and violations of statutes will be prosecuted.

Zoom Meeting: go to www.zoom.us/join | call: 1-929-205-6099  
Meeting ID: 920 7431 3584 | Passcode: 420205

WORK SESSION – 6:00 P.M.
1. Attorney Bultje – Overview of Buchanan Street Road End Agreement – Respond to Board Questions
2. Discussion/Direction – State Legislation Regarding STRs

REGULAR MEETING – 7:00 P.M.

I. CALL TO ORDER

II. ROLL CALL

III. STATEMENT ON REMOTE MEETING

IV. APPROVAL OF MEETING AGENDA

V. PUBLIC COMMENTS – (Agenda Items Only)
If you would like to comment on an Agenda Item Only, please click “Raise Hand” at the bottom of your screen or press Alt+Y. The Zoom Moderator will unmute you when it is your turn to speak. Comments will be limited to three (3) minutes.

VI. CONSENT AGENDA
1. Approve May 10, 2021, Regular Board Minutes
2. Approve Payment of Invoices in the Amount of $257,210.02 (A/P checks of $144,388.55 and payroll of $112,821.47)
3. Approve Municipal Consulting – Compensation & Benefits Study ($15,000±)
4. Approve Jackson-Merkey Contractors, Inc. Bid ($682,232) for Hofma Park Pump Station Forcemain Relocation Project
5. Approve DDA Bid Documents for Rosy Mound Pathway Project

VII. OLD BUSINESS
1. Approve Resolution 21-05-02 – Resolution of Intent to Issue Bonds for Park Improvements
VIII. NEW BUSINESS
1. Approve Resolution 21-05-03 – Approving MNRTF Land Acquisition Grant Agreement – TF20-0148 ($246,300)
2. Approve Resolution 21-05-04 – Approving MNRTF Development Grant Agreement – TF20 – 0154 ($300,000)
3. Approve Resolution 21-05-05 – Arrowaste Waste Hauling License
4. Discussion\Direction – Pottawattomie Park Waterfront Redevelopment Project

IX. REPORTS & CORRESPONDENCE
1. Committee Reports
2. Manager’s Report
   a. April Public Services Report
   b. March Legal Review
3. Other

X. PUBLIC COMMENTS – (Non-Agenda Items)
If you would like to comment on a Non-Agenda Item Only, please click “Raise Hand” at the bottom of your screen or press Alt+Y. The Zoom Moderator will unmute you when it is your turn to speak. Comments will be limited to three (3) minutes.

XI. ADJOURNMENT
GRAND HAVEN CHARTER TOWNSHIP BOARD
MONDAY, MAY 10, 2021

REGULAR MEETING

I. CALL TO ORDER
Supervisor Reenders called the regular meeting of the Grand Haven Charter Township Board to order at 7:00 p.m.

II. ROLL CALL
Board members present: Larsen, Reenders, Kieft, Behm, Redick, Meeusen Wagenmaker
Board members absent:

Also present was Manager Cargo, Human Resources Director Dumbrell, Finance Director Sandoval, and Community Development Director Fedewa.

III. STATEMENT ON REMOTE MEETING
It was noted that the Township Board was meeting remotely on the Zoom platform because of health concerns associated with COVID-19 pandemic. Information on this remote meeting has been posted so that the public may participate. All elected officials present noted that they are meeting remotely and are located within Grand Haven Charter Township, except for Supervisor Reenders who is in Grand Haven City.

IV. APPROVAL OF MEETING AGENDA
Motion by Trustee Meeusen and seconded by Trustee Behm to approve the meeting agenda. Which motion carried pursuant to the following roll call vote:
Ayes: Larsen, Wagenmaker, Kieft, Meeusen, Redick, Behm, Reenders
Nays:
Absent:

V. PUBLIC COMMENTS – (Agenda Items Only)
Supervisor Reenders announced that a period for public comments on agenda items was now opened.

Supervisor Reenders noted that if a person would like to comment on an Agenda Item Only, please click “Raise Hand” at the bottom of your screen or press Alt+Y. The Zoom moderator (i.e., Stacey Fedewa) will unmute you when it is your turn to speak. Comments will be limited to three (3) minutes.

1. Julie Koning (13210 Hidden Creek Drive) stated that the Open Air Business zoning text amendment would directly impact her household inasmuch that the Vandenberg SLU could be approved. Although she remains “pro-business”, she believes that the Vandenberg SLU application is contrary to the Master Plan and the location of the open-air business should not be located near the front.

2. Superintendent Cargo disclosed that he is a member of the Hidden Creek HOA
Board; but, has not been involved in the opposition occurring from members of the HOA or subdivision.

3. Richard Edwards (13224 Hidden Creek Drive) stated that he is concerned with issues of dust and noise regarding the Vandenberg SLU application. Believes the open-air business would be better suited at the rear of the property.

4. Supervisor Reenders noted that the Vandenberg SLU application is not on the agenda and that this public comment period is limited to agenda items, only.

5. Bob Koning (13210 Hidden Creek Drive) stated that the zoning text amendment is poorly timed, and he considers this to be “spot zoning”.

There being no further public comments, Supervisor Reenders announced that the period for public comments on agenda items was now closed.

VI. APPROVAL OF CONSENT AGENDA
1. Approve April 26, 2021, Regular Board Minutes
2. Approve Payment of Invoices in the Amount of $368,281.30 (A/P checks of $244,500.03 and payroll of $123,781.27)
3. Approve Bierman Inspection Services LLC Agreement
4. Approve Reis Appointment to Harbor Transit Board of Directors
5. Approve Bid for Generator at East Ferris Lift Station - (Bazen Electrical - $73,276)

Motion by Treasurer Kieft and seconded by Trustee Meeusen to approve the items listed on the Consent Agenda. Which motion carried, pursuant to the following roll call vote:
Ayes: Behm, Wagenmaker, Meeusen, Redick, Kieft, Reenders, Larsen
Nays: Absent:

VII. PRESENTATION – 2020 Financial Audit
Township Auditor Douglas Vredevedel presented the 2020 financial audit. It was noted that the auditor provided an “unqualified opinion” for a clean audit – which is the highest opinion that can be offered – and that there were no significant deficiencies or material weaknesses. The Township's financial position remains healthy.

VIII. OLD BUSINESS
1. Motion by Trustee Meeusen and seconded by Treasurer Kieft to approve the proposed Grand Haven Area Water and Sewer Extension Agreement and authorize the Supervisor and Clerk to execute this agreement. Which motion carried, pursuant to the following roll call vote:
Ayes: Kieft, Reenders, Meeusen, Behm, Wagenmaker, Larsen, Redick
Nays: Absent:
IX. NEW BUSINESS
1. Motion by Trustee Behm and seconded by Trustee Meeusen to refer the proposed Zoning Text Amendment Ordinance with draft date of 5/6/2021 back to the Planning Commission to address the questions and concerns that have been raised. Which motion carried, pursuant to the following roll call vote:
   Ayes: Wagenmaker, Larsen, Kieft, Reenders, Behm, Meeusen, Redick
   Nays:
   Absent:

X. REPORTS AND CORRESPONDENCE
a. Committee Reports
   i. The Personnel Committee will be meeting on Wednesday morning at 7:00 a.m.
   ii. Wagenmaker wanted clarification as to when a zoning application is considered “ready” for review by the Planning Commission.
   iii. Clerk Larsen asked if the questions and comments from the public will be shared with the Planning Commission. Staff noted that all public comments (e.g., emails, letters, etc.) are preserved and will be shared with the Planning Commission.

b. Manager’s Report, which included:
   i. Manager Cargo noted the engineer estimate to place 2,000 cubic yards of sand on the Buchanan Street road end is about $45k. It was noted that adjacent property owner and Marine Contractor Gezon noted that sand will be ineffective for erosion control and restoration.
   ii. April Building Report
   iii. April Ordinance Enforcement Report

c. Others

XI. PUBLIC COMMENTS
Supervisor Reenders announced that a period for public comments on non-agenda items was now opened.

Supervisor Reenders noted any person would like to comment on a non-agenda item only, please click “Raise Hand” at the bottom of your screen or press Alt+Y. The Zoom moderator will unmute you when it is your turn to speak. Comments will be limited to three (3) minutes.

1. Katy Barclay (17620 Buchanan Street) believes the Buchanan Street road end agreement should be opened to address current conditions (e.g., number of persons allowed). Does not believe that the Township can place sand on the road end and believes that there have been other violations.

2. Edward Everhart (12087 Bluewater Road) wants a clear statement justifying the placement of sand on the road end (which is not rationale) and believes that the Township has violated the road end agreement.

3. The Board instructed Manager Cargo to schedule a work session with Attorney Bultje to review the Buchanan Street road end agreement.
There being no further public comments, Supervisor Reenders announced that the period for public comments on agenda items was now closed.

XII. **ADJOURNMENT**

**Motion** by Clerk Larsen and seconded by Trustee Behm to adjourn the meeting at 7:53 p.m. **Which motion carried**, pursuant to the following roll call vote:

Ayes: Meeusen, Behm, Larsen, Kieft, Redick, Wagenmaker, Reenders

Nays:

Absent:

Respectfully Submitted,

Laurie Larsen
Grand Haven Charter Township Clerk

Mark Reenders
Grand Haven Charter Township Supervisor
SEDAMEN AGREEMENT

NOM, MICHAEL E. KOBZA

CASE NO. 94-20493-CH

THE CIRCUIT COURT FOR THE COUNTY OF OTTAWA
STATE OF MICHIGAN

"SUSAN BETTELENDORF, ALLEN, DONALD BETTELENDORF and LESLIE WILTS, DAVIS ALLEN, MABEL KAREN WASSON, JEFFREY WILTS, JULIE RIEGER, CARL WASSON, ANNA PONTONI, ROBERT RIEGER, JEFFREY HUGHES, NANCY HUGHES, MARK WELCH, JUDY BREGMAN, and DEFENDANTS"

Corporation, a municipal corporation
THE TOWNSHIP OF GRAND HAVEN, a municipal corporation, and BOARD OF COMMISSIONERS, a municipal corporation.

Plaintiff, DOUGLAS KOOI, vs. Plaintiff, DOUGLAS KOOI,

Defendant, BRENNAN F. WELCH and DEFENDANT INTERESTS

Attorneys for Defendant Interests
JAMES A. BIDDLE (P-10782)

Attorneys for Defendant Board of Ottawa

GRAND HAVEN, Ml 49417
221 WASHINGTON STREET
PO. BOX 281
PHILIP R. STEWART (P-3014)

GRAND HAVEN, Ml 49417
800 CALEDON PLAZA BUILDING
250 MONTROSE, N.W.
MARTIN, JOHNSON, STREET & COMMISSIONERS, P.L.C.

GRAND RAPIDS, Ml 49503
321 SELLERS ROAD, P.O. BOX 1767
GRAND RAPIDS, Ml 49503
(616) 322-1821
GRAND RAPIDS, Ml 49503
(616) 332-7921
GRAND RAPIDS, Ml 49503
(616) 322-1767
GRAND HAVEN, Ml 49417
(616) 842-5210
GRAND HAVEN, Ml 49417
Township opposed Koor's claim alleging certain rights based upon the highway by user statute.

Township opposed Koor's claim alleging certain rights based upon the highway by user statute.

This settlement agreement is executed effective this —- day of March, 1996.
Herein, it is agreed as follows:

In consideration of the above stated facts and the mutual covenants contained

Agreement

Jointly referred to as the "Quist Property".

Quist Property will be subject to common regulatory and supervisory requirements and will be

Under the terms and conditions of this Agreement, the Subject Property and the

Township of Grand Haven, County of Ottawa, State of Michigan,
the South Section line, thence East 10 points of beginning,
413.2 feet to Lake Michigan, thence Southwesterly along said Lake to
South Fractional 1/2, thence North 183.3 feet, thence West
commencing 139.26 feet West of the Southwesterly corner of said
Section 17, Town 7 North, Range 16 West, described as
The South 18 feet of that part of the South Fractional 1/2 of

1992) and is referred to herein as the "Quist Property," which is more particularly described as:

Commission, Ottawa County Circuit Court, File No. 2249 (corrected Judgment Filed April 26,
Quist's property is currently subject to a judgment entered in Miller v. Quist County Road
Agreement. Her husband is Gordon J. Quist who signs this Agreement to indicate his consent
immediately adjacent to and north of the Subject Property which will be affected by this
"Interests," Quist is a party to this Agreement for the reason that she owns certain property
particularly described in the pleadings. These individuals are hereafter referred to as the
rights in the Subject Property by adverse possession and prescriptive easement as more
Lake Shore Drive in Grand Haven Township who have interested in the litigation, claiming

The remaining parties to this Agreement, except for Martha Jane Quist ("Quist")
Article I. The Parties. The parties agree and acknowledge that Kool has the simple title to the Subject Property subject to the Interests of Ownership between the Township and the Interiors. The parties agree and acknowledge that Kool has the simple title to the Subject Property subject to the Interests of Ownership between the Township and the Interiors.

Article II. Perpetual Public Easement in Subject Pate. The Township shall have a perpetual easement in the Subject Property for use by the public as a road or for access to and from Lake Michigan as provided in the court judgment. The parties agree and acknowledge that Kool has the simple title to the Subject Property subject to the Interests of Ownership between the Township and the Interiors.

Article III. Easement Property. The easement property is subject to the conditions and restrictions of this Agreement. The public's use shall also include the right to consume food and beverages on the easement, swimming, fishing, and related activities herein, subject to the terms and conditions of this Agreement. The public's use shall also include the right to consume food and beverages on the easement, swimming, fishing, and related activities herein, subject to the terms and conditions of this Agreement.

Article IV. Fence and Gate. The Township shall construct a fence to enclose a fence property on the easement property, but limited by the conditions and restrictions of this Agreement. The public shall use the fence property, subject to the terms and conditions of this Agreement. The parties agree and acknowledge that Kool has the simple title to the Subject Property subject to the Interests of Ownership between the Township and the Interiors.
5

Additional Boundary Fences. The Township, at its expense, shall also place and maintain steel roll fences along the north and south boundaries of the Roadside Property. The 8 foot fences that extend west along the high water line of Lake Michigan east to the west end of the property, which extend from the south boundary fences, shall also be maintained and replaced as necessary during the term of this Agreement by the Township. The north and south boundary fences of the Roadside Property shall be maintained and replaced as necessary during the term of this Agreement by the Township. The Township shall provide access to the north and south boundary fences for a distance of 20 feet along the property, but access will be provided to pedestrians by emergency and maintenance vehicles. A pedestrian gate can be opened to provide access to Lake Michigan from the south side of the Railroad Property on a line two feet west of the asphalt paving for the parking area at the end of Buchanan Street. The Township shall provide access to the north boundary fence of the Roadside Property at its expense.
considered a park and the Township and Orono shall not encourage the public to use the
recreational and improvements necessary to control erosion. The Roadside Property is not to be
or placed upon the Roadside Property except for the fences described in Paragraph 4 and 5. Trash
9
Limitations on Facilities and Use. No improvements shall be made to
and regulations shall also preclude possession or use of alcoholic beverages.
set forth in Township Ordinance No. 39, effective August 2, 1980, as presently amended. Rules
apply and enforce, with respect to the Roadside Property, the rules and regulations as currently
property to no more than ninety (90) people at any one time. In addition, the Township shall
Restricions on Use. The Township shall limit the use of the Roadside
of violation, liocks and, if necessary, by tow-away services.
the two roads. The "No Parking" restrictions shall be enforced by the Township by the issuance
restrictions 7 days a week for a distance of 300 feet from the intersection of the center lines of
sides of Buchanan Street and Library Road to be subject to 24-hour a-day "No Parking"
approal of the Michigan State Police Department, the Township and/or Orono shall cause both
closed to parking each day from 10:00 P.M. to 8:00 A.M. In addition, subject to the necessity
be closed to parking each day from 10:00 P.M. to 8:00 A.M. In addition, subject to the necessity
parking areas by yellow lines or other appropriate markings. These parking area shall be
parked at the west end of Buchanan Street shall
7
Parking Restrictions. Parking at the west end of Buchanan Street shall
the gatekeeper will call the appropriate police department for assistance.
include causing people to vacate the Roadside Property when the gate is closed. If necessary,
10. **Supervision of Roadside Property.** In addition to providing a caretaker, erosion control under Paragraph II.  

Erosion control under Paragraph II.:  

Access to vehicles shall be limited to those vehicles necessary to effect any other water-related access to vehicles. The roadside Property is not to be a launching area for boat or jet skis.  

Supervision of Roadside Property items such as picnic tables, grill facilities, running water, playground equipment, and parking facilities or any other facilities for the public or Jet skies.  

Accordingly, the Township and Chena shall not place or allow to be placed upon the property the Township and Chena shall not place or allow to be placed upon the property.
and promptly repair damage to the fences and signs due to vandalism or other causes, to control
the Township has the affirmative duty to fence and maintain the Roadside Property, to prevent
Towship's Obligation To Enforce Agreement Under this agreement,
caused by foot traffic and other uses of the Roadside Property.

Paragraph 8.

Paragraph 9.

Township Control. The Township shall be responsible for stabilizing the
would not affect or change the Township's responsibilities of enforcement as provided in
Notwithstanding the termination of the Supervisor's services, termination of the Supervisor,
Township and Rool Reach a mutually agreeable to again providing the Supervisor.
the Township shall have no further obligation to provide the Supervisor, unless and until the
of the mailing of the notice, If payment is not received by the Township by the specified date,
services shall be terminated unless payment is received by the Township within fifteen (15) days
Township shall give written notice to the owner of the Subject Property that the Supervisor's
Township for reimbursement of the Township for the compensation of the Supervisor as required herein, then the
30 days notice to the Township. If the owner of the Subject Property fails, neglects or refuses
discussion, to modify the terms when the Supervisor's services shall be provided by providing
expense is unaffordable, then the owner of the Subject Property shall have the right, at his/her
Property and the Township, or if the owner of the Subject Property should decide that the
understood that the Supervisor's services would normally be required only on weekends and
By members of the public have resulted in substantial violations of the injunction despite the
agreement and is thereafter determined by the Court that the Township has failed or refused
Court issues an injunction to enforce all or a portion of the terms and conditions of this
damages or such other relief as may be determined appropriate by the Court. In the event the
seeking relief and/or recovery in law and equity, including the right to intangible relief and
enforce this agreement by filing an appropriate action in Ohio County Circuit Court
accordingly, the owners of the Subject Property and/or the Quiet Property shall have the right
enjoinment and use of their respective properties which are adjacent to the Roadway Property.
property, by diminishing or subordinating their right to the peaceful and quiet
in immemorial and inextricable harm to the owners of the Subject Property and the Quiet
agreement or the ordinance provisions relating to the use of the Roadway Property will result
violations by the Township or members of the public of the terms and conditions of this
13. Rights of Enforcement. It is acknowledged and agreed by the parties that
agreement as provided in paragraphs 12 and 14 hereof.
owners of the Subject Property and/or the Quiet Property shall have the right to enforce this
including the rules, regulations and ordinances applicable to the Roadway Property, then the
the Roadway Property is determined to be unreasonable and violative of this agreement,
agreement. If the Township neglects its duties under this agreement or if use by the public of
restrictions on use of the Roadway Property as set forth in paragraphs 7, 8, 9 and 10 of this
loud and obnoxious behavior of the public, it is asked to enforce and supervise the parking restrictions and


the Roadbed Property shall continue to be used for roadway purposes.
The Roadbed Property, if being understood that this portion of the Roadbed Property, including the subdivision and the west line of the subdivision, shall not be affected by any agreement or provision of the provisions of subparagraphs (p), (q), (r).

For upkeep or maintenance of the Roadbed Property:

(c) the Township or Otaawa shall have any further responsibility following termination of abandonment, neither the property shall be owned by the owner of the property.

All fences on the Roadbed Property shall remain on the

(d) forever terminated.

Agreement or otherwise to the property shall cease and be

Township and/or Otaawa and the public under this

owner of the Quist Property and any and all rights of the

 Fee simple title to the Quist Property shall revert to the

forever terminated.

under this Agreement or otherwise shall cease and be

and all rights of the Township and/or Otaawa and the public

owner of the subject property and any

Fee simple title to the subject property shall remain in the

portion thereof, then:

is terminated or if the Township and/or Otaawa abandons its use of the Roadbed Property, or any

14. Effect of Termination or Abandonment. In the event this Agreement members of the public, then the Court shall have the right and option to terminate this

good faith efforts of the Township to regulate and control the use of the Roadbed Property by

(p)
including the right to use such Property for swimming, sunbathing, and other purposes subject to
will be allowed to use the Subject Property for a road path for access to and from Lake Michigan.
If this Agreement is terminated or abandoned, then the Intervenors or their successors in interest
subject to the restrictions relating to use of the Roadbed Property as set forth in this Agreement.
of this Agreement, the Intervenors shall be considered members of the public and shall be

17. Separate Agreement Between Roadbed and Intervenors. During the term

or legal action between the parties relating to the Roadbed Property.

or considered by the Court with respect to the Responded or Reinstated Litigation or to any new case
or settle the Litigation shall have no bearing and specifically may not be submitted in evidence
activities, discussions, correspondence and any other events relating to the attempts of the parties
on or before October 15, 1996. In the event such action is taken, then this Agreement and any
Ligation or to commence a separate legal action provided such action is taken or commenced
have the Right at its/their discretion, to terminate this Agreement and to Reinstate the pending
provisions contained in the Agreement to the contrary, the Court of the Subject Property shall

16. Termination Without Cause. Notwithstanding any and all of the

paragraph 16 herein.

Exhibit 2. The form of the proposed Orders are attached to accommodate the intent of
Administratively Closed Case, attached as Exhibit 1, or the Order of Dismissal, attached as
16. 1996 or, in the Court's discretion, to be dismissed in accordance with either the Order
the Litigation hereby consent to allow the Litigation to be administratively closed until October

15. Dismissal of Administrative Closure of Litigation. All of the parties to
A Agreement were terminated under Paragraph 16.

and the regulations leading up to the Agreement shall be treated in the same manner as if the
then this Agreement shall be void and of no effect. In such event, the effect of this Agreement
the event it is determined that this Agreement is unenforceable as to the Township of Ontario,
conditional upon the enforceability of the provisions of this Agreement as a matter of law. In
conditioned upon the enforceability of the provisions of this Agreement as a matter of law. In
21. Enforcement of Agreement. This Agreement shall be subject to and

Responsibility for the Subject Property to the Township.
the Township, agree and acknowledge that Ontario may relinquish jurisdiction or transfer legal
assises with respect to the Road and Property and shall run with the land. The parties, including
shall be binding upon the parties hereto and their respective heirs, successors in interest and

20. Successors in Interest. This Agreement shall apply for the benefit of and

recorded.

appropriate for recording with the Ontario County Register of Deeds Office and shall be so

19. Recording of Agreement. This Agreement shall be executed in a form

provided by the terms and conditions of this Agreement.

18. Real Estate Taxes. During the term of this Agreement, the Road

this Agreement.

the terms and conditions of an easement granted by Kool to the Interferers concurrently with
Witnesses:

Conditions of this Agreement.

By Kathy J. Kool, wife of Douglas Kool, to acknowledge her full consent with the terms and

Execution of Agreement by Kathy J. Kool. This Agreement is executed
Board of Champaign County Road Commissioners,

The foregoing Settlement Agreement was acknowledged before me this 8th day of February, 1996 by Kay J. Kool

(County of Champaign)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)

STATE OF ILLINOIS

My commission expires: 07-01-98

Notary Public, Champaign County, IL

________________________
(County of Illinois)
The foregoing Settlement Agreement was acknowledged before me this 15th day of March, 1996 by Jeffrey Hughes and Nancy Hughes.

Notary Public, Ottawa County, MI
My commission expires: 04-06-97
Acting in Ottawa County

The foregoing Settlement Agreement was acknowledged before me this 21st day of February, 1996 by Judy Bregman.

Notary Public, Ottawa County, MI
My commission expires: 04-06-97
Acting in Ottawa County

The foregoing Settlement Agreement was acknowledged before me this 29th day of February, 1996 by Mark Welch.

Notary Public, Ottawa County, MI
My commission expires: 04-06-97
Acting in Ottawa County

The foregoing Settlement Agreement was acknowledged before me this 20th day of March, 1996 by Karen S. Behmacker.

Notary Public, Ottawa County, MI
My commission expires: 04-06-97
Acting in Ottawa County

STATE OF MICHIGAN
County of Ottawa

STATE OF MICHIGAN
County of Ottawa

STATE OF MICHIGAN
County of Ottawa

STATE OF MICHIGAN
County of Ottawa

STATE OF MICHIGAN
County of Ottawa
The foregoing settlement agreement was acknowledged before me this 25th day of February, 1996 by Jeffrey Willis and Leslie Willis.

County of Ottawa

STATE OF MICHIGAN

County of Ottawa

STATE OF MICHIGAN

County of Ottawa

STATE OF MICHIGAN

County of Ottawa
Boyd A. Henderson (P14865)

By

Attorneys for Plaintiff

Miltier, Johnson, Still & Cummings, PLC

My commission expires:
Notary Public, Kent County, MI


The foregoing Settlement Agreement was acknowledged before me this 30th day
of February, 1996 by Donald Belden dort and Susan Belden dort.

Country of Vermont

STATE OF MICHIGAN

County of Kent

State of Michigan

County of Othea

State of Michigan

County of Othea

County of Othea

County of Othea

County of Othea
By Judy E. Bregman (P322252)
Attorneys for Defendant Intervenors
BREGMAN & WELCH

By Phillip R. Sileika (P30314)
Attorneys for Township of Grand Haven
BUSSEARD & SILEIKA

By James A. Biclo (P10782)
Road Commissioners
Attorneys for Defendant Board of Ottawa County
CUNNINGHAM, DALMAN, P.C.
Manager’s Memo

DATE: May 20, 2021

TO: Township Board

FROM: Cargo

RE: Short Term Rental (STR) Legislation

Trustee Behm raised the issue of the continued assault on local control – with proposed Legislation in the Michigan House and Senate that would pre-empt local control on Short-Term Rentals (STRs) – eliminating zoning authority over STRs.

The following is an excerpt from the Michigan Townships Association (MTA) website:

PROTECT YOUR TOWNSHIP'S ABILITY TO ZONE FOR SHORT-TERM RENTALS—TELL YOUR LAWMAKERS TO OPPOSE HARMFUL PREEMPTION BILLS!

Local governments count on zoning to shape their communities and preserve the quality of life so important to their residents. Two bills—House Bill 4722 and Senate Bill 446—would eliminate your township’s ability to do so. The bills will preempt your township’s local zoning authority to regulate short-term rentals.
MTA needs you to contact your state lawmakers to share your opposition to House Bill 4722 and Senate Bill 446 preempting local zoning on rental properties in residential zones.

Many communities across the state have enacted regulations to address detrimental impacts short-term rentals have had on the quality of life in neighborhoods. Each community has accomplished this in a manner that best meets the needs of residents and short-term rentals. These local efforts should not be undermined and replaced with a one-size-fits-all approach from the state.

The legislation threatens the ability for local municipalities to manage the number and location of rentals across Michigan, undermining local control and upsetting the delicate balance between property rights and the established, transparent process for local decision-making.

The legislation would create a new statewide zoning requirement—thereby eliminating a township’s ability to regulate any issues with nonowner-occupied residences rented on a short-term basis UNLESS the same regulations are applied equally to all owner-occupied residences.

The legislation will also affect the quality of life for residents living near a short-term rental—negatively impacting their property rights.

Further, rental properties would no longer have to abide by local regulation—such as inspections and licensing—unless the same requirements are applied to all owner-occupied residential property as well.

Many times, commercial interests purchase multiple homes in a community for the sole purpose of renting them on a short-term basis—daily, weekly or monthly—with no intent for the owner to ever occupy the residential property. MTA believes locally elected township boards are best positioned to balance the unique needs of their community when addressing zoning issues and to protect the health, safety and welfare of residents, vacation visitors and renters.

MTA needs you to contact your lawmakers to voice opposition to this attack on local decision-making. The bills do not include any compromises local government groups have proposed to address concerns raised by proponents of the legislation.

If the Board wants to take a position of these bills and inform our State Legislators (i.e., State Senator Roger Victory and State Representative Jim Lilly), please direct staff on how you want to proceed.

If there are any questions or comments, please contact me at your convenience.
In March 2021, a Request for Proposals (RFP) to conduct a Compensation and Benefits Study, of Grand Haven Charter Township’s permanent jobs, was sent to five firms recommended by municipal human resources managers in West Michigan. By the deadline of April 30, 2021, four of the five firms responded with proposals.

After reviewing the four proposals and completed studies of the firms’ work, a recommendation was made to the Personnel Committee, on May 12, 2021, to select Municipal Consulting Services (MCS) for the Township’s Compensation and Benefits Study. MCS’s extensive experience and their detailed, final reports sets them apart from the other firms. Additionally, Mark Nottley would be assigned to completing this study and has performed over 200 compensation and human resources-related projects for public sector clients. Further information on MCS can be found on their website: Municipal Consulting Services LLC - Michigan - Government Operations Management Consulting

The cost for MCS to complete the study is expected to come in just under budget, as the Township budgeted $17,000 for the expense. Based on current workloads, the study should be completed and presented to the Board of Directors in September 2021.

If the Board concurs with the Personnel Committee’s recommendation to hire Municipal Consulting Services for the Township’s Compensation and Benefits Study, the following motion could be offered for consideration:

**Move to authorize Superintendent Cargo to accept the proposal from Municipal Consulting Services to conduct the Township’s Compensation and Benefits Study.**

Municipal Consulting Services’ proposal is attached for your review. If you have any questions, please contact Bill Cargo or Andrea Dumbrell.
GRAND HAVEN CHARTER TOWNSHIP

PROPOSAL TO CONDUCT A COMPENSATION AND BENEFITS STUDY
April 17, 2021

Ms. Andrea Dumbrell
Human Resources Director
Grand Haven Charter Township
13300 168th Avenue
Grand Haven, MI 49417

Dear Ms Dumbrell,

We are pleased to submit this proposal to conduct a Compensation and Benefits Study for Grand Haven Charter Township. We have performed numerous studies of this type for Michigan’s public entities, and we look forward to working with you to develop a pay system that is both internally equitable and externally competitive.

Our proposal, contained in the following pages, is organized as follows at your request:

- Team identification
- Approach and work plan
- Financial information
- References.

We appreciate the opportunity to be of assistance to you. Should you have questions or desire additional information, please do not hesitate to contact me at 734.904.4632.

Very truly yours,

Mark W. Nottley, Principal
Municipal Consulting Services LLC
6968 Fargo Trail
Littleton, CO 80125
# GRAND HAVEN CHARTER TOWNSHIP

PROPOSAL TO CONDUCT A
COMPENSATION AND BENEFITS STUDY

## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Team Identification</td>
<td>I-1</td>
</tr>
<tr>
<td>II. Approach and Work Plan</td>
<td>II-1</td>
</tr>
<tr>
<td>III. Financial Information</td>
<td>III-1</td>
</tr>
<tr>
<td>IV. References</td>
<td>IV-1</td>
</tr>
</tbody>
</table>
SECTION I

TEAM IDENTIFICATION
SECTION I

TEAM IDENTIFICATION

Municipal Consulting Services LLC is a management consulting firm incorporated in and licensed by the State of Michigan. The firm was established to provide human resources and operational-based consulting to public sector clients, including cities, townships, counties, school districts, institutions of higher education and other not-for-profit organizations. With more than 50 years of combined experience with Michigan’s public sector and the completion of hundreds of management studies, we are able to provide our clients with a vast array of products, covering a broad spectrum of organizational and human resources consulting services.

This project, for Grand Haven Charter Township, will be conducted by Mark Nottley, Principal for Municipal Consulting Services LLC. Mr. Nottley has performed over 200 compensation and human resource-related projects for public sector clients. Clients have included cities, townships, not-for-profits, school districts, county governments and other public sector entities.

Mr. Nottley is certified as a Senior Professional in Human Resources by the Society for Human Resources Management (SHRM) and holds a Master’s Degree in Public Administration from Wayne State University.

In regard to availability, our firm is small and accepts only as many projects as can be completed in a timely and responsible manner. We can commit to a June 1, 2021 start date for your project with an anticipated completion date of August 31, 2021 barring circumstances that are clearly beyond our control. Our client references will attest to the quality of our work as well as the timeliness and responsiveness to client needs.

* * * * * * *

In the following section, we present our approach to conducting the study.
SECTION II

OUR APPROACH AND WORK PLAN
SECTION II

OUR APPROACH AND WORK PLAN

Project Objectives

Grand Haven Charter Township has expressed an interest in utilizing an experienced compensation consultant in conducting a compensation and benefits study encompassing approximately thirty positions. In regard to project objectives, it will be our intent to develop a compensation system that will enhance the Township’s ability to recruit, retain and motivate quality employees. To accomplish this, we will:

- Develop a solid understanding of the specific duties and responsibilities of each position included in the study.
- Establish a competitive labor market and conduct a market survey of wages and employee benefits.
- Update the current pay grade structure and pay ranges based on job evaluation and a thorough evaluation of the established labor market.
- Collect, review and conclude upon a wide range of employee benefits, the competitiveness of current benefits and the impact on total compensation.
- Develop and include methodologies for evaluating current pay status and the impact of modifying current pay levels and moving employees through the pay ranges over time.
- Recommend procedures for ongoing pay system maintenance including pay system administration and compensation system upkeep.

Our Approach

Our approach for achieving these objectives will incorporate several important overall rationales. Specifically:

- **Client-consultant communications will be a paramount consideration.** We will work closely with you to assure concurrence on the conduct, and progress of the engagement, as it relates to thoroughness, scope and applicability.

- **Employee participation will be emphasized**, thus assuring that positional duties are clearly understood and opportunity for input is provided. To accomplish this, we will elicit employee input via a job questionnaire and interview supervisory personnel concerning each employee’s job duties.
• **The labor market survey will be customized**, with minimal, or no, reliance on “canned” data. Related:

  - We will develop a custom survey instrument that clearly specifies the duties of Grand Haven Charter Township’s positions.
  
  - We will define the most appropriate labor market.

  - We will survey both base wages and employee benefits, thus providing a more accurate appraisal of “total compensation”.

**Project Work Plan**

In developing the classification and compensation system we will structure the project into specific tasks, as follows:

**Task 1: Meet With the Township and Refine Work Plan**

It will be our intention to work closely with the Township to develop the classification and compensation system. Related, as a first step in the study process, we will meet via Zoom with designated project leaders to:

- Further define, and logistically plan, our approach and work schedule

- Determine the best approach for ongoing feedback and updates.

**Task 2: Collect and Review Compensation-Related Documentation**

Additionally, at this time we will also collect and review relevant compensation information, including existing job descriptions, benefits data, the collective bargaining agreement covering some employees, compensation-related personnel policies and all other information that will provide us with an understanding of classification and compensation issues.

**Task 3: Provide Employee Orientation and Elicit Employee Input**

At this time, we will also schedule a group meeting with the employees to be conducted via Zoom. The purpose of this meeting will be threefold, including:

- Orienting employees to the project work plan and objectives.

- Explaining the importance of their input in working with our project consultant.

- Eliciting their assistance in the study process – more specifically, to complete a job analysis questionnaire document regarding their specific job
duties, reporting relationships and other aspects of their job pertaining to compensation.

**Task 4: Review Submitted Job Questionnaires and Conduct Department Head Interviews**

The completed job questionnaires, in conjunction with your existing job descriptions, will provide our consultant with a good overview of job duties and reporting relationships. However, we do not feel that the questionnaire is sufficient for fully understanding the function of the position within the larger organization. Consequently, we consider it important that additional information be gathered through a subsequent interview process encompassing supervisory positions. The interviews will focus on:

- Obtaining a broader definition of duties and responsibilities for purposes of point factoring and determining relative grade positioning.
- Assuring that all job description information is accurately reflected and job questionnaire information is accurately stated.
- Clearly defining key duties to be used to compare the position to the labor market.

**Task 5: Develop List of Market Comparables in Consultation with the Township**

To establish compensation parameters for the Township’s labor force, we must first define the labor market. Ideally, the defined market will be comprised of a mix of similar townships and city governments.

In Task 5, we will work with you to define a representative labor market. To accomplish this, we will:

- Present the Township with a listing of potential comparable public sector employers. We will develop and present profile data on each entity to support this process – comprised of a mix of financial and demographic data.
- With input from you, we will also identify those positions that are amenable to local labor market comparisons.

**Task 6: Develop Survey Instrument for Wages**

Having completed Task 5, we will develop a survey instrument to elicit feedback regarding each position. This will be a “custom survey” that briefly describes each position. In addition to salary, we will survey other relevant compensation data, such as key duties that differ from the Township’s positional duties.
**Task 7: Develop Survey Instrument for Employee Benefits**

We will also survey other employee benefits including:

- Off-time provisions, including sick, personal, vacation, holiday and other.
- Sick-time bank policies, accrual limits and payout provisions.
- Health care coverage including PA 152 compliance, employee premium cost sharing requirements, prescription drug co-pay levels, payment-in-lieu of insurance options and other health care coverages such as dental and optical.
- Disability coverages including short-term disability, all purpose day programs, long-term disability – as well as life insurance levels.
- Retirement benefits including defined benefit (DB) or defined contribution (DC) retirement program usage. As appropriate, DB employee contribution, final average multiplier and program type (and/or) employer DC contribution and required match, plus any supplemental employer-paid contributions.
- Employer-paid retiree health care provision including percentage paid, spousal coverage, Medicare supplemental provision and/or any Retirement Savings Account benefits.
- Work hours, work week and related conditions.
- Any other benefits deemed to be important to the Township.

In our experience, the broad-based employee benefits survey that we are proposing will provide the Township with a strong indication of total compensation, and target specific areas where the benefit package may be high or low. The data will be arrayed in easy to read schedules accompanied by a narrative presentation. We will summarize our suggestions on issues or areas where the Township should focus its efforts and, in turn, help to determine the most appropriate level for base wages, within the larger context of total compensation. It should be noted, that this is not a “costing” exercise. Rather, it is presented as an overview of benefits that may help the Township focus on areas where discrepancies are apparent.

**Task 8: Conduct Survey Process and Finalize Results**

Having developed the survey instrument, we will mail the survey, and tabulate the incoming results. Follow-up calls will be made to clarify particular points, and supplementary surveys will be developed for any positions that are not adequately represented in our survey results.
Task 9: Conduct Point Factor Analysis and Refine the Grade Structure

Your request-for-proposal did not mention a point factor analysis. However, we anticipate that this would be part of the work plan to ensure that non-elected positions are properly graded in relation to each other. By way of explanation, point-factoring is a process in which each position is point-ranked relative to all other positions in the organization or group. Ideally, point-factoring is considered as a means of establishing internal equity, and in turn, pay grade placement.

With your concurrence, we will be pleased to perform a point-factor analysis encompassing all relevant positions included in the study. In this process, each position will be ranked in relation to ten factors that comprise our municipal job evaluation plan. The results will be used to potentially modify the current grade structure, and establish grade placement for each individual position.

Task 10: Apply Survey Results and Develop Pay Ranges for Each Pay Grade

In Task 10, we will use the results of the survey process to develop a pay range for each applicable pay grade. The result will be a comprehensive pay grade structure that includes all of the studied positions.

Task 11: Analyze Each Position within the Confines of the New Pay Grade Structure

We will then proceed to evaluate the wage levels of each employee relative to the newly established pay ranges. We will first determine any “red circled” positions that are paid at a level higher than the recommended range maximum and any “green circled” positions that are below the range minimum. All positions will be evaluated using a compa-ratio analysis to illustrate their specific positions within their respective ranges.

Task 12: Summarize all Benefit Data and Conclude on Comparability

As discussed in Tasks 7 and 8, we will collect and organize a wide array of employee benefit information from other comparable municipalities. In Task 12, we will array this information in spreadsheet/exhibit format and develop and narrative comparison of benefit provisions. We will indicate areas in which the Township is high or low as well innovative benefit approaches that may be of future value. It will be our objective to provide the Township with the information necessary to fully understand its competitive posture in the labor market and the relevance of total compensation when considering wage levels.

Task 13: Develop Pay Progression Options

There are various methods for implementing a pay system. Many clients prefer a multi-year methodology for advancing employees through the pay range. This may depend on performance evaluation results or be more structured (such as a step system with
progressive pay increases linked to performance evaluation). Related to this, we will also:

- Revisit and discuss the Township’s current compensation adjustment process with Township representatives.
- Introduce several examples of pay progression systems that are currently used in the public sector.
- Provide cost data to illustrate the impact of a preferred approach – and adjustments based on the study results.

**Task 14: Develop Final Report Document**

At the conclusion of Task 13, we will develop a comprehensive final report document. This will include:

- Written summation of all project methodologies.
- All schedules and summary results developed in Tasks 1-13.
- The recommended pay grade structure including all classifications.
- Identification of any positions that fall below or above the range parameters specified for their respective classifications.
- A narrative benefits analysis and all supporting documentation.
- Pay progression options and analysis intended to facilitate future implementation of the study’s results.
- Specification of annual procedures required to update the system for ongoing use, utilize the job evaluation system for purposes of reclassification and other related administrative procedures

**Task 15: Present Final Report to the Township Board**

At the conclusion of the study we will orally present the study’s findings to the Board of Trustees.

* * * * * * * *

*In the following section, we discuss financial information.*
SECTION III

FINANCIAL INFORMATION
SECTION III

FINANCIAL INFORMATION

*Project Timing:

We will commence work on the project as early as June 1, 2021 if so desired. We anticipate completing the project within 90 days of the day we begin work, depending on the timeliness of survey completion by the selected market comparables. It will be our objective to meet your August 31, 2021 project deadline.

*Professional Fees:

Professional fees to complete the project will be at a cost of $500 per job classification (job title) at project inception or completion, whichever number is larger. Based on 30 job classifications, Grand Haven Charter Township could anticipate a fee of $15,000. Should the number of job classifications exceed 30 at either project inception or completion, the Township would be charged an additional $500 for any such classification.

*Project Expenses:

Project expenses will be limited to $1,500 for travel-related costs (airfare, auto or mileage, hotel). This expense budget envisions two trips to the Township for project-related activities (i.e. interviews and final Board presentation). If costs are less for travel, or interviews are done by Zoom, the Township would only be charged the actual expense.

*Other Conditions:

This proposal will remain effective for 90 days from the date of submittal.

Grand Haven Charter Township will be billed on a calendar monthly basis for work completed in the previous period. All invoices will be due within thirty days of submittal.

*Project Deliverables:

Grand Haven Charter Township will receive seven bound copies of the final report document and electronic files of the final report and all schedules from which additional copies can be printed or source data can be extracted for future use.

* * * * * * *

In the following section we discuss our specific experience.
SECTION IV

OUR QUALIFICATIONS FOR CONDUCTING THE STUDY
SECTION IV

OUR QUALIFICATIONS FOR CONDUCTING THE STUDY

Our proposed project consultant has conducted numerous classification and compensation studies of public entities. We have listed below a number of project references.

SELECT REFERENCES FOR MARK NOTTLEY

<table>
<thead>
<tr>
<th>Client</th>
<th>Project</th>
<th>Contact</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Oak Township</td>
<td>Classification and Compensation Study</td>
<td>Mr. Michael Sedlak, Township Clerk</td>
<td>810.231.1333</td>
</tr>
<tr>
<td>Brighton Township</td>
<td>Classification and Compensation Study</td>
<td>Mr. Brian Vick, Township Manager</td>
<td>810.494.0710</td>
</tr>
<tr>
<td>Park Township</td>
<td>Classification and Compensation Study</td>
<td>Mr. Jerry Hunsburger, Supervisor</td>
<td>616-738-4232</td>
</tr>
<tr>
<td>Kochville Township</td>
<td>Classification and Compensation Study</td>
<td>Mr. Steve London, Township Manager</td>
<td>989.792.7596</td>
</tr>
<tr>
<td>Union Charter Township</td>
<td>Classification and Compensation Study</td>
<td>Mr. Mark Stuhldreher, Township Manager</td>
<td>989.772.4600</td>
</tr>
<tr>
<td>Kalamazoo Charter Township</td>
<td>Classification and Compensation Study</td>
<td>Mr. Dexter Mitchell, Township Manager</td>
<td>269.381.8085</td>
</tr>
<tr>
<td>Delhi Charter Township</td>
<td>Classification and Compensation Study</td>
<td>Ms. Tricia VanderPloeg, Human Resources Director</td>
<td>517.694.2137</td>
</tr>
<tr>
<td>DeWitt Charter Township</td>
<td>Classification and Compensation Study</td>
<td>Mr. Rod Taylor, Township Manager</td>
<td>517.668.0270</td>
</tr>
</tbody>
</table>
Client: Pere Marquette Charter Township (2020)
Project: Classification and Compensation Study
Contact: Mr. Jerry Bleau, Township Supervisor
Phone: 231.845.1277

Client: City of Ludington (2018)
Project: Classification and Compensation System
Contact: Ms. Jackie Steckel, Assistant to the City Manager
Phone: 231.845.6237

Client: City of Ann Arbor (2018)
Project: Classification and Compensation System
Contact: Ms. Ashley Walicki, Human Resources Manager
Phone: 734.794.6130

Client: City of Grand Blanc (2018)
Project: Classification and Compensation System
Contact: Ms. Wendy Jean-Buhrer, City Manager
Phone: 810.694.1118

Project: 2018 State-wide Survey of Wages and Benefits for Union Employees
Contact: Ms. Jamie Abednego, Office of the State Employer
Phone: 517.335.2579

Client: City of Monroe (2020)
Project: Classification and Compensation System
Contact: Ms. Peggy Howard, Director of Human Resources
Phone: 734.384.9173

Client: Kent County Road Commission (2019)
Project: Classification and Compensation System
Contact: Mr. Michael Dennis, Human Resources Manager
Phone: 616.242.6937

Client: Grand Rapids Community College (ongoing)
Project: Classification and Compensation System
Contact: Ms. Cathy Kubiak, Executive Director of HR
Phone: 616.234.3971

Client: Ottawa County (current project)
Project: Classification and Compensation System
Contact: Ms. Marcie VerBeek, Director of Human Resources
Phone: 616.738.4879

We will be pleased to provide additional references at your request.
Manager’s Memo

DATE: May 18, 2021

TO: Township Board

FROM: Bill

RE: 2021 – Hofma Park Pump Station Forcemain Relocation Project

As you may recall, the Township budgeted $750,000 to relocate the Hofma Park sewer pump station forcemain from emptying into the Hidden Creek gravity sewer to emptying into the gravity sewer main located at the west side of US-31 and Ferris Street.

Five bids on the aforementioned project were received with a low bid of $682,232, which is about 9% under the budget estimate. (See Bid Tabulation Summary below.)

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Bid Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackson Merkey Contractors</td>
<td>$682,232.00</td>
</tr>
<tr>
<td>Milbocker and Sons</td>
<td>$717,160.95</td>
</tr>
<tr>
<td>Wadel Stabilization</td>
<td>$768,984.00</td>
</tr>
<tr>
<td>Kamminga &amp; Roodvoets</td>
<td>$789,378.45</td>
</tr>
<tr>
<td>Montgomery Excavating</td>
<td>$810,427.50</td>
</tr>
</tbody>
</table>

Engineer Kieft is recommending that the Township award this bid to Jackson Merkey Contractors noting that Prein and Newhof “has had experience with Jackson Merkey on numerous projects of similar type and size with successful results including 168th Avenue sewer project from Ferris to Johnson Street”.

To approve the low bid and proceed with the project, the following motion can be offered:

Move to approve the low bid of $682,232 from Jackson Merkey Contractors for the Hofma Park Pump Station Forcemain Relocation Project and authorize Superintendent Cargo to execute the necessary contract documents.

If you have any questions or comments, please contact Cargo.
Manager’s Memo

DATE: May 20, 2021

TO: Township Board

FROM: Bill

RE: 2021 DDA Rosy Mound Pathway Extension - Approve Bid Documents

As you may recall, the Township budgeted about $75k from the DDA Fund to extend the pathway along Rosy Mound Drive – from Lakeshore Drive eastward. (This will provide a pathway option for both the Village at Rosy Mound Senior Housing and the High School – to the new egress drive.)

Pursuant to the Township’s policy on capital purchasing, prior to going to bid on projects in excess of $15,000, the bid specification shall be approved by the Township Board.

However, the Board instructed staff that the actual bid specifications were no longer to be included in a printed format in the Board packets, rather the specifications would be made available in an electronic format only. (This was done to save “paper” and reduce costs.)

Therefore, plans and bid specifications for the proposed “Rosy Mound Non-Motorized Path” project are available in an electronic format in the Board packets.

If there are no objections to plans or specifications, the following motion can be offered:

Move to approve the proposed plans and specifications for the proposed Rosy Mound Non-Motorized Path project and instruct staff to proceed forward with bid process.

If you have any questions or comments, please contact me at your convenience.
Project Specifications

Grand Haven Charter Township
Ottawa, Michigan

Rosy Mound Non-Motorized Path

May 2021

2210180
# Table of Contents

Advertisement ........................................................................................................................................... 1-2

Instructions to Bidders ............................................................................................................................. 1-4

Bid Proposal Checklist ............................................................................................................................ 1-1

Bid Proposal (proposal package for submittal by Contractor) ............................................................... 1-3

EJCDC C-520 (2018) Standard Form of Agreement (Stipulated Price) ................................................... 1-9

Bond Forms
  Performance Bond ............................................................................................................................... 1-3
  Payment Bond ................................................................................................................................... 1-3

Insurance Certificates (to be furnished by Contractor) ........................................................................

EJCDC C-700 (2018) Standard General Conditions ........................................................................... 1-72

Supplementary Conditions .................................................................................................................... 1-20

Soil Nomenclature and Terminology .................................................................................................... 1

Insurance Specifications ......................................................................................................................... 1-12

Section 2: Specifications for Excavating, Trenching, & Backfilling for Utilities .................................... 1-18

Section 3: Specifications for Surface Restoration ................................................................................ 1-10

Section 5: Specifications for Storm Sewer ............................................................................................ 1-21

Section 9: Specifications for Non-Motorized Multi-Use Pathways ....................................................... 1-14

Project Specifications ............................................................................................................................. 1-12

Drawings .............................................................................................................................................. 1-3
1. RECEIPT OF BIDS

Electronic proposals will be accepted and are the preferred method of submittal.

Bids will be received until:

**10:00 a.m. (local time) on Thursday May 27, 2021**

All bids received shall remain sealed and unopened until the bid opening. A bid opening will be conducted via a conference call.

2. SCOPE OF PROJECT

The project consists of furnishing all material and constructing the following:

- 1,300 feet of 8’ wide HMA pathway
- 20 feet of 12” storm sewer
- 250 feet of chain link fence

All labor, materials, equipment, transportation, and activity or costs necessary for completion of this work shall be included in this contract unless specifically stated otherwise.

Including all necessary appurtenances and restoration.

3. EXAMINATION OF SPECIFICATIONS

Contract documents may be examined online at [www.preinnewhof.com/planroom](http://www.preinnewhof.com/planroom) or at the offices of:

Prein&Newhof, 3355 Evergreen Drive NE, Grand Rapids, MI 49525
And some local plan rooms.

4. DEPOSIT FOR DRAWINGS AND SPECIFICATIONS

Drawings and specifications are available online at [www.preinnewhof.com/plan-room](http://www.preinnewhof.com/plan-room) or at the Grand Rapids Office of Prein&Newhof. Electronic drawings, specifications and bidding documents will be accessible/available only to those Bidders who are active members of the Prein&Newhof Plan Room. Bidder assumes sole risk for any project specifications and drawings, electronic or hard copy, obtained other than directly from Prein&Newhof. Hard copy drawings and specifications are available for the fee of $75.00 dollars. Prein&Newhof
Plan Room members who want to purchase the hard copy of the drawings only, may do so for $13.50 dollars. A $15 dollar charge will be added to all mailed drawings and/or specifications. Fees are payable by cash or check only and are not refunded.

5. **FUNDING**

The work to be performed under this contract will be financed and paid for by local funds.

6. **BID SURETY**

A bid bond, certified check, or cashier’s check payable to Grand Haven Charter Township in an amount equal to five percent (5%) of the total price shall accompany each bid. This surety shall bind the bidder for a period of forty-five (45) days after the receipt of bids.

7. **COMPLETION DATE**

The projects shall be substantially complete and ready for final payment by September 3, 2021. Anticipated award date by Township board is June 14, 2021.

William D. Cargo, Superintendent
Grand Haven Charter Township
Ottawa County, Michigan
1. CONTRACT DOCUMENTS

The contract documents consist of material outlined in Article 9 of the Agreement. Each Bidder shall carefully examine his copy of the contract documents for completeness. No claim will be allowed on the basis that the contract documents are not complete.

2. INTERPRETATION OF THE CONTRACT DOCUMENTS

It is the intent of these contract documents to be clear, complete and consistent. If Bidder is of the opinion that any portion of the contract documents is ambiguous, inconsistent or contains errors or omissions Bidder shall, prior to submitting its bid, in writing request Engineer to clarify that portion of the contract documents as an addendum. This interpretation or correction will be made a part of the contract documents as an addendum. Any such addendum shall be mailed, faxed, e-mailed or delivered only to each person recorded as having received/downloaded a copy of the contract documents directly from Prein&Newhof.

Only written addenda issued by the Engineer shall be binding. Oral interpretations, information or instructions by any office or employee of the Owner or Engineer are not authorized and therefore are not binding.

Questions related to the project shall be directed to Kevin Kieft, P.E. at 231-798-0101 or via email at kkieft@preinnewhof.com.

Any conclusions or information obtained or derived from Contract Documents will be at the user’s sole risk. Prein&Newhof will maintain the master copy (hard copy), from which all electronic copies are based in its Grand Rapids Office. In the case of any contract discrepancy, the Master Copy (hard copy) shall be considered the controlling document.

3. BIDDERS INVESTIGATION

The Bidder will be responsible for inspecting the site of the proposed work to determine for himself all conditions under which he will be obligated to work. It is also expected that he will investigate and make his own determination concerning the available facilities for receiving, transporting, handling and storing construction equipment and materials, and concerning other local conditions that may affect his work.
4. BID PROPOSAL PREPARATION

A. Name, Address and Legal Status of Bidder

The name and legal status of the Bidder, Corporation, Partnership or an Individual, shall be stated in the Proposal. A corporation Bidder shall name the state in which its Articles of Incorporation are held, and must give the title of the official having authority, under the by-laws, to sign contracts. A partnership Bidder shall give the full names and addresses of all partners. An L.L.C. Bidder shall provide the full names and addresses of all members.

Anyone signing a proposal as an agent of another must submit, with his proposal, legal evidence of his authority to act as an authorized agent of the party.

The place of residence of each Bidder, or the office address in the case of a firm or company, with county and state, must be given after a signature.

B. Bid Surety

See ADVERTISEMENT “BID SURETY”

C. Proposal Form

The Bidder is to complete the Bid Proposal Documents that are included in the Project Specification book (online or hard copy), referring to the table of contents to identify the exact order of these documents. The Bid Proposal Documents include: Bid Proposal Checklist, Bid Proposal, and Bid Proposal – Unit Prices. Electronic proposals will be accepted and are the preferred method of submittal in response to Governor Whitmer’s Executive Order.

The Bidder must provide the signed Bid Proposal Documents in either type written or hand written (in ink) form and clearly and completely set forth all required lump sum amounts, unit prices or other costs in a legible and understandable manner. Illegibility of any work or figure in the proposal may be sufficient cause for rejection of the proposal by the Owners.

The procedure for submitting electronic bids is as follows:

1) Bidders are to submit their bid electronically to Kevin Kieft at kkieft@preinnewhof.com and Dan Tlachac at dtlachac@ght.org.

2) Grand Haven Charter Township or Prein&Newhof will verify receipt of the bid by email. If a confirmation receipt is not received, bidders should call Kevin Kieft at 231-798-0101 to obtain verification. It is the bidders responsibility to obtain this verification.

3) The subject line for bid submittals shall include reference to the contract being bid, “Bid Proposal – Rosy Mound Non-Motorized Path”. Attached Bid Proposal documents and bid bonds shall be in the form of a pdf titled with Rosy Mound Non-
Motorized Path and Bidders Name. All bid proposal documents shall be submitted in PDF format with a file size not to exceed 10MB.

4) In the event that bidders are not able to submit their bid electronically, bidders shall be required to contact Kristi Walsh at the Grand Haven Charter Township Administration Office at (616) 842-5988 to setup an appointment to deliver the bid proposal.

5) All bids received shall remain sealed and unopened until the bid opening. A bid opening will be conducted via a conference call. Conference call information is provided below.

**Meeting link:**
https://zoom.us/j/5184773253?pwd=UmRnQWQyWlZ0QWhlck53NWF2NTBmZz09

**Phone Number for Audio:** +1.929.436.2866  
**Meeting ID:** 518-477-3253  
**Password:** 205880

D. **Proposal Data**

Proposals shall be carefully prepared in strict accordance with contract requirements and these instructions and shall include all pertinent information required by the proposal form. Failure of the bidder to comply in any respect shall be grounds for rejection of the bidder's proposal.

The proposal for work is on a unit price basis.

The bids will be based on the comparison of totals of the extensions of the stated unit prices. In case of an error in preparation of the bid form, the unit prices will be used.

No partial bids will be considered.

E. **Experience and Qualifications**

It is the intention of the Owner to award this contract to a Bidder that will perform and complete all work in compliance with the Contract Documents and in a workmanlike and professional manner. Bids are therefore only solicited from responsible Bidders known to be skilled, experienced and regularly engaged in work of similar character and magnitude to that covered by these contract documents.

After the opening of bids, when so requested by the Owner or Engineer, the Bidder will be required to provide documentation of the extent and nature of his experience in work of this kind and to furnish references as to his experience on projects of similar types and concerning contractor’s ability to timely and within budget perform work of the type involved in this project. The successful Bidder shall submit a statement of his experience and financial status, a list of all jobs he now has underway, with the volume and percent completed. If the successful Bidder is an LLC, bidder shall provide, if requested, personal guarantees of its members.
In addition to the above, when so requested, the Bidder shall meet with the Owner's representatives and give further information in relation to his proposed construction plan, methodology, and schedule of operations, in order to determine the Bidder’s qualifications, ability to perform the Work, and timely complete the Work in accordance with the contract requirements.

F. Return of Bid Deposits

The bid deposits of all Bidders, except the three lowest Bidders, will be returned within seven days after the opening of the bids. The bid deposits of the three lowest Bidders will be returned (1) within 48 hours after the contract shall have been awarded to the successful Bidder, the signed agreement has been delivered, and the required bonds have been approved by the Owner, or (2) after rejection of all bids.

5. WITHDRAWAL OF BIDS

Any Bidder who has submitted a proposal to the Owner may withdraw his bid at any time prior to the scheduled time for opening bids. No Bidder may withdraw his bid after the opening for a period of forty-five (45) days thereafter.

6. AWARD AND EXECUTION OF THE CONTRACT

The contract shall be deemed as having been awarded when formal Notice of Award shall have been duly provided by the Owner upon the Bidder.

The Bidder to whom the contract shall have been awarded will be required to execute an Agreement in the form included in the Contract Documents and to furnish sureties, insurance policies and certificates all as required within fifteen (15) days after the award. In case of his refusal or failure to do so, he will be considered to have abandoned all his rights and interest in the award, and his bid deposit may be declared forfeited to the Owner and the work may be awarded to another Bidder.

7. WOMEN AND MINORITY OWNED BUSINESSES

Women and minority owned businesses are highly encouraged to provide a proposal for the work described.

8. NON-DISCRIMINATION CLAUSE

This project must comply with all requirements of 1976 PA 453(Elliot-Larsen Civil Rights Act) and 1976 PA 220 (Persons with Disabilities Civil Rights Act) as amended.
Bid Proposal Checklist

Owner: Grand Haven Charter Township

Project Title: Rosy Mound Non-Motorized Path

Project #: 2210180

This checklist is for the bidder's convenience and the Engineer's use. It should be reviewed thoroughly before submitting a bid.

☐ Bid submitted on time.

☐ Bid surety properly completed and enclosed.

☐ Addenda, if applicable, has been acknowledged and any revisions to the proposal completed.

☐ Bid proposal legally signed in ink.

☐ All unit prices are completed in ink.
[Intentionally left blank]
Bid Proposal

Owner: Grand Haven Charter Township

Owner Address: 13300 168th Avenue, Grand Haven, Michigan 49417

Project Title: Rosy Mound Non-Motorized Path

Bid Date & Time: Thursday, May 27, 2021 at 10:00 am  
Project #: 2210180

The undersigned, being familiar with the site, plans, specifications, and related documents, proposes to furnish all required labor, materials, tools and equipment to construct the project in accordance with the unit prices on the following sheets.

Date Prepared: ______________________

Receipt of Addenda

Receipt of Addenda _________ through __________ is hereby acknowledged.

Summary of Bids

Total Bid $ ______________________

The Owner reserves the right to accept or reject any or all bids and to waive any irregularities in the bidding. No partial bids will be accepted.

Contractor's Signature

Contractor’s Name ______________________  Telephone Number ______________________

Business Address ______________________ City __________ Zip Code __________

Signature ______________________ Title ______________________ Date ______________________

Seal (if bidder is a corporation)
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mobilization, Max 10% of Total</td>
<td>1</td>
<td>Lsum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Traffic Control</td>
<td>1</td>
<td>Lsum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Erosion Control, Inlet Protection</td>
<td>4</td>
<td>Ea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Erosion Control, Mulch Blanket</td>
<td>350</td>
<td>Syd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Erosion Control, Silt Fence</td>
<td>120</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Tree Remove, 6 inch to 18 inch</td>
<td>23</td>
<td>Ea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Tree Remove, 18 inch and Over</td>
<td>3</td>
<td>Ea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>HMA Surface, Rem</td>
<td>90</td>
<td>Syd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Fence, Rem</td>
<td>270</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Fence, Chain Link</td>
<td>255</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Shared Path Grading</td>
<td>1,270</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6 inch Aggregate Base, 22A</td>
<td>1,520</td>
<td>Syd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>6 inch Conc. Sidewalk Ramp</td>
<td>90</td>
<td>Sft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Detectable Warning Surface</td>
<td>12</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Remove Curb and Gutter</td>
<td>110</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Concrete Curb and Gutter</td>
<td>110</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Sign, Relocate</td>
<td>2</td>
<td>Ea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Shared Path, HMA 13A</td>
<td>110</td>
<td>Ton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item No.</td>
<td>Description</td>
<td>Quantity</td>
<td>Unit</td>
<td>Unit Price</td>
<td>Total Amount</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------------------------------</td>
<td>----------</td>
<td>------</td>
<td>------------</td>
<td>--------------</td>
</tr>
<tr>
<td>19</td>
<td>Shared Path, HMA 36A</td>
<td>110</td>
<td>Ton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>HMA Approach</td>
<td>15</td>
<td>Ton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Turf Restoration</td>
<td>1,250</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>6 inch Waterborne Crosswalk, White</td>
<td>230</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Enter Only Text and Arrow, Yellow</td>
<td>1</td>
<td>lsum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>3 inch Irrigation Sleeve</td>
<td>50</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>12 inch SLCPP Storm Sewer</td>
<td>20</td>
<td>Ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>12 inch FES</td>
<td>1</td>
<td>Ea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>24 inch Storm Manhole</td>
<td>1</td>
<td>Ea</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Bid:
AGREEMENT BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between Grand Haven Charter Township, 13300 168th Avenue, Grand Haven, MI 49417 ("Owner") and ________________________ ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Rosy Mound Non-Motorized Path

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Rosy Mound Non-Motorized Path

ARTICLE 3—ENGINEER

3.01 The Owner has retained Prein&Newhof, 4910 Stariha Drive Muskegon, MI 49441 ("Engineer") to act as Owner’s representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by Prein&Newhof.

ARTICLE 4—CONTRACT TIMES

4.01 Time is of the Essence

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Contract Times: Dates

A. The Work will be substantially complete on or before September 3, 2021, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before September 3, 2021.

4.03 Contract Times: Days

A. The Work will be substantially complete within [number] days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within [number] days after the date when the Contract Times commence to run.

4.04 Milestones

A. Parts of the Work must be substantially completed on or before the following Milestone(s):
1. Milestone 1 [event & date/days]
2. Milestone 2 [event & date/days]
3. Milestone 3 [event & date/days]

4.05 **Liquidated Damages**

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. **Substantial Completion**: Contractor shall pay Owner $500 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. **Completion of Remaining Work**: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $500 for each day that expires after such time until the Work is completed and ready for final payment.

3. **Milestones**: Contractor shall pay Owner $ [number*] for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved, or until the time specified for Substantial Completion is reached, at which time the rate indicated in Paragraph 4.05.A.1 will apply, rather than the Milestone rate.

4. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner’s sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

C. **Bonus**: Contractor and Owner further recognize the Owner will realize financial and other benefits if the Work is completed prior to the time specified for Substantial Completion. Accordingly, Owner and Contractor agree that as a bonus for early completion, Owner shall pay Contractor $ [number] for each day prior to the time specified above for Substantial Completion (as duly adjusted pursuant to the Contract) that the Work is substantially complete. The maximum value of the bonus will be limited to $ [number].

4.06 **Special Damages**

A. Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor’s failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in
Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.

B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

C. The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.

**ARTICLE 5—CONTRACT PRICE**

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Work other than Unit Price Work, a lump sum of $[number].

All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

B. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item).

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Unit</th>
<th>Estimated Quantity</th>
<th>Unit Price</th>
<th>Extended Price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities) $[number]

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

C. Total of Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment) $[number].

D. For all Work, at the prices stated in Contractor’s Bid, attached hereto as an exhibit.
ARTICLE 6—PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments
A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 Progress Payments; Retainage
A. Owner shall make progress payments on the basis of Contractor’s Applications for Payment on or about the 30th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.
   a. 90 percent of the value of the Work completed (with the balance being retainage).
      1) If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and
   b. 0 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 98 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 100 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 Final Payment
A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 Consent of Surety
A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 Interest
A. All amounts not paid when due will bear interest at the rate of 0 percent per annum.
ARTICLE 7—CONTRACT DOCUMENTS

7.01 Contents

A. The Contract Documents consist of all of the following:
   1. This Agreement.
   2. Bonds:
      a. Performance bond (together with power of attorney).
      b. Payment bond (together with power of attorney).
   3. General Conditions.
   4. Supplementary Conditions.
   5. Specifications as listed in the table of contents of the project manual.
   6. Drawings (not attached but incorporated by reference) consisting of 3 sheets with each sheet bearing the following general title: Rosy Mound Non-Motorized Path.
   7. Addenda (numbers [number] to [number], inclusive).
   8. Exhibits to this Agreement (enumerated as follows):
      a. Contractor’s Bid (pages 1 to 3, inclusive)
      b. Insurance Specifications (pages 1 to 13, inclusive).
      c. The 2012 Standard Specifications for Construction adopted by the Michigan Department of Transportation are hereby incorporated into these contract documents.
      d. [List other required attachments (if any), such as documents required by funding or lending agencies]
   9. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
      a. Notice to Proceed.
      b. Work Change Directives.
      c. Change Orders.
      d. Field Orders.
      e. Warranty Bond, if any.

B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.
ARTICLE 8—REPRESENTATIONS, CERTIFICATION, AND STIPULATIONS

8.01 Contractor’s Representations

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda.

2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor’s safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. Contractor’s entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 Contractor’s Certifications

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 Standard General Conditions

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.
IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

<table>
<thead>
<tr>
<th>Owner:</th>
<th>Contractor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Haven Charter Township</td>
<td>(typed or printed name of organization)</td>
</tr>
<tr>
<td>By:</td>
<td>By:</td>
</tr>
<tr>
<td></td>
<td>(individual’s signature)</td>
</tr>
<tr>
<td>Date:</td>
<td>Date:</td>
</tr>
<tr>
<td></td>
<td>(date signed)</td>
</tr>
<tr>
<td>Name:</td>
<td>Name:</td>
</tr>
<tr>
<td></td>
<td>(typed or printed)</td>
</tr>
<tr>
<td>Title:</td>
<td>Title:</td>
</tr>
<tr>
<td></td>
<td>(typed or printed)</td>
</tr>
<tr>
<td>Attest:</td>
<td>Attest:</td>
</tr>
<tr>
<td></td>
<td>(individual’s signature)</td>
</tr>
<tr>
<td>Title:</td>
<td>Title:</td>
</tr>
<tr>
<td></td>
<td>(typed or printed)</td>
</tr>
<tr>
<td>Address for giving notices:</td>
<td></td>
</tr>
<tr>
<td>13300 168th Avenue</td>
<td>Grand Haven, MI 49417</td>
</tr>
<tr>
<td>Designated Representative:</td>
<td></td>
</tr>
<tr>
<td>Name:</td>
<td>Name:</td>
</tr>
<tr>
<td></td>
<td>(typed or printed)</td>
</tr>
<tr>
<td>Title:</td>
<td>Title:</td>
</tr>
<tr>
<td></td>
<td>(typed or printed)</td>
</tr>
<tr>
<td>Address:</td>
<td>Address:</td>
</tr>
</tbody>
</table>

Phone: ________________________
Email: ________________________

(If [Type of Entity] is a corporation, attach evidence of authority to sign. If [Type of Entity] is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)
**PERFORMANCE BOND**

<table>
<thead>
<tr>
<th>Contractor</th>
<th>Surety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Name:</td>
</tr>
<tr>
<td>Address (principal place of business):</td>
<td>Address (principal place of business):</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Owner</th>
<th>Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Grand Haven Charter Township</td>
<td>Description (name and location): Rosy Mound Non-Motorized Path</td>
</tr>
<tr>
<td>Mailing address (principal place of business): 13300 168th Avenue Grand Haven, MI 49417</td>
<td>Contract Price:</td>
</tr>
<tr>
<td>Effective Date of Contract:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond Amount:</td>
</tr>
<tr>
<td>Date of Bond:</td>
</tr>
<tr>
<td>(Date of Bond cannot be earlier than Effective Date of Contract)</td>
</tr>
<tr>
<td>Modifications to this Bond form: ☐ None ☐ See Paragraph 16</td>
</tr>
</tbody>
</table>

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

<table>
<thead>
<tr>
<th>Contractor as Principal</th>
<th>Surety</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Full formal name of Contractor)</td>
<td>(Full formal name of Surety) (corporate seal)</td>
</tr>
<tr>
<td>By:</td>
<td>By:</td>
</tr>
<tr>
<td>(Signature)</td>
<td>(Signature) (Attach Power of Attorney)</td>
</tr>
<tr>
<td>Name:</td>
<td>Name:</td>
</tr>
<tr>
<td>(Printed or typed)</td>
<td>(Printed or typed)</td>
</tr>
<tr>
<td>Title:</td>
<td>Title:</td>
</tr>
<tr>
<td>Attest:</td>
<td>Attest:</td>
</tr>
<tr>
<td>(Signature)</td>
<td>(Signature)</td>
</tr>
<tr>
<td>Name:</td>
<td>Name:</td>
</tr>
<tr>
<td>(Printed or typed)</td>
<td>(Printed or typed)</td>
</tr>
<tr>
<td>Title:</td>
<td>Title:</td>
</tr>
</tbody>
</table>

**Notes:** (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.
1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety’s obligation under this Bond will arise after:
   
   3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor’s performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner’s notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety’s receipt of the Owner’s notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner’s right, if any, subsequently to declare a Contractor Default;

   3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

   3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety’s obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety’s expense take one of the following actions:

   5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

   5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

   5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

   5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2. additional legal, design professional, and delay costs resulting from the Contractor’s Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety’s liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such
statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1. Balance of the Contract Price—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2. Construction Contract—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3. Contractor Default—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4. Owner Default—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5. Contract Documents—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: [Describe modification or enter “None”]
PAYMENT BOND

<table>
<thead>
<tr>
<th>Contractor</th>
<th>Surety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Name:</td>
</tr>
<tr>
<td>Address (principal place of business):</td>
<td>Address (principal place of business):</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Owner</th>
<th>Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Grand Haven Charter Township</td>
<td>Description (name and location): Rosy Mound Non-Motorized Path</td>
</tr>
<tr>
<td>Mailing address (principal place of business): 13300 168th Avenue Grand Haven, MI 49417</td>
<td>Contract Price:</td>
</tr>
<tr>
<td>Effective Date of Contract:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond Amount:</td>
</tr>
<tr>
<td>Date of Bond: (Date of Bond cannot be earlier than Effective Date of Contract)</td>
</tr>
<tr>
<td>Modifications to this Bond form: None See Paragraph 18</td>
</tr>
</tbody>
</table>

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

<table>
<thead>
<tr>
<th>Contractor as Principal</th>
<th>Surety</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Full formal name of Contractor)</td>
<td>(Full formal name of Surety) (corporate seal)</td>
</tr>
<tr>
<td>By:</td>
<td>By: (Signature) (Attach Power of Attorney)</td>
</tr>
<tr>
<td>Name:</td>
<td>Name: (Printed or typed)</td>
</tr>
<tr>
<td>Title:</td>
<td>Title:</td>
</tr>
<tr>
<td>Attest:</td>
<td>Attest: (Signature)</td>
</tr>
<tr>
<td>Name:</td>
<td>Name: (Printed or typed)</td>
</tr>
<tr>
<td>Title:</td>
<td>Title: (Printed or typed)</td>
</tr>
</tbody>
</table>

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.
1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety’s obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner’s property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety’s expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety’s obligations to a Claimant under this Bond will arise after the following:
   5.1. Claimants who do not have a direct contract with the Contractor
      5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
      5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
   5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant’s obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety’s expense take the following actions:
   7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
   7.2. Pay or arrange for payment of any undisputed amounts.
   7.3. The Surety’s failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney’s fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety’s total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney’s fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner’s priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

16.1. Claim—A written statement by the Claimant including at a minimum:

16.1.1. The name of the Claimant;

16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

16.1.4. A brief description of the labor, materials, or equipment furnished;
16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. Claimant—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic’s lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of “labor, materials, or equipment” that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3. Construction Contract—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. Owner Default—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. Contract Documents—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: [Describe modification or enter “None”]
STANDARD GENERAL CONDITIONS
OF THE CONSTRUCTION CONTRACT

Prepared By

Endorsed By
# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 1—Definitions and Terminology</td>
<td>........................................................................................................</td>
<td>1</td>
</tr>
<tr>
<td>1.01</td>
<td>Defined Terms</td>
<td>1</td>
</tr>
<tr>
<td>1.02</td>
<td>Terminology</td>
<td>6</td>
</tr>
<tr>
<td>Article 2—Preliminary Matters</td>
<td>........................................................................................................</td>
<td>7</td>
</tr>
<tr>
<td>2.01</td>
<td>Delivery of Performance and Payment Bonds; Evidence of Insurance</td>
<td>7</td>
</tr>
<tr>
<td>2.02</td>
<td>Copies of Documents</td>
<td>7</td>
</tr>
<tr>
<td>2.03</td>
<td>Before Starting Construction</td>
<td>8</td>
</tr>
<tr>
<td>2.04</td>
<td>Preconstruction Conference; Designation of Authorized Representatives</td>
<td>8</td>
</tr>
<tr>
<td>2.05</td>
<td>Acceptance of Schedules</td>
<td>8</td>
</tr>
<tr>
<td>2.06</td>
<td>Electronic Transmittals</td>
<td>9</td>
</tr>
<tr>
<td>Article 3—Contract Documents: Intent, Requirements, Reuse</td>
<td>........................................................................................................</td>
<td>9</td>
</tr>
<tr>
<td>3.01</td>
<td>Intent</td>
<td>9</td>
</tr>
<tr>
<td>3.02</td>
<td>Reference Standards</td>
<td>10</td>
</tr>
<tr>
<td>3.03</td>
<td>Reporting and Resolving Discrepancies</td>
<td>10</td>
</tr>
<tr>
<td>3.04</td>
<td>Requirements of the Contract Documents</td>
<td>11</td>
</tr>
<tr>
<td>3.05</td>
<td>Reuse of Documents</td>
<td>11</td>
</tr>
<tr>
<td>Article 4—Commencement and Progress of the Work</td>
<td>........................................................................................................</td>
<td>12</td>
</tr>
<tr>
<td>4.01</td>
<td>Commencement of Contract Times; Notice to Proceed</td>
<td>12</td>
</tr>
<tr>
<td>4.02</td>
<td>Starting the Work</td>
<td>12</td>
</tr>
<tr>
<td>4.03</td>
<td>Reference Points</td>
<td>12</td>
</tr>
<tr>
<td>4.04</td>
<td>Progress Schedule</td>
<td>12</td>
</tr>
<tr>
<td>4.05</td>
<td>Delays in Contractor’s Progress</td>
<td>12</td>
</tr>
<tr>
<td>Article 5—Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions</td>
<td>........................................................................................................</td>
<td>14</td>
</tr>
<tr>
<td>5.01</td>
<td>Availability of Lands</td>
<td>14</td>
</tr>
<tr>
<td>5.02</td>
<td>Use of Site and Other Areas</td>
<td>14</td>
</tr>
<tr>
<td>5.03</td>
<td>Subsurface and Physical Conditions</td>
<td>15</td>
</tr>
<tr>
<td>5.04</td>
<td>Differing Subsurface or Physical Conditions</td>
<td>16</td>
</tr>
</tbody>
</table>
5.05 Underground Facilities ................................................................................................................ 18
5.06 Hazardous Environmental Conditions at Site ............................................................................. 19

Article 6—Bonds and Insurance ........................................................................................................... 22
6.01 Performance, Payment, and Other Bonds ................................................................................. 22
6.02 Insurance—General Provisions ................................................................................................. 22
6.03 Contractor’s Insurance ............................................................................................................... 24
6.04 Builder’s Risk and Other Property Insurance ........................................................................... 25
6.05 Property Losses; Subrogation ..................................................................................................... 26
6.06 Receipt and Application of Property Insurance Proceeds ......................................................... 27

Article 7—Contractor’s Responsibilities ............................................................................................. 27
7.01 Contractor’s Means and Methods of Construction .................................................................... 27
7.02 Supervision and Superintendence .............................................................................................. 28
7.03 Labor; Working Hours ............................................................................................................... 28
7.04 Services, Materials, and Equipment ........................................................................................... 28
7.05 “Or Equals” ............................................................................................................................... 29
7.06 Substitutes .................................................................................................................................. 30
7.07 Concerning Subcontractors and Suppliers .................................................................................. 31
7.08 Patent Fees and Royalties .......................................................................................................... 32
7.09 Permits ....................................................................................................................................... 33
7.10 Taxes ........................................................................................................................................... 33
7.11 Laws and Regulations .................................................................................................................. 33
7.12 Record Documents ....................................................................................................................... 34
7.13 Safety and Protection.................................................................................................................... 34
7.14 Hazard Communication Programs ............................................................................................. 35
7.15 Emergencies ................................................................................................................................ 35
7.16 Submittals ..................................................................................................................................... 36
7.17 Contractor’s General Warranty and Guarantee .......................................................................... 38
7.18 Indemnification ............................................................................................................................. 39
7.19 Delegation of Professional Design Services ................................................................................ 40

Article 8—Other Work at the Site ......................................................................................................... 41
8.01 Other Work .................................................................................................................................. 41
8.02 Coordination ................................................................................................................................ 41
8.03 Legal Relationships ....................................................................................................................... 42
Article 9—Owner’s Responsibilities ............................................................................................................ 43
 9.01 Communications to Contractor .................................................................................................. 43
 9.02 Replacement of Engineer ............................................................................................................ 43
 9.03 Furnish Data ................................................................................................................................ 43
 9.04 Pay When Due............................................................................................................................. 43
 9.05 Lands and Easements; Reports, Tests, and Drawings ................................................................. 43
 9.06 Insurance..................................................................................................................................... 43
 9.07 Change Orders ............................................................................................................................ 43
 9.08 Inspections, Tests, and Approvals ............................................................................................... 44
 9.09 Limitations on Owner’s Responsibilities ..................................................................................... 44
 9.10 Undisclosed Hazardous Environmental Condition ...................................................................... 44
 9.11 Evidence of Financial Arrangements ........................................................................................... 44
 9.12 Safety Programs .......................................................................................................................... 44
Article 10—Engineer’s Status During Construction .................................................................................... 44
 10.01 Owner’s Representative .......................................................................................................... 44
 10.02 Visits to Site............................................................................................................................. 44
 10.03 Resident Project Representative ............................................................................................. 45
 10.04 Engineer’s Authority............................................................................................................... 45
 10.05 Determinations for Unit Price Work ....................................................................................... 45
 10.06 Decisions on Requirements of Contract Documents and Acceptability of Work ................... 45
 10.07 Limitations on Engineer’s Authority and Responsibilities ...................................................... 45
 10.08 Compliance with Safety Program ............................................................................................ 46
Article 11—Changes to the Contract .......................................................................................................... 46
 11.01 Amending and Supplementing the Contract .......................................................................... 46
 11.02 Change Orders ........................................................................................................................ 46
 11.03 Work Change Directives .......................................................................................................... 47
 11.04 Field Orders ............................................................................................................................. 47
 11.05 Owner-Authorized Changes in the Work ................................................................................ 47
 11.06 Unauthorized Changes in the Work ........................................................................................ 48
 11.07 Change of Contract Price ........................................................................................................ 48
 11.08 Change of Contract Times ....................................................................................................... 49
 11.09 Change Proposals .................................................................................................................... 49
 11.10 Notification to Surety.............................................................................................................. 51
18.03  Cumulative Remedies ............................................................................................................. 70
18.04  Limitation of Damages ............................................................................................................ 71
18.05  No Waiver ............................................................................................................................... 71
18.06  Survival of Obligations ............................................................................................................ 71
18.07  Controlling Law ....................................................................................................................... 71
18.08  Assignment of Contract ........................................................................................................... 71
18.09  Successors and Assigns ........................................................................................................... 71
18.10  Headings .................................................................................................................................. 71
ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term’s singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. **Addenda**—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. **Agreement**—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. **Application for Payment**—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. **Bid**—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. **Bidder**—An individual or entity that submits a Bid to Owner.

6. **Bidding Documents**—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. **Bidding Requirements**—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. **Change Order**—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. **Change Proposal**—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. **Claim**

   a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by
Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer’s decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer’s decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. Constituent of Concern—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. Contract—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. Contract Documents—Those items so designated in the Agreement, and which together comprise the Contract.

14. Contract Price—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. Contract Times—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. Contractor—The individual or entity with which Owner has contracted for performance of the Work.

17. Cost of the Work—See Paragraph 13.01 for definition.

18. Drawings—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. Effective Date of the Contract—The date, indicated in the Agreement, on which the Contract becomes effective.

20. Electronic Document—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. Electronic Means—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or
communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. **Engineer**—The individual or entity named as such in the Agreement.

23. **Field Order**—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. **Hazardous Environmental Condition**—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

   a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

   b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

   c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. **Laws and Regulations; Laws or Regulations**—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. **Liens**—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. **Milestone**—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. **Notice of Award**—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.

29. **Notice to Proceed**—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. **Owner**—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. **Progress Schedule**—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor’s plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part
thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. **Successful Bidder**—The Bidder to which the Owner makes an award of contract.

44. **Supplementary Conditions**—The part of the Contract that amends or supplements these General Conditions.

45. **Supplier**—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. **Technical Data**
   a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
   b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
   c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. **Underground Facilities**—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. **Unit Price Work**—Work to be paid for on the basis of unit prices.

49. **Work**—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. **Work Change Directive**—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 **Terminology**

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. **Intent of Certain Terms or Adjectives**: The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. **Day**: The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. **Defective**: The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;
2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. **Furnish, Install, Perform, Provide**

1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

F. Contract Price or Contract Times: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance

A. Performance and Payment Bonds: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. Evidence of Contractor’s Insurance: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. Evidence of Owner’s Insurance: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 Copies of Documents

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.
2.03 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor’s full responsibility therefor.

2. Contractor’s Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor’s Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.
2.06 **Electronic Transmittals**  
A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.  
B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.  
C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient’s use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.  

**ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE**  

3.01 **Intent**  
A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.  
B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.  
C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.  
D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.  
E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.  
F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.  
G. Nothing in the Contract Documents creates:  
   1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or  
   2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.
3.02 Reference Standards

A. Standards Specifications, Codes, Laws and Regulations

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

1. Contractor’s Verification of Figures and Field Measurements: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. Contractor’s Review of Contract Documents: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take
precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Requirements of the Contract Documents

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer’s written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 Reuse of Documents

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner’s express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.
ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 Commencement of Contract Times; Notice to Proceed
A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 Starting the Work
A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 Reference Points
A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer’s judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 Progress Schedule
A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
   1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
   2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 Delays in Contractor’s Progress
A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
C. If Contractor’s performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor’s sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
2. Abnormal weather conditions;
3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
4. Acts of war or terrorism.

D. Contractor’s entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor’s entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;
2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
4. The number of days’ increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the...
effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

**ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner’s interest therein as necessary for giving notice of or filing a mechanic’s or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor’s operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise;
(b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor’s performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. **Removal of Debris During Performance of the Work**: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. **Cleaning**: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. **Loading of Structures**: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 **Subsurface and Physical Conditions**

A. **Reports and Drawings**: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. **Underground Facilities**: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. **Reliance by Contractor on Technical Data**: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.
D. Limitations of Other Data and Documents: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 Differing Subsurface or Physical Conditions

A. Notice by Contractor: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. Engineer's Review: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. Owner's Statement to Contractor Regarding Site Condition: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement
to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer’s written findings, conclusions, and recommendations, in whole or in part.

D. **Early Resumption of Work:** If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer’s review or Owner’s issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. **Possible Price and Times Adjustments**

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
   a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
   b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
   c. Contractor’s entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
   a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
   b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor’s making such commitment; or
   c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor’s entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner’s issuance of the Owner’s written statement to Contractor regarding the subsurface or physical condition in question.

F. **Underground Facilities; Hazardous Environmental Conditions:** Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities.
Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 Underground Facilities

A. Contractor’s Responsibilities: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
2. complying with applicable state and local utility damage prevention Laws and Regulations;
3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. Notice by Contractor: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. Engineer’s Review: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor’s resumption of Work in connection with the Underground Facility in question;
3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
4. advise Owner in writing of Engineer’s findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. Owner’s Statement to Contractor Regarding Underground Facility: After receipt of Engineer’s written findings, conclusions, and recommendations, Owner shall issue a written
statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer’s written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer’s review or Owner’s issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
   a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
   b. Contractor’s entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
   c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor’s entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner’s issuance of the Owner’s written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor’s remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. **Reliance by Contractor on Technical Data Authorized:** Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner’s written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner’s own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual’s or entity’s own negligence.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual’s or entity’s own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.
ARTICLE 6—BONDS AND INSURANCE

6.01 Performance, Payment, and Other Bonds

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor’s obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 Insurance—General Provisions

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the
required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party’s full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party’s obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner’s option, may purchase and maintain Owner’s own liability insurance. Owner’s liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner’s liability policies for any of Contractor’s obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker’s compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor’s liability policies) on each Subcontractor’s commercial general liability insurance policy; and
2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor’s entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner’s termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party’s interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor’s interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor’s liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 Contractor’s Insurance

A. Required Insurance: Contractor shall purchase and maintain Worker’s Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. General Provisions: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;
2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. Additional Insureds: The Contractor’s commercial general liability, automobile liability, employer’s liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor’s acts or omissions, or the acts and omissions of those working on Contractor’s behalf, in the performance of Contractor’s operations.

6.04 Builder’s Risk and Other Property Insurance

A. Builder’s Risk: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder’s risk insurance upon the Work on a completed value basis, in the amount of the Work’s full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder’s risk insurance are set forth in the Supplementary Conditions.

B. Property Insurance for Facilities of Owner Where Work Will Occur: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder’s risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. Property Insurance for Substantially Complete Facilities: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder’s risk insurance. The builder’s risk insurance may terminate upon written confirmation of Owner’s procurement of such property insurance.
D. **Partial Occupancy or Use by Owner:** If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder’s risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder’s risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. **Insurance of Other Property; Additional Insurance:** If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder’s risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor’s expense.

### 6.05 Property Losses; Subrogation

A. The builder’s risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder’s risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.

2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner’s existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer’s rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner’s property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder’s risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06  Receipt and Application of Property Insurance Proceeds

A. Any insured loss under the builder’s risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder’s risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR’S RESPONSIBILITIES

7.01  Contractor’s Means and Methods of Construction

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor’s responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at
Contractor’s expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor’s determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 Supervision and Superintendence

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 Labor; Working Hours

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor’s employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor’s own acts and omissions.

C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner’s written consent, which will not be unreasonably withheld.

7.04 Services, Materials, and Equipment

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.
7.05 **“Or Equals”**

A. **Contractor’s Request; Governing Criteria:** Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or “or equal” item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an “or equal” item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

   a. in the exercise of reasonable judgment Engineer determines that the proposed item:

      1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

      2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

      3) has a proven record of performance and availability of responsive service; and

      4) is not objectionable to Owner.

   b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

      1) there will be no increase in cost to the Owner or increase in Contract Times; and

      2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. **Contractor’s Expense:** Contractor shall provide all data in support of any proposed “or equal” item at Contractor’s expense.

C. **Engineer's Evaluation and Determination:** Engineer will be allowed a reasonable time to evaluate each “or-equal” request. Engineer may require Contractor to furnish additional data about the proposed “or-equal” item. Engineer will be the sole judge of acceptability. No “or-equal” item will be ordered, furnished, installed, or utilized until Engineer’s review is complete and Engineer determines that the proposed item is an “or-equal,” which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. **Effect of Engineer’s Determination:** Neither approval nor denial of an “or-equal” request will result in any change in Contract Price. The Engineer’s denial of an “or-equal” request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
E. **Treatment as a Substitution Request:** If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an “or-equal” item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 **Substitutes**

A. **Contractor’s Request; Governing Criteria:** Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
   a. will certify that the proposed substitute item will:
      1) perform adequately the functions and achieve the results called for by the general design;
      2) be similar in substance to the item specified; and
      3) be suited to the same use as the item specified.
   b. will state:
      1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
      2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
      3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
   c. will identify:
      1) all variations of the proposed substitute item from the item specified; and
      2) available engineering, sales, maintenance, repair, and replacement services.
   d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in
Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. **Engineer’s Evaluation and Determination:** Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer’s review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer’s determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. **Special Guarantee:** Owner may require Contractor to furnish at Contractor’s expense a special performance guarantee or other surety with respect to any substitute.

D. **Reimbursement of Engineer’s Cost:** Engineer will record Engineer’s costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E. **Contractor’s Expense:** Contractor shall provide all data in support of any proposed substitute at Contractor’s expense.

F. **Effect of Engineer’s Determination:** If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer’s denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

### 7.07 Concerning Subcontractors and Suppliers

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor’s retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor’s obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor’s Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or
otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner’s requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 Patent Fees and Royalties

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any
license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 Permits

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor’s Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 Laws and Regulations

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor’s compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to
such Work or other action. It is not Contractor’s responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor’s Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any
of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner’s safety programs, if any. Any Owner’s safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor’s safety program with which Owner’s and Engineer’s employees and representatives must comply while at the Site.

I. Contractor’s duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor’s duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 Hazard Communication Programs

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor’s response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor’s response, a Work Change Directive or Change Order will be issued.
7.16 Submittals

A. Shop Drawing and Sample Requirements

1. Before submitting a Shop Drawing or Sample, Contractor shall:
   a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
   b. determine and verify:
      1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
      2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
      3) all information relative to Contractor’s responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
   c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor’s obligations under the Contract Documents with respect to Contractor’s review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. Submittal Procedures for Shop Drawings and Samples: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. Shop Drawings
   a. Contractor shall submit the number of copies required in the Specifications.
   b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. Samples
   a. Contractor shall submit the number of Samples required in the Specifications.
   b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer
may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer’s review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. **Engineer’s Review of Shop Drawings and Samples**

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer’s review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer’s review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer’s review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer’s review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer’s review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer’s review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer’s receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. **Resubmittal Procedures for Shop Drawings and Samples**

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two
resubmittals. Engineer will record Engineer’s time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer’s charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer’s charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
   c. Engineer’s review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.
   d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor’s General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor’s warranty and guarantee.

B. Owner’s rights under this warranty and guarantee are in addition to, and are not limited by, Owner’s rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor’s warranty and guarantee hereunder excludes defects or damage caused by:
   1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
   2. normal wear and tear under normal usage.

D. Contractor’s obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor’s obligation to perform the Work in accordance with the Contract Documents, or a release of Owner’s warranty and guarantee rights under this Paragraph 7.17:
   1. Observations by Engineer;
   2. Recommendation by Engineer or payment by Owner of any progress or final payment;
   3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
   4. Use or occupancy of the Work or any part thereof by Owner;
   5. Any review and approval of a Shop Drawing or Sample submittal;
   6. The issuance of a notice of acceptability by Engineer;
   7. The end of the correction period established in Paragraph 15.08;
   8. Any inspection, test, or approval by others; or
   9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor’s performance obligations to Owner for the Work described in the assigned contract.

7.18 Indemnification

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity
directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers’ compensation acts, disability benefit acts, or other employee benefit acts.

7.19 Delegation of Professional Design Services

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor’s design professional when submitted by Contractor to Engineer.

D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer’s review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;
2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 Other Work

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner’s employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner’s employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner’s employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

E. If the proper execution or results of any part of Contractor’s Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor’s Work. Contractor’s failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor’s Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 Coordination

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner’s employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be
set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 Legal Relationships

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner’s employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor’s rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor’s entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner’s contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner’s employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor’s failure to take reasonable and customary measures with respect to Owner’s other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor’s failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor’s actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER’S RESPONSIBILITIES

9.01 Communications to Contractor
A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 Replacement of Engineer
A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer’s status under the Contract Documents will be that of the former Engineer.

9.03 Furnish Data
A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 Pay When Due
A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 Lands and Easements; Reports, Tests, and Drawings
A. Owner’s duties with respect to providing lands and easements are set forth in Paragraph 5.01.
B. Owner’s duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
C. Article 5 refers to Owner’s identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 Insurance
A. Owner’s responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 Change Orders
A. Owner’s responsibilities with respect to Change Orders are set forth in Article 11.
9.08 Inspections, Tests, and Approvals
A. Owner’s responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 Limitations on Owner’s Responsibilities
A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor’s means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor’s failure to perform the Work in accordance with the Contract Documents.

9.10 Undisclosed Hazardous Environmental Condition
A. Owner’s responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 Evidence of Financial Arrangements
A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner’s obligations under the Contract (including obligations under proposed changes in the Work).

9.12 Safety Programs
A. While at the Site, Owner’s employees and representatives shall comply with the specific applicable requirements of Contractor’s safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER’S STATUS DURING CONSTRUCTION

10.01 Owner’s Representative
A. Engineer will be Owner’s representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner’s representative during construction are set forth in the Contract.

10.02 Visits to Site
A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor’s executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer’s efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
B. Engineer’s visits and observations are subject to all the limitations on Engineer’s authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer’s visits or observations of Contractor’s Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor’s means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 Resident Project Representative

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer’s consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 Engineer’s Authority

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer’s authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer’s authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner’s delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer’s authority as to changes in the Work is set forth in Article 11.

E. Engineer’s authority as to Applications for Payment is set forth in Article 15.

10.05 Determinations for Unit Price Work

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 Decisions on Requirements of Contract Documents and Acceptability of Work

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 Limitations on Engineer’s Authority and Responsibilities

A. Neither Engineer’s authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any
Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor’s means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor’s failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer’s review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 Compliance with Safety Program

A. While at the Site, Engineer’s employees and representatives will comply with the specific applicable requirements of Owner’s and Contractor’s safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 Amending and Supplementing the Contract

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer’s recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 Change Orders

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner’s acceptance of defective Work under Paragraph 14.04 or Owner’s correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer’s recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 **Work Change Directives**

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive’s effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 **Field Orders**

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 **Owner-Authorized Changes in the Work**

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving
the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer’s recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor’s safety obligations under the Contract Documents or Laws and Regulations.

11.06 Unauthorized Changes in the Work

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 Change of Contract Price

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor’s fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. Contractor’s Fee: When applicable, the Contractor’s fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
   a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor’s fee will be 15 percent;
   b. For costs incurred under Paragraph 13.01.B.3, the Contractor’s fee will be 5 percent;
c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor’s fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;

d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;

e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and

f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor’s fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 Change of Contract Times

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 Change Proposals

A. Purpose and Content: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.
B. Change Proposal Procedures

1. **Submittal**: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. **Supporting Data**: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
   
a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
   
b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

   The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. **Engineer’s Initial Review**: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. **Engineer’s Full Review and Action on the Change Proposal**: Upon receipt of Contractor’s supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor’s supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer’s inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. **Binding Decision**: Engineer’s decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. **Resolution of Certain Change Proposals**: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. **Post-Completion**: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.
11.10 Notification to Surety

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor’s responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 Claims

A. Claims Process: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer’s decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. Submittal of Claim: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor’s knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. Review and Resolution: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. Mediation

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal
and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator’s fees and costs.

E. Partial Approval: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. Denial of Claim: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. Final and Binding Results: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 Cost of the Work

A. Purposes for Determination of Cost of the Work: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. Costs Included: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe
benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers’ compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers’ field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor’s Cost of the Work and fee will be determined in the same manner as Contractor’s Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:
   a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor’s employees incurred in discharge of duties connected with the Work.
   b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
      1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.
   c. **Construction Equipment Rental**
      1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment,
machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price (“changed Work”), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder’s risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor’s fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. Costs Excluded: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor’s officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor’s principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor’s fee.
2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor’s principal and branch offices other than Contractor’s office at the Site.

4. Any part of Contractor’s capital expenses, including interest on Contractor’s capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. Contractor’s Fee

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
   a. Contractor’s fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
   b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor’s fee will be determined as follows:
      1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
      2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor’s fee for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. Documentation and Audit: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor’s accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor’s fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.
13.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor’s costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. Owner’s Contingency Allowance: Contractor agrees that an Owner’s contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor’s overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer’s preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer’s written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. Adjustments in Unit Price

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

   a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
b. Contractor’s unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor’s costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor’s safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 Tests, Inspections, and Approvals

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner’s and Engineer’s acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor’s purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor’s expense unless Contractor had given Engineer timely notice of Contractor’s intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 Defective Work

A. Contractor’s Obligation: It is Contractor’s obligation to assure that the Work is not defective.

B. Engineer’s Authority: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. Notice of Defects: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. Correction, or Removal and Replacement: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. Preservation of Warranties: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner’s special warranty and guarantee, if any, on said Work.

F. Costs and Damages: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer’s confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner’s evaluation of and determination to accept such defective Work (such costs to be approved
by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 Uncovering Work

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer’s observation, and then replace the covering, all at Contractor’s expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer’s request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor’s full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 Owner May Stop the Work

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then
Owner may, after 7 days’ written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor’s services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner’s representatives, agents and employees, Owner’s other contractors, and Engineer and Engineer’s consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor’s defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner’s rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

A. Basis for Progress Payments: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner’s request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner’s interest therein, all of which must be satisfactory to Owner.
3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor’s legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer’s reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer’s recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer’s observations of the executed Work as an experienced and qualified design professional, and on Engineer’s review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer’s knowledge, information and belief:
   a. the Work has progressed to the point indicated;
   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
   c. the conditions precedent to Contractor’s being entitled to such payment appear to have been fulfilled in so far as it is Engineer’s responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer’s review of Contractor’s Work for the purposes of recommending payments nor Engineer’s recommendation of any payment, including final payment, will impose responsibility on Engineer:
   a. to supervise, direct, or control the Work;
   b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
c. for Contractor’s failure to comply with Laws and Regulations applicable to Contractor’s performance of the Work;

d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer’s opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer’s opinion to protect Owner from loss because:

   a. the Work is defective, requiring correction or replacement;

   b. the Contract Price has been reduced by Change Orders;

   c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

   d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

   e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer’s recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. Reductions in Payment by Owner

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

   a. Claims have been made against Owner based on Contractor’s conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor’s conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

   b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

   c. Contractor has failed to provide and maintain required bonds or insurance;

   d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor’s failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner’s refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 Contractor’s Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor’s notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner’s objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner’s use or occupancy of the Work following Substantial Completion, review the builder’s risk insurance policy with respect to the end of the builder’s risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner’s use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 Partial Use or Occupancy

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor’s performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder’s risk or other property insurance.

15.05 Final Inspection

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 Final Payment

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:
   a. all documentation called for in the Contract Documents;
   b. consent of the surety, if any, to final payment;
   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
   d. a list of all duly pending Change Proposals and Claims; and
   e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment
bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. **Engineer's Review of Final Application and Recommendation of Payment:** If, on the basis of Engineer’s observation of the Work during construction and final inspection, and Engineer’s review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor’s other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer’s recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer’s opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. **Notice of Acceptability:** In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. **Completion of Work:** The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer’s written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. **Final Payment Becomes Due:** Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner’s receipt of the final Application for Payment from Engineer.

15.07 **Waiver of Claims**

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.
15.08  **Correction Period**

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor’s repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner’s written instructions:

1. correct the defective repairs to the Site or such adjacent areas;

2. correct such defective Work;

3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner’s written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor’s failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

F. Contractor’s obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.
ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 Owner May Suspend Work

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 Owner May Terminate for Cause

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor’s persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor’s disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor’s repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days’ written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as
to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor’s services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 Owner May Terminate for Convenience

A. Upon 7 days’ written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 Contractor May Stop Work or Terminate

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days’ written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor’s stopping the Work as permitted by this paragraph.
ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 Methods and Procedures
   A. Disputes Subject to Final Resolution: The following disputed matters are subject to final resolution under the provisions of this article:
      1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
      2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
   B. Final Resolution of Disputes: For any dispute subject to resolution under this article, Owner or Contractor may:
      1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
      2. agree with the other party to submit the dispute to another dispute resolution process; or
      3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 Giving Notice
   A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
      1. in person, by a commercial courier service or otherwise, to the recipient’s place of business;
      2. by registered or certified mail, postage prepaid, to the recipient’s place of business; or
      3. by e-mail to the recipient, with the words “Formal Notice” or similar in the e-mail’s subject line.

18.02 Computation of Times
   A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 Cumulative Remedies
   A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be
as effective as if repeated specifically in the Contract Documents in connection with each
particular duty, obligation, right, and remedy to which they apply.

18.04  Limitation of Damages

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution,
and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors,
members, partners, employees, agents, consultants, or subcontractors, shall be liable to
Contractor for any claims, costs, losses, or damages sustained by Contractor on or in
connection with any other project or anticipated project.

18.05  No Waiver

A. A party’s non-enforcement of any provision will not constitute a waiver of that provision,
nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06  Survival of Obligations

A. All representations, indemnifications, warranties, and guarantees made in, required by, or
given in accordance with the Contract, as well as all continuing obligations indicated in the
Contract, will survive final payment, completion, and acceptance of the Work or termination
of the Contract or of the services of Contractor.

18.07  Controlling Law

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08  Assignment of Contract

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this
Contract of any rights under or interests in the Contract will be binding on the other party
without the written consent of the party sought to be bound; and, specifically but without
limitation, money that may become due and money that is due may not be assigned without
such consent (except to the extent that the effect of this restriction may be limited by law),
and unless specifically stated to the contrary in any written consent to an assignment, no
assignment will release or discharge the assignor from any duty or responsibility under the
Contract.

18.09  Successors and Assigns

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to
the other party hereto, its successors, assigns, and legal representatives in respect to all
covenants, agreements, and obligations contained in the Contract Documents.

18.10  Headings

A. Article and paragraph headings are inserted for convenience only and do not constitute
parts of these General Conditions.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td></td>
<td>00800-1</td>
</tr>
<tr>
<td>Caption and Introductory Statements</td>
<td></td>
<td>00800-3</td>
</tr>
<tr>
<td>SC-1.01</td>
<td>Defined Terms</td>
<td>00800-3</td>
</tr>
<tr>
<td>SC-1.02</td>
<td>Terminology</td>
<td>00800-3</td>
</tr>
<tr>
<td>SC-2.03</td>
<td>Before Starting Construction</td>
<td>00800-4</td>
</tr>
<tr>
<td>SC-2.05</td>
<td>Acceptance of Schedules</td>
<td>00800-4</td>
</tr>
<tr>
<td>SC-3.01</td>
<td>Intent</td>
<td>00800-5</td>
</tr>
<tr>
<td>SC-3.02</td>
<td>Reference Standards</td>
<td>00800-5</td>
</tr>
<tr>
<td>SC-3.03</td>
<td>Reporting and Resolving Discrepancies</td>
<td>00800-5</td>
</tr>
<tr>
<td>SC-4.01</td>
<td>Commencement of Contract Times; Notice to Proceed</td>
<td>00800-6</td>
</tr>
<tr>
<td>SC-4.05</td>
<td>Delays in Contractor’s Progress</td>
<td>00800-6</td>
</tr>
<tr>
<td>SC-5.03</td>
<td>Subsurface and Physical Conditions</td>
<td>00800-7</td>
</tr>
<tr>
<td>SC-5.04</td>
<td>Differing Subsurface or Physical Conditions</td>
<td>00800-9</td>
</tr>
<tr>
<td>SC-5.05</td>
<td>Underground Facilities</td>
<td>00800-10</td>
</tr>
<tr>
<td>SC-5.06</td>
<td>Hazardous Environmental Conditions at Site</td>
<td>00800-14</td>
</tr>
<tr>
<td>SC-6.02</td>
<td>Insurance—General Provisions</td>
<td>00800-15</td>
</tr>
<tr>
<td>SC-6.03</td>
<td>Contractor’s Insurance</td>
<td>00800-15</td>
</tr>
<tr>
<td>SC-6.04</td>
<td>Builder’s Risk and Other Property Insurance</td>
<td>00800-15</td>
</tr>
<tr>
<td>SC-6.05</td>
<td>Property Losses; Subrogation</td>
<td>00800-15</td>
</tr>
<tr>
<td>SC-6.06</td>
<td>Receipt and Application of Property Insurance Proceeds</td>
<td>00800-16</td>
</tr>
<tr>
<td>SC-7.01</td>
<td>Contractor’s Means and Methods of Construction</td>
<td>00800-16</td>
</tr>
<tr>
<td>SC-7.05</td>
<td>“Or-Equals”</td>
<td>00800-16</td>
</tr>
<tr>
<td>SC-7.06</td>
<td>Substitutes</td>
<td>00800-16</td>
</tr>
<tr>
<td>SC-7.07</td>
<td>Concerning Subcontractors and Suppliers</td>
<td>00800-17</td>
</tr>
<tr>
<td>SC-7.08</td>
<td>Patent Fees and Royalties</td>
<td>00800-17</td>
</tr>
<tr>
<td>SC-7.11</td>
<td>Laws and Regulations</td>
<td>00800-17</td>
</tr>
<tr>
<td>SC-7.13</td>
<td>Safety and Protection</td>
<td>00800-18</td>
</tr>
<tr>
<td>SC-7.16</td>
<td>Submittals</td>
<td>00800-18</td>
</tr>
<tr>
<td>SC-7.17</td>
<td>Contractor’s General Warranty and Guarantee</td>
<td>00800-18</td>
</tr>
<tr>
<td>SC-7.19</td>
<td>Delegation of Professional Design Services</td>
<td>00800-19</td>
</tr>
<tr>
<td>SC-9.06</td>
<td>Insurance</td>
<td>00800-20</td>
</tr>
<tr>
<td>SC-10.01</td>
<td>Owner’s Representative</td>
<td>00800-20</td>
</tr>
<tr>
<td>SC-10.02</td>
<td>Visits to Site</td>
<td>00800-20</td>
</tr>
<tr>
<td>SC-10.03</td>
<td>Resident Project Representative</td>
<td>00800-20</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>SC-10.07</td>
<td>Limitations on Engineer's Authority and Responsibilities</td>
<td>00800-22</td>
</tr>
<tr>
<td>SC-15.01</td>
<td>Progress Payments</td>
<td>00800-22</td>
</tr>
<tr>
<td>SC-15.04</td>
<td>Partial Use or Occupancy</td>
<td>00800-23</td>
</tr>
<tr>
<td>SC-15.07</td>
<td>Waiver of Claims</td>
<td>00800-23</td>
</tr>
<tr>
<td>SC-17.01</td>
<td>Methods and Procedures</td>
<td>00800-23</td>
</tr>
<tr>
<td>SC-18.01</td>
<td>Giving Notice</td>
<td>00800-24</td>
</tr>
</tbody>
</table>

800-2
These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC C-700 (2018 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

Unless otherwise noted, the terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix “SC” added thereto.

ADDITIONS, DELETIONS AND CHANGES TO GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

SC-1.01 Defined Terms

SC-1.01 Add the following new paragraph immediately after Paragraph 1.01.A.22:

22.1 Falsework--temporary construction work on which a main work is wholly or partly built and/or supported until the main work is strong enough to support itself.

SC-1.01 Add the following new paragraph immediately after Paragraph 1.01.A.32:

32.1 Project Manual – the written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.

SC-1.02 Terminology

SC-1.02 Add the following new sentence immediately after the last sentence in Paragraph
1.02.B:

The use of any such term or adjective is not intended to and shall not be effective to relieve the Contractor of responsibility to comply with all Laws and Regulations applicable to the performance of the Work, or to perform the Work in accordance with the provisions of Article 7, or to comply with any other provision of the Contract Documents.

ARTICLE 2 - PRELIMINARY MATTERS

SC-2.03 Before Starting Construction

SC-2.03 Delete Paragraph 2.03.A in its entirety and insert the following in its place:

A. **Preliminary Schedules:** Within 10 days after the Effective Date of the Agreement, Contractor shall submit to Owner and Engineer for timely review:

1. A preliminary Progress Schedule indicating the times (number of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. A preliminary Schedule of Submittals; and

3. A preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

SC-2.05 Acceptance of Schedules

SC-2.05 Delete Paragraph 2.05.A in its entirety and insert the following in its place:

A. Upon Owner’s, Engineer’s or Contractor’s request at least ten days before submission of the first Application for Payment a conference, attended by Contractor, Owner, Engineer and others as appropriate, will be held to review for acceptability to Owner as provided below the schedules submitted in accordance with paragraph 2.03.A. If a schedule is not acceptable, Contractor shall have an additional ten days to make corrections and adjustments and to complete and resubmit the schedules. Upon notice by Owner, no progress
payment shall be made to Contractor until acceptable schedules are submitted and accepted by Owner.

1. The Progress Schedule will be acceptable to Owner if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Time, and if acceptable to Engineer. Such acceptance will not impose on Owner or Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor’s Schedule of Submittals will be acceptable to Owner if acceptable to Engineer and if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Owner as to form and substance if it is acceptable to Engineer and if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.01 Intent

SC-3.01 Add the following new sentence immediately after the last sentence in Paragraph 3.01.B:

Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.

SC-3.02 Reference Standards

SC-3.02.A.2 Delete Paragraph 3.02.A.2 in its entirety and insert the following in its place:

No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part
of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

SC-3.03  Reporting and Resolving Discrepancies

A.  Reporting Discrepancies

  SC-3.03  Delete Sub-Paragraph 3.03.A.3 in its entirety and insert the following in its place:

  3.  Contractor shall not be entitled to any increase in the Contract Amount or Contract Time for any conflicts, errors, ambiguities or discrepancies in the Contract Documents that were known, or that should have been known to Contractor, or which could have been discovered by Contractor as part of its review of the bidding requirements and Contract Documents prior to bidding or its review of the Contract Documents prior to undertaking any part of the Work.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

SC-4.01  Commencement of Contract Times; Notice to Proceed

  SC-4.01  Delete Paragraph 4.01.A in its entirety and insert the following in its place:

  A.  The Contract Times will commence to run on the day indicated in the Notice to Proceed.

SC-4.05  Delays in Contractor’s Progress

  SC-4.05  Add the following new paragraph immediately after Paragraph 4.05.G

  H.  Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under Paragraph 4.05 within 30 days of the commencement of the delaying, disrupting, or interfering event.
SC-5.03 Subsurface and Physical Conditions

SC-5.03.A Delete Paragraph 5.03.A in its entirety and insert the following in its place:

A. Reports and Drawings: The Contract Documents may identify:

1. Those soil borings, plans, drawings, surveys or other reports of explorations of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents;

2. Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site, (Except Underground Facilities) that Engineer has used in preparing the Contract Documents; and

3. Technical Data contained in such Reports and Drawings.

The soil borings, plans, drawings, surveys, technical data, and other documents referenced in Paragraphs 5.03.A.1, 2 and 3 are collectively called “Reports and Drawings.”

SC-5.03.C Delete Paragraph 5.03.C in its entirety and insert the following in its place:

C. Reliance by Contractor Not Authorized. Contractor may not rely upon the Reports and Drawings referenced in 5.03.A or make any claim against Owner, Engineer, or any of Owner's or Engineer's Consultants or Subcontractors related to the Reports and Drawings. This limitation includes but is not limited to:

1. The accuracy or completeness of such Reports and Drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. The accuracy or completeness of other data, interpretations, opinions, and information contained in, shown on, or indicated in the *Reports and Drawings*; or

3. Any Contractor interpretation of or conclusion drawn from any of the *Reports and Drawings* or any other Technical Data, data, interpretations, opinions or information referenced in the *Reports and Drawings*.

The *Reports and Drawings*, including the information contained therein, are offered to the Contractor only as information relied upon by Engineer in the preparation of the Contract Documents, and the Contractor is solely responsible for confirming actual conditions. Neither the Engineer nor the Owner, nor the Consultants or Subcontractors of either have any responsibility for any conclusion, interpretation or analysis contained therein or made by the Contractor based upon the Contractor’s review of the *Reports and Drawings*.

Neither Owner nor Engineer has any responsibility for and does not warrant that the soils or water table encountered during construction will be as shown in the *Reports and Drawings*.

**SC-5.03.D** Delete Paragraph 5.03.D in its entirety and insert the following in its place:

D. Contractor warrants that before submitting a bid the Contractor has determined the soil and subsoil conditions, including the water table elevation and the conditions to be encountered by Contractor in the performance of the Work and that said conditions and factors have been evaluated by Contractor and incorporated into his Contract with Owner. Contractor further warrants that the Contractor is fully aware of the soil conditions, subsoil conditions, water table and all applicable State and Federal Regulations related to the excavation, removal, transportation, placement and relocation of the materials involved in the Work to be performed by the Contractor and that Contractor
will complete the Work under whatever conditions he may encounter or create without extra cost, expense to or claim against the Owner or Engineer, their Consultants or Subcontractors.

Contractor has identified all locations where the Contractor’s operations are near public roadways, the properties of railroads or contiguous physical structures. Work shall not take place until Contractor has made all arrangements necessary to identify the location and/or elevation of the roadways, the properties of railroads or contiguous physical structures and foundation or appurtenances and has taken all necessary steps to protect the roadways, the properties of railroads or contiguous physical structures from damage. Contractor is solely responsible for any and all damage to roadways, the properties of railroads or contiguous physical structures and any personal injury, death or property damage or consequential damages arising from Contractor’s operations.

**SC-5.04 Differing Subsurface or Physical Conditions**

**SC-5.04.A** Delete Paragraph 5.04.A in its entirety and insert the following in its place:

A. **Notice by Contractor:** If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to require a change in the Contract Documents; or

2. is of an unusual nature and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, within 48 hours after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by paragraph 7.15), notify
Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so. If notice as provided in the section is not given, no change in Contract Price shall be considered or allowed.

SC-5.04.B Delete Paragraph 5.04.B in its entirety and insert the following in its place:

B. **Engineer's Review**: After receipt of written notice as required by Paragraph 5.04.A, Engineer will review the information provide by Contractor. If Engineer, in Engineer's sole discretion, determines that additional explorations and/or tests are needed to evaluate Contractor's belief that there are differing subsurface or physical conditions, then Contractor, at Contractor's sole expense, shall promptly undertake those additional explorations and/or tests, and provide the results to Engineer. Engineer will then review the information provided by Contractor along with any other information Engineer believes is pertinent, and advise Owner in writing (with a copy to Contractor) of Engineer's findings, conclusions and recommendations.

If after receipt of written notice as required by Paragraph 5.04.A, Engineer, in Engineer’s sole discretion, determines that additional explorations and/or tests are not needed to evaluate Contractor’s belief that there are differing subsurface or physical conditions, Engineer will review the information provided by Contractor, along with any other information Engineer believes is pertinent, and advise Owner in writing (with copy to Contractor) of Engineer's findings, conclusions and recommendations.

Owner reserves the right at its own expense to undertake additional exploration and/or testing. This reservation in no way waives the responsibility of the Contractor to undertake additional explorations and/or tests, if required, as set forth above.

SC-5.05  **Underground Facilities**

SC-5.05.A Delete Paragraph 5.05.A in its entirety and insert the following in its place:

A. **Contractor's Responsibilities**: The information and data shown or indicated in the Contract Documents with respect to existing
Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others.

1. The Underground Facilities shown on or indicated in the Contract Documents are located according to the information available to the Engineer at the time of the preparation of the Contract Documents. Neither the Engineer nor the Owner guarantee the accuracy or completeness of any such information or data, including but not limited to information provided by the Owner;

2. The Contractor is solely responsible for identifying the actual location of all Underground Facilities and shall verify the location and/or elevations of the Underground Facilities prior to undertaking construction;

3. At all locations where the Contractor's operations are near, will cross or contact Underground Facilities, no part of the Work shall commence until Contractor has made all arrangements necessary to identify the location and/or elevation of the Underground Facility, including contacting MISS DIG, has notified the owner of the Underground Facility, and has taken all necessary steps to protect the Underground Facility from damage.

4. The cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

   a. reviewing and checking all information and data regarding Underground Facilities at the Site;

   b. complying with applicable state and local utility damage prevention Laws and Regulations;

   c. locating all Underground Facilities shown or indicated in the Contract Documents;

   d. verifying the actual location of those Underground
Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

e. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction;

f. the safety and protection of all such Underground Facilities and related above ground structures, including but not limited to shoring, bracing, supporting and maintenance of all Underground Facilities and related above ground structures affected by the Contractor's operations;

g. repairing any damage to Underground Facilities and related above ground structures resulting from the Work; and

h. any personal injury, death or property damage or consequential damages arising from Contractor's Work.

5. In the event of the interruption of or damage to an Underground Facility as the result of Contractor's operations, the Contractor shall immediately notify the Underground Facility owner and shall take all steps necessary to cooperate with and assist the Underground Facility owner in the restoration and repair of the Underground Facility. Said repair work shall be continuous and shall not result in any delay of the Project or increased cost or expense to Owner, or claim against Owner, Engineer or their Consultants.

SC-5.05.B  Delete Paragraph 5.05.B in its entirety and insert the following in its place:

B. **Notice by Contractor**: If an Underground Facility is uncovered or revealed at or adjacent to the Site which was not shown or indicated in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing
conditions affected thereby or performing any Work in connection therewith (except in an emergency as required paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

SC-5.05.C Delete Paragraph 5.05.C in its entirety and insert the following in its place:

C. **Engineer’s Review**: Engineer will review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. If Engineer concludes that a change in the Contract Documents is required, Engineer shall prepare recommendations to the Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. At all times, Contractor shall be solely responsible for the safety and protection of such Underground Facility.

SC-5.05.F. Delete Paragraph 5.05.F.1 in its entirety and insert the following in its place:

F. **Possible Price and Times Adjustment**

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated in the Contract Documents, subject to the following:

   a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;

   b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

d. Contractor gave the notice required in Paragraph 5.05.B.

SC-5.06  Hazardous Environmental Conditions at Site

SC-5.06.A  Delete Paragraph 5.06.A in its entirety and insert the following in its place:

A. Reports and Drawings: The Supplementary Conditions identify:

1. The following reports regarding Hazardous Environmental Conditions at the Site were utilized by the Engineer in the preparation of the Contract Documents:
   a. None

2. The following drawings regarding Hazardous Environmental Conditions at the Site were utilized by the Engineer in the preparation of the Contract Documents:
   a. None

3. Technical Data contained in such Reports and Drawings.

SC-5.06.B  Delete Paragraph 5.06.B in its entirety and insert the following in its place:

B. Reliance by Contractor Not Authorized: Contractor may not make any Claim against Owner, Engineer or the Consultants of either with respect to:

1. The completeness of such reports, drawings and/or Technical Data, for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, the cost of Work and safety precautions and programs incident thereto; or

2. The accuracy of any Technical Data, or any other data,
interpretations, opinions and information contained in such reports or shown or indicated on such drawings; or

3. Any Contractor interpretation of or conclusion drawn from any such report, drawing or Technical Data.

ARTICLE 6 - BONDS AND INSURANCE

6.02 Insurance—General Provisions

SC-6.02 Delete Paragraph 6.02.A in its entirety and insert the following in its place:

A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Insurance Specification.


6.03 Contractor’s Insurance

SC-6.03 Delete Paragraph 6.03.A in its entirety and insert the following in its place:

A. Required Insurance: Contractor shall purchase and maintain Worker’s Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Insurance Specification.

SC-6.03 Delete Paragraphs 6.03.B through 6.03.C in their entirety and replace with Insurance Specification.

6.04 Builder’s Risk and Other Property Insurance

SC-6.04 Delete the last sentence of Paragraph 6.04.A and insert the following in its place:

The specific requirements applicable to the builder’s risk insurance are set forth in the Insurance Specification.

6.05  Property Losses; Subrogation

SC-6.05  Delete Paragraphs 6.05.A through 6.05.D in their entirety and replace with Insurance Specification.

6.06  Receipt and Application of Property Insurance Proceeds

SC-6.06  Delete Paragraphs 6.06.A through 6.06.C in their entirety and replace with Insurance Specification.

ARTICLE 7 - CONTRACTOR’S RESPONSIBILITIES

SC-7.01  Contractor’s Means and Methods of Construction

SC-7.01.A  Add the following new sentence immediately after the last sentence in 7.01.A:

Nothing in the design, specifications or Contract Documents shall be deemed to constitute a specific means, method, technique, sequence, or procedure of construction. Contractor shall be solely responsible for ensuring that the completed Work conforms accurately to the Contract Documents.

SC-7.05  "Or-Equals"

SC-7.05.A  Add the following sub-paragraph immediately after Paragraph 7.05.A.1.b.2:

3) the item will be functionally equal to the named item of material or equipment. Contractor warrants and assumes sole responsibility for the adequacy, performance and functioning of the “or-equal” material or equipment.

SC-7.06  Substitutes

SC-7.06.A.3.e  Add the following sub-paragraph immediately following paragraph 7.06.A.3.d:

e. Contractor warrants that, if approved and incorporated into the Work, the "substitute item" will be functionally
equal to the named item of material or equipment. Contractor assumes sole responsibility for the adequacy, performance and functioning of the “substitute” item of material or equipment.

SC-7.07 Concerning Subcontractors and Suppliers

SC-7.07.D Delete Paragraph 7.07.D in its entirety and replace with the following paragraph:

D. No later than two (2) business days after the bid opening, the Contractor shall submit to the Owner and Engineer for acceptance a list of the names and addresses of the Contractor’s Subcontractors, Suppliers and such other individuals and entities as the Owner requests.

SC-7.07 Add the following sub-paragraphs immediately following paragraph 7.07.M:

N. Contractor shall require all Subcontractors, prior to commencement of any Work by the Subcontractor, to secure and keep in force the insurance coverages set forth in and required by the Insurance Specification.

O. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors and Suppliers, whether initially or as a replacement, performing or furnishing any of the Work just as Contractor is responsible for Contractor’s own acts and omissions.

SC-7.08 Patent Fees and Royalties

SC-7.08.B Delete paragraph 7.08.B in its entirety.

SC-7.11 Laws and Regulations

SC-7.11.D Add the following new paragraph immediately after Paragraph 7.11.C:

D. Contractor shall be solely responsible for compliance with all Federal and State Occupational Safety and Health Act (“OSHA”) requirements related to the Work and the Site, including, if applicable, the requirements of the Michigan Occupational Safety and Health Act (“MIOSHA”). Neither Owner nor Engineer
shall have any responsibility for construction site safety or OSHA or MIOSHA compliance. Contractor will indemnify and hold harmless Owner and Engineer from all claims, costs, fees, fines, penalties and expenses (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court, administrative proceeding, and dispute resolution costs) related in any way to claims related to construction site safety, OSHA or MIOSHA violations or charges.

SC-7.13 Safety and Protection

SC-7.13.A Amend the first sentence of Paragraph 7.13.A to read as follows:

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work, including but not limited to the enforcement of safety precautions and programs of all Subcontractors.

SC-7.13.D Amend Paragraph 7.13.D to read as follows:

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense.

SC-7.16 Submittals

SC-7.16.B.1 Amend paragraph 7.16.B.1.a to read as follows:

a. Contractor shall submit to Engineer for approval eight (8) copies of all shop drawings.

SC-7.16.B.2 Amend paragraph 7.16.B.2.a to read as follows:

a. Contractor shall submit to Engineer for approval eight (8) duplicates of each Sample.

SC-7.16.E Add the following new paragraph immediately after Paragraph 7.16.E.1.d:

E. Contractor shall submit to Engineer for approval eight (8) duplicates of
each submittal.

SC-7.17  *Contractor's General Warranty and Guarantee*

SC-7.17.A  Delete Paragraph 7.17.A in its entirety and replace with the following paragraph:

Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee. Contractor's warranty and guaranty that all Work will be in accordance with the Contract Documents and will not be defective includes but is not limited to all materials and equipment incorporated into the Work. Unless a longer duration is required by the Project Specifications, Contractor's warranty and guaranty that all Work will be in accordance with the Contract Documents and will not be defective will extend for at least one year after the date of Substantial Completion.

SC-7.17.D.8  Amend paragraph 7.17.D.8 to read as follows:

8. Any inspection, test, review, or approval by Engineer, the Resident Project Representative (if one is assigned to the Site), or by others;

SC-7.17.D.9  Amend Paragraph 7.17.D.9 to read as follows:

9. Any correction of defective Work by Owner; or

SC-7.17.D.10  Add the following new paragraph immediately after Paragraph 7.17.D.9:

10. Any acceptance by Owner, or any failure to do so.

SC-7.19  *Delegation of Professional Design Services*

SC-7.19.B  Add the following new sentence immediately after the last sentence in 7.19.B:

The design professional must be licensed in the state or states where the Project is located.

SC-7.19.D  Delete Paragraph 7.19.D in its entirety and replace with the following paragraph:
Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, drawings, calculations, specifications, Submittals, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

ARTICLE 9 – OWNER’S RESPONSIBILITIES

SC-9.06  Insurance

SC-9.06.A. Delete Paragraph 9.06.A in its entirety and replace with the following paragraph:

A. Owner’s responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in the Insurance Specifications.

ARTICLE 10 - ENGINEER’S STATUS DURING CONSTRUCTION

SC-10.01  Owner’s Representative

SC-10.01.A Delete Paragraph 10.01.A in its entirety and insert the following in its place:

A. Engineer will be Owner’s representative during the construction period. The Engineer will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents. The authority and responsibilities of the Engineer as set forth in the Contract Documents shall not be restricted, extended or otherwise modified without the written consent of the Engineer and the Owner. Nothing in the Contract Documents shall create for the benefit of the Contractor, any Subcontractor, Supplier or other individual or entity, any contractual relationship between Engineers and any such Contractor, Subcontractor, Supplier or other individual or entity.

SC-10.02 Visits to Site

SC-10.02.A Amend Paragraph 10.02.A by striking the following words from the first sentence:
“at intervals appropriate to the various stages of construction”

SC-10.03  Resident Project Representative

SC-10.03.C  Add the following new paragraphs immediately after Paragraph 10.03.C:

C.  If Engineer furnishes a Resident Project Representative (RPR), the RPR will be Engineer’s employee or agent at the Site. The RPR's authority and responsibility is expressly limited to making observations of the progress that has been made and the quality of the various aspects of Contractor's executed Work, and reporting same to Engineer. RPR will not be required to make exhaustive or continuous observations or inspections on the Site to check the quality or quantity of the Work. RPR’s efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. In addition to the limitations set forth in Paragraph 10.07, The RPR does not have the authority or responsibility to:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including “or-equal” items).

2. Exceed limitations of Engineer’s authority as set forth in the Contract Documents.

3. Undertake any of the responsibilities of Contractor, Subcontractors, Suppliers, or Contractor’s superintendent.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor’s work.

5. Advise on, issue directions regarding, or assume control over safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.

6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals.

8. Authorize Owner to occupy the Project in whole or in part.

9. Interpret for Contractor or Owner any provision of the Contract Documents.

10. Stop the Work for any reason.

**SC-10.07 Limitations on Engineer’s Authority and Responsibilities.**

**SC-10.07.B** Add the following sentence immediately after the last sentence in Paragraph 10.07.B:

Engineer may not stop the work or interfere with the progress of the Work. No decision made by the Engineer in good faith either to exercise or not exercise any authority or responsibility delegated to Engineer in the Contract Documents or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall be construed as interference with the progress of the Work. Engineer shall have no authority or responsibility to recommend alternate or possible safety activities or changes for the safety of the project, Contractor, Subcontractors, Suppliers, Owner, employees, third persons or their property.

**SC-10.07.F** Add the following new paragraph immediately after Paragraph 10.07.E:

F. Engineer will not be responsible for Contractor’s failure to pay Subcontractors, Suppliers, employees, taxes, fees, permits, patent fees, copyright fees, royalties, licenses or monies due to any individual or entity.

**SC-15.01 Progress Payments**

**SC-15.01.C** Delete Paragraph 15.01.C.3.a and insert the following in its place:

a. Inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work; or

**SC-15.01.C** Delete the period at the end of the sentence in Paragraph 15.01.C.4.e and
insert the following in its place:

, or

SC-15.01.C Add the following new paragraphs immediately after Paragraph 15.01.C.4.e:

f. for Contractor's failure to construct the Work or any part of the Work in conformance with the Contract Documents, or

g. for defective Work.

SC-15.04 Partial Use or Occupancy

SC-15.04 Delete Paragraph 15.04.A.4 in its entirety and insert the following in its place:

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of the Insurance Specifications regarding builder's risk or other property insurance.

SC-15.07 Waiver of Claims

SC-15.07.A Delete Paragraph 15.07.A in its entirety and insert the following in its place:

A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising (1) from unsettled Liens, (2) from defective Work, (3) from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, (4) from outstanding Claims by Owner, (5) from Contractor's continuing obligations under the Contract Documents, and (6) from late completion by Contractor, including without limitation liquidated damages or other damage.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

SC-17.01 Methods and Procedures

SC-17.01.B Delete Paragraph 17.01.B.1 in its entirety and insert the following in its place:

1. At Owner's sole option, Owner may demand in writing arbitration of the dispute;
SC-17.01.C Add the following new paragraph immediately after Paragraph 17.01.B

SC-17.01.C Arbitration of Claims at Election of Owner

1. If the Owner elects in writing to demand arbitration as set forth in Paragraph 17.01.1, the dispute will be decided by arbitration in accordance with the rules of the American Arbitration Association in effect as of the Effective Date of the Agreement.

2. The demand for arbitration will be filed in writing with the Contractor and with the selected arbitrator, and a copy will be sent to Engineer for information.

3. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include: (i) a concise breakdown of the award; and (ii) a written explanation of the award specifically citing the Contract Document provisions deemed applicable and relied on in making the award.

4. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal except as provided by the controlling law governing vacating or modifying an arbitration award.

5. The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.

ARTICLE 18 – MISCELLANEOUS

18.01 Giving Notice

SC-18.01 Delete Paragraph 18.01.A.3 in its entirety.
SOIL NOMENCLATURE AND TERMINOLOGY

DRILLING & SAMPLING DESIGNATIONS:

SS : Split Spoon Sample (per ASTM D 1586)
LS : Split Spoon Sample with 3” Liner Insert
ST : Shelby Tube Sample - 3” O.D., unless otherwise noted
AS : Auger Sample
BS : Bulk Sample
HSA : Hollow Stem Auger
SSA : Solid Stem Auger
RB : Rock Bit (NX; BX; AX)
PP : Pocket Penetrometer Value
VS : Vane Shear Value
PM : Pressuremeter test - in situ

STANDARD PENETRATION TEST (ASTM D-1586): A 2-inch OD, ⅜-inch ID split barrel sampler is driven into undisturbed soil by means of repeating blows from a 140-pound hammer falling 30 inches. The sampler is driven three successive 6-inch increments; the total number of blows required for the final 12 inches of penetration is termed the Standard Penetration Resistance (N).

GRADATION DESCRIPTION & TERMINOLOGY:

Granular Soils (coarse-grained) have more than 50% of their dry weight retained on a #200 sieve; they are described as: Boulders, Cobble, Gravel or Sand. Fine-Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are described as: Clays or Clayey Silt if they are cohesive, and Silts if they are non-cohesive. In addition to gradation, granular soils are defined based on their in-situ density; fine grained soils are further defined based on their strength or consistency, and on their plasticity.

<table>
<thead>
<tr>
<th>Major Soil Component</th>
<th>Gradation Range</th>
<th>Descriptive Term(s)</th>
<th>Percent of Dry Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boulders</td>
<td>Over 12 inches (305mm)</td>
<td>Trace</td>
<td>1 - 10</td>
</tr>
<tr>
<td>Cobbles</td>
<td>12 inches to 3 inches (305mm to 76mm)</td>
<td>Little</td>
<td>10 - 20</td>
</tr>
<tr>
<td>Gravel</td>
<td>3 inches to ¾ inches (76mm to 19mm)</td>
<td>Some</td>
<td>20 - 35</td>
</tr>
<tr>
<td></td>
<td>¾ inches to #4 sieve (19mm to 4.75mm)</td>
<td>And</td>
<td>35 - 50</td>
</tr>
<tr>
<td>Sand</td>
<td>#4 sieve to #10 sieve (4.75mm to 2.00mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>#10 sieve to #40 sieve (2.00mm to 0.425mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>#40 sieve to #200 sieve (0.425mm to 0.074mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silt</td>
<td>Passing #200 sieve (0.074mm) to 0.005mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clay</td>
<td>Smaller than 0.005mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONSISTENCY OF COHESIVE SOILS:

<table>
<thead>
<tr>
<th>Unconfined Comp Strength, Qu (tsf)</th>
<th>Consistency</th>
<th>N - Blows/ft.</th>
<th>In-Situ Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.25</td>
<td>Very Soft</td>
<td>0 - 4</td>
<td>Very Loose</td>
</tr>
<tr>
<td>0.25 – 0.50</td>
<td>Soft</td>
<td>5 - 10</td>
<td>Loose</td>
</tr>
<tr>
<td>0.50 – 1.00</td>
<td>Medium (firm)</td>
<td>11 - 30</td>
<td>Medium Dense</td>
</tr>
<tr>
<td>1.00 – 2.00</td>
<td>Stiff</td>
<td>31 - 50</td>
<td>Dense</td>
</tr>
<tr>
<td>2.00 – 4.00</td>
<td>Very Stiff</td>
<td>50 +</td>
<td>Very Dense</td>
</tr>
<tr>
<td>4.00 – 8.00</td>
<td>Hard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;8.00</td>
<td>Very Hard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WATER LEVEL MEASUREMENT:

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. It should be noted that groundwater levels observed during drilling in predominantly cohesive soils are not necessarily indicative of the static groundwater level. This is due to the relatively low permeability of clay soils and the tendency of drilling operations to temporarily seal off natural paths of groundwater migration into the borehole. Additionally, fluctuations in groundwater levels should be anticipated with seasonal variations and following periods of heavy or prolonged precipitation.
[Intentionally left blank]
INSURANCE SPECIFICATIONS

Insurance Required to be Purchased and Maintained by the Contractor

Contractor shall comply with all requirements of this Insurance Specification. Contractor shall purchase and maintain (i.e. keep in force) insurance which conforms to the requirements of this Insurance Specification.

1.1 Insurance—General Provisions

1.1.1 Contractor shall obtain and maintain insurance as required in this Insurance Specification.

1.1.2 All insurance required by the Contract to be purchased and maintained by Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverage’s. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

1.1.3 Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Insurance Specification, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverage’s, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

1.1.4 Failure of Owner to demand such certificates or other evidence of the Contractor’s full compliance with these insurance requirements, or failure of Owner to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the Contractor’s obligation to obtain and maintain such insurance.

1.1.5 If Contractor does not purchase or maintain all of the insurance required of Contractor by the Contract, Contractor shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
1.1.6 If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner’s termination rights under Article 16 of the General Conditions of the Contract.

1.1.7 Without prejudice to any other right or remedy, if Contractor has failed to obtain required insurance, Owner may elect to obtain equivalent insurance to protect Owner’s interests at the expense of the Contractor, and the Contract Price shall be adjusted accordingly.

1.1.8 Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor’s interests.

1.1.9 The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor’s liability under the indemnities granted to Owner and other individuals and entities in the Contract.

1.2 **Contractor’s Insurance - Liability**

1.2.1 **Owner’s & Contractor’s Protective Liability:** Contractor shall purchase and maintain an Owner’s & Contractor’s Protective Liability Policy (“OCP” Policy). The OCP policy shall name the Owner, the Engineer, their consultants, agents, and employees, as the insureds (hereinafter collectively called the “named insureds”). The OCP policy will protect the named insureds for any actual or alleged liability arising out of the work performed by the Contractor, the Subcontractor(s), or Suppliers, on this Project. The OCP policy will provide primary, non-contributing coverage.

1.2.2 **Workers’ Compensation and Employer’s Liability:** Contractor shall purchase and maintain workers’ compensation and employer’s liability insurance for:

1.2.2.1 Claims under workers’ compensation, disability benefits, and other similar employee benefit acts.

1.2.2.2 United States Longshoreman and Harbor Workers’ Compensation Act and Jones Act coverage (if applicable).

1.2.2.3 Claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor’s employees (by stop-gap endorsement in monopolist worker’s compensation states).

1.2.2.4 Foreign voluntary worker compensation (if applicable).

1.2.3 **Commercial General Liability—Claims Covered:** Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:

1.2.3.1 Claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor’s employees.
1.2.3.2 Claims for damages insured by reasonably available personal injury liability coverage.

1.2.3.3 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

1.2.4 Commercial General Liability—Form and Content: Contractor’s commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverage’s and endorsements:

1.2.4.1 Products and completed operations coverage: Such insurance shall be maintained for three years after final payment.

1.2.4.2 Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.

1.2.4.3 Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor’s contractual indemnity obligations in Paragraph 7.18.

1.2.4.4 Premises/operations liability.

1.2.4.5 Personal and advertising injury.

1.2.4.6 Broad form property damage coverage.

1.2.4.7 Severability of interest (the CGL policy shall apply to each named insured as if that named insured was the only named insured and the policy shall apply separately to each insured against whom claim is made or suit is brought).

1.2.4.8 Underground, explosion, and collapse coverage.

1.2.4.9 Personal injury coverage, including employees (with no exclusions pertaining to employment).

1.2.4.10 Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.

1.2.4.11 For design professional additional insureds, ISO Endorsement CG 20 32 07 04, “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.
1.2.5 Automobile liability: Contractor shall purchase and maintain comprehensive automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle, including owned, non-owned, and hired motor vehicles. In light of standard policy provisions concerning (a) loading and unloading, and (b) definitions pertaining to motor vehicles licensed for road use versus unlicensed or self-propelled construction equipment, it is recommended that the comprehensive automobile liability insurance policy and the commercial general liability policy be written by the same insurance carrier, though not necessarily in one the policy. The comprehensive automobile liability policy shall be written on an occurrence basis.

1.2.6 Umbrella or excess liability: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer’s liability, commercial general liability, aviation liability and automobile liability insurance described in the paragraphs above and in Section 1.2.10 below. The coverage afforded shall be at least as set for in Section 1.5.6. But if no box is checked in Section 1.5.6, then the umbrella/excess liability coverage limits will be $2,000,000 per occurrence and $2,000,000 general aggregate. The umbrella or excess liability insurance policy(ies) shall be an occurrence policy(ies).

1.2.7 Contractor’s pollution liability insurance: Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor’s operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

1.2.8 Railroad Protective Liability: Contractor shall purchase and maintain a Railroad Protective Liability policy, where such an exposure exists, to provide coverage in the name of each railroad company having jurisdiction over rights-of-way across which Work under the Contract Documents is to be performed. The form of the policy and the limits of liability shall be determined by the railroad company(ies) involved.

1.2.9 Contractor’s professional liability insurance: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall purchase and maintain applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
1.2.10 **Aviation Liability Insurance**: If required on this project as indicated by a check mark in Section 1.5.10, Contractor shall procure and maintain for the duration of the Contract insurance against claims for injuries to persons or damage to property which may arise from or in connection with the ownership, maintenance or use of Manned or Unmanned Aerial Vehicles, including but not limited to drone(s).

1.2.10.1 **Minimum Scope and Limit of Insurance**: Aviation Liability Insurance on an “occurrence” basis, including products and completed operations, property damage, bodily injury with limits no less than $1,000,000 per occurrence, and $2,000,000 in the aggregate. This coverage may also be provided by endorsement to the Contractor’s Commercial General Liability policy.

1.3 **The policies of insurance required to be purchased and maintained by the Contractor shall:**

1.3.1 **Additional insureds**: The Contractor’s commercial general liability, automobile liability, umbrella or excess, pollution liability policies and aviation liability insurance, shall include and list as additional insureds the Owner and Engineer, and the following individuals and entities:

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Haven Charter Township</td>
<td>13300 168th, Grand Haven, MI 49417</td>
<td>(616) 842-5988</td>
</tr>
<tr>
<td>Ottawa County Road Commission</td>
<td>14110 Lakeshore Drive, Grand Haven, MI 49417</td>
<td>(616) 842-5400</td>
</tr>
<tr>
<td>Grand Haven Area Public Schools</td>
<td>1415 S Beechtree Street, Grand Haven, MI 49417</td>
<td>(616) 850-5000</td>
</tr>
<tr>
<td>Prein&amp;Newhof</td>
<td>4910 Stariha Drive, Muskegon, MI 49441</td>
<td>(231) 798-0101</td>
</tr>
</tbody>
</table>

The additional insured coverage shall include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and every additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements. Each additional insured endorsement shall state that each additional insured is entitled to the same rights as the named insured in the event of cancellation, including but not limited to prior notice of cancellation.

1.3.2 **Deductible Liability**: Any and all deductibles in the polices described in this Insurance Specification shall be assumed by, for the account of, and be the sole
responsibility of Contractor. The amount of any deductible is subject to approval by the Owner.

1.3.3 **Insurance will be primary:** The insurance required to be purchased and maintained by the Contractor under this Insurance Specification shall be primary (i.e. pay first) as respects any insurance, self-insurance or self-retention maintained by the Owner, Engineer, and any other insureds. Any insurance, self-insurance or self-retention maintained by the Owner, Engineer, or any other insureds, shall be in excess of the insurance purchased and maintained by the Contractor under this Insurance Specification, and shall not contribute with it.

1.3.4 **Coverages:** Include at least the specific coverage’s provided in this Insurance Specification.

1.3.5 **Minimum Limits:** Be written for not less than the limits of liability provided in this Insurance Specification and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.

1.3.6 **Notice of Cancellation:** Contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least ten (10) days prior written notice has been given to Contractor. Within three (3) days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.

1.3.7 **Duration:** Remain in effect at least until final payment (and longer if expressly required in this Insurance Specification or the Supplementary Conditions) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.

1.3.8 Be appropriate for the Work being performed and provide protection to Contractor, Owner, Engineer, and any other additional insured, from claims that may arise out of or result from Contractor’s, Sub-contractor’s or Supplier’s performance of the Work, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

1.3.9 The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

1.4 **Contractor’s Insurance - Property**

1.4.1 **Builder’s Risk:** If required on this project as indicated by a check mark in Section 1.5.7, Contractor shall purchase and maintain builder’s risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement
cost thereof (subject to such deductible amounts as may be provided in this Insurance Specification, or the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1.4.1.1 Include the interests of Owner, Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors, of any of them, and any other individuals or entities required by this Insurance Specification and/or the Supplementary Conditions to be insured under such builder’s risk policy. Each of whom shall be listed as a named insured (the parties required to be insured shall collectively be referred to as “insureds”).

1.4.1.2 Be written on a builder’s risk “all risk” policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by this Insurance Specification and/or the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder’s risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.

1.4.1.3 Cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

1.4.1.4 Cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
1.4.1.5 Extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).

1.4.1.6 Extend to cover damage or loss to insured property while in transit.

1.4.1.7 Allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder’s risk insurance.

1.4.1.8 Allow for the waiver of the insurer’s subrogation rights, as set forth below.

1.4.1.9 Provide primary coverage for all losses and damages caused by the perils or causes of loss covered.

1.4.1.10 Not include a co-insurance clause.

1.4.1.11 Include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.

1.4.1.12 Include performance/hot testing and start-up.

1.4.1.13 Be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer, with 30 days written notice to each other Insured.

1.4.2 Notice of Cancellation or Change: All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this section shall contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least ten (10) days prior written notice has been given to the purchasing policyholder. Within three (3) days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.

1.4.3 Deductibles: Contractor shall pay for costs not covered because of the application of a policy deductible.

1.4.4 Partial Occupancy or Use by Owner: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04 of the General Conditions of the Contract, then Owner, through Contractor, will provide notice of such occupancy or use to the builder’s risk insurer. The builder’s risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder’s risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder’s risk insurance.

1.4.5 Additional Insurance: If Contractor elects to obtain other special insurance to be included in or supplement the builder’s risk or property insurance policies provided under this section, it may do so at Contractor’s expense.
1.4.6 **Insurance of Other Property**: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

1.4.7 **Waiver of Rights**: All policies purchased in accordance with this Section 1.4, expressly including the builder’s risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in this Insurance Specification, or the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

1.4.8 **Sub-Contractors Waiver of Rights**

Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in this Insurance Specification or the Supplementary Conditions, as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder’s risk insurance and any other property insurance applicable to the Work.

1.4.9 **Receipt and Application of Property Insurance Proceeds**

Any insured loss under the builder’s risk and other policies of insurance required by this section will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder’s risk and other policies of insurance required by this section shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of the Contract or applicable Laws and Regulations.

If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

### 1.5 Minimum limits

1.5.1 The minimum limits for the insurance required by this Insurance Specification shall provide coverage for not less than the following amounts or greater where required by Laws or Regulations:

1.5.2 Owner’s & Contractor’s Protective Liability Policy

1.5.2.1 Each Occurrence $1,000,000
1.5.2.2 General – Aggregate $2,000,000

1.5.3 Contractor’s Commercial General Liability Policy

1.5.3.1 General – Aggregate $2,000,000
1.5.3.2 Products – Completed Operations Aggregate $2,000,000
1.5.3.3 Personal and Advertising Injury $1,000,000
1.5.3.4 Each Occurrence $1,000,000
1.5.3.5 Fire damage $50,000
1.5.3.6 Medical Expense $5,000

1.5.4 Comprehensive Automobile Liability Policy (In accordance with Michigan’s No Fault Statute)

1.5.4.1 Combined Single Limit of $1,000,000

1.5.5 Worker’s Compensation and Employer’s Liability Policy

1.5.5.1 Michigan Statutory Limits

1.5.5.2 Employer’s Liability

1.5.5.2.1 Each accident $500,000
1.5.5.2.2 Disease – each employee $500,000
1.5.5.2.3 Disease – policy limit $500,000
1.5.5.3 Federal, if applicable (e.g. FELA, Longshoreman’s, etc.) Statutory Limits

1.5.6 Excess or Umbrella Liability Policy

Unless increased limits are required as checked below, the limits shall be:

1.5.6.1 General Aggregate $2,000,000
1.5.6.2 Each Occurrence $2,000,000

Owner may select increased limits for this project as checked below; otherwise, the above limits shall apply if neither below option is checked:

Option One ☐ Check if required
1.5.6.1 General Aggregate $5,000,000
1.5.6.2 Each Occurrence $5,000,000

Option Two ☐ Check if required
1.5.6.1 General Aggregate $10,000,000
1.5.6.2 Each Occurrence $10,000,000

1.5.7 Builder’s Risk “all risk” policy

☐ Check if required

Full Replacement Cost

Items to be covered by Builder’s Risk include:

1.5.8 Contractor’s Pollution Liability Policy $1,000,000

1.5.9 Railroad Protective Liability $

☐ Check if required $

1.5.10 Aviation Liability Insurance

☐ Check if required

1.5.10.1 General – Aggregate $2,000,000
1.5.10.2 Products – Completed Operations Aggregate $2,000,000
1.5.10.4 Each Occurrence $1,000,000

1.5.11 Other insurance ☐ Check if required (List Type) $

Page 11 of 11
**CERTIFICATE OF LIABILITY INSURANCE**

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not affirmatively or negatively amend, extend or alter the coverage afforded by the policies below. This certificate of insurance does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder.

**IMPORTANT:** If the certificate holder is an additional insured, the policy(ies) must be endorsed. If subrogation is waived, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<table>
<thead>
<tr>
<th>CONTACT</th>
<th>Phone:</th>
<th>NAME:</th>
<th>FAX (A/C, No):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-MAIL ADDRESS:</th>
<th>PRODUCER CUSTOMER ID #:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INSURER(S) AFFording COVERAGE</th>
<th>NAIC #</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSURER A:</td>
<td>AM BEST FINANCIAL</td>
</tr>
<tr>
<td>INSURER B:</td>
<td></td>
</tr>
<tr>
<td>INSURER C:</td>
<td></td>
</tr>
<tr>
<td>INSURER D:</td>
<td></td>
</tr>
<tr>
<td>INSURER E:</td>
<td></td>
</tr>
<tr>
<td>INSURER F:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COVERAGES</th>
<th>CERTIFICATE NUMBER:</th>
<th>REVISION NUMBER:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This is to certify that the policies of insurance listed below have been issued to the insured named above for the policy period indicated. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies. Limits shown may have been reduced by paid claims.

### Insured

**Owner's Name and Address**

- 
- 
-  

### Insurers

<table>
<thead>
<tr>
<th>INSURER A:</th>
<th>INSURANCE COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM BEST FINANCIAL</td>
</tr>
<tr>
<td>INSURER B:</td>
<td></td>
</tr>
<tr>
<td>INSURER C:</td>
<td></td>
</tr>
<tr>
<td>INSURER D:</td>
<td></td>
</tr>
<tr>
<td>INSURER E:</td>
<td></td>
</tr>
<tr>
<td>INSURER F:</td>
<td></td>
</tr>
</tbody>
</table>

### Insured Limits

<table>
<thead>
<tr>
<th>Coverage Type</th>
<th>Policy Number</th>
<th>Policy Eff (MM/DD/YYYY)</th>
<th>Policy Exp (MM/DD/YYYY)</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Liability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial General Liability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Claims-Made</td>
<td>Occur</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner's &amp; Contractor's Prot</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Aggregate Limit Applies Per:</td>
<td>Policy</td>
<td>Project</td>
<td>Location</td>
<td></td>
</tr>
<tr>
<td><strong>Automobile Liability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any Auto</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Owned Autos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scheduled Autos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hired Autos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Owned Autos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Umbrella Liab</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occur</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Excess Liab</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Claims-Made</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Workers Compensation and Employers' Liability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any Proprietor/Partner/Executive Officer/Member Excluded?</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Mandatory in NH)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If yes, describe under Description of Operations below</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Workers Compensation and Employers' Liability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y/N</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Limits**

- Each Occurrence $1,000,000
- Premises (EA occurrence) $ |
- MED EXP (Any one person) $ |
- Personal & Adv Injury $ |
- General Aggregate $2,000,000 |
- Products - Comp/Op Agg $ |
- Combined Single Limit (EA accident) $ |
- Bodily Injury (Per person) $ |
- Bodily Injury (Per accident) $ |
- Property Damage (Per accident) $ |
- Each Occurrence $ |
- Aggregate $ |
- Aggregate $ |
- Aggregate $ |
- E.L. Each Accident $ |
- E.L. Disease - EA Employee $ |
- E.L. Disease - Policy Limit $ |

**Description of Operations / Locations / Vehicles**

(Attach ACORD 101, Additional Remarks Schedule, if more space is required)

**Certificate Holder**

**Cancellation**

Contractor's Name and Address

Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Authorized Representative

© 1988-2009 ACORD CORPORATION. All rights reserved.
CERTIFICATE OF LIABILITY INSURANCE

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

CONTACT

PRODUCER NAME:

FAX PHONE

(A/C, No):(A/C, No, Ext):

E-MAIL ADDRESS:

PRODUCER CUSTOMER ID #:

INSURER(S) AFFORDING COVERAGE

NAIC #

INSURED

Contractor’s Name and Address

- 

- 

- 

- 

- 

- 

INSURER A: INSURANCE COMPANY __ AM BEST FINANCIAL

INSURER B:

INSURER C:

INSURER D:

INSURER E:

INSURER F:

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

<table>
<thead>
<tr>
<th>INSURER</th>
<th>TYPE OF INSURANCE</th>
<th>LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>GENERAL LIABILITY</td>
<td>EACH OCCURRENCE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PREMISES ( Ea occurrence)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$100,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MED EXP (Any one person)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$5,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PERSONAL &amp; ADV INJURY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GENERAL AGGREGATE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$2,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PRODUCTS - COMP/OP AGG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$2,000,000</td>
</tr>
<tr>
<td></td>
<td>AUTOMOBILE LIABILITY</td>
<td>COMBINED SINGLE LIMIT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Ea accident)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BODILY INJURY (Per person)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$500,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BODILY INJURY (Per accident)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$500,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PROPERTY DAMAGE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Ea accident)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$500,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E.L. EACH ACCIDENT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$500,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E.L. DISEASE - EA EMPLOYEE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$500,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E.L. DISEASE - POLICY LIMIT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$500,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CONTENTS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Full Replacement Cost</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$1,000,000</td>
</tr>
</tbody>
</table>

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Name of Additional Insured

CERTIFICATE HOLDER CANCELLATION

Owner’s Name and Address

- SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1988-2009 ACORD CORPORATION. All rights reserved.

ACORD 25 (2009/09) The ACORD name and logo are registered marks of ACORD

14
[Intentionally left blank]
SECTION 2

SPECIFICATIONS FOR
EXCAVATING, TRENCHING, & BACKFILLING FOR UTILITIES

2.01 DESCRIPTION OF WORK

The work shall consist of furnishing all materials, equipment, and labor for excavating, trenching, and backfilling for utilities. The work also shall include the necessary clearing, sheeting and shoring, boring and jacking, dewatering, pipe embedment, and other appurtenant work.

The work shall be performed in accordance with the specifications and drawings, the MDOT 2012 Standard Specifications for Construction and the following specifications.

2.02 CLEARING, BRUSHING & TREE REMOVAL

2.02.01 General

The Contractor shall perform all clearing, brushing, and tree removal required for the proposed construction. Where indicated on the drawings for a specific area, that area shall be completely cleared in accordance with Sections 201 and 202 of the MDOT 2012 Standard Specifications for Construction. The Contractor shall notify the Engineer 48 hours (two working days) prior to commencement of clearing, brushing and tree removal. Clearing and brushing shall be confined to the limits of the right-of-way or easements unless otherwise directed and shall be kept to a practicable minimum.

Trees marked "Remove" on the drawings shall be taken down and removed from the right-of-way in a manner that does not endanger the adjoining property or persons or traffic using the right-of-way. Unless approved otherwise by the Engineer, stumps of trees are to be removed. All stump removal, shall be considered included in the major items of work to the project.

Selective pruning of trees will be permitted to allow operation of the Contractor's equipment. Trees shall be pruned neatly, and the scars from pruning or other damage by the Contractor's equipment shall be covered with a preservative.

2.02.02 Preservation of Trees

Because of the special concern for preservation of trees, all trees six (6) inches in diameter and larger, measured at a point 4 1/2’ above the ground line at the base of the tree, which are to be removed have been marked on the drawings. Where there is more than one tree that has grown from a common stump, each tree is measured as a separate tree. All other trees are to be preserved unless written permission for
removal is obtained from the Owner and/or the Engineer. Where tunneling is necessary to preserve a tree, it shall be included in the major items of work. Trees that may have to be tunneled may or may not be specified on the drawings. Where tunneling is necessary, excavation may have to be done by hand to prevent damage to the tree or to its roots. When tunneling or excavating is done close to a tree to be preserved, every effort shall be made to preserve the main roots.

2.02.03 Disposal of Debris

All trees, brush, and stumps from clearing and brushing operations shall be disposed of by the Contractor by hauling from the site, or other suitable means approved by the Engineer. Burning of debris will be allowed if approved by the Engineer and Owner. The Contractor shall obtain the necessary burning permits and shall comply with the safety regulations required.

2.02.04 Measurement & Payment

The cost of all clearing, brushing, tunneling, and protection of trees which are left standing shall be considered included in the major items of work unless specific items have been provided in the Proposal in which case the prices shall be payment in full for performing this work as specified herein. All tree preservation shall be included in the major items of work to the project. Trees will be measured at a point 4-1/2’ above the ground line at the base of the tree. Where more than one tree has grown from a common stump, each tree is measured as a separate tree. Trees six (6) inches in diameter and smaller will not be considered pay items.

2.03 REMOVAL OF SURFACE IMPROVEMENTS

Surface improvements such as sidewalks, improved lawns, drives, curb and gutter, and all types of pavement shall be removed just prior to excavating or trenching operations. All improvements shall be cut at the expected trench width prior to excavating using suitable equipment which does not damage the improvement outside of the trench area.

Concrete and bituminous pavement and drives shall be cut with a pavement cutting saw. The depth of the cut shall be the full depth of the pavement. Pavement crushers or breakers of any type are prohibited unless specifically authorized by the Engineer. Pavement which is removed shall not become mixed with backfill material. Power equipment may be used for pavement removal, provided that damage is not caused to improvements which are to remain.

Removal of surface improvements shall be included in the major items of work and no specific payment will be made therefore unless specific Proposal items are provided, in which case the prices bid shall be payment in full for performing this work as specified herein.
2.04 EXISTING SOIL / SUBSURFACE CONDITIONS

Where provided, soil borings are shown on the drawings only as information for use by the Engineer in preparing the contract documents. The Contractor is solely responsible for confirming actual soil conditions and depth of the water table.

2.05 EXISTING UNDERGROUND UTILITIES & STRUCTURES

2.05.01 Location

No less than three (3) working days prior to excavating, the Contractor is to call “MISS DIG” at 1-800-482-7171 or 811. Existing utilities are shown only at their approximate locations. The Contractor shall be responsible for determining their exact elevations and location in the field. The Contractor shall notify the owners of all underground utilities before starting any work. House sewer connections, water and gas services, and other utility lines may not be indicated on the drawings. However, the Contractor shall make every effort to locate all underground utilities from information obtained from the utility owner or by prospecting in advance of trench excavation.

2.05.02 Replacement

Certain underground utilities such as sewers may require removal and subsequent replacement in lieu of supporting or bracing during the proposed construction, or the Contractor may elect this option when temporary provisions to maintain essential services have been previously approved by the Engineer.

Unless otherwise specified, any utilities removed during the proposed construction shall be replaced by the Contractor. Materials and installation shall be equal to or better than original construction in every way. Salvaged materials may be reused when they are in good condition, and a satisfactory installation can be accomplished in the judgment of the Engineer.

Replacement of existing utilities shall be considered included in the major items of work unless specific items have been provided in the Proposal, in which case the prices bid shall be payment in full for performing this work as specified herein.

2.05.03 Relocation

Should any pipe or other existing utility require raising or lowering or moving to another location because of interference with the pipe or structure being constructed under these specifications, such changes which in the opinion of the Engineer are necessary shall be made by the Contractor unless otherwise specified. Relocation of existing utilities shall be included in the major items of work unless specific items are provided in the Proposal.
2.05.04  **Reconnection**

Where lateral services, house connections, or other pipe lines require reconnection to the proposed utility, as is the case when an existing utility is being reconstructed, the Contractor shall make these connections as specified or as shown on the drawings. All costs for making these connections, including provisions for maintaining flows and providing temporary service during the proposed construction, shall be included in the major items of work unless specific items are provided in the Proposal.

2.05.05  **Utilities to be Abandoned**

When pipes, conduits, sewers, or other structures are removed from the trench leaving dead ends in the ground, such ends shall be fully plugged or sealed with brick and mortar by the Contractor. Abandoned structures such as manholes or chambers shall be entirely removed unless otherwise specified or shown on the drawings.

All materials from abandoned utilities which can be readily salvaged shall be removed from the excavation by the Contractor and stored on the site or loaded on the Owner's truck as directed by the Engineer. Owner shall have first claim to salvageable materials. The Contractor is responsible to dispose of salvageable materials not desired to be kept by the Owner.

All costs for abandoning utilities and for removing and salvaging materials, when required, shall be considered included in the major items of work unless specific items have been provided in the Proposal, in which case the prices bid shall be payment in full for performing this work as specified herein.

2.06  **EXCAVATING & TRENCHING**

2.06.01  **General**

Excavating and trenching operations shall at all times be conducted in a safe, orderly manner using methods and equipment designed and suited to the intended use by personnel experienced in the work being performed.

None of the requirements or provisions specified herein or shown on the drawings shall nullify or restrict any safety provisions required by any regulation or law governing the protection and/or safety of persons or property.

2.06.02  **Width of Trench**

The width of the trench shall be ample to permit the pipe to be laid and joined properly and the pipe embedment material and backfill to be placed and compacted as specified. Trenches shall be of sufficient extra width when required as will permit the convenient placing of trench supports, sheeting, and bracing.
2.06.02.01  **Width of Trench for Rigid Pipe**

In order to limit excessive loads on rigid pipe, the maximum width of trench for pipe 36 inches and larger in diameter shall not be more than twice the nominal diameter. For smaller sizes of pipe, the maximum width of trench shall be not more than 3 feet greater than the nominal diameter of the pipe except as otherwise specified or directed. The above limiting restrictions on trench width apply from outside bottom of pipe to outside top of pipe.

Where the width of trench within these limits exceeds the maximum limit specified, the Contractor shall install a heavier class of pipe or use other means to provide additional load-carrying capacity at no additional cost to the Owner. Any changes in class of pipe or other variation shall be approved in writing by the Engineer before the work progresses.

When the trench width above the top of the pipe is appreciably greater then that which is reasonably required by project conditions in the judgment of the Engineer, any additional cost for backfill material, surface restoration, or other items that are the result of such excess width shall be borne by the Contractor.

2.06.02.02  **Width of Trench for Flexible Pipe**

Unless otherwise specified or approved by the Engineer, a minimum trench width of at least two (2) feet on each side of the pipe for placement of select embedment material will be required.

2.06.03  **Excavating to Grade**

The trench shall be excavated to a depth required for the proper installation of the pipe and placing of the pipe embedment material as specified.

Any part of the bottom of the trench excavated below the specified subgrade shall be refilled with approved materials compacted to 95% of maximum unit weight in accordance with MDOT procedures at no additional cost to the Owner. If additional excavation is required to correct unstable foundation conditions, payment will be made as specified in Section 2.08.

2.06.04  **Sheeting, Shoring, Bracing, & Shelving**

2.06.04.01  **General**

The Contractor shall brace or slope back the sides of all excavations in accordance with current MIOSHA regulations. The Contractor shall be responsible for compliance to such regulations and for the design, installation, and maintenance of all excavation safety measures.
2.06.04.02 Measurement & Payment

Unless otherwise specified in the Proposal, the costs incurred in the installation of bracing, sheeting, shoring, and shelving shall be included in the unit price bid for the work being performed.

Payment for sheeting left in place where directed by the Engineer shall be negotiated with the Contractor in accordance with the contract provisions for extra work unless specific items have been provided in the Proposal.

2.06.05 Rock Excavation

2.06.05.01 General

Wherever the word rock is used in these specifications, it shall mean boulders, solid ledge rock, and other minerals geologically placed and of a hardness when first exposed of 3 or greater in scales of mineral hardness, which in the opinion of the Engineer requires continuous use of drilling and blasting or special power equipment for its removal.

Soft disintegrated rock which can be removed with a power-operated excavator or with hand tools and loose, shaken, or previously blasted rock and broken stone in rock fillings shall not be classified as rock, nor will it be included in measurements for payment.

2.06.05.02 Hardness

The Engineer will determine the hardness of the material or minerals in question. The following accepted hardness will be used as a guide in the field for specific situations:

- Gypsum - hardness of 2
- Fingernail - hardness of approximately 2-1/2
- Calcite - hardness of 3
- Copper Coin - hardness of approximately 3
- Brass Pin - hardness of approximately 3

A mineral with a hardness of 3 will scratch a copper coin and can be scratched with a brass pin. Determinations of hardness which cannot readily be determined in the field shall be resolved by laboratory analysis of the material in question.

2.06.05.03 Blasting

Where blasting is necessary, the Contractor shall obtain the required permits and licenses at his own expense. This work shall be done with due regard to the safety of workmen, other people, and public and private property. The method of covering blasts, amounts of charges used, and the general procedure for doing this work shall
conform to the standard practice and shall meet all requirements of local ordinances and other regulations and shall be subject to the approval of the Engineer.

2.06.05.04 Clearance

Rock shall be removed to provide a clearance for all pipes, appurtenances, or structures of at least eight (8) inches below, and a minimum of eight (8) inches on each side of the pipe, appurtenance, or structure.

The specified minimum clearances are the minimum clear distance which will be permitted between any part of the pipe or appurtenances being laid and any part, point, or projection of the rock.

2.06.05.05 Measurement

Only boulders of 1 cubic yard or greater in volume that cannot be removed with power excavating equipment or rock as defined herein will be measured for payment. Measurements of rock will be made by the Engineer after rock is removed from the excavation by measuring the trench before the pipe is installed.

The cross sectional area will be measured at 25 foot intervals or closer if required to accurately measure the trench. The maximum depth which will be measured for payment shall be from the top of the rock formation to the specified subgrade for the pipe embedment material. The maximum width of trench to be considered for payment shall be as follows:

1. Below outside top of pipe, maximum width shall be the outside diameter of the pipe bell plus 12 inches but not less than 30 inches.

2. From outside top of pipe to top of rock formation, maximum width shall be computed based on a 5 on 1 slope vertically for the sides of the trench.

The volume will be computed by the Engineer using the method of average end areas based on measurements of rock actually removed subject to the maximum limits specified.

2.06.05.06 Basis of Payment

Rock excavation shall be paid for at the contract price per cubic yard, which price shall be payment in full for completing all work as specified herein including removal and disposal of the rock.

If a unit price has not been established in the Proposal, payment to the Contractor will be based on the contract provisions for extra work.
2.06.06 **Dewatering**

The Contractor shall provide and maintain adequate dewatering equipment to remove and dispose of all surface and ground water including water or sewage from exposed sewers or water mains, from all excavations and trenches, or other parts of the work. Each excavation shall be kept dry during the preparation of the subgrade and continually thereafter until the structure to be built or the installation of the pipeline is completed to such extent that no damage from hydrostatic pressure, flotation, or other cause will result.

Where work is in soil containing an excessive amount of water, the Contractor shall provide, install, and maintain suitable well points or wells connected to manifolds or reliable pumping equipment, or other suitable dewatering methods, and shall so operate the dewatering system to insure proper construction of the work. If the Contractor elects to use a trench underdrain or similar dewatering system, he shall receive prior approval of the Engineer as to location and installation methods for this type of system. The Contractor shall make every effort to prevent sand, sediment, or debris from entering any existing pipeline or conduit which he may use for drainage purposes. The repair or cleaning of drainage structures made necessary by the Contractor's operations shall be performed by and at the expense of the Contractor. Arrangements for discharge of ground water into any public sewer shall be previously approved by the Engineer and Owner of the receiving sewer.

Dewatering including the use of stone or gravel for dewatering purposes when required will not be paid for separately but shall be included in the contract price for the major items of work.

The Contractor shall limit his dewatering operation to the minimum time and depth required for construction. The Contractor will be required to furnish temporary water service and/or provide potable water at the direction of the Engineer to property owners whose wells are affected by the dewatering operations.

2.07 **BORING & JACKING**

2.07.01 **General**

Where so specified on the drawings, railroad tracks, streets, or other obstructions to be crossed by utilities shall be bored and/or jacked as hereinafter specified. These specifications describe the general method of conducting the boring and jacking operations and set forth minimum conditions. The location and details of the proposed installation will be shown on the Drawings.

Unless otherwise specified, the Contractor shall be responsible for obtaining any permits required for the work under the right-of-way, or other facility to be crossed, and shall carry out the details of his work in a manner that will fully meet the requirements of the authority having jurisdiction over the facility affected. No interruption of traffic will be permitted, and the Contractor shall take all precautions to that effect.
2.07.02  Casing Method

When the casing method is specified, a casing pipe shall be jacked into place and a carrier pipe shall then be installed in the casing pipe. The casing pipe shall be jacked into place by approved methods that will provide accurate alignment and grade and that will allow the carrier pipe to be installed within the casing at the specified alignment and grade.

The carrier pipe shall be joined together to form a continuous run through the casing. It shall be supported on wooden shoes or blocks which shall be securely fastened to each end of each piece of pipe or as recommended by the pipe manufacturer. The carrier pipe shall then be drawn or shoved through the casing. Junction with pipes of other materials at each end shall be made as shown on the Drawings. After the pipe has been inspected and accepted, the annular space between the pipe and the casing shall be filled with materials approved by the Owner, such as, peastone or flowable fill. After the casing has been filled, the ends of the casing shall be sealed as shown on the Drawings or in the Specifications.

2.07.03  Jacking Pipe Method

When specified or indicated on the Drawings, the pipe to be jacked shall also be utilized as the carrier pipe. The pipe shall be jacked into place by approved methods that will provide accurate alignment and grade. Excavation shall be performed ahead of the pipe by working inside the pipe or shall be performed by boring with approved equipment suitable for the intended use.

2.07.04  Measurement & Payment

The length of pipe to be measured for payment shall be the actual length of casing or jacking pipe actually jacked or pushed into place. When additional casing is specified or authorized, but is not actually jacked in place, the cost for furnishing and placing such additional casing will be paid for separately. If a unit price has not been established in the Proposal, payment will be based on the contract provisions for extra work. No additional payment will be made where the Contractor jacks or installs additional casing not shown on the Drawings or authorized by the Engineer.

The contract price per lineal foot for furnishing and jacking the pipe, or casing, where the casing method is used shall be payment in full for completing the work as specified herein including the necessary jacking pits and connections to pipes of other materials.

The carrier pipe shall be paid at the contract price for watermain, storm sewer, sanitary sewer, or force main per unit prices shown on the proposal and shall be payment in full for furnishing and installing the carrier pipe inside the casing.
2.08 SUBGRADE

The subgrade for pipe and/or structures shall be firm, dense, and thoroughly compacted and consolidated, free from mud and muck, and sufficiently stable to remain firm and intact under the feet of the workmen.

2.08.01 Unstable Foundation

When the soil beneath the normal pipe embedment area is soft or unstable, even with adequate dewatering, or in the opinion of the Engineer cannot support the pipe or utility, further depth shall be excavated and refilled to the proposed grade with MDOT Class II granular material (for plastic pipe the material must comply with ASTM D2321) compacted in twelve (12) inch layers as specified in Section 2.09.05, or other approved means shall be employed to assure a firm foundation for the utility. The volume of unstable foundation removed and replaced with approved materials for which payment will be allowed shall be determined in cubic yards unless otherwise specified on the Drawing or in the proposal. Said volume to be computed by assuming that the cross section area of the unstable foundation takes the form of a trapezoid as shown on the Standard Detail for Unstable Soil Removal for Utility.

Payment for removal and replacement of unstable foundation will be paid under the contract provisions for extra work, unless specific Proposal items have been provided, in which case, the unit price bid shall be payment in full for performing the work as specified. If the soil in the bottom of trench is soft due to excessive amounts of ground water, and/or the Contractor's method of operation, stabilization of the trench bottom shall be at the Contractor's expense.

2.08.02 Special Foundations

Where the subgrade at the bottom of the excavation consists of soil which is unstable or yielding to such a degree that, in the opinion of the Engineer, it cannot properly support the pipe or structure, the Contractor shall construct such additional foundation or reinforcement of the subgrade as may be specified, such as timber piling, geotextiles, or other means as approved by the Engineer to provide a proper foundation.

The construction of special foundations will be paid for separately based on the contract provisions for extra work, unless specific Proposal items have been provided, in which case the unit price bid shall be payment in full for performing the work as specified.

2.09 PIPE EMBEDMENT

2.09.01 General

Pipe embedment shall include the furnishing and placing of approved materials as specified or as directed from 4 inches under the outside bottom of the pipe to 12
inches over the outside top of the pipe. Various classes of pipe embedment may be specified or shown on the Drawings or Standard details in which case the limits of the various types will also be specified.

2.09.02 Flexible Pipe Embedment

Flexible pipe is any pipe having a pipe stiffness of less than 60 psi, as defined under the requirements of ASTM Designation D2412 (this includes all plastic pipe except Composite (Truss) pipe, and may include corrugated metal pipe, ductile iron pipe, and steel pipe, depending on pipe diameter and wall thickness).

Pipe embedment for flexible pipe shall be Class B as shown in the attached standard details. For pipes less than fifteen (15) inches in diameter, bedding material meeting the requirements of Section 902.07 of the MDOT 2012 Standard Specifications for Construction for granular materials Class II, modified to 100% passing a 1" sieve shall be used. If stone is used for bedding, it shall meet the requirements of ASTM D2321 (Table 1 – Embedment Classes for Plastic Pipe) for Class 1A crushed stone. An Engineer approved geotextile filter fabric shall be placed around all areas where Class 1A crushed stone pipe embedment is used as shown on the standard details. Transition zones between crushed stone and sand embedment shall be separated by a geotextile fabric. For pipes fifteen (15) inches in diameter and larger, bedding material meeting the requirements of Section 902.07 of the MDOT 2012 Standard Specifications for Construction for granular materials Class II, modified to 100% passing a 1" sieve shall be used.

2.09.03 Class B Pipe Embedment

Unless otherwise specified or shown on the Drawings, all pipe embedment shall be Class B pipe embedment as shown on the Standard details. When the soil in the bottom of the trench at pipe subgrade meets all the requirements for Granular Material Class II as specified in the MDOT 2012 Standard Specifications for Construction, Section 902.07 and in the opinion of the Engineer will provide suitable bedding for the pipe, such soil may be utilized as bedding material and prepared to receive the pipe as specified without undercutting and subsequent replacement.

Plastic pipe embedment shall comply with ASTM D2321.

2.09.04 Special Pipe Embedment

Various types of special pipe embedment may be specified or shown on the Drawings in locations where special conditions require their use. The Contractor shall perform all the work of constructing special pipe embedment where specified.

2.09.05 Placing Pipe Embedment Material

Pipe embedment material shall be placed in the bottom of the trench and shaped by hand to provide a firm and uniform bearing for the barrel of the pipe with additional shaping to accommodate the bells on bell and spigot pipe. After each pipe has been
graded, aligned, and placed in final position on the bedding material and jointing is complete, additional embedment material shall be carefully placed and compacted under and around each side of the pipe and over the pipe until it is completely covered by 12 inches of embedment material. Said material shall be distributed along both sides of the pipe uniformly and simultaneously to prevent lateral displacement of the pipe. All granular embedment material shall be compacted to 95% of maximum unit weight in accordance with MDOT procedures.

All the work of placing pipe embedment shall be considered an integral part of installing the pipe and shall be completed immediately after the pipe is laid to the correct alignment and grade.

2.09.06 Basis of Payment

All the work of furnishing and/or placing pipe embedment material as specified shall be included in the contract items for the proposed work as follows:

2.09.06.01 Class B Pipe Embedment

When a contract item has been provided in the proposal for special backfill, payment will be made under this item as specified in Paragraph 2.10 for approved granular material obtained off the site. When no specific item for special backfill has been provided, this work shall be included in the major work items.

2.09.06.02 Special Pipe Embedment

When one or more contract items have been provided in the Proposal for special pipe embedment, payment to the Contractor will be based on the prices bid for the respective items. When no specific items have been provided in the Proposal, the cost for completing this work as specified shall be included in the major work items except for authorized extra work in which case the contract provisions for extra work shall apply.

2.10 BACKFILLING ABOVE PIPE EMBEDMENT

2.10.01 General

All backfill material shall be free from cinders, ashes, refuse, sod, organic material, boulders, or rocks larger than 3 inches in diameter, frozen material or other material which in the opinion of the Engineer is unsuitable. The soil excavated from the trenches shall be used for backfilling when it is classified as suitable by the Engineer. If all or a portion of the excavated material is classified as unsuitable for backfilling, the Contractor shall remove and dispose of the unsuitable material and shall furnish and place granular material meeting the requirements of Section 902.07 of the MDOT 2012 Standard Specifications for Construction for Granular Material Class II.
All backfilling and compaction shall be performed by the Contractor using methods and equipment approved by the Engineer.

2.10.02 Trenches Requiring Compacted Granular Backfill

Trenches and excavations in the following locations shall be backfilled with approved granular material meeting the requirements of Section 902.07 of the MDOT 2012 Standard Specifications for Construction for Granular Material Class II:

a. Improved areas, including drives, sidewalks, parking areas, around structures, etc.

b. Within the limits of the roadway (within a 1 on 1 slope beginning two (2) feet from the edge of pavement or back of curb towards the right-of-way line).

c. Within the limits of future improvements (shown on Drawings).

d. Within limits specified on Drawings.

e. All sanitary sewer lateral trenches within the limits of the right-of-way.

All backfill within these areas shall be placed in layers not exceeding twelve (12) inches thick, and shall be compacted to 95% of maximum unit weight in accordance with MDOT procedures. Tests for compaction will be made by the Engineer or other representative designated by the Engineer at no cost to the Contractor. When tests indicate a density which is less than that required, the methods or equipment being used shall be modified to obtain the density specified, and the section in question shall be recompacted until the required density is obtained. The cost of retesting shall be borne by the Contractor.

2.10.03 Trenches Not Requiring Compacted Granular Backfill

Where not otherwise specified or directed, backfilling above the pipe embedment shall be made with material which is originally excavated, which is suitable. Backfill materials shall be consolidated by mechanical equipment working longitudinally in the trench, or by other approved methods, so as to be free of large voids with any excess material mounded over the trench or removed as directed by the Engineer. The trench shall be graded to a reasonable uniformity and left in a neat condition.

2.10.04 Basis of Payment

Payment for backfilling including compaction shall be made as follows:

a. When a contract item has been provided in the Proposal for special backfill, payment will be made under this item as specified in Paragraph 2.11 for approved granular material obtained off the site.
b. When no specific item for special backfill has been provided in the Proposal, this work shall be included in the major items of work.

2.11 SPECIAL BACKFILL - MEASUREMENT AND PAYMENT

2.11.01 Measurement

When an item has been provided in the Proposal for special backfill, approved granular material obtained off the site which is required by these specifications or authorized by the Engineer shall be included in this item. Special backfill shall be measured compacted in place. The Contractor shall furnish a delivery ticket for each truck load at the time the material is delivered to the project. The delivery ticket shall be prepared at least in duplicate, one copy of which shall be furnished to the Engineer or his representative, the other copy to be retained in the Contractor's file. No payment shall be made for special backfill unless the individual truck delivery tickets are furnished in this manner. The Engineer will use the delivery tickets when calculating the compacted in place quantity.

2.11.02 Payment

The Proposal unit price per cubic yard for special backfill shall be payment in full for furnishing, placing, and compacting the special backfill and for disposing of the material excavated from the trench as directed and in accordance with the Drawings and Specifications.

Stone used specifically for dewatering procedures shall not be classified as special backfill and no specific payment will be made therefor.

2.12 DISPOSAL OF EXCESS EXCAVATION

All excavated material in excess of that needed for backfill or that material classified as unsuitable by the Engineer shall be disposed of by the Contractor. However, the Engineer reserves the right to direct the Contractor to haul all or a portion of the material not required for backfilling to an area designated by the Engineer which is not more than 1,000 feet outside the project and which is reasonably accessible. This work, when directed, shall be performed at no additional cost to the Owner.

2.13 LIMITATIONS ON OPERATIONS

The Contractor shall at all times conduct his work so that there is a minimum of inconvenience to the residents and businesses in the vicinity of this project. To this end, he shall complete his backfill and remove all debris and unsuitable backfill to a point as close to the actual pipe installation as is practical and keep the area where the pipe construction and backfill has been completed in a neat condition. Open excavations shall be protected by signs, lights, barricades, and/or fence at all times when work is not actually taking place at that excavation. The placement of excavated earth along the line of the trench shall be controlled by the public’s use of the street or right-of-way and shall always be confined to approved limits.
Not more than 300 consecutive feet of street shall be closed at one time, and vehicular traffic through any street shall not be stopped for a period longer than two weeks without the written permission of the Engineer. Not more than one cross street shall be closed to vehicular traffic at the same time except by permission of the Engineer. Contractor shall maintain access for emergency vehicles at all times.

2.14 SOIL EROSION AND SEDIMENTATION CONTROL

The Contractor shall conduct his operations in such a manner that all soil is confined within the project limits and prevented from entering storm sewers, water courses, rivers, lakes, reservoirs, or wetlands.

The Contractor shall place a filter or barrier composed of straw, stone or other approved material around all catch basins or other inlets to the storm sewer or drainage courses to prevent sedimentation in these structures. After the construction operations are completed, the Contractor shall remove these filters and clean all the sediment and debris from the catch basins, ditches or other storm sewer structures.

Soil erosion and sedimentation control measures if indicated on the Drawings are considered as minimum requirements and are not to be considered as complete and all-inclusive. Additional control measures as may be required due to circumstances or conditions at the time of construction or as directed by the Engineer, or the designated Soil Erosion Control agency, shall be placed as required to insure conformance with the Part 91 of PA 451 of 1994. Deviations from or additions to the erosion control measures shown on the Drawings shall be subject to the approval of the Engineer or enforcing agency.

The Contractor is responsible to have a certified storm water operator and complete all such reports as required by regulatory agencies as it relates to storm water and soil erosion and sedimentation control.

The cost of this work and other control measures which may be required or directed by the Engineer shall be included in the major work items to the cost of the project unless specific items have been provided in the proposal.

2.15 STREAM CROSSING

The rules and regulations of Act 451, shall govern all streams, wetland and river crossings.
UNSTABLE SOIL REMOVAL FOR UTILITY
EXCAVATION FOR BELLS

CLASS B PIPE EMBEDMENT

NOTES

1. ALL BACKFILL INDICATED SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH M.D.O.T. PROCEDURES.

2. METHOD I SHALL BE USED IN AREAS OF UNCONSOLIDATED SOILS. (E.G. SAND, GRAVEL)

3. METHOD II SHALL BE USED IN AREAS OF CONSOLIDATED SOILS (E.G. CLAY, HARDPAN, ROCK)
SECTION 3

SPECIFICATIONS FOR SURFACE RESTORATION

3.01 DESCRIPTION OF WORK

All areas disturbed by construction operations shall be restored to the original condition thereof as determined by the Engineer using information from drawings, surveys, and photographs or video tapes when available.

The work shall be performed in accordance with the specifications and drawings, the MDOT 2012 Standard Specifications for Construction and the following specifications.

3.02 GRADING

All streets, walks, and other improved surfaces disturbed by construction operations shall be replaced to uniform lines and grades established by the Engineer. The finish grade line will be established within three (3) inches of the existing ground profile shown on the drawings unless a proposed grade is shown which indicates otherwise.

The Contractor shall perform all grading, compacting, shaping, and related work required to prepare the subgrade to the satisfaction of the Engineer. The cost for preparing the subgrade as specified herein shall be incidental to the cost of the project, and no specific payment will be made therefor.

3.03 REPLACEMENT OF AGGREGATE STREETS AND DRIVEWAYS

Aggregate streets shall be constructed in accordance with the typical section shown on the drawings and shall consist of a minimum of six (6) inches of aggregate surface course as specified below.

3.03.01 Materials

Aggregate surface course shall meet the requirements specified in Section 306 of the MDOT 2012 Standard Specifications for Construction. All material shall be taken from stockpiles that have recently been tested by the county road commission, MDOT, or an independent laboratory.

Aggregate material that is removed from roadways and driveways shall not be reused but shall be replaced with an equivalent depth of newly compacted aggregate conforming to MDOT 22A.
3.03.02  **Construction Methods**

Placement of aggregate surface course shall be in accordance with the applicable portions of Section 306 of the MDOT 2012 Standard Specifications for Construction.

3.03.03  **Aggregate Driveways and Field Drives**

Aggregate driveways and field drives shall be replaced with a minimum of six (6) inches of MDOT 22A aggregate compacted in place.

3.03.04  **Culverts**

Culverts that are removed may be reused, if they are in sound condition. If damaged, the culverts shall be replaced with ASTM C76 Class III concrete pipe or equivalent pipe. The cost of removing and replacing the culverts shall be considered part of the major items of work found in the Proposal unless otherwise specified.

3.03.05  **Measurement & Payment**

Except as specified in Section 3.04, all replacement of aggregate streets and driveways shall be measured in lineal feet along the centerline of the main line utility being constructed and shall include all final grading and shaping required. The width of gravel replacement will not be considered for payment unless specific items to that end have been provided in the Proposal.

3.04  **REPLACEMENT OF SURFACE AGGREGATE IN SPECIFIED AREAS**

The Contractor shall furnish and place additional aggregate conforming to MDOT Specifications in locations determined by the Engineer for the replacement of aggregate shoulders, drives, and streets where linear measurement (as specified in Section 3.03.05) is impractical, where only part of an existing aggregate surface requires replacement, or where field conditions require replacement of the aggregate to a greater or lesser thickness than six (6) inches as determined by the Engineer.

Aggregate shoulders disturbed by the Contractor's operations shall be restored or replaced to their original width and thickness with aggregate conforming to the requirements of Section 902 of the MDOT 2012 Standard Specifications for Construction for 22A or 23A aggregate as specified.

3.04.01  **Measurement & Payment**

Surface aggregate shall be measured in tons or cubic yards or as specified in the Proposal. The Contractor shall furnish a truck delivery ticket for each load when it is delivered to the project which clearly states the quantity in tons or cubic yards, date of delivery, and the specific location used on the project. The price per ton or
cubic yard as bid in the Proposal shall be payment in full for furnishing, placing, compacting, and grading the surface aggregate as directed by the Engineer.

Measurement of shoulder restoration shall be in lineal feet along the centerline of the main line utility being constructed directly below the shoulder or in square yards according to the Proposal Item. If there is no Proposal Item for shoulder restoration, it shall be considered incidental to the project, and no separate payment shall be made therefor.

3.05 REPLACEMENT OF HOT MIX ASPHALT (HMA) STREETS

Hot Mix Asphalt (HMA) streets shall be constructed in accordance with the typical section shown on the drawings and, unless otherwise specified, shall meet the requirements of 13A in Section 501 of the MDOT 2012 Standard Specifications for Construction placed at 330 lbs./sq.yd. minimum (165 lbs./sq. yd. leveling, 165 lbs./sq. yd. surface) over six (6) inches of compacted 22A aggregate.

3.05.01 Materials

Aggregate base for HMA streets shall meet the requirements of 22A in Section 902 of the MDOT 2012 Standard Specifications for Construction. HMA for base, leveling, and surface courses shall be as specified, and shall conform to the requirements of Section 501 of the MDOT 2012 Standard Specifications for Construction. Materials for bond coat shall be as specified in Section 501 of the MDOT 2012 Standard Specifications for Construction.

3.05.02 Construction Methods

Aggregate base for HMA streets shall be placed in accordance with Section 302 of the MDOT 2012 Standard Specifications for Construction.

HMA mixtures shall be placed in accordance with the applicable portions of Section 501 of the MDOT 2012 Standard Specifications for Construction. For replacement of valley gutters, pavers shall be equipped with an extension to the vibrating screed adjustable to fit the typical section shown on the drawings.

The Contractor shall not place the aggregate base course until the subgrade has been approved by the Engineer. The Contractor shall not place the first HMA course and each successive HMA course until the underlying aggregate or HMA course has been approved by the Engineer.

3.05.03 Saw Cutting

HMA street, driveway and spillway replacement shall include saw cutting the asphalt pavement at the edge of the trench for the full depth of the pavement. Payment for saw cutting shall be included in the pay items for street replacement and driveway replacement unless otherwise specified.
3.05.04 Measurement & Payment

HMA street replacement shall be measured in lineal feet along the centerline of the main line utility being constructed. The width of the street replaced will not be considered for payment, and payment will not be made for any length of street replaced beyond that which is directly above the pipe installed. HMA street replacement may also be measured in square yards or tons as specified in the Proposal.

Aggregate base for HMA shall be considered part of the HMA items, and no separate payment will be made therefor unless a specific Pay Item for aggregate base is listed in the Proposal.

The cost of HMA bond coat shall be considered part of the bituminous paving.

3.06 REPLACEMENT OF AGGREGATE SURFACE OR HOT MIX ASPHALT (HMA) PAVED AREAS (PATCHING)

When the drawings and specifications do not require that the Contractor replace an entire street, the surface that is disturbed shall be replaced as specified herein.

3.06.01 Materials

Surfacing aggregate and aggregate base for HMA pavement shall conform to the requirements for 22A aggregate in Section 902 of the MDOT 2012 Standard Specifications for Construction.

Unless otherwise specified on the drawings or in the specifications, HMA 13A, conforming to the requirements in Section 501 of the MDOT 2012 Standard Specifications for Construction, shall be used for HMA patches. When existing seal coat pavement is disturbed, a HMA patch shall be placed.

3.06.02 Construction Methods

When an aggregate surface is disturbed by the Contractor's operations, the edges of the existing aggregate surface shall be trimmed and shall be free of all foreign material before the new aggregate is placed. The subgrade shall be graded and compacted to the proper lines and grades to match the adjacent surface. The aggregate shall be placed in layers not to exceed six (6) inches and shall be compacted to 98% of its maximum unit weight in accordance with MDOT procedures.

When a HMA surface is disturbed by the Contractor's operations, that surface shall be replaced at a thickness equal to the thickness of the existing pavement adjacent to the trench but not less than one and one-half (1-1/2) inches thick. If existing pavement is greater than two (2) inches in thickness, the replacement pavement shall be placed in two or more layers. Aggregate base shall be replaced at a thickness equal to the adjacent aggregate base (minimum six inches) as specified.
for aggregate patches above. After placement of the aggregate base but prior to its final shaping and compaction, the edges of the existing pavement shall be trimmed to straight lines a minimum of one (1) foot from the edge of the trench to permit a straight and uniform surface between the existing and new aggregate base. Trimming of the existing pavement shall be by sawcutting or other suitable means approved by the Engineer.

All bituminous valley gutter located in disturbed HMA surface areas shall be replaced by the Contractor. Replacement of valley gutter in disturbed HMA areas shall be considered part of the HMA replacement.

3.06.03 Measurement & Payment

Replacement of aggregate surface shall be measured in lineal feet along the centerline of the main utility line being constructed. HMA paved areas (patching) shall be measured in square feet or square yards of actual aggregate surface and HMA patching replaced. Payment shall be made according to the Proposal Item for the type of surface to be replaced and shall include all trimming, removal, shaping, compacting, aggregate base, and HMA or aggregate surface.

3.07 REPLACEMENT OF CONCRETE IMPROVEMENTS

The Contractor shall replace all concrete sidewalk, drives, curb and gutter, and pavement removed during the installation of the utility or broken by the Contractor.

3.07.01 Materials

Concrete shall meet the requirements for Grade S2 Concrete as specified in Section 701 of the MDOT 2012 Standard Specifications for Construction. Other materials shall meet the requirements of the applicable portions of the MDOT 2012 Standard Specifications for Construction.

3.07.02 Construction Methods

The thickness of the concrete shall be the same as the concrete adjacent to the trench but shall not be less than four (4) inches. The alignment and grade and the contour and finish of the surface shall be the same as the concrete adjacent to the trench unless otherwise directed by the Engineer.

Pavements, walks, and drives shall be sawcut at the edges of the trench or removed to existing joints. The depth of the saw cut shall not be less than the full depth of the concrete.

The forms and joints and the methods of placing, curing, and protection shall be consistent with standard practice and shall meet all the requirements of the MDOT 2012 Standard Specifications for Construction for the various items.
3.07.03 **Concrete Curb & Gutter (Header Curb, 18 inch, 24 inch, and 30 inch)**

Concrete curb and gutter shall match the existing curb and contain two No. 4 steel reinforcing bars. Concrete grade shall be S2. Payment shall be made in lineal feet of curb and gutter replaced. All joints shall be saw cut. Curb and gutter shall be placed in accordance with Section 802 of the MDOT 2012 Standard Specifications for Construction.

3.07.04 **Sidewalk and Concrete Driveways**

Sidewalk and concrete driveways shall be placed in accordance with Section 801 & 803 of the MDOT 2012 Standard Specifications for Construction. Concrete shall be air entrained. All 6-inch thick concrete sidewalks shall include 6x6-W2.9xW2.9 woven wire steel mesh.

3.07.05 **Measurement & Payment**

Concrete walks, pavement, and drives will be measured in square feet or square yards of actual concrete surface replaced. Concrete curb and gutter shall be considered part of the construction of the utility line unless a specific item is provided in the Proposal for its replacement. If so specified, the concrete curb and gutter or valley gutter replacement shall be paid for in lineal feet measured along the face of a header curb or along the flow line of gutter when constructed as part of the curb. Concrete that has been broken by the Contractor outside the limits of the trench will not be considered for payment unless otherwise specified.

3.08 **REPLACEMENT OF LAWN IMPROVEMENTS**

3.08.01 **Underground Sprinkling Equipment**

Underground sprinkling lines, valves & heads, and water system curb stops and boxes are specifically excluded from the pay items. The Contractor shall take the necessary precautions to preserve this equipment during construction. Any underground sprinkling equipment disturbed by the Contractor shall be replaced at the Contractor's expense.

All underground sprinkling equipment shall be replaced in a timely fashion so as to minimize damage to the lawn areas. The Contractor will be responsible for any lawn damage caused by delayed replacement of the sprinkling equipment.

3.08.02 **Fences**

Fences, which are removed for construction, shall be replaced with equal or better type and size. The cost of removing and replacing the fences shall be considered part of the major items of work found in the Proposal unless otherwise specified.
3.08.03  **Ornamental Shrubbery and Bushes**

Ornamental shrubbery and bushes that are removed during construction shall be replaced in kind and size in a vigorous growing condition. Replacement costs shall be considered part of the major items of work found in the Proposal unless otherwise specified. All shrubs and bushes replaced shall be insured by a one-(1) year warranty commencing from the date of installation.

3.09  **TURF RESTORATION**

All areas of established turf shall be replaced as nearly as possible to their original condition.

3.09.01  **Topsoil**

Topsoil shall be placed at a minimum depth of four (4) inches over all areas disturbed by the Contractor's operations. The subgrade shall be graded to conform to the adjacent contours and shall be approved by the Engineer before placing topsoil. The topsoil shall then be placed in accordance with Section 816 of the MDOT 2012 Standard Specifications for Construction.

The soil shall be dark, organic natural surface soil, exclusive of muck or peat, suitable for the establishment of grass or other vegetable growth.

3.09.02  **Fertilizer**

After the topsoil has been placed, it shall be fertilized with a starter fertilizer at the rate of two (2) pounds per 1,000 square feet, in proportions of 16% nitrogen, 32% phosphoric acid, and 3% potash, or as directed by the Engineer. Fertilizer shall be applied just before the placing of the seed to retain its full benefit before unfavorable weather can cause deterioration.

3.09.03  **Seeding**

All previously seeded lawn areas shall be reseeded with Class A seed. Other areas disturbed by the Contractor's operations shall be seeded with Roadside seed. Temporary seed shall be placed for erosion control or temporary soil stabilization of stockpile areas. Seed mixtures, application rates, and methods shall be in accordance with Section 816 of the MDOT 2012 Standard Specifications for Construction.

Seasonal limitations on seeding in Section 816 of the MDOT 2012 Standard Specifications for Construction are waived. The Contractor shall repeat the seeding procedure as often as necessary to produce a close stand of weed-free grass.
3.09.04  Mulching

All seeded areas shall be mulched immediately following the seeding. Mulching shall be applied to all newly seeded areas at a rate of two (2) tons per acre in accordance with the requirements of Section 816 of the MDOT 2012 Standard Specifications for Construction, or as directed by the Engineer. Separate loose straw mulch is prohibited on residential lawn areas.

3.09.05  Hydro Application

All fertilizing, seeding and mulching shall be applied by an approved Hydro seeding and mulching process unless separate applications as heretofore described are approved by the Engineer.

3.09.06  Erosion Control

All erosion control measures shall be installed and maintained in accordance with the Soil Erosion and Sedimentation Control plan and permit. Unless otherwise specified, mulch blanket and high velocity blanket shall be placed in accordance with Section 816 of the MDOT 2012 Standard Specifications for Construction.

3.09.07  Sod

Sod shall be placed only where directed by the Engineer or as noted on the drawings or specifications.

All sod shall be nursery grown, conforming to MDOT requirements for Class A. Sod shall be approved by the Engineer before placing and shall be placed in accordance with the requirements of Section 816 of the MDOT 2012 Standard Specifications for Construction. The base on which the sod is to be laid shall consist of a minimum of four (4) inches of topsoil placed, watered and fertilized in the same manner required for seeding.

3.09.08  Measurement & Payment

Turf restoration will be measured in lineal feet along the centerline of the main utility line being constructed. Payment will be made according to the appropriate item for seeding or sod. Topsoil, fertilizer, mulch and erosion control shall be incidental to these items unless specific proposal items are provided. Any area disturbed by the Contractor's operations outside of the limits of the trench shall be restored by the Contractor to its original condition but will not be considered for payment.

3.10  SCHEDULING OF RESTORATION WORK

Initial restoration (rough grading, temporary aggregate if necessary, removal of excess excavated material and debris) shall be done each day to the extent necessary to allow the movement of local traffic and permit access to all properties.
for emergency vehicles. Maintenance of streets, drives, sidewalks, etc. shall be the responsibility of the Contractor (including dust control, grading, stabilization, etc.) until the restoration is complete and has been accepted by the Engineer.

Restoration of each street or section of utility line shall follow the construction in a timely fashion so as to minimize inconvenience to the adjacent property owners and the general public. The manner in which this restoration is done by the Contractor will be a determining factor in the approval by the Engineer of staking requests and partial payment requests.

3.11 LIMITS FOR MEASUREMENT & PAYMENT FOR SURFACE RESTORATION

All work necessary to return the area of construction operations to its original condition, other than the items listed in the Proposal, shall be considered incidental to the construction, and no specific payment will be made therefor.

For surface restoration items measured in lineal feet, payment will be based upon the type of surface that is directly above the utility. Only one surface restoration item shall be paid for each lineal foot of utility. Additional restoration on either side of the utility to the limits of construction will be done by the Contractor at no additional cost to the Owner. For example, when the utility is directly under the bituminous street, only the item of bituminous street restoration will be paid. Topsoil, seed, fertilizer and mulch required to restore the area adjacent to the street will not be paid for separately.

Payment will be made for the proposal items only. All of the work specified above and indicated on the drawings will be considered included in the unit prices.
SECTION 5

SPECIFICATIONS FOR STORM SEWER

5.01 DESCRIPTION OF WORK

The work shall consist of furnishing and installing storm sewer pipe of the specified size or sizes in a trench and shall include the construction of manholes, catch basins, and other appurtenant work. Excavating, trenching and backfilling shall be as specified in Section 2.

The work shall be performed in accordance with the specifications and drawings, the MDOT 2012 Standard Specifications for Construction and the following specifications.

5.02 MATERIALS

All materials furnished by the Contractor shall conform to the specifications which follow. Where reference specifications are used, they shall be considered as referring to the current edition or latest issue.

5.02.01 Sewer Pipe

All sewer pipe shall be of the materials and strengths shown on the Drawings or as specified.

5.02.01.01 Reinforced Concrete Sewer Pipe

Reinforced concrete sewer pipe, fittings, and accessories shall conform to the requirements of ASTM Designation C76 for the various classes specified.

Unless otherwise specified, joints for reinforced concrete sewer pipe shall be premium rubber joints conforming to the requirements of ASTM Designation C443.

5.02.01.02 Nonreinforced Concrete Pipe

Nonreinforced concrete pipe, fittings, and accessories shall conform to the requirements of ASTM Designation C14, Class 3, unless otherwise specified.

Unless otherwise specified, joints for non-reinforced concrete sewer pipe shall be premium rubber joints conforming to the requirements of ASTM Designation C443.
5.02.01.03 Reinforced Concrete Elliptical Pipe

Reinforced concrete elliptical pipe, fittings, and accessories shall conform to the requirements of ASTM Designation C507 for the various classes specified.

Unless otherwise specified, joints for reinforced concrete elliptical pipe shall conform to one of the following requirements:

Premium joints shall conform to one of the following requirements:

- External sealing bands conforming to the requirements of ASTM Designation C877,

Soil tight joints shall conform to the following requirements:

- Bituminous mastic conforming to the requirements of Section 909.09 of the MDOT 2012 Standard Specifications of Construction shall completely fill the annular space in the joint. Any excess mastic squeezed into the interior of the conduit shall be troweled smooth.

  The joint surface shall also be evenly wrapped with a three (3) foot wide geotextile fabric meeting the requirements of Section 910.03A of the MDOT 2012 Standard Specifications of Construction, Geotextile Blanket for pipe wrap.

  Geotextiles shall be stored, handled, and placed in accordance with the manufacturer's recommendations. Torn or punctured geotextiles shall not be used. Geotextile fabric which has deteriorated due to ultraviolet exposure (sunlight) during storage or has been damaged in placing will be rejected.

5.02.01.04 Reinforced Concrete Box Culverts

This section covers precast reinforced concrete box culverts and joints to be furnished and installed as specified and as shown on the drawings.

Box culverts shall be furnished and installed complete with all fittings, specials, jointing materials, and other necessary appurtenances.

Except as modified or supplemented herein, the manufacture and design of concrete box culvert shall be governed by the requirements of ASTM C1433, as applicable.

Unless otherwise specified herein, all materials used in the manufacture of culvert, fittings, and accessories shall conform to the requirements of ASTM C1433, as applicable.

Unless otherwise specified, joints for reinforced concrete box culverts shall conform to one of the following requirements:
Premium joints shall conform to one of the following requirements:

External sealing bands shall conform to the requirements of ASTM Designation C877. The width of the bands shall be thirteen (13) inches. External sealing bands shall be installed in accordance with the sealing band manufacturer's recommendations. Care shall be taken to ensure stretch of the band along the bottom surface of the conduit, and to prevent pulling of the sealing band into the bottom of the joint, by keeping the weight of the conduit off of the bedding until the sealing band is fully installed.

Soil tight joints shall conform to the following requirements:

Bituminous mastic conforming to the requirements of Section 909.09 of the MDOT 2012 Standard Specifications of Construction shall completely fill the annular space in the joint. Any excess mastic squeezed into the interior of the conduit shall be troweled smooth.

The joint shall surface shall also be evenly wrapped with a three (3) foot wide geotextile fabric meeting the requirements of Section 910.03A of the MDOT 2012 Standard Specifications of Construction, Geotextile Blanket for pipe wrap.

Geotextiles shall be stored, handled, and placed in accordance with the manufacturer's recommendations. Torn or punctured geotextiles shall not be used. Geotextile fabric which has deteriorated due to ultraviolet exposure (sunlight) during storage or has been damaged in placing will be rejected.

Except for fittings, bends, tees, and closure pieces, each piece of culvert shall be not less than six (6) feet long. Shorter length to help align precast holes may be allowed with the approval of the Engineer.

Joints shall conform to ASTM C1433, as applicable. Joint design shall be suitable for the joint sealing material to be used.

The total area of longitudinal steel reinforcement shall meet or exceed ASTM C1433. Longitudinal reinforcement shall be spaced uniformly around the culvert, and shall be continuous in each cage.

In no case shall the cover over the reinforcement be less than 5/8 inch, as measured from the internal surface or the external surface of the culvert, except the cover over the reinforcement for the external surface of the top slab of box culverts with less than two (2) feet of cover shall not be less than 1-5/8 inches.

In addition to the requirements of ASTM C1433, as applicable, each culvert and fitting shall have plainly and permanently marked thereon:
Identification of specials to show the location in the line.

On bends, the angle turned.

All bends, tees, closure pieces, wall fittings, end sections, and other fittings which are indicated on the drawings, or required to complete the work shall be furnished. Except as modified or otherwise provided herein, the design and manufacture of fittings shall be governed by the same requirements as the connecting culvert.

Concrete box culverts shall not be delivered to the site until concrete control cylinders representing such culverts shall have attained a compressive strength of at least eighty (80) percent of the specified minimum twenty-eight (28) day strength.

Concrete culvert and fittings shall be handled carefully and shall not be bumped or dropped. Hooks shall not be permitted to come in contact with joint surfaces. Use of lifting holes will be permitted with a minimum of four holes. Holes shall be plugged with non-shrink grout or other means acceptable to the Engineer, after installation.

Bedding for concrete box culverts shall be at least twelve (12) inches below the bottom of the box culvert on rock, and at least six (6) inches below the bottom of the box culvert laid on stable earth. The bedding shall be aggregate, thoroughly compacted to not less than ninety-five (95) percent of maximum unit weight – ninety-eight (98) percent if within the roadway influence – in accordance with MDOT procedures. Bedding material shall conform to the requirements of MDOT for 6A aggregate, or crushed concrete meeting the requirements for 22A aggregate, or approved equal. Bedding material shall extend a minimum of one (1) foot beyond the outside faces of the culvert.

Culvert laying shall begin at the lowest elevation, with the female ends facing the direction of laying, except when reverse laying is permitted by the Engineer.

The interior of all culvert and fittings shall be thoroughly cleaned before installation and shall be kept clean until the work has been accepted. All joint contact surfaces shall be kept clean until the joint is completed.

Jointing of precast concrete box culvert shall be as specified. Joints shall not be made when weather conditions may interfere with obtaining a satisfactory seal.

The gap width between successive box culvert sections after placement shall be a maximum of 3/4 inch at the nearest surfaces of the joint, and two (2) inches maximum at any other location as measured on the interior exposed edge of the joint. This permissible tolerance shall not affect the lines and grades and their permissible tolerances as shown on the drawings and specified.

Box culverts delivered to the job site with any patching shall not be accepted. If the Contractor wishes to seek acceptance for a patched box culvert, it must be
inspected by the Engineer prior to patching at the point of manufacture, and accepted subject to an approved method of patching.

Drawings, specifications, schedules, and other data showing complete details of the fabrication and construction of box culvert and fittings, together with complete data covering all materials proposed for use, shall be submitted for approval. The drawings and data shall include, but not be limited to, the following for each size culvert:

- Details of joints.
- Details of fittings and specials.
- Details of end sections and tees.
- Test reports.
- Laying schedules.
- Details of reinforcement at openings in the top or sides of the box culvert.

5.02.01.05 Corrugated Metal Pipe

Corrugated metal pipe shall conform to the applicable requirements of Sections 401 and 402 of the MDOT 2012 Standard Specifications of Construction for the various types and gauges specified.

Premium soil tight joints will be required.

5.02.01.06 Smooth Lined Corrugated Polyethylene Pipe

Smooth Lined Corrugated Polyethylene Pipe in sizes up to forty-eight (48) inch diameter shall conform to the requirements of AASHTO M-294, Type S. The material shall have a minimum resin cell classification of 335420 C as determined under ASTM Designation D3350. Pipe shall have annular corrugations, and joints shall have integral bell & spigot with gaskets. Gaskets shall be placed in annular corrugations. Gaskets shall be solid cross section rubber seals conforming to ASTM Designation F477. A protective removable shrink wrap material shall be placed on all exposed gaskets at the factory. Gaskets and sleeves shall be lubricated prior to insertion as required by the pipe manufacturer. Pipe fittings shall conform to AASHTO M-294. Installation and testing shall be as required in Section 2, "Excavating, Trenching, and Backfilling for Utilities", except a minimum of three (3) feet of cover shall be maintained over any pipe during construction staging when construction equipment is crossing the pipe. The cost of temporary cover shall be incidental to the item of work.
5.02.07  Polyvinyl Chloride (PVC) - (Roof Drain Laterals Only)

Solid wall PVC plastic pipe shall be extra strength conforming to the requirements of ASTM D3034, with a standard dimension ratio of 23.5 (SDR-23.5).

Joints for PVC plastic may be chemically welded. Manufacturers are required to "guide line" the uncoupled end of each joint of pipe so that in the field, it can be visually determined that the joint is properly made up.

Joints for PVC shall be integral bell & spigot design.

Polyvinyl Chloride (PVC) solid wall schedule 80, ASTM D1785, is also permitted.

5.02  Roof Drain Laterals

All roof drain laterals shall be extra strength pipe, and unless otherwise specified, shall be of any material specified in Paragraph 5.02.01. Where bends or curves are specified they shall be smooth long radius type curve. No mitered or segmented type bends will be approved.

5.02.03  Wyes and Tees

Wyes and Tees shall be cast fittings of the same material and joints as the main sewer, or may be an approved fabricated special fitting which provides a suitable connection for the lateral to the main sewer.

Details of special fittings and/or adaptors for connecting laterals of a material different from the main sewer shall be approved by the Engineer before they are manufactured.

Wyes and tees will be required as follows:

6" Wyes on main sewer of 8" or 10" diameter;
6" Wyes or Tees on main sewer of 12" diameter or larger.

5.02.04  Plugs and Stoppers

Plugs or stoppers for plugging the ends of laterals, risers or storm sewers, which are not extended shall make a water tight seal. Design shall be such that they can be readily removed without damage to the pipe.

5.02.05  Underdrains

Materials for underdrains shall conform to the requirements of Section 404 of the MDOT 2012 Standard Specifications of Construction.
5.02.06 **Cement Mortar**

Mortar shall consist of one part of Air Entraining Portland Cement, and two parts of masonry sand. These proportions shall be measured by volume.

The sand and cement shall be mixed dry in a clean tight box until a mixture of uniform color is produced, after which water shall be added until the required consistency is obtained. Mortar shall be mixed only in such quantities as needed for immediate use. The retempering of mortar will not be permitted.

5.02.06.01 **Cement**

Air Entraining Portland Cement shall conform to the requirements for Type 1A of the MDOT 2012 Standard Specifications for Construction for Air Entraining Portland Cement, ASTM Designation C150.

5.02.06.02 **Masonry Sand**

Masonry Sand shall conform to the requirements of "Natural Sand, 2MS" of the MDOT 2012 Standard Specifications for Construction.

5.02.06.03 **Water**

Water for mixing mortar shall be obtained from the public water supply unless otherwise approved by the Engineer.

5.02.07 **Concrete**

Concrete for pipe encasement, special pipe embedment, manhole bases and similar items shall meet the requirements of the 2012 MDOT Standard Specifications for Construction for Grade S3 concrete. Grade S3 concrete shall have the strength of 3,000 psi at 28 days.

5.02.08 **Manhole and Catch Basin Materials**

5.02.08.01 **Adjusting Rings**

Precast grade adjusting rings shall conform to the requirements of ASTM Designation C478.

5.02.08.02 **Precast Units**

Precast reinforced concrete manhole risers and precast reinforced concrete manhole conical top sections shall conform to the requirements for reinforced concrete manhole risers and tops, ASTM Designation C478.

Joints for precast sections shall be premium rubber, butyl rubber composition seals, "RAM-NEK", or approved equal.
5.02.08.03  **Castings**

Castings shall meet the requirements specified in the MDOT 2012 Standard Specifications for Construction Section 908. Manhole covers and rings and similar combinations of castings shall be machined to provide an even bearing.

Unless otherwise specified, manhole castings shall be East Jordon No. 1120 with Type A solid cover, or approved equal.

Unless otherwise specified, catch basin castings at curb inlets shall be East Jordan No. 7020, with Type M2 grate and Type T1 back, or approved equal.

5.02.08.04  **Steel Reinforcement**

Steel reinforcement shall conform to the requirements for steel reinforcement of Section 905 of the MDOT 2012 Standard Specifications for Construction.

5.02.08.05  **Manhole Steps**

Unless otherwise specified, manhole steps shall be plastic coated steel steps conforming to the requirements of ASTM Designation C478, or approved equal, spaced at 16” on center.

5.03  **INSPECTION OF MATERIALS BY CONTRACTOR**

It shall be the responsibility of the Contractor to inspect all materials for cracks, flaws or other defects before they are incorporated into the work. Any materials found to be defective or damaged, shall be promptly removed from the job site.

5.04  **LAYING PIPE**

5.04.01  **Alignment and Grade**

5.04.01.01  **Laser Method**

The Contractor shall use the laser beam method of maintaining line and grade for sewer construction, unless otherwise approved by the Engineer. The Contractor shall submit evidence to the Engineer that a qualified operator will handle the laser beam equipment during the course of construction.

The Engineer shall place line and grade stakes at each manhole, or more often, as determined by the Engineer. The Contractor shall check the line and grade at very point at which a stake has been placed.
5.04.02 Handling

Pipe shall be protected during unloading and handling against impacts, shocks and free fall. Pipe handled on skid-ways shall not be skidded or rolled against pipe already on the ground.

Pipe shall be carefully lowered into the trench in such a way as to avoid danger to the workmen or damage to the pipe.

5.04.03 Direction of Laying

Excavation of trenches and laying of pipe shall begin at the outlet for the sewer and proceed upgrade with the individual pipe being laid with the spigot end downstream.

5.04.04 Placing

Unless otherwise specified, installation of precast concrete sewer, storm drain, and culvert pipe shall conform to the requirements of ASTM Designation C1479, as applicable.

The pipe shall be placed on the prepared sub-grade and held firmly in place during subsequent pipe jointing and embedment operations. Successive pipes shall be carefully positioned so that when laid they form a sewer with a uniform invert true to line and grade.

Sufficient pressure shall be applied by an approved method to each pipe as it is laid to ensure that the spigot is all the way home in the bell. Care shall be exercised to prevent joints from opening up as successive lengths of pipe are placed. The Contractor shall take the necessary precautions when using a trench box to prevent joint separation when the box is pulled ahead.

5.04.05 Cleaning Sewer

The interior of the sewer shall be cleaned of all jointing material, dirt and debris as the work progresses.

In small sewers where cleaning after laying may be difficult, a swab or drag may be required in the pipe line to satisfactorily complete this work. Where possible, a plug shall be installed on the downstream end of the sewer to prevent any sand and debris from entering the existing sewer.

5.05 PIPE JOINTS

Pipe joints shall be made in strict accordance with the pipe manufacturer's recommendations unless otherwise specified herein. All lubricants, gaskets and other materials required to make the joints shall be supplied or recommended by the pipe manufacturer and approved by the Engineer.
Pipe layers shall be fully qualified and experienced in the work being performed and shall check each joint after it is completed to see that no part of the joint material is left on the inside of the pipe and that the joint is properly made.

5.06  LOCATION OF WYES AND TEES

The approximate locations of wyes or tees are shown on the Drawings. These locations may be adjusted where necessary to best serve the various properties. Exact locations will be determined by the Engineer before the wyes or tees are installed.

The Contractor shall keep an accurate record of measurements from the nearest downstream manhole to each wye or tee which is installed, the length of each lateral, and the depth at the end of each lateral. These measurements shall be recorded on the record drawings to be furnished by the Contractor.

5.07  ROOF OR FOOTING DRAIN LATERALS

5.07.01  General

Installation of roof/footing drain laterals shall meet all requirements specified for storm sewers. All laterals shall be inspected by the Engineer before the trench is backfilled. The end of all laterals shall be properly sealed with a standard stopper or plug, unless directed otherwise by the Engineer.

5.07.02  Length

All roof/footing drain laterals shall be laid at right angles to the storm sewer main line and shall extend to a point one foot outside the street right-of-way (property line) unless otherwise directed. No payment will be made for pipe laid beyond this point unless specifically ordered by the Engineer.

The Contractor shall measure and record the horizontal length of the lateral from the main line sewer to the end of the lateral and provide this information to the Engineer.

5.07.03  Grade

The roof/footing drain lateral shall be laid with a rise of one-quarter (1/4) inch per foot unless otherwise directed.

5.07.04  Markers and Measurements

After installation of the roof/footing drain lateral, but prior to backfilling, the Contractor shall provide and install a 2” x 2” wood marker for each service. The wood markers shall be set vertically from the end of the lateral to twelve (12) inches above finish surface elevations. Also, a 1/2” diameter by 3’ long metal stake shall be placed vertically and adjacent to the wood marker with 6” cover. The
Contractor shall assist the Construction Observer in locating the end of each lateral and in recording the location by measuring to the nearest downstream manhole.

After the record locations have been recorded and checked by the Construction Observer, the Contractor shall cut off the markers as follows: in improved areas, the markers shall be cut off two inches below grade; and in undeveloped areas, the markers shall be cut off six inches above grade.

5.08 MANHOLE AND CATCH BASIN CONSTRUCTION

Manholes and catch basins shall be constructed in accordance with the standard details and as specified herein.

Unless otherwise specified, or approved by the Engineer, all manholes and catch basins shall be precast.

Precast bases shall be installed on the subbase in such a way as to provide a uniform bearing under the manhole base.

Precast concrete adjusting rings shall be used to bring existing and new drainage structure covers within the proposed pavement to grade. After the cover is brought to grade, the entire hole created by excavating to raise the casting shall be filled in three-inch (3") lifts with Hot Mix Asphalt Mixture 3C or 13A to the top of the leveling course and air tamped to achieve proper compaction. Special care shall be taken to prevent debris from entering sewers.

Precast manholes and catch basins with integral bottom and channel may be used; however, any changes to the structure due to minor field adjustments of alignment and/or grade required to meet construction conditions, shall be made by the Contractor at no additional cost to the Owner.

Stubs shall be provided in manholes for future connections as shown on the Drawings or as directed by the Engineer. All such stubs shall be sealed with standard plugs or brick bulkheads, in accordance with Section 403.03 of the MDOT 2012 Standard Specifications for Construction.

5.09 CUT-INS

When cutting into an existing manhole, the opening shall be no larger than is necessary to admit the new sewer. All broken or surplus materials falling inside the structure shall be removed. The opening around the pipe shall then be properly sealed with brick and mortar or by other approved means which will result in a water tight and durable repair to the structure.

Flow channels shall be constructed as specified or as directed to accommodate the sewer being cut in.
Cut-ins to existing manholes shall be considered included in the major items of work and no specific payment will be made therefor.

5.10 ACCEPTANCE TESTS

5.10.01 Alignment and Grade

Each section of sewer may be checked by the Engineer for alignment and grade using lights and mirrors, television inspection, or other similar means. The Contractor shall assist the Engineer in the performance of these tests when necessary.

5.10.02 Pipe Deflection Tests (Flexible Pipe Only)

Flexible pipe is any pipe having a pipe stiffness of less than 115 psi. as defined under the requirements of ASTM Designation D2412.

The completed installation of flexible pipe shall at no point have out-of-round deflections in the main sewer pipe greater than five percent (5%) of the pipe's actual original inside diameter. Go/no go gauging tests, using an approved pointed mandrel with a minimum of nine (9) points, shall be performed by the Contractor in the presence of the Engineer, or his authorized representative after the trench is backfilled and before the surface restoration is begun. Pipe with deflections greater than five percent (5%) shall be re-laid by the Contractor at no additional expense to the Owner. Use of mechanical devices or equipment to complete the go/no go tests and vibratory re-rounding of failed sections are prohibited. A minimum of 30 days shall elapse between installation with backfilling and deflection testing.

5.11 MEASUREMENT AND PAYMENT

5.11.01 General

All proposed construction shall be measured for payment by the Engineer in accordance with the items listed in the proposal.

The unit price bid for each proposal item shall be payment in full for completing the work, ready for use as specified.

5.11.02 Storm Sewers

Measurement of the length of the sewer shall be in lineal feet along the centerline of the sewer from center to center of manhole or catch basin structures.

Where depth classifications are provided, the depth of the sewer connecting two adjacent structures shall be considered as being the average of the depth from earth grade to the sewer invert at these structures.
5.11.03 Manholes and Catch Basins

Manholes and catch basins shall be paid for in accordance with the units established in the proposal. When no proposal item is provided for castings, the work shall be considered part of the major items of work.

5.11.04 Wyes or Tees

When a specific item is provided in the proposal for Wyes or Tees the unit price bid shall be the additional cost of furnishing and placing the wye or tee over and above the cost of furnishing and laying the sewer pipe.

When no proposal item is provided, the work shall be considered part of the major items of work.

5.11.05 Roof or Footing Drain Laterals

The length of roof/footing drain laterals shall be measured horizontally from the center of the main sewer to the end of the lateral as specified.

5.11.06 Cut-Ins

Cut-ins shall be considered part of the major items of work and no specific payment will be made therefor.

5.11.07 Stubs

Stubs shall be considered part of the major items of work and no specific payment will be made therefor.
STANDARD CATCH BASIN
(PRECAST CONCRETE)

NOTES

1. PRECAST CONCRETE CATCH BASIN SHALL MEET ASTM C478.

2. IF BOTTOM IS PRECAST CONCRETE, SET ON MINIMUM 4" SAND SUBBASE (CIP) OR CLASS 1A CRUSHED STONE WRAPPED WITH GEOTEXTILE FABRIC.

3. STD. 4'-0" DIAMETER INLET SAME AS CATCH BASIN WITHOUT SUMP.
DRYWELL CATCH BASIN
(PRECAST CONCRETE)

NOTES

1. PRECAST CONCRETE CATCH BASIN SHALL MEET ASTM C478.

2. IF BOTTOM IS PRECAST CONCRETE, SET ON MINIMUM 4" SAND SUBBASE (CIP) OR CLASS 1A CRUSHED STONE WRAPPED IN GEOTEXTILE FABRIC.

3. STD. 4'-0" DIAMETER INLET SAME AS CATCH BASIN WITHOUT SUMP.
2’ DIAMETER INLET

NOTE

1. PRECAST CONCRETE INLET SHALL MEET ASTM C478.

2. IF BOTTOM IS PRECAST CONCRETE, SET ON MINIMUM 4” SAND SUBBASE (CIP) OR CLASS 1A CRUSHED STONE WRAPPED WITH GEOFABRIC.
2' DIAMETER INLET w/ SUMP

NOTE

1. PRECAST CONCRETE INLET SHALL MEET ASTM C478.

2. IF BOTTOM IS PRECAST CONCRETE, SET ON MINIMUM 4" SAND SUBBASE (CIP) OR CLASS 1A CRUSHED STONE WRAPPED WITH GEOTEXTILE FABRIC.
CURB INLET

NOTE

ALSO SEE "STANDARD CATCH BASIN" PLANS FOR STD. 4'-0" DIA. INLETS
STANDARD STORM SEWER MANHOLE
(PRECAST CONCRETE)

NOTES

1. PRECAST CONCRETE MANHOLE SHALL MEET ASTM C478.

2. IF BOTTOM IS PRECAST CONCRETE, SET ON MINIMUM 4" SAND SUBBASE (CIP) OR CLASS 1A CRUSHED STONE WRAPPED IN GEOFABRIC FABRIC.

3. CONE MAY BE ROTATED TO ALIGN STEPS TO VARIOUS LOCATIONS IN MANHOLE.
EXTRA REINFORCING IN PIPE AROUND OPENING. (2) #4 BARS, EACH SIDE

COVER, AS SPECIFIED
FINISH GRADE

SET FRAME IN SOFT MORTAR BED

ADJUSTING RINGS
(6" MIN. - 15" MAX.)

PRECAST CONE
ASTM C478

PLASTIC COATED STEEL STEPS

48" DIA. MANHOLE RISER
ASTM C478

24" MIN.

REINFORCED CONCRETE
PRECAST MANHOLE TEE

16" (TYP.)

42" DIA. & OVER

6" MIN. (TYP.)

UNDISTURBED SOIL

6" MIN.

2,500 PSI CONCRETE AROUND BOTTOM HALF OF PRECAST MANHOLE, Poured IN PLACE.

STANDARD STORM SEWER TEE MANHOLE
LEACHING BASIN
[Intentionally left blank]
SECTION 9

SPECIFICATIONS FOR NON-MOTORIZED MULTI-USE PATHWAYS

9.01 DESCRIPTION OF WORK

The work shall consist of furnishing and installing non-motorized multi-use pathways (pathways) of the specified widths and thicknesses as shown on the drawings specified herein, and furnishing all labor, materials, tools, and equipment for receiving, unloading, transporting, laying, and testing of the pathway. Contractor shall furnish all necessary accessories to complete the pathway work as shown on the drawings and specified herein.

The work shall be performed in accordance with the specifications and drawings, the MDOT 2012 Standard Specifications for Construction and the following specifications.

9.02 RIGHT-OF-WAY/EASEMENTS

The Contractor shall confine his work to the public right-of-way or easements as shown on the drawings. Any other area required for equipment or material storage or for construction operations shall be the Contractor’s responsibility.

9.03 LIMITATION ON OPERATIONS

The Contractor shall at all times conduct his work so that there is a minimum of inconvenience to the residents of the streets in this project. A traffic control plan must be submitted to, and approved by, the municipality and/or agency of jurisdiction prior to the start of construction.

9.04 PERMITS

The Contractor shall obtain all necessary permits including but not limited to those from the Road Commission and Drain Commission. The Owner will receive plan approval from these agencies. The Contractor shall pay for any charges or bonds for those permits and related inspection by those agencies. All costs shall be considered part of the major work items.

The Owner will obtain the Soil Erosion and Sedimentation Control permit and provide a copy for the Contractor’s reference. The Contractor is to provide a certified storm water operator and shall complete inspection reports as required by local, state and federal requirements.
9.05 HOT MIX ASPHALT (HMA) PATHWAY CONSTRUCTION


9.05.01 Grade

The pathway shall be constructed to match the existing grade, or as noted on the construction drawings. The pathway will have a transverse slope either toward or away from the road to maintain existing drainage patterns. Minor fills and cuts will be made in the field during construction to provide smooth transition of the pathway and maintain existing drainage patterns. The cost to make all cuts and fills required to construct the pathway shall be included in the price bid for the pathway grading and restoration.

9.05.02 Subbase Preparation

Existing vegetation shall be removed and topsoil excavated to provide a six (6) inch sand subbase for the proposed pathway. The existing sand subbase shall be compacted to ninety-five (95%) percent maximum unit weight in accordance with MDOT procedures. Where fill sand is required it shall be compacted to achieve ninety-five (95%) percent maximum unit weight in accordance with MDOT procedures. The cost to prepare the subbase shall be included in the price bid for the pathway grading and restoration.

9.05.03 Gravel Base

The gravel base shall be two (2’) feet wider than the HMA surface to provide one (1’) foot minimum shoulder on both sides of the pathway and consist of six (6) inches of compacted MDOT 22A gravel in accordance with the section as indicated on the construction drawing. Density of the gravel shall be ninety five (95%) percent. The cost for gravel base shall be included in the price bid for aggregate base under bituminous (6” compacted in place).

9.05.04 Hot Mix Asphalt (HMA) Surface

The hot mix asphalt surface shall consist of 120 lbs/s.y. MDOT 36A hot mix asphalt (top) over 165 lbs/s.y. of MDOT 13A hot mix asphalt (level) placed in accordance with the section as indicated on the construction drawings. The asphalt performance grade shall be 58-28. The hot mix asphalt shall be placed with a self-propelled paver; spreader boxes will not be permitted.

A bond coat shall be applied between successive courses of hot mix asphalt at an application rate of 0.05 to 0.15 gal/s.y. The bond coat shall be included in the cost of hot mix asphalt pathway.
**CONCRETE PATHWAY CONSTRUCTION**

Concrete pathway shall conform to MDOT 2012 Standard Specifications for Construction Section 803, “Concrete Sidewalk, Sidewalk Ramps and Steps” and 806, “Shared Use Paths”, as specified herein.

**9.06 Grade**

The pathway shall be constructed to match the existing grade, or as noted on the construction drawings. The pathway will have a transverse slope either toward or away from the road to maintain existing drainage patterns. Minor fills and cuts will be made in the field during construction to provide smooth transition of the pathway and maintain existing drainage patterns. The cost to make all cuts and fills required to construct the pathway shall be included in the price bid for the pathway grading and restoration.

**9.06.02 Sub-base Preparation**

Existing vegetation shall be removed and topsoil excavated to provide a four (4”) inch sand sub-base for the proposed pathway. The existing sand sub-base shall be compacted to ninety-five (95%) percent maximum unit weight in accordance with MDOT procedures. Where fill sand is required it shall be compacted to achieve ninety-five (95%) percent maximum unit weight in accordance with MDOT procedures. The cost to prepare and provide the four (4”) inch sand subbase shall be included in the unit price bid for the pathway grading restoration.

**9.06.03 Concrete**

Concrete shall meet the requirements of and shall be placed in accordance with the MDOT 2012 Standard Specifications for Construction Sections 601, “Portland Cement Concrete for Pavements” and 806, “Shared Use Paths”. Concrete shall be air-entrained. Other materials shall meet the requirements of the applicable portions of the MDOT 2012 Standard Specifications for Construction.

All concrete pathways shall be paved with a single course of concrete. Pathways through driveways shall be six (6”) inches thick. All other walks shall be four (4”) inches thick. All 6-inch thick concrete pathways shall include 6x6-W2.9xW2.9 woven wire steel mesh.

Unless otherwise specified, saw cuts and removal of existing pathway shall be considered incidental to the major items of work.

**9.06.04 Joints**

Full depth transverse expansion joints shall be constructed perpendicular to the surface of the pathway at intervals not to exceed fifty (50’) feet. Expansion joint material shall be one-half (1/2”) inch pre-molded expansion joints and shall be set ¼” below the surface of the pathway. Sealing of joints will not be required.
One (1”) inch pre-molded expansion joints must be placed between the pathway and back-of-curb when pathway is constructed between the curb and building or other rigid structures. Sealing of joints will not be required.

Transverse plane of weakness joints shall be true to line and grade, and shall be placed at four (4’) foot intervals and shall be formed with a grooving tool. Planes of weakness joints shall be constructed to a depth of at least one (1”) inch and a width of 1/8 inch to ¼ inch. Sealing of joints will not be required.

9.06.05  Surface

The surface of the concrete shall be floated to a level uniform surface and left with a slightly rounded surface. The surface shall be roughened with mechanic’s brush to prevent smooth and slippery surfaces. No surface shall be troweled to a glassy finish. Edges at the forms and joints shall be rounded with an edging tool.

9.07  HANDICAP CONCRETE CURB

At locations where pathway is constructed to a concrete curb, the curb shall be constructed as shown per the handicap concrete curb detail in these specifications. Rather than removing entire curb, sawcutting of existing curb head, may be allowed if approved by the Engineer. Unless otherwise specified, this item of work shall be paid by the lineal foot as measured along the face of curb.

9.08  ADA RAMP

ADA ramps shall be constructed to conform to MDOT 2012 Standard Specifications for Construction sections 601 “Portland Cement Concrete for Pavements”, 803 “Concrete Sidewalk, Sidewalk Ramps and Steps”, and 806 “Shared Use Paths”. ADA ramps shall meet the latest details per the MDOT Standard Plans.

9.09  TREES

Trees marked "REMOVE" on the drawings shall be taken down and removed from the right-of-way in a manner that does not endanger the adjoining property, or persons or traffic using the right-of-way. Tree limbs (less than three (3) inches in diameter) and tree stumps shall be completely removed and disposed of by the Contractor.

Firewood from the trees removed shall remain the property of the adjoining property owner. If the adjoining property owner does not want the remaining firewood, it shall be the property of the Contractor and disposed of by the Contractor.

Because of the special concern for preservation of trees in the area, only those trees that have been indicated on the construction drawings are to be removed.
Trees six (6) inches and smaller that are removed will not be considered a pay item. If shown in the proposal, trees over six (6) inches that are removed shall be a pay item otherwise shall be considered part of the major items of work. All other trees are to be preserved unless written permission for removal is obtained from the adjoining property owner and the Engineer. Selective pruning of trees will be permitted to allow operation of the Contractor’s equipment and this will be required for the necessary clearances along the proposed pathway. Tree branches and roots shall be pruned neatly and the scars shall be covered with an approved tree dressing.

9.10 STUMP REMOVAL

As noted on the drawings or as authorized by the Engineer, existing tree stumps as well as stumps remaining from trees which are removed shall be completely removed and disposed of by the Contractor. Grinding stumps down will not be permitted except as specifically authorized by the Engineer, however, all stumps and root material within two feet (2’) of the pathway shall be completely removed. Unless otherwise specified, the cost of stump removal shall be considered part of the major work items.

9.11 TREE REPLACEMENT

Replacement trees shall be the size and type specified in the proposal. Transplanting replacement trees shall be performed in accordance with the 2012 MDOT Standard Specifications for Construction Section 815 “Landscaping”. The Contractor shall replace transplanted trees that are not in a vigorous growing condition one year after transplanting. Unless otherwise specified, tree replacement shall be a pay item.

9.12 TREE TRIMMING

Adjacent trees shall be trimmed to allow for a minimum of twelve (12) feet overhead clearance and two (2) feet side clearance to the edge of the pathway. Unless otherwise specified, cost shall be considered part of the major items of work.

9.13 RELOCATIONS

9.13.01 Existing Utility Structures

Existing utility poles, guy anchors, hydrants (unless listed in the proposal), cable enclosure boxes, etc. shall be relocated by the utility company at no cost to the Contractor.
9.13.02 Fence Relocations

Existing fences shown or not shown on the construction drawings shall be relocated in accordance with MDOT 2012 Standard Specifications for Construction Section 808 “Fencing”. Unless otherwise specified, the cost of relocating fences shall be included in the cost of pathway grading and restoration.

9.13.03 Landscape Relocation

Existing shrubs, seedlings, bushes, landscaped mounds, decorative stone, shredded bark, etc. at the proposed walkway location shown or not shown on the drawings shall be relocated and transplanted by the Contractor, unless specified otherwise by the adjoining property owner.

The Contractor shall take care to transplant shrubs and bushes to guarantee there continued growth. If the transplanted material dies within the Contractor’s warranty period, the Contract shall replace the dead material with a similar type nursery stock in vigorous growing condition. Landscaping that cannot be transplanted shall be replaced with a similar type nursery stock in a vigorous growing condition.

Unless otherwise specified, the cost of landscaping relocation and replacement shall be included in the cost for pathway grading and restoration.

9.13.04 Sprinkler System Relocations

Existing sprinkler systems shown or not shown on the drawings shall be relocated as directed by the Engineer or the adjoining property owner. Sprinkler systems shall be tested for leakage after relocation is complete. Unless otherwise specified the cost of relocating sprinkler systems shall be included in the cost for pathway grading and restoration.

9.14 ADJUSTMENTS OF EXISTING UTILITY VALVES, ETC.

All existing valves for water mains, including valves for water services, gas company valves, manhole and catch basin castings, etc. shall be adjusted to meet the pathway elevations. Unless otherwise specified, the cost for this work shall be considered part of the major items of work.

9.15 MAIL BOXES

The Contractor shall temporarily relocate and maintain mail boxes interfering with the pathway location so that mail service is not interrupted, both temporarily and permanently. Mail boxes shall be replaced in a condition and location equal to that prior to construction or as required by the U.S. Postal Service. All mail boxes shall be replaced with a turn out of six (6) inches of MDOT 22A gravel, which shall be included in the cost of bituminous pathway grading and restoration.
9.16 DRIVEWAYS/HARD SURFACE PARKING AREAS

Unless otherwise noted on the construction drawings or as directed by the Engineer, all existing driveways/hard surface parking areas shall be saved. Where driveways/hard surface parking areas are to be removed, a clean sawcut smooth joint the full depth of the material shall be made. Bond coat or joint material shall be applied if necessary. Unless otherwise specified, cost of sawcut/removal and appurtenances shall be considered part of the major work items.

9.17 GRAVEL DRIVEWAYS

Pathways shall be constructed through gravel driveways. Additional gravel may be necessary to match the existing driveway to the new finished grade of the pathway. Additional gravel added to the existing driveways shall be compacted MDOT 22A gravel. This item shall be included in the price bid for Pathway Grading and Restoration.

9.18 DITCH/SWALE CONSTRUCTION

All ditch/swale construction, as required to maintain existing drainage patterns, shall be considered part of the major items of work, unless otherwise specified.

9.19 EXCESS EXCAVATION

Excess excavation shall be the property of the Contractor and shall be disposed of by the Contractor.

9.20 TREATED LUMBER/MODULAR CONCRETE BLOCK RETAINING WALL

Treated lumber/modular concrete block retaining walls shall be constructed in accordance with the details as shown on the construction drawings and the project specifications. These are pay items as listed in the proposal.

9.21 TREATED LUMBER FENCE

Treated lumber fence shall be constructed in accordance with the details as shown in the construction drawings. This is a pay item as listed in the proposal.

9.22 PEDESTRIAN STRIPING

Where indicated on the construction drawings, existing paved streets, driveways and parking areas shall be striped with six (6) inch wide, fifteen (15) mill minimum thickness, white, painted stripes. All paints shall be in accordance with the MDOT 2012 Standard Specifications for Construction Section 811 “Permanent Pavement Markings” and must be approved by the Engineer prior to placement. Unless otherwise specified, pedestrian striping is a pay item measured per lineal
foot of pathway. The Contractor is responsible for placing temporary signage during the placement of pedestrian striping as indicated in these specifications.

9.23 EXISTING PATHWAYS, CROSSINGS/REPLACEMENT/SAFETY

Where existing pathways are disturbed/removed they shall be replaced as soon as possible. The Contractor shall place barricades and warning signs to alert the pathway users.

9.24 MATERIAL TESTING

The Owner reserves the right to sample and test any of the materials required for the proposed construction, either before or after delivery to the project and to reject any material represented by any sample which fails to comply with the minimum requirements specified.

The Contractor shall furnish all materials reasonably required for sampling testing and analysis necessary for the testing of materials as required by these specifications.

The cost of the above described testing shall be paid by the Owner. If any material fails to meet the specified requirements, all material represented by the sample shall be rejected unless the Contractor can demonstrate through additional tests, at his own expense, that the remainder of the material is satisfactory.

As a minimum requirement, the following shall be submitted to the Engineer by the Contractor (at no additional cost to the Owner):

A. Pipe: certified test reports for strength from the manufacturer.

B. Hot mix asphalt (HMA) materials:
   1) master mix design
   2) slips from the plant as to the type of mix

C. Concrete material slips from the plant as to the type of mix.

9.25 LAWN AND YARD RESTORATION

Lawn restoration shall be done in accordance with MDOT Standard Specifications for Construction section 816, “Turf Establishment”.

After construction is complete, all disturbed lawn areas, including adjacent cut and fill areas as required to blend in to existing yards, shall be repaired using a maximum of 1 on 4 back slope and 4 inches of topsoil. All disturbed areas which are not lawns, including adjacent cuts and fill areas as required to blend into
existing yards, shall be repaired using a maximum of 1 on 3 back slope and 2 inches of topsoil.

A mixture of hydroteed, fertilizer and mulch shall be used to seed all disturbed areas. Seed mix selection shall be according to Table 816-1 of the MDOT Standard Specifications for Construction section 816, “Turf Establishment”.

With approval by the Engineer, the existing topsoil may be salvaged and reused.

Restored areas shall be repaired and reseeded as often as necessary in order to produce a close stand of weed free grass to the edges of the pathway. The cost of lawn and yard restoration is to be included in the price bid for pathway grading and restoration.

9.26 SURFACE RESTORATION

All areas disturbed by construction operations shall be restored to their original condition as determined by the Engineer. The Engineer will use information from drawings and photographs, or video tapes when available.

All streets, walks and other improved surfaces disturbed by construction operations shall be replaced to uniform lines and grades established by the Engineer.

Restoration shall follow the construction in a timely fashion so as to minimize inconvenience to the adjacent property owners and the general public. The manner in which this restoration is done by the Contractor will be a determining factor in the approval by the Engineer of staking requests and partial payment requests.

All work necessary to return the areas of construction operations to their original condition, other than the items listed in the proposal, shall be considered incidental to the major items of work, and no specific payment will be made therefore.

9.27 PROTECTION OF WORK

The Contractor shall protect the work until it is accepted by the Engineer. Any part of the completed work that is damaged prior to acceptance by the Owner shall be replaced at the Contractor’s expense.
CONCRETE PATHWAY DETAIL

SCALE: NONE

TOPSOIL, SEED, MULCH AND FERTILIZER

4" THICK (6" DRIVEWAYS)
MDOT P2 CONCRETE WITH LIMESTONE AGGREGATE

MIN. 4" SAND SUBBASE
(PAID IN PATHWAY GRADING AND RESTORATION)

BITUMINOUS PATHWAY DETAIL

SCALE: NONE

TOPSOIL, SEED, MULCH AND FERTILIZER

120#/SYD MDOT 36A HMA (TOP)
165#/SYD MDOT 13A HMA (BASE)
0.05-0.15#/SYD BOND COAT

6" MDOT 22A GRAVEL, CIP

6" MIN. SAND SUBBASE
(PAID IN PATHWAY GRADING AND RESTORATION)

NON-MOTORIZED MULTIUSE PATHWAY DETAILS

NOTE

* — CUT OR FILL TO 1:4 SLOPES IN YARD AREAS AND 1:3 SLOPES IN NON-YARD AREAS.

Prein & Newhof
09/2012
Section 9 Pathways
SLOPE EXISTING GRADE AS NECESSARY (PROTECT TREES, ETC.)

6" x 6" x 8'-0" TREATED LUMBER @ 16'-0" o.c., MIN. ONLY REQUIRED WHERE WALL IS FOUR (4) POSTS OR HIGHER.

COMPACTED SAND BACKFILL (TYP.)

6" x 6" x 48" LONG DEADMAN

PATHWAY

6" GRAVEL, CIP

6" x 6" TREATED LUMBER (35" HIGH MAXIMUM)

2" (TYP.)

TREATED LUMBER WALL (6" x 6" POSTS), DRILL 3/8" HOLE, DRIVE #4 REBAR THROUGH VERTICAL @ 42" o.c., STAGGER JOINTS. LUMBER SHALL BE NEW 6" x 6", SMOOTH SAWN

DETAIL TREATED LUMBER RETAINING WALL

NOTE

6" x 6" TREATED LUMBER, 0.4 RETENTION, EQUIVALENT TO WOOD FOUNDATION, SOUTHERN YELLOW OR RED PINE, SMOOTH SAWN

Prein & Newhof
09/2012
Section 9 Pathways
6" x 6" STD. WOLMANIZED FENCE POST SPACED AT 6'-0" o.c.

2" x 8" RAILS (PRESSURE TREATED), BOLT TO RAIL POSTS WITH 2 3/4" Ø A307 BOLTS, USE (4) BOLTS AT RAIL SPLICE JOINTS, COUNTERSINK HEADS (NUTS TO BE OUTSIDE OF POSTS), USE (2) PLATE WASHERS & LOCK WASHERS AT EACH BOLT.

PATHWAY

6" GRAVEL, CIP

TREATED LUMBER FENCE
MODULAR CONCRETE BLOCK RETAINING WALL

- 12" MDOT 22A LEVELING PAD

- 4" DIA. DRAIN WITH FILTER SOCK, DAYLIGHT @ 40' o.c. (MAX.)

- GEOGRID TIE-BACKS PER MANUFACTURERS SPECIFICATIONS

- FREE DRAINING BACKFILL PER SPECIFICATIONS

- EXISTING BACKSLOPE

- 3' MAX

- 2% MAX. SLOPE

- HMA NON MOTORIZED PATH

- 6" GRAVEL BASE

- MINIMUM BURIAL DEPTH OF ONE BLOCK

PATHWAY (SEE PLAN)

SHOULDER (SEE PLAN)

VARIES (SEE PLAN)

R.O.W.
HANDICAP CONCRETE CURB DETAIL

NOTE

THE PRICE PER LINEAL FOOT OF HANDICAP CURB SHALL INCLUDE FULL DEPTH SAWCUT, REMOVAL AND PLACING A HANDICAP CURB SECTION.
Project Specifications

Owner: Grand Haven Charter Township
Project Title: Rosy Mound Non-Motorized Path
Project #: 2210180

1. GENERAL

1.1 Specifications

Work under this Contract shall be completed in accordance with the General and Supplementary Conditions, the Project Specifications, the following Prein&Newhof Standard Specifications contained herein:

Section 2: Specifications for Excavating, Trenching & Backfilling for Utilities
Section 3: Specifications for Surface Restoration
Section 5: Specifications for Storm Sewer
Section 9: Specifications for Non-Motorized Multi-Use Pathways

Where a standard construction method or contract procedure is not specifically covered by the Contract Documents or shown on the drawings, the 2012 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction shall apply.

Except as written in these specifications, the order of precedence for resolving conflict, error, ambiguity, or discrepancy shall be as follows:

a. Contract Documents, including these Project Specifications.
b. Prein&Newhof Standard Specifications as listed in the Table of Contents of these Contract Documents.

1.2 Project Management

1.2.1 Scope of Work

Work to be constructed in this project generally includes furnishing and installing the following:

1,330 feet of 8’ wide HMA pathway
20 feet of 12” storm sewer

All labor, materials, equipment, transportation, and activity or costs necessary for completion of this work shall be included in this contract unless specifically stated otherwise.
1.2.2 Schedule

Contractor shall be responsible for coordination of all work activities. Contractor shall provide a detailed construction schedule to the Owner and Engineer and receive acceptance in writing prior to commencing construction. Contractor shall coordinate and cooperate with the Owner, Engineer, Ottawa County Road Commission, local residents, local schools, and other construction projects.

**Contractor shall begin construction following obtaining permits and easements for the project. It is anticipated that easements and the OCRC permit will be obtained by July 1, 2021.**

The Contractor shall provide the Owner and the Engineer a detailed schedule to complete the project. Contractor shall have until September 3, 2021 to complete the project.

The proposed fence shall be installed by August 20, 2021 prior to the start of the school year in the fall. The fence is crucial for the students’ safety.

1.2.3 Traffic Control and Maintenance

1.2.3.1 Maintaining

Contractor shall provide access for all properties in the immediate construction area. Emergency vehicle access shall be maintained at all times. A full shutdown of the road is not anticipated as part of the project. The Contractor shall coordinate any necessary lane closures with the Owner and Ottawa County Road Commission.

Contractor shall provide residents and businesses 48 hour notice prior to impacting their driveway(s).

The contractor shall be responsible for all traffic control, including shoulder and lane closures for the project. All signs, barricades, and other traffic control devices shall be in accordance with the current Michigan Manual of Uniform Traffic Control Devices. Signing for lane and shoulder closures shall be in accordance with Ottawa County Road Commission and Michigan Department of Transportation requirements. Plastic drums and light arrow panels will be required.

1.2.3.2 Measurement and Payment

All costs for signage necessary to maintain traffic throughout the project shall be consider included in the “Traffic Control” pay item.
1.2.4 Construction Staking

Unless otherwise specified, construction stakes will be furnished by the Engineer. The Contractor shall give 72 hours’ notice exclusive of weekends and holidays when requesting stakes.

The Contractor shall exercise proper care in the preservation of all stakes set for their use or the use of the Engineer and if such stakes are damaged, lost or removed by the Contractor’s operation, the cost of resetting may be charged to the Contractor.

Any irregularity in grade and/or line stakes discovered by the Contractor shall be reported to the Engineer for correction before proceeding with the work.

The Contractor shall provide additional methods, materials, or equipment as may be necessary to facilitate laying out, inspecting and constructing the work. The Contractor shall assume full responsibility for all detailed dimensions and elevations measured from the lines, grades and elevations established by the Engineer.

The construction stakes shall be left in place until each phase of the work has been completed and inspected. In the event of discrepancies in the location or grade of the work, the Contractor shall be responsible for making the necessary corrections unless grade stakes are left in place that shows evidence of an error in staking.

1.2.5 Material Testing

The Owner reserves the right to sample and test any of the materials requested for the proposed construction either before or after delivery to the project, and to reject material represented by any sample which fails to comply with the minimum requirements specified.

The Contractor shall furnish all materials reasonably required for sampling, testing and analysis necessary for the testing of materials as required by these specifications.

1.2.6 Permits

The Owner will obtain a SESC Permit and ROW Permit from Ottawa County Water Resources Commission (OCWRC) and the Ottawa County Road Commission (OCRC), respectively.

The Contractor shall complete all work according to the aforementioned permits and will be responsible for any fines that may be incurred due to failure to meet any of the conditions of the permits. The Contractor shall be responsible for the duties of the Onsite Responsible Person required for the SESC Permit.

The Contractor shall obtain all other permits necessary for construction of this project. The Contractor shall pay for any charges or bonds required by agencies for permits, inspections, or similar charges to construct this project as shown on the drawings. The cost of obtaining permits shall be considered part of the major items of construction. The Contractor shall comply with all permit conditions.
1.2.7 Existing Utilities

Various underground and overhead structure and utilities are shown on the Plans. The location and dimensions of such structures and utilities, where given, are believed to be reasonably correct, but do not purport to be absolutely so. These structures and utilities are plotted on the plans for the information of the Bidders, but information so given is not to be construed as a representation or assurance that such structures will be found or encountered as plotted, or that such information is complete or accurate. Bidders, therefore, shall satisfy themselves by such means as they may deem proper as to the location of all structures and utilities that may be encountered in the construction of the work. Specific utility locations and elevations, where shown on the Drawings shall be field verified by the Contractor prior to the start of construction.

The Contractor shall notify MISS DIG (1-800-482-7171) for utility locations a minimum of three (3) working days (excluding Saturday, Sunday, and holidays) prior to excavating. The Contractor shall be responsible for notifying utility owners who may not be part of the “MISS DIG” alert system.

Contractor shall cooperate with the utility companies in any repair, relocation, or other work to be performed on the utility caused by the construction of the contract.

The Contractor shall refer to Section 5.05 of the Supplementary Conditions as to the responsibilities of the Contractor regarding underground facilities. No claim for additional compensation will be allowed based on the work of the utility companies to replace, relocate, or repair their utility in the project area whether noted on the drawings or in the specifications or if deemed necessary during construction.

All relocation or removing and replacing of power poles, light poles and telephone poles and pedestals shall be done by the respective utility companies, unless otherwise specified. The Contractor shall coordinate the work operations with the utility companies.

The need for shoring and bracing of poles shall be evaluated by the Engineer and Contractor prior to construction.

1.2.8 Community Relations and Protection of Adjacent Property

The Contractor shall be entirely responsible for all damage to water pipes, electric conduits or cables, drains, sewers, gas mains, poles, telephone and telegraph lines, railroad bridges and tracks, streets, pavements, sidewalks, curbs, fences, street and highway bridges and culverts, building foundations, retaining walls or other structures of any kind met with during the progress of the work, and shall be liable for damages to public or private property resulting therefrom.

The Contractor shall shore, brace, install sheeting, and/or then take all precautions necessary to protect damage to existing structures due to dewatering, excavation, backfilling or other construction at the site. The Contractor shall minimize the
amount of excavation and site disturbance and shall save existing structures and landscaping where possible.

The cost of protection, replacement in their original positions and conditions or payment for damages thereto of pipe lines and structures affected by the work and the removal, relocation and rebuilding of pipe lines and structures called for on the drawings or specified shall be deemed included in the major proposal items. No additional payment will be made for such work.

The Contractor shall, at all times in performance of the work, employ approved methods and exercise reasonable care and skill so as to avoid unnecessary delay, injury, damage or destruction of public utility installations and structures; and shall, at all times in the performance of the work, avoid unnecessary interference with, or interruption of, public utility services, and shall cooperate fully with the Owner and utility owners thereof to that end.

1.2.9 Protection of Natural Resources

1.2.9.1 Soil Erosion and Sedimentation Control

The Contractor shall take all necessary steps to prevent damage to fish and game habitat and to preserve the natural resources of the State. Construction shall be carried out so as to minimize discharge of damaging material into any stream, lake, or reservoir.

The Contractor shall exercise caution in the discharge of waters from pumps, deepwells, or well point systems, in order that such discharges do not cause erosion, siltation, soil depositions, etc., in sewers, streams or other water courses or drainage structures.

The Contractor shall not permit any sand or debris of any kind to enter the existing ditches, streams, storm sewers or culverts.

The rules and regulations of all work shall comply with Part 31 (Water Resources Protection), Part 301 (Inland Lakes and Streams Act), Part 91 (Soil Erosion), and Part 303 (Wetland Protection) of P.A. No. 451 (Natural Resources and Environmental Protections Act of 1994).

The Contractor shall have a certified storm water operator and shall be responsible for all reporting as is required by the regulatory agencies. The Contractor shall be responsible to complete the items as outlined in the permit conditions.

Contractor shall place silt sack bags in all catch basins directly affected by construction. In addition, all catch basins in the project area are to be cleaned out at the completion of the project. Mulch blanket will be required on all disturbed slopes that are 1 on 3 or steeper. Placement of extra mulch blanket for restoration shall be approved by Engineer prior to placement. Mulch blanket shall be NAG SC-150, unless otherwise specified.
Contractor may install 12-inch filter sock in place of silt fence in areas of vegetation.

1.2.9.2 Measurement and Payment

Payment for mulch blanket, silt sack placement and maintenance shall be included in the “Erosion Control, Mulch Blanket,” and “Erosion Control, Inlet Protection” by the square yard and each (respectively) as included in the Proposal. Silt Fence shall be paid by the lineal foot per the pay item “Erosion Control, Silt Fence”. If the Contractor chooses to use 12-inch filter sock in place of silt fence in vegetated areas, 12 inch sock will be paid for by the lineal foot as “Erosion Control, Silt Fence”.

1.2.10 Payment

Payment shall be made for the proposal items only. All of the work specified herein and indicated on the drawings shall be considered included in the unit prices shown on the proposal.

2. EXCAVATING, TRENCHING AND BACKFILL

2.1 Tree Removal

2.1.1 Description

All work, materials and construction methods shall be in accordance with section 2.02 of the Specifications for Excavating, Trenching, and Backfilling for Utilities. Trees marked “Remove” on the drawings shall be taken down and removed from the right of way or easement in a manner that does not endanger the adjoining property or persons, or traffic using the right of way. The wood shall become the property of the adjoining property owner, or the property owner when in an easement. If the property owner does not want the wood, the Contractor shall dispose of the materials in a proper manner. Burning or burying on site will not be permitted. All other trees are to be preserved unless written permission for removal is obtained from the Owner and the Engineer. Trees less than 6-inch diameter will be considered incidental and included the Shared Path Grading pay item.

Stumps shall be removed unless noted otherwise in the project drawings. Stumps of trees that are removed shall not be ground down but shall be completely removed and included in this pay item.

2.1.2 Measurement and Payment

Payment for tree removal shall be per each for “Tree Remove, ___ inch to ___ inch” and shall include all work, materials, equipment and labor necessary to perform the work as described above.
2.2 Fence Removal and Replacement

2.2.1 Description

The fence removal item shall include removal and disposal of the fence to be removed as shown on the plans. Care shall be taken to not damage the existing fence where the proposed fence ties back into the existing fence.

The proposed chain link fence shall be 6’ tall and match the existing fence material and size. The fence alignment shown on the plans is an approximate location and the final alignment shall be reviewed in the field by the Owner and Grand Haven Area Public Schools before beginning installation. The proposed fence shall be installed before August 20, 2021. The proposed chain link fence pay item shall include all materials necessary to install the fence per the manufacture’s recommendations including but not limited to corner posts, fence posts, post caps, top rails, tension bar, chain link fence, tie wires, etc.

2.2.2 Measurement and Payment

Payment for the removal and disposal of the fence shall be per the “Fence, Rem” pay item and shall be paid per lineal foot of fence removed. Payment for the installation of the fence shall be paid by the lineal foot and per the pay item “Fence, Chain Link”. All materials, equipment and labor necessary to perform the work as described above shall be included in these pay items.

3. SURFACE RESTORATION

3.1 Shared Path Grading

3.1.1 Description

Grading and sub-base preparation including all labor and materials necessary for the cuts and fills to meet the proposed grade. Class II sand fill shall be included in this proposal item. Earthwork quantity to be included in Shared Path Grading has been estimated to be 100 cubic yards compacted in place. This earthwork quantity is only an estimate. Contractor shall perform their own calculations. Fill sand shall be compacted to 95% of its maximum unit weight to a minimum depth of 6 inches. Grading shall include shaping all side slopes to a maximum slope of 1 on 3 on both sides of the path as necessary. The removal of existing turf, topsoil, stumps, brush, shrubs, bushes, trees less than 6 inch diameter, and the cutting and removing of tree roots within the path limits is considered incidental to the Shared Path Grading pay item. This item includes furnishing suitable sand subbase material as needed and disposal of all excess removed or excavated material at the Contractor’s expense.

This item also includes the relocation of any mailboxes, address signs, and landscaping in the disturbed area.
This item includes grading the greenspace between the proposed path and the road edge to accommodate drainage. Along with any grading of driveways and the area from the back of path to the proposed grading limits. Swales shall be placed as necessary to allow runoff water to drain to manholes and catch basins.

3.1.2 Measurement and Payment

Measurement for payment of Shared Path Grading shall be by the lineal foot of finished path as measured along the centerline of the path and shall include all labor, material, and equipment required for removal of any surface improvement as specified and for topsoil stripping, excavating, filling (including furnishing Class II sand) and grading necessary to construct surface improvements as proposed, and the disposal of any excess material.

3.2 Shared Path, Aggregate

3.2.1 Description

Construct an aggregate base course on a prepared subbase or subgrade as shown on the plans or as directed by the Engineer. The aggregate base course shall be in accordance with Section 302 and 307 of the 2012 Standard Specifications for Construction. The aggregate base shall consist of dense graded 22A aggregate placed and compacted to 98% according to MDOT Standards to a depth of 6 inches (compacted in place) for all bituminous drive approaches, bituminous road pavement, bituminous non-motorized pathway, and aggregate drive approaches. The cost for preparing the sand subbase/subgrade as specified herein shall be considered included in the Shared Path Grading pay item, and no specific payment will be made therefor.

3.2.2 Measurement and Payment

Payment shall be per square yard per the pay item “6 inch Aggregate Base, 22A”.

3.3 ADA Ramps

3.3.1 Description

The ADA sidewalk ramp and detectable warning surfaces shall be constructed where noted on the drawings and shown in the detail and shall be in accordance with MDOT Detail R-28-J and the Michigan Department of Transportation 2012 Standard Specifications for Construction. Sidewalk ramp grades shall be approved by Engineer prior to concrete placement.

3.3.2 Materials

Concrete shall be six sack limestone mix and shall be air entrained (5% to 8%). Concrete shall meet section 9.07 of the Specifications for Non-Motorized Multi-Use Pathways Standard Specifications.
Detectable warning plates shall be fiberglass material. Coloring of the plates shall be brick red.

3.3.3 Measurement and Payment

Payment for the ADA ramps shall be per the pay items “6 inch Conc. Sidewalk Ramp” shall be paid for by the square foot. Payment for the detectable warning surfaces shall be per the pay item “Detectable Warning Surface” and shall be paid for by the foot along the center of plate.

3.4 Curb & Gutter Removal and Placement

3.4.1 Description

All work, materials, construction methods, measurement and payment to remove concrete curb and gutter shall be in accordance with section 204 of the 2012 MDOT Standard Specifications for Construction.

All work, materials, construction methods, measurement and payment to place new concrete curb and gutter shall be in accordance with section 802 of the 2012 MDOT Standard Specifications for Construction. Concrete curb removal and replacement shall be to the nearest joint. Curb removal at intersections shall be limited to concrete curb only, pavement removal will not be allowed in roadway. Every effort shall be made to protect road edge from damage. If new cracks or sawcuts resulting from the work extend into the roadway after curb removal and replacement, Contractor shall crack seal damaged areas at no expense to the Owner. The MDOT pay item shall be modified so that the curb and gutter shall not include rebar. Curb replacement shall match the type of curb existing in that location. No additional payment will be made for new concrete curb openings and shall conform to ADA requirements.

3.4.2 Measurement and Payment

Payment shall be by the lineal foot per the “Concrete Curb and Gutter” and “Remove Curb and Gutter” pay item.

3.5 Sign, Relocate

3.5.1 Description

The Contractor shall remove the existing sign and post without damaging it and relocate the sign and post to the proposed location as directed by the Engineer. If the sign is lost or damaged during the removal and relocation process it shall be the Contractors responsibility to furnish and replace the sign.

3.5.2 Measurement and Payment

Payment shall be by each sign relocated per the pay item “Sign, Relocate”
3.6 Shared Path, HMA

3.6.1 Description
The paths shall be paved with 165 lbs/syd MDOT 13A leveling course and 165 lbs/syd MDOT 36A HMA top course placed in accordance with the MDOT Standards.

3.6.2 Measurement and Payment
Payment shall be per ton per the pay item “Shared Path, HMA 13A” and “Shared Path, HMA 36A”. Payment for all HMA items shall be limited to the measured area multiplied by the proposed application rate plus 10 percent, or the actual tons installed, whichever is less. Any overruns will not be paid by the Owner.

3.7 Drive Approaches

3.7.1 Description
This work shall consist of installing HMA drive approaches as detailed on the plans and in accordance with Section 3 of the Prein&Newhof Specifications, “Specifications for Surface Restoration”. HMA drives shall use 6 inch MDOT 22A aggregate base and match existing HMA thickness or a minimum of 165 lbs/syd MDOT 13A leveling course and 165 lbs/syd MDOT 36A top course.

3.7.2 Measurement and Payment
Payment for HMA drives shall be per square yard per the pay item “6 inch Aggregate Base, 22A” and per ton for “HMA Approach”.

3.8 Turf Restoration

3.8.1 Description
Restoration shall consist of furnishing and placing topsoil, seed, fertilizer, and mulch to all areas disturbed by the construction of this project and repairing existing sprinklers as necessary. Restoration shall be completed by hydro method. The finished surface shall match the existing lawn surface as close as possible and shall produce a smooth uniform surface.

3.8.2 Measurement and Payment
Measurement for payment of Shared Path Restoration shall be by the lineal foot of finished path as measured along the centerline of the path and shall include all labor, material, and equipment required for the placement of topsoil, seed, and mulch necessary to perform the construction in accordance with the drawings and specifications per the “Turf Restoration” pay item.
3.9 Pavement Markings

3.9.1 Description

Includes all labor and material necessary to apply pavement markings as shown on the plans and in accordance with MDOT 2012 Standards. The pay item “Enter Only Symbol, Yellow” shall match the existing size, color, and font and shall include the text and arrow in the pay item.

3.9.2 Measurement and Payment

Payment shall be made by the lineal foot per the “6 inch Waterborne Crosswalk, White” pay item and by lump sum for the pay item “Enter Only Text and Symbol, Yellow”.

3.10 Irrigation Sleeves

3.10.1 Description

3 inch schedule 40 PVC irrigation sleeves shall be installed. The Contractor shall coordinate with the Village at Rosy Mound for the location of the three proposed sleeves.

3.10.2 Measurement and Payment

Payment shall include all labor, material and equipment necessary to install the sleeves and payment shall be made per lineal foot per the pay item “3 inch Irrigation Sleeve”.

4. STORM SEWER

4.1 Pipe Removal

4.1.1 Description

All work, materials, and construction methods shall be in accordance with MDOT 203 of the 2012 MDOT Standard Specifications for Construction. The limits of removal shall be reviewed in the field with the Engineer prior to removal. This shall include removal of pipe and flared end sections.

4.1.2 Measurement and Payment

All work, equipment, and labor will not be paid for separately and shall be included in the cost of the proposed pipe placement.
4.2 Pipe

4.2.1 Description

All work, materials, construction methods, and measurements and payment for storm sewer pipe shall conform to Section 5 of the Prein&Newhof Specifications, “Specifications for Storm Sewer.”

Pipe installation and bedding shall also conform to all manufacturers’ recommendations.

Removal of existing pipe shall be included in the cost of the placement of the new pipe.

4.2.2 Materials

All storm sewer pipes shall have flexible, watertight rubber O-ring gasketed joints conforming to the requirements of MDOT 909.03. Material shall be as noted on the drawings and conform to section 5.02.01.06 for Smooth Lined Corrugated Polyethylene Pipe.

4.2.3 Measurement and Payment

Furnishing and installing of storm sewer pipe shall be paid per foot of storm sewer per the pay item “___ inch SLCPP Storm Sewer”. Flared end sections will be paid by each per the pay item “___ inch FES”.

4.3 Manholes

4.3.1 Materials

All manhole and casting materials shall conform with Section 5.02.08 of the Prein&Newhof specifications. All structures shall be precast concrete. Manholes shall have EJIW 1040 Casting with Type B cover and shall be included in the cost of the manhole. All manholes and catch basins shall have 2 foot sumps.

Manholes shall be graded to accommodate drainage as well as the operation of lawn mowers.

4.3.2 Measurement and Payment

All work, equipment, and labor described above shall be included in the below pay item and conform to Section 5.11.03 of the Prein&Newhof specification. This pay item shall include the cost of furnishing and installing new castings, covers, adjusting rings and all costs associated with raising the structure to its final grade, and be paid per structure for “___ inch Storm Manhole”.

12
Manager’s Memo

DATE: May 20, 2021

TO: Township Board

FROM: Bill

RE: Resolution to Authorize Issuance of 2021 Park Improvement Bonds

Attached, please find (1) the “Bond Authorizing” resolution; (2) a bond financing timetable; and, (3) a bond parameters letter related to proposed Parks Improvement bond sale.

Specifically, the resolution authorizes the issuance of $6.14 million in bonds to fund a variety of park improvements – including the initial phase of the Schmidt Heritage Park.

The resolution has been prepared in accordance with the bond specifications prepared by the Township’s Registered Municipal Advisor, Paul Stauder of PFM.

Once the resolution is adopted, and the “Official Statement” of the bond sale is completed, the bond attorney will make arrangements for the publication of the “Official Notice of Sale” in the July 1st edition of The Bond Buyer. The form of that notice is attached to the resolution as Exhibit C. Publication of the notice will inform prospective underwriters and financial institutions of the Township’s bond sale.

Following the publication of the Official Notice of Sale, the Township will receive bids for the purchase of the bonds on Monday, July 12th. On that date and following receipt of the competitive bids, the resolution authorizes and directs the Township Supervisor and Treasurer to award the sale of the Bonds via an “Order Approving Sale and Terms of Bonds”. (Unlike previous bonds issued by the Township, it will not be necessary to award the bonds by resolution at a Township Board meeting.)

The Bonds are being issued under the provisions of the Revised Municipal Finance Act (i.e., Act 34 of the Public Acts of Michigan of 2001, as amended).

The Bonds, when issued, will be backed by the Township's general obligation, limited tax full faith and credit pledge; but, the Township expects to pay the principal of and interest on the Bonds from the proceeds of the 0.40 mill levy for park bonds approved by the voters.
Principal of the Bonds will be payable each May 1st, beginning May 1, 2022. Interest will be payable semi-annually, each November 1st and May 1st, with the first interest payment due May 1, 2022. The bonds final payment will occur in 2041 – i.e., this is a twenty-year bond.

To continue forward with the Parks Improvement project and the sale of the necessary bonds, the following motion can be offered:

**Move to approve Resolution 21-05-02, which authorizes the Township to borrow money and issue bonds known as “2021 Parks Improvement Bonds” in the aggregate principal sum $6,143,000 pursuant to the provisions of Act 34 for the purpose of defraying part of the cost of the Parks Improvements project, which includes the initial phase of the Schmidt Heritage Park.**

If you have any questions or comments, please contact Cargo at your convenience.
RESOLUTION NO. 21-05-02
CHARTER TOWNSHIP OF GRAND HAVEN
COUNTY OF OTTAWA
STATE OF MICHIGAN

RESOLUTION TO AUTHORIZE ISSUANCE OF 2021 PARKS IMPROVEMENT BONDS (GENERAL OBLIGATION UNLIMITED TAX) AND RELATED MATTERS

Minutes of a regular meeting of the Township Board of the Charter Township of Grand Haven held at the Township Hall in Grand Haven, Michigan, on the 24th day of May 2021, at 7:00 p.m. local time.

PRESENT: Members: ____________________________________________________________
________________________________________________________

ABSENT: Members: ____________________________________________________________
________________________________________________________

The following preamble and resolution were offered by member ____________ and seconded by member ____________:

WHEREAS, the Township Board of the Charter Township of Grand Haven (the “Township”) has previously determined that it is necessary and in the best interest of the Township and its residents to undertake the design, acquisition and construction of park improvements, facilities and amenities, including, but not limited to sports fields and facilities, restrooms, parking, trails and such other park improvements, facilities and amenities, as well as all associated engineering, legal and financing costs and professional services (collectively the “Project”); and

WHEREAS, the estimated cost for the Project including construction, financing, legal and contingency is $7,436,300; and

WHEREAS, in order to proceed with and fund the Project, the Township Board previously determined that it was necessary and appropriate for the Township to issue its general obligation
unlimited tax bonds (the “Bonds”) under the provisions of Article 9, Section 6 of the Michigan Constitution of 1963 (the “Michigan Constitution”), the Unlimited Tax Election Act, Act 189 of the Public Acts of Michigan of 1979, as amended (“Act 189”), and the Revised Municipal Finance Act, Act 34 of the Public Acts of Michigan of 2001, as amended (“Act 34”), and other applicable law, subject to the approval of Township electors; and

WHEREAS, the Township Board submitted a ballot proposal to Township electors at the May 4, 2021 general election to authorize the issuance of the Bonds for the Project in an amount not to exceed $6,140,000; and

WHEREAS, a ballot proposition authorizing the Township to borrow up to $6,140,000 and issue general obligation unlimited tax bonds for the Project was approved by a majority of the electors of the Township voting thereon at the May 4, 2021 general Township election held in accordance with applicable law; and

WHEREAS, the Township Board deems it necessary and in the best interest of the Township to proceed with the Project and borrow up to the sum of $6,140,000 and to issue its general obligation unlimited tax bonds therefore in accordance with the Michigan Constitution, Act 189 and Act 34.

NOW, THEREFORE, BE IT HEREBY RESOLVED AS FOLLOWS:

1. **Necessity; Findings; Cost of the Project.** It is necessary for the public health, safety and welfare of the Township for the Township to undertake the Project and issue bonds of the Township therefore pursuant to applicable law including Act 34 and Act 189. The Township Board hereby finds that the period of usefulness of the Project is not less than twenty (20) years. The pre-bid estimated cost of the Project in the amount of $7,436,000 is hereby approved and shall be paid from the proceeds of the bonds authorized by this resolution, investment earnings thereon, and Township funds on hand.
2. **Authorization of Bonds; Security for Repayment of Bonds; Unlimited Tax Pledge.** The Township shall borrow money and issue bonds known as 2021 PARKS IMPROVEMENT BONDS (GENERAL OBLIGATION UNLIMITED TAX) (the “Bonds”), in the not to exceed principal sum of Six Million One Hundred Forty Thousand and 00/100 Dollars ($6,140,000) pursuant to the provisions of applicable law, including Act 34 and Act 189, for the purpose of defraying all or a portion of the cost of the Project. The Bonds shall be the general obligation of the Township secured by the Township’s full faith and credit and the Township’s unlimited tax pledge in accordance with Act 34 and Act 189, pursuant to which the Township shall levy, in addition to other taxes which the Township may be authorized to levy, ad valorem taxes on all taxable property within the boundaries of the Township without limitation as to rate or amount to the extent necessary to pay the principal of and interest on the Bonds when due.

3. **Terms of Bonds.** The Bonds shall be dated as of the date of delivery, shall bear interest at a rate or rates not to exceed six percent (6%) per annum, expressed in multiples of 1/8 or 1/100 of 1% or both, to be determined upon the competitive sale thereof, payable on May 1, 2022, and semi-annually thereafter on each November 1 and May 1 until payment of the principal hereof has been made or duly provided for. The Bonds shall be issued in substantially the form and tenor as set forth in Exhibit A attached hereto, shall be in denominations of $5,000 or any integral multiple thereof up to the amount of a single maturity, shall be numbered from 1 upwards in order of authentication, shall be fully registered and shall be due and payable on May 1 each year and in the amounts as follows:
<table>
<thead>
<tr>
<th>Maturity</th>
<th>Principal Amount</th>
<th>Maturity</th>
<th>Principal Amount</th>
<th>Maturity</th>
<th>Principal Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>$125,000</td>
<td>2029</td>
<td>$295,000</td>
<td>2036</td>
<td>$355,000</td>
</tr>
<tr>
<td>2023</td>
<td>$215,000</td>
<td>2030</td>
<td>$300,000</td>
<td>2037</td>
<td>$365,000</td>
</tr>
<tr>
<td>2024</td>
<td>$225,000</td>
<td>2031</td>
<td>$310,000</td>
<td>2038</td>
<td>$375,000</td>
</tr>
<tr>
<td>2025</td>
<td>$240,000</td>
<td>2032</td>
<td>$320,000</td>
<td>2039</td>
<td>$385,000</td>
</tr>
<tr>
<td>2026</td>
<td>$260,000</td>
<td>2033</td>
<td>$330,000</td>
<td>2040</td>
<td>$395,000</td>
</tr>
<tr>
<td>2027</td>
<td>$275,000</td>
<td>2034</td>
<td>$335,000</td>
<td>2041</td>
<td>$405,000</td>
</tr>
<tr>
<td>2028</td>
<td>$285,000</td>
<td>2035</td>
<td>$345,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Bonds shall not be sold for less than 99% or more than 110% of par value.

The Bonds maturing in the years 2022 through 2041, inclusive, may be issued as serial bonds or term bonds, or both, in the manner described in the section entitled “Term Bond Options” in the Official Notice of Sale attached hereto as Exhibit B. In the event any portion of the Bonds are to be issued as term bonds, such bonds shall be subject to such additional terms as shall be consistent with the Official Notice of Sale, designated by the successful bidder for the purchase of the Bonds and approved by the Township in conjunction with the sale of the Bonds.

Notwithstanding the foregoing or any other provision of this resolution, the Township Supervisor and the Township Treasurer, acting on the written recommendation of PFM Financial Advisors, LLC, as registered municipal advisor to the Township with respect to the Bonds, are hereby authorized to adjust the final bond terms set forth herein to the extent necessary or convenient to complete the transaction authorized herein, and in pursuance of the foregoing are authorized to exercise the authority and make the determinations authorized pursuant to Section 315(1)(d) of Act 34 including, but not limited to, determinations regarding maximum interest rates, prices, discounts, maturities, principal amounts, denominations, dated dates, dates of issuance, designation of all or a portion of the Bonds as term or serial bonds, principal and interest payment dates, redemption rights, designation of series, use of premium, if any, received at the time of delivery of the Bonds, the final form of the Bond and other matters, it being understood that any such adjustment in the final bond terms made by the Township Supervisor and the Township Treasurer shall be made in anticipation of
and preparation for the competitive sale of the Bonds, that the rates of interest payable on the Bonds shall be determined upon the competitive sale of the Bonds, the designation of all or a portion of the Bonds as term or serial bonds, and the maturities of such Bonds that any provisions relating to the term bonds and mandatory redemption shall be established in accordance with the preceding paragraph and that any adjustment in the principal amount of the Bonds shall not in the aggregate exceed $6,140,000.

The Bonds shall be issued in book-entry only form as one bond per maturity fully registered in the name of Cede & Co., as bondholder and nominee for The Depository Trust Company (“DTC”), New York, New York. DTC will act as securities depository for the Bonds, purchase of the Bonds will be made in book-entry only form in the denomination of $5,000 or any integral multiple thereof, and purchasers will not receive certificates representing their interest in bonds purchased. If the Bonds are issued in book-entry only form, provisions in this resolution to the contrary shall be of no force or effect unless and until the suspension of the book-entry only system. The Township Treasurer is hereby authorized to execute such documents as may be required to enable the Bonds to be so issued. The depository trustee may be the same as the Bond Registrar and the Bonds may be transferred in part by depository trust and in part by transfer of physical bonds as the Township may determine.

4. **Bond Registrar; Payment of Principal and Interest.** A financial institution qualified to act as paying agent and registrar in the State of Michigan shall act on behalf of the Township as paying, registration and transfer agent (the “Bond Registrar”) with respect to the Bonds. The Township reserves the right to designate an alternate financial institution to act as Bond Registrar for the Bonds and in such event the Township shall mail, or cause to be mailed, notice to all registered owners of the Bonds not less than 60 days prior to the effective date of said change in Bond Registrar. The Bonds and the interest thereon shall be paid in lawful money of the United States of America by
the Bond Registrar. Interest shall be paid when due by check or draft drawn on the Bond Registrar and mailed by first class mail or other acceptable method to the registered owners of record as of each April 15 with respect to payments due and payable on the immediately succeeding May 1, and as of each October 15 with respect to payments due and payable on the immediately succeeding November 1. Principal shall be payable at the principal office of the Bond Registrar upon presentation and surrender of the corresponding bond certificate.

5. **Redemption of Bonds Prior to Maturity.** Principal of the Bonds designated by the original purchaser of the Bonds as a term maturity shall be subject to mandatory redemption, in part, by lot, at par and accrued interest on the redemption dates and in the principal amounts corresponding to the scheduled maturities. When term Bonds are purchased by the Township and delivered to the Bond Registrar for cancellation or are redeemed in a manner other than by mandatory redemption, the principal amount of the term Bonds affected shall be reduced by the principal amount of the Bonds so redeemed or purchased in the order determined by the Township.

Notwithstanding the mandatory redemption of term bonds, if any, the Bonds maturing in the years 2022 to 2031, both inclusive, shall not be subject to optional redemption prior to maturity.

The Bonds maturing in the years 2032 to 2041, both inclusive, shall be subject to redemption prior to maturity, at the option of the Township, in whole or in part in increments of $5,000 in such order of maturity as the Township may determine and within any maturity by lot on any date on or after May 1, 2031, at par and accrued interest to the date fixed for redemption, without premium.

Notice of the call of any Bonds for redemption shall be given by first-class mail by the Bond Registrar, no less than thirty (30) days prior to the date fixed for redemption, to the registered owners of record at the registered addresses shown on the registration books kept by the Bond Registrar. Bonds shall be called for redemption in multiples of $5,000 and Bonds of denominations of greater than $5,000 shall be treated as representing the number of Bonds obtained by dividing the
denomination of the Bond by $5,000 and such Bonds may be redeemed in part. The notice of redemption for Bonds redeemed in part shall state that upon surrender of the Bond to be redeemed a new Bond or Bonds in aggregate principal amount equal to the unredeemed portion of the bond surrendered shall be issued to the registered owner thereof. No further interest payment on the Bonds or portions of the Bonds called for redemption shall accrue after the date fixed for redemption, whether or not the Bond is presented for redemption, provided funds are on hand with the Bond Registrar to redeem the same.

6. **Registration.** The Bonds shall be registered both as to principal and interest in substantially the form and tenor as set forth in Exhibit A attached hereto. Any individual bond shall be transferable on the bond register maintained with respect to the Bonds upon the surrender of the individual bond together with an assignment executed by the registered owner or his or her duly authorized attorney in form satisfactory to the Bond Registrar. Upon receipt of a properly assigned Bond, the Bond Registrar shall authenticate and deliver a new bond or bonds in equal aggregate principal amount and like interest rate and maturity to the designated transferee or transferees. Any individual bond may likewise be exchanged for one or more other bonds with the same interest rate and maturity in authorized denominations aggregating the same principal amount as the bond being exchanged. Such exchange shall be effected by surrender of the individual bond to be exchanged to the Bond Registrar with written instructions signed by the registered owner of the individual bond or his or her attorney in form satisfactory to the Bond Registrar. Upon receipt of an individual bond with proper written instructions the Bond Registrar shall authenticate and deliver a new bond or bonds to the registered owner of the Bond or his or her properly designated transferee or transferees or attorney. A transfer, exchange and registration of Bonds shall be without expense or service charge to the registered holder except for any tax or other governmental charge required to be paid with
respect to such transfer, exchange or registration. The Bond Registrar shall not be required to transfer or exchange Bonds or parts of Bonds which have been selected for optional redemption.

7. **Duties of Bond Registrar.** The Bond Registrar shall, upon receipt of sufficient funds from the Township, make timely payments of principal and interest on the Bonds, authenticate the Bonds upon their initial issuance and subsequent transfer to successive holders, act as registrar of the Bonds including the preparation and maintenance of a current register of registered owners of the Bonds, coordinate the transfer of individual bonds between successive holders, including printing and transferring new certificates, and perform all other duties set forth in this Resolution or otherwise normally performed by paying, registration and transfer agents. All reasonable fees and expenses of the Bond Registrar shall be paid by the Township. The Township reserves the right to designate an alternate financial institution to act as Bond Registrar for the Bonds and in such event the Township shall mail notice to all registered owners of the Bonds not less than 60 days prior to the effective date of said change in Bond Registrar.

8. **Replacement of Bonds.** Upon receipt by the Bond Registrar of proof of ownership of an unmatured bond, or satisfactory evidence that the bond has been lost, apparently destroyed or wrongfully taken and of security or indemnity which complies with applicable law and is satisfactory to the Bond Registrar, the Bond Registrar may deliver a new executed bond to replace the bond lost, apparently destroyed or wrongfully taken in compliance with applicable law. In the event an outstanding matured bond is lost, apparently destroyed or wrongfully taken, the Bond Registrar may pay the bond without presentation upon the receipt of the same documentation required for the delivery of a replacement bond. The Bond Registrar for each new bond delivered or paid without presentation as provided above, shall require the payment by the bondholder of expenses, including counsel fees, which may be incurred by the Bond Registrar and the Township in connection therewith. Any bond delivered pursuant to the provisions of this Paragraph 8 in lieu of any bond lost, apparently
destroyed or wrongfully taken shall be of the same form and tenor and be secured in the same manner as the bond originally issued.

9. **Debt Service Fund.** There shall be established and maintained on the books of the Township Treasurer a fund to be designated “TOWNSHIP PARKS IMPROVEMENT BOND – DEBT SERVICE FUND” (the “Debt Service Fund”). Into said fund there shall be placed (i) the accrued interest, if any, from the date of the Bonds to the date of delivery thereof; and (ii) capitalized interest on the Bonds, if any, from the date of delivery of the Bonds. As part of the Debt Service Fund, there shall be established and maintained such subaccounts as are deemed necessary and appropriate for the proper administration of the Debt Service Fund and compliance with the requirements of Section 148 of the Internal Revenue Code of 1986, as amended (the “Code”). The principal of, premium, if any, and interest on the Bonds together with the Registrar’s fee and the cost of continuing disclosure, if any, for the term of the Bonds, when due shall be paid directly out of the Debt Service Fund or its subaccounts. All amounts hereby pledged, including the proceeds of the ad valorem property taxes levied in support of the Township’s unlimited tax pledge approved by Township voters on May 4, 2021, to the prompt payment of the principal of and interest on the Bonds shall be kept and maintained in the Debt Service Fund so long as there are any of the Bonds, or interest thereon, outstanding and unpaid. After payment in full of the Bonds and the interest thereon, or after provision has been made for the payment in full of the Bonds and the interest thereon in the manner provided in paragraph 20, the surplus remaining in the Debt Service Fund shall be used for such purposes as required or permitted by law.

10. **Construction Fund.** Prior to delivery and sale of the Bonds, there shall be established and maintained on the books of the Township Treasurer a separate account designated “TOWNSHIP PARKS IMPROVEMENT BOND – CONSTRUCTION FUND” (the “Construction Fund”). After deducting a sum equal to the amount of any (i) accrued interest from the date of the Bonds to the date
of delivery thereof; and (ii) capitalized interest on the Bonds, if any, from the date of delivery of the Bonds, which sums shall be deposited in the Debt Service Fund, as defined above, the balance of the proceeds of the Bonds including premium, if any, shall be deposited into the Construction Fund, together with Township funds on hand, which after taking into account investment earnings, is adequate to pay all remaining costs of the Project. The monies on deposit in the Construction Fund from time to time shall be used solely for the purpose for which the Bonds were issued, including the cost of the Project. Any unexpended balance shall be used for such purposes as required or permitted by law including, without limitation, transfer to the Debt Service Fund for payment of principal, premium, if any, and interest on the Bonds at maturity or by redemption. After completion of the Project and disposition of remaining Bond proceeds, if any, pursuant to the provisions of this Paragraph, the Construction Fund shall be closed.

11. **Investment of Funds.** The Township Treasurer shall keep full and complete records of all deposits to and withdrawals from the Debt Service Fund and the Construction Fund and of all investments of monies in such accounts and other transactions relating thereto. The Treasurer is authorized to invest the monies in said accounts in any one or more lawful investments authorized for townships by law and consistent with the Township investment policy.

12. **Covenant Regarding Tax Exempt Status of the Bonds.** The Township covenants to comply with all requirements of the Code necessary to assure that the interest on the Bonds will be and will remain excludable from gross income for federal income taxation (as opposed to alternative minimum or other indirect taxation). The Township hereby designates the Bonds as “qualified tax exempt obligations” for purposes of deduction of interest expense by financial institutions under the provisions of Section 265(b)(3) of the Code, it being reasonably anticipated that the aggregate amount of tax exempt obligations which will be issued by the Township and all subordinate entities to the Township shall not exceed $10,000,000 during calendar year 2021. The Township hereby covenants
that the Township will make no use of the proceeds of the Bonds, which if such use had been reasonably expected on the date of issuance of the Bonds, would have caused the Bonds to be “arbitrage bonds”, as defined in Section 148 of the Code. In addition, the Township covenants to comply with all applicable provisions of the Code that must be satisfied subsequent to the issuance of the Bonds in order that the interest on the Bonds be excluded (or continue to be excluded) from gross income within the meaning of Section 103(a) of the Code.

13. **Revised Municipal Finance Act.** The Township currently meets the requirements of qualified status under Section 303(3) of Act 34, and shall comply with all applicable requirements of Act 34, including the filing of a security report and the payment of the filing fee required by Section 319 of Act 34.

14. **Competitive Sale of Bonds.** The Bonds shall be sold at a competitive sale, in accordance with the Official Notice of Sale referenced in paragraph 15, below and applicable state law. Sealed bids for the purchase of the Bonds shall be received up to such time as shall later be determined by the Township Supervisor.

15. **Official Notice of Sale.** An Official Notice of Sale, substantially in the form set forth in Exhibit C, attached hereto, with such additions or deletions as shall be approved by the Township Supervisor, shall be published once in accordance with the law in The Bond Buyer, which is a publication printed in the English language and circulated in the State of Michigan, which carries as a part of its regular service notices of the sale of municipal bonds and notes, at least seven (7) days before the date fixed for sale of the Bonds.

16. **Execution and Delivery of Bonds.** The Township Supervisor and Township Clerk are authorized and directed to execute the Bonds in substantially the form approved with such necessary variations, omissions, corrections and insertions as they deem appropriate and are required for and on behalf of the Township, manually or by facsimile signature for and on behalf of the
Township, and, if the Township has a seal, to place thereon the Township Seal or a facsimile thereof; provided that the Bonds shall be executed by the facsimile signatures of the said Supervisor and Township Clerk only if the bonds are thereafter manually authenticated by the Bond Registrar. The Township Supervisor, Clerk and Treasurer are authorized and directed to execute and deliver on behalf of the Township such other certificates, affidavits, investment agreements or other documents or other instruments, including applications for ratings or municipal bond insurance, as may be required by the initial purchaser (the “Purchaser”) of the Bonds or Bond Counsel (as defined below) or the Municipal Advisor or convenient to effectuate the execution and delivery of the Bonds. Upon execution of the Bonds, the Township Treasurer is hereby authorized and directed to deliver or cause to be delivered the Bonds to the Purchaser, upon receipt of the purchase price therefor less any discount and plus any premium and accrued interest, if any, to the date of delivery. The Township shall furnish the Bonds ready for execution without expense to the Purchaser. The Township shall also furnish without expense to the Purchaser at the time of delivery of the Bonds, the approving opinion of Mika Meyers PLC, Attorneys (“Bond Counsel”), Grand Rapids, Michigan, approving the legality of the Bonds. The Bonds will be delivered at the expense of the Township in such place as agreed upon with the Purchaser. The proceeds of the Bonds shall be deposited into the Debt Service Fund and the Construction Fund, as provided in Paragraphs 9 and 10, above.

17. **Official Statement.** The Township Supervisor is authorized to cause the preparation of a near final official statement and a final official statement for the Bonds for the purpose of enabling compliance with SEC Rule 15c2-12 (the “Rule”), and to do all other things necessary to enable compliance with the Rule. After the award of the Bonds, the Township will provide on a timely basis an electronic copy of the final official statement at its expense to the successful bidder to enable the successful bidder to comply with paragraph (b)(4) of the Rule and the rules of the Municipal Securities Rulemaking Board.
18. **Continuing Disclosure.** The Township hereby covenants and agrees, for the benefit of the holders of the Bonds to execute a Continuing Disclosure Agreement in substantially the form attached hereto as Exhibit D, as the written undertaking of the Township (the “Undertaking”) required by the Rule and to provide continuing disclosure of certain financial information and operating data and timely notices of the occurrence of certain events in accordance with the Rule. This Undertaking shall be enforceable by the holders of the Bonds in the manner set forth therein and any failure by the Township to comply with the provisions of the Undertaking shall not be an event of default with respect to the Bonds. The Undertaking is hereby approved in the form attached and the Supervisor or, in his absence the Township Clerk, is hereby authorized and directed to execute the Undertaking and deliver the same for and on behalf of the Township in conjunction with the delivery of the Bonds in the form approved by this Resolution together with such additions and deletions as said officers deem to be appropriate and in the best interest of the Township (in such number of counterparts as may be desirable).

19. **Reservation of Rights.** The Township reserves the right to refund the Bonds, in whole or in part, prior to maturity, subject to the requirements of the Code and Act 34.

20. **Defeasance.** In the event cash or direct obligations of the United States or obligations the principal of and interest on which are guaranteed by the United States, or a combination thereof, the principal of and interest on which, without reinvestment, come due at times and in amounts sufficient to pay at maturity or such earlier date, if any, as the Bonds are subject to redemption in full, the principal of and interest on the Bonds, shall have been deposited in trust, this Bond Resolution shall be defeased and the owners of the Bonds shall have no further rights under this Bond Resolution except to receive payment of the principal of and interest on the Bonds from the cash or securities deposited in trust and the interest and gains thereon and to transfer and exchange Bonds as provided herein.
21. **Authorized Officers.** In the event of the absence or disability of the Township Clerk, the Deputy Clerk shall act in her stead. In the absence or disability of the Township Treasurer, the Deputy Township Treasurer shall act in his stead.

22. **Conflicts.** All resolutions and parts of resolutions in conflict with the foregoing are hereby rescinded.

**AYES:** Members: _________________________________________________________

**NAYS:** Members: _________________________________________________________

**ABSTAIN:** Members: _________________________________________________________

RESOLUTION DECLARED ADOPTED.

__________________________________________
Laurie Larsen, Clerk
Charter Township of Grand Haven

STATE OF MICHIGAN )
COUNTY OF OTTAWA ) ss.

I, the duly qualified and acting Clerk of the Charter Township of Grand Haven, Ottawa County, Michigan (the “Township”) do hereby certify that the foregoing is a true and complete copy of a resolution adopted by the Township Board at a regular meeting held on the 24th day of May 2021, the original of which is on file in my office. Public notice of said meeting was given pursuant to and in compliance with Act No. 267, Public Acts of Michigan, 1976, as amended, including in the case of a special or rescheduled meeting, notice by publication or posting at least eighteen (18) hours prior to the time set for the meeting.

IN WITNESS WHEREOF, I have hereto affixed my official signature this 24th day of May 2021.

__________________________________________
Laurie Larsen, Clerk
Charter Township of Grand Haven
EXHIBIT A

[Legend
Unless this certificate is presented by an authorized representative of The Depository Trust Company, a New York corporation (“DTC”), to the Township or its agent for registration of transfer, exchange, or payment, and any certificate issued is registered in the name of Cede & Co. or in such other name as is requested by an authorized representative of DTC (and any payment is made to Cede & Co. or to such other entity as is requested by an authorized representative of DTC), ANY TRANSFER, PLEDGE, OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL inasmuch as the registered owner, Cede & Co., has an interest herein.]

REGISTERED UNITED STATES OF AMERICA REGISTERED
STATE OF MICHIGAN

CHARTER TOWNSHIP OF GRAND HAVEN
COUNTY OF OTTAWA

2021 PARKS IMPROVEMENT BONDS
(GENERAL OBLIGATION UNLIMITED TAX)

No.

<table>
<thead>
<tr>
<th>Rate</th>
<th>Maturity</th>
<th>Date of Original Issue</th>
<th>CUSIP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>May 1, ____</td>
<td>__________, 2021</td>
<td></td>
</tr>
</tbody>
</table>

Registered Owner:

Principal Amount:

KNOW ALL MEN BY THESE PRESENTS, that the Charter Township of Grand Haven (the “Issuer”), State of Michigan, acknowledges itself indebted and for value received hereby promises to pay on the date specified above to the owner specified above or its registered assigns shown as the owner of record of this Bond on the books of ____________________________, __________, as bond registrar (the “Bond Registrar”) on the applicable date of record, the principal sum specified above in lawful money of the United States of America, upon presentation and surrender of this Bond at the principal office of the Bond Registrar, together with interest thereon at the rate per annum specified above payable on May 1, 20__, and semi-annually thereafter on the first day of November and May of each year from the November 1 or May 1 next preceding the Date of Authentication hereof, unless such Date of Authentication is a date to which interest has been paid or duly provided for, in which case from the Date of Authentication hereof, unless interest on this Bond has not been paid in full or duly provided for, in which case from the date to which interest has been paid in full, or if no interest has been paid on this Bond, from the Date of Original Issue specified above, until payment of the principal hereof has been made or duly provided for.

Payment of interest shall be paid to the registered owner hereof by the Bond Registrar by first class mail. The date of record shall be each April 15 and October 15 with respect to the payments
due on each May 1 and November 1, respectively. Principal and interest are payable in lawful money of the United States of America.

This Bond is one of a series of Bonds of like date and tenor except as to date of maturity and rate of interest aggregating the principal sum of $_________ and is issued pursuant to a Bond Authorizing Resolution adopted by the Issuer’s Township Board in accordance with and pursuant to the provisions of applicable state law, including Act 189 of the Public Acts of Michigan of 1979, as amended (“Act 189”), and Act 34 of the Public Acts of Michigan of 2001, as amended (“Act 34”), to fund the acquisition, construction, and financing of improvements to the Township’s parks, fields, trails, and related appurtenances located within the Township, as well as all associated engineering, legal and financing costs and professional services.

The Bonds shall be the general obligation of the Issuer secured by the Issuer’s full faith and credit and the Issuer’s unlimited tax pledge in accordance with Act 189, and Act 34, and pursuant to which the Issuer shall levy, in addition to other taxes which the Issuer may be authorized to levy, ad valorem taxes on all taxable property within the boundaries of the Charter Township of Grand Haven without limitation as to rate or amount to the extent necessary to pay the principal of and interest on the Bonds when due.

[The Bonds maturing in the years 20__ through 20__, both inclusive, shall not be subject to redemption prior to maturity.]

[MANDATORY REDEMPTION]

[The Bonds maturing May 1, 20__, and May 1, 20__ (the “Term Bonds”), are subject to mandatory redemption, in part, by lot, on the redemption dates and in the principal amounts set forth below and at a redemption price equal to the principal amount thereof, without premium, together with interest thereon to the date fixed for redemption. When a Term Bond is purchased by the Issuer and delivered to the Bond Registrar for cancellation or is redeemed in a manner other than by mandatory redemption, the principal amount of the Term Bond, to be so redeemed shall be reduced by the principal amount of the Term Bond so redeemed or purchased in the order determined by the Issuer.

<table>
<thead>
<tr>
<th>Redemption Date</th>
<th>Principal Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 1, 20__</td>
<td>$_________</td>
</tr>
<tr>
<td>May 1, 20__</td>
<td>$_________ (Term Bond Maturity)</td>
</tr>
<tr>
<td>May 1, 20__</td>
<td>$_________</td>
</tr>
<tr>
<td>May 1, 20__</td>
<td>$_________ (Term Bond Maturity)</td>
</tr>
</tbody>
</table>

[OPTIONAL REDEMPTION]

Bonds maturing in the years 20__ to 20__, both inclusive, shall be subject to redemption prior to maturity, at the option of the Issuer, in whole or in part in increments of $5,000 in such order of maturity as the Issuer may determine and within any maturity by lot on any date on or after May 1, 20__, at par and accrued interest to the date fixed for redemption, without premium.]

[Notice of the call of any Bonds for redemption shall be given by first-class mail by the Bond Registrar, no less than thirty (30) days prior to the date fixed for redemption, to the registered owners]
Bonds shall be called for redemption in multiples of $5,000 and Bonds of denominations of greater than $5,000 shall be treated as representing the number of Bonds obtained by dividing the denomination of the Bond by $5,000 and such Bonds may be redeemed in part. The notice of redemption for Bonds redeemed in part shall state that upon surrender of the Bond to be redeemed a new Bond or Bonds in aggregate principal amount equal to the unredeemed portion of the bond surrendered shall be issued to the registered owner thereof. No further interest payment on the Bonds or portions of the Bonds called for redemption shall accrue after the date fixed for redemption, whether or not the Bond is presented for redemption, provided funds are on hand with the Bond Registrar to redeem the same.

This Bond has been designated by the Township as a “qualified tax exempt obligation” under the provisions of Section 265(b)(3) of the Internal Revenue Code of 1986, as amended.

This bond is transferable, as provided in the Bond Authorizing Resolution, on the bond registration books of the Bond Registrar upon surrender of this bond together with an assignment executed by the registered owner or his or her duly authorized attorney in form satisfactory to the Bond Registrar. Upon such transfer, one or more fully registered bonds with denominations of $5,000 or such larger denomination in the same aggregate principal amount and the same maturity and interest rate, will be issued to the designated transferee or transferees.

It is hereby certified and recited that all acts, conditions and things required by law, precedent to and in the issuance of this Bond, exist and have been done and performed in regular and due time and form as required by law and that the total indebtedness of the Charter Township of Grand Haven including this Bond, does not exceed any constitutional, statutory or charter limitation.

This Bond shall not be valid or become obligatory for any purpose or be entitled to any security or benefit under the Bond Authorizing Resolution until the Certification of Registration and Authentication hereon shall have been manually signed by the Bond Registrar.

IN WITNESS WHEREOF, the Charter Township of Grand Haven, County of Ottawa, State of Michigan, by its Township Board, has caused this Bond to be signed and sealed in its name by the Township Supervisor and by its Township Clerk, all as of the Date of Original Issue.

CHARTER TOWNSHIP OF GRAND HAVEN

[SEAL]

By: __________________________
   Mark Reenders, Supervisor

By: __________________________
   Laurie Larsen, Clerk
CERTIFICATION OF REGISTRATION AND AUTHENTICATION

This Bond is one of the Bonds described in the within-mentioned Bond Authorizing Resolution and has been registered in the name of the payee designated on the face hereof in the Register maintained for the Issuer thereof.

[______________________________]
As Bond Registrar

Date of Authentication: __________, 2021
By: __________________________________________________________________________

Its Authorized Representative
ASSIGNMENT

For value received, the undersigned sells, assigns and transfers unto _______________________

the within Bond and all rights there under and hereby irrevocably constitutes and appoints ________________________ attorney to transfer the within Bond on the books kept for registration thereof with full power of substitution in the premises.

Dated: ________________________

Signature Guaranteed: ________________________

NOTICE: The signature(s) to this assignment must correspond with the name as it appears upon the face of the within Bond in every particular, without alteration or enlargement or any change whatever.

Signature(s) must be guaranteed by an eligible guarantor institution participating in a Securities Transfer Association recognized signature guarantee program.

The Bond Registrar will not effect transfer of this Bond unless the information concerning the transferee requested below is provided:

Name and Address: ________________________

________________________________________

________________________________________

________________________________________

(Include information for all joint owners if this Bond is held by joint account)

PLEASE INSERT SOCIAL SECURITY NUMBER OR OTHER IDENTIFYING NUMBER OF TRANSFEREE

(Insert number for first-named transferee if held by joint account)
EXHIBIT B
ORDER APPROVING SALE AND TERMS OF BONDS

We, the undersigned Township Supervisor and the Township Treasurer of the Charter Township of Grand Haven (the “Township”), hereby approve the sale of, and the following terms of, the Township’s 2021 Parks Improvement Bonds (General Obligation Unlimited Tax) (the “Bonds”), pursuant to authorization set forth in the Resolution to Authorize Issuance of the Township’s 2021 Parks Improvement Bonds (General Obligation Unlimited Tax), adopted by the Township Board on May 24, 2021 (the “Bond Authorizing Resolution”), and based upon the written recommendation of the Registered Municipal Advisor (as defined in the Bond Authorizing Resolution):

1. The Bonds shall be delivered to the Purchaser (as defined below) and dated as of ________________.

2. The principal amount of the Bonds shall be $___________.

3. The Bonds shall mature and bear interest as follows:

<table>
<thead>
<tr>
<th>Maturity Term Bond</th>
<th>Amount</th>
<th>Rate of Interest</th>
</tr>
</thead>
</table>

*Term Bond

4. Interest shall be paid semi-annually on the Bonds on ______ 1 and ______ 1 of each year commencing __________ 1, ______.

5. The record dates shall be ______ 15 and ______ 15, respectively, with respect to payments of principal and interest due on the Bonds on ______ 1 and ______ 1.

6. The Bonds [shall] [shall not] be subject to optional redemption prior to maturity.

7. The Bonds shall be issued in minimum denominations of $______ or any $______ increment in excess of $______ up to the aggregate principal amount of a single maturity.

8. The Bonds shall be sold at a competitive sale to ________________ (the “Purchaser”) at a price of $__________, in accordance with the terms of Purchaser’s bid to the Township for the purchase of the Bonds dated ________, 20__. 

9. The Bonds [shall] [shall not] be issued in book-entry only form.

10. The Bond Registrar shall be ______________, ______________, Michigan.

[11. Additional terms applicable to the Bonds, if any.]
EXHIBIT C

OFFICIAL
NOTICE OF SALE

CHARTER TOWNSHIP OF GRAND HAVEN
COUNTY OF OTTAWA
STATE OF MICHIGAN

$6,140,000
2021 PARKS IMPROVEMENT BONDS,
(GENERAL OBLIGATION UNLIMITED TAX)

SEALED BIDS for the purchase of the above Bonds will be received by the undersigned at the Grand Haven Township Hall, 13300 168th Avenue, Grand Haven, MI 49417, on _________, the _____ day of _______ 2021, until _____ .m., prevailing Eastern Time, at which time and place said bids will be publicly opened and read.

IN THE ALTERNATIVE, signed bids may be submitted until the time and date of the bid opening shown above by fax to the Township (fax number (616) 842-9419) or by e-mail to the Municipal Advisory Council of Michigan (e-mail: munibids@macmi.com). IF SUBMITTING TO MUNICIPAL ADVISORY COUNCIL OF MICHIGAN BY E-MAIL, PLEASE CALL (313) 963-0420 TO CONFIRM RECEIPT OF YOUR BID. FAXED OR E-MAILED BIDS MUST ARRIVE BEFORE THE TIME OF SALE AND THE BIDDER BEARS ALL RISKS OF TRANSMISSION FAILURE.

IN THE ALTERNATIVE, electronic bids will also be received on the same date and until the same time by Bidcomp/Parity, including any fee charged by Bidcomp/Parity. Further information about Bidcomp/Parity, including any fee charged, may be obtained from Bidcomp/Parity, Client Services, 1359 Broadway, Second Floor, New York, New York 10010, (212) 849-5021. IF ANY PROVISION OF THIS NOTICE OF SALE SHALL CONFLICT WITH INFORMATION PROVIDED BY BIDCOMP/PARITY, AS THE APPROVED PROVIDER OF ELECTRONIC BIDDING SERVICES, THIS NOTICE SHALL CONTROL.

Bidders may choose any of the means or locations to present bids, but not more than one.

AWARD OF THE BONDS will be made to the successful bidder at a proceeding to be held at the Township Hall at ___ p.m. on ______________, 2021.

BOND DETAILS. The Bonds will be in fully registered form and in $5,000 denominations or such multiples thereof up to the amount of a single maturity; will bear interest from their date payable on May 1, 2022, and semi-annually thereafter, will be dated the date of delivery, will be numbered in direct order of maturity from 1 upwards, and will mature serially on May 1 in the years and amounts as follows:

---

02929138 3 C-1
INTEREST RATE AND BIDDING DETAILS: The Bonds shall bear interest at a rate or rates not exceeding 6% per annum, to be fixed by the bids therefore, expressed in multiples of 1/8 or 1/100 of 1%, or both. The interest on any one Bond shall be at one rate only and all Bonds maturing in any one year must carry the same interest rate. The difference between the highest and lowest rate bid on the Bonds shall not exceed three percentage (3.0%) points. The interest rates on the Bonds shall not be in descending order. No proposal for the purchase of less than all of the Bonds or at a price less than 99% or more than 110% of their par value will be considered.

MATURITY ADJUSTMENT: The aggregate principal amount of this issue is believed to be the amount necessary to provide adequate funds to pay costs of the project and to pay transactional costs. The Issuer reserves the right to decrease the aggregate principal amount of the Bonds after receipt of the bids and prior to final award. Such adjustment, if necessary, will be made in increments of $5,000 and may be made in any maturity.

ADJUSTMENT TO PURCHASE PRICE: The purchase price of the Bonds will be adjusted proportionately to the adjustment in principal amount of the Bonds and in such manner as to maintain as comparable an underwriter spread as possible to that bid.

BOOK-ENTRY ELIGIBLE: The Bonds will be issued in book-entry only form as one bond per maturity fully registered in the name of Cede & Co., as bondholder and nominee for The Depository Trust Company (“DTC”), New York, New York. DTC will act as securities depository for the Bonds. Purchase of the Bonds will be made in book-entry only form, in the denomination of $5,000 or any integral multiple thereof, and purchasers will not receive certificates representing their interest in bonds purchased. The book-entry-only system is described further in the preliminary Official Statement for the Bonds.

TERM BOND OPTION: Bidders shall have the option of designating any one or more maturities of Bonds maturing in the years 2022 through 2041, inclusive, as serial bonds or term bonds, or both. The bid must designate whether each of the principal amounts shown above for the years 2022 through 2041, inclusive, represent a serial maturity, a mandatory redemption requirement for a term bond or a term bond maturity. There may be more than one term bond maturity. The amounts of the maturities which are aggregated in a designated term bond shall be subject to mandatory redemption on the dates and in the amounts set forth in the maturity schedule at par, plus accrued interest to the date of mandatory redemption. Any such designation must be made within one (1) hour of the time bids are submitted.
**PRIOR REDEemption:** The Bonds maturing in the years 2022 through 2031, inclusive, shall not be subject to redemption prior to maturity.

In addition to mandatory redemption of term bonds, if any, Bonds maturing in the years 2032 to 2041, both inclusive, shall be subject to redemption prior to maturity, at the option of the Township, in whole or in part in increments of $5,000 in such order of maturity as the Township may determine and within any maturity by lot on any date on or after May 1, 2031, at par and accrued interest to the date fixed for redemption, without premium.

Notice of the call of any Bonds for redemption shall be given by first-class mail by the Bond Registrar, no less than thirty (30) days prior to the date fixed for redemption, to the registered owners of record at the registered addresses shown on the registration books kept by the Bond Registrar. Bonds shall be called for redemption in multiples of $5,000 and Bonds of denominations of greater than $5,000 shall be treated as representing the number of Bonds obtained by dividing the denomination of the Bond by $5,000 and such Bonds may be redeemed in part. The notice of redemption for Bonds redeemed in part shall state that upon surrender of the Bond to be redeemed a new Bond or Bonds in aggregate principal amount equal to the unredeemed portion of the Bond surrendered shall be issued to the registered owner thereof. No further interest payment on the Bonds or portions of the Bonds called for redemption shall accrue after the date fixed for redemption, whether or not the Bond is presented for redemption, provided funds are on hand with the Bond Registrar to redeem the same.

**REGISTRATION, TRANSFER AGENT AND PAYING AGENT:** Principal (May 1) shall be payable at _______________________, _____________________, Michigan, or such other transfer agent as the Township may hereafter designate by notice mailed to the registered owners not less than 60 days prior to any change in transfer agent. Interest (May 1 and November 1) shall be paid by check mailed to the owner as shown on the registration books of the Township on April 15 with respect to payments due on the immediately succeeding May 1 and on October 15 with respect to payments due on the immediately succeeding November 1. The Bonds will be transferable only upon the registration books of the Township kept by the transfer agent. The first interest payment will be due May 1, 2022.

**PURPOSE AND SECURITY:** The Bonds are the general obligation of the Township secured by the Township’s full faith and credit and the Township’s unlimited tax pledge in accordance with Act 34 of the Public Acts of Michigan of 2001, as amended, and the Unlimited Tax Election Act, which is Act 189 of the Public Acts of Michigan of 1979, as amended, pursuant to which the Township shall levy, in addition to other taxes which the Township may be authorized to levy, ad valorem taxes on all taxable property within the boundaries of the Charter Township of Grand Haven without limitation as to rate or amount to the extent necessary to pay the principal of and interest on the Bonds when due. The issuance of the Bonds and the Township’s unlimited tax pledge were approved by Township electors on May 4, 2021.

The rights and remedies of bondholders may be affected by bankruptcy and other laws and equitable remedies of general application now existing or hereafter enacted relating to or affecting the enforcement of the rights and remedies of bondholders.

**MUNICIPAL BOND INSURANCE:** If the Bonds qualify for issuance of any policy of municipal bond insurance or commitment therefor at the option of the bidder/purchaser, the purchase of any
such insurance policy or the issuance of any such commitment shall be at the option and expense of the purchaser of the Bonds. Any and all increased costs of issuance of the Bonds resulting from such purchase of insurance shall be paid by the purchaser, except that if the Township has requested and received a rating on the Bonds from a rating agency, the Township shall pay the fee for the requested rating. Any other rating agency fees shall be the responsibility of the purchaser. FAILURE OF THE MUNICIPAL BOND INSURER TO ISSUE THE POLICY AFTER THE BONDS HAVE BEEN AWARDED TO THE PURCHASER SHALL NOT CONSTITUTE CAUSE FOR FAILURE OR REFUSAL BY THE PURCHASER TO ACCEPT DELIVERY OF THE BONDS FROM THE TOWNSHIP.

**AWARD OF BONDS - TRUE INTEREST COST:** The Bonds will be awarded to the bidder whose bid produces the lowest true interest cost determined in the following manner: the lowest true interest cost will be the single interest rate (compounded on May 1, 2022 and semi-annually thereafter) necessary to discount the debt service payments from their respective payment date to July 28, 2021, the anticipated delivery date of the Bonds, in an amount equal to the price bid, excluding accrued interest.

**LEGAL OPINION:** Bids shall be conditioned upon the approving opinion of Mika Meyers PLC, Attorneys of Grand Rapids, Michigan, approving the legality of the Bonds, and the original of the opinion will be delivered without expense to the purchaser of the Bonds at the delivery thereof.

The fees of Mika Meyers PLC, for services rendered in connection with such approving opinion are expected to be paid from Bond proceeds. Except to the extent necessary to issue their approving opinion as to the validity of the above bonds, Mika Meyers PLC, has not been requested to examine or review and has not examined or reviewed any financial documents, statements or materials that have been or may be furnished in connection with the authorization, issuance or marketing of the Bonds, and accordingly, will not express any opinion with respect to the accuracy or completeness of any such financial documents, statements or materials.

**TAX EXEMPTION:** The approving opinion of bond counsel will include an opinion to the effect that under existing law, the interest on the Bonds is excluded from gross income for federal income tax purposes, and is not an item of tax preference for purposes of the federal alternative minimum tax. The opinion set forth above will be subject to the condition that the Township comply with all requirements of the Internal Revenue Code of 1986, as amended (the “Code”), that must be satisfied subsequent to the issuance of the Bonds in order that interest thereon be (or continue to be) excluded from gross income for federal income tax purposes. Failure to comply with certain of such requirements could cause the interest on the Bonds to be included in gross income retroactive to the date of issuance of the Bonds. The Township has covenanted to comply with all such requirements. Bond counsel will express no opinion regarding other federal tax consequences arising with respect to the Bonds.

In addition, the approving opinion of bond counsel will include an opinion to the effect that under existing law, the Bonds and the interest thereon are exempt from all taxation in the State of Michigan except inheritance and estate taxes, taxes on transfers and taxes on gains realized from the sale, payment or other disposition thereof.

**QUALIFIED TAX EXEMPT OBLIGATIONS:** The Bonds have been designated as “qualified tax exempt obligations” for purposes of deduction of interest by financial institutions.
CERTIFICATE REGARDING “ISSUE PRICE”: The successful bidder must assist the Township in establishing the issue price of the Bonds and will be required to furnish, at least ten (10) days prior to the delivery of the Bonds, a certificate in a form acceptable to bond counsel as to the “issue price” of the Bonds within the meaning of Section 1273 of the Internal Revenue Code of 1986, as amended.

The certificate will set forth the reasonably expected initial offering price to the public or the sales price or prices of the Bonds, together with the supporting pricing wires or equivalent communications with such modifications as may be appropriate or necessary in the sole judgment of bond counsel. The Township intends that the provisions of Treasury Regulation Section 1.148-1(f)(3)(i) (defining “competitive sale” for purposes of establishing the issue price of the Bonds) will apply to the initial sale of the Bonds (the “competitive sale requirements”) because:

(i) the Township shall disseminate this Notice of Sale to potential underwriters in a manner that is reasonably designed to reach potential underwriters;

(ii) all bidders shall have an equal opportunity to bid;

(iii) the Township may receive bids from at least three underwriters of municipal bonds who have established industry reputations for underwriting new issuances of municipal bonds; and

(iv) the Township anticipates awarding the sale of the Bonds to the bidder who submits a firm offer to purchase the Bonds at the highest price (or lowest interest cost), as set forth in this Notice of Sale.

Any bid submitted pursuant to this Notice of Sale shall be considered a firm offer for the purchase of the Bonds, as specified in the bid. Unless the bidder intends to hold the Bonds for its own account with no intention to offer the Bonds to the public, the bidder, by submitting a bid, represents to the Township that the bidder has an established industry reputation for underwriting new issuances of municipal bonds.

In the event that the competitive sale requirements are not satisfied, the Township shall so advise the winning bidder. The Township shall treat the first price at which 10% of each maturity of the Bonds (the “10% test”) is sold to the public as the issue price of that maturity, applied on a maturity-by-maturity basis. The winning bidder shall advise the Township if any maturity of the Bonds satisfies the 10% test as of the date and time of the award of the Bonds. The Township will not require bidders to comply with the “hold the offering price” rule and, therefore, does not intend to use the initial offering price to the public as of the sale date of any maturity of the Bonds as the issue price of that maturity. Bids will not be subject to cancellation in the event that the competitive sale requirements are not satisfied. Bidders should prepare their bids on the assumption that all of the maturities of the Bonds will be subject to the 10% test in order to establish the issue price of the Bonds.

If the competitive sale requirements are not satisfied, then until the 10% test has been satisfied as to each maturity of the Bonds, the winning bidder agrees to promptly report to the Township the prices at which the unsold Bonds of that maturity have been sold to the public. That reporting
obligation shall continue, whether or not the Closing Date has occurred, until the 10% test has been satisfied as to the Bonds of that maturity or until all Bonds of that maturity have been sold.

By submitting a bid, each bidder confirms that: (i) any agreement among underwriters, any selling group agreement and each retail distribution agreement (to which the bidder is a party) relating to the initial sale of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each underwriter, each dealer who is a member of the selling group, and each broker-dealer that is a party to such retail distribution agreement, as applicable, to report the prices at which it sells to the public the unsold Bonds of each maturity allotted to it until it is notified by the winning bidder that either the 10% test has been satisfied as to the Bonds of that maturity or all Bonds of that maturity have been sold to the public, if and for so long as directed by the winning bidder and as set forth in the related pricing wires, and (ii) any agreement among underwriters relating to the initial sale of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each underwriter that is a party to a retail distribution agreement to be employed in connection with the initial sale of the Bonds to the public to require each broker-dealer that is a party to such retail distribution agreement to report the prices at which it sells to the public the unsold Bonds of each maturity allotted to it until it is notified by the winning bidder or such underwriter that either the 10% test has been satisfied as to the Bonds of that maturity or all Bonds of that maturity have been sold to the public, if and for so long as directed by the winning bidder or such underwriter and as set forth in the related pricing wires.

Sales of any Bonds to any person that is a related party to an underwriter shall not constitute sales to the public for purposes of this Notice of Sale. Further, for purposes of this Notice of Sale:

(i) “public” means any person other than an underwriter or a related party,

(ii) “underwriter” means (A) any person that agrees pursuant to a written contract with the Township (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the public and (B) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (A) to participate in the initial sale of the Bonds to the public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the public),

(iii) a purchaser of any of the Bonds is a “related party” to an underwriter if the underwriter and the purchaser are subject, directly or indirectly, to (i) at least 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (ii) more than 50% common ownership of their capital interests or profit interests, if both entities are partnerships (including direct ownership by one partnership of another), or (iii) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other), and

(iv) “sale date” means the date that the Bonds are awarded by the Township to the winning bidder.
In addition, if the successful bidder obtains a municipal bond insurance policy or other credit enhancement for the Bonds in connection with their original issuance, the successful bidder will be required, as a condition of delivery of the Bonds, to certify whether the premium therefor will be less than the present value of the interest expected to be saved as a result of such insurance or other credit enhancement.

GOOD FAITH: A wire transfer in an amount equal to 1% ($61,400) of the face amount of the Bonds, to the Charter Township of Grand Haven will be required of the successful bidder as a guarantee of good faith on the part of the bidder, to be forfeited as liquidated damages if such bid be accepted and the bidder fails to take up and pay for the Bonds. The successful bidder shall wire the good faith deposit not later than twelve o’clock noon, Local Time, on the next business day following the sale using the wire instructions provided by PFM Financial Advisors, LLC. The good faith deposit will be applied to the purchase price of the Bonds. No interest shall be allowed on the good faith deposits. The wire transfer of funds of the successful bidder will be applied immediately, in which event, payment of the balance of the purchase price of the Bonds shall be made at the closing.

OFFICIAL STATEMENT: The Township’s Preliminary Official Statement, dated __________, 2021, including the Official Notice of Sale and the Bid Form, may be obtained by contacting the Township’s Registered Municipal Advisor whose address and telephone number is set forth below. The Preliminary Official Statement is in a form “deemed final” as of its date by the Township for purposes of Securities and Exchange Commission Rule 15c2-12(b)(1) but is subject to revision, amendment and completion in a final Official Statement. The successful bidder shall supply to the Township within twenty-four (24) hours after the award of the Bonds all necessary pricing and other information necessary to complete the final Official Statement.

The Township will furnish, upon request of the successful bidder, an electronic copy of the final Official Statement relating to the Bonds within seven (7) business days from the date of the sale specified above, to permit the successful bidder to comply with Securities and Exchange Commission Rule 15c2-12.

CONTINUING DISCLOSURE: In order to assist bidders in complying with SEC Rule 15c2-12, as amended, the Township will undertake to provide certain annual financial information and notices of the occurrence of certain events, if material for the benefit of the holders of the Bonds. The details and terms of the undertaking are set forth in a Continuing Disclosure Agreement to be executed and delivered by the Township, a form of which is included in the Preliminary Official Statement and will also be included in the final Official Statement.

DELIVERY OF BONDS: The Township will furnish Bonds ready for execution at its expense at such location as approved by the Township. The usual Closing documents, including a continuing disclosure agreement and a certificate that no litigation is pending affecting the issuance of the Bonds, will be delivered at the time of the delivery of the Bonds. If the Bonds are not tendered for delivery by twelve noon, Eastern Time, on the 45th day following the date of sale, or the first business day thereafter if said 45th day is not a business day, the successful bidder may on that day, or any time thereafter until delivery of the Bonds, withdraw his proposal by serving notice of cancellation, in writing, on the undersigned in which event the Township shall promptly return the good faith deposit without interest. Payment for the Bonds shall be made in Federal
Reserve Funds. Accrued interest to the date of delivery of the Bonds shall be paid by the purchaser at the time of delivery.

**CUSIP NUMBER:** CUSIP numbers will be printed on the Bonds at the Purchaser’s expense. The printing of incorrect CUSIP numbers or the failure to print the CUSIP numbers on the Bonds shall not constitute cause for the purchaser to refuse delivery of the Bonds.

**REGISTERED MUNICIPAL ADVISOR:** Further information, including a copy of the Official Statement prepared for the Bonds, may be obtained from the Township’s Registered Municipal Advisor, PFM Financial Advisors LLC, 555 Briarwood Circle, Suite 333, Ann Arbor, MI 48108. Telephone (734) 994-9700, Facsimile (734) 994-9710.

**BIDDER CERTIFICATION:** By submitting a bid, the bidder shall be deemed to have certified that it is not an “Iran-linked Business” as defined in Act 517 of the Public Acts of Michigan of 2012, being MCL 129.311 et seq., and bidder may be required to execute and deliver a certificate in a form prepared by Bond Counsel to that effect.

**THE RIGHT IS RESERVED TO REJECT ANY OR ALL BIDS.**

**ENVELOPES:** Envelopes containing the bids should be plainly marked “Proposal for Bonds.”

Mark Reenders, Supervisor
Charter Township of Grand Haven
EXHIBIT D
CONTINUING DISCLOSURE AGREEMENT (ISSUER)

$6,140,000
CHARTER TOWNSHIP OF GRAND HAVEN
COUNTY OF OTTAWA
STATE OF MICHIGAN
2021 PARKS IMPROVEMENT BONDS
(GENERAL OBLIGATION UNLIMITED TAX)

This Continuing Disclosure Agreement (the “Agreement”) is executed and delivered by the Charter Township of Grand Haven, County of Ottawa, Michigan (the “Issuer”), pursuant to a resolution adopted May 24, 2021, by the Issuer’s Township Board in connection with the issuance by the Issuer of its $6,140,000 Parks Improvement Bonds (General Obligation Unlimited Tax), dated as of __________, 2021 (the “Bonds”). The Issuer covenants and agrees as follows:

SECTION 1. PURPOSE OF THE DISCLOSURE AGREEMENT.

(a) This Agreement is being executed and delivered by the Issuer with respect to the Bonds for the benefit of the Bondholders and in order to assist the Participating Underwriters in complying with the Rule.

(b) In consideration of the purchase and acceptance of any and all of the Bonds by those who shall hold the same or shall own beneficial ownership interests therein from time to time, this Agreement shall be deemed to be and shall constitute a contract between the Issuer and the Bondholders from time to time, and the covenants and agreements herein set forth to be performed on behalf of the Issuer shall be for the benefit of the Bondholders of any and all of the Bonds.

(c) The Issuer acknowledges that this Agreement does not address the scope of any application of Rule 10b-5 promulgated by the SEC pursuant to the 1934 Act to the Annual Financial Information or notices of the Listed Events provided or required to be provided by the Issuer pursuant to this Agreement.

(d) As of the date of delivery of the Bonds to the initial purchaser thereof, the Issuer is an obligated person (within the meaning of the Rule) with respect to less than $10,000,000 in aggregate amount of outstanding municipal securities, including the Bonds and excluding those securities permitted to be exempted pursuant to Section (d)(2)(i) of the Rule.

SECTION 2. DEFINITIONS. In addition to the capitalized terms defined elsewhere in this Agreement, the following capitalized terms shall have the following meanings in this Agreement:

“Annual Financial Information” shall mean any Annual Financial Information provided by the Issuer pursuant to, and as described in, Sections 3 and 4 of this Agreement.

“Bond Counsel” shall mean nationally recognized legal counsel in municipal securities law.
“Bond Resolution” shall mean collectively the resolutions duly adopted by the governing board of the Issuer authorizing the issuance, sale and delivery of the Bonds.

“Bondholder” means the registered owner of a Bond or any person which (a) has the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Bonds (including any person holding Bonds through nominees, depositaries or other intermediaries), or (b) is treated as the owner of any Bond for federal income tax purposes.

“Dissemination Agent” shall mean the Issuer, or any successor Dissemination Agent designated as such in writing by the Issuer and which has filed with the Issuer a written acceptance of such designation, and such agent’s successors and assigns.

“EMMA” shall mean the Electronic Municipal Market Access system maintained by the MSRB for purposes of the Rule.

“GAAP” shall mean generally accepted accounting principles, as such principles are prescribed, in part, by the Financial Accounting Standards Board and modified by the Government Accounting Standards Board and Act 2 of the Public Acts of Michigan of 1968, as amended, in effect from time to time.

“Listed Events” shall mean any of the events listed in Section 5(a) of this Agreement.

“MSRB” shall mean the Municipal Securities Rulemaking Board.

“1934 Act” shall mean the Securities Exchange Act of 1934, as amended.


“Participating Underwriter” shall mean any of the original underwriters of the Bonds required to comply with the Rule in connection with the offering of the Bonds.

“Rule” shall mean Rule 15c2-12 promulgated by the SEC pursuant to the 1934 Act, as the same may be amended from time to time, together with all interpretive guidances or other official interpretations or explanations thereof that are promulgated by the SEC.

“SEC” shall mean the Securities and Exchange Commission.

“State” shall mean the State of Michigan.

**SECTION 3. PROVISION OF ANNUAL FINANCIAL INFORMATION.**

(a) Each year, the Issuer shall provide, or shall cause the Dissemination Agent to provide, not later than six months after the last day of the Issuer’s preceding fiscal year, commencing with the Issuer’s Annual Financial Information for the Issuer’s fiscal year ending December 31, 2021, after such materials are available, to the MSRB, Annual Financial Information for the preceding fiscal year which is consistent with the requirements of Section 4(a) of this Agreement, and in the event of an amendment or waiver, the requirements of Section 8 of this Agreement. Not later than fifteen (15) business days prior to said date, the Issuer shall provide the
Annual Financial Information to the Dissemination Agent (if other than the Issuer). In each case, the Annual Financial Information may be submitted as a single document or as separate documents comprising a package, and may include by specific reference other information as provided in Section 4 of this Agreement; provided, however, that if the audited financial statements of the Issuer are not available by the respective deadlines for filing the Annual Financial Information, they shall be provided when and if available, and unaudited financial statements in a format similar to the audited financial statements most recently prepared for the Issuer shall be included in the Annual Financial Information.

(b) If the Issuer is unable to provide to the MSRB Annual Financial Information by the dates required in subsection (a), the Issuer shall send a notice in a timely manner to the MSRB in accordance with Section 14 of this Agreement.

(c) As of the date of this Agreement, the fiscal year of the Issuer commences on January 1 and ends on December 31. If the fiscal year of the Issuer changes after the date of this Agreement, the Issuer shall send a notice of such change to the MSRB in accordance with Section 14 of this Agreement. If such change will result in the Issuer’s fiscal year ending on a date later than the ending date prior to such change, the Issuer shall provide notice of such change to the MSRB on or prior to the deadline for filing the Annual Financial Information in effect when the Issuer operated under its prior fiscal year. Such notice may be provided along with the Annual Financial Information, provided that it is filed at or prior to the deadline described above.

(d) The Dissemination Agent shall:

(1) determine each year prior to the dates for providing the Annual Financial Information the address of the MSRB; and

(2) if the Dissemination Agent is other than the Issuer, file a report with the Issuer certifying that the Annual Financial Information has been provided pursuant to this Agreement, stating the date it was provided to the MSRB and other persons, if any, to which it was provided.

(e) In connection with providing the Annual Financial Information, the Dissemination Agent (if other than the Issuer) is not obligated or responsible under this Agreement to determine the sufficiency of the content of the Annual Financial Information for purposes of the Rule or any other state or federal securities law, rule, regulation or administrative order.

SECTION 4. CONTENT OF ANNUAL FINANCIAL INFORMATION.

(a) The Issuer’s Annual Financial Information shall include, at a minimum, that financial information and operating data which is customarily prepared by the Issuer and is publicly available, and shall contain or include by reference the following:

(1) Audited financial statements of the Issuer for its most recently completed fiscal year, prepared in accordance with GAAP with such changes as may be required from time to time in accordance with state law; and
(2) The most recent financial information and operating data relating to the Issuer contained in the Official Statement under the following captions: [“Property Valuations,” “Major Taxpayers,” “Tax Rates (Per $1,000 of Valuation),” “Tax Levies and Collections,” “Debt Statement,” and “Legal Debt Margin.”]

Any or all of the items listed above may be included by specific reference to other documents available to the public through EMMA or filed with the SEC.

SECTION 5. REPORTING OF SIGNIFICANT EVENTS.

(a) The Issuer covenants to provide, or cause to be provided, notice of the occurrence of any of the following events with respect to the Bonds in a timely manner and not in excess of ten (10) business days after the occurrence of the event in accordance with the Rule:

(1) principal and interest payment delinquencies;
(2) non-payment related defaults, if material;
(3) unscheduled draws on debt service reserves reflecting financial difficulties;
(4) unscheduled draws on credit enhancements reflecting financial difficulties;
(5) substitution of credit or liquidity providers, or their failure to perform;
(6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the security, or other material events affecting the tax status of the security;
(7) modifications to rights of Bondholders, if material;
(8) bond calls, if material;
(9) defeasances;
(10) release, substitution, or sale of property securing repayment of the securities, if material;
(11) rating changes;
(12) bankruptcy, insolvency, receivership or similar event of the Issuer;
(13) the consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; and
(14) appointment of a successor or additional trustee or the change of name of a trustee, if material.
(15) incurrence of a financial obligation of the obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the obligated person, any of which affect security holders, if material; and
(16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the obligated person, any of which reflect financial difficulties.
(b) Whenever the Issuer obtains knowledge of the occurrence of a Listed Event described in Section 5(a)(2), (7), (8), (10), (14), (15) or (16), the Issuer shall as soon as possible determine if such event would be material under applicable federal securities laws.

(c) If the Issuer determines in the exercise of its best judgment in good faith that the occurrence of a Listed Event would be material under applicable federal securities laws, the Issuer shall promptly cause a notice of the occurrence of a Listed Event, determined to be material in accordance with the Rule, to be filed with the MSRB. In connection with providing a notice of the occurrence of a Listed Event described in Section 5(a)(9) above, the Issuer shall include in the notice explicit disclosure as to whether the Bonds have been escrowed to maturity or escrowed to call, as well as appropriate disclosure of the timing of maturity or call.

(d) The Issuer acknowledges that the “rating changes” referred to above in Section 5(a)(11) of this Agreement may include, without limitation, any change in any rating on the Bonds or other indebtedness for which the Issuer is liable, or on any indebtedness for which the State is liable.

(e) The Issuer acknowledges that it is not required to provide a notice of a Listed Event with respect to credit enhancement when the credit enhancement is added after the primary offering of the Bonds, the Issuer neither applied for nor participated in obtaining such credit enhancement, and such credit enhancement is not described in the Official Statement.

SECTION 6. TERMINATION OF REPORTING OBLIGATION.

(a) The Issuer’s obligations under this Agreement shall terminate upon the legal defeasance of the Bond Resolution or by the prior redemption or payment in full of all of the Bonds.

(b) This Agreement, or any provision hereof, shall be null and void in the event that the Issuer (i) receives an opinion of Bond Counsel, addressed to the Issuer, to the effect that those portions of the Rule, which require such provisions of this Agreement, do not or no longer apply to the Bonds, whether because such portions of the Rule are invalid, have been repealed, amended or modified, or are otherwise deemed to be inapplicable to the Bonds, as shall be specified in such opinion, and (ii) delivers notice to such effect with the MSRB in accordance with Section 14 of this Agreement.

SECTION 7. DISSEMINATION AGENT. The Issuer, from time to time, may appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Agreement, and may discharge any such Dissemination Agent, with or without appointing a successor Dissemination Agent.

SECTION 8. AMENDMENT. Notwithstanding any other provision of this Agreement, this Agreement may be amended, and any provision of this Agreement may be waived to the effect that:

(i) If the amendment relates to the provisions of Section 3(a), 3(b), 3(c), 4 or 5(a), it may only be made in connection with a change in circumstances that arises from a change
in legal requirements, a change in law or a change in the identity, nature or status of the Issuer or the types of business in which the Issuer is engaged;

(ii) this Agreement as so amended or taking into account such waiver, would have complied with the requirements of the Rule at the time of the primary offering of the Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances, in the opinion of Bond Counsel; and

(iii) such amendment or waiver does not materially impair the interests of the Bondholders, in the opinion of Bond Counsel.

In the event of any amendment to, or waiver of a provision of, this Agreement, the Issuer shall describe such amendment or waiver in the next Annual Financial Information, and shall include a narrative explanation of the reason for the amendment or waiver. In particular, if the amendment or waiver results in a change to the annual financial information required to be included in the Annual Financial Information pursuant to Section 4 of this Agreement, the first Annual Financial Information that contains the amended operating data or financial information shall explain, in narrative form, the reasons for the amendment and the impact of such change in the type of operating data or financial information being provided. In addition, if the annual financial information required to be provided in the Annual Financial Information can no longer be generated because the operations to which it related have been materially changed or discontinued, a statement to that effect shall be included in the first Annual Financial Information that does not include such information. If the amendment or waiver involves a change in the accounting principles to be followed in preparing financial statements as set forth in Section 4, the Annual Financial Information for the year in which the change is made shall present a comparison between the financial statements or information prepared based on the new accounting principles and those prepared based on the former accounting principles. The comparison shall include a qualitative discussion of such differences and the impact of the changes on the presentation of the financial information. To the extent reasonably feasible, the comparison shall also be quantitative. A notice of the change in the accounting principles shall be sent by the Issuer to the MSRB. All explanations, statements, notices and other filings to be made under this Section 8 shall be made in accordance with Section 14 of this Agreement.

SECTION 9. ADDITIONAL INFORMATION. Nothing in this Agreement shall be deemed to prevent the Issuer from disseminating any other information, using the means of dissemination set forth in this Agreement or any other means of communication, or including any other information in any Annual Financial Information or notice of occurrence of a Listed Event, in addition to that which is required by this Agreement. If the Issuer chooses to include any information in any Annual Financial Information or notice of occurrence of a Listed Event in addition to that which is specifically required by this Agreement, the Issuer shall have no obligation under this Agreement to update such information or include it in any future Annual Financial Information or notice of occurrence of a Listed Event.

SECTION 10. DEFAULT. In the event of a failure of the Issuer or the Dissemination Agent (if other than the Issuer) to comply with any provision of this Agreement, any Bondholder may take such actions as may be necessary and appropriate, including seeking mandamus or specific performance by court order, to cause the Issuer to comply with its obligations under this Agreement.
Agreement, but no person or entity shall be entitled to recover monetary damages under any circumstances. A default under this Agreement shall not be deemed an event of default under the Bond Resolution or the Bonds, and the sole remedy under this Agreement in the event of any failure of the Issuer to comply with the Agreement shall be an action to compel performance.

SECTION 11. DUTIES OF DISSEMINATION AGENT. The Dissemination Agent shall have only such duties as are specifically set forth in this Agreement.

SECTION 12. BENEFICIARIES. This Agreement shall inure solely to the benefit of the Issuer, the Dissemination Agent, the Participating Underwriters, and the Bondholders and shall create no rights in any other person or entity.

SECTION 13. ADDITIONAL DISCLOSURE OBLIGATIONS. The Issuer acknowledges and understands that other state and federal laws, including, without limitation, the Securities Act of 1933, as amended, and Rule 10b-5 promulgated by the SEC pursuant to the 1934 Act, may apply to the Issuer, and that under some circumstances compliance with this Agreement, without additional disclosures or other action, may not fully discharge all duties and obligations of the Issuer under such laws.

SECTION 14. COMPLIANCE WITH MSRB FILING REQUIREMENTS. All filings required to be made to the MSRB shall be made only in an electronic format prescribed by the MSRB and all documents provided to the MSRB as part of any such filing shall be accompanied by identifying information as prescribed by the MSRB. Until otherwise designated by the MSRB or the SEC, filings with the MSRB are to be made through the EMMA website of the MSRB, currently located at http://emma.msrb.org.

SECTION 15. OBLIGATED PERSONS. The Issuer is the only obligated person (within the meaning of the Rule) with respect to the Bonds.

SECTION 16. GOVERNING LAW. This Agreement shall be construed and interpreted in accordance with the laws of the State, and any suits and actions arising out of this Agreement shall be instituted in a court of competent jurisdiction in the State. Notwithstanding the foregoing, to the extent this Agreement addresses matters of federal securities laws, including the Rule, this Agreement shall be construed and interpreted in accordance with such federal securities laws and official interpretations thereof.

CHARTER TOWNSHIP OF GRAND HAVEN

By:______________________________________
    Mark Reenders
    Its:  Supervisor

By:______________________________________
    Laurie Larsen
    Its:  Clerk

Dated: ___________, 2021
## FINANCING TIMETABLE

$6,140,000

Charter Township of Grand Haven  
County of Ottawa, State of Michigan  
2021 Unlimited Tax General Obligation Bonds

<table>
<thead>
<tr>
<th>DATE</th>
<th>Task Comp.</th>
<th>ACTION REQUIRED</th>
<th>RESPONSIBLE PARTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fri, May 14, 2021</td>
<td>✓ PFM provided Bond Counsel with bond specifications</td>
<td></td>
<td>PFM</td>
</tr>
<tr>
<td>Wed, May 19, 2021</td>
<td>✓ Bond Authorizing Resolution circulated</td>
<td></td>
<td>BC</td>
</tr>
<tr>
<td>Mon, May 24, 2021</td>
<td>✓ Township Board adopts Bond Authorizing Resolution</td>
<td></td>
<td>Township</td>
</tr>
<tr>
<td>Mon, Jun 07, 2021</td>
<td>Draft of Preliminary Official Statement circulated for review and comment</td>
<td></td>
<td>PFM</td>
</tr>
<tr>
<td>Mon, Jun 07, 2021</td>
<td>PFM submits credit packages to rating agency(ies) and insurance companies</td>
<td></td>
<td>PFM</td>
</tr>
<tr>
<td>Fri, Jun 11, 2021</td>
<td>Due diligence call to review Preliminary Official Statement - comments due on Preliminary Official Statement (@ 11 AM)</td>
<td></td>
<td>All Parties</td>
</tr>
<tr>
<td>Fri, Jun 11, 2021</td>
<td>PFM circulates updated Preliminary Official Statement</td>
<td></td>
<td>All Parties</td>
</tr>
<tr>
<td>Week of June 14th</td>
<td>Rating Call</td>
<td></td>
<td>Township/PFM</td>
</tr>
<tr>
<td>Tue, Jun 29, 2021</td>
<td>Bond rating released</td>
<td></td>
<td>PFM</td>
</tr>
<tr>
<td>Thu, Jul 01, 2021</td>
<td>Preliminary Official Statement printed and mailed</td>
<td></td>
<td>PFM</td>
</tr>
<tr>
<td>Thu, Jul 01, 2021</td>
<td>Notice of Sale published</td>
<td></td>
<td>BC</td>
</tr>
<tr>
<td>Mon, Jul 12, 2021</td>
<td>Bond sale (11:30 am) and award</td>
<td></td>
<td>All parties</td>
</tr>
<tr>
<td>Mon, Jul 12, 2021</td>
<td>Final numbers distributed</td>
<td></td>
<td>PFM</td>
</tr>
<tr>
<td>Tue, Jul 13, 2021</td>
<td>PFM circulates draft Official Statement</td>
<td></td>
<td>PFM</td>
</tr>
<tr>
<td>Fri, Jul 16, 2021</td>
<td>Print and mail Final Official Statement</td>
<td></td>
<td>PFM</td>
</tr>
<tr>
<td>Mon, Jul 19, 2021</td>
<td>Draft closing memo distributed</td>
<td></td>
<td>PFM</td>
</tr>
<tr>
<td>Wed, Jul 21, 2021</td>
<td>Final closing memo distributed</td>
<td></td>
<td>PFM</td>
</tr>
<tr>
<td>Wed, Jul 28, 2021</td>
<td>Tentative bond closing - via phone and wire</td>
<td></td>
<td>All parties</td>
</tr>
<tr>
<td>August 2021</td>
<td>Closing transcripts and security report filed with Department of Treasury</td>
<td></td>
<td>BC</td>
</tr>
</tbody>
</table>

**Legend:**  
Township = Charter Township of Grand Haven (Issuer)  
BC = Mika Meyers PLC (Bond Counsel)  
PFM = PFM Financial Advisors LLC (Financial Advisor)
May 14, 2021

Mr. Mark E. Nettleton  
Mika Meyers PLC  
900 Monroe Ave NW  
Grand Rapids, Michigan 49503

Re: Not to Exceed $6,140,000 Charter Township of Grand Haven, County of Ottawa, State of Michigan, 2021 Unlimited Tax General Obligation Bonds (UTGO)

Dear Mark:

Please draft a bond authorizing resolution for the bonds for the Township Board's consideration on Monday, May 24th. This will finance park improvements via competitive sale. We are contemplating a sale by mid July.

The bond parameters are as follows:

Tax Designation: Qualified Tax Exempt Obligations  
Date of Issue: Date of Delivery  
Principal Due: May 1 annually  
Maturities: Provide for maturities in the years 2022 through 2041 (Subject to Change, See Attached)  
Maturity Adjustment: The aggregate principal amount of this issue is believed to be the amount necessary to provide adequate funds to fund the projects and to pay transactional costs. The Issuer reserves the right to decrease the aggregate principal amount of the Bonds after receipt of the bids and prior to final award. Such adjustment if necessary, will be made in increments of $5,000 and may be made in any maturity.  
Purchase Price Adjustment: The purchase price of the bonds will be adjusted proportionately to the adjustment in principal amount of the bonds and in such manner as to maintain as comparable an underwriter spread as possible to that bid.  
Term Bonds: The initial purchaser of the bonds may designate any one or more maturities as term bonds and the consecutive maturities which shall be aggregated in the term bonds. Any such designation must be made within 1 hour of the sale.  
Mandatory Redemption: The amounts of the maturities which are aggregated in a designated term bond shall be subject to mandatory redemption on the dates and in the amounts set forth in the maturity schedule at par, plus accrued interest to the date of mandatory redemption.  
Optional Redemption: Bonds maturing through 5-1-31 shall be non-callable. Bonds due thereafter shall be made callable, at the option of the Issuer, in such order as the Issuer shall determine on any date on or after 3-1-31 at par and accrued interest; no premium.  
First Coupon: 5-1-2022 or such later date as determined upon sale  
Capitalized Interest: None  
Maximum Rate: 6%  
Maximum Spread: 3%  
Multiples: 1/8 or 1/100 of 1% or both  
Restriction: INTEREST RATES SHALL NOT BE IN DESCENDING ORDER.
Mr. Mark Nettleton  
May 14, 2021  
Page 2 – Grand Haven Township

Purchase Price: Not less than 99% or more than 110% of the par value.  
Basis of Award: Lowest True Interest Cost.  
Bond Insurance: Not at issuer’s expense.  
Good Faith Deposit: Require a 1% good faith deposit to be made by noon following the day of sale.  
Form of Bonds: Non-Certificated; Book Entry Only  
CUSIP Numbers: PFM, if required, will request CUSIP numbers for the bonds prior to sale and CUSIP numbers will be printed on the bonds at the option of and expense of the purchaser.  
Bid Acceptance: At the Township administrative office or by email to the Municipal Advisory Council. Bids may also be submitted via Parity or by Fax at either location.  
Official Statements: The Financial Consultant will provide a reasonable number of Final Official Statements in electronic only format to the managing underwriter at no cost.  
Notice of Sale: Publish in The Bond Buyer  
Issue Price: In the event necessary, permit the underwriter to elect the 10% rule or hold the price at their choosing.  
Delegation parameters: TIC shall not exceed 6%  
Purchase price shall not be less than 99%  
Bond term not to exceed 20 years

We would appreciate receiving a copy of the bond authorizing resolution, continuing disclosure undertaking and legal opinion when they become available. Please let me know if anything further is needed at this time.

Sincerely,

[Signature]

Paul R. Stauder  
Managing Director

PRS  
Enclosures

cc: William Cargo, Superintendent/Manager  
Andrea Sandoval, Finance Director  
Dale Deis / Aaron Wright / Stacy Adkins, PFM
$6,140,000
CHARTER TOWNSHIP OF GRAND HAVEN
COUNTY OF OTTAWA, STATE OF MICHIGAN
2021 PARKS IMPROVEMENT BONDS
(GENERAL OBLIGATION - UNLIMITED TAX)

ESTIMATED MILLAGE NEEDED TO RETIRE BONDED DEBT

<table>
<thead>
<tr>
<th>Tax Year</th>
<th>Payment Year</th>
<th>Existing UT Debt</th>
<th>Series 2021</th>
<th>Delinquency Allowance</th>
<th>Use of Funds</th>
<th>Proposed and Existing UT Debt</th>
<th>Projected Tax Rate</th>
<th>Growth Rate</th>
<th>New Bond Mills Needed</th>
<th>Mills Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Principal Due</td>
<td>Interest Rate</td>
<td>Interest Due</td>
<td>Interest Due</td>
<td>Total Debt</td>
<td>7.00%</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>2021</td>
<td>2022</td>
<td>0</td>
<td>$125,000</td>
<td>2.75%</td>
<td>$126,638</td>
<td>$82,706</td>
<td>$334,344</td>
<td>4.30%</td>
<td>0.40</td>
<td>0.40</td>
</tr>
<tr>
<td>2022</td>
<td>2023</td>
<td>0</td>
<td>$215,000</td>
<td>2.75%</td>
<td>$87,706</td>
<td>$377,456</td>
<td>3.00%</td>
<td>0.40</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>2024</td>
<td>0</td>
<td>$225,000</td>
<td>2.75%</td>
<td>$79,750</td>
<td>$381,406</td>
<td>2.50%</td>
<td>0.40</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>2025</td>
<td>0</td>
<td>$240,000</td>
<td>2.75%</td>
<td>$76,656</td>
<td>$390,013</td>
<td>2.50%</td>
<td>0.40</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>2026</td>
<td>0</td>
<td>$260,000</td>
<td>2.75%</td>
<td>$73,356</td>
<td>$403,138</td>
<td>2.50%</td>
<td>0.40</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>2026</td>
<td>2027</td>
<td>0</td>
<td>$275,000</td>
<td>2.75%</td>
<td>$69,781</td>
<td>$410,781</td>
<td>2.50%</td>
<td>0.40</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>2027</td>
<td>2028</td>
<td>0</td>
<td>$285,000</td>
<td>2.75%</td>
<td>$66,000</td>
<td>$431,081</td>
<td>2.50%</td>
<td>0.40</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>2028</td>
<td>2029</td>
<td>0</td>
<td>$295,000</td>
<td>2.75%</td>
<td>$62,081</td>
<td>$415,106</td>
<td>2.50%</td>
<td>0.38</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>2029</td>
<td>2030</td>
<td>0</td>
<td>$300,000</td>
<td>2.75%</td>
<td>$58,025</td>
<td>$411,925</td>
<td>2.50%</td>
<td>0.37</td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>2031</td>
<td>0</td>
<td>$310,000</td>
<td>2.75%</td>
<td>$53,900</td>
<td>$413,538</td>
<td>2.50%</td>
<td>0.36</td>
<td>0.36</td>
<td></td>
</tr>
<tr>
<td>2031</td>
<td>2032</td>
<td>0</td>
<td>$320,000</td>
<td>2.75%</td>
<td>$49,638</td>
<td>$414,875</td>
<td>2.50%</td>
<td>0.35</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>2032</td>
<td>2033</td>
<td>0</td>
<td>$330,000</td>
<td>2.75%</td>
<td>$45,238</td>
<td>$415,938</td>
<td>2.50%</td>
<td>0.35</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>2033</td>
<td>2034</td>
<td>0</td>
<td>$335,000</td>
<td>2.75%</td>
<td>$40,700</td>
<td>$411,794</td>
<td>2.50%</td>
<td>0.34</td>
<td>0.34</td>
<td></td>
</tr>
<tr>
<td>2034</td>
<td>2035</td>
<td>0</td>
<td>$345,000</td>
<td>2.75%</td>
<td>$36,094</td>
<td>$412,444</td>
<td>2.50%</td>
<td>0.33</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>2035</td>
<td>2036</td>
<td>0</td>
<td>$345,000</td>
<td>2.75%</td>
<td>$31,350</td>
<td>$412,819</td>
<td>2.50%</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>2036</td>
<td>2037</td>
<td>0</td>
<td>$365,000</td>
<td>2.75%</td>
<td>$26,469</td>
<td>$412,919</td>
<td>2.50%</td>
<td>0.31</td>
<td>0.31</td>
<td></td>
</tr>
<tr>
<td>2037</td>
<td>2038</td>
<td>0</td>
<td>$375,000</td>
<td>2.75%</td>
<td>$21,450</td>
<td>$412,744</td>
<td>2.50%</td>
<td>0.30</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>2038</td>
<td>2039</td>
<td>0</td>
<td>$385,000</td>
<td>2.75%</td>
<td>$16,294</td>
<td>$412,294</td>
<td>2.50%</td>
<td>0.30</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>2039</td>
<td>2040</td>
<td>0</td>
<td>$395,000</td>
<td>2.75%</td>
<td>$11,000</td>
<td>$411,569</td>
<td>2.50%</td>
<td>0.29</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>2040</td>
<td>2041</td>
<td>0</td>
<td>$405,000</td>
<td>2.75%</td>
<td>$5,569</td>
<td>$410,569</td>
<td>2.50%</td>
<td>0.28</td>
<td>0.28</td>
<td></td>
</tr>
<tr>
<td>2041</td>
<td>2042</td>
<td>0</td>
<td>$12,000</td>
<td>2.75%</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$0 $6,140,000 $1,032,694 $906,056 $8,078,750

$25,442 $0 $8,104,192

[1] Includes $0 of Existing UT Debt and $0 of Existing LT Debt
[2] Includes $1,201,000 of equivalent IFT valuations & less DDA/TIFA debt captures of $0 for 2021.

PRS/AW

Presale Gr Haven Township 2021 UTGO Presale
5/14/2021 4:18 PM
$6,140,000
CHARTER TOWNSHIP OF GRAND HAVEN
2021 PARKS IMPROVEMENT BONDS

**Bond Sizing Schedule**

<table>
<thead>
<tr>
<th>Bond Sizing</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond Discount</td>
<td>1.000% $61,400</td>
</tr>
<tr>
<td>Bond Insurance</td>
<td>0</td>
</tr>
<tr>
<td>Bond Attorney Fee</td>
<td>27,750</td>
</tr>
<tr>
<td>Financial Consultant Fee</td>
<td>24,140</td>
</tr>
<tr>
<td>Credit Rating</td>
<td>17,000</td>
</tr>
<tr>
<td>Total Bond Issuance Costs</td>
<td>$136,990</td>
</tr>
<tr>
<td>Estimated Other Costs</td>
<td>$5,134</td>
</tr>
<tr>
<td>Total Project Expenditures</td>
<td>$6,142,124</td>
</tr>
</tbody>
</table>

**Project Fund Draws and Earnings Section**

<table>
<thead>
<tr>
<th>Date</th>
<th>Project Expenditures</th>
<th>Issuance &amp; Other Costs</th>
<th>Totals</th>
<th>Average Life</th>
<th>Payout %</th>
<th>Project Fund Balance</th>
<th>Estimated Interest Rate</th>
<th>Projected Interest Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 21</td>
<td>$333,333</td>
<td>$142,124</td>
<td>$475,458</td>
<td>0.69</td>
<td>7.74%</td>
<td>5,664,542</td>
<td>0.05%</td>
<td>$236</td>
</tr>
<tr>
<td>Sep 21</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>13.17%</td>
<td>5,331,445</td>
<td>0.05%</td>
<td>222</td>
</tr>
<tr>
<td>Oct 21</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>18.59%</td>
<td>4,998,334</td>
<td>0.05%</td>
<td>208</td>
</tr>
<tr>
<td>Nov 21</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>24.02%</td>
<td>4,665,209</td>
<td>0.05%</td>
<td>194</td>
</tr>
<tr>
<td>Dec 21</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>29.45%</td>
<td>4,332,070</td>
<td>0.05%</td>
<td>181</td>
</tr>
<tr>
<td>Jan 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>34.88%</td>
<td>3,998,917</td>
<td>0.05%</td>
<td>167</td>
</tr>
<tr>
<td>Feb 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>40.30%</td>
<td>3,665,750</td>
<td>0.05%</td>
<td>153</td>
</tr>
<tr>
<td>Mar 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>45.73%</td>
<td>3,332,570</td>
<td>0.05%</td>
<td>139</td>
</tr>
<tr>
<td>Apr 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>51.16%</td>
<td>3,000,406</td>
<td>0.05%</td>
<td>125</td>
</tr>
<tr>
<td>May 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>56.58%</td>
<td>2,666,231</td>
<td>0.05%</td>
<td>111</td>
</tr>
<tr>
<td>Jun 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>62.01%</td>
<td>2,332,044</td>
<td>0.05%</td>
<td>97</td>
</tr>
<tr>
<td>Jul 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>67.44%</td>
<td>2,007,857</td>
<td>0.05%</td>
<td>83</td>
</tr>
<tr>
<td>Aug 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>72.86%</td>
<td>1,666,666</td>
<td>0.05%</td>
<td>69</td>
</tr>
<tr>
<td>Sep 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>78.29%</td>
<td>1,333,180</td>
<td>0.05%</td>
<td>56</td>
</tr>
<tr>
<td>Oct 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>83.72%</td>
<td>999,999</td>
<td>0.05%</td>
<td>42</td>
</tr>
<tr>
<td>Nov 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>89.15%</td>
<td>666,666</td>
<td>0.05%</td>
<td>28</td>
</tr>
<tr>
<td>Dec 22</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>94.57%</td>
<td>333,333</td>
<td>0.05%</td>
<td>14</td>
</tr>
<tr>
<td>Jan 23</td>
<td>333,333</td>
<td>333,333</td>
<td>666,666</td>
<td>0.69</td>
<td>100.00%</td>
<td>0</td>
<td>0.05%</td>
<td>0</td>
</tr>
<tr>
<td>Feb 23</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.69</td>
<td>100.00%</td>
<td>0</td>
<td>0.05%</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$6,000,000</td>
<td>$142,124</td>
<td>$6,142,124</td>
<td><strong>$2,124</strong></td>
<td><strong>PRS/AW</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Presale Gr Haven Township 2021 UTGO Presale 2021 Sizing

5/14/2021 4:18 PM
SUPERINTENDENT'S MEMO

DATE: May 17, 2021

TO: Township Board

FROM: Cargo

SUBJECT: Approval of Two (2) MNRTF Grant Agreements

The Township received authorization from the Michigan Department of Natural Resources to proceed forward with two Michigan Natural Resources Trust Fund (MNRTF) grants, which include:

- The purchase of the 15.7-acre parcel on Groesbeck Street abutting Hofma Park and Preserve at a total estimated acquisition cost of about $328,400 (with the Township funding about $82,100 of the total) which is MNRTF Land Acquisition Grant #TF20-0148; and,
- The development of an expanded trail system (including parking, benches, boardwalk, etc.) within the Witteveen Farm and Wolf property portions of Hofma Park and Preserve at a total estimated project cost of about $862,400 (with the Township funding about $562,400 of the total) which is MNRTF Development Grant #TF20-0154.

It is noted that 90% of the MNRTF land acquisition grant monies will be reimbursed to the Township after closing and the filing of a “Reimbursement Document” with the State. The final 10% will be reimbursed to the Township after completion of an audit by the State of Michigan. It is also noted that the MNRTF development grant monies can begin reimbursement after the development project is at least 25% complete.

To proceed forward with the two (2) attached project agreements (i.e., MNRTF Land Acquisition Grant #TF20-0148 and MNRTF Development Grant #TF20-0154) the following two (2) motions can be offered:

Move to approve Resolution 21-05-03, which approves MNRTF Land Acquisition Grant #TF20-0148 and authorizes the Township Superintendent to execute said agreement.

Move to approve Resolution 21-05-04, which approves MNRTF Development Grant #TF20-0154 and authorizes the Township Superintendent to execute said agreement.

Please contact me if you have any questions or comments.
At a regular meeting of the Township Board of the Charter Township of Grand Haven, Ottawa County, Michigan, held at the Township Hall at 13300 - 168th Avenue, Grand Haven Charter Township, Ottawa County, Michigan, on the 24th day of May, 2021, at 7:00 p.m., local time.

After certain matters of business had been completed, Supervisor Reenders announced that the next order of business was the consideration of an agreement as received from the Michigan Department of Natural Resources regarding a land acquisition grant for the purchase of a 15.7 acre parcel on Groesbeck Street adjacent to Hofma Park and Preserve.

The proposed agreement was discussed by the members of the Board, and after discussion was completed the following resolution was offered by ________________ and seconded by ________________:

GRAND HAVEN CHARTER TOWNSHIP
RESOLUTION NO. 21-05-03

RESOLVED, that the Grand Haven Charter Township (“Township”), Michigan, does hereby accept the terms of the agreement as received from the Michigan Department of Natural Resources (“Department”) and that the Township does hereby specifically agree, but not by way of limitation, as follows:

1. To appropriate all funds necessary to complete the project during the project period and to provide Eighty-Two Thousand and One Hundred dollars ($82,100.00) to match the grant authorized by the Department.
2. To maintain satisfactory financial accounts, documents, and records to make them available to the Department for auditing at reasonable times in perpetuity.
3. To regulate the use of the property acquired and reserved under this Agreement to assure the use thereof by the public on equal and reasonable terms.
4. To comply with any and all terms of said TF20-0148 Agreement including all terms not specifically set forth in the foregoing portions of this Resolution.

BE IT FURTHER RESOLVED, that the Township Superintendent is authorized to execute the agreement with the Department on behalf of the Township.

Ayes:
Nays:
Absent and Not Voting:

Resolution Declared: Adopted on May 24, 2021

________________________________
Laurie Larsen
Grand Haven Charter Township Clerk
CERTIFICATE

I, the undersigned, the duly qualified and acting Township Clerk of the Charter Township of Grand Haven, Ottawa County, Michigan, certify that the foregoing is a true and complete copy of the resolution adopted by the Township Board at a regular meeting of the Township Board held on the 24th day of May, 2021. I further certify that public notice of the meeting was given pursuant to and in full compliance with Michigan Act 267 of 1976, as amended, and that the minutes of the meeting were kept and will be or have been made available as required by the Act.

_________________________________
Laurie Larsen
Grand Haven Charter Township Clerk
This Agreement is between Grand Haven Charter Township in the county of Ottawa County hereinafter referred to as the “GRANTEE,” and the MICHIGAN DEPARTMENT OF NATURAL RESOURCES, an agency of the State of Michigan, hereinafter referred to as the “DEPARTMENT.” The DEPARTMENT has authority to issue grants to local units of government or public authorities for the acquisition of land for resource protection and public outdoor recreation under Part 19 of the Natural Resources and Environmental Protection Act, Act 451 of 1994, as amended, and under Article IX, Section 35 of the Michigan Constitution. The GRANTEE has been approved by the Michigan Natural Resources Trust Fund (MNRTF) Board of Trustees (BOARD) to receive a grant. In Public Act 9 of 2021, the Legislature appropriated funds from the MNRTF to the DEPARTMENT for a grant-in-aid to the GRANTEE.

The purpose of this Agreement is to provide funding to acquire land or rights in land for the project named below. This Agreement is subject to the terms and conditions specified herein.

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>Hofma Park and Preserve Land Acquisition</th>
<th>Project #:</th>
<th>TF20-0148</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of grant:</td>
<td>$246,300.00</td>
<td>Project TOTAL:</td>
<td>$328,400.00</td>
</tr>
<tr>
<td>Amount of match:</td>
<td>$82,100.00</td>
<td>End Date:</td>
<td>05/31/2023</td>
</tr>
<tr>
<td>Start Date:</td>
<td>Date of Execution by DEPARTMENT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As a precondition to the effectiveness of this Agreement, the GRANTEE is required to sign and return it to the DEPARTMENT with the necessary attachments by 07/06/2021, or the Agreement may be cancelled by the DEPARTMENT. This Agreement is not effective until the GRANTEE has signed it, returned it, and the DEPARTMENT has signed it. The Agreement is considered executed when signed by the DEPARTMENT.

The individuals signing below certify by their signatures that they are authorized to sign this Agreement on behalf of their agencies, and that the parties will fulfill the terms of this Agreement, including any attached appendices, as set forth herein.

GRANTEE

SIGNED

By [Print Name]:
Title:
Organization:
Date:

DUNS #

SIGMA Vendor Number  SIGMA Address ID

 Required - Please choose one Acquisition Closing Option Desired:

☐ This project will be completed utilizing a grant reimbursement process. Grantee will purchase land and seek reimbursement after closing.

☐ This project will be completed utilizing an escrow closing process.

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

SIGNED:

By
Grants Section Manager

Date of Execution by DEPARTMENT
1. This Agreement shall be administered on behalf of the DEPARTMENT by the Grants Management Section within the Finance and Operations Division. All notices, reports, documents, requests, actions or other communications required between the DEPARTMENT and the GRANTEE shall be submitted through the department’s online grant management system, MiRecGrants, which is accessed through www.michigan.gov/dnr-grants, unless otherwise instructed by the DEPARTMENT. Primary points of contact pertaining to this agreement shall be:

**GRANTEE CONTACT**

<table>
<thead>
<tr>
<th>Name/Title</th>
<th>Organization</th>
<th>Address</th>
<th>Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNRTF Grant Program Manager</td>
<td>Grants Management/DNR Finance &amp; Operations</td>
<td>525 W. Allegan Street, Lansing, MI 48933</td>
<td>517-284-7268</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name/Title</th>
<th>Organization</th>
<th>Address</th>
<th>Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:DNR-Grants@michigan.gov">DNR-Grants@michigan.gov</a></td>
<td></td>
<td>P.O. Box 30425, Lansing, MI 48909</td>
<td></td>
</tr>
</tbody>
</table>

2. The legal description of the project area, boundary map of the project area, and the land acquisition grant application bearing the number **TF20-0148** uploaded to MiRecGrants are by this reference made part of this Agreement. The Agreement together with the referenced documents in MiRecGrants constitute the entire Agreement between the parties and may be modified only in writing and executed in the same manner as the Agreement is executed.

3. The time period allowed for project completion is from **05/07/2021** through **05/31/2023**, hereinafter referred to as the “project period.” Requests by the GRANTEE to extend the project period shall be submitted in MiRecGrants before the expiration of the project period. Extensions to the project period are at the discretion of the DEPARTMENT and may only be extended by an amendment to this Agreement.

4. The grant herein provided is for the acquisition by the GRANTEE of **15.7** acres of land in **Fee Simple** title free of all liens and encumbrances, situated and being in the city/village/township of **Grand Haven Charter Township**, in the County of **Ottawa County, STATE OF MICHIGAN** as described in the uploaded legal description and shown on the uploaded boundary map. As used in this Agreement, the words “project area” shall mean the lands acquired under this Agreement as described in this Section.

5. The project area shall be used for **outdoor recreation and habitat conservation**, as further described in the GRANTEE’S proposal to the DEPARTMENT and approved by the MNRTF Board. Significant changes in the use of the project area as described in this Section require the prior written authorization of the DEPARTMENT.

6. In order to preserve the financial resources of the State of Michigan and to prevent unjust enrichment of a third party interim owner, if the landowner listed in the project application grants any rights in the real property to an individual or agency other than the GRANTEE, the DEPARTMENT may inspect the terms of the conveyance as a condition to approving the GRANTEE to close.

7. The DEPARTMENT will:
a. grant to the GRANTEE a sum of money equal to Seventy-Five percent (75%) as reimbursement or as payment into an escrow account for escrow closing, of the total eligible cost of acquisition of fee simple title free of all liens and encumbrances to the lands in the project area, not to exceed the sum of Two Hundred and Forty-Six Thousand Three Hundred dollars ($246,300.00). Acquisition of easements or other rights in land less than fee simple will be considered on a case by case basis at the discretion of the DEPARTMENT.

b. include the following in the total cost of acquisition eligible for grant funding (based on grant percentage) as provided for in Section 7(a):

i. Purchase price of the land, up to the market value, in the project area acquired by the GRANTEE during the project period as provided for in section 9(f) of this Agreement;

ii. Reasonable and appropriate costs incurred and paid by the GRANTEE during the project period for recording fees, title insurance, transfer tax, prorated property tax, closing fees and environmental assessments; and

iii. Costs incurred and paid by the GRANTEE for appraisal(s) as provided for in Section 9(f) and approved by the DEPARTMENT.

c. grant funds to the GRANTEE for eligible costs and expenses incurred, as follows:

i. Payments will be made on a reimbursement basis or to an escrow account for escrow closing for Seventy-Five percent (75%) of the eligible expenses incurred by the GRANTEE up to 90% of the maximum amount allowable under the grant.

ii. Reimbursement (or payment to an escrow account for escrow closing) will be made only upon DEPARTMENT review and approval of a complete reimbursement (or escrow closing) request submitted by the GRANTEE on forms provided by the DEPARTMENT that meet all documentation requirements set forth by the DEPARTMENT. A complete reimbursement or escrow closing request must document the total cost of the acquisition and the GRANTEE’s compliance with Section 8 of this Agreement and DEPARTMENT acquisition project procedures.

iii. The DEPARTMENT shall conduct an audit of the project’s financial records upon approval of the final reimbursement request or completion of the escrow closing. The DEPARTMENT may issue an audit report with no deductions or may find some costs ineligible for final audit reimbursement.

iv. The final 10% of the grant amount will be released upon completion of a satisfactory audit by the DEPARTMENT and documentation that the GRANTEE has erected proper signage acknowledging MNRTF assistance in compliance with Section 9(q) of this Agreement.

8. Closing Options:

a. FOR REIMBURSEMENT PROJECTS:

The GRANTEE shall be eligible for reimbursement only upon GRANTEE’S completion of all of the following:

i. Electing to use the grant reimbursement closing process at time of signing this project agreement (See grey box prior to signature section).

ii. Acquisition by GRANTEE of fee simple title free of all liens and encumbrances of all land in the project area. Acquisition of easements or other rights in land less than fee simple will be considered on a case by case basis at the discretion of the DEPARTMENT.

iii. Submission of proof of acquisition of marketable record title to the DEPARTMENT in the form of a policy of title insurance ensuring the GRANTEE possesses marketable record title in fee simple, free of all liens and encumbrances to the land in the project area. Said policy is to insure the GRANTEE against loss or damage at least equal to the purchase price of the subject land.

iv. Proper conveyance to the State of Michigan of all mineral interest to which the State is entitled under this Agreement as outlined in Section 9(m).

v. Submission of a complete request for reimbursement as set forth in this Agreement.

b. FOR ESCROW CLOSING PROJECTS:

The GRANTEE shall be eligible for grant funding through escrow closing process only upon GRANTEE’S completion of the following:

i. Electing to use the escrow closing process at time of signing this project agreement (See grey box prior to signature section).

ii. Securing the services of a reputable title company who will agree to serve as the escrow closing agent.
iii. Execution of escrow closing agreement by GRANTEE, DEPARTMENT, LANDOWNER/SELLER and title company (agent).

iv. Providing Department and title company an approximate desired timeframe for closing.

v. Sending DEPARTMENT the draft closing packet (reference Land Acquisition Escrow Closing Package Checklist) at least 60 days prior to the desired closing date.

vi. Coordinating with title company to schedule the exact closing date after DEPARTMENT’S approval of draft closing documents and submitting to DEPARTMENT an updated closing statement from the title company at least 10 days before the desired closing date.

vii. Submitting local matching funds plus 10% of the eligible grant amount to title company for deposit into escrow account and providing proof of escrowed funds to the DEPARTMENT.

9. The GRANTEE will:

a. immediately make available all funds needed to pay all necessary costs required to complete the project and to provide Eighty-Two Thousand One Hundred dollars ($82,100.00) as local match to this project. This sum represents Twenty-Five percent (25%) of the total eligible cost of acquisition including incidental costs. Any cost overruns incurred to complete the project called for by this Agreement shall be the sole responsibility of the GRANTEE.

b. complete the acquisition in compliance with the acquisition project procedures set forth by the DEPARTMENT.

c. make no written offer or commitment to purchase lands in the project area before execution of this Agreement and before written DEPARTMENT approval as provided for in Section 9. Failure to comply with this requirement shall, at the option of the DEPARTMENT, make the cost of the property an ineligible expense under this Agreement and subject this Agreement to termination by the DEPARTMENT.

d. provide verification that the site is not a facility as defined in Part 201 of the Michigan Natural Resources and Environmental Protection Act, Act 451 of the Public Acts of 1994, as amended, based on the results of due diligence and, if needed, an environmental assessment or, if the site has been determined to be a facility, to provide documentation of due care compliance. The results of the due diligence must be accounted for in the appraisal(s).

e. complete a 40-year title review on the property. The results of the title review must be accounted for in the appraisal(s).

f. obtain an appraisal of the real estate within the project area in accordance with standards established by the DEPARTMENT to determine the market value thereof; two appraisals meeting these standards being required for properties valued at $750,000 or more. Failure to complete the appraisal(s) in this manner shall make the cost of said appraisal(s) an ineligible expense under this Agreement.

g. submit the appraisal(s) to the DEPARTMENT for approval no later than 120 days after the date of execution of this Agreement. No written offer or commitment to purchase land in the project area shall be transmitted by the GRANTEE until after approval has been given in writing by the DEPARTMENT.

h. perform, or to directly contract for the performance of, all appraisal(s), appraisal review(s), title review, closing and acquisition of all lands in the project area.

i. eliminate all pre-existing non-recreation uses of the project area within 90 days of the date of acquisition, unless otherwise approved by the DEPARTMENT in writing.

j. remove existing structures or make ready for an appropriate use in a reasonable time frame after completion of the acquisition.

k. complete acquisition of the entire project area before 05/31/2023. Failure to acquire the project area by 05/31/2023 shall constitute a breach of this Agreement and subject the GRANTEE to the remedies provided by law and set forth in Section 23 of this Agreement.

l. provide the DEPARTMENT all documents and information as specified in Sections 8a or 8b of this Agreement. If utilizing reimbursement process, documents must be submitted within 60 days after the transaction is closed. If utilizing escrow closing process, documents must be submitted no later than 60 days prior to desired closing. Failure to submit the required documents and information for review shall constitute a material breach of this Agreement. Proof of payment to seller (such as cancelled check, wire confirmation, etc.), recorded warranty deed, recorded mineral royalty deed and recorded Declaration and Notice must be submitted to the DEPARTMENT within 60 days after closing. The final 10% of eligible grant amount will be released upon satisfactory audit review and approval by the DEPARTMENT.

m. for parcels over 5 acres, execute, acknowledge and deliver to the DEPARTMENT a deed conveying to the State of Michigan a perpetual nonparticipating royalty equal to 1/6 of the gross proceeds of sale of all oil and/or gas and other minerals produced and saved in any combination from the mineral rights in, on or under the lands in the project area.

n. retain all rights acquired by the GRANTEE in coal, oil, gas, sand, gravel or any other minerals in, on or under the lands in the project area in perpetuity.
10. The GRANTEE shall acquire fee simple title, free of all liens, encumbrances, or restrictions on future use to the lands in the project area. The fee simple title acquired shall not be subject to (1) any possibility of reversion or right of entry for condition broken or any other executory limitation which may result in defeasance of title or (2) to any reservations or prior conveyance of coal, oil, gas, sand, gravel or any other mineral interests.

11. The GRANTEE shall not allow any encumbrance, lien, security interest, mortgage or any evidence of indebtedness to attach to or be perfected against the project area.

12. The project area and any facilities located thereon shall not be wholly or partially conveyed, either in fee, easement or otherwise, or leased for a term of years, or for any other period, nor shall there be any whole or partial transfer of title, ownership, or right of ownership or control without the written approval and consent of the DEPARTMENT.

13. The assistance provided to the GRANTEE as a result of this Agreement is intended to have a lasting effect on the supply of outdoor recreation, scenic beauty sites, and recreation facilities beyond the financial contribution alone and permanently commits the project area to Michigan’s outdoor recreation estate, therefore:
a. The GRANTEE agrees that lands in the project area are being acquired with MNRTF assistance and shall be maintained in public outdoor recreation use in perpetuity. No portion of the project area shall be converted to other than public outdoor recreation use without the approval of the DEPARTMENT. The DEPARTMENT shall approve such conversion only upon such conditions as it deems necessary to assure the substitution by GRANTEE of other outdoor recreation properties of equal or greater market value and of reasonably equivalent usefulness and location. Such substituted land shall become part of the project area and will be subject to all the provisions of this Agreement.

b. Approval of a conversion shall be at the sole discretion of the DEPARTMENT.

c. Before completion of the project, the GRANTEE and the DEPARTMENT may mutually agree to alter the project area through an amendment to this Agreement to provide the most satisfactory public outdoor recreation area.

14. Should title to the lands in the project area or any portion thereof be acquired from the GRANTEE by any other entity through exercise of the power of eminent domain, the GRANTEE agrees that the proceeds awarded to the GRANTEE shall be used to replace the lands affected with outdoor recreation properties of equal or greater market value, and of reasonably equivalent usefulness and location. The DEPARTMENT shall approve such replacement only upon such conditions as it deems necessary to assure the substitution with other outdoor recreation properties of equal or greater market value and of reasonably equivalent usefulness and location. Such replacement land shall be subject to all the provisions of this Agreement.

15. The GRANTEE acknowledges that:

   a. The GRANTEE has examined the project area and has found the property safe for public use or actions will be taken by the GRANTEE to make the property safe for public use no later than 90 days after the date of acquisition; and

   b. The GRANTEE is solely responsible for development, operation, and maintenance of the project area, and that responsibility for actions taken to develop, operate, or maintain the project area is solely that of the GRANTEE; and

   c. The DEPARTMENT’s involvement in the premises is limited solely to the making of a grant to assist the GRANTEE in acquiring the premises.

   d. The GRANTEE acknowledges that the DEPARTMENT is not responsible for any tax liability assessed on the property after closing by the GRANTEE. Further, the eligible amount of tax pro-rated at time of closing will be determined by the DEPARTMENT.

16. Before the DEPARTMENT will give approval to make a written offer to purchase the property included in this project, the GRANTEE must provide documentation to the DEPARTMENT that indicates either:

   a. It is reasonable for the GRANTEE to conclude, based on the advice of an environmental consultant, as appropriate, that no portion of the project area is a facility as defined in Part 201 of the Michigan Natural Resources and Environmental Protection Act, Act 451 of the Public Acts of 1994, as amended;

   or

   b. If any portion of the project area is a facility, documentation that Department of Environment, Great Lakes and Energy-approved response actions have been or will be taken to make the site safe for its intended use within the project period, and that implementation and long-term maintenance of response actions will not hinder public outdoor recreation use and/or the resource protection values of the project area.

17. If the DEPARTMENT determines that, based on contamination, the project area will not be made safe for the planned recreation use within the project period, or another date established by the DEPARTMENT in writing, or if the DEPARTMENT determines that the presence of contamination will reduce the overall usefulness of the property for public recreation and resource protection, the grant may be cancelled by the DEPARTMENT with no reimbursement made to the GRANTEE.

18. The GRANTEE shall acquire and maintain, or cause to be acquired or maintained, insurance which will protect the GRANTEE from claims which may arise out of or result from the GRANTEE’S operations under this Agreement, whether performed by the GRANTEE, a subcontractor or anyone directly or indirectly employed by the GRANTEE, or anyone for whose acts may hold them liable. Such insurance shall be with companies authorized to do business in the State of Michigan in such amounts and against such risks as are ordinarily carried by similar entities, including but not limited to public liability insurance, worker’s compensation insurance or a program of self-insurance complying with the requirements.
of Michigan law. The GRANTEE shall provide evidence of such insurance to the DEPARTMENT at its request.

19. Nothing in this Agreement shall be construed to impose any obligation upon the DEPARTMENT to operate, maintain or provide funding for the operation and/or maintenance of any recreational facilities in the project area.

20. The GRANTEE hereby represents that it will defend any suit brought against either party which involves title, ownership, or any other rights, whether specific or general, including any appurtenant riparian rights, to and in the project area and any lands connected with or affected by this project.

21. The GRANTEE is responsible for the use and occupancy of the premises, the project area and the facilities thereon. The GRANTEE is responsible for the safety of all individuals who are invitees or licensees of the premises. The GRANTEE will defend all claims resulting from the use and occupancy of the premises, the project area and the facilities thereon. The DEPARTMENT is not responsible for the use and occupancy of the premises, the project area and the facilities thereon.

22. Failure by the GRANTEE to comply with any of the provisions of this Agreement shall constitute a material breach of this Agreement.

23. Upon breach of the Agreement by the GRANTEE, the DEPARTMENT, in addition to any other remedy provided by law and this Agreement, may:
   a. Terminate this Agreement; and/or
   b. Withhold and/or cancel future payments to the GRANTEE on any or all current recreation grant projects until the violation is resolved to the satisfaction of the DEPARTMENT; and/or
   c. Withhold action on all pending and future grant applications submitted by the GRANTEE under the Michigan Natural Resources Trust Fund, the Land and Water Conservation Fund and the Recreation Passport Grant Program; and/or
   d. Require repayment of grant funds already paid to GRANTEE; and/or
   e. Seek specific performance of the Agreement terms.

24. This Agreement may be canceled by the DEPARTMENT, upon 30 days written notice, due to Executive Order, budgetary reduction, other lack of funding, upon request by the GRANTEE, or upon mutual Agreement by the DEPARTMENT and GRANTEE. The DEPARTMENT may honor requests for just and equitable compensation to the GRANTEE for all satisfactory and eligible work completed under this Agreement up until 30 days after written notice, upon which time all outstanding reports and documents are due to the DEPARTMENT and the DEPARTMENT will no longer be liable to pay the GRANTEE for any further charges to the grant.

25. The GRANTEE agrees that the benefit to be derived by the State of Michigan from the full compliance by the GRANTEE with the terms of this Agreement is the preservation, protection and the net increase in the quality of public outdoor recreation facilities and resources which are available to the people of the State and of the United States and such benefit exceeds to an immeasurable and unascertainable extent the amount of money furnished by the State of Michigan by way of assistance under the terms of this Agreement. The GRANTEE agrees that after final audit reimbursement has been made to the GRANTEE, repayment by the GRANTEE of grant funds received would be inadequate compensation to the State for any breach of this Agreement. The GRANTEE further agrees therefore, that the appropriate remedy in the event of a breach by the GRANTEE of this Agreement after final audit reimbursement has been made shall be the specific performance of this Agreement.

26. The GRANTEE agrees not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of religion, race, color, national origin, age, sex, sexual orientation, height, weight, marital status, partisan considerations, or a disability or genetic information that is unrelated to the person's ability to perform the duties of a particular job or position. The GRANTEE further agrees that any subcontract shall contain non-discrimination provisions which are not less stringent than this provision and binding upon any and all subcontractors. A breach of this covenant shall be regarded as a material breach of this Agreement.

27. The GRANTEE may not assign or transfer any interest in this Agreement without prior written authorization of the DEPARTMENT.

28. The rights of the DEPARTMENT under this Agreement shall continue in perpetuity.

If this Agreement is approved by Resolution, a true copy must be attached to this Agreement. A sample Resolution is on the next
SAMPLE RESOLUTION
(Acquisition)

Upon motion made by ______________________________, seconded by ______________________________, the following Resolution was adopted:

“RESOLVED, that the ______________________________, Michigan, does hereby accept the terms of the Agreement as received from the Michigan Department of Natural Resources and that the ______________________________ does hereby specifically agree, but not by way of limitation, as follows:

1. To appropriate all funds necessary to complete the project during the project period and to provide ______________________________($____________) dollars to match the grant authorized by the DEPARTMENT.

2. To maintain satisfactory financial accounts, documents, and records to make them available to the DEPARTMENT for auditing at reasonable times in perpetuity.

3. To regulate the use of the property acquired and reserved under this Agreement to assure the use thereof by the public on equal and reasonable terms.

4. To comply with any and all terms of said Agreement including all terms not specifically set forth in the foregoing portions of this Resolution.

The following aye votes were recorded: ________________
The following nay votes were recorded: ________________

STATE OF MICHIGAN )
 ) ss
COUNTY OF __________  )

I, _______________________________, Clerk of the ______________________________, Michigan, do hereby certify that the above is a true and correct copy of the Resolution relative to the Agreement with the Michigan Department of Natural Resources, which Resolution was adopted by the ______________________________ at a meeting held ________________________.

________________________________
Signature

________________________________
Title

________________________________
Dated
At a regular meeting of the Township Board of the Charter Township of Grand Haven, Ottawa County, Michigan, held at the Township Hall at 13300 - 168th Avenue, Grand Haven Charter Township, Ottawa County, Michigan, on the 24th day of May, 2021, at 7:00 p.m., local time.

After certain matters of business had been completed, Supervisor Reenders announced that the next order of business was the consideration of an agreement as received from the Michigan Department of Natural Resources regarding a development grant for the trail expansion and development project with Hofma Park and Preserve.

The proposed agreement was discussed by the members of the Board, and after discussion was completed the following resolution was offered by ________________ and seconded by ________________:

GRAND HAVEN CHARTER TOWNSHIP
RESOLUTION NO. 21-05-04

RESOLVED, that the Grand Haven Charter Township (“Township”), Michigan, does hereby accept the terms of the agreement as received from the Michigan Department of Natural Resources (“Department”) and that the Township does hereby specifically agree, but not by way of limitation, as follows:

1. To appropriate all funds necessary to complete the project during the project period and to provide Five Hundred and Sixty-Two Thousand and Four Hundred dollars ($562,400.00) to match the grant authorized by the Department.
2. To maintain satisfactory financial accounts, documents, and records to make them available to the Department for auditing at reasonable times in perpetuity.
3. To regulate the use of the property acquired and reserved under this Agreement to assure the use thereof by the public on equal and reasonable terms.
4. To comply with any and all terms of said TF20-0154 Agreement including all terms not specifically set forth in the foregoing portions of this Resolution.

BE IT FURTHER RESOLVED, that the Township Superintendent is authorized to execute the agreement with the Department on behalf of the Township.

Ayes:
Nays:
Absent and Not Voting:

Resolution Declared: Adopted on May 24, 2021

________________________________
Laurie Larsen
Grand Haven Charter Township Clerk
CERTIFICATE

I, the undersigned, the duly qualified and acting Township Clerk of the Charter Township of Grand Haven, Ottawa County, Michigan, certify that the foregoing is a true and complete copy of the resolution adopted by the Township Board at a regular meeting of the Township Board held on the 24th day of May, 2021. I further certify that public notice of the meeting was given pursuant to and in full compliance with Michigan Act 267 of 1976, as amended, and that the minutes of the meeting were kept and will be or have been made available as required by the Act.

______________________________
Laurie Larsen
Grand Haven Charter Township Clerk
This Agreement is between Grand Haven Charter Township in the county of Ottawa County, hereinafter referred to as the "GRANTEE," and the MICHIGAN DEPARTMENT OF NATURAL RESOURCES, an agency of the State of Michigan, hereinafter referred to as the "DEPARTMENT." The DEPARTMENT has authority to issue grants to local units of government for the development of public outdoor recreation facilities under Part 19 of the Natural Resources and Environmental Protection Act, P.A. 451 of 1994, as amended and under Article IX, Section 35 of the Michigan Constitution. The GRANTEE has been approved by the Michigan Natural Resources Trust Fund (MNRTF) Board of Trustees (BOARD) to receive a grant. In Public Act 9 of 2021, the Legislature appropriated funds from the MNRTF to the DEPARTMENT for a grant-in-aid to the GRANTEE.

The purpose of this Agreement is to provide funding in exchange for completion of the project named below. This Agreement is subject to the terms and conditions specified herein.

Project Title: Hofma Park & Preserve - Trail Expansion & Universal Design
Project #: TF20-0154

Grant Amount: $300,000.00
Match Amount: $562,400.00
PROJECT TOTAL: $862,400.00

Start Date: Date of Execution by DEPARTMENT
End Date: 05/31/2023

As a precondition to the effectiveness of the Agreement, the GRANTEE is required to sign the Agreement and return it to the DEPARTMENT with the required attachments by 07/06/2021 or the Agreement may be cancelled by the DEPARTMENT. This Agreement is not effective until the GRANTEE has signed it, returned it, and the DEPARTMENT has signed it. The Agreement is considered executed when signed by the DEPARTMENT.

The individuals signing below certify by their signatures that they are authorized to sign this Agreement on behalf of their agencies, and that the parties will fulfill the terms of this Agreement, including any attached appendices, as set forth herein.

GRANTEE

SIGNED

By [Print Name]:
Title:
Organization:

DUNS Number

______________________________
SIGMA Vendor Number
______________________________
SIGMA Address ID

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

SIGNED

By:
Grants Section Manager

Date of Execution by DEPARTMENT
1. This Agreement shall be administered on behalf of the DEPARTMENT by the Grants Management Section within the Finance and Operations Division. All notices, reports, documents, requests, actions or other communications required between the DEPARTMENT and the GRANTEE shall be submitted through the department’s online grant management system, MiRecGrants, which is accessed through www.michigan.gov/dnr-grants, unless otherwise instructed by the DEPARTMENT. Primary points of contact pertaining to this agreement shall be:

**GRANTEE CONTACT**

<table>
<thead>
<tr>
<th>Name/Title</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNRTF Grant Program Manager</td>
<td>Grants Management/DNR Finance &amp; Operations</td>
</tr>
<tr>
<td>__________</td>
<td>__________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address</th>
<th>E-mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>525 W. Allegan Street, Lansing, MI 48933</td>
<td><a href="mailto:DNR-Grants@michigan.gov">DNR-Grants@michigan.gov</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone Number</th>
<th>E-mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>517-284-7268</td>
<td>__________</td>
</tr>
</tbody>
</table>

2. The legal description of the project area, boundary map of the project area, and the development grant application bearing the number **TF20-0154** uploaded to MiRecGrants are by this reference made part of this Agreement. The Agreement together with the referenced documents in MiRecGrants constitute the entire Agreement between the parties and may be modified only in writing and executed in the same manner as the Agreement is executed.

3. The time period allowed for project completion is from **05/07/2021** through **05/31/2023**, hereinafter referred to as the “project period.” Requests by the GRANTEE to extend the project period shall be submitted in MiRecGrants before the expiration of the project period. Extensions to the project period are at the discretion of the DEPARTMENT and may only be extended by an amendment to this Agreement.

4. The words "project area" shall mean the land and area described in the uploaded legal description and shown on the uploaded boundary map.

5. The words "project facilities" shall mean the following individual components, as further described in the application.

   - Bench(es)
   - Boardwalk
   - Landscaping
   - Lighting
   - Overlook or Observation Deck
   - Paved Parking Lot
   - Rain Garden with Native Plants
   - Signage
   - Trail 8' wide or more
   - Trash Bin(s)
   - Utilities

6. The DEPARTMENT will:
a. grant to the GRANTEE a sum of money equal to Thirty-Five percent (35%) of Eight Hundred and Sixty-Two Thousand Four Hundred dollars ($862,400.00), which is the total eligible cost of construction of the project facilities including engineering costs, but in any event not to exceed Three Hundred Thousand dollars ($300,000.00).

b. grant these funds in the form of reimbursements to the GRANTEE for eligible costs and expenses incurred as follows:

   i. Payments will be made on a reimbursement basis at Thirty-Five percent (35%) of the eligible expenses incurred by the GRANTEE up to 90% of the maximum reimbursement allowable under the grant.
   ii. Reimbursement will be made only upon DEPARTMENT review and approval of a complete reimbursement request submitted by the GRANTEE through the MiRecGrants website, including but not limited to copies of invoices, cancelled checks, EFTs, list of volunteer and/or force account time and attendance records.
   iii. The DEPARTMENT shall conduct an audit of the project’s financial records upon approval of the final reimbursement request by DEPARTMENT staff. The DEPARTMENT may issue an audit report with no deductions or may find some costs ineligible for reimbursement.
   iv. The final 10% of the grant amount will be released upon completion of a satisfactory audit by the DEPARTMENT and documentation that the GRANTEE has erected an MNRTF sign in compliance with Section 7(j) of this Agreement.

7. The GRANTEE will:

   a. immediately make available all funds needed to incur all necessary costs required to complete the project and to provide Five Hundred and Sixty-Two Thousand Four Hundred dollars ($562,400.00) in local match. This sum represents Sixty-Five percent (65%) of the total eligible cost of construction including engineering costs. Any cost overruns incurred to complete the project facilities called for by this Agreement shall be the sole responsibility of the GRANTEE.
   b. with the exception of engineering costs as provided for in Section 8, incur no costs toward completion of the project facilities before execution of this Agreement and before DEPARTMENT approval of plans, specifications and bid documents.
   c. complete construction of the project facilities to the satisfaction of the DEPARTMENT and to comply with the development project procedures set forth by the DEPARTMENT in completion of the project, including but not limited to the following:

      i. Retain the services of a professional architect, landscape architect, or engineer, registered in the State of Michigan to serve as the GRANTEE’S Prime Professional. The Prime Professional shall prepare the plans, specifications and bid documents for the project and oversee project construction.
      ii. Within 180 days following execution of this Agreement by the GRANTEE and the DEPARTMENT and before soliciting bids or quotes or incurring costs other than costs associated with the development of plans, specifications, or bid documents, provide the DEPARTMENT with plans, specifications, and bid documents for the project facilities, sealed by the GRANTEE’S Prime Professional.
      iii. Upon DEPARTMENT approval of plans, specifications and bid documents, openly advertise and seek written bids for contracts for purchases or services with a value equal to or greater than $50,000 and accept the lowest qualified bid as determined by the GRANTEE’S Prime Professional.
      iv. Upon DEPARTMENT approval of plans, specifications and bid documents, solicit three (3) written quotes for contracts for purchases or services between $5,000 and $50,000 and accept the lowest qualified bid as determined by the GRANTEE’S Prime Professional.
      v. Maintain detailed written records of the contracting processes used and submit these records to the DEPARTMENT upon request.
      vi. Complete construction to all applicable local, state and federal codes, as amended; including but not limited to the federal Americans with Disabilities Act (ADA) of 2010, as amended; the Persons with Disabilities Civil Rights Act, Act 220 of 1976, as amended; the Playground Equipment Safety Act, P.A. 16 of 1997, as amended; the Utilization of Public Facilities by Physically Limited Act, P.A. 1 of 1966, as amended; the Elliott-Larsen Civil Rights Act, Act 453 of 1976, as amended; and the 2013 Access Board’s Final Guidelines for Outdoor Developed Areas.
      vii. Bury all new utilities within the project area.
      viii. Correct any deficiencies discovered at the final inspection within 90 days of written notification by the DEPARTMENT. These corrections shall be made at the GRANTEE’S expense and are eligible for
reimbursement at the discretion of the DEPARTMENT and only to the degree that the GRANTEE’S prior expenditures made toward completion of the project are less than the grant amount allowed under this Agreement.

d. operate the project facilities for a minimum of their useful life as determined by the DEPARTMENT, to regulate the use thereof to the satisfaction of the DEPARTMENT, and to appropriate such monies and/or provide such services as shall be necessary to provide such adequate maintenance.

e. provide to the DEPARTMENT for approval, a complete tariff schedule containing all charges to be assessed against the public utilizing the project area and/or any of the facilities constructed thereon, and to provide to the DEPARTMENT for approval, all amendments thereto before the effective date of such amendments. Preferential membership or annual permit systems are prohibited on grant-assisted sites, except to the extent that differences in admission and other fees may be instituted on the basis of residence. Nonresident fees shall not exceed twice that charged residents. If no resident fees are charged, nonresident fees may not exceed the rate charged residents at other comparable state and local public recreation facilities.

f. adopt such ordinances and/or resolutions necessary to effectuate the provisions of this Agreement; certified copies of all such ordinances and/or resolutions adopted for such purposes shall be forwarded to the DEPARTMENT before the effective date thereof.

g. separately account for any revenues received from the project area which exceed the demonstrated operating costs and to reserve such surplus revenues for the future maintenance and/or expansion of the GRANTEE’S park and outdoor recreation program.

h. furnish the DEPARTMENT, upon request, detailed statements covering the annual operation of the project area and/or project facilities, including income and expenses and such other information the DEPARTMENT might reasonably require.

i. maintain the premises in such condition as to comply with all federal, state, and local laws which may be applicable, and to make any and all payments required for all taxes, fees, or assessments legally imposed against the project area.

j. erect and maintain a sign on the property which designates this project as one having been constructed with the assistance of the MNRTF. The size, color and design of this sign shall be in accordance with DEPARTMENT specifications.

k. conduct a dedication/ribbon-cutting ceremony as soon as possible after the project is completed and the MNRTF sign is erected within the project area. At least 30 days prior to the dedication/ribbon-cutting ceremony, the DEPARTMENT must be notified in writing of the date, time, and location of the dedication/ribbon-cutting ceremony. GRANTEE shall provide notice of ceremony in the local media. Use of the grant program logo and a brief description of the program are strongly encouraged in public recreation brochures produced by the GRANTEE. At the discretion of the DEPARTMENT, the requirement to conduct a dedication/ribbon-cutting ceremony may be waived.

8. Only eligible costs and expenses incurred toward completion of the project facilities after execution of the Project Agreement shall be considered for reimbursement under the terms of this Agreement. Eligible engineering costs incurred toward completion of the project facilities beginning January 1, 2021 and throughout the project period are also eligible for reimbursement. Any costs and expenses incurred after the project period shall be the sole responsibility of the GRANTEE.

9. To be eligible for reimbursement, the GRANTEE shall comply with DEPARTMENT requirements. At a minimum, the GRANTEE shall:

   a. Submit a progress report every 180 days during the project period.

   b. Submit complete requests for partial reimbursement when the GRANTEE is eligible to request at least 25 percent of the grant amount and construction contracts have been executed or construction by force account labor has begun.

   c. Submit a complete request for final reimbursement within 90 days of project completion and no later than 08/31/2023. If the GRANTEE fails to submit a complete final request for reimbursement by 08/31/2023, the DEPARTMENT may audit the project costs and expenses and make final payment based on documentation on file as of that date or may terminate this Agreement and require full repayment of grant funds by the GRANTEE.

10. During the project period, the GRANTEE shall obtain prior written authorization from the DEPARTMENT before adding, deleting or making a significant change to any of the project facilities as proposed. Approval of changes is solely at the discretion of the DEPARTMENT. Furthermore, following project completion, the GRANTEE shall obtain prior written authorization from the DEPARTMENT before implementing a change that significantly alters the project facilities as constructed and/or the project area, including but not limited to discontinuing use of a project facility or making a significant change in the recreational use of the project area. Changes approved by the DEPARTMENT pursuant to this Section may
also require prior approval of the BOARD, as determined by the DEPARTMENT.

11. All project facilities constructed or purchased by the GRANTEE under this Agreement shall be placed and used at the project area and solely for the purposes specified in the application and this Agreement.

12. The project area and all facilities provided thereon, as well as the land and water access ways to them, shall be open to the general public at all times on equal and reasonable terms. No individual shall be denied ingress or egress thereto or the use thereof because of sex, race, color, religion, national origin, residence, age, height, weight, familial status, marital status, or disability.

13. Unless an exemption has been authorized by the DEPARTMENT pursuant to this Section, the GRANTEE hereby represents that it possesses fee simple title, free of all liens and encumbrances, to the project area. The fee simple title shall not be subject to: 1) any possibility of reversion or right of entry for condition broken or any other executory limitation which may result in defeasance of title or 2) to any reservation or prior conveyance of coal, oil, gas, sand, gravel or other mineral interests. For any portion of the project area that the GRANTEE does not possess in fee simple title, the GRANTEE hereby represents that it has:

   a. Received an exemption from the DEPARTMENT before the execution of this Agreement, and
   b. Received prior approval from the DEPARTMENT of a lease and/or easement for any portion of the property not held in fee simple title as indicated in written correspondence from the DEPARTMENT dated ____________________________, and
   c. Supplied the DEPARTMENT with an executed copy of the approved lease or easement, and
   d. Confirmed through appropriate legal review that the terms of the lease or easement are consistent with GRANTEE’S obligations under this Agreement and will not hinder the GRANTEE’S ability to comply with all requirements of this Agreement. In no case shall the lease or easement tenure be less than 20 years from the date of execution of this Agreement.

14. The GRANTEE shall not allow any encumbrance, lien, security interest, mortgage or any evidence of indebtedness to attach to or be perfected against the project area or project facilities included in this Agreement.

15. None of the project area, nor any of the project facilities constructed under this Agreement, shall be wholly or partially conveyed in perpetuity, either in fee, easement or otherwise, or leased for a term of years or for any other period, nor shall there be any whole or partial transfer of the lease title, ownership, or right of maintenance or control by the GRANTEE except with the written approval and consent of the DEPARTMENT. The GRANTEE shall regulate the use of the project area to the satisfaction of the DEPARTMENT.

16. The assistance provided to the GRANTEE as a result of this Agreement is intended to have a lasting effect on the supply of outdoor recreation, scenic beauty sites, and recreation facilities beyond the financial contribution alone and permanently commits the project area to Michigan’s outdoor recreation estate, therefore:

   a. The GRANTEE agrees that lands in the project area are being acquired with MNRTF assistance and shall be maintained in public outdoor recreation use in perpetuity. No portion of the project area shall be converted to other than public outdoor recreation use without the approval of the DEPARTMENT. The DEPARTMENT shall approve such conversion only upon such conditions as it deems necessary to assure the substitution by GRANTEE of other outdoor recreation properties of equal or greater market value and of reasonably equivalent usefulness and location. Such substituted land shall become part of the project area and will be subject to all the provisions of this Agreement.
   b. Approval of a conversion shall be at the sole discretion of the DEPARTMENT.
   c. Before completion of the project, the GRANTEE and the DEPARTMENT may mutually agree to alter the project area through an amendment to this Agreement to provide the most satisfactory public outdoor recreation area.

17. Should title to the lands in the project area or any portion thereof be acquired from the GRANTEE by any other entity through exercise of the power of eminent domain, the GRANTEE agrees that the proceeds awarded to the GRANTEE shall be used to replace the lands and project facilities affected with outdoor recreation lands and project facilities of equal or greater market value, and of equal or greater usefulness and location. The DEPARTMENT and BOARD shall approve such replacement only upon such conditions as it deems necessary to assure the replacement by GRANTEE of other outdoor recreation properties and project facilities of equal or greater market value and of equal or greater usefulness and location. Such replacement land shall be subject to all the provisions of this Agreement.
18. The GRANTEE acknowledges that:

   a. The GRANTEE has examined the project area and has found the property safe for public use or actions will be taken by the GRANTEE before beginning the project to assure safe use of the property by the public, and

   b. The GRANTEE is solely responsible for development, operation, and maintenance of the project area and project facilities, and that responsibility for actions taken to develop, operate, or maintain the property is solely that of the GRANTEE, and

   c. The DEPARTMENT’S involvement in the premises is limited solely to the making of a grant to assist the GRANTEE in developing the project site.

19. The GRANTEE assures the DEPARTMENT that the proposed State-assisted action will not have a negative effect on the environment and, therefore, an Environmental Impact Statement is not required.

20. The GRANTEE hereby acknowledges that this Agreement does not require the State of Michigan to issue any permit required by law to construct the outdoor recreational project that is the subject of this Agreement. Such permits include, but are not limited to, permits to fill or otherwise occupy a floodplain, and permits required under Parts 301 and 303 of the Natural Resources and Environmental Protection Act, Act 451 of the Public Acts of 1994, as amended. It is the sole responsibility of the GRANTEE to determine what permits are required for the project, secure the needed permits and remain in compliance with such permits.

21. Before the DEPARTMENT will approve plans, specifications, or bid documents; or give approval to the GRANTEE to advertise, seek quotes, or incur costs for this project, the GRANTEE must provide documentation to the DEPARTMENT that indicates either:

   a. It is reasonable for the GRANTEE to conclude, based on the advice of an environmental consultant, as appropriate, that no portion of the project area is a facility as defined in Part 201 of the Michigan Natural Resources and Environmental Protection Act, Act 451 of the Public Acts of 1994, as amended; or

   b. If any portion of the project area is a facility, documentation that Department of Environment, Great Lakes and Energy-approved response actions have been or will be taken to make the site safe for its intended use within the project period, and that implementation and long-term maintenance of response actions will not hinder public outdoor recreation use and/or the resource protection values of the project area.

22. If the DEPARTMENT determines that, based on contamination, the project area will not be made safe for the planned recreation use within the project period, or another date established by the DEPARTMENT in writing, or if the DEPARTMENT determines that the presence of contamination will reduce the overall usefulness of the property for public recreation and resource protection, the grant may be cancelled by the DEPARTMENT with no reimbursement made to the GRANTEE.

23. The GRANTEE shall acquire and maintain insurance which will protect the GRANTEE from claims which may arise out of or result from the GRANTEE’S operations under this Agreement, whether performed by the GRANTEE, a subcontractor or anyone directly or indirectly employed by the GRANTEE, or anyone for whose acts may hold them liable. Such insurance shall be with companies authorized to do business in the State of Michigan in such amounts and against such risks as are ordinarily carried by similar entities, including but not limited to public liability insurance, worker’s compensation insurance or a program of self-insurance complying with the requirements of Michigan law. The GRANTEE shall provide evidence of such insurance to the DEPARTMENT at its request.

24. Nothing in this Agreement shall be construed to impose any obligation upon the DEPARTMENT to operate, maintain or provide funding for the operation and/or maintenance of any recreational facilities in the project area.

25. The GRANTEE hereby represents that it will defend any suit brought against either party which involves title, ownership, or any other rights, whether specific or general rights, including appurtenant riparian rights, to and in the project area of any lands connected with or affected by this project.

26. The GRANTEE is responsible for the use and occupancy of the premises, the project area and the facilities thereon. The GRANTEE is responsible for the safety of all individuals who are invitees or licensees of the premises. The GRANTEE will defend all claims resulting from the use and occupancy of the premises, the project area and the facilities thereon. The DEPARTMENT is not responsible for the use and occupancy of the premises, the project area and the facilities thereon.
27. Failure by the GRANTEE to comply with any of the provisions of this Agreement shall constitute a material breach of this Agreement.

28. Upon breach of the Agreement by the GRANTEE, the DEPARTMENT, in addition to any other remedy provided by law, may:
   a. Terminate this Agreement; and/or
   b. Withhold and/or cancel future payments to the GRANTEE on any or all current recreation grant projects until the violation is resolved to the satisfaction of the DEPARTMENT; and/or
   c. Withhold action on all pending and future grant applications submitted by the GRANTEE under the Michigan Natural Resources Trust Fund, Land and Water Conservation Fund and Recreation Passport Grant Program; and/or
   d. Require repayment of grant funds already paid to GRANTEE; and/or
   e. Require specific performance of the Agreement.

29. This Agreement may be canceled by the DEPARTMENT, upon 30 days written notice, due to Executive Order, budgetary reduction, other lack of funding, upon request by the GRANTEE, or upon mutual agreement by the DEPARTMENT and GRANTEE. The DEPARTMENT may honor requests for just and equitable compensation to the GRANTEE for all satisfactory and eligible work completed under this Agreement up until 30 days after written notice, upon which time all outstanding reports and documents are due to the DEPARTMENT and the DEPARTMENT will no longer be liable to pay the GRANTEE for any further charges to the grant.

30. The GRANTEE agrees that the benefit to be derived by the State of Michigan from the full compliance by the GRANTEE with the terms of this Agreement is the preservation, protection and net increase in the quality of public outdoor recreation facilities and resources which are available to the people of the State and of the United States and such benefit exceeds to an immeasurable and unascertainable extent the amount of money furnished by the State of Michigan by way of assistance under the terms of this Agreement. The GRANTEE agrees that after final reimbursement has been made to the GRANTEE, repayment by the GRANTEE of grant funds received would be inadequate compensation to the State for any breach of this Agreement. The GRANTEE further agrees therefore, that the appropriate remedy in the event of a breach by the GRANTEE of this Agreement after final reimbursement has been made shall be the specific performance of this Agreement.

31. The GRANTEE shall return all grant money if the project area or project facilities are not constructed, operated or used in accordance with this Agreement.

32. The GRANTEE agrees not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of religion, race, color, national origin, age, sex, sexual orientation, height, weight, marital status, partisan considerations, or a disability or genetic information that is unrelated to the person's ability to perform the duties of a particular job or position. The GRANTEE further agrees that any subcontract shall contain non-discrimination provisions which are not less stringent than this provision and binding upon any and all subcontractors. A breach of this covenant shall be regarded as a material breach of this Agreement.

33. The DEPARTMENT shall terminate this Agreement and recover grant funds paid if the GRANTEE or any subcontractor, manufacturer, or supplier of the GRANTEE appears in the register compiled by the Michigan Department of Licensing and Regulatory Affairs pursuant to Public Act No. 278 of 1980.

34. The GRANTEE may not assign or transfer any interest in this Agreement without prior written authorization of the DEPARTMENT.

35. The rights of the DEPARTMENT under this Agreement shall continue in perpetuity.
SAMPLE RESOLUTION
(Development)

Upon motion made by ____________________________, seconded by ________________________, the following Resolution was adopted:

“RESOLVED, that the ____________________________, Michigan, does hereby accept the terms of the Agreement as received from the Michigan Department of Natural Resources, and that the ____________________________ does hereby specifically agree, but not by way of limitation, as follows:

1. To appropriate all funds necessary to complete the project during the project period and to provide ____________________________($_____________) dollars to match the grant authorized by the DEPARTMENT.

2. To maintain satisfactory financial accounts, documents, and records to make them available to the DEPARTMENT for auditing at reasonable times.

3. To construct the project and provide such funds, services, and materials as may be necessary to satisfy the terms of said Agreement.

4. To regulate the use of the facility constructed and reserved under this Agreement to assure the use thereof by the public on equal and reasonable terms.

5. To comply with any and all terms of said Agreement including all terms not specifically set forth in the foregoing portions of this Resolution.”

The following aye votes were recorded: ________________
The following nay votes were recorded: ________________

STATE OF MICHIGAN )
) ss
COUNTY OF ____________ )

I, _______________________________, Clerk of the ____________________________, Michigan, do hereby certify that the above is a true and correct copy of the Resolution relative to the Agreement with the Michigan Department of Natural Resources, which Resolution was adopted by the ____________________________ at a meeting held ________________.

________________________________
Signature

________________________________
Title

________________________________
Date
Manager’s Memo

DATE:   May 11, 2021

TO:     Township Board

FROM:   Cargo

RE:     Arrowaste, Inc. - 2021 Waste Hauling License

Attached, please find a proposed resolution approving Arrowaste's application to operate within the Township.

Their proposed fee is a maximum of between $27,000 and $65.00 – depending upon where the property is located – e.g., properties along narrow private roads within the Lakehills area of the Township have much higher rates. The rates include recycling every other week with a 96-gallon cart.

The company does not offer yard waste collection.

A copy of their application and supporting documentation will be available at the meeting for those interested.

To approve the application, the following motion can be offered:

Move to approve Resolution 21-05-05 approving a one-year license agreement with Arrowaste, Inc. for waste collection and hauling services in Grand Haven Charter Township.

If there are any questions or comments, please contact me at your convenience.
At a regular meeting of the Township Board of the Charter Township of Grand Haven, Ottawa County, Michigan, held at the Township Hall at 13300 – 168th Avenue, Grand Haven Charter Township, Ottawa County, Michigan, on the 24th day of May 2021, at 7:00 p.m., local time.

After certain matters of business had been completed, Supervisor Reenders announced that the next order of business was the consideration of a license to operate in the Township for Arrowaste.

The proposed license agreement was discussed by the members of the Board, and after discussion was completed the following resolution was offered by _________________ and seconded by ___________________

GRAND HAVEN CHARTER TOWNSHIP
RESOLUTION 21-05-05

APPROVING THE LICENSE APPLICATION OF ARROWASTE TO OPERATE WITHIN GRAND HAVEN CHARTER TOWNSHIP AND THE SCHEDULE OF FEES FOR SERVICE.

WHEREAS, Grand Haven Charter Township adopted and amended Ordinance No. 334 which provides for the licensing of garbage, trash, and recyclable collectors or haulers; and

WHEREAS, Arrowaste applied for a license to operate within Grand Haven Charter Township pursuant to said Ordinance; and

WHEREAS, Arrowaste meets all of the requirements of said Ordinance for operating within the Township, as shown by their license application, which has been reviewed and approved by the Township Superintendent; and

WHEREAS, Arrowaste provided a schedule of fees to be charged for said services, which is included within said application.

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

1) The application of Arrowaste to provide trash and recyclable collection and hauling services pursuant to Ordinance No. 334, as amended, within the Charter Township of Grand Haven is hereby approved until May 1, 2022.

2) That the attached schedule of fees, which indicates the maximum rate that can be charged, is approved until May 1, 2022, at which time a new schedule of rates must be submitted for review and approval by the Township Board. (Any change of the rates prior to May 1, 2022 must be submitted to the Township Board for approval pursuant to Ordinance No. 334, as amended.) It is noted that applicant will be providing recycling services every other week but will be supplying a large cart.

3) That a copy of this resolution will be forwarded by the Township Clerk to Arrowaste and that it shall be considered to be a license to operate waste and recyclable collection and hauling within Grand Haven Charter Township until May 1, 2022.
RESOLUTION DECLARED: Adopted.
ADOPTED ON May 24, 2021

Laurie Larsen
Grand Haven Charter Township Clerk

CERTIFICATE

I, the undersigned, the duly qualified and Township Clerk of the Charter Township of Grand Haven, Ottawa County, Michigan, certify that the foregoing is a true and complete copy of the resolution adopted by the Township Board at a regular meeting of the Township Board held on the 24th day of June 2021. I further certify that public notice of the meeting was given pursuant to and in full compliance with Michigan Act 267 of 1976, as amended, and that the minutes of the meeting were kept and will be or have been made available as required by the Act.

Laurie Larsen
Grand Haven Charter Township Clerk
DATE: May 17, 2021
TO: Township Board
FROM: Bill Cargo
SUBJECT: Pottawattomie Park – Waterfront Restoration Project

OVERVIEW:

The waterfront of Pottawattomie Park has been negatively impacted by high water levels, erosion, and the “age” of the boardwalks and floating docks.

The Township received a $140,000 federal grant to assist with the restoration of the waterfront and had budgeted a total of $283,000 to design and construct changes to the waterfront (i.e., $260k for construction and $23k for design services).

The project was bid on April 20th – and because of rapidly increasing construction costs – the pre-bid construction estimate was raised↑ to $318,400. Unfortunately, even that projected cost increase was insufficient and the low bid (of the three bids received) on the project was $513,000 – from APEX Contractors of Dorr, Michigan. (This was 97% above↑ the budget estimate and 61% above↑ the pre-bid construction estimate.)

Because of the condition of the floating dock, and because of the condition of the boardwalk, and because of the erosion of the shoreline – the Township must still complete a restoration of this waterfront area.

Therefore, staff and engineers met to find a way to reduce↓ the construction cost while addressing the aforementioned issues. The result is a modification of the program – eliminating the dilapidated boardwalk, eliminating the replacement of a retaining wall, and changing from large timber pilings to steel pilings in the water. This would result in a savings of $91,400 in construction costs – reducing↓ the low bid from $513,000 to $421,600 (with the federal government paying $140,000 of the total project).

It should also be noted that the floating dock will be re-built (i.e., decking and rails), section by section, within the Public Services building next winter by Public Services staff.
RECOMMENDED ACTION:

Prein and Newhof notes that APEX Contractors has performed satisfactorily on other projects designed by the engineering firm and that APEX has a clear understanding of the project scope and schedule.

Therefore, if the Board agrees that the Pottawattomie Park waterfront project needs to move forward (*to replace the aging infrastructure and address erosion concerns*) and to maintain the $140,000 federal grant, the following motion can be offered:

**Move to approve the modified low bid from APEX Contractors not-to-exceed $421,600 and to authorize the Superintendent to execute the proposed construction contract. This decision was made because the original bid cost was reduced by $91,400 through direct negotiation and because the Township wants to retain the $140,000 federal grant toward the project.**

Please contact me if you have any questions or comments.
### WATER

<table>
<thead>
<tr>
<th>MONTH</th>
<th>WORK ORDERS</th>
<th>METER INSTalls 3/4&quot;</th>
<th>REPLACED METERS</th>
<th>REPLACED MXU'S</th>
<th>NEW TAPS 1&quot;</th>
<th>MAIN INSTALLED FEET</th>
<th>MILLION GALLONS OF NOWS WATER</th>
<th>MILLION GALLONS OF G.R. WATER</th>
<th>G.R. SUPPLEMENTAL WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>JANUARY</td>
<td>46</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>39.17</td>
<td>0.72</td>
</tr>
<tr>
<td>FEBRUARY</td>
<td>78</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>34.30</td>
<td>1.00</td>
</tr>
<tr>
<td>MARCH</td>
<td>74</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>7</td>
<td>3</td>
<td>33.80</td>
<td>0.65</td>
</tr>
<tr>
<td>APRIL</td>
<td>81</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>38.92</td>
<td>2.74</td>
</tr>
<tr>
<td>MAY</td>
<td>918</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>18</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>JUNE</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>JULY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUGUST</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SEPTEMBER</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>OCTOBER</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>NOVEMBER</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DECEMBER</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TOTAL YTD</td>
<td>279</td>
<td>12</td>
<td>11</td>
<td>13</td>
<td>11</td>
<td>12</td>
<td>3642</td>
<td>146.19</td>
<td>5.12</td>
</tr>
<tr>
<td>TOTALS</td>
<td>5515</td>
<td>23</td>
<td>11</td>
<td>13</td>
<td>11</td>
<td>12</td>
<td>3400</td>
<td>151.31</td>
<td>5.12</td>
</tr>
</tbody>
</table>

**NOTES:**

### WASTEWATER

<table>
<thead>
<tr>
<th>MONTH</th>
<th>WORK ORDERS</th>
<th>NEW TAPS</th>
<th>MAIN INSTALLED IN FEET</th>
<th>MILLION GALLONS OF WASTE PUMPED</th>
</tr>
</thead>
<tbody>
<tr>
<td>JANUARY</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>6.61</td>
</tr>
<tr>
<td>FEBRUARY</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>8.86</td>
</tr>
<tr>
<td>MARCH</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>9.42</td>
</tr>
<tr>
<td>APRIL</td>
<td>2</td>
<td>8</td>
<td>3400</td>
<td>9.29</td>
</tr>
<tr>
<td>MAY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>JUNE</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>JULY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>AUGUST</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>SEPTEMBER</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>OCTOBER</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>NOVEMBER</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>DECEMBER</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>TOTAL YTD</td>
<td>11</td>
<td>22</td>
<td>3400</td>
<td>34.18</td>
</tr>
<tr>
<td>TOTALS</td>
<td>926</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**