

CHARTER TOWNSHIP OF
YPSILANTI BOARD OF TRUSTEES

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BRENDA L. STUMBO

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JOHN P. NEWMAN II

GLORIA PETERSON

DEBBIE SWANSON

May 21, 2024

Regular Meeting – 6:00 p.m.

**Ypsilanti Township Civic Center
7200 S. Huron River Drive
Ypsilanti, MI 48197**

DEPARTMENTAL REPORTS

CHARTER TOWNSHIP OF YPSILANTI FIRE DEPARTMENT

222 South Ford Boulevard, Ypsilanti, MI 48198



MONTHLY REPORT FOR APRIL 2024

Fire Department staffing levels are as follows:

1 Fire Chief	1 Fire Marhsall	3 Shift Captains
16 Fire Fighters	3 Shift Lieutenants	1 Clerk III/Staff Support

All fire department response personnel are licensed as Emergency Medical Technicians by the State of Michigan Public Health. During the month, the fire department responded to **474** requests for assistance. Of those requests, **287** were medical emergency service calls, with the remaining **187** incidents classified as non-medical and/or fire related.

Department activities for the month of March 2024:

- 1) Smoke Alarms
 - a)

- 2) Fire fighters received training in the following areas:
 - a) Continuing Education Classes
 - b) Grass Fire Refresher & Practical
 - c) Fit Testing
 - d) Hazmat Exercise @Civic Center
 - e) Aerial Ops & Familiarization

- 3) Pub Education
 - a) Ypsilanti National Little League @Harris Road field

The Fire Marshal had these activities / events for the month of March 2024:

1. Fire Investigations: 7
2. Fire Investigations interview: 4
3. Fire Investigations follow up: 3
4. Food Truck Development Program:
5. Building Inspections: 2
6. Building Re-inspections: 4
7. Liquor Inspections:
8. Junk Yard Inspections:
9. Business Tour:
10. Plan Reviews: 5
11. Site Plan Reviews: 1
12. Hood / Fire Suppression Inspections: 2
13. Court in Ann Arbor on April 5th
14. Meetings: 10
15. New hire orientation for new hire A Johnson at the Civic Center
16. Attending the FDIC conference in IN
17. Chief Meetings I attended: 1
18. Zoom Meeting:
19. Fire Alarm Inspections: 1
20. Occupant Load Certificates:
21. Burn Permit: 1
22. Burn Complaints:
23. Knox Box: 4
24. Fire Drills:
25. Training: 5
26. Business/Community Engagement: 1
27. Citizen Engagement: 4
28. Building Improvement project: 2
29. New Construction Site Visit: 1
30. Safety Inspections:
31. Addressing: 6
32. Code Research: Weekly

The Fire Chief attended these meetings / events for the month of April 2024:

1. Board Meetings
2. County Fire Chiefs meeting representing the Township.
3. SOG updates
4. New Fire Fighter hire introduction to the township.
5. Michigan Fire Inspectors educational seminar for continuing education points
6. Attended the Fire Department Instructors Conference (FDIC)
7. Hosted a Hazardous Material training drill /jointly with Ypsilanti Townships Clerk's office for upcoming election days.
8. Scheduled Annual Department photo end of April.
9. Hosted Firehouse Friday with W4 country and the community with a donation of food to the local food drive charity
10. Many 911 responses
11. Working on a Tourn out Gear Grant through the state of Michigan for free gear for the Firefighters
12. Washtenaw 100 Club dinner annual
13. Officer meeting, monthly to discuss current affairs/problem solving.
14. Attended radio consortium meeting with Supervisor Stumbo for further information.
15. Attended EMU ribbon cutting ceremony with Supervisor Stumbo
16. Attended and was a guest speaker at a neighborhood watch meeting Gault Village
17. Instructed two of our members in state mandated ICS 400 class and they passed.
18. Worked with the Fire Marshal on several fire investigations/fire inspections.
19. Replaced many broken or needed fire tools, fireground, auto accidents, Emergency Medical equipment.
20. Prepare station #3 (Hewit Road station for construction update, starting soon
21. Developed a new shoulder patch. (It's been over 20 years without an update) will be worn shortly.
22. Working with the Fire Marshal on a food truck inspection with our surrounding neighbors, cities, and townships.

There were 0 injuries, and 0 deaths reported this month for civilians.

There were 0 injuries, and 0 deaths reported this month for fire fighters.

This month the total fire loss, including vehicle fires, is estimated at **\$163,000.00**. All occurred at the following locations:

DATE OF LOSS	ADDRESS	ESTIMATED LOSS
1) 4/02/2024	2500 Holmes	\$ 3,000.00 (Vehicle Fire)
2) 4/07/2024	1942 McGregor	\$ 3,000.00 (Ceiling heater Fire)
3) 4/08/2024	1812 Tyler	\$ 0.00 (Cooking Fire)
4) 4/10/2024	8782 Lagoon	\$ 0.00 (Outside Fire)
5) 4/10/2024	2871 International	\$ 0.00 (Trash Fire)
6) 4/13/2024	291 Dakota	\$ 20,000.00 (Building Fire)
7) 4/14/2024	2086 Valley View	\$ 0.00 (Building Fire)
8) 4/14/2024	Exit 183	\$ 32,000.00 (Vehicle Fire)
9) 4/14/2024	1236 Russell Street	\$ 40,000.00 (Building Fire)
10)4/24/2024	9252 MacArthur Blvd	\$ 0.00 (Mutual Aid – Superior)
11)4/26/2024	13425 Hitchingham	\$ 0.00 (Mutual Aid - Augusta)
12)4/26/2024	1300 Jones	\$ 65,000.00 (Building Fire)

Respectfully submitted,

Maria Batianis
Charter Township of Ypsilanti Fire Department

Attachment: Image Trend Incident Type Report (Summary): 4/01/2024 – 4/30/2024

Monthly Incident Report's 2024

Basic Incident Type Code And Description (FD1.21)	Total Incidents	Total Incidents Percent of Incidents	Total Property Loss	Total Content Loss	Total Loss	Total Loss Percent of Total
Incident Type Category (FD1.21): 1 - Fire						
111 - Building fire	6	1.27%	80,000.00	45,000.00	125,000.00	76.69%
113 - Cooking fire, confined to container	1	0.21%	0.00	0.00	0.00	0.00%
116 - Fuel burner/boiler malfunction, fire confined	1	0.21%	0.00	3,000.00	3,000.00	1.84%
118 - Trash or rubbish fire, contained	1	0.21%	0.00	0.00	0.00	0.00%
131 - Passenger vehicle fire	2	0.42%	33,000.00	2,000.00	35,000.00	21.47%
142 - Brush or brush-and-grass mixture fire	2	0.42%	0.00	0.00	0.00	0.00%
154 - Dumpster or other outside trash receptacle fire	1	0.21%				
160 - Special outside fire, other	1	0.21%				
Total: 15	Total: 3.16%	Total: 113,000.00	Total: 50,000.00	Total: 163,000.00	Total: 100.00%	
Incident Type Category (FD1.21): 3 - Rescue & Emergency Medical Service Incident						
300 - Rescue, EMS incident, other	10	2.11%				
311 - Medical assist, assist EMS crew	104	21.94%				
320 - Emergency medical service, other	47	9.92%				
321 - EMS call, excluding vehicle accident with injury	103	21.73%				
322 - Motor vehicle accident with injuries	8	1.69%				
324 - Motor vehicle accident with no injuries.	14	2.95%				
354 - Trench/below-grade rescue	1	0.21%				
Total: 287	Total: 60.55%	Total: 0.00	Total: 0.00	Total: 0.00	Total: 0.00%	
Incident Type Category (FD1.21): 4 - Hazardous Condition (No Fire)						
400 - Hazardous condition, other	1	0.21%				
424 - Carbon monoxide incident	1	0.21%				
440 - Electrical wiring/equipment problem, other	2	0.42%				
441 - Heat from short circuit (wiring), defective/worn	1	0.21%				
442 - Overheated motor	1	0.21%				
444 - Power line down	2	0.42%				
471 - Explosive, bomb removal (for bomb scare, use 721)	2	0.42%				
480 - Attempted burning, illegal action, other	1	0.21%				
Total: 11	Total: 2.32%	Total: 0.00	Total: 0.00	Total: 0.00	Total: 0.00%	
Incident Type Category (FD1.21): 5 - Service Call						
500 - Service call, other	4	0.84%				
510 - Person in distress, other	1	0.21%				
550 - Public service assistance, other	2	0.42%				
551 - Assist police or other governmental agency	1	0.21%				
552 - Police matter	1	0.21%				
554 - Assist invalid	5	1.05%				
561 - Unauthorized burning	2	0.42%				
Total: 16	Total: 3.38%	Total: 0.00	Total: 0.00	Total: 0.00	Total: 0.00%	
Incident Type Category (FD1.21): 6 - Good Intent Call						
600 - Good intent call, other	3	0.63%				
611 - Dispatched and cancelled en route	110	23.21%				
622 - No incident found on arrival at dispatch address	3	0.63%				
651 - Smoke scare, odor of smoke	4	0.84%				
Total: 120	Total: 25.32%	Total: 0.00	Total: 0.00	Total: 0.00	Total: 0.00%	

Basic Incident Type Code And Description (FD1.21)	Total Incidents	Total Incidents Percent of Incidents	Total Property Loss	Total Content Loss	Total Loss	Total Loss Percent of Total
Incident Type Category (FD1.21): 7 - False Alarm & False Call						
700 - False alarm or false call, other	12	2.53%				
730 - System malfunction, other	1	0.21%				
731 - Sprinkler activation due to malfunction	1	0.21%				
733 - Smoke detector activation due to malfunction	1	0.21%				
735 - Alarm system sounded due to malfunction	2	0.42%				
736 - CO detector activation due to malfunction	1	0.21%				
740 - Unintentional transmission of alarm, other	2	0.42%				
743 - Smoke detector activation, no fire - unintentional	5	1.05%				
	Total: 25	Total: 5.27%	Total: 0.00	Total: 0.00	Total: 0.00	Total: 0.00%
	Total: 474	Total: 100.00%	Total: 113,000.00	Total: 50,000.00	Total: 163,000.00	Total: 100.00%



Date: May 5, 2024
To: Clerk's Office
CC: Brenda Stumbo, Supervisor
From: Michael Saranen, Operation Manager

Subject: Department Report (activities in April 2024)

Activities:

Ford Lake Dam (Hydro Station)

General Operation Summary:

It was an active month for the Hydro Station and continues to operate safely, continues to get routine safety inspections and preventive maintenance. Operators had 4 after-hour call-in for the month.

Average precipitation for the month of is around 3.26", this year it was 4.15".

Regulatory Status:

For 2024-

- DSSMR- **Complete, Filed with FERC**
- Owners Dam Safety Program Review - **Planning**
- EAP annual update and test -
- EAP First Responder Training - **Complete**
- WQ Report – **Equipment deployed**
- Nuisance Plant Plan Report -
- Wildlife Plan Report -
- Historical Activity Report -
- Gate Certification -
- Security Review - **Planning**
- FERC Security Inspection - TBD
- FERC Annual Dam Safety Inspection – **June**
- Annual DEQ Lake Operation Monitoring Report- **In review by State**
- Spillway Assessment Action Plan - **Filed, addressing comments by FERC, Ongoing**
- Public Safety Plan - **Installing new safety signs in 2024**
- Fish & Sediment Analysis - Not required until 2033

- Part 12 Comprehensive Analysis Inspection – **Started, getting proposals**

Future Items:

- Shoreline Restoration, Ford Lake Park
- PMF Study for watershed
- Shoreline Erosion Survey – 2025
- Protective Relay testing – 2024
- Emergency Gen Testing – 2025
- Concrete repairs – 2025 - 2026
- Windows/additional concrete repairs (powerhouse and dam) - TBD
- EAP Tabletop and Functional Exercise – 2024, in planning with downstream dam
- EAP Rewrite - 2025

Projects:

Concrete Repairs- Delayed, approved by the Board to go out to bid. Construction was planned for summer 2023, however the cost came in doubled and the project will be rebid in coming months.

Sluice Gate Stress Analysis- 2024, the FERC has requested a detailed study of the spillway gates. This is a common industry request from FERC as they continuously look at safety involving dams. We are currently working with engineering to develop a procedure to complete this task. **Awarded, getting contract documents in proper form.**

Turbine Inspections and Maintenance- Conduct cleaning, inspection and maintenance on turbine equipment and associated spaces. #2 was inspected and found to be satisfactory. #1 is planned in the 1st quarter of the year. **Delayed**

Operation Summary

2024	April	YTD	5 Year Ave.
Precipitation total (inches) ¹	4.15	11.67	38.0
Days Online	30	121	359.4
Generation MWH (estimated)	1,307.853	4,884.908	10469.1
Generation MWH lost (estimated)*	.792	3.729	515.6
After Hour Call In			
Water levels	2	9	38
Mechanical/Electrical	2	2	4
Other	0	0	2
Totals	4	11	43

Recent History	2019	2020	2021	2022	2023
Precipitation total (inches)	45.4	41.4	40.0	26.37	36.65
Days Online	350.6	359.7	360.0	363.5	363.4
Generation MWH (estimated)	12,576.7	10,722.7	10,524.5	9,185.151	9,336.397
Generation MWH lost (estimated)*	1,005.8	570.2	423.2	362.5	216.076
After Hour Call In					
Water levels	30	69	33	36	22
Mechanical/Electrical	3	4	9	0	3
Other	0	2	0	4	2
Totals	33	75	42	40	27

¹ Preliminary totals from NOAA for Detroit

*losses related to scheduled & unscheduled maintenance and water quality discharges.

Water Quality Summary:

MOU with City of Ann Arbor

The Parties share a common interest in eliminating and preventing nuisance blue green algae blooms in Ford and Belleville Lakes, and they acknowledge that information about water quality and conditions in the lakes is important to advancing their common interest. THEREFORE, the Parties enter into this Memorandum of Understanding to memorialize their understanding as to their efforts to cooperate and work together to monitor, collect, and share water quality information regarding Ford and Belleville Lakes.

Work Plan

- MOU has been signed, for 2024 the current plan is to gather WQ data for future use.
- Additional activities may be identified in the coming months.

Current Activities

- WQ lake buoy has been deployed and is gathering data.

Sluice Gate Usage Summary

Releasing water from the sluice gates is primary done to maintain lake level when flow exceeds the powerhouse. At certain times, we can use the gates to help keep the lake mixed to maintain oxygen levels (effectiveness depends on a number of factors) at the bottom of the lake.

The water quality monitoring begins on June 1st and will end on September 30th; operators monitor the water quality conditions and take readings as outline in the WQ Plan. The dam releases water from the bottom gates to maintain run of river and/or help with water quality in Ford Lake. The Federal License requires us to pass water with a minimum of 5mg/l of dissolved oxygen all the time. Therefore, spilling from the bottom gates in the summer to improve the lake is not always possible.

Current Year 2024	Current Year Days Spilled	Current Year Lost KWh*	Current Year Lost KW\$*	Prior Yr. Lost KW\$*
January	7.6	0	0	0
February	11.4	0	0	0
March	.4	0	0	0
April	8.75	0	0	0
May				\$ 1,597
June				\$ 8,241
July				\$ 373
August				\$ 268
September				\$ 86
October				0
November				0
December				0
Totals	28.15	0	\$ 0	\$ 10,565

*Estimated losses from diverting water away from generators for the **purpose of improving WQ.**

Sargent Charles Dam

This dam continues to get routine safety inspections and appropriate maintenance.

In October 2023, the dam was inspected by the state. In their report the dam is in satisfactory condition, the report listed some maintenance recommendations to help maintain a safe dam. Staff are reviewing the report for follow-up actions.



WASHTENAW COUNTY OFFICE OF THE SHERIFF



JERRY L. CLAYTON
SHERIFF

2201 Hogback Road ♦ Ann Arbor, Michigan 48105-9732 ♦ OFFICE (734) 971-8400 ♦ FAX (734) 973-4624 ♦ EMAIL sheriffinfo@ewashtenaw.org

MARK A. PTASZEK
UNDERSHERIFF

To: Brenda Stumbo, Ypsilanti Township Supervisor
From: Chad Teets, Police Services Lieutenant
Cc: Ypsilanti Township Board
Keith Flores, WCSO Police Services Commander
Nancy Hansen, WCSO Police Services Captain
Date: April 8, 2024
Re: April 2024 Police Services Monthly Report

SUMMARY:

During the month of March 2024, there were 3,657 calls for service in Ypsilanti Township. In March 2023, there were 3,790 calls for service in Ypsilanti Township.

OPERATIONS

During March 2024, Patrol Operations responded to calls for service, conducted traffic enforcement, and completed criminal investigations in support of our citizen's quality of life.

In the month of March 2024 there were 5 home invasions, which is a -16.6% change as compared to March 2023 (6 home invasions). In many of these incidents domestic relationships and unauthorized entry were common. The best prevention methods for a typical residential home invasion are to keep all windows and doors locked (including vehicles in the driveway), including deadbolts, while away from home. External lighting and visual deterrents such as "Beware of Dog" or alarm signage also discourages criminals.

In the month of March 2024 there was 1 breaking and entering. In the month of March 2023, we saw no breaking and entering's (100% increase).

In March 2024 there were 21 reported UDAA's. This is a 600% increase compared to March 2023 where there were 3 reported UDAA's. Many of these vehicle thefts occurred by the suspect gaining entry to an unlocked vehicle. Citizens are reminded to lock all vehicle doors and keep ignition keys in separate and secure areas to prevent such thefts. Valuables, if left in a vehicle, should be placed in a concealed location. Many vehicles that are being targeted are Hyundai and Kia makes due to well-known theft practices. The following website provides further information regarding the reduction of potential for theft of your vehicle, common vehicles targeted, and further information.

<https://www.nhtsa.gov/road-safety/vehicle-theft-prevention>

YOUTH INITIATIVE

The Sheriff's Office continues to partner with courts, probation, and social services to ensure that there is accountability beyond the Sheriff's Office contact with the offenders that are consistently involved in crimes. From a year-to-year perspective, comparing 2024 to 2023, our juvenile offenses and complaints are up 85% (from 20 to 37) and our runaway complaints are up 400% (from 2 to 10).

*Co Creating Community Wellness and Safety – Providing Exemplary Service
Building Strong and Sustainable Communities
Serving Washtenaw County since 1823*



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UNDERSHERIFF

COMMUNITY ACTION TEAM

The purpose of the Community Action Team (CAT) is to respond to situations involving or with a nexus of drugs, guns, or violence. The team focuses on the timely assessment and response to tips they receive from our community and community problems identified through crime pattern analysis.

CAT collaboration with the Michigan Department of Corrections in reference to parole compliance contributes to effective monitoring and management of parolees who live in our community. Timely and efficient response to tips regarding parolee misconduct combined with regular unannounced home visits are expected by the parolees that reside in Ypsilanti Township and surrounding areas.

For any violent crime tips related to guns, gang activity or violence in general please call 734-661-9034.

CLEMIS ONLINE REPORTING

Citizens can now fill out a police report online utilizing CLEMIS' new "online reporting tool". Citizens can visit: <https://www.washtenaw.org/3439/File-a-Police-Report> to fill out an online report.

WASHTENAW ALERT (EVERBRIDGE)

As a reminder for residents they can sign up for "Up-to-the-minute updates" from the Washtenaw County Sheriff's Office by email or cell phone at www.washtenaw.org/alerts

HOUSE WATCH

If you plan on being gone for a period of time sign your house up for house checks. The house watch form can be found at: <https://www.washtenaw.org/1743/House-Watch>

NEW FACES

The Sheriff's Office is hiring! We continue to hire highly qualified, motivated, and diverse people that are committed to pursuing our mission: Creating public safety, providing quality service, and building strong and sustainable communities.

If you are interested in joining us in serving your community in Police Services, Corrections, Communications, Emergency Services or Community Corrections please check us out at: <https://www.washtenaw.org/1124/Sheriff>

We have rewarding career opportunities available for those seeking a profession with a greater purpose.

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Out of Area Time Ypsilanti TWP

For: 03/01/2024 thru 03/31/2024



Patrol Area	Reporting Area	Username	Location	Activity Category	Incident Number	Comments	Start Time	Duration in Minutes	Start Date
YPSILANTI TWP	SUPERIOR TWP	WDGERWIGB	MACARTHUR BLVD	BACKUP DISPATCHED CALLS	240015634	disorderly between a brother and sister // brother is possibly under the influence and is aggressive // dispatch advised that male half has an officer safety caution // ok per sgt pennington	06:42:00	15	3/1/2024
YPSILANTI TWP	SUPERIOR TWP	WDTRASKOSR	MACARTHUR BLVD	BACKUP DISPATCHED CALLS	240016307	ASSISTED SUPERIOR UNITS WITH CROWD CONTROL / APPROVED SGT. ARTS	14:30:00	50	3/3/2024
YPSILANTI TWP	SUPERIOR TWP	WDCAMPAGIORNIM	SHEFFIELD DR	DISPATCHED CALLS	240016327	S1 LEFT SGT.HOUK DUE TO SUT UNITS BEING TIED UP ON A DEATH SCENE WITH DISORDERLY FAMILY	15:05:00	10	3/3/2024
YPSILANTI TWP	SUPERIOR TWP	WDCUSOJ	MACARTHUR BLVD	BACKUP DISPATCHED CALLS	240016610	DEPUTIES FIGHTING WITH A SUBJECT WHO POSSIBLY HAD A FIREARM; OK PER SGT. HOGAN.	16:15:00	15	3/4/2024
YPSILANTI TWP	LODI TOWNSHIP	WDPEARSONA	S WAGNER RD	BACKUP DISPATCHED CALLS	240016825	DEP ROY, ASSIST WITH SHOTS FIRED/SUBJIDE; SGT HOGAN	13:00:00	45	3/5/2024
YPSILANTI TWP	LODI TOWNSHIP	WDBECHTOLG	S WAGNER RD	DISPATCHED CALLS	240016825	ACTIVE SHOOTER SITUATION/SUSPECT SEEN WITH GUN ENTERING BUILDING/SGT HOGAN APPROVED	13:15:00	35	3/5/2024
YPSILANTI TWP	SUPERIOR TWP	WDROYJ	MCAULEY DR	BACKUP DISPATCHED CALLS	240017787	SCENE SECURITY ON SHOOTING SCENE PER SGT ERBES DE-ESCALATION OF FAMILY	02:00:00	135	3/9/2024
YPSILANTI TWP	SUPERIOR TWP	WDHEATHV	FIRST ST	BACKUP DISPATCHED CALLS	240017885	NO SUT AVAILABLE TIED UP ON FUNERAL DETAIL-- APPROVED BY 629 SGT HOGAN	13:10:00	40	3/9/2024
YPSILANTI TWP	SUPERIOR TWP	WDPEARSONA	FIRST ST	DISPATCHED CALLS	240017885	HI AND BOND VIOLATION; AL SUT UNITS TIED UP ON FUNERAL DETAIL; SGT HOGAN	13:10:00	40	3/9/2024
YPSILANTI TWP	SUPERIOR TWP	WDPEARSONA	FIRST ST	DISPATCHED CALLS	240017914	BOND VIOLATION; SENT TO BACK UP SUT AND INTERVIEW S1 REF LAST CALL OUT; SGT HOGAN	15:45:00	45	3/9/2024
YPSILANTI TWP	SUPERIOR TWP	WDGERWIGB	E CLARK RD/NOTTINGHAM DR	BACKUP DISPATCHED CALLS	240018188	dispatched as a Ypsi Twp call // actually Superior Twp //	20:05:00	48	3/10/2024
YPSILANTI TWP	DEXTER CITY	WDTROWBRIDGEM	DEXTER	STATION DETAIL		PER SGT BYNUM I WAS TO MAINTAIN COVERAGE IN DEXTER UNTIL DEPUTY HALL WAS COMPLETED WITH HIS DETAIL IN YPSILANTI TWP FOR SPANISH TRANSLATION	20:25:00	120	3/12/2024
YPSILANTI TWP	SUPERIOR TWP	WDROBERTSG	MACARTHUR BLVD/GLENDALE DR	K9 DETAIL	240018789	AST WITH K9 NARCOTIC SNIFF APV SGT BYNUM	23:00:00	60	3/12/2024
YPSILANTI TWP	SUPERIOR TWP	WDCUSOJ	MACARTHUR BLVD	BACKUP DISPATCHED CALLS	240019084	SHOOTING ON MACARTHUR BLVD; SUT UNITS TIED UP; OK PER SGT. PENNINGTON.	01:15:00	55	3/14/2024
YPSILANTI TWP	SUPERIOR TWP	WDSIMMST	MACARTHUR BLVD	DISPATCHED CALLS	240019091	SHOTS FIRED / CARELESS USE OF FIREARM / SGT PENNINGTON	01:20:00	60	3/14/2024
YPSILANTI TWP	SUPERIOR TWP	WDLOWHORNB	MACARTHUR BLVD	BACKUP DISPATCHED CALLS	240020333	FIGHT ON BLVD, BU ONE AVAILABLE, APPROVED BY SGT ERBES, ONE SUT UNIT TIED UP, PARTIES ADVISED THEY DID NOT NEED POLICE ASSISTANCE.	22:10:00	10	3/18/2024
YPSILANTI TWP	SUPERIOR TWP	WDSIMMST	MACARTHUR BLVD	BACKUP DISPATCHED CALLS	240020333	POSSIBLE FIGHT / SGT ERBES	22:10:00	10	3/18/2024
YPSILANTI TWP	SUPERIOR TWP	WDSIMMST	BRIDGEWATER DR	BACKUP DISPATCHED CALLS	240020673	ASSIST SUT / ALARM / SGT PENNINGTON	06:20:00	10	3/20/2024
YPSILANTI TWP	SUPERIOR TWP	WDHALLR	HEMLOCK CT	BACKUP DISPATCHED CALLS	240020758	BACK UP SUPERIOR TOWNSHIP UNIT FOR FAMILY TROUBLE- APPROVED BY SGT. HOUK	15:20:00	25	3/20/2024
YPSILANTI TWP	SUPERIOR TWP	WDHEATHV	E HURON RIVER DR	DISPATCHED CALLS	240021223	ASSIGNED BY 629 HOGAN FOR SUSPECT WITH WARRANTS AT HOSPITAL	08:00:00	225	3/22/2024
YPSILANTI TWP	SUPERIOR TWP	WDPEARSONA	NOTTINGHAM DR	DISPATCHED CALLS	240021779	TOOK ALARM SINCE SUT WAS TIED UP; SGT HOGAN	15:25:00	20	3/24/2024
YPSILANTI TWP	SUPERIOR TWP	WDHEATHV	MCAULEY DR	BACKUP DISPATCHED CALLS	240022147	ASSIST SUT DEPS WITH FIGHT AT HOSPITAL-- APPROVED BY 638 WILLIAMS	00:10:00	10	3/26/2024
YPSILANTI TWP	SUPERIOR TWP	WDCUSOJ	MACARTHUR BLVD	BACKUP DISPATCHED CALLS	240022927	DV THAT JUST OCCURED; SUSPECT WALKING TOWARDS YPT; OK PER SGT. PENNINGTON	23:50:00	15	3/28/2024
YPSILANTI TWP	SUPERIOR TWP	WDTROWBRIDGEM	PROSPECT RD/GEDDES RD	BACKUP DISPATCHED CALLS	240023229	BACKUP OTHER UNITS ON OWI CRASH			
YPSILANTI TWP	YORK TWP	WDBELLASE	HARRJET ST/PERRY ST	BACK-UP TRAFFIC STOP	240023277	SGT WILLIAMS APPROVAL	00:00:00	15	3/30/2024
YPSILANTI TWP	ANN ARBOR TWP	WDRAABT	E HURON RIVER DR	BACKUP DISPATCHED CALLS	240023558	BU 719	06:00:00	5	3/30/2024
YPSILANTI TWP	ANN ARBOR TWP	WDRAABT	E HURON RIVER DR	BACKUP DISPATCHED CALLS	240023558	ASSIST ANT/SUT WITH BOL FOR WANTED SUBJ. GOOD PER SGT HOUK	11:30:00	0	3/31/2024
YPSILANTI TWP	SUPERIOR TWP	WDLYONSW	E HURON RIVER DR	DISPATCHED CALLS	240023558	WARRANT ARREST ATTEMPT, UTL APPROVED MY SGT HOUK	11:30:00	60	3/31/2024
YPSILANTI TWP	SCIO TOWNSHIP	WDVANDERROESTB	BAKER RD	K9 DETAIL	240023676	ASSIST SCIO TWP DEPS W/ EXPLOSIVE DETECTION // PER SGT. WALLACE	22:05:00	30	3/31/2024
							Sum:	1,208	



Into Area Time Ypsilanti TWP

For: 03/01/2024 thru 03/31/2024



Patrol Area	Reporting Area	Username	Location	Activity Category	Incident Number	Comments	Start Time	Duration in Minutes	Start Date
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSAMAHAD	N ROSEWOOD	DISPATCHED CALLS	240015718	ASSISTED WITH TRANSLATION // SGT ARTS APPROVAL	12:25:00	20	3/1/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSIRIANNJU	CARVER AVE	BACKUP DISPATCHED CALLS	240015926	BU/ YPT UNITS ON REPORTED FIA SUBJECT WITH KNIFE / APPROVED BY SGT. WILLIAMS	01:45:00	15	3/2/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSAMAHAD	MEDFORD DR/WOBURN DR	BACKUP DISPATCHED CALLS	240016235	NEARBY THE AREA ASSISTED WITH CHECKING ON THE VEHICLE // SGT WILLIAMS WAS AWARE	06:50:00	25	3/3/2024
SALEM TWP	YPSILANTI TWP	WDGERWIGB	RUSSELL CT	DISPATCHED CALLS	240016331	no units available // all units dealing with disorderly subjects on Blvd reference a family member passing and large group outside // possible gas leak at location // ok by Sgt. Arts	15:10:00	10	3/3/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDGERWIGB	N HURON RIVER DR/GREGORY AVE	BACKUP DISPATCHED CALLS	240016428	subject rolling on the ground in the middle of huron river dr	22:22:00	8	3/3/2024
YORK TWP	YPSILANTI TWP	WDYONOJ	WHITTAKER RD	BACKUP DISPATCHED CALLS	240016780	blu ypsi depts for multiple fires with downed power lines no avail units per sgt hogan	09:25:00	35	3/5/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDGERWIGB	E MICHIGAN AVE/S WJARD	DISPATCHED CALLS	240016942	car fire // fully engulfed // stopped traffic W/8 E Michigan Ave // ok by Sgt. Erbes	22:05:00	20	3/5/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSIRIANNJU	HOLMES RD	BACKUP DISPATCHED CALLS	240017000	ASSIST YPT UNITS WITH SHOTS FIRED / APPROVED BY SGT. ERBES	05:25:00	65	3/6/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDPACHECOGARCJAR	ECORSE RD/MAPLEWOOD AVE	BACKUP DISPATCHED CALLS	240017424	BU FOR SPANISH TRANSLATION APPROVED BY SGT WILLIAMS	18:55:00	20	3/7/2024
SALEM TWP	YPSILANTI TWP	WDPACHECOGARCJAR	HUNTER AVE	BACKUP DISPATCHED CALLS	240017424	ASSIST 709 WITH TRANSLATION ON A LARCENY REPORT. APPROVED BY SGT. HOGAN	14:00:00	60	3/10/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDHILLJ	HOLMES RD/SPENCER LN	DISPATCHED CALLS	240018239	MOTORIST ASSIST - OBSERVED VEHICLE WITH HAZARDS ON AND BLOCKING EAST BOUND LANE - APPROV SGT ERBES	00:20:00	5	3/11/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSAMAHAD	HOLMES RD/IN FORD BLVD	BACKUP DISPATCHED CALLS	240018387	SGT HOUK APPROVAL // YPT UNITS WERE TIED UP // WELFARE CHECK - MALE ON THE GROUND NOT MOVING UNKNOWN STATUS	14:55:00	30	3/11/2024
DEXTER-DEXTER TWP- WEBSTER TWP	YPSILANTI TWP	WDHALLR	STA 2	DETAIL	240018387	IN ROUTE TO STA 2 FOR SPANISH TRANSLATION- APPROVED PER SERGEANT BYNUM 24-18651/24-18754	20:00:00	45	3/12/2024
DEXTER-DEXTER TWP- WEBSTER TWP	YPSILANTI TWP	WDHALLR	S HAMILTON ST	BACKUP DISPATCHED CALLS	240018754	PROVIDED SPANISH TRANSLATION FOR SCHOOL BOMB THREATS- APPROVED PER SERGEANT BYNUM 24-18651/24-18754	20:45:00	75	3/12/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSIRIANNJU	CANDLEWOOD LN	DISPATCHED CALLS	240018803	ALL YPT UNITS TIED UP ON TRAFFIC STOP WITH FOUR SUBJECTS WHO FOOT BAILED / APPROVED BY SGT. WILLIAMS / TAKEN AS PRIMARY UNIT	00:45:00	30	3/13/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSIRIANNJU	ALLEN AVE	BACKUP DISPATCHED CALLS	240018811	ASSIST 727 WITH AMBULANCE REQUEST / ALL OTHER YPT UNITS TIED UP ON TRAFFIC STOP WITH FOUR SUBJECTS WHO FOOT BAILED / APPROVED BY SGT. WILLIAMS	01:25:00	20	3/13/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSAMAHAD	GOLFSIDE RD	BACKUP DISPATCHED CALLS	240019747	SUICIDAL SUBJECT WITH RAZOR // I WAS CLOSEST BACK UP AND ASSISTED WITH SGT HOUK'S APPROVAL	15:05:00	30	3/16/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSHANKLANDC	HAYES ST/TYLER RD	DISPATCHED CALLS	240020041	PER 623 SGT BYNUM NO ONE AVAILABLE CHECKING ON FIGHT	19:50:00	10	3/17/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDTRIPPB	S HURON RIVER DR	BACKUP DISPATCHED CALLS	240020039	CLOSEST UNIT TO A POSSIBLE FLIPPED KAYAK, LOCATED PADDLE BOARD ALONG SHORE LINE WITH NO ONE NEAR IT. PER SGT BYNUM	20:00:00	30	3/17/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDPACHECOGARCJAR	E TERRACE LN	BACKUP DISPATCHED CALLS	240020301	ASSIST WITH SPANISH TRANSLATION FOR HOME INVASION CASE. APPROVED BY SGT. WALLACE	18:50:00	25	3/18/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSAMAHAD	SPINNAKER WAY	BACKUP DISPATCHED CALLS	240021353	NEEDED ASSISTANCE WITH TRANSLATION // SGT HOGAN APPROVAL	17:10:00	15	3/22/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDCLARKA	MCGREGOR RD	BACKUP DISPATCHED CALLS	240022238	BU Welfare Check S1 Possibly armed Sgt. Hogan Approval	12:05:00	25	3/26/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSIRIANNJU	BYNAN DR	DISPATCHED CALLS	240022417	ALL YPT UNITS TIED UP ON HOMICIDE IN YPSI CITY / APPROVED BY SGT. WILLIAMS / HANDLED AS PRIMARY UNIT	23:25:00	5	3/26/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSIRIANNJU	HOLMES RD	DISPATCHED CALLS	240022422	ALL YPT UNITS TIED UP ON HOMICIDE IN YPSI CITY / APPROVED BY SGT. WILLIAMS / HANDLED AS PRIMARY UNIT	00:01:00	14	3/27/2024



Into Area Time Ypsilanti TWP

For: 03/01/2024 thru 03/31/2024



ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDTRIPB	INTERNATIONAL DR	BACKUP DISPATCHED CALLS	240022918	CLOSEST UNIT TO B&E IN PROGRESS; DETAINED SUBJECT CLIMBING OUT OF WINDOW AS WE ARRIVED; APPEARED TO BE MISUNDERSTANDING; PER SGT PENNINGTON	23:05:00	15	3/28/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDNEDDOK	FALL RIVER RD	BACKUP DISPATCHED CALLS	240023197	VEH FIRE / ARSON APPROVAL TO ASSIST PER SGT. WILLIAMS	21:51:00	29	3/29/2024
DEXTER-DEXTER TWP- WEBSTER TWP	YPSILANTI TWP	WDHALLR	STA 2	DETAIL		DEPUTY G.ROBERTS COVERED DEXTER WHILE I (DEPUTY HALL) ASSISTED DEPUTY VANDEROOST WITH SPANISH TRANSLATION REGARDING A DV/STRANGULATION 24-23196 - APPROVED BY SGT. WILLIAMS	23:15:00	35	3/29/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDTRIPB	E MICHIGAN AVE	BACKUP DISPATCHED CALLS	240023253	NO YPT UNITS AVAILABLE AFTER SUSPECT VEHICLE INVOLVED IN FIGHT WAS FOUND; ASSISTED WITH DETAINING OCCUPANTS; PER SGT WILLIAMS	02:45:00	35	3/30/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDHILLJ	E MICHIGAN AVE	BACKUP DISPATCHED CALLS	240023253	Assist YPT with fight 24-23253 - approv sgt Williams	02:50:00	40	3/30/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDCLARKA	WASHTENAW AVE/GOLFSIDE RD	BACKUP DISPATCHED CALLS	240023304	BU CSC SUSPECT TURNED R&O SGT, HOUK APPROVAL	10:40:00	20	3/30/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSAMAHAD	GROVE RD/GEORGINA DR	BACK-UP TRAFFIC STOP	240023319	YPSI TWP HAD A VEHICLE CRASH OUT OCCUPIED X4 THEY TOOK OFF RUNNING // SGT HOUK APPROVAL TO ASSIST IN LOCATING SUBJECTS	12:25:00	120	3/30/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDCLARKA	GROVE RD/GEORGINA DR	BACK-UP TRAFFIC STOP	240023319	BU YPT ARMED FLEEING SUSPECTS SGT, HOUK APPROVAL	12:30:00	75	3/30/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSAMAHAD	INTERNATIONAL DR	BACKUP DISPATCHED CALLS	240023349	ASSISTED WITH TRANSLATION // SGT HOUK APPROVAL	15:00:00	20	3/30/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSAMAHAD	WASHTENAW AVE/GOLFSIDE RD	BACK-UP TRAFFIC STOP	240023380	CLOSEST BACK TO DEPUTY CAMP // ASSISTED UNTIL YPT DEPUTY ARRIVED // SGT HOUK	17:10:00	20	3/30/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDNEDDOK	LAUREL AVE	DISPATCHED CALLS	240023387	SHOOTING IN YPSI TWP / APPROVAL TO ASSIST PER SGT. HOUK, I WAS NEAR BY WHEN THE CALL CAME IN AND FIRST ON SCENE.	17:26:00	20	3/30/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSAMAHAD	LAUREL AVE	BACKUP DISPATCHED CALLS	240023387	SHOTS FIRED WITH ONE PERSON INJURED // ASSISTED WITH SCENE // SGT HOUK	17:30:00	30	3/30/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDSAMAHAD	FALL RIVER RD	BACKUP DISPATCHED CALLS	240023410	CLOSEST BACK UP // ASSISTED UNTIL DEPUTIES WERE SECURE // SGT HOUK	19:15:00	5	3/30/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDTRIPB	RUE DEAUVILLE BLVD	BACKUP DISPATCHED CALLS	240023511	CLOSEST UNIT TO A MALE POSSIBLY TRYING BURN A VEHICLE; CALMED SUBJECT DOWN AND STOODBY WHILE GLASS WAS CLEANED UP; PER SGT WILLIAMS	03:30:00	15	3/31/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDCAMPAGIORNIM	S HAMILTON ST/CATHERINE ST	DISPATCHED CALLS	240023653	ASSIST OIC WITH FLEEING UDAA DUE TO OFC SAFETY, SGT.WILLIAMS	20:01:00	84	3/31/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDWARDB	S HAMILTON ST/CATHERINE ST	BACKUP DISPATCHED CALLS	240023653	RECOVERED UDAA/ PURSUIT PER SGT. WILLIAMS	20:10:00	20	3/31/2024
SCIO TWP	YPSILANTI TWP	WDCLARKA	S HAMILTON ST/ CATHERINE ST	BACKUP DISPATCHED CALLS		BU FLEE AND ELUDE MULTIPLE OCCUPANTS HEADED W/B ON I94 SGT. WALLACE APPROVAL	20:10:00	50	3/31/2024
ANN ARBOR-SUPERIOR TWP COLLABORATION	YPSILANTI TWP	WDTRIPB	E MICHIGAN AVE	BACKUP DISPATCHED CALLS	240023706	CLOSEST UNIT TO A WOMAN WITH A KNIFE BREAKING INTO A HOUSE; KEPT PARTIES SEPARATED; PER SGT WILLIAMS	01:40:00	10	4/1/2024
							Sum:	1,280	



YPSILANTI TOWNSHIP MONTHLY POLICE SERVICES DATA

March 2024

JERRY L. CLAYTON
SHERIFF

Incidents	Month 2024	Month 2023	% Change	YTD 2024	YTD 2023	% Change
Traffic Stops	969	1017	-5%	2922	2965	-1%
Citations	167	265	-37%	594	851	-30%
Drunk Driving (OWI)	19	10	90%	34	29	17%
Drugged Driving (OUID)	2	2	0%	18	6	200%
Calls for Service Total	3336	3612	-8%	10317	10714	-4%
Calls for Service <i>(Traffic stops and non-response medicals removed)</i>	1945	2074	-6%	5921	6119	-3%
Robberies	1	1	0%	3	6	-50%
Assaultive Crimes	62	68	-9%	160	193	-17%
Home Invasions	5	6	-17%	16	21	-24%
Breaking and Entering's	0	1	-	5	3	67%
Larcenies	36	24	50%	81	84	-4%
Vehicle Thefts	21	3	600%	46	23	100%
Traffic Crashes	60	90	-33%	207	257	-19%
Medical Assists	48	44	9%	147	131	12%
Animal Complaints <i>(ACO Response)</i>	57	64	-11%	110	159	-31%
In/Out of Area Time	Month	YTD	+ = Positive Change - = Negative Change			
	<i>(minutes)</i>	<i>(minutes)</i>				
Into Area Time	1321	2769				
Out of Area Time	1208	3883				
Investigative Ops (DB)	34915	81285				
Secondary Road Patrol	499	864				
County Wide	240	930				
	Hours Accum.	Hours Used	Balance			
Banked Hours						

2024 Ypsilanti Township Monthly Call Report (WD)

City:Ypsilanti Twp-YPT



Search Criteria: (This report counts for offenses but excludes UCR status of 'Unfounded'.)

Month:	March
Year:	2024
City:	Ypsilanti Twp-YPT

2024 Ypsilanti Township Monthly Call Report (WD)

City:Ypsilanti Twp-YPT

CLASS	Description	Mar/2024	Mar/2023	% CHG	YTD 2024	YTD 2023	% CHG	ADULT		JUV		Total	
								Mar/2024	YTD	Mar/2023	YTD	Mar	YTD
09001	MURDER/NONNEGLIGENT MANSLAUGHTER (VOLUNTARY)	0	1	-100%	0	1	-100%	0	0	0	0	0	0
09002	NEGLIGENT HOMICIDE/MANSLAUGHTER (INVOLUNTARY)	0	1	-100%	1	1	0%	0	0	0	0	0	0
10001	KIDNAPPING/ABDUCTION	0	1	-100%	2	2	0%	0	0	0	0	0	0
10002	PARENTAL KIDNAPPING	0	0	0%	1	0	0%	0	0	0	0	0	0
11001	SEXUAL PENETRATION PENIS/VAGINA -CSC 1ST DEGREE	5	1	400%	12	5	140%	0	0	0	0	0	0
11002	SEXUAL PENETRATION PENIS/VAGINA -CSC 3RD DEGREE	0	1	-100%	1	2	-50%	0	0	0	0	0	0
11003	SEXUAL PENETRATION ORAL/ANAL -CSC 1ST DEGREE	0	0	0%	1	0	0%	0	0	0	0	0	0
11004	SEXUAL PENETRATION ORAL/ANAL -CSC 3RD DEGREE	1	0	0%	1	1	0%	0	0	0	0	0	0
11005	SEXUAL PENETRATION OBJECT -CSC 1ST DEGREE	0	0	0%	1	0	0%	0	0	0	0	0	0
11007	SEXUAL CONTACT FORCIBLE -CSC 2ND DEGREE	2	2	0%	5	2	150%	0	0	0	0	0	0
11008	SEXUAL CONTACT FORCIBLE -CSC 4TH DEGREE	1	2	-50%	4	5	-20%	1	1	0	0	1	1
12000	ROBBERY	1	0	0%	3	3	0%	0	0	0	0	0	0
12001	ROBBERY	0	1	-100%	0	3	-100%	0	0	0	0	0	0
13001	NONAGGRAVATED ASSAULT	35	34	2.941%	86	100	-14%	8	24	0	1	8	25
13002	AGGRAVATED/FELONIOUS ASSAULT	28	34	-17.6%	69	88	-21.5%	8	33	2	3	10	36
13003	INTIMIDATION/STALKING	9	9	0%	27	24	12.5%	2	4	0	0	2	4
20000	ARSON	1	0	0%	2	0	0%	0	1	0	0	0	1
21000	EXTORTION	0	2	-100%	4	7	-42.8%	0	0	0	0	0	0
22001	BURGLARY -FORCED ENTRY	3	4	-25%	16	17	-5.88%	1	3	0	0	1	3
22002	BURGLARY -ENTRY WITHOUT FORCE (Intent to Commit)	3	2	50%	6	6	0%	0	0	1	1	1	1
23001	LARCENY -POCKETPICKING	0	0	0%	1	0	0%	0	0	0	0	0	0
23002	LARCENY -PURSESNAATCHING	1	1	0%	1	2	-50%	0	0	0	0	0	0

2024 Ypsilanti Township Monthly Call Report (WD)

City:Ypsilanti Twp-YPT

CLASS	Description	Mar/2024	Mar/2023	% CHG	YTD 2024	YTD 2023	% CHG	ADULT		JUV		Total	
								Mar/2024	YTD	Mar/2023	YTD	Mar	YTD
23003	LARCENY -THEFT FROM BUILDING	11	5	120%	32	22	45.45%	0	2	0	0	0	2
23005	LARCENY -THEFT FROM MOTOR VEHICLE	19	10	90%	33	35	-5.71%	0	1	0	2	0	3
23006	LARCENY -THEFT OF MOTOR VEHICLE PARTS/ACCESSORIES	1	0	0%	5	10	-50%	0	1	0	0	0	1
23007	LARCENY -OTHER	4	8	-50%	16	15	6.666%	2	2	0	1	2	3
24001	MOTOR VEHICLE THEFT	18	3	500%	43	24	79.16%	1	2	0	2	1	4
24002	MOTOR VEHICLE, AS STOLEN PROPERTY	3	0	0%	6	4	50%	1	1	1	4	2	5
25000	FORGERY/COUNTERFEITING	0	1	-100%	2	5	-60%	0	0	0	0	0	0
26001	FRAUD -FALSE PRETENSE/SWINDLE/CONFIDENCE GAME	4	8	-50%	10	21	-52.3%	0	1	0	0	0	1
26002	FRAUD -CREDIT CARD/AUTOMATIC TELLER MACHINE	4	3	33.33%	7	16	-56.2%	0	0	0	0	0	0
26005	FRAUD -WIRE FRAUD	2	1	100%	6	2	200%	0	0	0	0	0	0
26007	FRAUD - IDENTITY THEFT	2	9	-77.7%	9	27	-66.6%	0	0	0	0	0	0
27000	EMBEZZLEMENT	1	0	0%	1	3	-66.6%	0	0	0	0	0	0
28000	STOLEN PROPERTY	4	0	0%	6	3	100%	1	1	0	0	1	1
29000	DAMAGE TO PROPERTY	20	22	-9.09%	62	86	-27.9%	1	3	0	0	1	3
30001	RETAIL FRAUD -MISREPRESENTATION	0	0	0%	0	2	-100%	0	0	0	0	0	0
30002	RETAIL FRAUD -THEFT	3	3	0%	13	19	-31.5%	0	2	1	1	1	3
35001	VIOLATION OF CONTROLLED SUBSTANCE ACT	12	9	33.33%	21	34	-38.2%	3	8	0	0	3	8
35002	NARCOTIC EQUIPMENT VIOLATIONS	2	1	100%	5	7	-28.5%	1	1	0	0	1	1
37000	OBSCENITY	2	1	100%	3	2	50%	0	0	0	0	0	0
52001	WEAPONS OFFENSE- CONCEALED	7	3	133.3%	24	26	-7.69%	3	9	0	2	3	11
52003	WEAPONS OFFENSE -OTHER	3	4	-25%	6	10	-40%	0	0	0	0	0	0
72000	ANIMAL CRUELTY	0	4	-100%	1	4	-75%	0	0	0	0	0	0
Group A Totals		212	191	10.99%	555	646	-14.0%	33	100	5	17	38	117
22003	BURGLARY - UNLAWFUL ENTRY (NO INTENT)	0	0	0%	0	1	-100%	0	0	0	0	0	0
26006	FRAUD -BAD CHECKS	1	0	0%	2	1	100%	0	0	0	0	0	0
36004	SEX OFFENSE -OTHER	1	2	-50%	1	3	-66.6%	0	1	0	0	0	1

2024 Ypsilanti Township Monthly Call Report (WD)

City:Ypsilanti Twp-YPT

CLASS	Description	Mar/2024	Mar/2023	% CHG	YTD 2024	YTD 2023	% CHG	ADULT		JUV		Total	
								Mar/2024	YTD	Mar/2023	YTD	Mar	YTD
38001	FAMILY -ABUSE/NEGLECT NONVIOLENT	8	4	100%	15	9	66.66%	0	2	0	0	0	2
38002	FAMILY -NONSUPPORT	0	1	-100%	0	1	-100%	0	0	0	0	0	0
38003	FAMILY -OTHER	0	0	0%	0	1	-100%	0	0	0	0	0	0
41002	LIQUOR VIOLATIONS -OTHER	1	1	0%	1	1	0%	0	0	0	0	0	0
48000	OBSTRUCTING POLICE	16	10	60%	63	39	61.53%	1	12	4	4	5	16
49000	ESCAPE/FLIGHT	0	1	-100%	0	1	-100%	0	0	0	0	0	0
50000	OBSTRUCTING JUSTICE	20	16	25%	50	60	-16.6%	8	18	0	0	8	18
53001	DISORDERLY CONDUCT	0	0	0%	3	2	50%	0	1	0	0	0	1
53002	PUBLIC PEACE -OTHER	0	1	-100%	1	3	-66.6%	1	1	0	0	1	1
54001	HIT and RUN MOTOR VEHICLE ACCIDENT	1	0	0%	1	0	0%	0	0	0	0	0	0
54002	OPERATING UNDER THE INFLUENCE OF LIQUOR OR DRUGS	23	13	76.92%	59	37	59.45%	19	46	0	0	19	46
55000	HEALTH AND SAFETY	4	2	100%	6	8	-25%	0	0	0	0	0	0
57001	TRESPASS	1	1	0%	4	7	-42.8%	0	1	0	0	0	1
58000	SMUGGLING	1	0	0%	1	0	0%	0	0	0	0	0	0
63000	VAGRANCY	0	0	0%	1	0	0%	0	0	0	0	0	0
70000	JUVENILE RUNAWAY	10	2	400%	20	12	66.66%	0	0	0	0	0	0
73000	MISCELLANEOUS CRIMINAL OFFENSE	10	0	0%	14	0	0%	0	0	0	0	0	0
75000	SOLICITATION	0	0	0%	1	0	0%	0	0	0	0	0	0
Group B Totals		97	54	79.62%	243	186	30.64%	29	82	4	4	33	86
2800	JUVENILE OFFENSES AND COMPLAINTS	37	20	85%	63	42	50%	0	0	0	0	0	0
2900	TRAFFIC OFFENSES	10	14	-28.5%	42	38	10.52%	0	0	0	0	0	0
3000	WARRANTS	35	39	-10.2%	99	106	-6.60%	21	60	0	1	21	61
3100	TRAFFIC CRASHES	82	113	-27.4%	300	346	-13.2%	0	0	0	0	0	0
3200	SICK / INJURY COMPLAINT	189	191	-1.04%	655	588	11.39%	0	0	0	0	0	0
3300	MISCELLANEOUS COMPLAINTS	731	739	-1.08%	2245	2075	8.192%	1	2	0	0	1	2
3500	NON - CRIMINAL COMPLAINTS	859	872	-1.49%	2855	2747	3.931%	0	0	0	3	0	3
3700	MISCELLANEOUS TRAFFIC COMPLAINTS	1007	1152	-12.5%	3465	3412	1.553%	0	0	0	0	0	0

2024 Ypsilanti Township Monthly Call Report (WD)

City:Ypsilanti Twp-YPT

CLASS	Description	Mar/2024	Mar/2023	% CHG	YTD 2024	YTD 2023	% CHG	ADULT		JUV		Total	
								Mar/2024	YTD	Mar/2023	YTD	Mar	YTD
3800	ANIMAL COMPLAINTS	71	89	-20.2%	217	203	6.896%	0	0	0	0	0	0
3900	ALARMS	115	118	-2.54%	371	339	9.439%	0	0	0	0	0	0
Group C Totals		3136	3347	-6.30%	10312	9896	4.203%	22	62	0	4	22	66
4000	HAZARDOUS TRAFFIC CITATIONS / WARNINGS	0	1	-100%	2	1	100%	0	0	0	0	0	0
4100	NON-HAZARDOUS TRAFFIC CITATIONS / WARNINGS	0	1	-100%	1	1	0%	0	0	0	0	0	0
4200	PARKING CITATIONS	1	2	-50%	1	4	-75%	0	0	0	0	0	0
4300	LICENSE / TITLE / REGISTRATION CITATIONS	0	0	0%	2	1	100%	0	0	0	0	0	0
4500	MISCELLANEOUS A THROUGH UUUU	39	15	160%	69	52	32.69%	0	0	0	0	0	0
Group D Totals		40	19	110.5%	75	59	27.11%	0	0	0	0	0	0
6000	MISCELLANEOUS ACTIVITIES (6000)	42	44	-4.54%	145	121	19.83%	0	0	0	0	0	0
6100	MISCELLANEOUS ACTIVITIES (6100)	86	71	21.12%	211	232	-9.05%	0	0	0	0	0	0
6300	CANINE ACTIVITIES	5	7	-28.5%	7	15	-53.3%	0	0	0	0	0	0
6500	CRIME PREVENTION ACTIVITIES	2	5	-60%	14	17	-17.6%	0	0	0	0	0	0
6600	COURT / WARRANT ACTIVITIES	1	6	-83.3%	1	8	-87.5%	0	0	0	0	0	0
6700	INVESTIGATIVE ACTIVITIES	36	46	-21.7%	112	115	-2.60%	0	0	0	0	0	0
Group F Totals		172	179	-3.91%	490	508	-3.54%	0	0	0	0	0	0
City : Ypsilanti Twp Totals		3657	3790	-3.50%	11675	11295	3.364%	84	244	9	25	93	269



**YPSILANTI
TOWNSHIP**
— WHERE YOUR FUTURE GROWS —

Charter Township of Ypsilanti

7200 S. HURON RIVER DRIVE • YPSILANTI, MI 48197

SUPERVISOR BRENDA STUMBO • CLERK HEATHER JARRELL ROE • TREASURER STAN
ELDRIDGE TRUSTEES: RYAN HUNTER • JOHN P. NEWMAN II • GLORIA PETERSON •
DEBBIE SWANSON

REGULAR MEETING AGENDA

TUESDAY, MAY 21, 2024

6:00 P.M.

1. CALL TO ORDER
2. PLEDGE OF ALLEGIANCE AND INVOCATION
4. CONSENT AGENDA
 - A. MINUTES OF THE MAY 7, 2024 REGULAR MEETING AND CLOSED SESSION
 - B. STATEMENTS AND CHECKS
 1. STATEMENTS AND CHECKS FOR MAY 21, 2024 IN THE AMOUNT OF \$960,052.33
 2. CLARITY HEALTHCARE DEDUCTIBLE ACH EFT FOR APRIL 2024 IN THE AMOUNT OF \$59,976.16
 3. CLARITY HEALTHCARE DEDUCTIBLE ADMIN FEE FOR APRIL 2024 IN THE AMOUNT OF \$1,588.19
 - C. TREASURER'S REPORT APRIL 2024
5. ATTORNEY REPORT
 - A. GENERAL LEGAL UPDATE

OLD BUSINESS

1. REQUEST AUTHORIZATION TO SEEK SEALED BIDS FOR PATHWAY AND PLAYGROUND SURFACE REPAIRS AT BURNS PARK AND PATHWAY RENOVATION AND PLAYGROUND REPLACEMENT AT WEST WILLOW PARK
(TABLED AT THE MAY 7, 2024 REGULAR MEETING)

NEW BUSINESS

1. REQUEST TO APPROVE THE CONTRACT WITH THE WASHTENAW COUNTY SHERIFF'S OFFICE AND WASHTENAW COUNTY TO FACILITATE COLLABORATIVE SHARING OF A SCHOOL RESOURCE OFFICER FOR THE SUMMER MONTHS WITH THE LINCOLN CONSOLIDATED SCHOOL DISTRICT IN THE AMOUNT OF \$30,263.21 BUDGETED IN LINE ITEM #266-301-831-008
2. REQUEST TO APPROVE THE 2024 THIRD AGREEMENT WITH THE WASHTENAW COUNTY ROAD COMMISSION (WCRC) IN THE AMOUNT OF \$1,861,865.87 BUDGETED IN LINE ITEM #101-902-981-130
3. REQUEST TO WAIVE THE FINANCIAL POLICY AND AWARD THE LOW QUOTE FROM DIUBLE FOR THE PURCHASE OF A BOBCAT TRACTOR IN THE AMOUNT OF \$28,694.80 BUDGETED IN LINE ITEM #101-770-977-000

4. REQUEST TO APPROVE THE AGREEMENT WITH RUN SIGNUP TO HOST REGISTRATION FOR THE DIVOT DASH 5K AT GREEN OAKS GOLF COURSE ON OCTOBER 15, 2024
5. BUDGET AMENDMENT #7

AUTHORIZATIONS AND BIDS

1. REQUEST TO SEEK SEALED BIDS FOR PATHWAY RENOVATION AND PLAYGROUND REPLACEMENT AT APPLERIDGE PARK AS PART OF THE WASHTENAW COUNTY COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) PROJECT FUNDING
2. REQUEST TO REJECT THE BIDS FOR THE REPLACEMENT AND INSTALLATION OF THE COMMUNITY CENTER RENOVATION HVAC PROJECT AND ACCEPT THE LOW QUOTE FROM W.J. ONEIL IN THE AMOUNT OF \$110,000.00 BUDGETED IN LINE ITEM #213-901-975-555
3. REQUEST TO SEEK SEALED BIDS FOR THE PURCHASE OF ONE NEW FORD TRANSIT VAN FOR BUILDING OPERATIONS
4. REQUEST TO WAIVE THE FINANCIAL POLICY AND AWARD THE LOW QUOTE FOR REPAIRS TO FIRE STATION #3 TO BMS MANAGEMENT IN THE AMOUNT OF \$52,092.28 BUDGETED IN LINE ITEM #206-901-976-005 DUE TO ALLIED BUILDING SERVICE WITHDRAWING THEIR QUOTE

CLOSED SESSION

1. REQUEST TO ENTER INTO CLOSED SESSION IN ACCORDANCE WITH THE OPEN MEETINGS ACT SECTION 15.268 TO CONSIDER MATERIAL EXEMPT FROM DISCUSSION OR DISCLOSURE BY FEDERAL OR STATE STATUTE

OTHER BUSINESS

PUBLIC COMMENTS

- THREE MINUTES PER PERSON
- ALL COMMENTS MUST BE ADDRESSED TO THE CHAIR
- PUBLIC COMMENTS ARE ALSO WELCOME AS THE BOARD ADDRESSES EACH AGENDA ITEM

BOARD MEMBER UPDATES

CONSENT AGENDA

**CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING**

Supervisor Brenda Stumbo called the meeting to order at approximately 6:00pm in the Ypsilanti Township Civic Center Board Room, 7200 S. Huron River Drive, Ypsilanti Township. The Pledge of Allegiance was recited followed by a moment of silent prayer.

Members Present: Supervisor Brenda Stumbo, Clerk Heather Jarrell Roe, and Treasurer Stan Eldridge
Trustees: John Newman II, Gloria Peterson, and Debbie Swanson, Ryan Hunter (late)

Members Absent: none

Legal Counsel: Wm. Douglas Winters

John Hines, Municipal Services Director, introduced Jeff Yahr as the new Assistant Municipal Services Director. Mr. Hines stated Mr. Yahr comes from a construction background and has been here about 3 weeks and is working with the Parks and Grounds team. Mr. Hines introduced Josh Kugler who has worked at the Township since 2021 and is now promoted to Recreation Service Manager.

CONSENT AGENDA

A. MINUTES OF THE APRIL 15, 2024 SPECIAL MEETING, APRIL 15, 2024 CLOSED SESSION AND APRIL 16, 2024 REGULAR MEETING

A motion was made by Clerk Jarrell Roe and supported by Trustee Peterson to approve the meeting minutes with the edits from Supervisor Stumbo and Trustee Swanson to the minutes.

The motion carried unanimously.

B. STATEMENTS AND CHECKS

**1. STATEMENTS AND CHECKS FOR MAY 7, 2024 IN THE AMOUNT OF
\$1,452,880.78**

**CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 2**

A motion was made by Clerk Jarrell Roe and supported by Treasurer Eldridge to approve the Statements and Checks.

The motion carried unanimously.

ATTORNEY REPORT

A. GENERAL LEGAL UPDATE

Attorney Winters stated that most of the agenda items including the closed session he has been involved with. He said he would ask the Board to what degree do they want to be involved with the planned removal of the Peninsular Dam. He said there will be issues with high level of contamination with this removal. He said during the Ypsilanti City Council meeting the issue regarding contamination was discussed and it was stated that this process would not contaminate Ford Lake any more than it already is. Attorney Winters stated the City of Ypsilanti will have to secure \$14 million to pay for this project. He suggested that the Board monitor this process if the removal moves forward.

Supervisor Stumbo stated that she had previously met with the former Mayor of Ypsilanti when it was first discussed regarding the removal of the dam. She said that there will be a shrinkage in the river and Ypsilanti city residents will have more property if they own property along the river and we wanted at that time discussed making sure the township residents who owned property along the river would be given the same opportunity. She said she would reach out to the City of Ypsilanti and set up a meeting to discuss this further.

NEW BUSINESS

- 1. REQUEST TO APPROVE THE AGREEMENT WITH THE PEACH TRUCK TO UTILIZE FORD HERITAGE PARK AND GREEN OAKS GOLF COURSE PARKING LOT SPACE FOR TEN WEEKS**

CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 3

A motion was made by Treasurer Eldridge and supported by Clerk Jarrell Roe to approve the agreement with the Peach Truck to utilize Ford Heritage Park and Green Oaks Golf Course parking lot space for ten weeks (see attached).

Robin Castle-Hine, Community Events Manager stated that Peach Truck contacted her about bringing in their peaches to sell in the Township. She said they will be at the location for 2 hours and they do sell out, so they suggest people order online. She said they sell 12lbs of peaches for \$45.00. She said they will be there from 4:30 to 6:30. She said you go online to their website Peachtree.com and order.

The motion carried unanimously.

2. REQUEST TO APPROVE CHANGE ORDER #1 WITH AR BROUWER FOR THE FORD LAKE PARK SHELTER IMPROVEMENTS IN THE AMOUNT OF \$32,863.00 BUDGETED IN LINE ITEM #101-902-981-070

A motion was made by Clerk Jarrell Roe and supported by Trustee Swanson to approve Change Order #1 with AR Brouwer for the Ford Lake Park Shelter improvements in the amount of \$32,863.00 budgeted in line #102-902-981-070 (see attached).

John Hines, Municipal Services Director explained what this change entails.

Clerk Jarrell Roe stated that it is frustrating that we accept a bid for a certain amount and then other extras pop up and the cost changes and a \$32,863.00 change is major.

John Hines explained that unfortunately a lot of the structures are old and sometimes other problems show up when we begin doing the project.

Gloria Peterson, Township Trustee asked if the trees aren't cut down won't the roots continue to grow, and we will have this issue again.

John Hines stated that some of the trees have been removed and they will grind down the roots, so it won't be an issue in the near future.

**CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 4**

Debbie Swanson, Township Trustee agreed with Clerk Jarrell Roe that it is very concerning that we keep having large change orders. She said when this was first brought up, she asked about the grills and now they are being taken out. She asked what would be put in its' place.

John Hines stated that if the grills need to be removed, they will fill the area with concrete in place of the grills. He said it will be leveled and a granite countertop will be added so residents can use it as a counter that will have electric outlets so hot plates and crock pots can be used.

The motion carried unanimously.

3. REQUEST TO APPROVE AN AGREEMENT WITH OHM ADVISORS TO PROVIDE ENGINEERING SERVICES FOR THE REDESIGN AND REBID FOR THE CIVIC CENTER POND IN THE AMOUNT OF \$9,900.00 BUDGETED IN LINE ITEM #101-902-981-030

A motion was made Clerk Jarrell Roe and supported by Treasurer Eldridge to approve an agreement with OHM Advisors to provide engineering services for the redesign and rebid for the Civic Center Pond in the amount of \$9,900.00 budgeted in line item #101-902-981-030.

A motion was made by Clerk Jarrell Roe and supported by Treasurer Eldridge to Table this request.

The motion carried unanimously.

4. REQUEST TO APPROVE A LEAVE OF ABSENCE FOR CHRISTINA BENITEZ FOR A TIME LIMIT OF 60 DAYS

A motion was made by Clerk Jarrell Roe and supported by Treasurer Eldridge to request a leave of absence for Christina Benitez for a time limit of 60 days.

Trustee Swanson asked to abstain from this vote.

**CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 5**

Attorney Winters stated he had no objections to Trustee Swanson abstaining.

The motion carried unanimously.

**5. REQUEST TO APPROVE CIRCUIT COURT LITIGATION TO ABATE A PUBLIC
NUISANCE AT 2574 STATE ST. BUDGETED IN LINE ITEM #101-729-801-023**

A motion was made by Clerk Jarrell Roe and supported by Treasurer Eldridge to approve circuit court litigation to abate a public nuisance at 2574 State St. budgeted in line item #101-729-801-023.

Fletcher Reyher, Planning/Development Coordinator explained the nuisance at 2574 State St.

Attorney Winters also stated that the structure built on this property did so without any footing put into the ground which would have secured the building. He said if there was a high wind it could take this building down.

Trustee Swanson stated she sees tanks on the property that possibly wouldn't be acceptable next to the building.

The motion carried unanimously.

**6. REQUEST TO APPROVE CIRCUIT COURT LITIGATION TO ABATE A PUBLIC
NUISANCE AT 849 JEROME AVE. BUDGETED IN LINE ITEM #101-729-801-023**

A motion was made by Clerk Jarrell Roe and supported by Treasurer Eldridge to approve circuit court litigation to abate a public nuisance at 849 Jerome Ave. budgeted in line item #101-729-801-023.

Belinda Kingsley, Community Compliance Director explained the public nuisance at this residence.

**CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 6**

Debbie Swanson, Trustee, asked if there are vermin because when things get cleaned up then the vermin move into other areas of the neighborhood and that we should be ready to help with that.

Belinda Kingsley stated they would do that, and they still have a contract with Orkin through the Water Resource Commission.

The motion carried unanimously.

7. REQUEST TO APPROVE CIRCUIT COURT LITIGATION TO ABATE A PUBLIC NUISANCE AT 944 N. RIVER ST. BUDGETED IN LINE ITEM #101-729-801-023

A motion was made by Clerk Jarrell Roe and supported by Treasurer Eldridge to approve circuit court litigation to abate a public nuisance at 944 N. River St. budgeted in line item #101-729-801-023.

Belinda Kingsley, Community Compliance Director explained the public nuisance at this residence.

The motion carried unanimously.

8. REQUEST TO APPROVE THE AGREEMENT WITH THE WASHTENAW COUNTY ROAD COMMISSION (WCRC) FOR THE INSTALLATION OF 4 (FOUR) SPEED HUMPS ON BRADLEY AVE. IN THE AMOUNT OF \$33,930.00 BUDGETED IN LINE ITEM #101-446-982-000

A motion was made by Trustee Peterson and supported by Clerk Jarrell Roe to approve the agreement with the Washtenaw County Road Commission (WCRC) for the installation of 4 (four) speed humps on Bradley Ave. in the amount of \$33,930.00 budgeted in line item #101-446-982-000 (see attached).

Supervisor Stumbo stated she and Clerk Jarrell Roe had a zoom meeting with the Road Commission and they agreed to include renters that could sign petitions for speed humps. She said it is hard to find the owners when they are petitioning for speed humps and need 51% of the residents to agree to installing them.

**CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 7**

The motion carried unanimously.

9. REQUEST TO APPROVE THE AGREEMENT WITH THE WASHTENAW COUNTY ROAD COMMISSION (WCRC) FOR THE INSTALLATION OF 9 (NINE) SPEED HUMPS ON GEORGE AVE. AND SMITH AVE. IN THE AMOUNT OF \$77,130.00 BUDGETED IN LINE ITEM #101-446-982-000

A motion was made by Treasurer Eldridge and supported by Trustee Swanson to approve the agreement with the Washtenaw County Road Commission (WCRC) for the installation of 9 (nine) speed humps on George Ave. and Smith Ave. in the amount of \$77,130.00 budgeted in line item #101-446-982-000 (see attached).

The motion carried unanimously.

10. REQUEST TO APPOINT JULIANN TRUDELL TO THE CIVIL SERVICE COMMISSION WITH AN EXPIRATION DATE OF DECEMBER 31, 2024

A motion was made by Trustee Peterson and supported by Clerk Jarrell Roe to appoint Juliann Trudell to the Civil Service Commission with an expiration date of December 31, 2024.

The motion carried unanimously.

11. RESOLUTION 2024-06, TEMPORARY ROAD CLOSURE REQUEST FOR THE OBERUN 5K

Clerk Jarrell Roe read Resolution 2024-06.

A motion was made by Clerk Jarrell Roe and supported by Treasurer Eldridge to approve Resolution 2024-06, temporary road closure request for the Oberun 5K (see attached).

The motion carried unanimously.

**CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 8**

**12. RESOLUTION 2024-07, TEMPORARY ROAD CLOSURE REQUEST FOR THE
RUN, SCREAM, RUN 5K**

Clerk Jarrell Roe read Resolution 2024-07.

A motion was made by Clerk Jarrell Roe and supported by Treasurer Eldridge to approve Resolution 2024-07, temporary road closure request for the Run, Scream, Run 5K (see attached).

The motion carried unanimously.

13. BUDGET AMENDMENT #6

Clerk Jarrell Roe read Budget Amendment #6.

A motion was made by Clerk Jarrell Roe and supported by Trustee Swanson to approve Budget Amendment #6 (see attached).

The motion carried unanimously.

AUTHORIZATIONS AND BIDS

**1. REQUEST AUTHORIZATION TO SEEK BIDS FOR PATHWAY AND
PLAYGROUND SURFACE REPAIRS AT BURNS PARK AND PATHWAY
RENOVATION AND PLAYGROUND REPLACEMENT AT WEST WILLOW PARK**

A motion was made by Clerk Jarrell Roe and supported by Treasurer Eldridge to request authorization to seek bids for pathway and playground surface repairs at Burns Park and pathway renovation and playground replacement at West Willow Park.

John Hines, Municipal Services Director explained the process for deciding what the residents wanted for the park in their neighborhood and that it would be paid for by the ARPA funds.

CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 9

Residents spoke of their concerns regarding the park renovation at West Willow Park and asked about additional lighting, park benches, and separate play areas for younger and older youth.

John Hines stated that regarding adding new benches, upgrading lighting has been discussed and it is something we can look to do outside of this funding but not part of this project.

Janice Williams, West Willow resident asked for this project for West Willow Park to be paused because the residents feel what is being planned is not what the residents had envisioned. She suggested that they meet again and go over what they want in their park.

Joann McCollum, West Willow resident stated that when she goes to the park she sees the basketball court for older kids, playground for young children but nothing for the middle kids and when speaking to the middle kids they want something for their age group.

Trustee Hunter asked if the project could be split so they could address the concerns of the West Willow residents.

Supervisor Stumbo stated it was possible but the funds we are were using for the project were from ARPA and projects must be completed by this year.

John Hines stated we could wait to put out to bid but he would request that the motion be passed tonight so we can get that part done. He said they would have more community engagement so they could re-evaluate the needs for West Willow Park.

Trustee Hunter asked if Mr. Hines was suggesting that this would be passed tonight so that the resources would be available.

Mr. Hines stated that pending attorney review, they would look at different playground designs that would fit the need for all age groups and still keep the project closer to the original timeline.

CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 10

Supervisor Stumbo suggested that we proceed with the sealed bids for Burns Park.

John Hines stated that changing the baseball field into soccer fields would be an easy process.

Trustee Swanson questioned that since the parks were put together to save money and now if we continue with Burns Parks would it cost more.

John Hines stated the reason we would bid them together was for cost savings. He said companies may not give a discount if it was bid separately.

Treasurer Eldridge asked if we move forward with Burns Park and table West Willow tonight, give John 30 days to meet with West Willow, and then bring it back to our June meeting, could John send the two bids out together, and still get the cost savings. John Hines stated that would be possible.

Trustee Swanson questioned why they only picked one playground vendor because typically you get a better price if you check multiple vendors. Trustee Swanson explained her expertise in working on the Park Commission and purchasing playground equipment.

Trustee Peterson stated her concern with the playground equipment is that it appears to be designed for very young children. She stated she also was on the Park Commission and that we have beautiful equipment in our township parks. She suggested that West Willow residents present exactly what they want, and we will see if it fits in the budget.

Supervisor Stumbo stated that the bike and walk path needs to be fixed in both parks and wondered if that would be something that we could get started on.

John Hines stated he would set up a meeting this week or next with West Willow so he could bring it back at the May 21st meeting.

A motion was made by Treasurer Eldridge and seconded by Trustee Hunter to table until the May 21, 2024 meeting.

**CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 11**

The motion carried unanimously.

2. REQUEST TO REJECT THE BIDS RECEIVED FOR THE CIVIC CENTER POND AND APPROVE OHM TO REBID WITH A REDUCTION OF SCOPE

A motion was made by Clerk Jarrell Roe and supported by Trustee Peterson to request to reject the bids received for the Civic Center Pond and approve OHM to rebid with a reduction of scope.

Clerk Jarrell Roe stated that she would not be in favor of rebidding this tonight.

Treasurer Eldridge stated that we had tabled this under new business, and we should take the rebid portion out of this request and just reject the bids.

A motion was made by Treasurer Eldridge and supported by Trustee Hunter to reject the bids received for the Civic Center Pond.

The motion carried unanimously.

There was discussion regarding the bidding process and how much higher the bids are coming in from what was expected.

PUBLIC COMMENTS

Two public comments were given.

CLOSED SESSION

- 1. REQUEST TO ENTER CLOSED SESSION IN ACCORDANCE WITH THE OPEN MEETINGS ACT, MCL 15.268 SUBSECTION (D) TO CONSIDER THE PURCHASE OR LEASE OF REAL PROPERTY UP TO THE TIME AN OPTION TO PURCHASE OR LEASE THAT REAL PROPERTY IS OBTAINED AND (H) TO CONSIDER MATERIAL EXEMPT FROM DISCUSSION OR DISCLOSURE BY STATE OR FEDERAL STATUTE**

**CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 12**

A motion was made by Clerk Jarrel Roe and supported by Treasurer Eldridge to request to enter closed session in accordance with the open meetings act, MCL 15.268 subsection (D) to consider the purchase or lease of real property up to the time an option to purchase or lease that real property is obtained and (H) to consider material exempt from discussion or disclosure by State or Federal Statute.

Motion carried unanimously.

The board entered closed session at 8:15pm.

The board returned from closed session at 9:11pm.

OTHER BUSINESS

- 1. REQUEST AUTHORIZATION FOR SUPERVISOR STUMBO AND CLERK JARRELL ROE TO EXECUTE THE PURCHASE AGREEMENT BETWEEN YPSILANTI TOWNSHIP AND UPH YPSILANTI PROPERTY LLC FOR A TOTAL OF 3.740 ACRES FOR THE TOTAL COST OF \$806,513.00 LOCATED AT 1410 S. HURON ST. PARCEL NUMBER K-11-38-280-018 FOR THE INTENTIONS OF OPENING A CULVER'S**

A motion was made by Clerk Jarrell Roe and seconded by Trustee Hunter to authorize Supervisor Stumbo and Clerk Jarrell Roe to execute the purchase agreement between Ypsilanti Township and UPH Ypsilanti Property LLC for a total of 3.740 acres for the total cost of \$806,513.00 located at 1410 S. Huron St. parcel number K-11-38-280-018 for the intentions of opening a Culver's.

Supervisor Stumbo stated the dollar from the sale of this land are committed to be reinvested in the Ecorse, Holmes Rd., and Michigan Ave areas for redevelopment.

Supervisor Stumbo thanked Attorney Winters, Fletcher Reyher, the Planning/Development Coordinator and the Assessing Department for their work on this project.

**CHARTER TOWNSHIP OF YPSILANTI
MINUTES OF THE MAY 7, 2024 REGULAR BOARD MEETING
PAGE 13**

Supervisor Stumbo stated that if this moves forward it would be second property sold on Huron St.

The motion passed unanimously.

A motion to adjourn was made by Trustee Peterson and supported by Treasurer Eldridge.

Motion carried unanimously.

The meeting was adjourned at approximately 9:14pm.

Respectfully Submitted,

**Brenda L. Stumbo, Supervisor
Charter Township of Ypsilanti**

**Heather Jarrell Roe, Clerk
Charter Township of Ypsilanti**



The Peach Truck Summer Agreement

This Agreement, which includes the Terms and Conditions attached as Exhibit A (this "Agreement"), is made as of 4/30/2024, by and between The Peach Truck, LLC, a Tennessee limited liability company, ("Seller"), located at 1109 Woodland St. P.O. Box 60425, Nashville, TN, 37206, phone (615)-913-4225, and, Ford Heritage Park located at 8399 Textile Rd, phone 7345444000 (the "Host").

TOUR HOST: Green Oaks Golf Course
DATE: 6/5/2024, 6/26/2024, 7/17/2024, 8/7/2024, 8/28/2024
EVENT TIME: 4:30pm - 6:30pm
LOCATION OF EVENT: 1775 E Clark Rd, Ypsilanti, MI 48198

Retail Space: Host shall assign Seller adequate space, approx. 15 parking spots to sell Seller's products and merchandise. Seller, in its sole discretion, has final say on how the space is used and how Seller presents to the general public. Seller agrees, at its sole cost and expense, to keep its space clean and in a manner satisfactory with Host. Seller shall not transfer, assign, sublet, or share any space without written approval. Additionally, Seller shall have all property and trash removed in a reasonable time following the conclusion of the event.

PARKING: Parking is included and will be available on a first come first serve basis in Host's controlled lots.

By signing this Agreement, I have read and agreed to the Terms and Conditions, a copy of which are attached to this Agreement as Exhibit A.

The Peach Truck, LLC

[x]

Signature:

Signature:

Jessica Miller

Heather Jarrell Roe
Branda L. Stumbo

Name: Jessica Miller

Name: Heather Jarrell Roe / Branda L. Stumbo

Date:

Date: May 9, 2024

Address: 1109 Woodland St. PO Box 60425
Nashville, TN 37206

Address: 7200 S. Huron River Dr.

EXHIBIT A -- TERMS AND CONDITIONS

1. **CANCELLATION POLICY:** Both parties reserves the right to terminate this Agreement outside of 30 days from event, for any reason, and in their sole discretion, without any penalty whatsoever.
2. **INDEMNIFICATION:** Host agrees to indemnify, defend, and hold harmless Seller and its respective managers, members, affiliates, officers, employees, agents, and representatives from and against any and all losses, lawsuits, judgements, causes of action, costs, damages, claims (actual or alleged) and expenses resulting from unsafe conditions or property defects arising out of or incidental to or in any way resulting from negligent acts or omissions of Host and its agents, representatives and employees, if any, in the performance of this Agreement and/or use of Tour Space. Nothing herein shall be construed to waive, limit, or restrict any governmental immunity defense available to the Charter Township of Ypsilanti.
3. **On-site Marketing Materials:** Ability to have signs/A-frames on property during day of event with materials to help facilitate the sale of the product. IE: URL, Time, Date, Prices, Products.
4. **Contractual Easement:** In case of change of ownership the agreement for times and dates stays valid.
5. **Site of Location Set-Up:** Site of Set-Up will be in a high traffic and visible location as well as mutually agreed upon between both parties.
6. **LIMITATION OF LIABILITY:** To the extent Host maintains any claim against Seller, Host shall look solely against Seller's profits from the Event for the recovery of any judgment against Seller and no other property or assets of Seller shall be subject to levy, execution or other enforcement procedure for the satisfaction of Host's remedies under or with respect to this Agreement. In no event shall Seller be liable to Host for any other person or entity for consequential, special, indirect, incidental, or punitive damages, costs, expenses, or losses (including without limitation lost profits, loss of business, anticipatory profits and opportunity costs). Notwithstanding the foregoing, nothing in this paragraph is intended to limit or restrict the indemnification rights or obligations in this Agreement.
7. **MEDIA RELEASE:** Host grants Seller the irrevocable and unlimited right and permission to use photographs and/or video recordings of EVENT, Host's intellectual property, and Host's property on each of Seller's social media and other Internet properties, publications, promotional flyers, marketing materials, derivative works, or for any other similar purpose without compensation or permission from Host.
8. **NO WAIVER:** No delay or failure of any party to exercise any right provided herein shall in any way affect its right to enforce that right or any other right under this Agreement at a later time. No waiver shall be effective unless in writing signed by the waiving party.
9. **SEVERABILITY:** If any provision of this Agreement is declared invalid by any lawful tribunal, then it shall be adjusted to conform to legal requirements of that tribunal and that modification shall automatically become a part of the Agreement. Or, if no adjustment can be made, the provision shall be deleted as though never included in the Agreement and its remaining provisions shall remain in full force and effect.
10. **NO PARTNERSHIP OR AGENCY:** Seller and Host are independent contractors, and neither party shall be, nor represent itself to be, the joint venture, franchiser, franchisee, partner, broker, employee, servant, agent or representative of the other party for any purpose. Neither party is, or shall be, responsible for the acts or omissions of the other and neither party shall bear authority to make any representation or incur any obligation on behalf of the other party unless expressly authorized herein. Each party also acknowledges that it has not relied on any promises, inducements, representations or other statements made by the other party regarding the commercial viability, profitability or success in the marketplace of any Projects or services, and that each party's decision to enter into this Agreement is made independently from the other party.
11. **CHOICE OF LAW:** This Agreement shall be governed by the laws of the State of Tennessee without regard to its conflict of laws provisions.
12. **DISPUTE RESOLUTION:** If a dispute arises out of or relates to this contract, or the breach thereof, and if the dispute cannot be settled through negotiation, the parties agree first to try in good faith to settle the dispute by mediation administered by the American Arbitration Association under its Commercial Mediation Procedures in Nashville, Tennessee (or such other location agreed upon by the parties) or by private party before resorting to arbitration, litigation, or some other dispute resolution procedure unless both parties agree in writing to forego mediation. Any dispute or controversy arising under or in connection with this Agreement that cannot be settled through mediation shall be settled exclusively

by arbitration in accordance with the rules of the American Arbitration Association then in effect in Nashville, Tennessee (or such other location agreed upon by the parties).

13. **ENTIRE AGREEMENT:** The Agreement constitute the complete and exclusive statement of the agreement between the parties and supersede all prior oral and written agreements, communications, representations, statements, negotiations and undertakings relating to the subject matter.



The Peach Truck Summer Agreement

This Agreement, which includes the Terms and Conditions attached as Exhibit A (this "Agreement"), is made as of 4/30/2024, by and between The Peach Truck, LLC, a Tennessee limited liability company, ("Seller"), located at 1109 Woodland St. P.O. Box 60425, Nashville, TN, 37206, phone (615)-913-4225, and, 1775 E. Clark Road located at Green oaks gold course, phone 734-544-4000 (the "Host").

TOUR HOST: Ford Heritage Park
DATE: 5/28/2024, 6/18/2024, 7/9/2024, 7/30/2024, 8/20/2024
EVENT TIME: 4:30pm-6:30pm
LOCATION OF EVENT: 8399 Textile Rd, Ypsilanti, MI 48197

Retail Space:

Host shall assign Seller adequate space, approx. 15 parking spots to sell Seller's products and merchandise. Seller, in its sole discretion, has final say on how the space is used and how Seller presents to the general public. Seller agrees, at its sole cost and expense, to keep its space clean and in a manner satisfactory with Host. Seller shall not transfer, assign, sublet, or share any space without written approval. Additionally, Seller shall have all property and trash removed in a reasonable time following the conclusion of the event.

PARKING:

Parking is included and will be available on a first come first serve basis in Host's controlled lots.

By signing this Agreement, I have read and agreed to the Terms and Conditions, a copy of which are attached to this Agreement as Exhibit A.

The Peach Truck, LLC

[X]

Signature:

Signature:

Jessica Miller

Heather Jarrell Roe / Brenda L. Stumbo

Name: Jessica Miller

Name: Heather Jarrell Roe / Brenda L. Stumbo

Date:

Date:

May 9, 2024

Address: 1109 Woodland St. PO Box 60425
Nashville, TN 37206

Address:

7200 S. Huron River Dr.
Ypsilanti, MI 48197

EXHIBIT A -- TERMS AND CONDITIONS

1. **CANCELLATION POLICY:** Both parties reserves the right to terminate this Agreement outside of 30 days from event, for any reason, and in their sole discretion, without any penalty whatsoever.
2. **INDEMNIFICATION:** Host agrees to indemnify, defend, and hold harmless Seller and its respective managers, members, affiliates, officers, employees, agents, and representatives from and against any and all losses, lawsuits, judgements, causes of action, costs, damages, claims (actual or alleged) and expenses resulting from unsafe conditions or property defects arising out of or incidental to or in any way resulting from negligent acts or omissions of Host and its agents, representatives and employees, if any, in the performance of this Agreement and/or use of Tour Space. Nothing herein shall be construed to waive, limit or restrict any governmental immunity defense available to the Charter Township of Ypsilanti.
3. **On-site Marketing Materials:** Ability to have signs/A-frames on property during day of event with materials to help facilitate the sale of the product. IE: URL, Time, Date, Prices, Products.
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5. **Site of Location Set-Up:** Site of Set-Up will be in a high traffic and visible location as well as mutually agreed upon between both parties.
6. **LIMITATION OF LIABILITY:** To the extent Host maintains any claim against Seller, Host shall look solely against Seller's profits from the Event for the recovery of any judgment against Seller and no other property or assets of Seller shall be subject to levy, execution or other enforcement procedure for the satisfaction of Host's remedies under or with respect to this Agreement. In no event shall Seller be liable to Host for any other person or entity for consequential, special, indirect, incidental, or punitive damages, costs, expenses, or losses (including without limitation lost profits, loss of business, anticipatory profits and opportunity costs). Notwithstanding the foregoing, nothing in this paragraph is intended to limit or restrict the indemnification rights or obligations in this Agreement.
7. **MEDIA RELEASE:** Host grants Seller the irrevocable and unlimited right and permission to use photographs and/or video recordings of EVENT, Host's intellectual property, and Host's property on each of Seller's social media and other Internet properties, publications, promotional flyers, marketing materials, derivative works, or for any other similar purpose without compensation or permission from Host.
8. **NO WAIVER:** No delay or failure of any party to exercise any right provided herein shall in any way affect its right to enforce that right or any other right under this Agreement at a later time. No waiver shall be effective unless in writing signed by the waiving party.
9. **SEVERABILITY:** If any provision of this Agreement is declared invalid by any lawful tribunal, then it shall be adjusted to conform to legal requirements of that tribunal and that modification shall automatically become a part of the Agreement. Or, if no adjustment can be made, the provision shall be deleted as though never included in the Agreement and its remaining provisions shall remain in full force and effect.
10. **NO PARTNERSHIP OR AGENCY:** Seller and Host are independent contractors, and neither party shall be, nor represent itself to be, the joint venture, franchiser, franchisee, partner, broker, employee, servant, agent or representative of the other party for any purpose. Neither party is, or shall be, responsible for the acts or omissions of the other and neither party shall bear authority to make any representation or incur any obligation on behalf of the other party unless expressly authorized herein. Each party also acknowledges that it has not relied on any promises, inducements, representations or other statements made by the other party regarding the commercial viability, profitability or success in the marketplace of any Projects or services, and that each party's decision to enter into this Agreement is made independently from the other party.
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12. **DISPUTE RESOLUTION:** If a dispute arises out of or relates to this contract, or the breach thereof, and if the dispute cannot be settled through negotiation, the parties agree first to try in good faith to settle the dispute by mediation administered by the American Arbitration Association under its Commercial Mediation Procedures in Nashville, Tennessee (or such other location agreed upon by the parties) or by private party before resorting to arbitration, litigation, or some other dispute resolution procedure unless both parties agree in writing to forego mediation. Any dispute or controversy arising under or in connection with this Agreement that cannot be settled through mediation shall be settled exclusively

by arbitration in accordance with the rules of the American Arbitration Association then in effect in Nashville, Tennessee (or such other location agreed upon by the parties).

13. **ENTIRE AGREEMENT:** The Agreement constitute the complete and exclusive statement of the agreement between the parties and supersede all prior oral and written agreements, communications, representations, statements, negotiations and undertakings relating to the subject matter.

CHANGE ORDER

OWNER
 ARCHITECT
 CONTRACTOR
 FIELD
 OTHER

AIA DOCUMENT G701

PROJECT:
 Ypsilanti Charter Township
 ARPA Parks Project - Shelters
TO CONTRACTOR:
 A.R. Brouwer Company
 2830 Baker Road, Suite 100
 Dexter, MI 48130

CHANGE ORDER NUMBER: 2
DATE: 4/30/2024
ARCHITECT'S PROJECT NO.: 134586SG2023
CONTRACT DATE: 2/8/2024
CONTRACT FOR: Renovations to Ford Park and West Willow park Pavilions

All Changes per Attached "ARPA Parks Projects Shelter Repairs - Additional Work" Dated 4/23/24 and Amended 4/30/24 by David Marr

\$32,863.00

Shelter #1-1 Net change \$15,774.00
 Shelter #1-2 Net change \$1,980.00
 Shelter #2 Net change \$15,109.00

Not valid until signed by the Owner, Architect and Contractor.

The original (Contract Sum) ~~(Guaranteed maximum Price)~~ was \$379,788.00
 Net change by previously authorized Change orders (\$2,251.00)
 The (Contract Sum) ~~(Guaranteed maximum Price)~~ prior to this Change order was \$377,537.00
 The original (General Allowance) in contract \$30,000.00
 Net change in (General Allowance) by previously authorized Change orders
 The (General Allowance) balance prior to this Change order was \$30,000.00
 The (Contract Sum) ~~(Guaranteed maximum price)~~ will be (increased) ~~(decreased)~~
~~(unchanged)~~ by this Change Order in the amount of \$32,863.00
 The (General Allowance) balance including this Change order is \$0.00
 The new (Contract Sum) ~~(Guaranteed maximum Price)~~ including this Change order will be \$410,400.00

The Contract Time will be ~~(increased)~~ ~~(decreased)~~ ~~(unchanged)~~ by 00 days

NOTE: This summary does not reflect changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive.

ARCHITECT Spicer Group
 230 S Washington Ave
 Address
 Saginaw, MI 48607

CONTRACTOR A.R. Brouwer
 2830 Baker Road, Suite 100
 Address
 Dexter, MI 48130

Brenda L. Stumbo
Heather Jarrell Roz
 OWNER Ypsilanti Charter Township
 7200 S. Huron River Dr.
 Address
 Ypsilanti, MI 48197

BY _____
 DATE _____

BY _____
 DATE _____

BY *Brenda L. Stumbo / Heather Jarrell Roz*
 DATE *May 9, 2024*

4/23/2024 This document has been edited by David Marr, AIA, Project Manager for Spicer Group, for inclusion in Change Order No. 2 dated 4/30/24 *David W. Marr*

John Hines
Municipal Services Director
Ypsilanti Township

Ypsilanti Township ARPA Parks Projects Shelter Repairs – Additional Work

John,

Here are the costs associated with the additional scopes of work at Ford Lake Park for Shelter #1, Shelter #2, and the Pavilion.

Shelter #1:

1. Asphalt Work:

- a. Remove and replace entire existing asphalt path (approximately 1,300 square feet). Includes cost to remove existing roots from under path.
Shelter #1-1 Add: \$15,774.00

~~b. Remove and replace problem areas of existing path (approximately 500 square feet). Includes cost to remove existing roots from under path.
Add: \$5,500.00~~

~~c. Regrade and place 3 inch asphalt path from Shelter #1 to existing path (approximately 210 square feet).
Add: \$1,256.00~~

2. Existing Retaining Wall Work:

- a. Remove and dispose of existing retaining wall made of railroad ties. Grade out area where existing retaining wall is removed. Existing culvert to remain abandoned.
Add: \$1,100.00

b. Seed and install straw mat in area graded out.
Add: \$880.00
Shelter #1-2 \$1,980.00

~~c. Note: Additional investigative work via camera and locate device can be provided on the culvert. It is assumed that the culvert is abandoned due to a lack of water flow and because we cannot locate the inlet.~~

~~Add: \$1,188.00~~

Shelter #2:

1. Remove and dispose of existing hood, vents (3), grill tops (3), and concrete countertop.
Add: \$7,722.00
2. Make roof deck repairs/roofing at vent locations.
Add: \$589.00
3. Repair/install T1-11 board where hood is removed.
Add: \$415.00
4. Infill grills (3) and match face on infill to that of the countertop. Any necessary masonry repairs and cleaning of existing brick/block is included.
Add: \$3,158.00
5. Furnish and install granite countertop (246 inch by 30 inch) for outside use with edge profile.
Add: \$3,225.00

Shelter #2 Total for Additional Scope at Shelter #2: \$15,109.00

Pavilion:

~~1. Remove and dispose of existing wood structure, concrete slab, and existing block down to existing footing.~~

~~Add: \$16,500.00~~

~~2. Add soil erosion (silt fence) protection during and after demolition.~~

~~a. Note: Additional soil erosion measures may need to be taken, unclear until demolition happens.~~

~~Add: \$205.00~~

~~**Total for Existing Pavilion Removal: \$16,705.00**~~

**AGREEMENT BETWEEN
CHARTER TOWNSHIP OF YPSILANTI AND
THE WASHTENAW COUNTY ROAD COMMISSION**

THIS AGREEMENT, made and entered into this 7 day of May, 2024 between the Board of the Charter Township of Ypsilanti (the "Township") and the Board of Washtenaw County Road Commissioners (the "Road Commission").

WHEREAS, the Charter Township of Ypsilanti desires to install four (4) speed humps on Bradley Avenue between Grove Road and Lakeview Avenue (the "Project"); and

WHEREAS, proper authority is provided to the parties of this Agreement under the provisions of Act 51 of Public Acts of 1951 as amended; and

WHEREAS, the Road Commission will prepare documents for the Project; and

WHEREAS, the Township shall promptly reimburse the Road Commission upon receipt of any invoices for all costs and expenses attributed to the Project;

THEREFORE, BE IT AGREED that the Township will pay the Road Commission for all actual costs incurred associated with the construction of the Project estimated to be \$38,930.00.

IT IS FURTHER UNDERSTOOD that the Charter Township of Ypsilanti will be a named insured on the Washtenaw County Road Commission's coverage for liability for the activities described above. The Road Commission will submit a certificate of insurance evidencing such coverage to the Township Clerk prior to implementation of services under the contract. Each party to this contract shall be responsible for the acts and omissions of its employees and agents.

AGREEMENT SUMMARY

Estimated Cost

Installation of four speed humps on Bradley Avenue **\$38,930.00**

FOR YPSILANTI TOWNSHIP:

Brenda L. Stumbo
Brenda L. Stumbo, Supervisor 5-9-24

Heather Jarrell Roe
Heather Jarrell Roe, Clerk 5-9-24

FOR WASHTENAW COUNTY ROAD COMMISSION:

Barbara R. Fuller, Chair

Matthew F. MacDonell, Managing Director

**AGREEMENT BETWEEN
CHARTER TOWNSHIP OF YPSILANTI AND
THE WASHTENAW COUNTY ROAD COMMISSION**

THIS AGREEMENT, made and entered into this 7 day of May, 2024 between the Board of the Charter Township of Ypsilanti (the "Township") and the Board of Washtenaw County Road Commissioners (the "Road Commission").

WHEREAS, the Charter Township of Ypsilanti desires to install nine (9) speed humps on George Avenue and Smith Avenue (the "Project"); and

WHEREAS, proper authority is provided to the parties of this Agreement under the provisions of Act 51 of Public Acts of 1951 as amended; and

WHEREAS, the Road Commission will prepare documents for the Project; and

WHEREAS, the Township shall promptly reimburse the Road Commission upon receipt of any invoices for all costs and expenses attributed to the Project;

THEREFORE, BE IT AGREED that the Township will pay the Road Commission for all actual costs incurred associated with the construction of the Project estimated to be \$77,130.00.

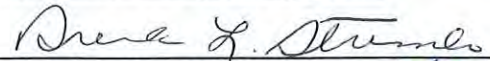
IT IS FURTHER UNDERSTOOD that the Charter Township of Ypsilanti will be a named insured on the Washtenaw County Road Commission's coverage for liability for the activities described above. The Road Commission will submit a certificate of insurance evidencing such coverage to the Township Clerk prior to implementation of services under the contract. Each party to this contract shall be responsible for the acts and omissions of its employees and agents.

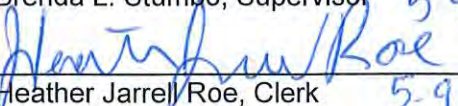
AGREEMENT SUMMARY

Estimated Cost

Installation of nine speed humps on George Avenue and Smith Avenue	\$77,130.00
---	--------------------

FOR YPSILANTI TOWNSHIP:


Brenda L. Stumbo, Supervisor 5-9-24


Heather Jarrell Roe, Clerk 5-9-24

FOR WASHTENAW COUNTY ROAD COMMISSION:

Barbara R. Fuller, Chair

Matthew F. MacDonell, Managing Director

CHARTER TOWNSHIP OF YPSILANTI

RESOLUTION NO. 2024-06

RESOLUTION REGARDING TEMPORARY ROAD CLOSURE

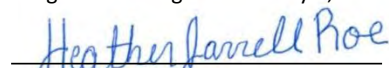
Resolution authorizing the temporary road closure of Merritt Road between Munger and Stoney Creek for runners to cross Merritt Road at Wiard's Orchard to enter Rolling Hills on Friday, July 19, 2024 from 6:30pm to 7:15pm for the Oberun 5K to benefit Huron Waterloo Pathways (Border to Border Trail).

WHEREAS, the Charter Township of Ypsilanti Board of Trustees has approved the temporary closure of Ypsilanti Township roads as indicated above; and

WHEREAS, the Driveways, Banners, and Parades Act 200 of 1969 requires the Township to authorize an official designated by resolution to make such request from the Road Commission.

NOW THEREFORE, BE IT RESOLVED that the Township of Ypsilanti Board of Trustees designates and agrees that Randal Step, owner R.F. Events be the authorized official designee in this instance, when application is made to the Washtenaw County Road Commission for this temporary road closure.

I, Heather Jarrell Roe, Clerk of the Charter Township of Ypsilanti, County of Washtenaw, State of Michigan hereby certify the above resolution is a true and exact copy of Resolution No. 2024-06 approved by the Charter Township of Ypsilanti, Board of Trustees assembled at a Regular Meeting held on May 7, 2024.


Heather Jarrell Roe, Clerk
Charter Township of Ypsilanti

**CHARTER TOWNSHIP
OF YPSILANTI**

RESOLUTION NO. 2024-07

**RESOLUTION REGARDING
TEMPORARY ROAD
CLOSURE**

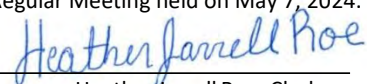
Resolution authorizing the temporary road closure of Merritt Road between Munger and Stoney Creek for runners to cross Merritt Road at Wiard's Orchard on Saturday, October 12, 2024 from 8:30am to 11:00am for the Run Scream Run 5K, 10K and Kid's Mile to benefit Washtenaw Promise.

WHEREAS, the Charter Township of Ypsilanti Board of Trustees has approved the temporary closure of Ypsilanti Township roads as indicated above; and

WHEREAS, the Driveways, Banners, and Parades Act 200 of 1969 requires the Township to authorize an official designated by resolution to make such request from the Road Commission.

NOW THEREFORE, BE IT RESOLVED that the Township of Ypsilanti Board of Trustees designates and agrees that Randal Step, owner R.F. Events be the authorized official designee in this instance, when application is made to the Washtenaw County Road Commission for this temporary road closure.

I, Heather Jarrell Roe, Clerk of the Charter Township of Ypsilanti, County of Washtenaw, State of Michigan hereby certify the above resolution is a true and exact copy of Resolution No. 2024-07 approved by the Charter Township of Ypsilanti, Board of Trustees assembled at a Regular Meeting held on May 7, 2024.



Heather Jarrell Roe, Clerk
Charter Township of Ypsilanti

**CHARTER TOWNSHIP OF YPSILANTI
2024 BUDGET AMENDMENT # 6**

May 7, 2024

AMOUNTS ROUNDED UP TO THE NEAREST DOLLAR

213 - BIKE, SIDEWALK, REC, ROADS FUND (BSRII)	Total Increase	<u><u>\$34,091.00</u></u>
--	-----------------------	----------------------------------

Request to carryforward the remaining \$34,091 encumbered for the Huron Bridge Project with MDOT. This will be funded by an appropriation of prior year fund balance.

Revenues:	Prior Year Fund Balance	213-000-699.999	\$34,091.00
			<u>\$34,091.00</u>
		Net Revenues	<u><u>\$34,091.00</u></u>
Expenditures:	Huron Bridge Pathway	213-901-986.010	\$34,091.00
			<u>\$34,091.00</u>
		Net Expenditures	<u><u>\$34,091.00</u></u>

206 - FIRE FUND	Total Increase	<u><u>\$0.00</u></u>
------------------------	-----------------------	-----------------------------

Request to do a budget line transfer between cost center expenditures, from capital outlay to uniforms. There are funds budgeted in capital outlay fire stations that are available and are needed in the uniform line to purchase Class A dress jackets for all firefighters to represent the Township at special functions such as; funerals, township celebrations and other special events. This will not change the total budget in the fund.

Expenditures:	Capital outlay - Fire Stations	206-901-976.005	(\$20,000.00)
	Uniforms	206-336-741.001	\$20,000.00
			<u>\$0.00</u>
		Net Expenditures	<u><u>\$0.00</u></u>

216 - FIRE PENSION & OPEB MILLAGE FUND	Total Increase	<u><u>\$72,000.00</u></u>
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Request to budget for fire pension contribution. There is an excess amount available in fund balance. These funds are for a specific millage that can only used for fire pension and other pension employee benefits (OPEB). This will be funded by an appropriation of prior year fund balance.

Revenues:	Prior Year Fund Balance	216-000-699.999	\$72,000.00
			<u>\$72,000.00</u>
		Net Revenues	<u><u>\$72,000.00</u></u>
Expenditures:	Retirement Fire Dept pension	216-336-876.004	\$72,000.00
			<u>\$72,000.00</u>
		Net Expenditures	<u><u>\$72,000.00</u></u>

Motion to Amend the 2024 Budget (#6)

Move to increase the Bike, Sidewalk, Rec, Roads Fund (BSRII) budget by \$34,091 to \$4,296,036 and approve the department line item changes as outlined.

Move to complete a line transfer in the Fire Fund budget for a net result of zero and approve the department line item changes as outlined.

Move to increase the Fire Pension & OPEB Millage Fund budget by \$72,000 to \$1,557,154 and approve the department line item changes as outlined.

Supervisor
BRENDA L. STUMBO
Clerk
HEATHER JARRELL ROE
Treasurer
STAN ELDRIDGE
Trustees
RYAN HUNTER
JOHN P. NEWMAN II
GLORIA PETERSON
DEBBIE SWANSON



YPSILANTI TOWNSHIP

— WHERE YOUR FUTURE GROWS —

**Accounting
Department**

7200 S. Huron River Drive
Ypsilanti, MI 48197
Phone: (734) 544-4000 Ext 5
Fax: (734) 484-5154

STATEMENTS AND CHECKS

MAY 21, 2024 BOARD MEETING

ACCOUNTS PAYABLE CHECKS -	\$	684,507.96
HAND CHECKS -	\$	261,246.16
CREDIT CARD PURCHASES-	\$	<u>14,298.21</u>
GRAND TOTAL -	\$	960,052.33

Clarity Health Care Deductible –

ACH EFT – \$59,976.16 (APRIL)
ADMIN FEE - \$ 1,588.19 (APRIL)

Check Date	Check	Vendor Name	Description	Amount
Bank AP AP				
05/09/2024	196725	YOUR MEMBESHIP.COM INC	REPLACEMENT - REC SERVICES MANAGER	100.00
			REPLACEMENT - ASST MUNICIPAL SVCS DIR	100.00
				<u>200.00</u>
05/09/2024	196726	CHARTER TOWNSHIP OF SUPERIOR	ACCT. #HURO-007200-0000-01	49.00
05/09/2024	196727	COMCAST	ACCT. #8529 10 234 0124352	119.28
05/09/2024	196728	COMCAST	ACCT. #8529 10 234 0586337	71.84
05/09/2024	196729	COMCAST	ACCT. #8529 10 234 0186229	198.95
05/09/2024	196730	COMCAST	ACCT. #8529 10 234 0884997	152.95
05/09/2024	196731	COMCAST CABLE	ACCT. #8529 01 001 0000523 (CAMERAS)	11,238.40
05/09/2024	196732	VERIZON WIRELESS	ACCT. #742203150-00001	2,912.26
05/09/2024	196733	VERIZON WIRELESS	ACCT. #342201808-00001	525.51
05/09/2024	196734	WASTE MANAGEMENT	ACCT. #6-98933-92004	2,633.99
05/09/2024	196735	WASTE MANAGEMENT	ACCT. #6-98933-92004	6,443.26
05/09/2024	196736	WASTE MANAGEMENT	ACCT. #6-98680-82001	1,026.95
05/09/2024	196737	WASTE MANAGEMENT	ACCT. #1627603-32004	699.32
05/09/2024	196738	WASTE MANAGEMENT	ACCT. #6-98156-42005	228.60
05/09/2024	196739	WASTE MANAGEMENT	ACCT. #6-96630-02003	224,809.52
05/09/2024	196740	WEX BANK	WEX CREDIT CARD CHARGES ENDING APRIL 202	1,802.15
05/10/2024	196741	DTE ENERGY	GAS & ELECTRIC INVOICES	7,968.18
05/16/2024	196742	B-BALL SKILLS LLC	REPLACEMENT - B-BALL SKILLS MEMBERSHIPS	166.00

HAND CHECKS

AP TOTALS:	
Total of 18 Checks:	261,246.16
Less 0 Void Checks:	0.00
Total of 18 Disbursements:	<u>261,246.16</u>

Check Date	Check	Vendor Name	Description	Amount
Bank AP AP				
05/21/2024	196743	14-B DISTRICT COURT	SMALL CLAIMS COURT FILING FEE	100.00
05/21/2024	196744	A DESIGN LINE	TWP APPAREL RSD/COMM ENGAGEMENT	570.78
05/21/2024	196745	A.F. SMITH ELECTRIC	YPSI TWP LIGHT POLES	1,614.99
05/21/2024	196746	ACCUSHRED LLC	SHRED SERVICES	71.75
05/21/2024	196747	ADVANCED COMMUNICATIONS & DATA	INTERNET UTILITY SERVICE	680.55
05/21/2024	196748	ALLGRAPHICS CORPORATION	YOUTH SOCCER T-SHIRTS FOR SPRING 2024	2,750.97
05/21/2024	196749	AMAZON CAPITAL SERVICES	SUPPLIES FOR 50&BEYOND - RECREATION	84.57
			HEADLESS GHOST ADAPTER	35.97
			CHARGERS FOR TABLETS/PHONES	101.97
			CERTIFICATE & CERTIFICATE HOLDERS	48.84
			FALL PROTECTION SAFETY ANCHORS	222.44
			SURGE PROTECTORS FOR WALKIE TALKIES - RE	111.20
			OFFICE SUPPLIES - RES. SERVICES	10.14
			OFFICE SUPPLIES - MUNICIPAL SERVICES	147.73
			SOCCER NETS - RECREATION	240.04
			OFFICE SUPPLIES	54.65
			OFFICE SUPPLIES	223.89
			SAFETY PPE	33.76
			ERASABLE GEL PENS - OCS	13.98
			INFRARED THERMOMETER - RES. SERVICES	59.82
			OFFICE SUPPLIES - RES. SERVICES	31.86
			ROOFTOP STROBE LIGHTS - RECREATION	177.42
			PARK EVENT SUPPLIES	321.35
			BLUETOOTH OUTDOOR SPEAKER - GOLF	168.99
			DEVICE CHARGERS + SHELVES	687.67
			REPLACEMENT BOAT PROP AND LOG BOOK FOR W	195.71
			CREDIT MEMO	(225.59)
				<u>2,746.41</u>
05/21/2024	196750	ANGELA KOJIRO	MILEAGE REIMBURSEMENT	43.82
05/21/2024	196751	ANN ARBOR CLEANING SUPPLY	BROOM HEADS - PARKS	136.48
05/21/2024	196752	ASSOCIATED FENCE	GATE/FENCE REPAIR AT GOGC AND COMMUNITY	1,525.00
			GATE/FENCE REPAIR AT GOGC AND COMMUNITY	850.00
				<u>2,375.00</u>
05/21/2024	196753	AUTO VALUE YPSILANTI	258-BATTERY	145.44
			TORO TIRE REPAIRS	62.96
			317- HYDRAULIC	122.78
			258-OIL	56.78
				<u>387.96</u>
05/21/2024	196754	B-BALL SKILLS LLC	BBALL SKILLS MEMBERSHIPS	180.00
			BBALL SKILLS MEMBERSHIPS	270.00
				<u>450.00</u>
05/21/2024	196755	BACK TO NATURE LAWN CARE	BROADLEAF WEED CONTROL	74.75
05/21/2024	196756	BARR ENGINEERING COMPANY	PROFESSIONAL SERVICES FROM 3/23 2024 TO	12,620.40
05/21/2024	196757	BOLD CONSTRUCTION LLC	PAINTING OF LEC DOORS	1,440.00
05/21/2024	196758	CARLA JONES	REFUND - CREDIT ON ACCOUNT	100.00
05/21/2024	196759	CARLISLE WORTMAN ASSOCIATES INC	SHEETZ - W. MICHIGAN	1,877.50
05/21/2024	196760	CARLISLE WORTMAN ASSOCIATES INC	2020 WHITTAKER	300.00
05/21/2024	196761	CARLISLE WORTMAN ASSOCIATES INC	DEAL POINTE MERRIL	300.00

A/P CHECKS

Check Date	Check	Vendor Name	Description	Amount
05/21/2024	196762	CARLISLE/WORTMAN ASSOCIATES	PLANNING DEPARTMENT SUPPORT	8,960.00
05/21/2024	196763	CATALIS COURTS AND LAND RECORDS	ONLINE TICKET SERVICES MONTHLY FEE	291.60
05/21/2024	196764	CINTAS CORPORATION	FIRST AID CABINET SERVICE - 5/2/24	62.15
			FIRST AID CABINET SERVICE - 5/2/24	10.71
			FIRST AID CABINET SERVICE - 5/2/24	94.07
			FIRST AID CABINET SERVICE - 5/2/24	47.47
			FIRST AID CABINET SERVICE - 5/2/24	70.26
			FIRST AID CABINET SERVICE - 5/2/24	7.15
			FIRST AID CABINET SERVICE - 5/2/24	7.15
			FIRST AID CABINET SERVICE - 5/2/24	7.15
			FIRST AID CABINET SERVICE - 5/2/24	7.16
			MONTHLY SERVICE FOR AED AT CRC	130.50
				<u>443.77</u>
05/21/2024	196765	COMPLETE BATTERY SOURCE	WATER QUALITY EQUIPMENT BATTERIES	25.46
05/21/2024	196766	CRYSTAL FLASH, INC.	FUEL FOR HQ - REGULAR	187.11
			FUEL FOR HQ - DIESEL	2,893.00
			FORD LAKE PARK: REFILL GAS FUEL TANK - S	1,057.15
			CC: REFILL GAS FUEL TANK - STATE OF MICH	1,366.34
			FORD LAKE PARK: REFILL DIESEL FUEL TANK	838.47
			DIESEL FUEL FOR EQUIPMENT 04/11/24	689.47
				<u>7,031.54</u>
05/21/2024	196767	CUMMINS SALES AND SERVICE	NEW ENGINE FOR ROSIE OLD 14-1	64,507.27
05/21/2024	196768	DANCE WITH ELEGANCE	DROP INS & LATE REGISTRATIONS	767.90
05/21/2024	196769	DECIMA LLC	COMMUNITY CENTER WATER DAMAGE REPAIR	14,181.30
			COMMUNITY CENTER RESTROOM AND SANITARY A	32,482.26
				<u>46,663.56</u>
05/21/2024	196770	DISPUTE RESOLUTION CENTER	QUARTERLY BILL	1,875.00
05/21/2024	196771	DIUBLE EQUIPMENT INC.	PULLEY AND BELT FOR 311	78.34
			AIR FILTER FOR 258	115.96
			BLADES AND OIL FOR 258,312,311	210.19
				<u>404.49</u>
05/21/2024	196772	DOHYOUN LEE	YOUTH TENNIS INSTRUCTOR	120.00
05/21/2024	196773	ELLEN PATTERSON	REFUND - SHELTER RENTAL	100.00
05/21/2024	196774	EMERGENCY VEHICLES PLUS	PURCHASE OF 15 PASSENGER 50 & BEYOND BUS	84,797.00
05/21/2024	196775	EMERGENT HEALTH PARTNERS	FIRE DISPATCHING SERVICES	8,430.55
05/21/2024	196776	ERANE WASHINGTON	REIMBURSEMENT FOR GIFT CARDS FOR RECOVER	75.00
05/21/2024	196777	FARMER & UNDERWOOD TRUCKING	INFIELD MATERIAL FOR COMMUNITY CENTER PA	2,043.43
05/21/2024	196778	FASTENAL	TRASH GRABBERS 51"	314.75
05/21/2024	196779	FONDRIEST ENVIRONMENTAL, INC	ANNUAL MAINTENANCE TO WATER QUALITY EQUI	186.47
05/21/2024	196780	GOVERNMENTAL CONSULTANT SERVICES	PROFESSIONAL SERVICES RETAINER FEE - MAY	3,503.85
05/21/2024	196781	GRAINGER	EAR MUFF TO PROTECT WORKERS HEARING	49.95
			SUPPLIES	29.92
			TRYING NEW SAFETY GLASSES	14.75
				<u>94.62</u>
05/21/2024	196782	GREENER GOODS	BANNERS FOR DEPT	185.00
05/21/2024	196783	HOME DEPOT	MAINT SUP FOR PAINTING THE REC (INV#9024	46.44
			MAINTENANCE SUPPLIES FOR PAINTING AT COM	33.26
			MAINT SUPPLIES - KEY BOXES (INV#9031386)	39.98

Check Date	Check	Vendor Name	Description	Amount
			YARD WASTE BAGS - COMMUNITY ENGAGEMENT	11.25
			BUILD OPS- SWITCH GUARD	2.57
			MAINT. SUPPLIES & HARDWARE FOR CIVIC, RE	129.28
			P&G TOOL	242.40
			ANT TRAPS - LEC	13.88
			MAINT SUPPLIES FOR THE CIVIC CENTER (INV	9.44
			MAINTENANCE - CAULK & PAINT SUPPLIES FOR	115.60
			MAINTENANCE SUPPLIES FOR USE AT CIVIC CE	75.44
			FURNITURE SLIDERS - LEC	59.16
			FURNITURE SLIDES - LEC	14.98
				<u>793.68</u>
05/21/2024	196784	HOME DEPOT	MAINTENANCE TOOLS - RES. SERVICES	468.99
05/21/2024	196785	HOME DEPOT	MAINTENANCE TOOLS - RES. SERVICES	259.00
05/21/2024	196786	HOME DEPOT	ACCT. #6035 3225 0163 9862	412.34
05/21/2024	196787	HOWLETT LOCK & DOOR	REMOVE AND REPLACE EXTERIOR SHOP DOOR	2,337.87
05/21/2024	196788	INFINITY FITNESS LLC	LATE REGISTRATIONS AND DROP IN FEES	119.00
05/21/2024	196789	INSIGHT PUBLIC SECTOR INC	1PASSWORD BUSINESS	1,374.15
			FORTIGUARD SECURITY RATING SERVICE	491.75
				<u>1,865.90</u>
05/21/2024	196790	JOSEPH STOUT	YOUTH TENNIS INSTRUCTOR	20.00
05/21/2024	196791	KCI	SUMMER 2024 TAX BILLS - PRINTING AND MAI	9,176.70
05/21/2024	196792	KEARNS BROTHERS INC	REFUND - PERMIT FEES #PB24-0177	345.00
05/21/2024	196793	KIMBERLEE RAGLIN	REIMBURSEMENT FOR GAS FOR FIRE TRUCK	75.00
05/21/2024	196794	LANGUAGE LINE SERVICES	INTERPRETER SERVICES	458.16
05/21/2024	196795	LAUREL HANNA	SPRING 2024 YOUTH SOCCER SITE SUPERVISOR	125.00
05/21/2024	196796	LAWRENCE HENDRICKS	YOUTH TENNIS INSTRUCTOR	20.00
			YOUTH TENNIS INSTRUCTOR	40.00
				<u>60.00</u>
05/21/2024	196797	LINDE GAS & EQUIPMENT INC	OXYGEN RENTAL	343.79
05/21/2024	196798	LOOKING GOOD LAWN	YTWM INVOICE 2024-1C	3,300.00
			YTWM INVOICE 2024-2C	3,300.00
			YTWM INVOICE 2024-3C	3,400.00
				<u>10,000.00</u>
05/21/2024	196799	LOOKING GOOD LAWN	BLIGHT REMOVAL	500.00
05/21/2024	196800	LOOKING GOOD LAWN	BLIGHT REMOVAL	240.00
05/21/2024	196801	LOWE'S	FLASHLIGHTS - RECREATION	94.92
			FLASHLIGHTS - RECREATION	47.46
				<u>142.38</u>
05/21/2024	196802	LUBRICATION ENGINEERS	OPERATING SUPPLIES AND GREASE FOR TURBIN	1,581.77
05/21/2024	196803	MATHEW FERRETT	REIMBURSEMENT FOR CEO CLASS AND TEST	170.00
05/21/2024	196804	MAYA GLENN	DROP IN FEES	28.00
05/21/2024	196805	MCLAIN AND WINTERS	LEGAL SERVICES - APRIL 2024	163,244.77
05/21/2024	196806	MENARDS, INC.	CIVIC CENTER LOCKER ROOM CARPET JOB (INV	105.92
			CIVIC CENTER LOCKER ROOM MAINTENANCE (IN	346.74
				<u>452.66</u>
05/21/2024	196807	MICHIGAN CAT	SPARE ENGINE FOR HQ	3,535.07
05/21/2024	196808	MICHIGAN LINEN SERVICE, INC.	LAUNDRY FOR CIVIC CENTER 5/7/2024 (INVOI	101.10

Check Date	Check	Vendor Name	Description	Amount
			MAINT. GARAGE LINEN SERVICE 5/7/24 (INV#	24.00
			LINEN SERVICE FOR COMMUNITY CENTER 5/7/2	49.50
			LINEN SERVICE FOR STATION HQ	190.40
			LINEN SERVICE FOR STATION 3	86.26
			LINEN SERVICE FOR STATION 4	85.03
			LAUNDRY SERVICES 2024	24.00
			LAUNDRY SERVICES 2024	24.00
			LINEN SERVICE FOR STATION HQ	190.40
			LINEN SERVICE FOR STATION 3	86.26
			LINEN SERVICE FOR STATION 4	85.03
			WEEKLY LINEN SERVICES	68.50
			LAUNDRY FOR CIVIC CENTER 4/30/2024 (INVO	101.10
			MAINT. GARAGE LINEN SERVICE 4/30/24 (INV	24.00
			LINEN SERVICE FOR COMMUNITY CENTER 4/30/	49.50
			LEC LAUNDRY SERVICE	60.25
				<u>1,249.33</u>
05/21/2024	196809	NEXTCARE URGENT CARE MICHIGAN	PRE-EMPLOYMENT DRUG SCREENS AND PHYSICAL	1,308.00
05/21/2024	196810	OFFICE EXPRESS	BUSINESS CARDS - OCS & RES. SERVICES	90.00
05/21/2024	196811	OOMA, INC.	OOMA SERVICES	248.44
05/21/2024	196812	ORCHARD, HILTZ & MCCLIMENT INC	CARPORT REBUILDING PROJECT	477.50
			CONSTRUCTION ENGINEERING SERVICES FOR RI	21,735.50
			FORTIS ACADEMY MEETING	350.00
			1473 ECORSE HANI AUTO - CONST	262.50
			VISIBLE LEARNING CENTER - CE SERVICES	665.00
			TITA TORTILLAS - SITE PLAN REVIEW	271.25
			FROST MUSIC VENUE - SITE PLAN REVIEW	225.00
			SHEETZ - SITE PLAN REVIEWS	1,199.50
			DR. PAWS - DETAILED ENGINEERING REVIEW	782.50
			PAINT CREEK RESIDENTIAL - MEETINGS	350.00
				<u>26,318.75</u>
05/21/2024	196813	PARKWAY SERVICES, INC.	PORTABLE TOILET RENTAL - FORD LAKE PARK	180.00
			PORTABLE TOILET RENTAL FOR GREEN OAKS FR	260.00
			PORT A JOHN SERVICE - HYDRO	130.00
			PORTABLE TOILET RENTAL - FORD LAKE PARK	310.00
				<u>880.00</u>
05/21/2024	196814	PEARLINE DAVIS	RECOVERY COURT PAYROLL	296.80
			RECOVERY COURT PAYROLL	278.26
				<u>575.06</u>
05/21/2024	196815	PRIORITY ONE EMERGENCY	PANTS FOR FF JOHNSON	272.97
			PATCH CHANGE OVER FOR CHIEF	42.00
				<u>314.97</u>
05/21/2024	196816	PSYBUS	PSYCHOLOGICAL EVALUATION - AYDIN JOHNSON	625.00
05/21/2024	196817	RAPHAEL A. PEOPLES	SPRING 2024 YOUTH SOCCER REF	80.00
05/21/2024	196818	RHETT REYES	RECOVERY COURT PAYROLL	1,032.00
			RECOVERY COURT PAYROLL	1,096.50
				<u>2,128.50</u>
05/21/2024	196819	RICK PLISICO	RICK PLISICO CONTRACTUAL INSPECTIONS FEBR	300.00

Check Date	Check	Vendor Name	Description	Amount
05/21/2024	196820	RICOH USA, INC.	PRINTER MAINTENANCE CHARGES EQUIPMENT RENTAL	574.91 (97.30) <hr/> 477.61
05/21/2024	196821	ROBERT ACTON	ROBERT ACTON CONTRACTUAL INSPECTIONS 04.	1,550.00
05/21/2024	196822	SAM'S CLUB DIRECT	SUPPLIES FOR FRONT DESK VENDING CUSTODIAL SUPPLIES - TOILET PAPER (CIVIC	204.34 22.98 <hr/> 227.32
05/21/2024	196823	SHERWIN WILLIAMS COMPANY	PAINT SUPPLIES FOR COMMUNITY CENTER	384.31
05/21/2024	196824	SHI INTERNATIONAL CORP	ADMINDROID OFFICE 365 REPORTER	529.04
05/21/2024	196825	SHRADER TIRE & OIL	#71 4 NEW TIRES	945.91
05/21/2024	196826	SITEONE LANDSCAPE SUPPLY, LLC	FARIWAYS AND ROUGHS FERTILIZER SUMMER AP FAIRWAY AND ROUGH FERTILIZER WITH PRE-EM TEE FERTILIZER PROGRAM LESCO TURF PAINT AND HERBICIDE - IN#1406 LESCO CONTRACTORS SEED MIXTURE - IN#1406 PLUS 5 FIELD MARKER CHALKWHITE - IN#1406	1,522.52 1,365.18 2,197.92 171.83 184.12 516.21 <hr/> 5,957.78
05/21/2024	196827	SOUTHERN COMPUTER WAREHOUSE	YEALINK SIP-T46U	1,233.90
05/21/2024	196828	SPICER GROUP	FORD LAKE PARK SHELTER REPLACEMENTS FORD LAKE PARK SHELTER REPAIR CONSTRUCTI LAKESIDE PARK SHELTER REPLACEMENT FORD HERITAGE PARK BATHROOM FACILITIES BURNS PARK IMPROVEMENTS WEST WILLOW PARK IMPROVEMENTS CLUBVIEW PARK PRIME PROFESSIONAL SERVICE COMMUNITY CENTER PARK PRIME PROFESSIONAL	3,150.00 950.00 4,575.00 5,300.00 2,700.00 1,750.00 2,147.35 1,197.85 <hr/> 21,770.20
05/21/2024	196829	STATE OF MICHIGAN***	INSPECTION OF LEC BOILERS	150.00
05/21/2024	196830	STEPHEN BROWN	STEVE BROWN CONTRACTUAL INSP 04.22.24 -	1,550.00
05/21/2024	196831	STERICYCLE INC	STERI-SAFE BUDGET SUBSCRIPTION	269.10
05/21/2024	196832	STEVEN DENSMORE	REIMBURSEMENT FOR FOOD WHILE AT CONFEREN	48.05
05/21/2024	196833	STEVEN WALLGREN	REIMBURSEMENT FOR EXPENSES	19.67
05/21/2024	196834	TERMINIX PROCESSING CENTER	PEST CONTROL SERVICES FOR GREEN OAKS ON	83.00
05/21/2024	196835	TRENDSET COMMUNICATIONS GROUP	CABLE RUNS - CIVIC	774.48
05/21/2024	196836	UNIVERSITY TRANSLATORS	TRANSLATOR SERVICES TRANSLATOR SERVICES TRANSLATOR SERVICES TRANSLATOR SERVICES	220.00 373.87 275.00 220.00 <hr/> 1,088.87
05/21/2024	196837	USA SOFTBALL OF MICHIGAN	SPRING 2024 REGISTRATIONS SOFTBALLS FOR THE 2024 SPRING SOFTBALL S	495.00 721.00 <hr/> 1,216.00
05/21/2024	196838	VANTAGE APPAREL	GREEN OAKS LOGO EMPLOYEE POLO SHIRTS.	354.88
05/21/2024	196839	VERIZON CONNECT FLEET USA	GPS SERVICES-APRIL 2024	575.85
05/21/2024	196840	VICTORY LANE	#706 FULL SERVICE OIL CHANGE	75.15
05/21/2024	196841	WASHTENAW COUNTY LEGAL NEWS	NOXIOUS WEEDS AD - ORDINANCE	125.00
05/21/2024	196842	WASHTENAW COUNTY TREASURER#	PRE INVOICE LEDGER 03/24	315.65
05/21/2024	196843	WEINGARTZ	STRING TRIMMER	72.00

05/16/2024 04:15 PM
User: mharris
DB: Ypsilanti-Twp

CHECK REGISTER FOR CHARTER TOWNSHIP OF YPSILANTI
CHECK NUMBERS 196743 - 196847

Check Date	Check	Vendor Name	Description	Amount
05/21/2024	196844	WILLIAM KLIBER IV	SPRING 2024 YOUTH SOCCER REF	80.00
05/21/2024	196845	YOUR MEMBESHIP.COM INC	ADVERTISEMENT FOR RECREATION COORDINATOR	100.00
05/21/2024	196846	YPSILANTI ACE HARDWARE	YARD BAGS	5.98
			YARD RAKES - COMMUNITY ENGAGEMENT	99.95
			YARD BAGS	2.99
			TRU FUEL	50.94
			SUPPLIES	38.58
				<u>198.44</u>
05/21/2024	196847	YPSILANTI COMMUNITY	2024 FORD LAKE PUMP STATION IMPROVEMENTS	<u>154,000.00</u>

AP TOTALS:
Total of 105 Checks: 684,507.96
Less 0 Void Checks: 0.00
Total of 105 Disbursements: 684,507.96

05/16/2024 04:18 PM
 User: mharris
 DB: Ypsilanti-Twp

CHECK REGISTER FOR CHARTER TOWNSHIP OF YPSILANTI
 CHECK NUMBERS 106 - 107

Check Date Check Vendor Name Invoice Vendor Description **CREDIT CARDS** Amount

Bank CARDS COMERICA COMMERCIAL CARD

Check Date	Check	Vendor Name	Invoice Vendor	Description	Amount
05/21/2024	106(E)	COMERICA BANK	FEDERAL EXPRESS CORPORATION	FEDEX INVOICE - ANSTEAD	86.30
			FEDERAL EXPRESS CORPORATION	OVERNIGHT MAILING TO TOM COLIS	32.95
			GORDON FOOD SERVICE INC.	OPERATING SUPPLIES AND FOOD AN	462.72
			GORDON FOOD SERVICE INC.	OPERATING SUPPLIES AND FOOD AN	533.04
			GORDON FOOD SERVICE INC.	OPERATING SUPPLIES AND FOOD AN	387.88
			GORDON FOOD SERVICE INC.	OPERATING SUPPLIES AND FOOD AN	843.30
			MLIVE MEDIA GROUP	MLIVE SUBSCRIPTION	100.00
			MICHIGAN STATE UNIVERSITY	CLASS FOR ERICA HOLMES	2,500.00
			UNITED STATES POST OFFICE	PASSPORT POSTAGE WEEK OF 3-25-	68.95
			UNITED STATES POST OFFICE	PASSPORT POSTAGE WEEK OF 3-11-	120.90
			UNITED STATES POST OFFICE	PASSPORT POSTAGE WEEK OF 3-18-	40.30
			UNITED STATES POST OFFICE	PASSPORT POSTAGE WEEK OF 4-8-2	211.35
			UNITED STATES POST OFFICE	PASSPORT POSTAGE WEEK OF 4-15-	19.70
			UNITED STATES POST OFFICE	PASSPORT POSTAGE WEEK OF 04-01	160.30
			UNITED STATES POST OFFICE	PASSPORT POSTAGE WEEK OF 4-22-	59.10
			UNITED STATES POST OFFICE	PASSPORT POSTAGE WEEK OF 4-29-	69.85
			UNITED STATES POST OFFICE	PASSPORT POSTAGE WEEK OF 5-6-2	78.80
			FRED PRYOR SEMINARS	PRYOR PLUS TRAINING FOR ERICA	249.00
			4IMPRINT	PROMOTIONAL ITEMS - COMMUNITY	2,777.30
			MIAM	ANNUAL MEMBERSHIP DUES AND MIA	500.00
			WASHTENAW COUNTY DEPARTMENT	TESTING TUBES APPLERIDGE WELL	60.00
			TRACTOR SUPPLY COMPANY	POND CHEMICALS/DYE - MAINTENAN	519.92
			CITY OF ANN ARBOR	PARKING FOR COURT	19.80
			SOARING EAGLE CASINO & RESORT	HOTEL FOR CHIEF DENSMORE- MI F	408.26
			WALMART	REPLACEMENT SOCCER EQUIPMENT B	159.52
			ASTERNIC	FOP2 RENEWAL	20.00
			AVANGATE INC.	MINITEK.GR RENEWAL	77.28
			B & H FOTO & ELECTRONICS CORP	CAMERAS - ORDINANCE	989.97
			CANVA PTY LTD. ABN 80 158 929	YEARLY SUBSCRIPTION FOR THE RE	119.40
			COURTYARD BY MARRIOTT	HOTEL STAY FOR CHIEF- HOMELAND	365.72
			COURT STREET	PARKING FOR CHIEF'S CONFERENCE	84.00
			GALLS LLC	ORDINANCE OFFICER SHOES - JAMI	124.99
			IPS DRUG TESTING	DOT RAMDOM FOR WILLIAM SWEENEY	45.00
			MACEO	REGISTRATION FOR BELINDA & BOB	40.00
			NATIONAL FIRE SPRINKLER ASSOC	FIRE MARSHAL WALLGREN MEMBERSH	50.00
					12,385.60

05/21/2024	107(E)	COMERICA BANK	PACK N PARCEL	GROUND SHIPPING FOR EQUIPMENT	17.41
			RESTAURANT DEPOT	SIGNS FOR THREE COMPARTMENT SI	10.02
			RED ROOF INN	HOTEL DURING DRUG COURT CONFER	129.18
			SCRIBE	SCRIBE PRO PLAN	708.00
			SURVEYMONKEY INC	SURVEYMONKEY RENEWAL	900.00
			TRANSUNION RISK & ALTERNATIVE	MONTHLY SUBSCRIPTION FEES FOR	148.00
					1,912.61

CARDS TOTALS:

Total of 2 Checks:					14,298.21
Less 0 Void Checks:					0.00
Total of 2 Disbursements:					14,298.21



**YPSILANTI
TOWNSHIP**
— OFFICE OF THE TREASURER —

**MONTHLY TREASURER'S REPORT
STAN ELDRIDGE
APRIL 1, 2024 - APRIL 30, 2024**

<u>Account Name</u>	<u>Beginning Balance</u>	<u>Cash Receipts</u>	<u>Cash Disbursements</u>	<u>Ending Balance</u>
101 - General Fund	14,809,183.21	6,271,715.18	2,602,328.50	18,478,569.89
101 - Payroll	290,338.36	929,438.67	1,022,537.70	197,239.33
101 - Willow Run Escrow	146,393.72	48.00	0.00	146,441.72
206 - Fire Department	1,094,021.36	5,700,377.11	374,051.54	6,420,346.93
208 - Parks Fund	16,963.96	66.01	403.68	16,626.29
213 - Roads/Bike Path/Rec/General Fund	1,464,568.86	1,614,553.72	321,796.21	2,757,326.37
216 - Fire Pension & OPEB Millage Fund	84,778.65	1,423,272.88	0.00	1,508,051.53
217 - Fire Special Millage Capital Fund	207,420.87	823.51	0.00	208,244.38
226 - Environmental Services	637,607.31	3,842,664.92	344,540.22	4,135,732.01
230 - Recreation	39,483.02	346,989.81	66,927.52	319,545.31
236 - 14-B District Court	95,333.46	64,046.99	122,112.32	37,268.13
244 - Economic Development	76,002.89	302.01	0.00	76,304.90
249 - Building Department Fund	1,553,022.83	104,394.34	60,527.75	1,596,889.42
250 - LDFA Tax	21,585.09	74,555.51	0.00	96,140.60
252 - Hydro Station Fund	1,196,666.71	4,762.23	40,678.47	1,160,750.47
266 - Law Enforcement Fund	8,171,663.36	9,045,614.67	1,102,448.85	16,114,829.18
282 - Cares Act Fund	0.00	0.00	0.00	0.00
284 - Opioid Settlement Fund	26,257.57	103.97	0.00	26,361.54
287 - Nuisance Abatement Fund	49,986.79	4,317.29	293.40	54,010.68
398 - LDFA 2006 Bonds	86.23	0.00	0.00	86.23
584 - Green Oaks Golf Course	207,990.23	75,888.77	63,556.29	220,322.71
597 - Compost Site	867,689.04	31,510.97	35,394.32	863,805.69
661 - Motor Pool	261,676.41	1,063.56	2,042.91	260,697.06
702 - General Tax Collection	102,319.44	10,870.97	23,900.25	89,290.16
703 - Current Tax Collections	26,273,636.55	4,663.38	26,249,075.53	29,224.40
707 - Bonds & Escrow/GreenTop	1,853,698.30	39,212.78	6,436.25	1,886,474.83
708 - Fire Withholding Bonds	95,538.46	31.33	0.00	95,569.79
GRAND TOTAL	59,643,912.68	29,591,288.58	32,439,051.71	56,796,149.55

ATTORNEY REPORT

GENERAL LEGAL UPDATE

OLD BUSINESS



MEMORANDUM

To: Charter Township of Ypsilanti Board of Trustees

From: John Hines, Municipal Services Director

Date: May 15, 2024

RE: **Request Authorization to seek sealed bids for pathway and playground surface repairs at Burns Park and pathway renovation and playground replacement at West Willow Park as part of the American Rescue Plan Act (ARPA) projects funding.**

The Residential Services Department is requesting authorization to seek sealed bids for the repairs of the existing pathway and playground decking at Burns Park budgeted in GL #101-902-981.010 and the renovation of the pathway and replacement of the playground equipment and decking at West Willow Park that is budgeted in GL#101-902-981.150.

Spicer Group was approved by the board to provide professional engineering services for both approved ARPA projects at each park. Spicer and Township staff held public input meetings in November 2023 and mailed postcards to residents of each neighborhood to get input on improvements to best impact the community. Proposed RFP used the input received to craft plans for each park.

Burns Park, the bid package will focus on renovation on the existing path around the park. Due to weather, age and use over time, the path has shifted to be broken in places and uneven at spots. Also included is to remove the existing mulch and decking of the playground surfaces in the park and replace new, with updated borders and replacement of fresh mulch. This will alleviate a highlighted issue of weeds growing through that is a current playground deterrent.

West Willow Park renovations will plan for a complete playground area replacement. This will include the equipment, decking and barrier areas and replacement new mulch. The plans will also include pathway replacement with new limestone as a base bid and pavement of the path as an alternate.

Staff will return to the Board of Trustees to recommend and award the selection of a bidder.

Please find attached this memorandum the proposed construction documents and the bidding package as created by Spicer Group.

Age 2-5 Structure:



Age 5-12 Structure:



**CONTRACT DOCUMENTS
FOR
BURNS PARK AND WEST WILLOW PARK IMPROVEMENTS**

**YPSILANTI CHARTER TOWNSHIP
YPSILANTI, MICHIGAN**

Prepared By:
SPICER GROUP, INC.

MAY 2024

Plans Included

DP-xxxx-1-7

Project I.D. Number: 134586SG2023

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CHARTER TOWNSHIP OF YPSILANTI
YPSILANTI, MICHIGAN
BURNS PARK AND WEST WILLOW PARK IMPROVEMENTS

ADVERTISEMENT FOR BIDS

Sealed Bids for the **Burns Park and West Willow Park Improvements** will be received by CLERK'S OFFICE, Ypsilanti Township Civic Center, 7200 S. Huron River Dr., Ypsilanti MI., 48197, until **2:00 p.m.** local time on **June 11, 2024**.

The Project consists of removing and replacing existing HMA paths at Burns Park, removing and replacing play surface at Burns Park, removing and replacing playground equipment at West Willow Park, and removing and replacing existing gravel path at West Willow Park.

The Issuing Office for the Bidding Documents is: Spicer Group, Inc., 125 Helle Blvd., Suite 2, Dundee, MI 48131, Elsie Jorgensen, 269-252-6100, elsie.jorgensen@spicergroup.com. The contract documents for bidding purposes are available beginning May 21, 2024 on MITN Purchasing Group, Bidnetdirect.com; and Charter Township of Ypsilanti, 7200 Huron River Drive, Ypsilanti, MI 48197. **Bidders are encouraged to download plans from MITN at Bientedirect.com at no additional cost.** Neither Owner nor ENGINEER will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the Issuing Office. Bidders should direct correspondence to ENGINEER.

For bidders choosing to pick up copies of bid documents, copies may be obtained on or after 12:00 PM, local time May 21, 2024 at the CLERK'S OFFICE, Ypsilanti Township Civic Center, 7200 S. Huron River Dr., Ypsilanti MI., 48197 for no fee.

Bid Security in the form of a Bid Bond for a sum no less than 5% of the amount of the Bid will be required with each Bid.

The OWNER reserves the right to accept any Bid, reject any Bid, or waive irregularities in Bids.

No Bid may be withdrawn for a period of 60 calendar days after the scheduled closing time for receipt of bids.

John Hines, Municipal Services Director
Charter Township of Ypsilanti

++ END OF ADVERTISEMENT FOR BIDS ++

Ypsilanti Charter Township
Clubview and Community Center Pickleball and Tennis Courts

Advertisement
C-111-1

INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within 3 days of Owner's request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

- 4.01 *Site and Other Areas*
- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.
- 4.02 *Existing Site Conditions*
- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
1. The Supplementary Conditions identify:
- a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.

- b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
 - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
 - 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
 - 3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
 - B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
 - C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.
- 4.03 *Site Visit and Testing by Bidders*
- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.
 - B. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
 - C. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
 - D. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.
- 4.04 *Owner's Safety Program*
- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER’S REPRESENTATIONS

5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder’s safety precautions and programs;
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – PRE-BID CONFERENCE

- 6.01 No pre-bid conference will be held for this project. Bidders are encouraged to visit the site prior to bidding on this project.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted via email only to Elsie Jorgensen at elsie.jorgensen@spicergroup.com. All email questions must be received by 5:00 P.M. on Wednesday, June 5, 2024. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received after 5:00 P.M. June 5, 2024 may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

ARTICLE 8 – BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the

Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.

- 11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.
- 12.03 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers.
- 12.04 If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 12.05 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

ARTICLE 13 – PREPARATION OF BID

- 13.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”
- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.

- 13.03 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.04 A Bid by an individual shall show the Bidder's name and official address.
- 13.05 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 13.06 All names shall be printed in ink below the signatures.
- 13.07 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.08 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.09 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form..

ARTICLE 14 – BASIS OF BID

14.01 Base Bid with Alternates

- A. Bidders shall submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.
- B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form.

14.02 Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity" (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

14.03 Allowances

- A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

ARTICLE 15 – SUBMITTAL OF BID

- 15.01 With each copy of the Bidding Documents, a Bidder is furnished one Affidavit of Compliance – Iran Economic Sanctions Act (C210) This form must be signed, notarized and included with the submitted bid package.
- 15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation “BID ENCLOSED.” A mailed Bid shall be addressed to Ypsilanti Township Civic Center, 7200 S. Huron River Dr., Ypsilanti MI., 48197
- 15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.

- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 20 – BONDS AND INSURANCE

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner’s requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

- 21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 22 – EQUAL EMPLOYMENT

- 22.01 Attention of Bidders is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against on any illegal basis with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, partisan considerations, genetic information, or a disability that is unrelated to the individual’s ability to perform the duties of a particular job or position as required by Public Act 453 of 1976 (Elliot-Larsen Civil Rights Act), Public Act 220 of 1976 (Persons with Disabilities Act), as amended, and Executive Directive 2019-09.

ARTICLE 23 – BUILD AMERICA, BUY AMERICA (BABA)

- 23.01 Attention of Bidders is particularly called to the requirement for ensuring that all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States.” (Build America, Buy America Act, P.L. 117-58, Secs 70911 - 70917.

AFFIDAVIT OF COMPLIANCE-IRAN ECONOMIC SANCTIONS ACT
MICHIGAN PUBLIC ACT 517 OF 2012

The undersigned, as owner or authorized officer of the below named CONTRACTOR, pursuant to the compliance certification requirement by the State of Michigan, and as referenced by OWNER in the BIDDING DOCUMENTS, hereby certifies, represents and warrants that the CONTRACTOR (including its Officers, Directors and Employees) is not an “Iran linked business” as defined by the Iran Economic Sanctions Act, Michigan Public Act 517 of 2012 (THE ACT). And, that in the event CONTRACTOR is awarded a contract as a result of the aforementioned BIDDING DOCUMENTS, the Contractor will not become an “Iran linked business” at any time during the course of performing the work or any services under the contract.

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

CONTRACTOR:

 Name of Contractor
 By: _____
 Its: _____
 Date: _____

STATE OF _____ }
 ss.
 COUNTY OF _____ }

This instrument was acknowledged before me on the _____ day of _____, ____
 by _____.

 _____, Notary Public
 _____ County, State of _____
 My Commission expires: _____
 Acting in the County of: _____

**BID FORM
FOR CONSTRUCTION CONTRACTS**

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

*Clerk's Office
Ypsilanti Township Civic Center
7200 S Huron River Dr
Ypsilanti, MI 48197*

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 45 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

If no addenda have been issued, insert "N/A". Bidder shall submit signed copies of the Addendum Acknowledgment receipt form issued with each addendum with the complete bid form.

- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder 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 Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER’S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. “corrupt practice” means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid 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.

ARTICLE 5 – BASIS OF BID

- 5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Burns Park					
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1.	Mobilization, Max 5%	Each	1		
2.	Pavement Removal	Sq Yd	420		
3.	Removal of Safety Surfacing	Sq Yd	540		
6.	Playground Curb	Lin Ft	442		
9.	Safety Surfacing	Sq Yd	420		
10.	Aggregate Base, 8 inch	Sq Yd	530		
11.	HMA, 13A	Ton	80		
12.	Sidewalk, 4 inch	Sq Ft	370		
13.	Restoration	Sq YD	3160		
14.	Soil Erosion and Sedimentation Control	Lum Sump	1		
Subtotal of Burns Park					\$

West Willow Park					
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1.	Mobilization, Max 5%	Each	1		
2.	Removal of Safety Surfacing	Sq Yd	630		
3.	Removal of Play Equipment	Lump Sum	1		
4.	Relocate Existing Bench	Each	2		
5.	Playground Curb	Lin Ft	273		
6.	Gravel Walk	Sq Yd	1,310		
7.	Play Equipment, West Willow, Supply & Install	Lump Sum	1		
8.	Safety Surfacing	Sq Yd	630		
9.	Aggregate Base, 8 inch	Sq Yd	1,440		
10.	Restoration	Sq YD	2,000		
11.	Soil Erosion and Sedimentation Control	Lum Sump	1		
Subtotal of West Willow					\$
Total of Burns Park and West Willow Park Improvements					\$

ALTERNATE A – Pave 550’ of Path at West Willow					
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1.	Mobilization, Max 5%	Each	1		
2.	Removal of Safety Surfacing	Sq Yd	630		
3.	Removal of Play Equipment	Lump Sum	1		
4.	Relocate Existing Bench	Each	2		
5.	Playground Curb	Lin Ft	273		
6.	Gravel Walk	Sq Yd	700		
7.	Play Equipment, West Willow, Supply & Install	Lump Sum	1		
8.	Safety Surfacing	Sq Yd	630		
9.	Aggregate Base, 8 inch	Sq Yd	1440		
10.	HMA, 13A	Ton	100		
11.	Restoration	Sq YD	2,000		
12.	Soil Erosion and Sedimentation Control	Lum Sump	1		
Subtotal of Alternate A					\$

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor’s overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete on or before **September 1, 2024** and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **September 30, 2024**.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
 - A. Required Bid security;
 - B. Affidavit of Compliance – Iran Economic Sanctions Act;

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By:

[Signature] _____

[Printed name] _____

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

Bidder's License No.: _____

(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

NOTICE OF AWARD

Date of Issuance:

Owner:	Ypsilanti Charter Township	Owner's Contract No.:	
Engineer:	Spicer Group, Inc.	Engineer's Project No.:	134586SG2023
Project:	Burns Park and West Willow Park Improvements	Contract Name:	Burns Park and West Willow Park Improvements

Bidder:

Bidder's
Address:

TO BIDDER:

You are notified that Owner has accepted your Bid dated [_____] for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

Burns Park and West Willow Park Improvements

The Contract Price of the awarded Contract is: \$ _____ [note if subject to unit prices, or cost-plus]

[] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically. [revise if multiple copies accompany the Notice of Award]

a set of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner [_____] counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security [e.g., performance and payment bonds] and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner:

Authorized Signature

Authorized Signature

By:

By:

Title:

Title:

Copy: Engineer

Ypsilanti Charter Township
Burns Park and West Willow Park Improvements

Notice of Award
C-510 - 1

AGREEMENT

THIS AGREEMENT is by and between Ypsilanti Charter Township (“Owner”) and _____ (“Contractor”).

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:

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Burns Park and West Willow Park Improvements.

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Spicer Group, Inc.

3.02 The Owner has retained Spicer Group, Inc. (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time 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 completed on or before September 1, 2024 and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before September 30, 2024

4.03 *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 times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. 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 \$600 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A 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 Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$600 for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

4.04 *Special Damages*

- A. In addition to the amount provided for liquidated damages, 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.

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 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):

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.

- B. 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 account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 1st 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 Work completed (with the balance being retainage). If the Work has been 50 percent 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. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 50 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 in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

- 7.01 All amounts not paid when due shall bear interest at the rate of 0 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
 - E. 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 Site-related reports and

drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

- F. 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.
- G. 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.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. 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.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 7, inclusive).
 - 2. Performance bond (pages 1 to 3, inclusive).
 - 3. Payment bond (pages 1 to 4, inclusive).
 - 4. Maintenance and Guarantee (pages 1 to 2, inclusive).
 - 5. General Conditions (pages 1 to 65, inclusive).
 - 6. Supplementary Conditions (pages 1 to 5, inclusive).
 - 7. Specifications as listed in the table of contents of the Project Manual.
 - 8. The Drawings are listed on the document title page.
 - 9. Addenda (numbers █ to █, inclusive).
 - 10. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages █ to █, inclusive).
 - 11. 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.
- B. The documents listed in Paragraph 9.01.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 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

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

10.02 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto 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 Documents.

10.03 *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.

10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall 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.

10.05 *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 10.05:
 1. “corrupt practice” means the offering, giving, receiving, or soliciting of any thing 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.

10.06 *Other Provisions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, 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.

B. Equal Opportunity

Contractor shall not 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 race, color, religion, national origin, age, sex, height, weight, marital status, or because of a handicap that is unrelated to the person’s ability to perform the duties of a particular job or position.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

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

OWNER:

CONTRACTOR:

Ypsilanti Charter Township _____

By: _____

By: _____

Title: _____

Title: _____

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

7200 Huron River Drive _____

Ypsilanti, MI 48197 _____

NOTICE TO PROCEED

Owner:	Ypsilanti Charter Township	Owner's Contract No.:	
Contractor:		Contractor's Project No.:	
Engineer:	Spicer Group, Inc.	Engineer's Project No.:	134586SG2023
Project:	Burns Park and West Willow Park Improvements	Contract Name:	Burns Park and West Willow Park Improvements
		Effective Date of Contract:	

TO CONTRACTOR:

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on _____, **2024**. *[see Paragraph 4.01 of the General Conditions]*

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, the date of Substantial Completion is **September 1, 2024**, and the date of readiness for final payment is **September 30, 2024**.

Owner: **Ypsilanti Charter Township**

By: _____	Authorized Signature	By: _____	Authorized Signature
Title: _____		Title: _____	
Date Issued: _____		Date Issued: _____	

Copy: Engineer

PERFORMANCE BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*
Ypsilanti Charter Township
7200 S Huron River Dr
Ypsilanti, MI 48197

CONSTRUCTION CONTRACT
Effective Date of the Agreement:
Amount:
Description *(name and location):*

BOND
Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*
Amount:
Modifications to this Bond Form: None See Paragraph 16

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal *(seal)*

Surety's Name and Corporate Seal *(seal)*

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall 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 shall not be reduced or set off on account of any such unrelated obligations. No right of action shall 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 may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall 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 shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

Ypsilanti Charter Township
7200 S Huron River Dr
Ypsilanti, MI 48197

CONSTRUCTION CONTRACT

Effective Date of the Agreement:
Amount:
Description *(name and location):*

BOND

Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*
Amount:
Modifications to this Bond Form: None See Paragraph 18

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

CONTRACTOR AS PRINCIPAL

SURETY

(seal)
Contractor's Name and Corporate Seal

(seal)
Surety's Name and Corporate Seal

By: _____

Signature

By: _____

Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

Ypsilanti Charter Township
Burns Park and West Willow Park Improvements

Payment Bond
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- to the Surety (at the address described in Paragraph 13).
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 shall 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 shall 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
 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 shall 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 shall 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 shall 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 shall 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 satisfy 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 shall 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 shall be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall 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:

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

4. A brief description of the labor, materials, or equipment furnished;
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;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
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 shall be 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

MAINTENANCE AND GUARANTEE BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned, _____
_____ as Principal, and _____,

as Surety, are held and firmly bound onto Charter Township of Ypsilanti, OWNER,

in the sum of _____
_____ Dollars (\$ _____) to be paid to the Owner for which payment

will and truly be made jointly and severally bind ourselves, our heirs, our executors, administrators, and assigns, firmly by these presents.

Sealed with our signature and seals and dated this _____ day of _____, 20__.

WHEREAS, the above named Principal has entered into a certain written Contract with Charter Township of Ypsilanti dated _____, 20__, wherein the Principal agreed as follows:

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that by and under said Contract, the above-named Principal has agreed with the OWNER, for a period of one (2) years from the date of payment of the final estimate, to keep in good order and repair and defect in all work done under said Contract, either by the Principal or his subcontractors, or his suppliers, that may develop during said period due to improper materials, defective equipment, workmanship or arrangements; any other work affected in making good such imperfections, shall also be made good, all without expense to the OWNER, excepting only such part or parts of said Work as may have been disturbed without the consent or approval of the Principal after final acceptance of the Work, and that whenever directed to do so by the OWNER, by notice served in writing, either personally or by mail, on the Principal, legal representative, successor, or on the Surety, he/she will at once make such repairs as directed by the OWNER; and in case of failure to do so within one (1) week from the date of service of such notice, or within a reasonable time as shall be fixed in said notice, then the OWNER shall have the right to purchase such materials and employ such labor and equipment as may be necessary for the purpose and to undertake to do and make such repairs, and charge the expense thereof to and receive same from said Principal or Surety. If any repair is necessary to be made at once to protect life and property, then and in that case, the OWNER may take immediate steps to repair or barricade such defects without notice to the CONTRACTOR. In such accounting the OWNER shall not be held to obtain the lowest figure for doing of the Work or nay part thereof, but all sums actually paid therefore shall be charged to the Principal or Surety. In this connection, the judgement of the OWNER is final and conclusive. If the said Principal, for a period of one (2) years from the date of the final estimate of payment, shall keep such Work so constructed under the Contact in good order and repair, excepting only such part or parts of such Work as may have been disturbed without the consent or approval of said Principal after final acceptance of the same, and shall, whenever notice is given as herein specified, at once proceed to make repair as in said notice directed or shall reimburse the OWNER for any expense incurred by making such repairs should the Principal or Surety fail to do as hereinbefore specified, and shall fully indemnify, defend and hold harmless said OWNER from all law suits and actions for damages of every name and description brought or claimed against it for or on account of any injury to person(s) or property received or sustained by any party or parties, by or from any of the acts or omissions or through the prosecution of the Work included in said Contract, and from any and all claims arising under the Workman's Compensation Act, so-called, of the State of Michigan, then the above obligation shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed by their respective authorized officers this _____ day of _____, 20__.

Signed, Sealed and Delivered
in the presence of:

Signature

Signature

Name

Name

Principal

Signature

Signature

Name

Name

Surety

Contractor's Application for Payment No. 1		
Application Period:	Application Date:	Via (Engineer): Spicer Group, Inc.
To (Owner): Ypsilanti Charter Township	From (Contractor):	Engineer's Project No.: 134586SG2023
Project: Burns Park and West Willow Park Improvements	Contract:	
Owner's Contract No.:	Contractor's Project No.:	

Application For Payment Change Order Summary

Approved Change Orders	Additions	Deductions
TOTALS		
NET CHANGE BY		
CHANGE ORDERS		

1. ORIGINAL CONTRACT PRICE..... \$ _____
2. Net change by Change Orders..... \$ _____
3. Current Contract Price (Line 1 ± 2)..... \$ _____
4. TOTAL COMPLETED AND STORED TO DATE
(Column F total on Progress Estimates)..... \$ _____
5. RETAINAGE:
 - a. X _____ Work Completed..... \$ _____
 - b. X _____ Stored Material..... \$ _____
 - c. Total Retainage (Line 5.a + Line 5.b)..... \$ _____
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c)..... \$ _____
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)..... \$ _____
8. AMOUNT DUE THIS APPLICATION..... \$ _____
9. BALANCE TO FINISH, PLUS RETAINAGE
(Column G total on Progress Estimates + Line 5.c above)..... \$ _____

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor Signature _____

By: _____ Date: _____

Payment of: \$ _____
(Line 8 or other - attach explanation of the other amount)

is recommended by: _____ (Engineer) _____ (Date)

Payment of: \$ _____
(Line 8 or other - attach explanation of the other amount)

is approved by: _____ (Owner) _____ (Date)

Approved by: _____ Funding or Financing Entity (if applicable) _____ (Date)

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: Ypsilanti Charter Township Owner's Contract No.:
Contractor: Contractor's Project No.:
Engineer: Spicer Group, Inc. Engineer's Project No.: 133251SG2022
Project: Burns Park and West Willow Park Improvements Contract Name: Burns Park and West Willow Park Improvements

This [preliminary] [final] Certificate of Substantial Completion applies to:

- All Work The following specified portions of the Work:

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

- Amendments to Owner's responsibilities: None
 As follows

- Amendments to Contractor's responsibilities: None
 As follows:

The following documents are attached to and made a part of this Certificate: *[punch list; others]*

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

EXECUTED BY ENGINEER:		RECEIVED:	RECEIVED:
By: _____	By: _____	By: _____	By: _____
(Authorized signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)	
Title: _____	Title: _____	Title: _____	
Date: _____	Date: _____	Date: _____	

Ypsilanti Charter Township
Burns Park and West Willow Park Improvements

Certificate of Substantial Completion
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**STANDARD GENERAL CONDITIONS OF THE
CONSTRUCTION CONTRACT**

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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 form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting 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, or both; 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, or both; 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; or (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. 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), hazardous waste, and any substance, product, waste, or other material

of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree 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 the 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. *Engineer*—The individual or entity named as such in the Agreement.
21. *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.
22. *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. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *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.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
27. *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.

28. *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.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
30. *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.
31. *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.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *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.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *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.
36. *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.
37. *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 furnished by Owner which are designated for the use of Contractor.
38. *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.
39. *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.
40. *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 thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.

42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, 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.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *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.
48. *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 the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives*:
 1. 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*:
 - 1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*:
 - 1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. 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 15.04).
- E. *Furnish, Install, Perform, Provide*:
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean 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, shall mean 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, shall mean 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. 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 Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), 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 executed 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 specifically 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 *Initial 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 for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall 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.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items 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 items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one 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 or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall 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.

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, shall mean 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, 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.

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 Documents 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 Documents 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 shall 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 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 thereunder.
- 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 give written notice to Owner and Contractor 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 editions, 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 shall preclude 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 thirtieth 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 sixtieth day after the day of Bid opening or the thirtieth 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 shall 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 shall 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 shall 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 the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the 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. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall 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 utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 - 4. acts of war or terrorism.
- D. 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.
- E. Paragraph 8.03 governs 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.

- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times 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.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor 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; 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 7.12, 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 at law; 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 shall 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 known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); 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 upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
 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.

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 either:
 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; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 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 the necessity of Owner's obtaining 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 above; 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. *Possible Price and Times Adjustments:*
 1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, 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 conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
 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; or
 - 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 as 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, or both, then any such adjustment shall 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, or both, 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.

5.05 *Underground Facilities*

- 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. Unless it is otherwise expressly provided in the Supplementary Conditions:
 - 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 - 2. 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 existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. 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 in the Contract Documents, or was not shown or indicated 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), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to 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. 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. *Possible Price and Times Adjustments:*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, 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. 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 conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. 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, or both, then any such adjustment shall 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, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

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

1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
2. 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 Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
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, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, 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.
- 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 or 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.H shall obligate 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 shall obligate 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 all of Contractor's obligations under the Contract. These bonds shall 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 Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, 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 shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. 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.

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

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. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, 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.
- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. 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, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of 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.
- G. 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.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect 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 shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.

- J. 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.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 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).
 - 4. Foreign voluntary worker compensation (if applicable).
- B. *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. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 - 2. claims for damages insured by reasonably available personal injury liability coverage.
 - 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.
- C. *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 coverages and endorsements:
 - 1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. 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.
 - 2. 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.
 - 3. Broad form property damage coverage.
 - 4. Severability of interest.
 - 5. Underground, explosion, and collapse coverage.
 - 6. Personal injury coverage.
 - 7. 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.
 - 8. 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.

- D. *Automobile liability*: Contractor shall purchase and maintain 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. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *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.
- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such 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.
- H. *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 be responsible for purchasing and maintaining 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.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
 - 1. include at least the specific coverages provided in this Article.
 - 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 - 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three 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.
 - 4. remain in effect at least until final payment (and longer if expressly required in this Article) 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.
 - 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed 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.

- J. 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.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. 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.

6.05 *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 full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 - 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 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.
 - 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.
 - 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).

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).
 6. extend to cover damage or loss to insured property while in transit.
 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.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *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 Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed 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.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- 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 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.
- E. *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 Paragraph 6.05, it may do so at Contractor's expense.
- F. *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.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, 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 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.

- B. 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:
 - 1. loss 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 perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner 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.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. 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 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.

6.07 Receipt and Application of Property Insurance Proceeds

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 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 6.05 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 this Contract or applicable Laws and Regulations.

- C. 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.

ARTICLE 7 – CONTRACTOR’S RESPONSIBILITIES

7.01 *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. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *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 at all times maintain good discipline and order at the Site.
- B. 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 shall 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.

7.03 *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 shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall 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 shall 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.

7.04 *“Or Equals”*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, 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 material or equipment, or items from other proposed suppliers under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an “or equal” item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it 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) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it 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 shall result in any change in Contract Price. The Engineer’s denial of an “or-equal” request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment 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 material or equipment under the circumstances described below. To the extent possible such requests shall 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 material or equipment from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.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 material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall 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 that specified, and
 - 3) be suited to the same use as that 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 that specified, and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall 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 shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity 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 five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. 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, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, 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, Supplier, or other individual or entity, whether initially or as a replacement, shall 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 fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.

- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 - 2. shall create 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.

7.07 *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 a particular 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 shall be disclosed by Owner 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.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. 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

7.09 *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.

7.10 *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. Except where otherwise expressly required by applicable Laws and Regulations, 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 shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give 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 notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *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.

7.12 *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. 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.
- B. 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. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when 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.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. 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.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.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).
- F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall 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.

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of 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 threatened 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 thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified 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
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
- 2. Each submittal shall 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 submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will 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.D.

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.D.
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. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
 1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. 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, conform to the information given in 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 shall 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.
 5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 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, shall 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, Sample, or other submittal shall 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.D.4.
- E. *Resubmittal Procedures:*
 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 submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

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 and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper 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.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 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. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.
- D. 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 shall 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 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 performance of the Work, provided that any

such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury 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 shall 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.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

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 utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. 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.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, 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.

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 at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner 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, or both. 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 shall 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. When applicable, any such equitable adjustment in Contract Price shall 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 is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

- 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. 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 to 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.
- C. 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 to Contractor.
- D. 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 shall 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 Documents (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 10.08. 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 *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 Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

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

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *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.

10.07 *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.

10.08 *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, shall 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 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 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *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 (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not 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, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.

2. *Work Change Directives:* 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 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.
3. *Field Orders:* 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. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *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. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes 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 shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate 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.

11.03 *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.

11.04 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall 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); or

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 11.04.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 11.04.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall 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 shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five 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 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.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 five 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 shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall 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 will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the

Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. 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. The supporting data shall 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. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall 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.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *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 that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the 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 11.02, (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 in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *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 shall be submitted 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; and
 - 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.
- 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 shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall be incorporated in a Change Order 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. 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 shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, 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, shall 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 shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns

from sale of surplus materials and equipment shall 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, who 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 shall 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 for services specifically related to the Work.
5. Supplemental costs including 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, and hand tools not owned by the workers, 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.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the 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 property insurance established in accordance with Paragraph 6.05), 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 shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall 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 shall not include any of the following items:
1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, 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. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. 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.
 5. 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:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.
- E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

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 on account of any of the foregoing will be valid.
- C. *Contingency Allowance:* Contractor agrees that a 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 on account of Work covered by allowances, and the Contract Price shall 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, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

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 will 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 therewith 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 shall 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 shall 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 shall 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 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 shall 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 special 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, or both, 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 shall 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 rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven 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 on account of 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. 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 shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and 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.
 - 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. 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, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, 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 on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of 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 that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated 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;

1. there are other items entitling 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 shall 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 shall be treated as an amount due as determined by Paragraph 15.01.C.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 seven 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 shall 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 seven 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 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 6.05 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 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall 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 disputes that Contractor believes are unsettled; 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 Application and Acceptance:*
1. 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 ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall 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. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. 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. *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.
 - D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- 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 from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special

guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.

- 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 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 terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then 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 other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, 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 therefrom.
- B. If 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 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 correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. 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.
- D. 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.
- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not 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, or both, directly attributable to any such suspension.

Any Change Proposal seeking such adjustments shall 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) ten 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) 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 seven 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 shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven 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 for (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 on account of loss of anticipated overhead, profits, or revenue, 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 seven 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, seven 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; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising 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; or
 - 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 Documents requires the giving of written notice, it will be deemed to have been validly given if:
 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

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 shall not constitute a waiver of that provision, nor shall 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 or completion of the Contract or termination 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 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition). All provisions that are not so amended or supplemented remain in full force and effect.

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.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.03 *Subsurface and Physical Conditions*

SC-5.03 Delete Paragraphs 5.03.A and 5.03.B in their entirety and insert the following:

- A. No reports of exploration or test of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to the Owner.**

SC-5.06 *Hazardous Environmental Conditions*

SC 5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.**
- B. Not Used.**

ARTICLE 6 – BONDS AND INSURANCE

SC-6.03 *Contractor's Liability Insurance*

SC 6.03 Add the following new paragraph immediately after Paragraph 6.03.J:

K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

- 1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:**

\$1,000,000.00 limit each accident

- 2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:**

Combined single limit of \$1,000,000.00 each occurrence for bodily injury 7 property damage. Must include 60 day written notice for change of coverate, cancellation, or non-renewal of coverate. Must name "The Charter Township of Ypsilanti and its past, present, and future elected officials shall be named as "additional named insured" on the general liability policy with respect to the services provided under this contract" – Occurrence basis.

3. Automobile Liability under Paragraph 6.03.D of the General Conditions:

Covers owned, hired, and non-owned vehicles with personal protection insurance and property protection. Includes residual liability insurance with a combined single limit of \$1,000,000.00 each accident for bodily injury and property damage.

4. Owner's Protective Liability

Combined single limit of \$1,000,000.00 each occurrence for bodily injury & property damage.

5. Builder's Risk

Option. May be used to cover everything.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SC-7.02 Labor; Working Hours

SC-7.02.B. Add the following new subparagraphs immediately after Paragraph 7.02.B:

1. Regular working hours will be 7 A.M to 7 P.M.
2. Owner's legal holidays shall be defined as U.S. Federal Holidays.

SC-7.02.B. Amend the first and second sentences of Paragraph 7.02.B to state "...all Work at the Site shall be performed during regular working hours, Monday through Saturday. Contractor will not perform Work on a Sunday or any legal holiday."

SC-7.08 Permits

SC 7.08 Add the following new subparagraphs immediately after Paragraph 7.08.A:

- B. A Soil Erosion and Sedimentation Control (SESC) Permit is not required since the Owner is an Authorized Public Agency (APA). However, the Contractor will need to construct the project in accordance with SESC measure as described in the bidding plans and specifications.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

SC-10.03 Project Representative

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.A:

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
 1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
 2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
 3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other

Project-related meetings, and prepare and circulate copies of minutes thereof.

- 4. Liaison:**
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.**
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.**
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.**
- 5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.**
- 6. Shop Drawings and Samples:**
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.**
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.**
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.**
- 7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.**
- 8. Review of Work and Rejection of Defective Work:**
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.**
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.**
- 9. Inspections, Tests, and System Start-ups:**
 - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.**

- b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
10. Records:
- a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
 - b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
 - c. Maintain records for use in preparing Project documentation.
11. Reports:
- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
 - b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
 - c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.
12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.
14. Completion:
- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
 - b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.

- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

C. The RPR shall not:

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, or Suppliers.
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 security or 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 from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC-13.01 Cost of the Work

SC-13.01 Add the following to the end of Paragraph 13.01.B.1:

Contractor is required to observe and abide by The Charter Township of Ypsilanti’s Prevailing Wage and Living Wage requirements. The relevant Township ordinances, as well as the relevant Prevailing Wage Decision are included in the Bidding Documents.

Work Change Directive No.

Date of Issuance: _____ Effective Date: _____
Owner: Ypsilanti Charter Township Owner's Contract No.: _____
Contractor: _____ Contractor's Project No.: _____
Engineer: Spicer Group, Inc. Engineer's Project No.: 134586SG2023
Project: Burns Park and West Willow Park Contract Name: Burns Park and
Improvements West Willow Park Improvements

Contractor is directed to proceed promptly with the following change(s):
Description:

Attachments: *[List documents supporting change]*

Purpose for Work Change Directive:

Directive to proceed promptly with the Work described herein, prior to agreeing to changes on Contract Price and Contract Time, is issued due to: *[check one or both of the following]*

- Non-agreement on pricing of proposed change.
- Necessity to proceed for schedule or other Project reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price \$ _____ [increase] [decrease].
Contract Time _____ days [increase] [decrease].

Basis of estimated change in Contract Price:

- Lump Sum Unit Price
- Cost of the Work Other

RECOMMENDED:	AUTHORIZED BY:	RECEIVED:
By: _____ Engineer (Authorized Signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: _____ Date: _____
Title: _____

Change Order No. _____

Date of Issuance:	Effective Date:
Owner: Ypsilanti Charter Township	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: Spicer Group, Inc.	Engineer's Project No.: 134586SG2023
Project: Burns Park and West Willow Park Improvements	Contract Name: Burns Park and West Willow Park Improvements

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (if required)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: _____ Date: _____
Title: _____

Field Order No. _____

Date of Issuance: _____ Effective Date: _____
Owner: Ypsilanti Charter Township Owner's Contract No.: _____
Contractor: _____ Contractor's Project No.: _____
Engineer: Spicer group, Inc. Engineer's Project No.: 134586SG2023
Project: Burns Park and West Willow Park Contract Name: Burns Park and West
Improvements Willow Park Improvements

Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph III "Changes in the Work", for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference: _____ Specification(s) _____ Drawing(s) / Detail(s) _____

Description: _____

Attachments: _____

ISSUED:		RECEIVED:	
By: _____ Engineer (Authorized Signature)		By: _____ Contractor (Authorized Signature)	
Title: _____		Title: _____	
Date: _____		Date: _____	

Copy to: Owner

SECTION 01 10 00

SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Contract description.
 - 2. Contractor's use of Site.
 - 3. Permits.
 - 4. Specification conventions.

1.2 CONTRACT DESCRIPTION

- A. Work of the Project includes demolition of an approximately 120' x 120' and 120' x 180' tennis court playing surface, construction of a new 120' x 120' and 120' x 180' tennis and pickleball multi-use playing surface, salvaging fencing, and restoration.
- B. The Work of the Project includes removal and replacement of approximately 528' long HMA path at Burns Park, removal and replacement 420 sqyd of fiber mulch under playground at Burns Park, removal and replacement of playground equipment at West Willow Park, and regrading of gravel walking path at West Willow Park.
- C. Perform Work of Contract under stipulated sum Contract with Owner according to Conditions of Contract.

1.3 CONTRACTOR'S USE OF SITE

- A. Access to Site: Contractor may, at their own cost, close the park or portions of the park to public. Contractor is responsible for safety and security of the site. Contractor must allow safe and reasonable access to the Owner or Owner's representative.
- B. Time Restrictions for Performing Work: as described in General and Supplemental Conditions.
- C. Construction Plan: Before start of construction, submit by email an electronic file in PDF format of construction plan regarding access to Work, use of Site, and utility outages for acceptance by Owner. After acceptance of plan, construction operations shall comply with accepted plan unless deviations are accepted by Owner in writing.

1.4 PERMITS

- A. Furnish any necessary permits for construction of Work and delivery of materials.

1.5 SPECIFICATION CONVENTIONS

- A. These Specifications are written in imperative mood and streamlined form. This imperative language is directed to Contractor unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 01 10 00

SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Application for Payment.
- B. Change procedures.
- C. Defect assessment.
- D. Unit prices.

1.2 APPLICATION FOR PAYMENT

- A. Submit via email electronic file in PDF format of each Application for Payment on EJCDC C-620 - Contractor's Application for Payment.
- B. Content and Format: Use Schedule of Values for listing items in Application for Payment.
- C. Submit updated construction schedule with each Application for Payment.
- D. Payment Period: Submit at intervals stipulated in the Agreement.
- E. Submit submittals with transmittal letter as specified in Section 01 33 00 - Submittal Procedures.
- F. Substantiating Data: When Engineer requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:
 - 1. Partial release of liens from major Subcontractors and vendors.
 - 2. Affidavits attesting to off-Site stored products.
 - 3. Construction Progress Schedule, revised and current as specified in Section 01 33 00 - Submittal Procedures.

1.3 CHANGE PROCEDURES

- A. Submittals: Submit name of individual who is authorized to receive change documents and is responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Carefully study and compare Contract Documents before proceeding with fabrication and installation of Work. Promptly advise Engineer of any error, inconsistency, omission, or apparent discrepancy.

- C. Requests for Interpretation (RFI) and Clarifications: Allot time in construction scheduling for liaison with Engineer; establish procedures for handling queries and clarifications.
 - 1. Use CSI Form 13.2A - Request for Interpretation for requesting interpretations.
 - 2. Engineer may respond with a direct answer on the Request for Interpretation form,, EJCDC C-942 - Field Order, or CSI Form 13/6A - Change Order Request (Proposal).
- D. Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on EJCDC C-942.
- E. Engineer may issue CSI Form 13/6A including a detailed description of proposed change with supplementary or revised Drawings and Specifications, a change in Contract Time for executing the change with stipulation of overtime work required and with the period of time during which the requested price will be considered valid. Contractor will prepare and submit estimate within 5 days.
- F. Document requested substitutions according to Section 01 25 00 - Substitution Procedures.
- G. Unit Price Change Order: For Contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of that which are not predetermined, execute Work under Work Directive Change. Changes in Contract Sum/Price or Contract Time will be computed as specified for Force Account Change Order.
- H. Work Directive Change: Engineer may issue directive, on EJCDC C-940 - Work Change Directive signed by Owner, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.
- I. Force Account Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Engineer will determine change allowable in Contract Sum/Price and Contract Time as provided in Contract Documents.
- J. Maintain detailed records of Work done on force account basis. Provide full information required for evaluation of proposed changes and to substantiate costs for changes in the Work.
- K. Document each quotation for change in Project Cost or Time with sufficient data to allow evaluation of quotation.
- L. Change Order Forms: EJCDC C-941 - Change Order.
- M. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.
- N. Correlation of Contractor Submittals:
 - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
 - 2. Promptly revise Progress Schedules to reflect change in Contract Time, revise subschedules to adjust times for other items of Work affected by the change, and resubmit.
 - 3. Promptly enter changes in Record Documents.

1.4 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of Engineer, it is not practical to remove and replace the Work, Engineer will direct appropriate remedy or adjust payment.
- C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Engineer.
- D. Defective Work will be partially repaired according to instructions of Engineer, and unit sum/price will be adjusted to new sum/price at discretion of Engineer.
- E. Individual Specification Sections may modify these options or may identify specific formula or percentage sum/price reduction.
- F. Authority of Engineer to assess defects and identify payment adjustments is final.
- G. Nonpayment for Rejected Products: Payment will not be made for rejected products for any of the following reasons:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from transporting vehicle.
 - 4. Products placed beyond lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

1.5 UNIT PRICES

- A. Authority: Measurement methods are delineated in **1.2 Measurement and Payment section.**
- B. Take measurements and compute quantities. Engineer will verify measurements and quantities.
- C. Unit Quantities: Quantities and measurements indicated on Bid Form are for Contract purposes only. Actual quantities provided shall determine payment.
 - 1. When actual Work requires more or fewer quantities than those quantities indicated, provide required quantities at contracted unit sum/prices.
 - 2. When actual Work requires 25 percent or greater change in quantity than those quantities indicated, Owner or Contractor may claim a Contract Price adjustment.
- D. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application, or installation of item of the Work; overhead and profit.
- E. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Engineer multiplied by unit sum/price for Work incorporated in or made necessary by the Work.
- F. Measurement of Quantities:

1. Weigh Scales: Inspected, tested, and certified by applicable State weights and measures department within past year.
2. Platform Scales: Of sufficient size and capacity to accommodate conveying vehicle.
3. Metering Devices: Inspected, tested, and certified by applicable State department within past year.
4. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel, or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
5. Measurement by Volume: Measured by cubic dimension using mean length, width, and height or thickness.
6. Measurement by Area: Measured by square dimension using mean length and width or radius.
7. Linear Measurement: Measured by linear dimension, at item centerline or mean chord.
8. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as completed item or unit of the Work.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 01 20 00

SECTION 01 22 20

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SCOPE

1. This section describes the method of measurement and basis of payment for all items of the work included in the Contract and indicated in the Bid Proposal. Provide all labor, material, tools, equipment, and services required to complete the Work included in the Contract Documents. Items described in the Specifications and indicated on the Drawings, but not shown in this specification section, are considered incidental to the Project.
2. Each bid item on the bid form includes all work items required to construct the work as shown on the drawings and indicated in the specifications, including those items not specifically stated below in this section.
3. From time to time, Contractors may receive written authorization to perform additions to or deletions from the Work, on a Unit Rate Price basis; the costs of Changes shall be calculated in accordance with the Unit Rate Pricing or "Add/Deduct" indicated on this Bid Form.

Unless otherwise noted, each Unit Rate Price includes all direct and indirect costs for labor, equipment, transportation, testing services, general work expenses, applicable taxes, overhead, and other costs required to complete the work.

- a) The all-inclusive Unit Rate Prices are fixed for the duration of this Contract, and not subject to escalation.
- b) The Unit Rate Prices shall include all Work the Contractor is required to perform without regard to the quantities involved, difficulty in performing the Work, materials or equipment required, and specific handling of materials and equipment.
- c) All Unit Rate Prices shall apply at 100% of their value for both additions and deletions to the Scope of Work, unless mutually agreed to otherwise in accordance with the Contract Documents.

1.2 UNIT PRICE – MEASUREMENT AND PAYMENT

1. Section 01 20 00 – Price and Payment Procedures Contract Sum/Price.
2. Pavement Removal
 - a) Basis of Measurement: By the unit price bid per square yard as stated in the proposal.
 - b) Basis of Payment: Includes all associated labor, material, and equipment for saw cutting, removal, and disposal of asphalt pavement.
3. Removal of Safety Surfacing
 - a) Basis of Measurement: By the unit price bid per square yard as stated in the proposal.
 - b) Basis of Payment: Installs all the associated labor, material, and equipment for complete removal of existing fiber mulch and wear mats including all excavation required to prepare area for installation of new safety surface.

4. Removal of Playground Equipment
 - a) Basis of Measurement: By the unit price bid per lump sum as stated in the proposal.
 - b) Basis of Payment: Includes all associated labor, materials, and equipment required to remove and dispose of existing playground equipment at West Willow Neighborhood Park.

5. Relocate Existing Bench
 - a) Basis of Measurement: By the unit price per each as stated in the proposal.
 - b) Basis of Payment: Includes all associated labor, materials, and equipment needed to relocated existing benches, including excavation for concrete posts. Existing benches are to be reused and mounted beneath the surface.

6. Playground Curb
 - a) Basis of Measurement: By the unit price per linear foot as stated in the proposal.
 - b) Basis of Payment: Included all associated labor, materials, and equipment needed to install curb around play area. This includes required excavation, granular base.

7. Gravel Walk
 - a) Basis of Measurement: By the unit price of square yard as stated in the proposal.
 - b) Basis of Payment: Includes all associated labor, material, equipment, supplying to the site, preparing the base, placing, and compacting with the plan details for installation of 2" gravel fines.

8. Play Equipment, West Willow, Supply & Installation
 - a) Basis of Measurement: By the unit price of lump sum as stated in the proposal.
 - b) Basis of Payment: Includes all associated labor, material, and equipment required for a complete installation of play equipment as laid out in the plan details.

9. Safety Surfacing
 - a) Basis of Measurement: By the unit price of square yard as stated in the proposal.
 - b) Basis of Payment: Includes associated all labor, materials, and equipment needed to install safety surfacing including engineered wood fiber, wear pads, geotextile fiber, and peastone as needed.

10. Aggregate Base, _ inch:
 - a) Basis of Measurement: at the unit price per square yard as stated in the proposal.
 - b) Basis of Payment: Includes all associated labor, material, and equipment for providing, hauling, placing, compacting, and shaping the material, and providing water for compaction.

11. HMA, __:
 - a) Basis of Measurement: At the unit price per ton as stated in the proposal.
 - b) Basis of Payment: Includes all associated labor, material, equipment, saw cutting, mix design, supplying to site, preparing base, testing, tack coating surfaces, placing, compacting, and rolling in accordance with the plan details for a complete installation.

12. Sidewalk, _ inch:
 - a) Basis od Measurement: At the unit price per square foot as stated in the proposal.
 - b) Basis of Payment: Includes all associated labor, material, equipment needed to install sidewalk, including granular base material at depth specified on plans.

13. Restoration:
 - a) Basis of Measurement: By the unit price bid per square yard as stated in the proposal.
 - b) Basis of Payment: Includes all excavation, labor, materials, fertilizer, mulch, landscape, grading, topsoil, subsoil, seeding, watering, and maintenance to provide uniform grass growth and any re-seeding and erosion repair to provide for a uniform growth at the completion of the project.

14. Soil Erosion and Sedimentation Control
 - a) Basis of Measurement: Included in the lump sum price bid as stated in the Proposal.
 - b) Basis of Payment: Includes all associated labor, material, and equipment, permit fees, etc. required for soil erosion prevention and sedimentation control required for this project. Additional control measures shall be employed as required by site conditions and applicable enforcing agency having project jurisdiction at no additional cost.

15. Mobilization, Max 5%
 - a) Basis of Measurement: Included in the lump sum price bid as stated in the proposal.
 - b) Basis of Payment: This work consists of preparatory work and operations including, but not limited to, the following:
 - a. The movement of personnel, equipment, supplies, and incidental to the project site
 - b. Establishment of the contractor's offices, buildings, and other facilities to support work on the project including associated job sites posters.
 - c. Other work and operations the contractor must perform.
 - d. Expenses incurred, before beginning work on pay items at the project site.
 - e. Pre-construction costs, exclusive of bidding costs, that are necessary direct costs to the project rather than directly attributable to other pay items under contract.
 - f. Payment shall be in accordance with MDOT Standard Specifications of Construction Table 150-1.

END OF SECTION 01 22 20

SECTION 01 25 00
SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance.
- B. Product options.
- C. Product substitution procedures.

1.2 QUALITY ASSURANCE

- A. Contract is based on products and standards established in Contract Documents without consideration of proposed substitutions.
- B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.
- C. Substitution Proposals: Permitted for specified products except where specified otherwise. Do not substitute products unless substitution has been accepted and approved in writing by Owner.

1.3 PRODUCT OPTIONS

- A. See Section 01 60 00 - Product Requirements.

1.4 PRODUCT SUBSTITUTION PROCEDURES

- A. Engineer will consider requests for substitutions only within 15 days after date of Owner-Contractor Agreement.
- B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.
- C. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:
 - 1. Manufacturer's name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.
 - 2. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
 - 3. Reference to Article and Paragraph numbers in Specification Section.

4. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
5. Changes required in other Work.
6. Availability of maintenance service and source of replacement parts as applicable.
7. Certified test data to show compliance with performance characteristics specified.
8. Samples when applicable or requested.
9. Other information as necessary to assist Engineer's evaluation.

D. A request constitutes a representation that Contractor:

1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
2. Will provide same warranty for substitution as for specified product.
3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
4. Waives claims for additional costs or time extension that may subsequently become apparent.
5. Will coordinate installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
6. Will reimburse Owner for review or redesign services associated with reapproval by authorities having jurisdiction.

E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals without separate written request or when acceptance will require revision to Contract Documents.

F. Substitution Submittal Procedure:

1. Submit requests for substitutions on CSI Form 13.1A Substitution Request-After the Bidding/Negotiating Stage.
2. Submit, via email, a file in PDF format of Request for Substitution for consideration. Limit each request to one proposed substitution.
3. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
4. Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 01 25 00

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Coordination and Project conditions.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Closeout meeting.

1.2 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of various Sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Verify that utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing operating equipment in service.
- C. Coordination Meetings: In addition to other meetings specified in this Section, hold coordination meetings with personnel and Subcontractors to ensure coordination of Work.
- D. Coordinate completion and clean-up of Work of separate Sections in preparation for Substantial Completion.
- E. After Owner's occupancy of premises, coordinate access to Site for correction of defective Work and Work not complying with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

- A. Engineer will schedule and preside over meeting after Notice of Award.
- B. Attendance Required: Engineer, Owner, major Subcontractors, and Contractor.
- C. Minimum Agenda:
 - 1. Submission of executed bonds and insurance certificates.
 - 2. Distribution of Contract Documents.
 - 3. Submission of list of Subcontractors, list of products, schedule of values, and Progress Schedule.
 - 4. Designation of personnel representing parties in Contract and Engineer.

5. Communication procedures.
6. Procedures and processing of requests for interpretations, field decisions, field orders, submittals, substitutions, Applications for Payments, proposal request, Change Orders, and Contract closeout procedures.
7. Scheduling.
8. Critical Work sequencing.

- D. Engineer: Record minutes and distribute copies to participants within two days after meeting, with two copies each to Contractor, Owner, and those affected by decisions made.

1.4 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B. Engineer will make arrangements for meetings, prepare agenda with copies for participants, and preside over meetings.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, and Engineer, as appropriate to agenda topics for each meeting.
- D. Minimum Agenda:
 1. Review minutes of previous meetings.
 2. Review of Work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems impeding planned progress.
 5. Review of submittal schedule and status of submittals.
 6. Review of off-Site fabrication and delivery schedules.
 7. Maintenance of Progress Schedule.
 8. Corrective measures to regain projected schedules.
 9. Planned progress during succeeding work period.
 10. Coordination of projected progress.
 11. Maintenance of quality and work standards.
 12. Effect of proposed changes on Progress Schedule and coordination.
 13. Other business relating to Work.
- E. Engineer: Record minutes and distribute copies to participants within two days after meeting, with two copies each to Contractor, Owner, and those affected by decisions made.

1.5 CLOSEOUT MEETING

- A. Schedule Project closeout meeting with sufficient time to prepare for requesting Substantial Completion. Preside over meeting and be responsible for minutes.
- B. Attendance Required: Contractor, major Subcontractors, Engineer, Owner, and others appropriate to agenda.
- C. Notify Engineer four days in advance of meeting date.

D. Minimum Agenda:

1. Contractor's inspection of Work.
2. Contractor's preparation of an initial "punch list."
3. Procedure to request Engineer inspection to determine date of Substantial Completion.
4. Completion time for correcting deficiencies.
5. Inspections by authorities having jurisdiction.
6. Final cleaning.
7. Preparation for final inspection.
8. Closeout Submittals:
9. Final Application for Payment.
10. Contractor's demobilization of Site.
11. Maintenance.

- E. Record minutes and distribute copies to participants within two days after meeting, with two copies each to Engineer, Owner, and those affected by decisions made.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION – Not Used

END OF SECTION 01 30 00

SECTION 01 32 16

CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Submittals.
- B. Review and evaluation.
- C. Updating schedules.
- D. Distribution.

1.2 SUBMITTALS

- A. Within 10 days after date of Owner-Contractor Agreement, submit proposed preliminary network diagram defining planned operations for first 60 days of Work, with general outline for remainder of Work.
- B. Participate in review of preliminary and complete network diagrams jointly with Engineer.
- C. Within 20 days after joint review of proposed preliminary network diagram, submit draft of proposed complete network diagram for review. Include written certification that major Subcontractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete network analysis consisting of network diagrams and mathematical analyses.
- E. Submit updated network schedules with each Application for Payment.
- F. Submit number of opaque reproductions Contractor requires, plus two copies Engineer will retain.
- G. Submit network schedules under transmittal letter form specified in Section 01 33 00 - Submittal Procedures.
- H. Schedule Updates:
 - 1. Overall percent complete, projected and actual.
 - 2. Completion progress by listed activity and subactivity, to within five working days prior to submittal.
 - 3. Changes in Work scope and activities modified since submittal.
 - 4. Delays in submittals or resubmittals, deliveries, or Work.
 - 5. Adjusted or modified sequences of Work.
 - 6. Other identifiable changes.
 - 7. Revised projections of progress and completion.

I. Narrative Progress Report:

1. Submit with each monthly submission of Progress Schedule.
2. Summary of Work completed during the past period between reports.
3. Work planned during the next period.
4. Explanation of differences between summary of Work completed and Work planned in previously submitted report.
5. Current and anticipated delaying factors and estimated impact on other activities and completion milestones.
6. Corrective action taken or proposed.

1.3 REVIEW AND EVALUATION

- A. Participate in joint review and evaluation of schedules with Engineer at each submittal.
- B. Evaluate Project status to determine Work behind schedule and Work ahead of schedule.
- C. After review, revise schedules incorporating results of review, and resubmit within 10 days.

1.4 UPDATING SCHEDULES

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Update schedules to depict current status of Work.
- C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- D. Upon approval of a Change Order, include the change in the next schedule submittal.
- E. Indicate changes required to maintain Date of Substantial Completion.
- F. Submit sorts as required to support recommended changes.
- G. Prepare narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken or proposed and its effect.

1.5 DISTRIBUTION

- A. Following joint review, distribute copies of updated schedules to Contractor's Project site file, to Subcontractors, suppliers, Engineer, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 01 32 16

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Definitions.
- B. Submittal procedures.
- C. Construction progress schedules.
- D. Proposed product list.
- E. Product data.
- F. Use of electronic CAD files of Project Drawings.
- G. Shop Drawings.
- H. Samples.
- I. Other submittals.
- J. Test reports.
- K. Certificates.
- L. Manufacturer's instructions.
- M. Manufacturer's field reports.
- N. Erection Drawings.
- O. Contractor review.
- P. Engineer review.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action.
- B. Informational Submittals: Written and graphic information and physical Samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

- A. Transmit each submittal with CSI Form 12.1A - Submittal Transmittal.
- B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
- C. Identify: Project, Contractor, Subcontractor and supplier, pertinent Drawing and detail number, and Specification Section number appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite Project, and submit electronic submittals via email as PDF electronic files. Coordinate submission of related items.
- F. For each submittal for review, allow 15 days excluding delivery time to and from Contractor.
- G. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.
- H. Allow space on submittals for Contractor and Engineer review stamps.
- I. When revised for resubmission, identify changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- K. Submittals not requested will not be recognized nor processed.
- L. Incomplete Submittals: Engineer will not review. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Engineer.

1.4 CONSTRUCTION PROGRESS SCHEDULES

- A. Comply with Section 01 32 16 - Construction Progress Schedule

1.5 PROPOSED PRODUCT LIST

- A. Within 15 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, indicate manufacturer, trade name, model or catalog designation, and reference standards.

1.6 PRODUCT DATA

- A. Product Data: Action Submittal: Submit to Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Submit electronic submittals via email as PDF electronic files.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.7 ELECTRONIC CAD FILES OF PROJECT DRAWINGS

- A. Electronic CAD Files of Project Drawings: May only be used to expedite production of Shop Drawings for the Project. Use for other Projects or purposes is not allowed.
- B. Electronic CAD Files of Project Drawings: Distributed only under the following conditions:
 - 1. Use of files is solely at receiver's risk. Engineer does not warrant accuracy of files. Receiving files in electronic form does not relieve receiver of responsibilities for measurements, dimensions, and quantities set forth in Contract Documents. In the event of ambiguity, discrepancy, or conflict between information on electronic media and that in Contract Documents, notify Engineer of discrepancy and use information in hard-copy Drawings and Specifications.
 - 2. CAD files do not necessarily represent the latest Contract Documents, existing conditions, and as-built conditions. Receiver is responsible for determining and complying with these conditions and for incorporating addenda and modifications.
 - 3. User is responsible for removing information not normally provided on Shop Drawings and removing references to Contract Documents. Shop Drawings submitted with information associated with other trades or with references to Contract Documents will not be reviewed and will be immediately returned.
 - 4. Receiver shall not hold Engineer responsible for data or file clean-up required to make files usable, nor for error or malfunction in translation, interpretation, or use of this electronic information.
 - 5. Receiver shall understand that even though Engineer has computer virus scanning software to detect presence of computer viruses, there is no guarantee that computer viruses are not present in files or in electronic media.
 - 6. Receiver shall not hold Engineer responsible for such viruses or their consequences, and shall hold Engineer harmless against costs, losses, or damage caused by presence of computer virus in files or media.

1.8 SHOP DRAWINGS

- A. Shop Drawings: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a professional Engineer responsible for designing components shown on Shop Drawings.
 - 1. Include signed and sealed calculations to support design.
 - 2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
 - 3. Make revisions and provide additional information when required by authorities having jurisdiction.
- D. Submit electronic submittals via email as PDF electronic files.
- E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.9 SAMPLES

- A. Samples: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Samples for Selection as Specified in Product Sections:
 - 1. Submit to Engineer for aesthetic, color, and finish selection.
 - 2. Submit Samples of finishes, textures, and patterns for Engineer selection.
- C. Submit Samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate Sample submittals for interfacing work.
- D. Include identification on each Sample, with full Project information.
- E. Submit number of Samples specified in individual Specification Sections; Engineer will retain one Sample.
- F. Reviewed Samples that may be used in the Work are indicated in individual Specification Sections.
- G. Samples will not be used for testing purposes unless specifically stated in Specification Section.
- H. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.10 OTHER SUBMITTALS

- A. Closeout Submittals: Comply with Section 01 70 00 - Execution and Closeout Requirements.
- B. Informational Submittal: Submit data for Engineer's knowledge as Contract administrator or for Owner.
- C. Submit information for assessing conformance with information given and design concept expressed in Contract Documents.

1.11 TEST REPORTS

- A. Informational Submittal: Submit reports for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit test reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.12 CERTIFICATES

- A. Informational Submittal: Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Engineer, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product but must be acceptable to Engineer.

1.13 MANUFACTURER'S INSTRUCTIONS

- A. Informational Submittal: Submit manufacturer's installation instructions for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, to Engineer in quantities specified for Product Data.
- C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.14 MANUFACTURER'S FIELD REPORTS

- A. Informational Submittal: Submit reports for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit report within 5 days of observation to Engineer for information.

- C. Submit reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.15 ERECTION DRAWINGS

- A. Informational Submittal: Submit Drawings for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit Drawings for information assessing conformance with information given and design concept expressed in Contract Documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by Engineer or Owner.

1.16 CONTRACTOR REVIEW

- A. Review for compliance with Contract Documents and approve submittals before transmitting to Engineer.
- B. Contractor: Responsible for:
 - 1. Determination and verification of materials including manufacturer's catalog numbers.
 - 2. Determination and verification of field measurements and field construction criteria.
 - 3. Checking and coordinating information in submittal with requirements of Work and of Contract Documents.
 - 4. Determination of accuracy and completeness of dimensions and quantities.
 - 5. Confirmation and coordination of dimensions and field conditions at Site.
 - 6. Construction means, techniques, sequences, and procedures.
 - 7. Safety precautions.
 - 8. Coordination and performance of Work of all trades.
- C. Stamp, sign or initial, and date each submittal to certify compliance with requirements of Contract Documents.
- D. Do not fabricate products or begin Work for which submittals are required until approved submittals have been received from Engineer.

1.17 ENGINEER REVIEW

- A. Do not make "mass submittals" to Engineer. "Mass submittals" are defined as six or more submittals or items in one day or 15 or more submittals or items in one week. If "mass submittals" are received, Engineer's review time stated above will be extended as necessary to perform proper review. Engineer will review "mass submittals" based on priority determined by Engineer after consultation with Owner and Contractor.
- B. Informational submittals and other similar data are for Engineer's information, do not require Engineer's responsive action, and will not be reviewed or returned with comment.

- C. Submittals made by Contractor that are not required by Contract Documents may be returned without action.
- D. Submittal approval does not authorize changes to Contract requirements unless accompanied by Change Order, Field Order, or Work Change Directive.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 01 33 00

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Quality control.
- B. Tolerances.
- C. References.
- D. Labeling.
- E. Mockup requirements.
- F. Testing and inspection services.
- G. Manufacturers' field services.

1.2 QUALITY CONTROL

- A. Monitor quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with specified standards as the minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- C. Perform Work using persons qualified to produce required and specified quality.
- D. Products, materials, and equipment may be subject to inspection by Engineer and Owner at place of manufacture or fabrication. Such inspections shall not relieve Contractor of complying with requirements of Contract Documents.
- E. Supervise performance of Work in such manner and by such means to ensure that Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.

1.3 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

- B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When such tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current as of date of Contract Documents except where specific date is established by code.
- C. Obtain copies of standards and maintain on Site when required by product Specification Sections.
- D. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
- E. Neither contractual relationships, duties, or responsibilities of parties in Contract nor those of Engineer shall be altered from Contract Documents by mention or inference in reference documents.

1.5 LABELING

- A. Attach label from agency approved by authorities having jurisdiction for products, assemblies, and systems required to be labeled by applicable code.
- B. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label:
 - 1. Model number.
 - 2. Serial number.
 - 3. Performance characteristics.
- C. Manufacturer's Nameplates, Trademarks, Logos, and Other Identifying Marks on Products: Not allowed on surfaces exposed to view in public areas, interior or exterior.

1.6 MOCK-UP REQUIREMENTS

- A. Tests will be performed under provisions identified in this Section and identified in individual product Specification Sections.
- B. Assemble and erect specified or indicated items with specified or indicated attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mockups shall be comparison standard for remaining Work.

- D. Where mockup has been accepted by Engineer and is specified in product Specification Sections to be removed, remove mockup and clear area when directed to do so by Engineer.

1.7 TESTING AND INSPECTION SERVICES

- A. Owner will employ and pay for specified services of an independent firm to perform testing and inspection.
- B. Independent firm will perform tests, inspections, and other services specified in individual Specification Sections and as required by authorities having jurisdiction.
 - 1. Laboratory: Authorized to operate in State of Michigan.
 - 2. Laboratory Staff: Maintain full-time Professional Engineer on staff to review services.
 - 3. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.
- C. Testing, inspections, and source quality control may occur on or off Project Site. Perform off-Site testing as required by Engineer or Owner.
- D. Reports shall be submitted by independent firm to Engineer, Contractor, and authorities having jurisdiction, in duplicate, indicating observations and results of tests and compliance or noncompliance with Contract Documents.
 - 1. Submit final report indicating correction of Work previously reported as noncompliant.
- E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Engineer and independent firm 48 hours before expected time for operations requiring services.
 - 2. Make arrangements with independent firm and pay for additional Samples and tests required for Contractor's use.
- F. Employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work according to requirements of Contract Documents.
- G. Retesting or re-inspection required because of nonconformance with specified or indicated requirements shall be performed by same independent firm on instructions from Engineer. Payment for retesting or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum/Price.
- H. Agency Responsibilities:
 - 1. Test Samples of mixes submitted by Contractor.
 - 2. Provide qualified personnel at Site. Cooperate with Engineer and Contractor in performance of services.
 - 3. Perform indicated sampling and testing of products according to specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 5. Promptly notify Engineer and Contractor of observed irregularities or nonconformance of Work or products.

6. Perform additional tests required by Engineer.
 7. Attend preconstruction meetings and progress meetings.
- I. Agency Reports: After each test, promptly submit two copies of report to Engineer, Contractor, and authorities having jurisdiction. When requested by Engineer, provide interpretation of test results. Include the following:
1. Date issued.
 2. Project title and number.
 3. Name of inspector.
 4. Date and time of sampling or inspection.
 5. Identification of product and Specification Section.
 6. Location in Project.
 7. Type of inspection or test.
 8. Date of test.
 9. Results of tests.
 10. Conformance with Contract Documents.
- J. Limits on Testing Authority:
1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency or laboratory may not approve or accept any portion of the Work.
 3. Agency or laboratory may not assume duties of Contractor.
 4. Agency or laboratory has no authority to stop the Work.

1.8 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual Specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe Site conditions, conditions of surfaces and installation, and quality of workmanship, as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Engineer 30 days in advance of required observations. Observer is subject to approval of Engineer.
- C. Report observations and Site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
- D. Refer to Section 01 33 00 - Submittal Procedures, "Manufacturer's Field Reports" Article.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 01 40 00

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities:
 - 1. Temporary electricity.
- B. Construction Facilities:
 - 1. Vehicular access.
 - 2. Parking.
 - 3. Progress cleaning and waste removal.
 - 4. Traffic regulation.
- C. Temporary Controls:
 - 1. Barriers.
 - 2. Enclosures and fencing.
 - 3. Security.
 - 4. Water control.
 - 5. Dust control.
 - 6. Erosion and sediment control.
 - 7. Noise control.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 2. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 - 3. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

1.3 TEMPORARY ELECTRICITY

- A. Provide and pay for power service required from utility source as needed for construction operation.
- B. Complement existing power service capacity and characteristics as required for construction operations.

1.4 PARKING

- A. If Site space is not adequate, provide additional off-Site parking.
- B. Permanent Pavements and Parking Facilities:
 - 1. Avoid traffic loading beyond paving design capacity. Tracked vehicles are not allowed.
- C. Maintenance:
 - 1. Maintain traffic and parking areas in sound condition free of excavated material, construction equipment, products, mud, snow, ice, and the like.
 - 2. Maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original condition.
- D. Mud from Site vehicles: Provide means of removing mud from vehicle wheels before entering streets.

1.5 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain Site in clean and orderly condition.
- B. Collect and remove waste materials, debris, and rubbish from Site periodically and dispose of off-Site.

1.6 TRAFFIC REGULATION

- A. Signs, Signals, and Devices:
 - 1. Post-Mounted and Wall-Mounted Traffic Control and Informational Signs: As approved by authorities having jurisdiction.
 - 2. Traffic Cones, Drums, Flares, and Lights: As approved by authorities having jurisdiction.
 - 3. Flag Person Equipment: As required by authorities having jurisdiction.
- B. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.
- C. Haul Routes:
 - 1. Consult with authorities having jurisdiction and establish public thoroughfares to be used for haul routes and Site access.
 - 2. Confine construction traffic to designated haul routes.
 - 3. Provide traffic control at critical areas of haul routes to regulate traffic and to minimize interference with public traffic.
- D. Traffic Signs and Signals:
 - 1. Provide signs at approaches to Site and on Site, at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.

2. Relocate signs and signals as Work progresses, to maintain effective traffic control.

E. Removal:

1. Remove equipment and devices when no longer required.
2. Repair damage caused by installation.
3. Remove post settings to depth of 2 feet.

1.7 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to allow for Owner's use of Site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Tree and Plant Protection: Preserve and protect existing trees and plants designated to remain.
 1. Protect areas within drip lines from traffic, parking, storage, dumping, chemically injurious materials and liquids, ponding, and continuous running water.
 2. Replace trees and plants damaged by construction operations.
- C. Protect non-owned vehicular traffic, stored materials, Site, and structures from damage.

1.8 ENCLOSURES AND FENCING

- A. Construction: Contractor's option.
- B. Exterior Enclosures: Contractor's option

1.9 SECURITY

- A. Security Program:
 1. Protect Work on existing premises from theft, vandalism, and unauthorized entry.

1.10 WATER CONTROL

- A. Grade Site to drain. Maintain excavations free of water. Provide, operate, and maintain necessary pumping equipment.

1.11 DUST CONTROL

- A. Execute Work by methods that minimize raising dust from construction operations.
- B. Provide positive means to prevent airborne dust from dispersing into atmosphere.

1.12 EROSION AND SEDIMENT CONTROL

- A. Plan and execute construction by methods to control surface drainage from cuts and fills from borrow and waste disposal areas. Prevent erosion and sedimentation.
- B. Minimize surface area of bare soil exposed at one time.
- C. Provide temporary measures including berms, dikes, drains, and other devices to prevent water flow.
- D. Construct fill and waste areas by selective placement to avoid erosive surface silts and clays.
- E. Periodically inspect earthwork to detect evidence of erosion and sedimentation. Promptly apply corrective measures.

1.13 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise produced by construction operations.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 01 50 00

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.

1.2 PRODUCTS

- A. At minimum, comply with specified requirements and reference standards.
- B. Specified products define standard of quality, type, function, dimension, appearance, and performance required.
- C. Furnish products of qualified manufacturers that are suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise. Confirm that manufacturer's production capacity can provide sufficient product, on time, to meet Project requirements.
- D. Do not use materials and equipment removed from existing premises except as specifically permitted by Contract Documents.
- E. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products according to manufacturer's instructions.
- B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products; use methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products according to manufacturer's instructions.

- B. Store products with seals and labels intact and legible.
- C. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable to product.
- D. For exterior storage of fabricated products, place products on sloped supports aboveground.
- E. Provide off-Site storage and protection when Site does not permit on-Site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products; use methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Products complying with specified reference standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and complying with Specifications; no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit Request for Substitution for any manufacturer not named, according to Section 01 25 00 - Substitution Procedures.

PART 2 - PRODUCTS – Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 01 60 00

SECTION 01 70 00

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Field engineering.
- B. Closeout procedures.
- C. Manual for equipment and systems.
- D. Product warranties and product bonds.
- E. Examination.
- F. Preparation.
- G. Execution.
- H. Protecting installed construction.
- I. Final cleaning.

1.2 FIELD ENGINEERING

- A. Owner will locate and Contractor shall protect survey control and reference points. Promptly notify Engineer of discrepancies discovered.
- B. Control datum for survey is indicated on Drawings.
- C. Verify setbacks and easements; confirm Drawing dimensions and elevations.
- D. Provide field engineering services. Establish elevations, lines, and levels using recognized engineering survey practices.
- E. Maintain complete and accurate log of control and survey Work as Work progresses.
- F. Protect survey control points prior to starting Site Work; preserve permanent reference points during construction.
- G. Promptly report to Engineer loss or destruction of reference point or relocation required because of changes in grades or other reasons.
- H. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.

1.3 CLOSEOUT PROCEDURES

- A. Prerequisites to Substantial Completion: Complete following items before requesting Certification of Substantial Completion, either for entire Work or for portions of Work:
1. Submit maintenance manuals, Project record documents, and other similar final record data in compliance with this Section.
 2. Complete facility startup, testing, adjusting, balancing of systems and equipment, demonstrations, and instructions to Owner's operating and maintenance personnel as specified in compliance with this Section.
 3. Conduct inspection to establish basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to be completed or corrected, value of incomplete or nonconforming Work, reason for being incomplete, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion.
 4. Obtain and submit releases enabling Owner's full, unrestricted use of Project and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases from authorities having jurisdiction and utility companies.
 5. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner.
 6. Discontinue or change over and remove temporary facilities and services from Project Site, along with construction tools, mockups, and similar elements.
 7. Perform final cleaning according to this Section.
- B. Substantial Completion Inspection:
1. When Contractor considers Work to be substantially complete, submit to Engineer:
 - a. Written certificate that Work, or designated portion, is substantially complete.
 - b. List of items to be completed or corrected (initial punch list).
 2. Within seven days after receipt of request for Substantial Completion, Engineer will make inspection to determine whether Work or designated portion is substantially complete.
 3. Should Engineer determine that Work is not substantially complete:
 - a. Engineer will promptly notify Contractor in writing, stating reasons for its opinion.
 - b. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Engineer.
 - c. Engineer will reinspect Work.
 - d. Redo and Inspection of Deficient Work: Repeated until Work passes Engineer's inspection.
 4. When Engineer finds that Work is substantially complete, Engineer will:
 - a. Prepare Certificate of Substantial Completion on EJCDC C-625 - Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected as verified and amended by Engineer and Owner (final punch list).
 - b. Submit Certificate to Owner and Contractor for their written acceptance of responsibilities assigned to them in Certificate.
 5. After Work is substantially complete, Contractor shall:

- a. Allow Owner occupancy of Project under provisions stated in Certificate of Substantial Completion.
 - b. Complete Work listed for completion or correction within time period stipulated.
- C. Prerequisites for Final Completion: Complete following items before requesting final acceptance and final payment.
 - 1. When Contractor considers Work to be complete, submit written certification that:
 - a. Contract Documents have been reviewed.
 - b. Work has been examined for compliance with Contract Documents.
 - c. Work has been completed according to Contract Documents.
 - d. Work is completed and ready for final inspection.
 - 2. Submittals: Submit following:
 - a. Final punch list indicating all items have been completed or corrected.
 - b. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 - c. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
 - d. Accounting statement for final changes to Contract Sum.
 - 3. Perform final cleaning for Contractor-soiled areas according to this Section.
- D. Final Completion Inspection:
 - 1. Within seven days after receipt of request for final inspection, Engineer will make inspection to determine whether Work or designated portion is complete.
 - 2. Should Engineer consider Work to be incomplete or defective:
 - a. Engineer will promptly notify Contractor in writing, listing incomplete or defective Work.
 - b. Contractor shall remedy stated deficiencies and send second written request to Engineer that Work is complete.
 - c. Engineer will reinspect Work.
 - d. Redo and Inspection of Deficient Work: Repeated until Work passes Engineer's inspection.

1.4 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one copy with comments.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

- C. Submit one copy of completed volumes before Substantial Completion. Draft copy will be reviewed and returned after Substantial Completion, with Engineer comments. Revise content of document sets as required prior to final submission.
- D. Submit in PDF composite electronic indexed file of final manual within ten days after final inspection.
- E. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

1.5 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed in duplicate by responsible Subcontractors, suppliers, and manufacturers within ten days after completion of applicable item of Work.
- B. Execute and assemble transferable warranty documents and bonds from Subcontractors, suppliers, and manufacturers.
- C. Verify documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required.
- E. Submit prior to final Application for Payment.
- F. Time of Submittals:
 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
 2. Make other submittals within ten days after date of Substantial Completion, prior to final Application for Payment.
 3. For items of Work for which acceptance is delayed beyond Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that existing Site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual Specification Sections.

- D. Verify that utility services are available with correct characteristics and in correct locations.

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance according to manufacturer's instructions.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer-required or -recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

3.3 EXECUTION

- A. Comply with manufacturer's installation instructions, performing each step in sequence. Maintain one set of manufacturer's installation instructions at Project Site during installation and until completion of construction.
- B. When manufacturer's installation instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Verify that field measurements are as indicated on approved Shop Drawings or as instructed by manufacturer.
- D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
 - 1. Secure Work true to line and level and within specified tolerances, or if not specified, industry-recognized tolerances.
 - 2. Physically separate products in place, provide electrical insulation, or provide protective coatings to prevent galvanic action or corrosion between dissimilar metals.
 - 3. Exposed Joints: Provide uniform joint width and arrange to obtain best visual effect. Refer questionable visual-effect choices to Engineer for final decision.
- E. Allow for expansion of materials and building movement.
- F. Climatic Conditions and Project Status: Install each unit of Work under conditions to ensure best possible results in coordination with entire Project.
 - 1. Isolate each unit of Work from incompatible Work as necessary to prevent deterioration.
 - 2. Coordinate enclosure of Work with required inspections and tests to minimize necessity of uncovering Work for those purposes.
- G. Mounting Heights: Where not indicated, mount individual units of Work at industry recognized standard mounting heights for particular application indicated.
 - 1. Refer questionable mounting heights choices to Engineer for final decision.
 - 2. Elements Identified as Accessible to Handicapped: Comply with applicable codes and regulations.

- H. Adjust operating products and equipment to ensure smooth and unhindered operation.
- I. Clean and perform maintenance on installed Work as frequently as necessary through remainder of construction period. Lubricate operable components as recommended by manufacturer.

3.4 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual Specification Sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate Work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Use durable sheet materials to protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

3.5 FINAL CLEANING

- A. Execute final cleaning prior to final Project assessment.
 - 1. Employ experienced personnel or professional cleaning firm.
- B. Clean Site; sweep paved areas, rake clean landscaped surfaces.
- C. Remove waste and surplus materials, rubbish, and construction facilities from Site.

END OF SECTION 01 70 00

SECTION 02 41 13
SITE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification sections, apply to this section.

1.2 SUMMARY

- A. Provide labor, materials, and equipment as necessary to complete work as indicated on the Drawings and specified herein.
- B. This section includes the removal of existing structures, fences, pavements, and other items indicated on the Drawings or specified, or both.
- C. Related sections include the following:
 - 1. Division 01 Section "General Requirements – Temporary Facilities and Controls."
 - 2. Division 31 Section "Site Clearing."
 - 3. Division 31 Section "Earthwork."

1.3 PROJECT CONDITIONS

- A. Do not close or obstruct streets, walks or other occupied or used facilities without permission from the Project Representative. Provide alternate routes around closed or obstructed traffic ways if required.

PART 2 - EXECUTION

2.1 PREPERATION

- A. Provide, erect, and maintain temporary barriers, and barricades to protect existing operations.
- B. Erect and maintain weatherproof closures for exterior openings, if applicable.
- C. Erect and maintain temporary partitions to prevent spread of dust, odors, and noise to permit continued Owner occupancy, if applicable.
- D. Protect existing materials and equipment which are not to be demolished.
- E. Prevent movement of structure; provide bracing and shoring.
- F. Notify affected utility companies before starting work and comply with their requirements.

- G. Mark locations and termination of utilities.
- H. Provide appropriate temporary signage including signage for exit of site egress.

2.2 DEMOLITION

- A. Disconnect, remove, cap, and identify designated utilities within demolition areas.
- B. Demolish in an orderly and careful manner. Protect existing structures and existing utilities designed to be left in service.
- C. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.
- D. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.
- E. Remove temporary Work.

2.3 REMOVAL OF PAVEMENTS

- A. Saw cut concrete curb and gutter and flatwork on nearest existing joint beyond area required to be removed as shown on the Drawings.
- B. Provide a minimum of 18 inches between the new gutter pan edge and the bituminous paving edge.

2.4 CLEANUP

- A. Contractor shall be responsible for disposing debris from demolition and salvage operations. Disposal of debris shall be done legally off the Owner's property, except that specifically requested for salvage by the Owner or Engineer. Burning of debris is not permitted.
- B. During demolition operations, keep dust to a minimum using appropriate methods.
- C. During demolition operations, access roads and adjacent concrete pathways shall be maintained broom clean. Roads shall be cleaned by using a pick-up type sweeper. A front-end tractor mounted sweeper is not permitted.
- D. The site shall be graded to provide surface drainage and shall be left in a clean condition.

END OF SECTION 02 41 13

SECTION 03 10 00

CONCRETE FORMING AND ACCESSORIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Formwork for cast-in-place concrete.
 - 2. Shoring, bracing, and anchorage.
 - 3. Form accessories.
 - 4. Form stripping.
- B. Related Sections:
 - 1. Section 03 30 00 - Cast-In-Place Concrete.

1.2 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 117 - Standard Specifications for Tolerances for Concrete Construction and Materials.
 - 2. ACI 301 - Specifications for Structural Concrete.
 - 3. ACI 318 - Building Code Requirements for Structural Concrete.
 - 4. ACI 347 - Guide to Formwork for Concrete.
- B. American Forest and Paper Association:
 - 1. AF&PA - National Design Specifications for Wood Construction.
- C. The Engineered Wood Association:
 - 1. APA/EWA PS 1 - Voluntary Product Standard for Construction and Industrial Plywood.
- D. ASTM International:
 - 1. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
 - 2. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials.
- E. West Coast Lumber Inspection Bureau:
 - 1. WCLIB - Standard Grading Rules for West Coast Lumber.
 - 2. Michigan Department of Transportation 2012 Standard Specifications for Construction.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 347.
- B. For wood products furnished for work of this Section, comply with AF&PA.
- C. Perform Work in accordance with State of Michigan Department of Transportation 2020 Standard Construction Specifications.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Products storage and handling requirements.
- B. Deliver void forms and installation instructions in manufacturer's packaging.
- C. Store off ground in ventilated and protected manner to prevent deterioration from moisture.

1.5 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Coordinate this Section with other sections of work, requiring attachment of components to formwork.

PART 2 PRODUCTS

2.1 WOOD FORM MATERIALS

- A. Plywood: Douglas Fir 5 ply species; solid one side grade; sound undamaged sheets with clean, true edges.
- B. Lumber Forms:
 - 1. Application: Use for edge forms and unexposed finish concrete.
 - 2. Boards: 6 inches or 8 inches in width, shiplapped or tongue and groove, "Pine species no. 2 grade with grade stamps clearly visible.
- C. Plywood Forms:
 - 1. Application: Use for exposed finish concrete.
 - 2. Forms: Conform to PS 1; full size 4 x 8 feet panels; each panel labeled with grade trademark of APA/EWA.
 - 3. Plywood for Surfaces to Receive Membrane Waterproofing: Minimum of 5/8 inch thick; APA/EWA "B-B Plyform Structural I Exterior" grade.
 - 4. Plywood where "Smooth Finish" is required, as indicated on Drawings: APA/EWA "HD Overlay Plyform Structural I Exterior" grade, minimum of 3/4 inch thick.

2.2 PREFABRICATED FORMS

- A. Glass Fiber Fabric Reinforced Plastic Forms: Matched, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished concrete surfaces.
- B. Tubular Column Type: Round, spirally wound laminated fiber material, surface treated with release agent, non-reusable, sizes as indicated on Drawings.
- C. Steel Forms: Sheet steel, suitably reinforced, and designed for particular use indicated on Drawings.

D. Form Liners: Smooth, durable, grainless and non-staining hardboard, unless otherwise indicated on Drawings.

E. Framing, Studding and Bracing: Stud or No. 3 structural light framing grade.

2.3 FORMWORK ACCESSORIES

A. Form Release Agent: Colorless material which will not stain concrete, absorb moisture or impair natural bonding or color characteristics of coating intended for use on concrete; manufactured by W.R. Meadows, or equal.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify lines, levels, and centers before proceeding with formwork. Verify dimensions agree with Drawings.

C. When formwork is placed after reinforcement resulting in insufficient concrete cover over reinforcement before proceeding, request instructions from Engineer.

3.2 INSTALLATION

A. Earth Forms: Not allowed.

B. Formwork - General:

1. Provide top form for sloped surfaces steeper than 1.5 horizontal to 1 vertical to hold shape of concrete during placement, unless it can be demonstrated that top forms can be omitted.
2. Construct forms to correct shape and dimensions, mortar-tight, braced, and of sufficient strength to maintain shape and position under imposed loads from construction operations.
3. Camber forms where necessary to produce level finished soffits unless otherwise shown on Drawings.
4. Carefully verify horizontal and vertical positions of forms. Correct misaligned or misplaced forms before placing concrete.
5. Complete wedging and bracing before placing concrete.

C. Forms for Smooth Finish Concrete:

1. Use steel, plywood or lined board forms.
2. Use clean and smooth plywood and form liners, uniform in size, and free from surface and edge damage capable of affecting resulting concrete finish.
3. Install form lining with close-fitting square joints between separate sheets without springing into place.
4. Use full size sheets of form lines and plywood wherever possible.
5. Tape joints to prevent protrusions in concrete.
6. Use care in forming and stripping wood forms to protect corners and edges.
7. Level and continue horizontal joints.

8. Keep wood forms wet until stripped.

D. Framing, Studding and Bracing:

1. Space studs at 16 inches on center maximum for boards and 12 inches on center maximum for plywood.
2. Size framing, bracing, centering, and supporting members with sufficient strength to maintain shape and position under imposed loads from construction operations.
3. Construct beam soffits of material minimum of 2 inches thick.
4. Distribute bracing loads over base area on which bracing is erected.
5. When placed on ground, protect against undermining, settlement or accidental impact.

E. Erect formwork, shoring, and bracing to achieve design requirements, in accordance with requirements of ACI 301 and MDOT Standard Construction Specifications.

F. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.

G. Obtain Engineer's approval before framing openings in structural members not indicated on Drawings.

H. Install void forms in accordance with manufacturer's recommendations.

3.3 APPLICATION - FORM RELEASE AGENT

A. Apply form release agent on formwork in accordance with manufacturer's recommendations.

B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.

C. Do not apply form release agent where concrete surfaces are indicated to receive special finishes that are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

D. Reuse and Coating of Forms: Thoroughly clean forms and reapply form coating before each reuse. For exposed work, do not reuse forms with damaged faces or edges. Apply form coating to forms in accordance with manufacturer's specifications. Do not coat forms for concrete indicated to receive "scored finish". Apply form coatings before placing reinforcing steel.

3.4 INSTALLATION - INSERTS, EMBEDDED PARTS, AND OPENINGS

A. Install formed openings for items to be embedded in or passing through concrete work.

B. Locate and set in place items required to be cast directly into concrete.

C. Coordinate with Work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other Work.

D. Install accessories straight, level, and plumb. Ensure items are not disturbed during concrete placement.

- E. Install water stops continuous without displacing reinforcement.
- F. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain.
- G. Close temporary openings with tight fitting panels, flush with inside face of forms, and neatly fitted so joints will not be apparent in exposed concrete surfaces.
- H. Form Ties:
 - 1. Use sufficient strength and sufficient quantity to prevent spreading of forms.
 - 2. Place ties at least 1 inch away from finished surface of concrete.
 - 3. Leave inner rods in concrete when forms are stripped.
 - 4. Space form ties equidistant, symmetrical and aligned vertically and horizontally unless otherwise shown on Drawings.
- I. Arrangement: Arrange formwork to allow proper erection sequence and to permit form removal without damage to concrete.
- J. Construction Joints:
 - 1. Install surfaced pouring strip where construction joints intersect exposed surfaces to provide straight line at joints.
 - 2. Just prior to subsequent concrete placement, remove strip and tighten forms to conceal shrinkage.
 - 3. Show no overlapping of construction joints. Construct joints to present same appearance as butted plywood joints.
 - 4. Arrange joints in continuous line straight, true and sharp.
- K. Embedded Items:
 - 1. Make provisions for pipes, sleeves, anchors, inserts, reglets, anchor slots, nailers, water stops, and other features.
 - 2. Do not embed wood or uncoated aluminum in concrete.
 - 3. Obtain installation and setting information for embedded items furnished under other Specification sections.
 - 4. Securely anchor embedded items in correct location and alignment prior to placing concrete.
 - 5. Verify conduits and pipes, including those made of coated aluminum, meet requirements of ACI 318 for size and location limitations.
- L. Openings for Items Passing Through Concrete:
 - 1. Frame openings in concrete where indicated on Drawings. Establish exact locations, sizes, and other conditions required for openings and attachment of work specified under other sections.
 - 2. Coordinate work to avoid cutting and patching of concrete after placement.
 - 3. Perform cutting and repairing of concrete required as result of failure to provide required openings.
- M. Screeds:
 - 1. Set screeds and establish levels for tops of concrete slabs and levels for finish on slabs.
 - 2. Slope slabs to drain where required or as shown on Drawings.

3. Before depositing concrete, remove debris from space to be occupied by concrete and thoroughly wet forms. Remove freestanding water.

N. Screed Supports:

1. For concrete over waterproof membranes and vapor retarder membranes, use cradle, pad or base type screed supports which will not puncture membrane.
2. Staking through membrane is not be permitted.

O. Cleanouts and Access Panels:

1. Provide removable cleanout sections or access panels at bottoms of forms to permit inspection and effective cleaning of loose dirt, debris and waste material.
2. Clean forms and surfaces against which concrete is to be placed. Remove chips, saw dust and other debris. Thoroughly blow out forms with compressed air just before concrete is placed.

3.5 FORM CLEANING

- A. Clean forms as erection proceeds, to remove foreign matter within forms.
- B. Clean formed cavities of debris prior to placing concrete.
- C. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.
- D. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.

3.6 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads and removal has been approved by Engineer.
- B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.
- C. Store removed forms in manner that surfaces to be in contact with fresh concrete will not be damaged. Discard damaged forms.
- D. Leave forms in place for minimum number of days as specified in ACI 347.

3.7 ERECTION TOLERANCES

- A. Construct formwork to maintain tolerances required by ACI 301 and MDOT Standard Construction Specifications.
- B. Tolerances: Construct formwork to produce completed concrete surfaces within construction tolerances specified in ACI 117.

3.8 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements and 01 70 00 - Execution and Closeout Requirements:
Field inspecting, testing, adjusting, and balancing.
- B. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and items are secure.
- C. Notify Engineer after placement of reinforcing steel in forms, but prior to placing concrete.
- D. Schedule concrete placement to permit formwork inspection before placing concrete.

END OF SECTION 03 10 00

SECTION 03 20 00
CONCRETE REINFORCING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Reinforcing bars.
 - 2. Welded wire fabric.
 - 3. Reinforcement accessories.
- B. Related Requirements:
 - 1. Section 03 10 00 - Concrete Forming and Accessories.
 - 2. Section 03 30 00 - Cast-in-Place Concrete.

1.2 REFERENCE STANDARDS

- A. American Concrete Institute:
 - 1. ACI 301 - Specifications for Structural Concrete.
 - 2. ACI 318 - Building Code Requirements for Structural Concrete.
 - 3. ACI 530/530.1 - Building Code Requirements and Specification for Masonry Structures.
 - 4. ACI SP-66 - ACI Detailing Manual.
- B. American Welding Society:
- C. AWS D1.4 - Structural Welding Code - Reinforcing Steel.
- D. ASTM International:
 - 1. ASTM A184 - Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement.
 - 2. ASTM A615 - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
 - 3. ASTM A704 - Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement.
 - 4. ASTM A706 - Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement.
 - 5. ASTM A767 - Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement.
 - 6. ASTM A775 - Standard Specification for Epoxy-Coated Steel Reinforcing Bars.
 - 7. ASTM A884 - Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement.
 - 8. ASTM A934 - Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars.ASTM
 - 9. A996 - Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement.

10. ASTM A1064 - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.

- E. Concrete Reinforcing Steel Institute:
1. CRSI 10-MSP - Manual of Standard Practice.
 2. CRSI 10PLACE - Placing Reinforcing Bars.

1.3 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.
- B. Coordinate Work of this Section with placement of formwork, formed openings, and other Work.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Shop Drawings:
1. Indicate bar sizes, spacings, locations, splice locations, and quantities of reinforcing steel and welded wire fabric.
 2. Indicate bending and cutting schedules.
 3. Indicate supporting and spacing devices.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- D. Submit certified copies of mill test report of reinforcement materials analysis.
- E. Welder Certificates: Certify welders and welding procedures employed on Work, verifying AWS qualification within previous 12 months.
- F. Qualifications Statement:
1. Welders: Qualify procedures and personnel according to AWS D1.1.

1.5 QUALITY ASSURANCE

- A. Perform Work according to CRSI 10-MSP.
- B. Prepare Shop Drawings according to ACI SP-66.
- C. Perform Work according to State of Michigan and local municipal standards.

1.6 QUALIFICATIONS

- A. Welders: AWS qualified within previous 12 months for employed weld types.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

- B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
- C. Store materials according to manufacturer instructions.
- D. Protection:
 - 1. Protect materials from moisture by storing in clean, dry location remote from construction operations areas.
 - 2. Provide additional protection according to manufacturer instructions.

1.8 EXISTING CONDITIONS

- A. Field Measurements:
 - 1. Verify field measurements prior to fabrication.
 - 2. Indicate field measurements on Shop Drawings.

PART 2 PRODUCTS

2.1 REINFORCEMENT

- A. Reinforcing Steel:
 - 1. Comply with ASTM A615.
 - 2. Yield Strength: 60 ksi.
 - 3. Billet Bars: Plain.
 - 4. Finish: Uncoated.
- B. Welded Plain Wire Fabric:
 - 1. Comply with ASTM A1064.
 - 2. Configuration: Flat sheets.
 - 3. Finish: Uncoated.

2.2 FABRICATION

- A. Fabricate concrete reinforcement according to CRSI 10-MSP.
- B. Form standard hooks for 180-degree bends , 90-degree bends , stirrups and tie hooks , and seismic hooks as indicated on Drawings.
- C. Form reinforcement bends with minimum diameters according to ACI 318.
- D. Fabricate column reinforcement with offset bends at reinforcement splices.
- E. Form spiral column reinforcement from minimum 3/8-inch-diameter continuous plain bar or wire.
- F. Form ties and stirrups from following:
 - 1. Bars No. 10 and Smaller: No. 3 deformed bars.
 - 2. Bars No. 11 and Larger: No. 4 deformed bars.
- G. Weld reinforcement according to AWS D1.4.

- H. Galvanized and Epoxy-Coated Reinforcement: Clean surfaces, weld, and re-protect welded joint according to CRSI 10PLACE.
- I. Splicing:
 - 1. If not indicated on Drawings, locate reinforcement splices at point of minimum stress.
 - 2. Obtain approval of splice locations from Engineer.

2.3 SHOP FINISHING

- A. Galvanized Finish for Steel Bars:
 - 1. Comply with ASTM A767 , Class II.
 - 2. Hot-dip galvanized after fabrication.
- B. Epoxy-Coated Finish for Steel Bars: Comply with ASTM A775.
- C. Epoxy-Coated Finish for Steel Wire: Comply with ASTM A884, Class A.

2.4 ACCESSORY MATERIALS

- A. Tie Wire:
 - 1. Minimum 16 gage, annealed type.
- B. Chairs, Bolsters, Bar Supports, and Spacers:
 - 1. Size and Shape: To strengthen and support reinforcement during concrete placement conditions.
 - 2. Furnish load-bearing pad on bottom to prevent vapor retarder puncture.
- C. Special Chairs, Bolsters, Bar Supports, and Spacers Adjacent to Weather-Exposed Concrete Surfaces:
 - 1. Material: Plastic coated steel.
 - 2. Size and Shape: To meet Project conditions.
- D. Reinforcing Splicing Devices:
 - 1. Type: Mechanical threaded; full tension and compression.
 - 2. Size: To fit joined reinforcing.
 - 3. Manufacturers:
 - a. ERICO International Corporation.
 - b. Substitutions: Section 01 60 00 - Product Requirements.
- E. Epoxy Coating Patching Material: Type as recommended by coating manufacturer.

2.5 SOURCE QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Requirements for testing, inspection, and analysis.
- B. Owner Inspection:
 - 1. Make completed concrete reinforcing available for inspection at manufacturer's factory prior to packaging for shipment.

2. Notify Owner at least seven days before inspection is allowed.
- C. Owner Witnessing:
1. Allow witnessing of factory inspections and test at manufacturer's test facility.
 2. Notify Owner at least seven days before inspections and tests are scheduled.
- D. Certificate of Compliance:
1. If fabricator is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at fabricator's facility conforms to Contract Documents.
 2. Specified shop tests are not required for Work performed by approved fabricator.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Place, support, and secure reinforcement against displacement.
- B. Do not deviate from required position beyond specified tolerance.
- C. Do not weld crossing reinforcement bars for assembly except as permitted by Engineer.
- D. Do not displace or damage vapor retarder.
- E. Accommodate placement of formed openings.
- F. Spacing:
 1. Space reinforcement bars with minimum clear spacing according to ACI 318.
 2. If bars are indicated in multiple layers, place upper bars directly above lower bars.
- G. Maintain concrete cover around reinforcement according to ACI 318 as follows:

REINFORCEMENT LOCATION		MINIMUM CONCRETE COVER
Footings and Concrete Formed against Earth		3 Inches
Concrete Exposed to Earth or Weather	No. 6 Bars and Larger	2 Inches
	No. 5 Bars and Smaller	1-1/2 Inches
Supported Slabs, Walls, and Joists	No. 14 Bars and Larger	1-1/2 Inches
	No. 11 Bars and Smaller	3/4 Inch
Beams and Columns		1-1/2 Inches
Shell and Folded Plate Members	No. 6 Bars and Larger	3/4 Inch
	No. 5 Bars and Smaller	1/2 Inch

- H. Splice reinforcing where indicated on Drawings according to manufacturer's instructions.

3.2 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Requirements for tolerances.

- B. Install reinforcement within following tolerances for flexural members, walls, and compression members:

REINFORCEMENT DEPTH	DEPTH TOLERANCE	CONCRETE COVER TOLERANCE
Greater than 8 Inches	Plus or Minus 3/8 Inch	Minus 3/8 Inch
Less than 8 Inches	Plus or Minus 1/2 Inch	Minus 1/2 Inch

- C. Foundation Walls: Install reinforcement within tolerances according to ACI 530/530.1.

3.3 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Requirements for inspecting and testing.
- B. Perform field inspection and testing according to ACI 318.
- C. Provide unrestricted access to Work and cooperate with appointed inspection and testing firm.
- D. Reinforcement Inspection:
1. Placement Acceptance: Inspect specified and ACI 318 material requirements and specified placement tolerances.
 2. Welding: Inspect welds according to AWS D1.1.
 3. Periodic Placement Inspection: Inspect for correct materials, fabrication, sizes, locations, spacing, concrete cover, and splicing.
 4. Weldability Inspection: Inspect for reinforcement weldability if formed from steel other than ASTM A706.
 5. Continuous Weld Inspection: Inspect reinforcement according to ACI 318.
 6. Periodic Weld Inspection: Inspect other welded connections.

END OF SECTION 03 20 00

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes cast-in-place concrete for the following:
 - 1. Slabs on grade.
 - 2. Equipment pads.
- B. Related Sections:
 - 1. Section 03 10 00 - Concrete Forming and Accessories.

1.2 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 301 - Specifications for Structural Concrete.
 - 2. ACI 305 - Hot Weather Concreting.
 - 3. ACI 306.1 - Standard Specification for Cold Weather Concreting.
 - 4. ACI 308.1 - Standard Specification for Curing Concrete.
 - 5. ACI 318 - Building Code Requirements for Structural Concrete.
- B. ASTM International:
 - 1. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - 2. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
 - 3. ASTM C33 - Standard Specification for Concrete Aggregates.
 - 4. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 - 5. ASTM C42/C42M - Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
 - 6. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.
 - 7. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic Cement Concrete.
 - 8. ASTM C150 - Standard Specification for Portland Cement.
 - 9. ASTM C172 - Standard Practice for Sampling Freshly Mixed Concrete.
 - 10. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
 - 11. ASTM C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
 - 12. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
 - 13. ASTM C330 - Standard Specification for Lightweight Aggregates for Structural Concrete.
 - 14. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete.
 - 15. ASTM C595 - Standard Specification for Blended Hydraulic Cements.
 - 16. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete.

17. ASTM C685/C685M - Standard Specification for Concrete Made By Volumetric Batching and Continuous Mixing.
18. ASTM C845 - Standard Specification for Expansive Hydraulic Cement.
19. ASTM C989 - Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars.
20. ASTM C1017/C1017M - Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete.
21. ASTM C1064/C1064M - Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete.
22. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
23. ASTM C1116 - Standard Specification for Fiber-Reinforced Concrete and Shotcrete.
24. ASTM C1157 - Standard Performance Specification for Hydraulic Cement.
25. ASTM C1218/C1218M - Standard Test Method for Water-Soluble Chloride in Mortar and Concrete.
26. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures.
27. ASTM D994 - Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
28. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
29. ASTM D1752 - Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
30. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
31. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials.
32. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
33. ASTM E1643 - Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs.
34. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.

- C. Michigan Department of Transportation:
1. 2020 Standard Specifications for Construction.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data on joint devices, attachment accessories, admixtures, and mix design.
- C. Design Data:
1. Submit concrete mix design for each concrete strength.
 2. Submit separate mix designs if admixtures are required for following:
 - a. Hot and cold weather concrete Work.
 - b. Air entrained concrete Work.
 3. Identify mix ingredients and proportions, including admixtures.
 4. Identify chloride content of admixtures and whether or not chlorides were added during manufacture.

- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Manufacturer Instructions: Submit installation procedures and interfacing required with adjacent work.
- F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

1.4 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Closeout procedures.
- B. Project Record Documents: Accurately record actual locations of embedded utilities and components concealed from view in finished construction.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 301.
- B. Conform to ACI 305 when concreting during hot weather.
- C. Conform to ACI 306.1 when concreting during cold weather.
- D. Acquire cement and aggregate from one source for Work.
- E. Perform Work in accordance with State of Michigan Department of Transportation Standard Specifications for Construction.
- F. Maintain one copy of each document on site.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.
- B. Maintain concrete temperature after installation at minimum 50 degrees F for minimum 7 days.
- C. Maintain high early strength concrete temperature after installation at minimum 50 degrees F for minimum 3 days.

1.7 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Coordinate placement of joint devices with erection of concrete formwork and placement of form accessories.

PART 2 PRODUCTS

2.1 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type IA - Air Entraining Portland type; in accordance with MDOT specifications for construction.
- B. Expansive Hydraulic Cement: ASTM C845.
- C. Coarse Aggregates: ASTM C33.
 - 1. In accordance with MDOT 6AA.
- D. Fine Aggregate: ASTM C33.
 - 1. In accordance with MDOT 2NS.
- E. Water: ACI 318; potable, without deleterious amounts of chloride ions.

2.2 ADMIXTURES

- A. Furnish materials according to State of MDOT standard specification for construction.
- B. Air Entrainment: ASTM C260.
- C. Chemical: ASTM C494/C494M.
 - 1. Type A - Water Reducing.
 - 2. Type B - Retarding.
 - 3. Type C - Accelerating.
 - 4. Type F - Water Reducing, High Range.
- D. Fly Ash: ASTM C618 Class C.
- E. Plasticizing: ASTM C1017/C1017M Type I, plasticizing.

2.3 ACCESSORIES

- A. Bonding Agent: Two component modified epoxy resin.
 - 1. Manufacturers:
 - a. Sikadur 32, Hi-Mod LV manufactured by Sika Corp; concessive 1001 LPL, 3007.
 - b. Substitutions: Or equal manufactured by structural bonding company.
- B. Non-Shrink Grout: ASTM C1107/C1107M; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,400 psi in 48 hours and 7,000 psi in 28 days.
 - 1. Manufacturers:
 - a. Five Star Grout as manufactured by U.S. Grout Company.
 - b. Or equal.
- C. Epoxy Adhesive: Two components epoxy resin adhesive; Sikadur 35, Hi-Mod LV manufactured by Sika Corporation, Glendale Hts., IL 708-924-7900.

- D. Adhesive Anchors: Hilti HVA adhesive anchoring system. Hilti adhesive anchors shall be comprised on an HEA capsule with an ASTM A193, Grade B & HAS stainless steel rod assembly with stainless steel ASTM F594 nuts and ANSI B 18.221 (1965), Type A, plain washers under the turned element. Install per manufacturer’s specifications.

2.4 JOINT DEVICES AND FILLER MATERIALS

- A. Joint Filler Type A: ASTM D1751; Asphalt impregnated fiberboard or felt, 1/4 to 1 inch thick; tongue and groove profile; manufactured by A.C.D. International or equal.
- B. Construction Joint Devices: ANSI/ASTM D1751 type; 1/4 inch to 1 inch thick, manufactured by A.C.D. International or equal.
- C. Expansion and Contraction Joint Devices: Supply materials in accordance with MDOT 2020 standard specifications for construction.
- D. Sealant: ASTM D6690, Type I; Son-No-Mar, manufactured by Sonneborn Building Products or equal.

2.5 CONCRETE MIX

- A. Select proportions for normal weight concrete in accordance with ACI 301 Method 2.
- B. Select proportions for concrete in accordance with ACI 318 without trial mixtures or field experience when approved by Engineer.
- C. Provide concrete to the following criteria:

Concrete Grade: MDOT P1/S2

Material and Property	Measurement
Flexural Strength (7 day)	550 psi
Flexural Strength (28 day)	650 psi
Compressive Strength (7 day)	2,600 psi
Compressive Strength (28 day)	3,500 psi
Cement Type	Type A or IA
Cement Content (minimum)	6.0 sacks
Coarse Aggregate Type	6AA
Coarse Aggregate	72 percent by bulk volume (Dry, loose)
Fine Aggregate	2NS
Air Content	6.5 percent plus or minus 1.5 percent
Slump	4 inches plus or minus 1 inch

- D. Admixtures: Include admixture types and quantities indicated in concrete mix designs only when approved by Engineer.
 - 1. Use accelerating admixtures in cold weather. Use of admixtures will not relax cold weather placement requirements.
 - 2. Do not use calcium chloride nor admixtures containing calcium chloride.
 - 3. Use set retarding admixtures during hot weather.
 - 4. Add air entrainment admixture to concrete mix for work exposed to freezing and thawing.
 - 5. For concrete exposed to deicing chemicals, limit fly ash, pozzolans, silica fume, and slag content as required by applicable ACI code.
- E. Average Compressive Strength Reduction: Permitted in accordance with ACI 318.
- F. Ready Mixed Concrete: Mix and deliver concrete in accordance with ASTM C94/C94M.
- G. Site Mixed Concrete: Mix concrete in accordance with ACI 318.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify requirements for concrete cover over reinforcement.
- C. Verify anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with placing concrete.

3.2 PREPARATION

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Remove laitance, coatings, and unsound materials.
- B. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.
- C. Remove debris and ice from formwork, reinforcement, and concrete substrates.
- D. Remove water from areas receiving concrete before concrete is placed.

3.3 PLACING CONCRETE

- A. Place concrete in accordance with ACI 301 and MDOT Standard Specifications for Construction.
- B. Notify testing laboratory and Engineer minimum 24 hours prior to commencement of operations.
- C. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints are not disturbed during concrete placement.

- D. Deposit concrete at final position. Prevent segregation of mix.
- E. Place concrete in continuous operation for each panel or section determined by predetermined joints.
- F. Consolidate concrete after placing by means of mechanical vibrators or other suitable tools approved by the Engineer.
- G. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- H. Place concrete continuously between predetermined expansion, control, and construction joints.
- I. Do not interrupt successive placement; do not permit cold joints to occur.
- J. Saw cut joints within 24 hours after placing. Use 3/16 inch thick blade, cut into 1/4 depth of slab thickness.
- K. Concrete transported in a truck mixer, agitator or other transportation device shall be discharged at the job within 1 1/2 hours after the cement has been added to the water or aggregates.
- L. When hand mixing is authorized, it shall be done on a watertight platform and in such a manner as to ensure a uniform distribution of the materials throughout the mass. Mixing shall continue until a homogeneous mixture of the required consistency is obtained.
- M. Retempering of partially hardened concrete or mortar will not be permitted.

3.4 CONCRETE FINISHING

- A. Formed Surfaces:
 - 1. As a minimum of formed surfaces shall receive a plain finish and rubbed finish.
 - 2. Plain Finish: Immediately after removal of forms, all fins and loose material shall be removed and all holes, voids, aggregate pockets and depressions shall be cut out to solid concrete. All such defective areas shall be cleaned and wetted thoroughly and immediately be brushed and net cement and filled with Portland Cement grout finished, flush with the adjacent surfaces. Patch work shall be damp cured for a period of 48 hours and, when exposed, it shall be finished to match adjacent surfaces.
 - 3. Rubbed Finish: All form marks and other such irregularities shall be removed by rubbing the surface with a Carborundum stone and water as soon as practical after form removal.
 - 4. Bagged Finish: All formed surfaces which are not earth backfilled shall receive a bagged finish. All air and water voids shall be finished flush with the wall surface. The wall shall first be moistened with water. Portland cement grout matching the color of the base concrete shall be worked into the voids using burlap or sponge rubber finishing pads.
- B. Unformed Surface Finishes
 - 1. Troweled Finish: After a floated finish, provide a smooth surface, free of defects with a steel trowel. Follow the first troweling with a second troweling after the concrete has hardened sufficiently to produce a ringing sound as the towel is moved over the surface. The

finish surface shall be essentially free of trowel marks, uniform in texture and appearance and shall be plane to 1/8" in 10 ft. tolerance.

2. Broomed Finish: After receiving the floated and troweled finishes, apply a broomed finish with a fiber-bristle brush in a direction transverse to the line of traffic.
 3. Floated Finish: Place, consolidate, strike off and level concrete. After the concrete has stiffened sufficiently, floating shall begin using a hard float, power trowel and float shoes or powered disc float. Cut down high spots and fill low spots to 1/4" in 10 ft. tolerance. Float to a uniform sandy texture.
 4. Scratched Finish: After the concrete has been placed consolidated, struck off and leveled to a 1/4" in 2 ft. tolerance, roughen with stiff brushes or rakes before the final set.
- C. Finish concrete floor surface in accordance with ACI 301.
- D. Provide a troweled finish for base slabs.
- E. Provide a floated finish for slabs as directed by the Engineer.
- F. Provide a broom finish for exterior slabs, sidewalks, pavements and where directed by the Engineer.
- G. Provide a scratched finish where concrete is specified to receive a subsequent concrete topping.
- H. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at one inch per 10 feet unless otherwise indicated on drawings.
- I. Maximum variation of surface flatness for exposed concrete floors 1/8 inch in 10 feet.

3.5 CURING AND PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- C. Cure concrete in accordance with MDOT Standard Specification for Construction.
- D. Membrane Curing Compound: Apply curing compound in accordance with manufacturer's instructions. Curing compound shall not contain any ingredients which might stain or otherwise injure the concrete or prevent a good bond for subsequent coatings or finishing's.

3.6 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Field inspection and testing will be performed by Owner's testing laboratory in accordance with MDOT Standard Specification for Construction.
- C. Provide free access to Work and cooperate with appointed firm.

- D. Submit proposed mix design of each class of concrete to Engineer for review prior to commencement of Work.
- E. Concrete Inspections:
 - 1. Continuous Placement Inspection: Inspect for proper installation procedures.
 - 2. Periodic Curing Inspection: Inspect for specified curing temperature and procedures.
- F. Strength Test Samples:
 - 1. Sampling Procedures: ASTM C172.
 - 2. Cylinder Molding and Curing Procedures: ASTM C31/C31M, cylinder specimens, standard cured.
 - 3. Sample concrete and make one set of three cylinders for every 75 cu yds or less of each class of concrete placed each day and for every 5,000 sf of surface area for slabs and walls.
 - 4. When volume of concrete for any class of concrete would provide less than 5 sets of cylinders, take samples from five randomly selected batches, or from every batch when less than 5 batches are used.
 - 5. Make one additional cylinder during cold weather concreting, and field cure.
- G. Field Testing:
 - 1. Slump Test Method: ASTM C143/C143M.
 - 2. Air Content Test Method: ASTM C231.
 - 3. Temperature Test Method: ASTM C1064/C1064M.
 - 4. Measure slump and temperature for each compressive strength concrete sample.
 - 5. Measure air content in air entrained concrete for each compressive strength concrete sample.
- H. Cylinder Compressive Strength Testing:
 - 1. Test Method: ASTM C39/C39M.
 - 2. Test Acceptance: In accordance with MDOT Standard Specification for Construction.
 - 3. Test one cylinder at 7 days.
 - 4. Test two cylinders at 28 days.
 - 5. Dispose remaining cylinders when testing is not required.
- I. Core Compressive Strength Testing:
 - 1. Sampling and Testing Procedures: ASTM C42/C42M.
 - 2. Test Acceptance: In accordance with MDOT Standard Specification for Construction.
 - 3. Drill three cores for each failed strength test from concrete represented by failed strength test.
- J. Maintain records of concrete placement. Record date, location, quantity, air temperature and test samples taken.

3.7 PATCHING

- A. Allow Engineer to inspect concrete surfaces immediately upon removal of forms.
- B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Engineer upon discovery.

- C. Patch imperfections as directed by Engineer in accordance with MDOT Standard Specification for Construction.

3.8 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by Engineer.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.

END OF SECTION 03 30 00

SECTION 03 39 00
CONCRETE CURING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes initial and final curing of horizontal and vertical concrete surfaces.
- B. Related Sections:
 - 1. Section 03 30 00 - Cast-In-Place Concrete.

1.2 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 301 - Specifications for Structural Concrete.
 - 2. ACI 302.1 - Guide for Concrete Floor and Slab Construction.
 - 3. ACI 308.1 - Standard Specification for Curing Concrete.
 - 4. ACI 318 - Building Code Requirements for Structural Concrete.
- B. ASTM International:
 - 1. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete.
 - 2. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
 - 3. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.
 - 4. ASTM D2103 - Standard Specification for Polyethylene Film and Sheeting.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit data on curing compounds, mats, paper, film, compatibilities, and limitations.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 301.
- B. Perform Work in accordance with State of Michigan and local municipal standards.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.
- B. Deliver curing materials in manufacturer's packaging including application instructions.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Membrane Curing Compound Type A: ASTM C309, Type 1, Class A.
- B. Water: Potable, not detrimental to concrete.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify substrate surfaces are ready to be cured.

3.2 INSTALLATION - HORIZONTAL SURFACES

- A. Cure concrete in accordance with ACI 308.1 using moisture curing or moisture-retaining-cover curing method.
- B. Spraying: Spray water over floor slab areas and maintain wet for 7 days.

3.3 INSTALLATION - VERTICAL SURFACES

- A. Cure concrete in accordance with ACI 308.1 using moisture curing or moisture-retaining-cover curing method.
- B. Spraying: Spray water over surfaces and maintain wet for 7 days.

3.4 PROTECTION OF FINISHED WORK

- A. Section 01 70 00 - Execution and Closeout Requirements: Protecting finished Work.
- B. Do not permit traffic over unprotected floor surface.

END OF SECTION 03 39 00

SECTION 11 68 13
PLAYGROUND EQUIPMENT

1 PART 1 GENERAL

1.1 SCOPE

- A. This section covers assembling and installing all playground equipment, age-appropriate signage, and edging as shown on the drawings and as herein specified and/or required for a complete job. The Work shall include all equipment, signage, installation, inspection and guaranties.

1.2 RELATED SECTIONS

- A. Section 01 30 00 – Submittals.
- B. Section 03 30 00 – Cast-In-Place Concrete.
- C. Section 32 18 16 – Playground Protective Surfacing.
- D. ASTM A123/A123M – (2017) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- E. ASTM A135/A135M – (2009; R2014) Standard Specification for Electric-Resistance-Welded Steel Pipe.
- F. ASTM A153/A153M – (2016) Standard Specification for Zinc Coating (Hot-Dip) Iron and Steel Hardware.
- G. ASTM A500/A500M – (2018) Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- H. ASTM A513/A513M – (2019) Standard Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing.
- I. ASTM B26/B26M – (2014; E 2015) Standard Specification for Aluminum-Alloy Sand Castings.
- J. ASTM B108/B108M – (2018) Standard Specification for Aluminum-Alloy Permanent Mold Castings.
- K. ASTM B117 – (2016) Standard Practice for Operating Salt Spray (Fog) Apparatus.
- L. ASTM B179 – (2017) Standard Specification for Aluminum Alloys in Ingot and Molten Forms for Castings from All Casting Processes.

- M. ASTM B221 - (2014) Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- N. ASTM B221M - (2013) Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric).
- O. ASTM D173/D173M - (2003; R 2011; E 2012) Bitumen-Saturated Cotton Fabrics Used in Roofing and Waterproofing.
- P. ASTM D822 - (2013) Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.
- Q. ASTM D1248 - (2016) Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable.
- R. ASTM D2454 - (2014) Determining the Effect of Overbaking on Organic Coatings.
- S. ASTM D2794 - (1993; R 2019) Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- T. ASTM D3359 - (2017) Standard Test Methods for Rating Adhesion by Tape Test.
- U. ASTM D3363 - (2005; E 2011; R 2011; E 2012) Film Hardness by Pencil Test.
- V. ASTM D6112 - (2013) Compressive and Flexural Creep and Creep-Rupture of Plastic Lumber and Shapes.
- W. ASTM F1487 - (2017) Standard Consumer Safety Performance Specification for Playground Equipment for Public Use
- X. ASTM F2373 - (2011) Standard Consumer Safety Performance Specification for Public Use Play Equipment for Children 6 Months through 23 Months.
- Y. CPSC Pub No 325 - (2015) Public Playground Safety Handbook.

1.3 SUBMITTALS

- A. Furnish complete installation product information for all equipment to the Owner's Representative for approval.
- B. At the completion of the project, the contractor must provide the Owner with:
 1. A written maintenance plan which describes in detail any and all requirements for maintenance and inspections.
 2. A maintenance kit containing at a minimum tool, touch-up paint, hardware and graffiti remover.

1.4 QUALITY ASSURANCE

- A. Installer: Must have a minimum of 5 years experience with a minimum of 10 sites.
 - 1. All proposed equipment will be IPEMA certified or show that it has been tested to meet all current safety standards.
- B. Installer: Must be certified by the manufacturer for training and experience installing the playground and must be CPSI Certified.

1.5 DELIVERY, STORAGE AND HANDLING

- A. All shipments shall include a packing list for each skid/container, specifying the part numbers and quantities on each skid or within each container.
- B. Play structure posts shall be individually packaged in sturdy, water-resistant, mar-resistant cardboard boxes. Other components shall be individually wrapped or bulk wrapped to provide protection during shipment. Small parts and hardware packages will be placed in crates for shipment. The components and crates are then shrink-wrapped to skids (pallets) to ensure secure shipping.
- C. All equipment is to remain packaged until delivered to the park site where it is to be installed.

1.6 WARRANTY

- A. Manufacturer shall offer the following warranties on the materials and components of its system:
- B. LIFETIME LIMITED WARRANTY ON SUPPORT POSTS (UPRIGHTS)
- C. 15 YEAR LIMITED WARRANTY ON PUNCHED STEEL DECKS, PIPES, RAILS, LOOPS AND RUNGS
- D. 15 YEAR LIMITED WARRANTY ON ROTOMOLDED POLYETHYLENE COMPONENTS
- E. LIFETIME LIMITED WARRANTY ON HARDWARE

2 PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Landscape Structures, represented by Penchura, LLC, 889 S. Old US23, Brighton, MI 48114, (888) 778-7529, www.penchura.com.

2.2 MATERIAL

- A. Material: All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all steel parts by the use of time-tested coatings such as zinc plating, galvanizing, ProShield finish, TenderTuff coating, etc.
- B. Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F879 unless otherwise indicated. All primary fasteners shall include a locking patch-type material that will meet the minimum torque requirements of IFI-125. Manufacturer to provide special tools for pinned tamperproof fasteners.
- C. TenderTuff Coating:
 - 1. Metal components to be TenderTuff-coated shall be thoroughly cleaned in a hot phosphatizing pressure washer, then primed with a water-based thermosetting solution.
 - 2. Primed parts shall be preheated prior to dipping in UV-stabilized, liquid polyvinyl chloride (PVC), then salt cured at approximately 400 degrees fahrenheit.
 - 3. The finished coating shall be approximately .080" thick at an 85 durometer with a minimum tensile strength of 1700 PSI and a minimum tear strength of 250 pounds/inch.
 - 4. Five standard colors are available all with a matte finish. Color: by Owner.
- D. ProShield Finish:
 - 1. All Metal components with ProShield finish shall be thoroughly cleaned and phosphatized through a five-stage power washer.
 - 2. Parts are then thoroughly dried, preheated and processed through a set of automatic power spray guns where a minimum 0.002" of epoxy primer is applied.
 - 3. A minimum .004" of architectural-grade Super-Durable polyester TGIC powder is applied.
 - 4. The average ProShield film thickness is .006".
 - 5. ProShield is formulated and tested per the following ASTM standards. Each color must meet or exceed the ratings listed below:
 - a. Hardness (D3363) rating 2H
 - b. Flexibility (D522) pass 1/8" mandrel
 - c. Impact (D2794) rating minimum 80 inch-pounds (9.038 newton meters)
 - d. Salt Fog Resistance (B117 and D1654) 4,000 hours and rating 6 or greater
 - e. UV Exposure (G154, 340 bulb) 3,000 hours, rating delta E of 2, and 90 percent gloss retention
 - f. Adhesion (D3359, Method B) rating 5B
 - g. The Paint Line shall employ a "checkered" adhesion test daily.
 - h. Standard Colors – Colors: by Owner.
- E. Decks:
 - 1. All decks shall be of modular design and have 5/16" diameter holes on the standing surface.

2. There shall be a minimum of (4) slots in each face to accommodate face mounting of components.
3. Decks shall be manufactured from a single piece of low carbon 12 GA (.105") sheet steel conforming to ASTM specification A-1011.
4. The sheet shall be perforated with a return flange on the perimeter to provide reinforcement to ensure structural integrity.
5. There shall be no unsupported area larger than 3.5 square feet.
6. Decks shall be designed so that all sides are flush with the outside edge of the supporting posts.
7. Decks shall be Tendertuff coated. Color: by Owner

F. Concrete Products:

1. Two processes are used to produce concrete products:
 - a. Glass Fiber Reinforced Concrete (GFRC) Products:
 - i. Glass fiber is alkali-resistant (AR) with high tensile properties formulated for concrete.
 - ii. GFRC nominal product thickness is 1" with a unit weight of about 12 lbs per square foot and an average ultimate flexural strength of 2,100 psi per ASTM C947.
 - iii. Finish: Exterior latex paint suited for concrete applications.
 - b. Precast Concrete Products: Wet-cast solid, molded concrete
 - i. Average compressive strength of 5,000 psi per ASTM C39.
 - ii. Unit weight range of about 115-145 lbs. per cubic foot.
 - iii. Finish: Exterior latex paint suited for concrete applications

G. Rotationally Molded Polyethylene Parts:

1. These parts shall be molded using prime compounded linear low-density polyethylene with a tensile strength of 2500 psi (per ASTM D638 and with color and UV-stabilizing additives.
2. Wall thickness varies by product from .187" (3/16") to .312" (5/16").

H. Recycled Permalene Parts:

1. These parts shall be manufactured from 3/4" high-density polyethylene that has been specially formulated for optimum UV stability and color retention.
2. Products shall meet or exceed density of .960 G/cc per ASTM D1505, tensile strength of 2400 PSI per ASTM D638.
3. Available in a three-layer product with (2) .100" thick exterior layers over a .550" thick recycled Black interior core.
4. Standard colors. Color: by Owner

I. Footings:

1. Unless otherwise specified, the bury on all footings shall be 34" below Finished Grade (FG) on all in-ground play events/posts.

J. Hardware Packages:

1. All shipments shall include individual component-specific hardware packages.

2. Each hardware package shall be labeled with the part number, description, a component diagram showing the appropriate component, package weight, a bar code linking the hardware package to the job number, assembler's name, date and time the package was assembled, work center number, and work order number.
- K. Installation Documentation:
1. All shipments shall include a notebook or packet of order-specific, step-by-step instructions for assembly of each component, including equipment assembly diagrams, estimated hours for assembly, footing dimensions, concrete quantity for direct bury components, fall height information, area required information and detailed material specifications.
- L. Maintenance Kit:
1. An order-specific maintenance kit shall be provided for each structure order. The kit will include a notebook or packet with a second set of installation documents and order-specific maintenance documentation with recommendations on how often to inspect, what to look for and what to do to keep the equipment in like-new condition.
 2. The kit shall include touch-up primer, appropriate color touch-up paint, sandpaper, appropriate color touch-up PVC, graffiti remover and additional installation tools for the tamperproof fasteners.
- M. Play Structure:
1. Site-specific Play Structure specifications, such as model names and numbers, can be found in the Drawings.

3 PART 3 EXECUTION

3.1 PREPARATION

- A. Prior to any excavation, installation of any other related work, the contractor will verify the conditions of the site.

3.2 ASSEMBLY AND INSTALLATION

- A. To avoid transport damage, All Playground Equipment shall be unpacked and assembled at the installation site.
- B. All play equipment shall be assembled and installed in accordance with the manufacturer's recommendations.
- C. The Contractor shall be responsible for any assembly requirements and installation of all play equipment including concrete footers.

3.3 CONSTRUCTION INSPECTION

- A. Once the installation is complete, the manufacturer shall certify in writing to the Owner that the installation has been completed in strict accordance with the manufacturer's specifications and requirements.

3.4 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Remove excess excavated material, trash, debris and waste materials and legally dispose of such off the property, except as otherwise specifically noted.

END OF SECTION 11 68 13

SECTION 31 05 13
SOILS FOR EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Topsoil materials.
- B. Related Requirements:
 - 1. Section 31 05 16 – Aggregates for Earthwork
 - 2. Section 31 23 16 – Excavation
 - 3. Section 31 23 23 – Fill
 - 4. Section 32 91 19 – Landscape Grading
 - 5. Section 32 92 19 – Seeding

1.2 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit name of imported materials source.
- C. Supplier's Certificate: Certify that products meet or exceed specified requirements.

1.3 QUALITY ASSURANCE

- A. Furnish each subsoil and topsoil material from single source throughout Work.
- B. Perform Work according to Michigan Department of Transportation standards.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Topsoil:
 - 1. Comply with Michigan Department of Transportation standard.

2.2 SOURCE QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Requirements for testing, inspection, and analysis.

- B. Owner Inspection:
 - 1. Make topsoil available for inspection at source prior to packaging for shipment.
 - 2. Notify Owner at least seven days before inspection is allowed.
- C. Owner Witnessing:
 - 1. Allow witnessing of source testing at supplier's test facility.
 - 2. Notify Owner at least seven days before tests are scheduled.
- D. Certificate of Compliance:
 - 1. If supplier is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at source conforms to Contract Documents.
 - 2. Specified source tests are not required for Work performed by approved supplier.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Excavation:
 - 1. Excavate topsoil from designated areas.
 - 2. Strip topsoil to full depth of topsoil in designated areas.
 - 3. Remove excess excavated materials not intended for reuse from Site.
 - 4. Remove excavated materials not meeting requirements for topsoil materials from Site.
- B. Stockpiling:
 - 1. Stockpile excavated material meeting requirements for topsoil materials.
 - 2. Stockpile in sufficient quantities to meet Project schedule and requirements.
 - 3. Separate differing materials with dividers or stockpile apart to prevent intermixing of soil types or contamination.
 - 4. Direct surface water away from stockpile to prevent erosion or deterioration of materials.

3.2 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for cleaning.
- B. Stockpile:
 - 1. Remove stockpile and leave area in clean and neat condition.
 - 2. Grade Site surface to prevent freestanding surface water.

END OF SECTION 31 05 13

SECTION 31 05 16
AGGREGATES FOR EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Aggregate materials.
- B. Related Requirements:
 - 1. Section 31 23 16 - Excavation
 - 2. Section 31 23 23 - Fill

1.2 REFERENCE STANDARDS

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit name of imported materials source.
- C. Supplier's Certificate: Certify that products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

- A. Furnish each aggregate material from single source throughout Work.
- B. Perform Work according to Michigan Department of Transportation standards.
- C. Maintain one copy of each standard affecting Work of this Section on Site.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aggregate:

1. MDOT 22A Crushed Limestone: Comply with Michigan Department of Transportation

2.2 SOURCE QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Requirements for testing, inspection, and analysis.
- B. Testing and Analysis:
 1. Comply with AASHTO T 180.
 2. If tests indicate materials do not meet specified requirements, change material and retest.
- C. Owner Inspection:
 1. Notify Owner at least seven days before inspection is allowed.
- D. Owner Witnessing:
 1. Allow witnessing of source testing at supplier's test facility.
 2. Notify Owner at least seven days before tests are scheduled.
- E. Certificate of Compliance:
 1. If supplier is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at source conforms to Contract Documents.
 2. Specified source tests are not required for Work performed by approved supplier.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Excavation:
 1. Remove excess excavated aggregate materials not intended for reuse from Site.
 2. Remove excavated materials not meeting requirements for aggregate from Site.
- B. Stockpiling:
 1. Stockpile excavated material meeting requirements for aggregate materials.
 2. Stockpile in sufficient quantities to meet Project schedule and requirements.
 3. Separate different aggregate materials with dividers or stockpile apart to prevent intermixing of aggregate types or contamination.
 4. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.

3.2 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for cleaning.
- B. Stockpile:

1. Remove stockpile and leave area in clean and neat condition.
2. Grade Site surface to prevent freestanding surface water.

END OF SECTION 31 05 16

SECTION 31 22 13
ROUGH GRADING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Excavating topsoil.
2. Excavating subsoil.
3. Cutting, grading, filling, rough contouring, and compacting, site for paving and playground equipment.

B. Related Requirements:

1. Section 31 05 13 - "Soils for Earthwork" for soils for fill.
2. Section 31 05 16 - "Aggregates for Earthwork" for aggregates for fill.
3. Section 31 23 16 - "Excavation" for building excavation.
4. Section 31 23 23 - "Fill" for general building area backfilling.
5. Section 32 91 19 - "Landscape Grading" for finish grading with topsoil to contours.

1.2 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of remaining utilities by horizontal dimensions, elevations or inverts, and slope gradients.

1.3 QUALITY ASSURANCE

- A. Perform Work according to State of Michigan Department of Transportation 2020 standard specifications for construction.
- B. Furnish each coarse- and fine-aggregate material from single source throughout Work.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Perform Work according to:

1. The State of Michigan Department of Transportation standards.

2.2 MATERIALS

- A. Topsoil: as specified in Section 31 05 13 - "Soils for Earthwork".
- B. Subsoil Fill: as specified in Section 31 05 13 - "Soils for Earthwork".
- C. Structural Fill: as specified in Section 31 05 16 - "Aggregates for Earthwork".
- D. Granular Fill: as specified in Section 310516 "Aggregates for Earthwork".

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the work.
- B. Verify Site conditions under provisions of Section 01 30 00 - "Administrative Requirements".
- C. Verify survey benchmark and intended elevations for the Work are as indicated on Drawings.

3.2 PREPARATION

- A. Call Miss Dig not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Identify required lines, levels, contours, and datum.
- C. Notify utility company to remove and relocate utilities.
- D. Protect utilities indicated to remain free from damage.
- E. Protect plant life, lawns, and other features remaining as portion of final landscaping.
- F. Protect benchmarks, survey control point, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

3.3 TOPSOIL EXCAVATION

- A. Excavate topsoil from areas to be further excavated, relandscaped, or regraded without mixing with foreign materials for use in finish grading.
- B. Do not excavate wet topsoil.
- C. Stockpile in area designated on Site to depth not exceeding 8 feet and protect from erosion. Stockpile material until disposal.

- D. Remove from Site excess topsoil not intended for reuse.
- E. Remove topsoil from Site.
- F. Do not remove topsoil from Site.

3.4 SUBSOIL EXCAVATION

- A. Excavate subsoil from areas to be further excavated, relandscaped, or regraded.
- B. Do not excavate wet subsoil or excavate and process wet material to obtain optimum moisture content.
- C. When excavating through roots, perform Work by hand and cut roots with sharp axe or a Sawzall reciprocating saw.
- D. Remove from Site excess subsoil not intended for reuse.
- E. Remove subsoil from Site.
- F. Stockpile subsoil in area designated on Site to depth not exceeding 8 feet and protect from erosion.
- G. Stockpile excavated material in area designated on Site according to Section 31 05 16 - "Aggregates for Earthwork".
- H. Benching Slopes: Horizontally bench existing slopes greater than 1:4 to key placed fill material to slope to provide firm bearing.
- I. Stability: Replace damaged or displaced subsoil as specified for fill.

3.5 FILLING

- A. Fill areas to contours and elevations with unfrozen materials.
- B. Place material in continuous layers as follows:
 1. Subsoil Fill: Maximum 12 inches compacted depth.
 2. Structural Fill: Maximum 8 inches compacted depth.
 3. Granular Fill: Maximum 8 inches compacted depth.
- C. Maintain optimum moisture content of fill materials to attain required compaction density.
- D. Slope grade away from building with a minimum 2 percent slope for minimum distance of 10 feet, unless noted otherwise.
- E. Make grade changes gradual. Blend slope into level areas.
- F. Repair or replace items damaged by excavation or filling.

G. Install Work according to State of Michigan Department of Transportation standards.

3.6 TOLERANCES

A. Top Surface of Subgrade: Plus or minus 1.2 inches from required elevation.

3.7 FIELD QUALITY CONTROL

A. Perform in-place compaction tests according to the following:

1. Density Tests: ASTM D2922
2. Moisture Tests: ASTM D6938.

B. When tests indicate Work does not meet specified requirements, remove Work, replace, and retest.

C. Frequency of Tests: As indicated by the Engineer.

D. Prepare test and inspection reports.

END OF SECTION 31 22 13

SECTION 31 23 16

EXCAVATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Soil densification.
2. Excavating for playground installation.
3. Excavation for paving.

B. Related Requirements:

1. Section 02 41 13 - Selective Site Demolition
2. Section 31 05 13 - Soils for Earthwork
3. Section 31 05 16 - Aggregates for Earthwork
4. Section 31 23 23 - Fill

1.2 REFERENCE STANDARDS

- A. Local utility standards when working within 48 inches of utility lines.

PART 2 - PRODUCTS

- 2.1 Not Used.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.

B. Utility Service Locator:

1. Call MissDIG not less than three working days before performing Work.
2. Request that underground utilities be located and marked within and immediately surrounding Site.
3. Identify required lines, levels, contours, and data.

C. Existing Utilities:

1. Notify utility company to remove and relocate utilities.
 2. Protect from damage utilities indicated to remain.
- D. Protect plant life, lawns, rock outcroppings, and other features designated to remain as portion of final landscaping.
- E. Protect benchmarks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- F. Do not close or obstruct roadways without permits.
- G. Erect and maintain temporary barriers and security devices, including warning signs, warning lights, and similar measures, for protection of public, Owner, and existing improvements indicated to remain.

3.2 SOIL DENSIFICATION BY VIBRO-COMPACTION

- A. Description:
1. Vibro-compact substrates below footing bearing surfaces for footings as indicated on Drawings before excavating Site.
 2. Densify existing subsoils with existing relative density rating of "compact to dense" to attain relative density rating of "very dense."

3.3 EXCAVATION

- A. Excavate subsoil to accommodate fence footings.
- B. Compact disturbed load-bearing soil in direct contact with foundations to original bearing capacity.
- C. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- D. Trim excavation and remove loose matter.
- E. Removal of Deleterious Materials:
1. Remove excess and unsuitable material from Site.
- F. Notify Architect/Engineer of unexpected subsurface conditions.
- G. Correct over-excavated areas as directed by Engineer.
- H. Remove excavated material from Site.
- I. Repair or replace items indicated to remain that have been damaged by excavation.

3.4 FIELD QUALITY CONTROL

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
- B. Inspecting: Request visual inspection of bearing surfaces by Engineer before installing subsequent Work.

3.5 PROTECTION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
- B. Prevent displacement or loose soil from falling into excavation and maintain soil stability.
- C. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
- D. Protect structures, utilities, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards that may be created by earth operations.

END OF SECTION 31 23 16

SECTION 31 23 23

FILL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Backfilling fence footing.

B. Related Requirements:

1. Section 03 30 00 - Cast-in-Place Concrete
2. Section 31 05 13 - Soils for Earthwork
3. Section 31 05 16 - Aggregates for Earthwork
4. Section 31 23 16 - Excavation

1.2 REFERENCE STANDARDS

A. American Association of State Highway and Transportation Officials:

1. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. ASTM International:

1. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
2. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method.
3. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
4. ASTM D6031/D6031M - Standard Test Method for Logging In Situ Moisture Content and Density of Soil and Rock by the Nuclear Method in Horizontal, Slanted, and Vertical Access Tubes.
5. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Materials Source: Submit name of imported materials suppliers.

C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

- D. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

1.4 QUALITY ASSURANCE

- A. Perform Work according to Michigan Department of Transportation standards.
- B. Maintain one copy of each standard affecting Work of this Section on Site.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Structural Fill: MDOT Class I for lower area of excess excavation over 24", compacted to 97 percent of maximum density in accordance with MDOT standards.
- B. Granular Fill: MDOT Class II for dry excavation and backfill under structure compacted to 95 percent of maximum density in accordance with MDOT standards.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.

3.2 PREPARATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.
- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with structural fill and compact to density equal to or greater than requirements for subsequent fill material.

3.3 BACKFILLING

- A. Backfill areas to contours and elevations.
- B. Systematically backfill to allow maximum time for natural settlement.
- C. Place material in continuous layers as follows:
 - 1. Structural Fill: Maximum 6 inches compacted depth.
 - 2. Granular Fill: Maximum 18 inches compacted depth.

- D. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces, and do not backfill with frozen materials.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Make gradual grade changes and blend slope into level areas.
- G. Remove surplus backfill materials from Site.
- H. Leave fill material stockpile areas free of excess fill materials.

3.4 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Requirements for tolerances.
- B. Top Surface of Backfilling under Paved areas: Plus or minus ½ inch from required elevations.

3.5 FIELD QUALITY CONTROL

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
- B. Testing:
 - 1. Laboratory Material Testing: Comply with AASHTO T 180.
 - 2. In-Place Compaction Testing:
 - a. Density Tests: Comply with ASTM D2922
 - b. Moisture Tests: Comply with ASTM D3017
 - 3. If tests indicate that Work does not meet specified requirements, remove Work, replace, compact, and retest.
 - 4. Proof-roll compacted fill surfaces under HMA surface.

3.6 PROTECTION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
- B. Reshape and recompact fills subjected to vehicular traffic during construction.

3.7 ATTACHMENTS

- A. Fill Under Grass Areas: Native material to 4 inches below finish grade; compacted uniformly to 95 percent of maximum density.
- B. Fill under Asphalt Paving:

1. Compact existing base to 95 percent of maximum density.
2. 21AA Crushed Limestone to 3 inches below finish paving elevation; compacted uniformly to 95 percent of maximum density.

END OF SECTION 31 23 23

SECTION 32 11 23

AGGREGATE BASE COURSES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Aggregate subbase.
2. Aggregate base course.
3. Aggregate for path.

B. Related Sections:

1. Section 31 22 13 - Rough Grading: Preparation of site for base course.
2. Section 31 23 23 - Fill: Compacted fill under base course.
3. Section 32 12 16 - Asphalt Paving: Binder and finish asphalt courses.
4. Section 32 13 13 - Concrete Paving: Finish concrete surface course.
5. Section 32 91 19 - Landscape Grading: Topsoil fill at areas adjacent to aggregate base course.

1.02 REFERENCES

A. American Association of State Highway and Transportation Officials:

1. AASHTO M288 - Standard Specification for Geotextile Specification for Highway Applications.

B. ASTM International:

1. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
2. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
3. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
4. ASTM D2940 - Standard Specification for Graded Aggregate Material For Bases or Subbases for Highways or Airports.
5. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.03 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Samples: Submit, in air-tight containers, 10 lb. sample of each type of aggregate fill to testing laboratory.

- C. Materials Source: Submit name of aggregate materials suppliers.
- D. Manufacturer's Certificate: Certify products meet or exceed specified requirements MDOT 2020 Standard Specifications for Construction.

1.04 QUALITY ASSURANCE

- A. Furnish each aggregate material from single source throughout the Work.
- B. Perform Work according to MDOT 2020 Standard Specifications for Construction standards.

PART 2 - PRODUCTS

2.01 AGGREGATE MATERIALS

- A. Coarse Aggregate: MDOT 22A Aggregate as specified in MDOT 2020 Standard Specifications for Construction standards Table 902-1.
 - 1. Material should be crushed limestone
- B. Trail Surface Aggregate
 - 1. Crushed limestone fines. Any substitution must be approved by engineer prior to bidding,

2.02 GRANULAR MATERIALS

- A. Fine Aggregate: MDOT Class II Sand as specified in MDOT 2020 Standard Specifications for Construction standards Table 902-3.

2.03 ACCESSORIES

- A. Geotextile Fabric: AASHTO M288; non-woven, polypropylene.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting Work.
- B. Verify compacted substrate is dry and ready to support paving and imposed loads.
 - 1. Proof roll substrate with 3 ton in minimum two perpendicular passes to identify soft spots.
 - 2. Remove soft substrate and replace with compacted fill as specified in Section 31 23 23 or as approved by Engineer.
- C. Verify substrate has been inspected, gradients and elevations are correct.

3.02 PREPARATION

- A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.
- B. Do not place fill on soft, muddy, or frozen surfaces.

3.03 AGGREGATE PLACEMENT

- A. Gradation of Aggregate: MDOT 2020 Standard Specifications for Construction standards Table 902-1.
- B. Spread aggregate over prepared substrate to total compacted thickness as indicated on Drawings.
- C. Roller compact aggregate to 98 percent maximum density.
- D. Level and contour surfaces to elevations, profiles, and gradients indicated.
- E. Add small quantities of fine aggregate to coarse aggregate when required to assist compaction.
- F. Maintain optimum moisture content of fill materials to attain specified compaction density. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
- G. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.04 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Maximum Variation From Flat Surface: 1/4 inch measured with 10 foot straight edge.
- C. Maximum Variation From Thickness: 1/4 inch.
- D. Maximum Variation From Elevation: 1/2 inch.

3.05 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Compaction testing will be performed according to MDOT 2020 Standard Specifications of Construction – Density Requirements.
- C. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.
- D. Frequency of Tests: As determined by the Engineer in the field with a minimum of one test for every 500 square yards of each layer compacted aggregate.

3.06 COMPACTION

- A. Compact materials to 98 percent of maximum density as determined from test strip, according to MDOT 2020 Standard Specifications of Construction – Density Requirements.

END OF SECTION 32 11 23

SECTION 32 12 16

ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Asphalt materials.
2. Aggregate materials.
3. Aggregate subbase.
4. Asphalt paving base course, binder course, and wearing course.

1.2 REFERENCE STANDARDS

A. American Association of State Highway and Transportation Officials:

1. AASHTO M29 - Standard Specification for Fine Aggregate for Bituminous Paving Mixtures.
2. AASHTO M140 - Standard Specification for Emulsified Asphalt.
3. AASHTO M208 - Standard Specification for Cationic Emulsified Asphalt.
4. AASHTO M288 - Standard Specification for Geotextile Specification for Highway Applications.
5. AASHTO M320 - Standard Specification for Performance-Graded Asphalt Binder.
6. AASHTO M324 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
7. AASHTO MP1a - Standard Specification for Performance-Graded Asphalt Binder.

B. Asphalt Institute:

1. AI MS-2 - Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types.
2. AI MS-19 - Basic Asphalt Emulsion Manual.
3. AI SP-2 - Superpave Mix Design.

C. ASTM International:

1. ASTM C1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.
2. ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
3. ASTM D242 - Standard Specification for Mineral Filler For Bituminous Paving Mixtures.
4. ASTM D692 - Standard Specification for Coarse Aggregate for Bituminous Paving Mixtures.
5. ASTM D946 - Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction.
6. ASTM D977 - Standard Specification for Emulsified Asphalt.

7. ASTM D1073 - Standard Specification for Fine Aggregate for Bituminous Paving Mixtures.
8. ASTM D1188 - Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
9. ASTM D2027 - Standard Specification for Cutback Asphalt (Medium-Curing Type).
10. ASTM D2397 - Standard Specification for Cationic Emulsified Asphalt.
11. ASTM D2726 - Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures.
12. ASTM D2950 - Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods.
13. ASTM D3381 - Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction.
14. ASTM D3515 - Standard Specification for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.
15. ASTM D3549 - Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens.
16. ASTM D3910 - Standard Practices for Design, Testing, and Construction of Slurry Seal.
17. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
18. ASTM E408 - Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques.
19. ASTM E903 - Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres.
20. ASTM E1918 - Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field.
21. ASTM E1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data:
 1. Submit product information for asphalt and aggregate materials.
 2. Submit mix design with laboratory test results supporting design.
- C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

- A. Mixing Plant: Certified by Michigan Department of Transportation.
- B. Obtain materials from same source throughout.
- C. Perform Work in accordance with Michigan Department of Transportation standard.
- D. Maintain one copy of document on site.

1.5 QUALIFICATIONS

- A. Installer: Company specializing in performing work of this section with minimum 2 years' experience.

1.6 AMBIENT CONDITIONS

- A. Section 01 50 00 - Temporary Facilities and Controls: Ambient conditions control facilities for product storage and installation.
- B. Do not place asphalt mixture between November 15 and March 1.
- C. Do not place asphalt mixture when ambient air or base surface temperature is less than 40 degrees F, or surface is wet or frozen.

PART 2 - PRODUCTS

2.1 ASPHALT PAVING

- A. Performance / Design Criteria:
- B. Asphalt Materials:
 - 1. Asphalt Binder: AASHTO M320; performance grade PG 58-28.
 - 2. Tack Coat: In accordance with Michigan Department of Transportation standards.
- C. Aggregate Materials:
 - 1. Coarse Aggregate: ASTM D692; crushed stone, gravel, or blast furnace slag.
 - 2. Fine Aggregate: AASHTO M29; natural sand or sand manufactured from stone, gravel, or blast furnace slag.

2.2 MIXES

- A. Use dry material to avoid foaming. Mix uniformly.
- B. Asphalt Paving Mixtures: Designed in accordance with Michigan Department of Transportation standards.
 - 1. Wearing Course: 36A.

2.3 SOURCE QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Testing, inspection and analysis requirements.
- B. Submit proposed mix design for review prior to beginning of Work.
- C. Test samples in accordance with AI MS-2.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify compacted subbase is dry and ready to support paving and imposed loads.
 - 1. Proof roll subbase with fully loaded tandem-axle dump truck in minimum two perpendicular passes to identify soft spots.
 - 2. Remove soft subbase and replace with compacted fill as specified in Section 31 23 23 - Fill.
- C. Verify gradients and elevations of base are correct.

3.2 INSTALLATION

- A. Subbase:
 - 1. Prepare subbase in accordance with the State of Michigan Department of Transportation.
- B. Tack Coat:
 - 1. Apply tack coat in accordance with Michigan Department of Transportation standards.
- C. Double Course Asphalt Paving:
 - 1. Install Work in accordance with Michigan Department of Transportation standards.
 - 2. Place asphalt wearing course after tack coat has "broke" but before it loses tackiness.
 - 3. Place each course of asphalt to thickness indicated on Drawings.
 - 4. Compact each course by rolling to specified density. Do not displace or extrude paving from position. Hand compact in areas inaccessible to rolling equipment.
 - 5. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.

3.3 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- C. Scheduled Compacted Thickness: Within 1/4 inch.
- D. Variation from Indicated Elevation: Within 1/2 inch.

3.4 FIELD QUALITY CONTROL

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
- B. Take samples and perform tests including mat density tests in accordance with Michigan Department of Transportation standards.
- C. Asphalt Paving Mix Temperature: Measure temperature at time of placement.
- D. Asphalt Paving Density: ASTM D2950 nuclear method; test one location for every 500 square yards compacted paving.

3.5 PROTECTION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
- B. Immediately after placement, protect paving from mechanical injury until surface temperature is less than 140 degrees F (60 degrees C).

END OF SECTION 32 12 16

SECTION 32 16 23

CONCRETE PAVING AND SIDEWALKS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Concrete paving for sidewalks, parking pads, dumpster pads, approaches to boardwalk sections, and approaches to road crossings.
- B. Related Sections:
 - 1. Section 03 10 00 – Concrete Forming and Accessories.
 - 2. Section 03 20 00 – Concrete Reinforcement.
 - 3. Section 03 30 00 – Cast In Place Concrete.
 - 4. Section 03 39 00 – Concrete Curing.

1.2 REFERENCES

- A. MDOT 2020 Standard Specifications for Construction.
- B. American Association of State Highway and Transportation Officials:
- C. American Concrete Institute:
 - 1. ACI 304 - Guide for Measuring, Mixing, Transporting, and Placing Concrete.
- D. ASTM International:
 - 1. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
 - 2. ASTM C33/C33M - Standard Specification for Concrete Aggregates.
 - 3. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 - 4. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.
 - 5. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete.
 - 6. ASTM C150/C150M - Standard Specification for Portland Cement.
 - 7. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete.
 - 8. ASTM C172/C172M - Standard Practice for Sampling Freshly Mixed Concrete.
 - 9. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
 - 10. ASTM C231/C231M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
 - 11. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete.
 - 12. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
 - 13. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete.
 - 14. ASTM C595/C595M - Standard Specification for Blended Hydraulic Cements.

15. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
16. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
17. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.
18. ASTM C1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emisimeters.
19. ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
20. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
21. ASTM D1752 - Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.
22. ASTM D5893/D5893M - Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.
23. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.

1.3 PREINSTALLATION MEETINGS

- A. Section 01 30 00 - Administrative Requirements: Requirements for preinstallation meeting.
- B. Convene minimum one week prior to commencing Work of this Section. At this meeting the Owner and Contractor shall discuss schedule, concrete finishing requirements, and clean-up.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data:
 1. Submit required information regarding concrete materials, joint filler, admixtures, and curing compounds.
 2. Mix Design:
 - a. Submit concrete mix design for each concrete strength prior to commencement of Work.
 - b. Submit separate mix designs if admixtures are required for hot- and cold-weather concrete Work.
 - c. Identify mix ingredients and proportions, including admixtures.
 3. Identify chloride content of admixtures and whether or not chloride was added during manufacture.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- D. Qualifications Statement:
 1. Submit qualifications for manufacturer and installer.

1.5 QUALITY ASSURANCE

- A. Perform Work according to MDOT 2020 Standard Specifications for Construction.
- B. Obtain cementitious materials from same source throughout.
- C. Maintain one copy of each standard affecting Work of this Section on Site.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years' documented experience.
- B. Installer: Company specializing in performing Work of this Section with minimum three years' documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

1.8 AMBIENT CONDITIONS

- A. Section 01 50 00 - Temporary Facilities and Controls: Requirements for ambient condition control facilities for product storage and installation.
- B. Minimum Conditions: Do not place concrete if base surface temperature is less than 40 deg. F, or if surface is wet or frozen.
- C. Subsequent Conditions: Maintain minimum 50 deg. F, for not less than 72 hours after placing, and at a temperature above freezing for remainder of curing period.

1.9 EXISTING CONDITIONS

- A. Field Measurements:
 - 1. Verify field measurements prior to placing concrete.
 - 2. Indicate field measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 AGGREGATE SUBGRADE

- A. MDOT 21AA or suitable Class II sand that is able to be compacted to 95% or better.

2.2 MATERIALS

A. Forms:

1. Material:
 - a. Wood: Straight and free from warping, twisting, loose knots, splits, or other defects.
 - b. Steel: Channel-formed sections.
2. Profile: To suit conditions.
3. Cement: The cement shall be Portland Cement, Type I, and shall comply with the Standard Specifications for Portland Cement (ASTM C150), or the Standard Specifications for Air-Entraining Portland Cement (ASTM C175). The air-entraining content of concrete shall be 6.5 +/- 1.5 percent.
4. Concrete Mix: See Section 2.3.
5. Water: The water used in mixing concrete shall be clean and free from deleterious amounts of acid, alkalis or organic material.
6. Coarse Aggregate shall be 6A in accordance with the current MDOT Standard Specifications for Construction.
7. Fine Aggregate shall be 2NS in accordance with the current MDOT Standard Specifications for Construction.
8. Joint Filler:
 - a. Material: Asphalt-impregnated fiberboard or felt. Full depth transverse expansion joints shall be constructed perpendicular to the surface of the sidewalk 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 1/4" below the surface of the sidewalk. Sealing of joints will not be required. One (1") inch pre-molded expansion joints must be placed between the sidewalk and back-of-curb when sidewalk is constructed between the curb and building or other rigid structures. Sealing of joints will not be required. Transverse control/contraction joints shall be true to line and grade and shall be placed at a minimum of four (4') foot intervals and shall be formed with a grooving tool or saw cut and constructed to a depth of at least one (1") inch and a width of 1/8 inch to 1/4 inch. Sealing of joints will not be required. See Section 3.3 for more finishing requirements.

2.3 MIXES

A. Concrete Mix:

1. The concrete shall be mixed in a approved mixing device prepared for this purpose and produce a homogenous mass which can be deposited in the forms, without segregation. The concrete mix shall me the requirements of Grade P1, S1, or S2 concrete as specified by the

MDOT Standard Specifications for Construction. The concrete shall not have less than six (6) bags of cement per cubic yard, and a 28-day compressive strength of not less than 3,500 psi.

2.4 ACCESSORIES

A. Curing Compound:

1. Comply with MDOT 2020 Standard Specifications for Construction.

2.5 SOURCE QUALITY CONTROL

- ##### A. Section 01 40 00 - Quality Requirements: Requirements for testing, inspection, and analysis.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that compacted subgrade is dry and ready to support paving and imposed loads.
- B. Verify that gradients and elevations of subgrade are as indicated on Drawings.
- C. Verify reinforcing placement for proper size, spacing, location, and support.

3.2 PREPARATION

- A. If site conditions require, moisten substrate to minimize absorption of water from fresh concrete.
- B. Notify Engineer minimum 24 hours prior to commencement of concreting operations.

3.3 INSTALLATION

A. Subgrade:

1. As specified in Section 2.1. Existing vegetation shall be removed and topsoil excavated to provide a four (4") inch 22A or sand sub-base for the proposed sidewalk. The existing subgrade shall be disturbed as little as possible during preparation, and shall be compacted to ninety-five (95%) percent maximum unit weight in accordance with current MDOT procedures. Where fill sand is required it shall be compacted to achieve ninety-five (95%) percent maximum unit weight in accordance with current MDOT Standard Specifications for Construction.

B. Forms:

1. Place and secure forms and screeds to correct location, dimension, profile, and gradient.
2. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
3. Clean forms and coat with form oil each time before concrete is placed.

- C. Placing Concrete:
 - 1. Comply with MDOT 2020 Standard Specifications for Construction.
 - 2. The concrete shall be thoroughly spaded along the forms and joints before finishing operations are started. The concrete shall be alternately tamped and struck off with a proper strike board until all the voids are removed and the surface has the required grade and cross section. The surface shall be floated with a steel float just enough to produce a smooth surface free from irregularities. The surface shall be floated again with a steel trowel, walk-behind or by hand, to achieve a smooth surface free from irregularities.
 - 3. Where the sidewalk meets the existing boardwalk, an 8" thickened edge shall be formed to prevent the sand subbase from leaching out from under the sidewalk.

- D. Finishing:
 - 1. Place curing compound on exposed concrete surfaces immediately after finishing.
 - 2. Edges and Joints:
 - a. All edges on sidewalk shall be rounded to a radius of ¼ inch with an approved finishing tool. All control or contraction joints shall be saw cut or rounded with an approved double edging tool (i.e., walk behind joint tool) having a radius of ¼ inch on each side. All tooled joints and edges shall be "closed up" with a walk-behind trowel, and re-tooled to assure a smooth and uniform joint edge.
 - b. Spalled Corners and Edges: Clean and fill with mortar mixture and re-finish.
 - c. Broom finish: The surface shall be brushed lightly to produce a slightly roughened surface and remove the finishing tool marks. Broom perpendicular to the edge of the sidewalk. Texture the surface of sidewalk ramps with a coarse broom transverse to the ramp slope.
 - d. Control/contraction joints shall be constructed by dividing the sidewalk into areas of approximately 25 square feet unless otherwise shown on the plans. Where feasible the unit areas shall be square and not less than 16 square feet, and not more than 36 square feet.

- E. Curing:
 - 1. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete. Barricade all sidewalks and crossings from vehicular traffic of any kind for seven (7) days after placing concrete.

3.4 TOLERANCES

- A. According to MDOT 2020 Standard Specifications for Construction.

3.5 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Requirements for inspecting and testing.
- B. The Contractor is responsible to ensure that all forms meet the requirements shown on the Plans. If any discrepancy is noticed, the Contractor shall notify the Owner and Engineer immediately, and prior to placing the concrete.

3.6 PROTECTION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
- B. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, rain and flowing water, and mechanical injury. The Contractor shall be responsible for the proper protection of the sidewalk until it has sufficiently cured. Walk must be properly barricaded and lighted during evening and nighttime hours. The Contractor shall take all necessary precautions to protect the sidewalk from rain. The Contractor shall be responsible for the concrete placed during cold weather. Any concrete damage or failure as a result of frost action shall be removed and replaced at the Contractor's expense.
- C. Do not permit traffic over paving for minimum 7 days after finishing.
- D. Project Clean-up:
 - 1. Backfilling along the outside edge of the sidewalk shall be performed after the concrete has gained sufficient strength. The fixed forms may then be removed. The space on both sides of the walk shall be backfilled with clean, screened topsoil which shall be compacted and graded to conform to the cross section shown on the plans. Place seed or sod as specified.
 - 2. Clean-up shall be completed before final acceptance of work. The contractor shall clean the walk, adjacent surfaces, gutters, lawns, private property, rights-of-way, and structures leaving them in as good of a condition as originally found. All machinery, tools, surplus materials, and barricades shall be removed from the site.
 - 3. Legally dispose of all excess material off-site, including concrete "wash out" from the concrete truck chute.

END OF SECTION

SECTION 32 18 16.33
PLAYGROUND PROTECTIVE SURFACES

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Playground Surfacing including all Engineered Wood Fiber Surfacing and Wear Mats.

1.2 RELATED SECTIONS

- A. Section 01 33 00 – Submittals
- B. Section 11 68 13 – Playground Equipment
- C. Section 31 22 13 – Rough Grading
- D. Section 31 23 16 – Excavation
- E. Section 31 23 23 – Fill
- F. Section 32 33 00 – Site Furnishings

1.3 REFERENCES

- A. CPSC – Consumer Product Safety Commission, Public Playground Safety Handbook.
- B. ASTM F1487 – American Society for Testing and Materials, Playgrounds for Public Use.
- C. ADA – Americans with Disabilities Act Accessibility Guidelines for Play Areas (ADAAG).
- D. ASTM C67 – Standard Test Method for Weathering and Aging of Surface Systems and Materials and Standard Test Method for Rubber – Deterioration in an Air Over.
- E. ASTM D2434 – Standard Test Method for Permeability of Granular Soils (Constant Head).
- F. ASTM D2859 – Standard Test Method for the Surface Flammability of Products (Burn Pill Test).
- G. ASTM D3776 – Standard Test Methods for Mass Per Unit Area (Weight) of Fabric.
- H. ASTM D3786 – Standard Test Method for Bursting Strength of Textile Fabrics - Diaphragm Bursting Strength Tester Method.
- I. ASTM D4491 – Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
- J. ASTM D4533 – Standard Test Method for Trapezoid Tearing Strength of Geotextiles.
- K. ASTM D4632 – Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.

- L. ASTM D4716 – Standard Test Method for Determining the (In plane) Flow rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head.
- M. ASTM D4751 – Standard Test Method for Determining Apparent Opening Size of a Geotextile. ASTM D4833 – Standard Test Method for Index Puncture Resistance of Geomembranes, and Related Products.
- N. ASTM D5199 – Standard Test Method for Measuring the Nominal Thickness of Geosynthetics.
- O. ASTM E108 – Standard Test Method for Fire Tests of Surface Systems and Materials.
- P. ASTM E303-93 – Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
- Q. ASTM F1292 and F355-95 – Standard Test Method for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
- R. ASTM F1951 – Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
- S. ASTM F2075 – Standard Specification for Engineered Wood Fiber for Use as a Playground Safety Surface Under and Around Playground Equipment.
- T. 16 CFR 1500.44 – Method for Determining Extremely Flammable and Flammable Solids.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. Member of International Play Equipment Manufacturer’s Association (IPEMA).
 - 2. Sales Representatives trained by National Playground Safety Institute (NPSI).
- B. Installer Qualifications: A firm or individual certified, licensed, or otherwise qualified by surfacing manufacturer as experienced and with sufficient trained staff to install manufacturer's products according to specified requirements.
- C. Workmanship: The Contractor is responsible for correction of work which does not conform to the specified requirements.

1.5 SUBMITTALS

- A. Submit under the provision of Section 01 33 00.
- B. Product Data: Submit manufacturer’s product data, specifications, warranty, detailed drawings, maintenance, and installation instructions, ASTM F 1292 test results, ASTM F1951 Accessibility test results, ASTM F2075 test results, and IPEMA Certificates of Complainacce, where applicable.
- C. Samples: Submit manufacturer’s samples of each specified material.
- D. Manufacturer’s / Installer’s Certificates: Certify products meet or exceed the specified requirements.
- E. Quality Assurance / Control: Certificate of qualifications of the surfacing installer.

- F. Maintenance Instructions: Submit manufacturer's maintenance and cleaning instructions for playground surfacing.
- G. Warranty: Submit manufacturer's standard warranty.
- H. References: Submit at least 3 customers that have been using the product for at least 3 years.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer. Deliver engineered wood fiber playground surfacing to site in bulk.
- B. Storage: Store materials in a clean, dry area in accordance with manufacturer's instructions. Store engineered wood fiber playground surfacing to prevent contamination.
- C. Handling: Protect materials during handling and installation to prevent damage. Handle engineered wood fiber playground surfacing to prevent contamination.

1.7 COORDINATION

- A. Coordinate work with the work of other trades on the project.

1.8 WARRANTY

- A. Warranty cover Playground Surfacing for the following periods:
 - 1. Engineered Wood Fiber: 15 years.
 - 2. Wear Mats: 5 years.
- B. Operation Data: Submit for continuing Owner maintenance.
- C. Maintenance Data: Include methods for cleaning, replacement, and repair.

PART 2 PRODUCTS

2.1 MANUFACTURER / PRODUCT

- A. Engineered Wood Fiber Safety Surfacing: GT Impax, GameTime (represented by Sinclair Recreation), 128 East Lakewood Blvd, Ste 40, Holland, MI 49424, 800-444-4954, www.sinclair-rec.com, or approved equal.
- B. Rubber Wear Mats: DynaCushion Beveled Wear Mat, Pierceton Rubber Products, Inc., (represented by Sinclair Recreation), 128 East Lakewood Blvd, Ste 40, Holland, MI 49424, 800-444-4954, www.sinclair-rec.com, or approved equal.
 - 1. Wear Mats will be installed in per the manufacturer's specifications and will be required in the following locations:
 - a. Swings – Wear mat shall be placed directly beneath the swing seat, minimum size four (4) feet by six (6) feet for each swing
 - b. Slides – Wear mat shall be placed directly under the slide exit, minimum size three (3) feet by three (3) feet.
 - c. Merry-go-rounds – Wear mat shall extend a minimum of three (3) feet beyond the edge of the merry-go-round, in all directions.

C. GEOTEXTILE FABRIC

1. Geotextile fabric shall be a polyester drainage fabric, non-woven, meeting or exceeding the following:

PROPERTIES	STANDARD	AMOCO 4546 <i>(or approved equal)</i>
<i>Physical</i>		
• Grab Tensile Strength	• ASTM-D 4632	• 90 oz/yd ²
• Grab Tensile Elongation	• ASTM- D 4632	• 50%
• Mullen Burst	• ASTM- D 3786	• 185 lb/in ²
• Puncture	• ASTM- D 4833	• 55lbs.
• Trapezoidal Tear	• ASTM- D 4533	• 40 lbs.
• UV Resistance	• ASTM- D 4355	• 70/500 (%@_hr)
<i>Hydraulic</i>		
• Apparent Opening Size	• ASTM- D 4751	• 70 (US std. Sieve no.)
• Permittivity	• ASTM- D 4491	
• Flow Rate	• ASTM- D 4491	• 145 gal/min/feet ²

D. PEASTONE

1. Peastone shall be natural smooth rock material. Supply sample of peastone to the Owner for approval prior to delivery to site.
2. Peastone is not an acceptable safety surfacing; it is only to be used in the drainage layer as indicated on the drawings.

PART 3 EXECUTION

3.1 INSPECTION

- A. Contractor shall thoroughly examine the areas and conditions under which excavation, filling, and grading are to be performed. Architect is to be notified, in writing, of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

3.2 PREPARATION

- A. Excavate play area as indicated on the drawings and to ensure proper safety use zones of play equipment.

3.3 PREPARATION

- A. The subgrade shall be graded to a minimum of 1% and a maximum of 5% to insure positive drainage throughout the site.
- B. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated subsoil.
- C. The subgrade shall be compacted to 95% of the dry density, as determined by the provisions of AASHTO or T 205.

- D. Drainage Trenches
 - 1. Dig trenches and construct the french drains as indicated on the drawings.
 - 2. Fabric and peastone gravel shall be placed in the trenches, to depths indicated on the drawings.
 - 3. Four (4) inch perforated pipe shall be placed in the trenches, as indicated on the drawings. Unless otherwise indicated on the plans, pipe shall have a minimum slope of 0.5%.
 - 4. All installation sites shall have positive grade to facilitate drainage away from the playground area and other active areas within the park.
- E. Install the playground equipment.
- F. Install the edging around the play area.

3.4 SAFETY SURFACE INSTALLATION

- A. Begin the safety surfacing only after the play equipment and edging have been installed.
- B. Geotextile Fabric
 - 1. Geotextile fabric shall be used as separation between the subsoil and safety surfacing.
 - 2. In areas where equipment exists, it is necessary to cut the fabric to fit. Once fitted, any cuts should be overlapped with fabric wherever possible.
 - 3. Geotextile fabric shall be placed on smooth subgrade and all wrinkles removed. All seams shall overlap a minimum of six (6) inches.
 - 4. Machinery shall not disturb or travel on the geotextile fabric.
- C. Wear Mats
 - 1. Place all wear mats in the required areas per this specification, Part 2, 2.1, B.
 - 2. All wear mats shall be installed as per the manufacturer's specifications to assure maximum impact protection for proposed equipment fall heights.
- D. Engineered Wood Fiber (EWF) Safety Surfacing
 - 1. Place Engineered Wood Fiber Safety Surfacing in all remaining areas, as indicated on the plans.
 - 2. All material must be installed to allow for settling and natural compaction.

3.5 GUARANTEE and MAINTENANCE

- A. All Materials and Installations shall be guaranteed by the manufacturer/supplier for a period of one year beyond the date of final acceptance by the Owner. The manufacturer/supplier shall provide a written maintenance plan to the Owner which describes, in detail, any, and all maintenance requirements which will need to be accomplished during the life of the safety surfacing.

3.6 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Remove excess excavated material, trash, debris and waste materials and legally dispose of such off the property, except as otherwise specifically noted.

3.7 ACCEPTANCE

- A. Inspection will be made jointly by the Contractor, Engineer, and the Owner's representative.
- B. Upon acceptance of the work by the Engineer and owner, the project will be approved for final payment.

END OF SECTION 32 18 16.33

SECTION 32 33 00

SITE FURNISHINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Furnishing and installing all items of site furnishings or amenities as shown on drawings, as herein specified and/or as required for a complete job.
- B. Related Requirements:
 - 1. Section 01 30 00 - Submittal Procedures
 - 2. Section 03 30 00 - Cast in Place Concrete
 - 3. Submit shop drawings and product data for all items to be installed within this section.

PART 2 - PRODUCTS

2.1 MATERIAL

- A. Contractor to reuse existing benches from site.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. The Contractor shall be responsible for any assembly requirements and installation of site furnishings including concrete footings. Assemble and install per manufacturer's instructions.
- B. Field located with Owner/Engineer prior to installation, unless noted otherwise.

END OF SECTION 32 33 00

SECTION 32 91 19
LANDSCAPE GRADING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Final grade topsoil for finish landscaping.
- B. Related Sections:
 - 1. Section 31 23 23 - Fill
 - 2. Section 32 05 13 - Soils for Earthwork

1.2 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures
- B. Materials Source: Submit name of imported materials source.
- C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.3 QUALITY ASSURANCE

- A. Furnish each topsoil material from single source throughout the Work.
- B. Perform Work in accordance with Michigan Department of Transportation standard.
- C. Maintain one copy on site.

PART 2 - PRODUCTS

2.1 MATERIAL

- A. Topsoil: as specified in Section 31 05 13.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify substrate base has been contoured and compacted.

3.2 PREPARATION

- A. Protect landscaping and other features remaining as final Work.
- B. Protect existing structures, fences, sidewalks, utilities, paving, and curbs.

3.3 SUBSTRATE PREPARATION

- A. Eliminate uneven areas and low spots.
- B. Remove debris, roots, branches, and stones in excess of ½ inch in size. Remove contaminated subsoil.
- C. Scarify surface to depth of 3 inches where topsoil is scheduled. Scarify in areas where equipment used for hauling and spreading topsoil has compacted subsoil.

3.4 PLACING TOPSOIL

- A. Place topsoil in areas where seeding is required. Place topsoil during dry weather.
- B. Fine grade topsoil to eliminate rough or low areas. Maintain profiles and contour of subgrade.
- C. Remove roots, weeds, rocks, and foreign material while spreading.
- D. Lightly compact placed topsoil.
- E. Remove surplus subsoil and topsoil from site.
- F. Leave stockpile area and site clean and raked, ready to receive landscaping.

3.5 PROTECTION OF INSTALLED WORK

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
- B. Prohibit construction traffic over topsoil.

3.6 SCHEDULES

- A. Compacted topsoil thicknesses: Minimum four inches (4") thickness.
 - 1. Seeded Grass: 3 inches.

END OF SECTION 32 91 19

SECTION 32 92 19

SEEDING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Fertilizing.
 - 2. Seeding.
 - 3. Maintenance.
- B. Related Sections:
 - 1. Section 32 05 13 – Soils for Earthwork
 - 2. Section 32 91 19 – Landscape Grading

1.2 DEFINITIONS

- A. Weeds: Vegetative species other than specified species to be established in given area.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data for seed mix, fertilizer, mulch, and other accessories.
- C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

- A. Provide seed mixture in containers showing percentage of seed mix, germination percentage, inert matter percentage, weed percentage, year of production, net weight, date of packaging, and location of packaging.
- B. Perform Work according to Michigan Department of Transportation standards.
- C. Maintain one copy of document on site.

1.5 QUALIFICATIONS

- A. Seed Supplier: Company specializing in manufacturing Products specified in this section with minimum three years experience.

- B. Installer: Company specializing in performing work of this section with minimum three years experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.
- B. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable.
- C. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

1.7 MAINTENANCE SERVICE

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for maintenance service.
- B. Maintain seeded areas immediately after placement until grass is well established and exhibits vigorous growing condition.

PART 2 - PRODUCTS

2.1 SEED MIXTURE

- A. Furnish materials according to Michigan Department of Transportation standards.
- B. Description:
 - 1. Perennial Ryegrass: 20 percent.
 - 2. Kentucky Blue Grass: 30 percent.
 - 3. Creeping Red Fescue Grass: 50 percent.

2.2 ACCESSORIES

- A. Mulching Material: Oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable.
- B. Fertilizer: Commercial grade; recommended for grass; of proportion necessary to eliminate deficiencies of topsoil to the following proportions: Nitrogen 12 percent, phosphoric acid 12 percent, soluble potash 12 percent.
- C. Water: Clean, fresh and free of substances or matter capable of inhibiting vigorous growth of grass.

2.3 SOURCE QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Testing, inspection and analysis requirements.

- B. Analyze to ascertain percentage of nitrogen, phosphorus, potash, soluble salt content, organic matter content, and pH value.
- C. Provide recommendation for fertilizer and lime application rates for specified seed mix as result of testing.
- D. Testing is not required when recent tests and certificates are available for imported topsoil. Submit these test results to testing laboratory. Indicate, by test results, information necessary to determine suitability.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify prepared soil base is ready to receive the Work of this section.

3.2 FERTILIZING

- A. Apply fertilizer at application rate 500 lbs. per acre.
- B. Apply after smooth raking of topsoil and prior to roller compaction.
- C. Do not apply fertilizer at same time or with same machine used to apply seed.
- D. Mix fertilizer thoroughly into upper 2 inches of topsoil.
- E. Lightly water soil to aid dissipation of fertilizer. Irrigate top level of soil uniformly.

3.3 SEEDING

- A. Apply seed at rate of 220 lbs per acre evenly in two intersecting directions. Rake in lightly.
- B. Do not seed areas in excess of that which can be mulched on same day.
- C. Planting Season: April 15 through October 10.
- D. Do not sow immediately following rain, when ground is too dry, or when winds are over 12 mph (19 km/h).
- E. Roll seeded area with roller not exceeding 112 lbs/linear foot.
- F. Immediately following seeding, apply mulch to thickness of 1/8 inches. Maintain clear of shrubs and trees.

- G. Apply water with fine spray immediately after each area has been mulched. Saturate to 4 inches of soil.

3.4 HYDROSEEDING

- A. Apply seeded slurry for lawn with a hydraulic seeder at a rate of 8 lbs. per 1000 sq. ft. evenly in two intersecting directions. Native seed will be seeded at the rate earlier specified in this section.
- B. Do not hydroseed area in excess of what which can be mulched on same day.
- C. Immediately following seeding, apply mulch at a rate of 50 lbs. per 1000 sq. ft. Maintain clear of shrubs and trees.
- D. Apply water with a fine spray immediately after each are has been mulched. Saturate to 3 inches of soil.

3.5 SEED PROTECTION

- A. Cover seeded slopes where grade is 4 inches per foot or greater with erosion fabric. Roll fabric onto slopes without stretching or pulling.
- B. Lay fabric smoothly on surface, bury top end of each section in 6 inch (150 mm) deep excavated topsoil trench. Overlap edges and ends of adjacent rolls minimum 12 inches (300 mm). Backfill trench and rake smooth, level with adjacent soil.
- C. Secure outside edges and overlaps at 36 inch (900 mm) intervals with stakes.
- D. Lightly dress slopes with topsoil to ensure close contact between fabric and soil.
- E. At sides of ditches, lay fabric laps in direction of water flow. Lap ends and edges minimum 6 inches (150 mm).

3.6 MAINTENANCE

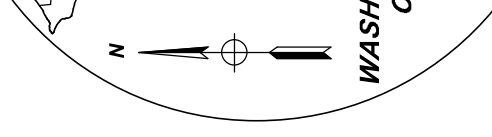
- A. Immediately reseed areas showing bare spots.
- B. Repair any eroded areas and reseed immediately.
- C. Contractor shall guarantee a uniform grass growth over the entire project and shall reseed bare and thin areas until this is accomplished at no additional cost to the project.
- D. Water to prevent grass and soil from drying out.
- E. Roll surface to remove minor depressions or irregularities.
- F. Control growth of weeds. Apply herbicides. Remedy damage resulting from improper use of herbicides.
- G. Repair washouts or gullies.

- H. Protect from traffic and erosion in newly seeded areas is the responsibility of the Contractor. Safety fences and/or silt fences with appropriate signage may be used at the Contractor's expense until the grasses are fully established.

END OF SECTION 32 92 19

BURN WEST V

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GENERAL NOTES

NO WORK SHALL BE PERFORMED BEFORE 7:00 AM OR AFTER 7:00 PM MONDAY THROUGH SATURDAY. NO WORK SHALL HAPPEN ON SUNDAYS OR HOLIDAYS. UNLESS AUTHORIZED BY THE OWNER.

CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS PRIOR TO START OF CONSTRUCTION. CONSTRUCTION STAKING AND INSPECTION.

CONTRACTOR TO PROVIDE DUST CONTROL AND SWEEP ROADS DAILY.

ALL EXCAVATED MATERIAL NOT TO BE REUSED OR DISPOSED OF ON SITE SHALL BE REMOVED FROM SITE. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSING MATERIALS ACCORDING TO LOCAL AND STATE REQUIREMENTS.

UNDERGROUND UTILITIES/MISS DIG FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 1-800-482-7171 OR 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER AS TO WHERE POSSIBLE CONFLICT EXISTS.

ALL CONSTRUCTION UNDER EXISTING UTILITIES, INCLUDING HOUSE SERVICES, SHALL BE COMPLETELY BACKFILLED WITH SAND, IN 12" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM UNIT WEIGHT.

ANY UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE SUPPORTED, PER THE SPECIFICATIONS OF THE INDIVIDUAL UTILITY COMPANY CLAIMING OWNERSHIP OF THE UTILITY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTH-DISTURBING ACTIVITIES. PLACE TURF ESTABLISHMENT ITEMS AS SOON AS POSSIBLE ON POTENTIAL ERODIBLE SLOPES AS DIRECTED BY THE ENGINEER. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH EITHER SOD OR SEED/MULCH OR MULCH BLANKET AS DIRECTED BY THE ENGINEER.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE AND MAINTAINED UNTIL THE CONTRACT HAS BEEN COMPLETED AND ACCEPTED. MEASURES SHALL ONLY BE PAID FOR ONCE.

ALL CATCHBASINS AND SEDIMENTATION TRAP/BASIN SHALL BE CLEANED OUT UPON COMPLETION OF THE PROJECT.

ALL DEWATERING REQUIRED FOR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR UTILITY BEING INSTALLED.

ALL RIPRAP SHALL BE MDOT PLAIN RIPRAP TYPE MATERIAL, UNLESS OTHERWISE NOTED.

CONTRACTORS SHALL FINISH GRADE, SEED, FERTILIZE, AND MULCH DAILY ON ALL DISTURBED AREAS.

CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL ACT, PART 91 OF ACT 451 OF 1994.

PROPERTY OWNERS' NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THEIR ACCURACY IS NOT GUARANTEED.

ADJUSTING MONUMENT BOXES
ALL GOVERNMENT CORNERS ON THIS PROJECT SHALL BE PRESERVED. WHETHER SHOWN OR NOT, IT MAY BE

SITE WORK
ELECTRIC SERVICE TO BUILDING
SERVICE LINES AND PAD LOCATED
WITH UTILITY COMPANY.

ALL TRENCHED CONSTRUCTION
SHALL BE COMPLETELY BACKFILLED
LAYERS AND COMPACTED TO NOT LESS
THAN 95% OF THE MAXIMUM UNIT WEIGHT.

UNPAVED AREAS SHALL BE FINISHED
TO A MAXIMUM DESIRABLE SLOPE.

CONTRACTOR IS RESPONSIBLE FOR
ADJACENT EXISTING AND PROPOSED
DIMENSIONS SHOWN ARE TO BE MAINTAINED.

WHERE A DISCREPANCY OCCURS
NOTIFY THE ENGINEER FOR CLARIFICATION.

PAVEMENT / SIDEWALK
CONTRACTOR SHALL SAWCUT
PAVEMENT AND CURB & GUTTERS.

HMA PAVEMENT AND OR OTHER
WHEN RAIN IS FORECAST TO OCCUR.

SIDEWALK SHALL BE CONSTRUCTED
SLOPES NOT TO EXCEED 2% TO
CURBS OR PAVEMENT.

IN GRASS AREAS, THE SURFACE
SURFACE, UNLESS NECESSARY FOR
PAVEMENT.

THE CONTRACTOR SHALL PROTECT
VANDALISM. DAMAGED HMA SHALL
BE REPAIRED.

PAVEMENT MARKINGS AND
ALL PERMANENT PAVEMENT
MARKING TYPICALS PAVE-9-9.

PARK OPERATIONS
PARK SHALL BE CLOSED DURING
CONSTRUCTION. CLOSED SIGNS.

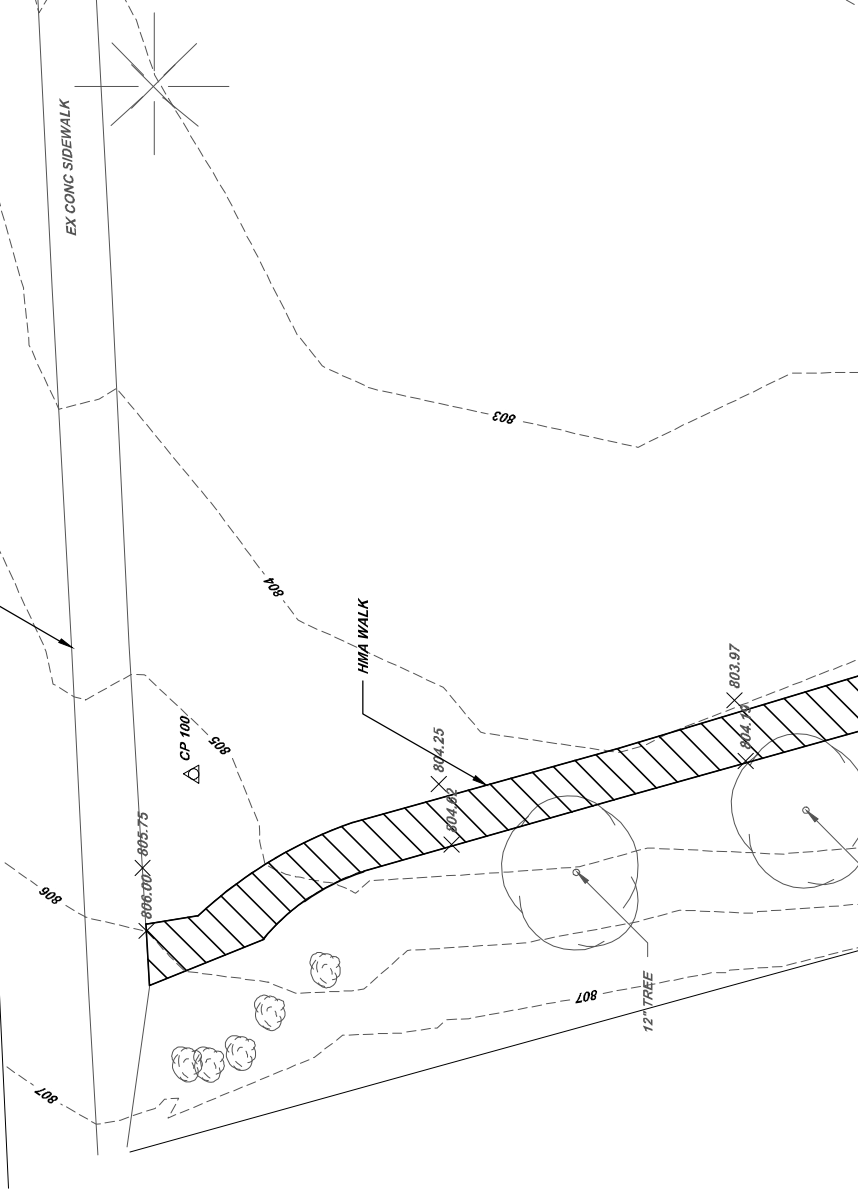
CONC SIDEWALK

EX CONC SIDEWALK

HMA WALK

CP 100

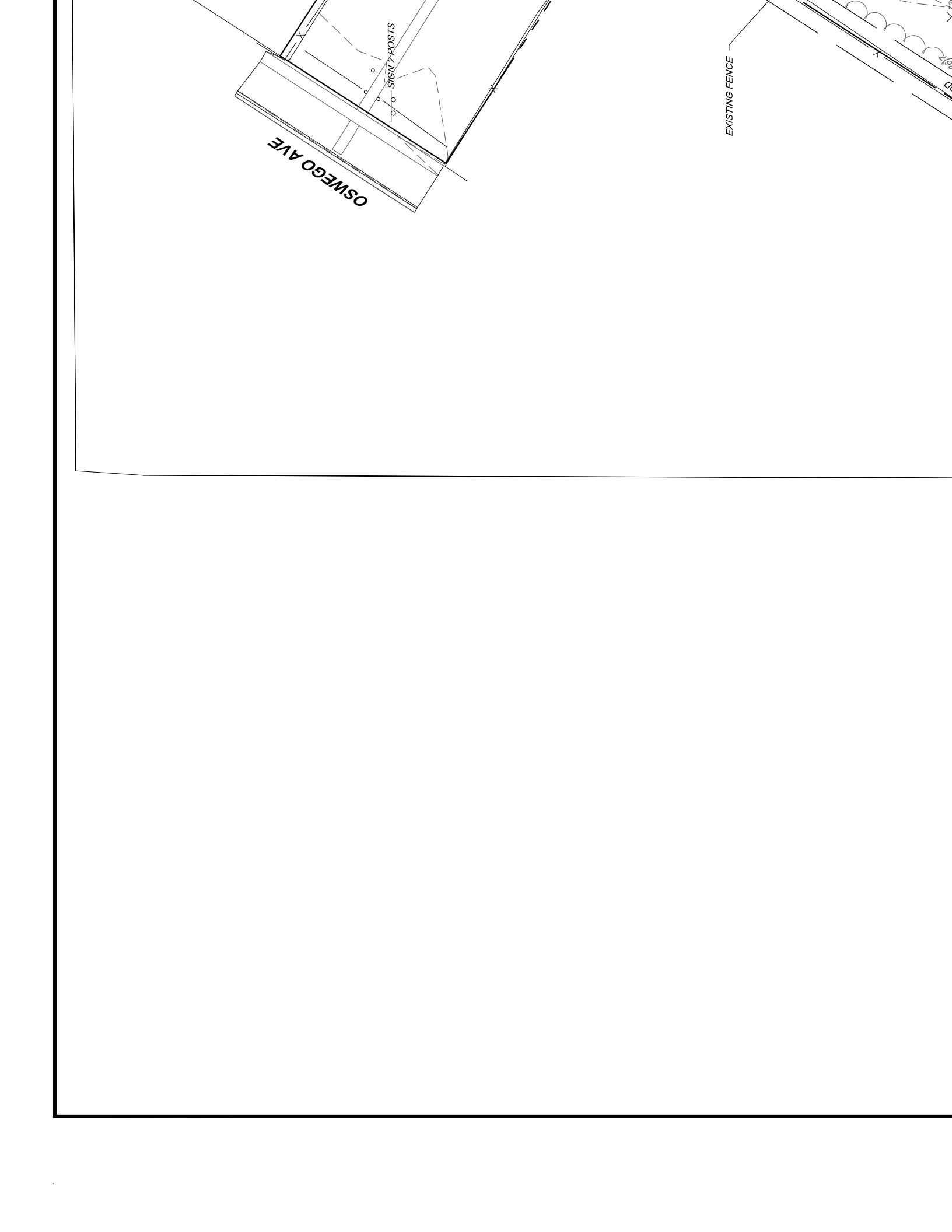
12" TREE

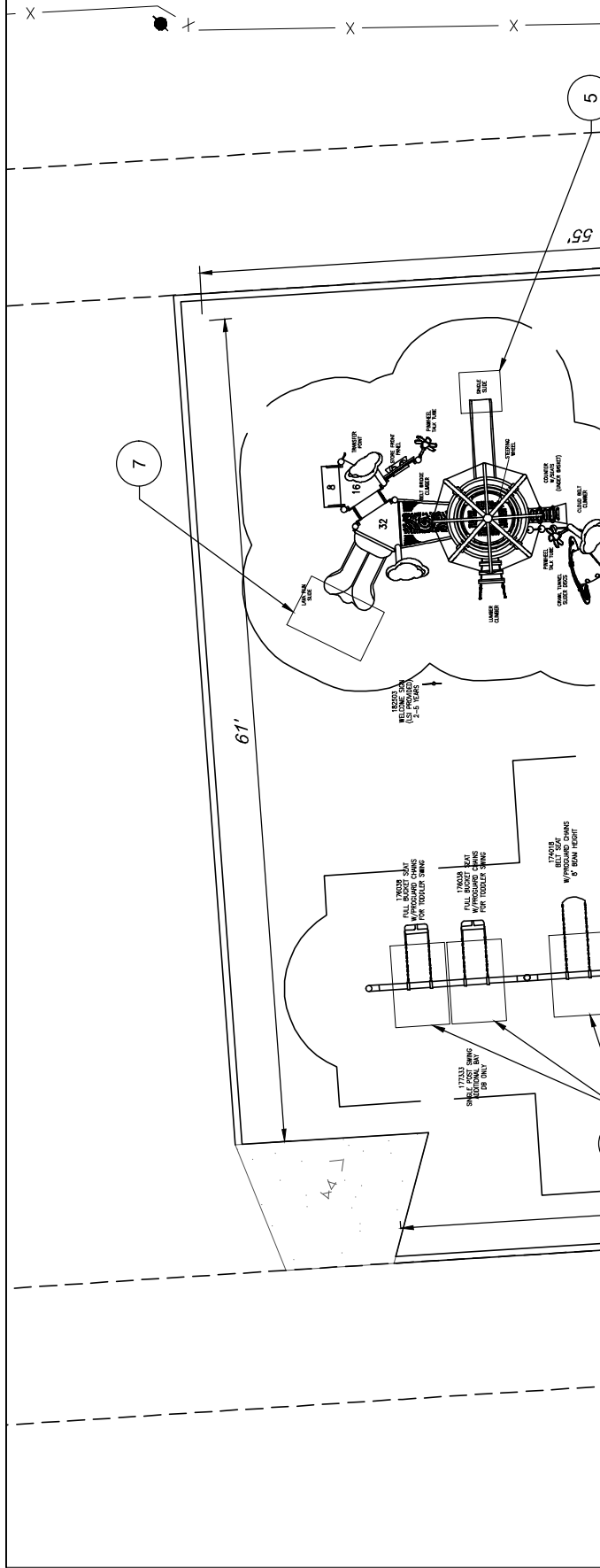


OSWEGO AVE

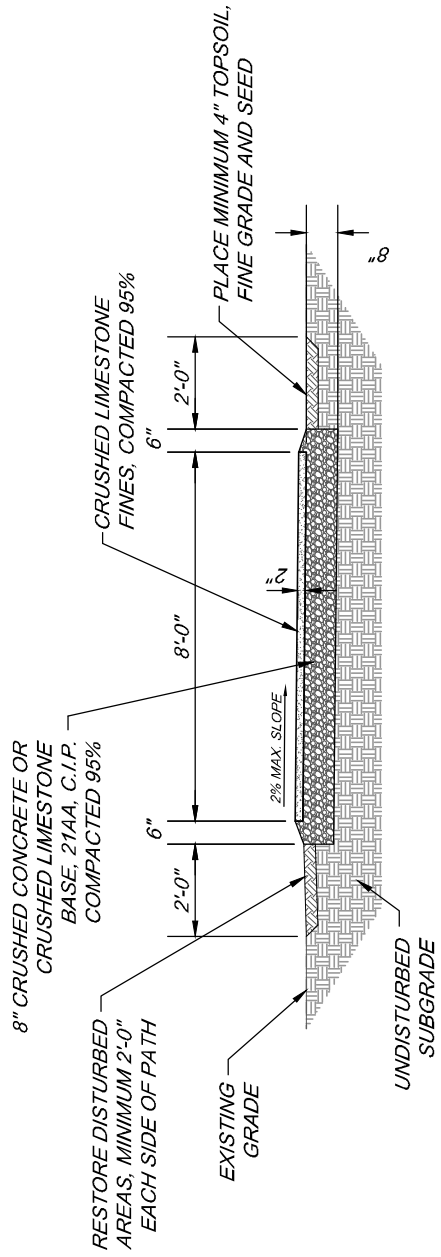
SIGN POSTS

EXISTING FENCE





NOTE: THE PROPOSED ACCESSIBLE PATH'S RUNNING SLOPE SHALL NOT EXCEED 5% (1:20) SLOPE AND THE PATH'S CROSS SLOPE SHALL NOT EXCEED 2%, UNLESS OTHERWISE NOTED.

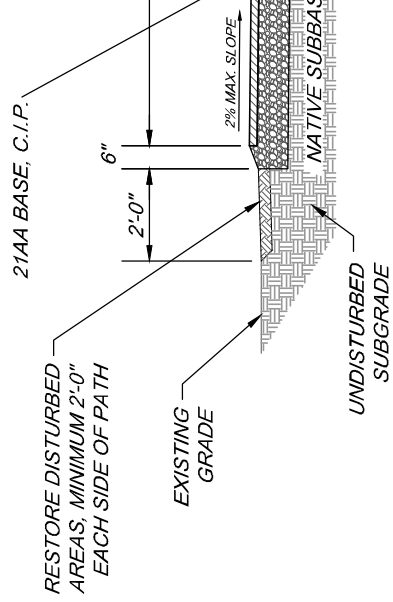


1 TYP. STONE PATH CROSS SECTION

NOT TO SCALE

1 DP-7

NOTE: THE PROPOSED ACCESSIBLE PATH'S RUNNING SLOPE SHALL NOT EXCEED 5% (1:20) SLOPE AND THE PATH'S CROSS SLOPE SHALL NOT EXCEED 2%, (1:50) UNLESS OTHERWISE NOTED.

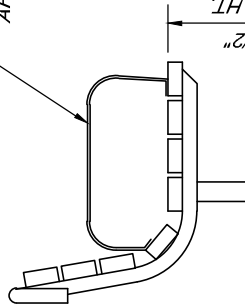


2 TYP. HMA PATH

NOT TO SCALE

2 DP-7

ADA PARK BENCH WITH ARMREST ONE END ONLY



EXISTING SAFETY SURFACE

SIDEWALK CONSTRUCTION NOTES:

- PROVIDE EXPANSION JOINTS:
- AROUND STRUCTURES LOCATED WITHIN THE SIDEWALK.
- AT SLAB ADJACENT TO DRIVEWAY CROSSING.

NEW BUSINESS

Township Supervisor
Brenda L. Stumbo
Township Clerk
Heather Jarrell Roe
Township Treasurer
Stan Eldridge



**YPSILANTI
TOWNSHIP**
— OFFICE OF THE SUPERVISOR —

Trustees
Ryan Hunter
John Newman II
Gloria Peterson
Debbie Swanson

MEMORANDUM

To: Charter Township of Ypsilanti Board of Trustees

From: Brenda Stumbo, Township Supervisor

Date: May 15, 2024

RE: Request to authorize and sign a contract with the Washtenaw County Sheriff's Office and Washtenaw County to facilitate collaborative sharing of a School Resource Officer for the summer months with the Lincoln Consolidated School District in the amount of \$30,263.21; budgeted in line 266-301-831.008

For the past 15 years, Ypsilanti Township has collaborated with local school districts that employ a School Resource Officer (SRO) through the Washtenaw County Sheriff's Office. The SRO's are assigned to the school districts during the academic school year, while the Township utilizes them during the summer months. This is a win-win because the Township contracts for the school deputy during the summer months when schools are closed, which helps the school district and provides additional coverage for the Township. This is especially helpful during a time that the Sheriff's Department faces challenges fulfilling contract deputies, a nationwide issue.

This year, we will add the SRO from the Lincoln Consolidated School district for the period of June 16, 2024 through August 17, 2024 at a cost of \$30,263.21.

The cost is based on the 2024 Police Service Unit annual price of \$177,290 prorated for the length of the contract. These rates are subject to change based on staffing availability.

Thank you for your consideration.

CC: McLain & Winters, Township Attorneys
Chad Teets, Lieutenant WCSO

AGREEMENT TO ASSIGN THE LINCOLN CONSOLIDATED SCHOOL DISTRICT
CONTRACTUAL DEPUTY TO YPSILANTI TOWNSHIP FOR THE TIME PERIOD
OF JUNE 16, 2024 THROUGH AUGUST 17, 2024

AGREEMENT is made this 6 May 2024 by YPSILANTI TOWNSHIP, a Michigan municipal corporation located at 7200 S. Huron River Drive, Ypsilanti, Michigan, ("Township"), the LINCOLN CONSOLIDATED SCHOOL DISTRICT, located at 8970 Whittaker Road, Ypsilanti, Michigan ("School"), the COUNTY OF WASHTENAW, a municipal corporation, with offices located in the County Administration Building, 220 North Main Street, Ann Arbor, Michigan ("County") and the WASHTENAW COUNTY SHERIFF'S OFFICE located at 2201 Hogback Road, Ann Arbor, Michigan ("Sheriff")

WHEREAS, the Township and the School currently contract with the County and the Sheriff to provide contractual police services in their respective jurisdictions and;

WHEREAS, the deputy assigned to the School is primarily used during the standard school year of August through early June; and

WHEREAS, Ypsilanti Township and the School have discussed and agreed upon a sharing arrangement, whereby the deputy assigned to the School will work for the Township from June 16, 2024 through August 17, 2024 with the Township being financially responsible for that deputy for the time that he/she works for the Township; and

WHEREAS, the School deputy will be reassigned to the Township and given assignments as agreed upon by the Township and Sheriff, thereby enhancing police services in the Township during the summer months.

WHEREAS, the parties now desire to memorialize this Agreement to writing.

NOW THEREFORE, the parties agree as follows:

ARTICLE I – Assignment of Contractual Deputy

The parties agree that beginning on June 16, 2024 and concluding on August 17, 2024 the contractual deputy assigned to Lincoln Consolidated School District will be reassigned to the Ypsilanti Township. Upon expiration, the deputy will be reassigned back to the Lincoln Consolidated School District.

ARTICLE II - TERM

This contract shall begin on June 16, 2024 and continue through August 17, 2024.

ARTICLE III –PAYMENT FOR REASSIGNED DEPUTY

During the term of this Agreement, the parties agree that the Township shall be responsible to pay the County for the price of the reassigned deputy at the rates established and agreed upon in the police service contract currently in effect between the County, Township and Sheriff, which Agreement is incorporated by reference into this Agreement. Using these rates, the price of the reassigned deputy for the term of this contract shall be \$30,263.21 payable by the Township as follows: June invoice--\$7,387.08; July invoice--\$14,774.17; August invoice--\$8,101.96. These rates are subject to change based on the availability of staffing levels and the implementation of this contract.

ARTICLE IV- CHANGES IN SCOPE OR SCHEDULE OR SERVICES

Changes mutually agreed upon by the parties will be incorporated into this Agreement by written amendments signed by all parties.

ARTICLE V - EXTENT OF CONTRACT

The terms of this document represents the entire agreement between the parties on the reassignment of the School contractual deputy to the Township for the term described in this Agreement and supersedes all prior representations, negotiations or agreements whether written or oral on this matter.

YPSILANTI TOWNSHIP

WASHTENAW COUNTY

By: _____
Brenda Stumbo (DATE)
Supervisor

By: _____
Gregory Dill (DATE)
County Administrator

By: _____
Heather Jarrell Roe (DATE)
Clerk

WASHTENAW COUNTY SHERIFF'S OFFICE

LINCOLN CONSOLIDATED SCHOOLS

By: _____
Jerry L. Clayton
Sheriff

By: _____
Robert Jansen
Superintendent

APPROVED AS TO FORM:

ATTESTED TO:

By: _____
Michelle K. Billard
Office of Corporation Counsel

By: _____
Lawrence Kestenbaum (DATE)
County Clerk/Register

Township Supervisor
Brenda L. Stumbo
Township Clerk
Heather Jarrell Roe
Township Treasurer
Stan Eldridge



**YPSILANTI
TOWNSHIP**
— OFFICE OF THE SUPERVISOR —

Trustees
Ryan Hunter
John Newman II
Gloria Peterson
Debbie Swanson

MEMORANDUM

To: Charter Township of Ypsilanti Board of Trustees

From: Brenda Stumbo, Township Supervisor

Date: May 15, 2024

RE: Request to authorize signing of Washtenaw County Road Commission (WCRC) 2024 Third Agreement in the amount of \$1,861,865.87, budgeted in line number 101-902-981.130, which was recommended by OHM and the Road Commission

Attached for the Board's consideration is the 2024 Third Road Agreement with the Washtenaw County Road Commission. Also included are maps of the projects.

The first item is to finish the milling and resurfacing of Greene Farms Subdivision, which was started with the 2023 Road Agreement.

The second listed project is Phase 1 of Sugarbrook in coordination with the Ypsilanti Community Utilities Authority Water Main replacement project. The pavement will be milled after the water main replacement, and then resurfaced. There will also be sidewalk repairs and ADA ramp installed.

The Road Commission and OHM worked together to recommend these roads. These road projects will be ARPA funded.

Thank you for your consideration.

2024 YPSILANTI TOWNSHIP THIRD AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 2024, by and between the Township Board of Ypsilanti Township ("Ypsilanti Township"), Washtenaw County, and the Board of Washtenaw County Road Commissioners ("WCRC").

WHEREAS, Ypsilanti Township desires that certain improvements be made upon the local roads in the Township of Ypsilanti, and

WHEREAS, proper authority is provided to the parties of the agreement under the provisions in Act 51 of Public Acts of 1951 as amended,

IT IS NOW THEREFORE AGREED, the WCRC will accomplish the improvements as specified herein, all in accordance with the standards of the Board of Washtenaw County Road Commissioners,

IT IS FURTHER AGREED, Ypsilanti Township shall pay WCRC for the actual project costs incurred for the project; and

IT IS FURTHER AGREED, the WCRC will submit an invoice to the Township on July 1, 2024, for 50% of the estimated project costs. Following project completion and final accounting of the project costs, WCRC will submit the final invoice for the actual remaining unpaid costs. The final invoice shall provide supporting detail and information, which reasonably identifies the actual project costs incurred by WCRC. The Township described herein agrees to remit payment within 30 days from receipt of WCRC invoices.

Greene Farms Subdivision 2024:

Work to include forestry, milling the existing pavement, the placement of 2" HMA resurfacing, ADA sidewalk ramp upgrades, and associated project restoration.

Roads to include:

(Phase 5)

Berwick Drive, Warwick Drive to Roxbury Drive
Berwick Court, Berwick Drive to End of Road
Hampton Drive, Hitchingham Road to Berwick Drive
Hampton Court, Hampton Drive to End of Road
Houston Court, Berwick Drive to End of Road
Crest Drive, Hitchingham Road to Berwick Drive
Oxford Court, Crest Drive to End of Road

(Phase 6)

Marlow Drive, Bemis Road to Essex Drive
Essex Drive, Marlow Drive to Warwick Drive
Kensington Drive, Essex Drive to Amrhein Drive
Carlton Drive, Essex Drive to Amrhein Drive
Warwick Drive, Essex Drive to Amrhein Drive
Amrhein Drive, Bemis Road to Roxbury Court

(Phase 7)

Warwick Drive, Bemis Road to Essex Drive
Essex Drive, Warwick Drive to Marlow Drive
Winterfield Drive, Essex Drive to Warwick Drive
Newbury Drive, Essex Drive to Warwick Drive

Estimated project cost for Greene Farms Subdivision 2024:

\$ 1,180,000.00

2024 Ypsilanti Township Third Agreement

Sugarbrook 2024:

As a division of the Ypsilanti Community Utilities Authority contract, work to include milling the existing pavement, the placement of 2" HMA resurfacing, ADA sidewalk ramp upgrades, and associated restoration.

Roads to include:

McCarthy Street, Knowles Street to Conway Street
McCarthy Court, Conway Street to End of Road
Knowles Street, McCarthy Street to Andrea Avenue
Heather Ridge, McCarthy Street to Andrea Avenue
Lynn Avenue, McCarthy Street to Harry Street
Conway Street, McCarthy Street to Harry Street
Harry Street, Grove Road to Foley Avenue
Andrea Avenue, Harry Street to Foley Avenue
Foley Avenue, Harry Street to Andrea Street
Crittendon Avenue, Harry Street to Harmon Avenue

Estimated project cost for Sugarbrook 2024:

\$ 998,000.00

2024 Ypsilanti Township Third Agreement

AGREEMENT SUMMARY

2024 LOCAL ROAD PROGRAM

Greene Farms Subdivision 2024 (Phases 5, 6, 7)	\$ 1,180,000.00
Less WCRC 2024 Local Matching Funds	\$ 316,134.13
Subtotal	<u>\$ 863,865.87</u>

Sugarbrook 2024 \$ 998,000.00

ESTIMATED AMOUNT TO BE PAID BY YPSILANTI TOWNSHIP UNDER THIS AGREEMENT DURING 2024: **\$ 1,861,865.87**

CHARTER TOWNSHIP OF YPSILANTI:

Brenda Stumbo, Supervisor

Heather Jarrell Roe, Clerk

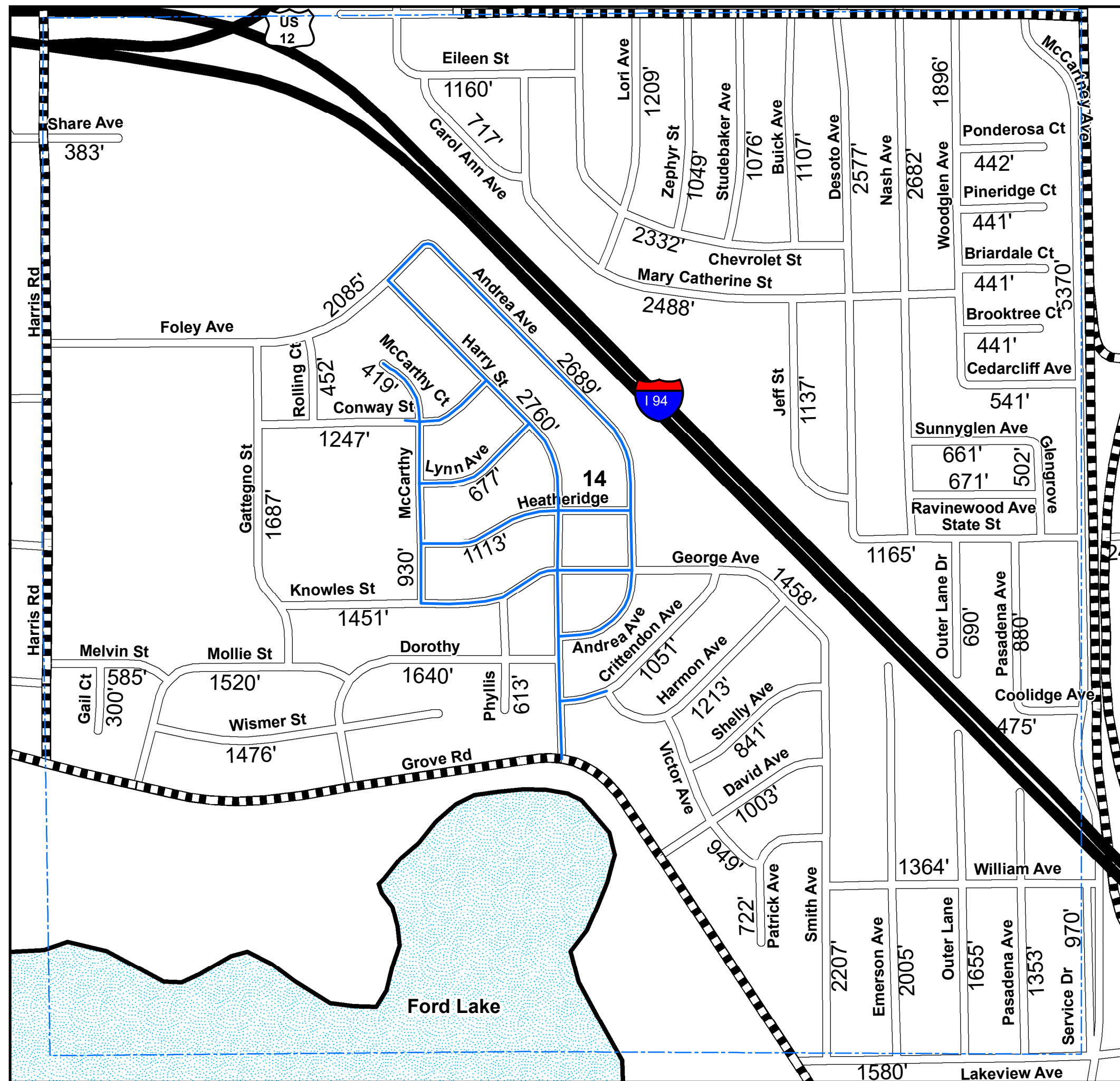
WASHTENAW COUNTY ROAD COMMISSION:

Barbara Ryan Fuller, Chair

Matthew MacDonell, Managing Director

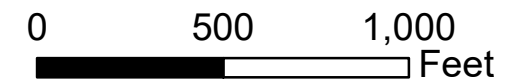


East Sugarbrook Subdivision



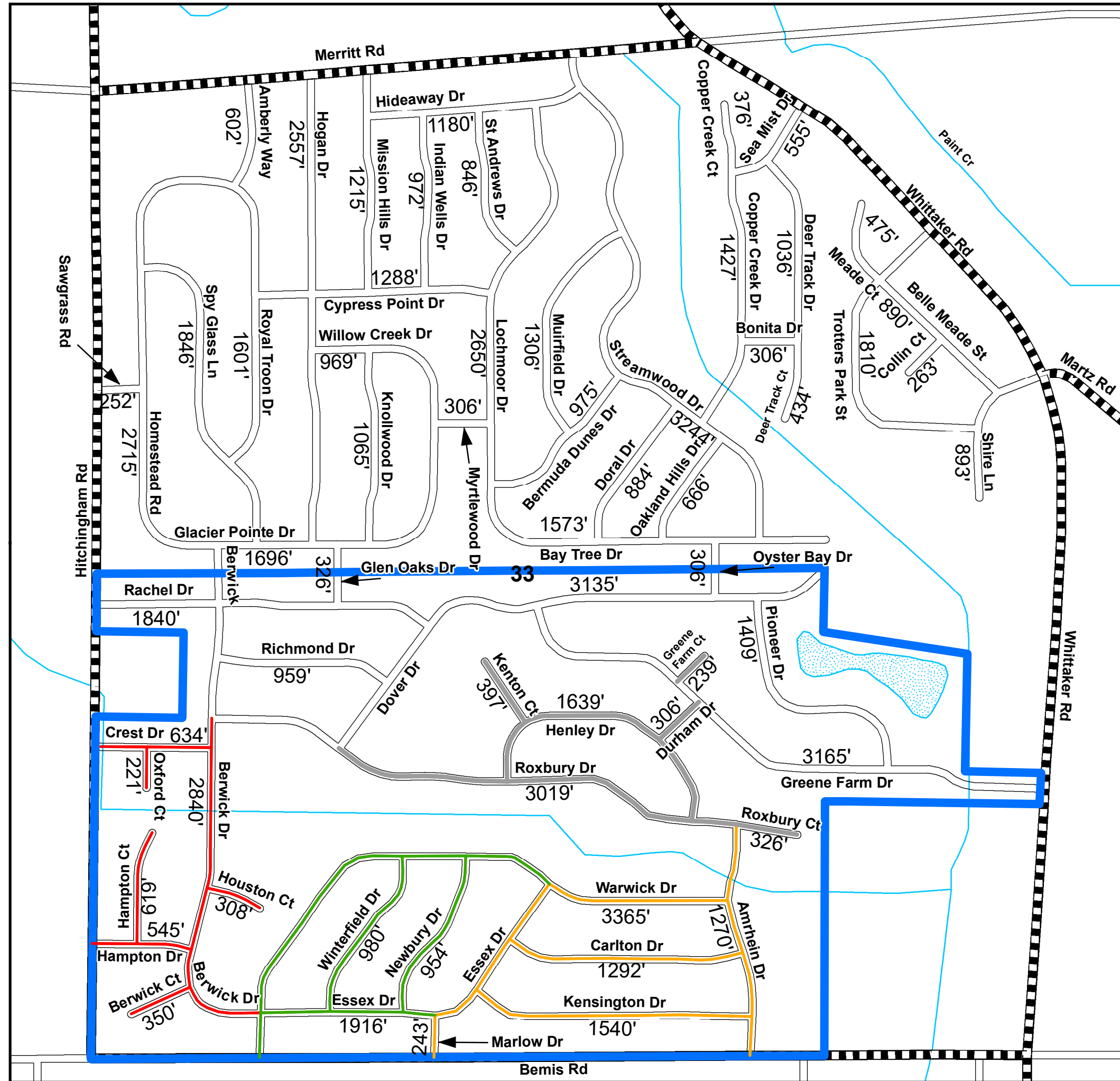
LEGEND

- County Primary
- County Local
- Project Limits





Greene Farms Subdivision HMA Paving



LEGEND

- County Primary
- County Local
- Subdivision Boundary
- Work Completed
- Work Proposed
 - Phase 5
 - Phase 6
 - Phase 7

0 500 1,000 Feet





MEMORANDUM

To: Charter Township of Ypsilanti Board of Trustees
From: Jeff Yahr, Assistant Municipal Services Director
CC: John Hines, Municipal Services Director
Date: May 15, 2024

RE: Request authorization from the Board to waive the bidding portion of the Financial Policy and review the three quotes obtained proactively and to accept the low quote from Diuble for the purchase of Bobcat Tractor.

The Residential Services Department is requesting to waive the portion of the financial policy which requires seeking sealed bids and to accept the low quote of \$28,694.80 from Diuble to approve the purchase of a Bobcat Tractor model CT2535 with loader for the Parks and Grounds Division budgeted in line 101-770-977.000.

The reason the Residential Services Department is seeking to waive the sealed bid portion of the financial policy is due to product availability and time frame of delivery. Diuble was selected for being the lowest quote and having the Tractor in stock currently. Parks and Grounds needs to have a tractor in it's fleet for field maintenance and the loader is used for any material needed for the ball fields and facility winter maintenance. This purchase would replace the current John Deere Tractor that is also utilized by the Golf Course staff.

Please see below for the quotes received during the process;

Diuble:	\$28,694.80
Weingartz:	\$44,131.12
John Deere:	\$52,318.53

Jeff Yahr
Assistant Municipal Services Director

AGCO
Allis-Chalmers
Deutz-Allis
Farmhand
Gleaner

Hesston
New Idea
Oliver
Sunflower
White



DIUBLE EQUIPMENT, INC.

4365 S. Parker Rd. • Phone: 734-994-1313
Ann Arbor, MI 48103 • Fax: 734-994-7872
www.diubleequipment.com



Bobcat

Bobcat Turf
Brillon
Ferris
H & S
Meyer

Shindaiwa
Simplicity
Swoopster
Unverferth
Woods

Quote: 8044.01 —
Created: 04/15/2024
Expires: 07/15/2024
Salesperson: SD

SCOTT

CHARTER TOWNSHIP OF YPSI
RESIDENTIAL SERVICES
7200 S HURON RIVER DR
YPSILANTI, MI 48197

Customer: 44020
Phone: 734-484-0073

Fax: 734-544-3501

page 1

Unit Sale: BCA CT2535 TRACTOR

32759.00

stock number: 49054
serial number: B4VP11579

BOBCAT CT2535 CAB TRACTOR W/LOADER

REBATE

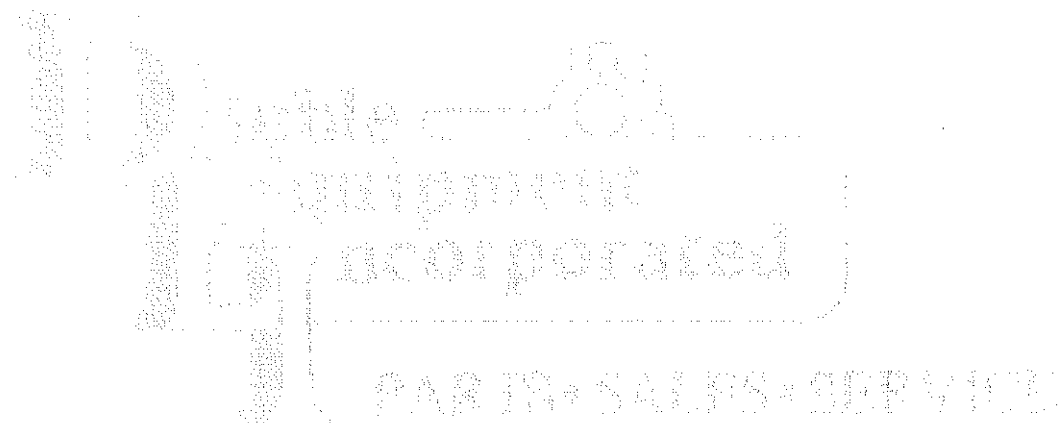
\$-4064.20

MUNICIPAL REBATE - BOBCAT TRACTOR/LOADER

Tax Number B 38-6007433

Sales Tax

0.00



THANK YOU FOR YOUR BUSINESS

Total Sale	\$28694.80
------------	------------



ALL PURCHASE ORDERS MUST BE MADE OUT TO (VENDOR):

Deere & Company
2000 John Deere Run
Cary, NC 27513
FED ID: 36-2382580
UEID: FNSWEDARMK53

ALL PURCHASE ORDERS MUST BE SENT TO DELIVERING DEALER:

Tri County Equipment, Inc.
3700 Lapeer Road
Auburn Hills, MI 48326
248-373-5000
jddealer@tricityequipment.net

Quote Summary

Prepared For:

Ypsilanti Township
MI
Home : 734-544-3511

Delivering Dealer:

Tri County Equipment, Inc.
Frank Cook
3700 Lapeer Road
Auburn Hills, MI 48326
Phone: 248-373-5000
fcook@tricityequipment.net

Quote ID: 30922333
Created On: 09 May 2024
Last Modified On: 09 May 2024
Expiration Date: 07 June 2024

Equipment Summary

Equipment Summary	Suggested List	Selling Price	Qty	Extended
JOHN DEERE 5060E Cab Utility Tractor Contract: MI Ag, Grounds, and Roadside 240000000161 (PG 3W CG 22) Price Effective Date: November 1, 2023	\$ 53,262.00	\$ 46,337.94 X	1 =	\$ 46,337.94
JOHN DEERE 520M Loader Contract: MI Ag, Grounds, and Roadside 240000000161 (PG 3W CG 22) Price Effective Date: November 1, 2023	\$ 7,767.00	\$ 5,980.59 X	1 =	\$ 5,980.59

Equipment Total **\$ 52,318.53**

* Includes Fees and Non-contract items

Quote Summary

Equipment Total	\$ 52,318.53
Trade In	
SubTotal	\$ 52,318.53
Est. Service Agreement Tax	\$ 0.00
Total	\$ 52,318.53
Down Payment	(0.00)
Rental Applied	(0.00)
Balance Due	\$ 52,318.53

Salesperson : X _____

Accepted By : X _____



Utility Tractors & Mowers - 031121
 CE and AG - 040319
 Utility Vehicles 122220
 NJPA Arkansas 4600041718
 NJPA Delaware 655-17673
 Nebraska 14777 (OC)
 Mississippi 8200067336

MX5400DTC WEB QUOTE #2769257

Date: 4/18/2024 12:06:52 PM

- Customer Information -

Wireman, Shelby
 139086

Charter Township of Ypsilanti
 swireman@ypsitownship.org
 734-544-4000

Quote Provided By
 WEINGARTZ SUPPLY CO.
 Brian Buddie
 46061 VAN DYKE AVE.
 UTICA, MI 48317
 email: bbuddie@weingartz.com
 phone: 5862625875

-- Standard Features --

-- Custom Options --



M Series

MX5400DTC

UTILITY CAB TRACTOR, 4WD, GEAR TRANSMISSION

*** EQUIPMENT IN STANDARD MACHINE ***

DIESEL ENGINE

Model # V2403
 Direct injection
 4 Cyl. 148.6 cu. in.
 ^ 53.0 Net Eng. HP
 ^ 46.5 PTO HP
 @ 2700 Eng. rpm
 EPA Tier 4 Emmission Cert.
 Turbo Common Rail Electronic Fuel Injection
 12V - 650 CCA Battery
 Charging Output 60 Amps

HYDRAULICS

Open Center - Gear Pump
 4.9 gpm Power Steering
 9.5 gpm Remote/3 Pt. Hitch
 14.4 gpm Total Hyd. Flow
 Cat I/II 3-point Hitch
 At lift Point 2870 lbs.
 24" Behind 2310 lbs.
 Telescoping Lower Links
 Telescoping Stabilizers

^ Manufacturer Estimate

FRONT AXLE

Hydrostatic Power Steering
 4WD: Cast Iron, Bevel Gear

TRANSMISSION

4-Speed Partially Synchronized
 8F / 8R Two Range
 Mech. Wet Disc Brakes
 Clutch - Dry
 Rear Differential Lock

INSTRUMENTS

Tachometer/Hour Meter
 Fuel Gauge Meter
 Warning Symbols
 Coolant Temperature Meter

SELECTED TIRES

sub63
 FRONT - 12-16.5 R4 TITAN HD-2000
 REAR - 17.5L-24 R4 TITAN INDUSTRIAL CONTRACTOR TL

FLUID CAPACITY

Fuel Tank 11.9 gal
 Cooling System 6.9 qts
 Crankcase with filter 7.4 qts
 Transmission and
 Hydraulics 11.6 gal

POWER TAKE OFF

Live-Independent Hydraulic
 540 rpm Rear PTO
 @ 2700 Eng. rpm
 SAE Std 1 3/8" Six Spline

SAFETY EQUIPMENT

2-Post Foldable ROPS w/
 Retractable Seat Belt
 Flip-Up PTO Shield
 Safety Start Switches
 Parking Brakes
 Electric Key Shut Off
 Turn Signals
 SMV Sign

OPERATORS PLATFORM

Semi-Flat Deck w/Hanging Pedals
 High Back Seat with Adjustable
 Suspension
 Tilt Steering
 Interior Light
 Interior Rearview Mirror
 Front Wiper with Washer
 A/C & Heater
 Speakers & Radio Pre-Wired
 Left Hand Step
 Horn
 Left & Right Hand Door
 Rubber Floor Mat
 Stationary PTO Switch
 Cup Holder
 Color Coded Controls

MX5400DTC Base Price: \$43,672.00

(1) LOADER VALVE FOR CAB MODELS \$934.00
 MX2132-LOADER VALVE FOR CAB MODELS

(1) FRONT LOADER MX SERIES W/O VALVE \$5,517.00
 LA1065A-FRONT LOADER MX SERIES W/O VALVE

(1) QUICK ATTACH 72" MATERIAL BUCKET \$817.00
 L2236-QUICK ATTACH 72" MATERIAL BUCKET

Configured Price: \$50,940.00

Sourcewell Discount: (\$11,206.80)

SUBTOTAL: \$39,733.20

2Yr MX5400DTC Extended Warranty \$1,250.00

Factory Assembly: \$325.00

Dealer Assembly: \$559.17

Freight Cost: \$1,093.75

PDI: \$400.00

Rim Guard \$770.00

Total Unit Price: \$44,131.12

Quantity Ordered: 1

Final Sales Price: \$44,131.12

**Final pricing will be based upon pricing at the time of
 final delivery to Sourcewell members.
 Purchase Order Must Reflect Final Sales Price.**

**To order, place your Purchase Order directly with the quoting
 dealer**

*Some series of products are sold out for 2022. All equipment specifications are as complete as possible as of the date on the quote. Additional attachments, options, or accessories may be added (or deleted) at the discounted price. All specifications and prices are subject to change. Taxes are not included. The PDI fees and freight for attachments and accessories quoted may have additional charges added by the delivering dealer. These charges will be billed separately. Prices for product quoted are good for 60 days from the date shown on the quote. All equipment as quoted is subject to availability.

Township Supervisor
Brenda L. Stumbo
Township Clerk
Heather Jarrell Roe
Township Treasurer
Stan Eldridge



**YPSILANTI
TOWNSHIP**
— RESIDENTIAL SERVICES DEPARTMENT —

Trustees
Ryan Hunter
John Newman II
Gloria Peterson
Debbie Swanson

MEMORANDUM

To: Charter Township of Ypsilanti Full Time Elected Officials

From: Robin Castle-Hine, Community Events Director

CC: Josh Kugler, Recreation Services Manager
John Hines, Municipal Services Director

Date: May 15, 2024

Subject: Request Authorization to accept the agreement with Run Signup to host Divot Dash 5K at Green Oaks Golf Course on October 5, 2024.

The Recreation Department is seeking approval to accept the agreement with Run Signup to utilize their platform to take registrations for Divot Dash 5K that will be hosted at the Green Oaks Golf Course on October 5, 2024.

Run Signup is a widely known registration platform that works with entities and municipalities to take registration for events and advertise the events to a wide range of potential users. By utilizing this website and the Recreation's own means of advertising; this event could have upwards of 300 signees.

This agreement has been reviewed by Township Legal and pending indemnification language modifications, are approved to move forward.

Robin Castle-Hine
Community Events Manager
rcastlehine@ypsitownship.org

The RunSignup Event Contract

1. **Overview and Scope.** RunSignup's Software-as-a-Service, or "SaaS", solutions (each a "**Service**") enable the provision of technology-based Service to help facilitate the administration and management of various races, activities, clubs, online giving sites, charitable donations and other events (collectively, "**Events**"). A Service may be used by directors or organizers of an Event, sponsoring organizations, charities, not-for-profit entities, and other individuals and entities managing or supporting an Event (collectively, "**Organizers**"). This Agreement is entered into between RunSignup and the Organizer of the Event which/who: (a) is duly authorized to receive the registration fees, donations, membership fees, ticket fees and any and all other payments which are processed and collected for the Event through the use of our Service (collectively, the "**Event Proceeds**"); or (b) is otherwise using the Service to support an Event. You represent that you are the Organizer or its authorized representative and have the requisite authority to enter into this Agreement and receive the Event Proceeds. Organizers using a Service are referred to in this Agreement collectively as "**you**" or "**yours**" or as the Organizer.
2. **Contracting Parties.** This Agreement is entered into between RunSignup, Inc., a Delaware corporation doing business as RunSignup, BikeSignup, TriSignup, SkiSignup, PaddleSignup, AdventureSignup, GiveSignup, and Ticketsignup (collectively, "**RunSignup**", "**we**" or "**us**") at 300 Mill Street, Suite 200, Moorestown, NJ 08057, and you.
3. **License, Restrictions and Intellectual Property Rights.**
 - a. We grant you a limited, non-exclusive, non-transferable, non-sublicensable license for you to use the Service on a time-bounded basis for the subscription period specified in the "Termination" provision below. You may use the Service, and shall ensure that your Authorized Users (defined in Section 3(d) below) use the Service, solely in support of your particular Event and solely for the purposes for which we designed the Service to be used as contemplated in this Agreement.
 - b. As applicable, the Service will be made available to you through one of our websites, including runsignup.com, bikesignup.com, trisignup.com, skisignup.com, paddlesignup.com, adventuresignup.com, givesignup.org, and ticketsignup.io, or through a mobile application or other cloud-based platform, which we may make available for your use (individually, a "**Site**" and collectively, the "**Sites**").
 - c. Unless expressly authorized in this Agreement, you shall not, and Organizers shall ensure that its Authorized Users (defined in Section 3(d) below) do not: (i) permit any third-party to access, use or copy all or any portion of the Service; (ii) modify, reverse engineer, decompile, disassemble, distribute, create derivative works based on, copy or otherwise exploit or circumvent access controls to all or any portion of the Service; (iii) sell, sublicense, rent, lease, or otherwise transfer rights to all or any portion of the Service; (vi) use the Service to operate in an outsourcing, service bureau or similar manner; or (v) use the Service in any manner which (a) poses a security risk, violates applicable laws or

regulations, or violates any acceptable use policy or other terms of use which are posted on the Sites where the Service is accessed; (b) overburdens or impairs the performance or operation of the Service or our hosted environment; (c) introduces offensive, pornographic, infringing or other inappropriate content; (d) poses a liability risk to Us; or (e) violates our [Code of Conduct](#) or similar policy to the extent posted on our Site. The restrictions, conditions, limitations and prohibitions regarding the Service which are set forth in this Agreement shall apply equally to the applicable Site(s) and the underlying technology throughout which the Service is provided. Any rights not granted hereunder are reserved by RunSignup.

d. You may only permit access to the Service by your employees and third parties (for example, volunteers or contractors) who you authorize to use the Service in support of the operations of the applicable Event and who are bound by the confidentiality, limited use, intellectual property and other applicable conditions and restrictions of this Agreement (“**Authorized Users**”). As the Organizer, you shall be responsible and liable to ensure that each Authorized User complies with the terms and conditions set forth in this Agreement.

e. We retain all right, title and interest in and to the Service and Sites (including, without limitation, the underlying technology, along with the features, functions, design, “look and feel”, graphics, branding, design and other content) and in and to the associated documentation and materials, and in all related intellectual property, modifications, enhancements and derivative works, including all know-how, methods and processes, as well as all related technology and all content (other than your posted Custom Content, as defined in Section 6(a) below), will belong solely and exclusively to RunSignup. In addition to the other restrictions and limitations set forth herein, you agree that, except as expressly authorized hereunder in connection with your use of the Service and a Site, you shall treat our intellectual property as confidential information and shall not disclose or distribute it, in whole or in part.

f. Nothing in this Agreement prevents you from using another registration provider or discontinuing use of the Service without penalty (but, if applicable, you shall pay any and all fees due under this Agreement) during the period which this Agreement is in effect.

4. Credit Card Information. In connection with the handling of credit card information in the provision of our Services, we have undergone a rigorous independent data security assessment to earn a designation as a Level 1 “**PCI-DSS**” (“**Payment Card Industry Data Security Standard**”) Service Provider. To the extent that we handle credit card information for your Event, we agree to maintain Level 1 PCI-DSS compliance during the term of this Agreement and to retain an independent, qualified firm to validate compliance on at least an annual basis. To the extent applicable, RunSignup agrees to provide you with proof of compliance on written request no more frequently than annually. RunSignup acknowledges that, when credit card information is used for transactions on our Site, we will employ measures designed to protect cardholder data under the requirements listed in the PCI-DSS once it has been encrypted by our SSL certificate and transmitted to our servers. We do not store any user credit card information on our servers, but pass that directly to a third party payment gateway for processing. For those users who request to

have their credit card data stored, we use a secure online credit card “vault” service. We will confirm that any third party payment gateways or third party vault services we use will have also been designated as PCI Level 1 compliant.

5. Information We Collect; Information Security

- a. In the course of providing the Services, we will collect certain information as follows:
- i. From individuals using the Sites and/or Service to registering for Events (each a “Participant”) or to set up a profile, we may collect their name, address, email address, gender, date of birth, phone number and other information, which we will store on our Sites as a profile (collectively, “**Profile Data**”).
 - ii. We will also store the lists and reports of Participants who have registered for the Event (“**Event Data**”). You may use the Event Data in support of the administration and support of your Event and to market your future Events to Participants and (as applicable solicit donations, subject to your compliance with this Agreement, applicable data security/privacy laws, and the terms of the RunSignup Privacy Policy.
 - iii. We will not use Profile Data or Event Data to market Events or other services directly to Participants and we will not share or sell Event Data to other Events or advertisers.
 - iv. If you are using a Service to facilitate the marketing of an Event or the payment and collection of fees or donations in connection with an Event, we will collect information from you, including your name, address, date of birth, tax identification number and other information that will allow us to identify you. We will also collect information about the entity that will receive the proceeds from the account if an entity will receive the proceeds (collectively, “**Organizer Data**”). The Organizer Data is required to satisfy various regulatory, credit card network, beneficial ownership, underwriting and “know your customer” requirements and guidelines for approving the payment account and to prevent funding terrorism and money laundering. We may request additional information to help us verify the information collected, or information needed, including information related to taxes described in Section 8, below. You agree to provide us this additional information. You consent to our use of independent third party services, including the use of credit reports, to verify information you provide and to determine the financial risk of processing transactions on your behalf. If any of the information you provide cannot be verified or is otherwise determined to be erroneous including by a state, local, or foreign government, you agree to indemnify RunSignup for any fees, penalties, or other charges imposed related to the erroneous information.
 - v. The Profile Data, Event Data and Organizer Data may be collectively referred to as “**Collected Data**”.
- b. We agree to maintain commercially reasonable safeguards designed to protect the Collected Data from unauthorized disclosure or use. You hereby consent to our collection, use and handling of Collected Data and other information which you provide to us or which our Service generates about you in a manner consistent with

this Agreement and the RunSignup Privacy Policy. Details regarding our handling of the Collected Data is set forth in the RunSignup privacy policy, which can be found at <https://RunSignup.com/About-Us/Privacy-Policy> (the “**RunSignup Privacy Policy**”), and you confirm that you have reviewed such policy and agree thereto. Such uses of data include: (i) the disclosure of Collected Data to third parties to support our provisioning of the Service; and (ii) the utilization of aggregated data pursuant to Section 5(c) below.

c. You shall maintain, and shall ensure that your Authorized Users maintain, the confidentiality of your user name, password and other account information (collectively, “**Account Information**”), which enables access and use of the Services. You shall maintain the confidentiality of your Account Information and be solely responsible for any unauthorized disclosure or use of such Account Information, along with any ensuing liability for any harm or damages caused thereby.

d. You shall protect the privacy and security of personal information and any other regulated information regarding registrants, Participants, members and others (including such information which is a part of Event Data) in accordance with all applicable laws, regulations, prevailing industry standards and other applicable data security guidelines (“**Data Security Laws**”). In addition, you shall ensure that: (i) you, and any other applicable party which accesses such information, has posted, and complies with, a privacy policy to address applicable collection, uses and storage practices; and (ii) such privacy policies comply with all applicable Data Security Laws.

e. You shall be solely responsible and liable for, and shall indemnify, defend and hold us harmless from, any liability or damages or harm of any kind incurred or alleged to have been incurred by any individual or entity which arises out, relates to or is connected with any actions or omissions of you or any Authorized User or any Participant which is based upon or results in the unauthorized access to, disclosure of, or breach of security or integrity or privacy regarding any information accessed, uploaded, provided, generated processed, utilized, stored or otherwise handled by you or us including but not limited to Event Data in connection with this Agreement, a Service or an Event.

6. Content You Post.

a. You, may choose to post, upload, publish, submit, display or transmit data, text, images, recordings, materials, logos, marks or other content on or through the Services or the Sites “**Custom Content**”). You may not post any content that infringes the intellectual property rights of another party.

b. You on behalf of your organization, each Authorized User and each Participant: hereby grant to RunSignup a non-exclusive, worldwide, royalty-free, perpetual, irrevocable, transferable license to use, display, reproduce, distribute, modify and transmit, in digital or printed form, all Custom Content in connection with the implementation, operation, maintenance and promotion of the Service and the promotion of your Event. However, we may also use your name, logo and/or other marks for the purpose of listing your organization as a user of our Service on our promotional materials (including on our

Site). We agree to discontinue such use of your name or marks, which we have inserted or posted in our promotional materials within ten (10) days of your written request. You represent and warrant that, to the extent that any Custom Content is owned by a third party, the owner has granted you the necessary rights to effectuate the license granted to us above.

c. You agree that we may de-personalize (remove any personally identifying information protected under applicable law) and aggregate any data, information or content which we collect, handle, store, process or otherwise access in connection with our provision of the Service (including data and Custom Content which you provide or post) to perform analytics, improve and market the Services, or for any other business or commercial purpose. We shall have no obligation or liability in connection with the use of any of data, information or content, which we de-personalize, unless and to the extent prohibited by applicable law.

7. Fees. Each online Participant using our Services will pay the registration fee charged by you plus a fee for processing such registrations (a “**Processing Fee**”), which is calculated and charged per transaction (not including donations) as follows:

Checkout Total (Not Including Donations)	Processing Fee
\$0	\$0
\$.01 to \$249.99	\$1.00 + 6.0% of Checkout Total
\$250.00 to \$999.99	\$1.00 + 5.0% of Checkout Total
\$1,000.00+	\$1.00 + 4.0% of Checkout Total

Processing Fees for donations are 4.0% of the donation total.

The Processing Fee is established by us and may be changed from time to time at our discretion but will always be clearly disclosed on our Sites to you and to your registrants. We will not change Processing Fees while your race or ticket-based Event is open and accepting registrations or transactions through the Service. We will be responsible for collecting all registration fees and Processing Fees and you hereby expressly consent to, and authorize us, to collect all such fees in connection with our provision of the Service.

8. Taxes. You will be responsible for the collection and payment of any and all sales and/or use tax (“**Sales Tax**”), excise, privilege taxes, duties, value added taxes, fees, assessments or similar liabilities (collectively, “Taxes”), except to the extent that (i) we automatically calculate, collect, or remit Sales Tax on your behalf according to applicable law (for more information, see our Site for details); or (ii) we expressly agree with you to receive Sales Tax or other transaction-based charges on your behalf in connection with your sales through our Site. Any and all fees payable by you and/or the online registrants pursuant to this Agreement, including but not limited to the Processing Fee are exclusive of all Taxes, and you and/or the online registrants will pay any Taxes that are imposed and payable on such amounts. All payments made by you to RunSignup under this Agreement

will be made free and clear of any deduction or withholding (including but not limited to cross-border withholding taxes), as may be required by law. If any such deduction or withholding is required on any payment, you will pay such additional amounts as are necessary so that the net amount received by RunSignup is equal to the amount then due and payable under this Agreement. Except as otherwise provided in this Agreement, you agree that RunSignup is not obligated to determine whether Taxes apply, and RunSignup is not responsible to collect, report, or remit any Taxes arising from any transaction. However, if a taxing authority requires us to pay any of your Taxes, you will promptly reimburse us for the amounts paid.

9. Important Information About Procedures for Opening a New Payment Account:

Establishing a payment account with RunSignup for the collection of fees or donations (a **"Payment Account"**) requires us to obtain, verify and record information that identifies each person who opens an account. When a payment account is opened, we will ask for certain Organizer Data (as defined in Section 5 above) and you agree to provide such information. We may ask you for additional information now or in the future if your payment processing increases or if we are unable to verify your identity or the identity or tax identification number for the entity that is receiving Event proceeds.

a. RunSignup uses Adyen and we may use other payment processing services now and in the future (collectively **"Processors"**) for payment processing for payment accounts.

i. In order for you to use a Payment Account you must be approved as a sub-merchant by RunSignup and Processors by submitting the required Organizer Data which may vary based on your processing volume. By accepting this Agreement and using an Advanced Payment Account you also agree to the Adyen Terms and Conditions (<https://www.adyen.com/legal/terms-and-conditions-adyen-for-platforms>).

ii. We allow you to choose direct deposit or check payments from the credit card payment gateway to the Payment Account which we maintain for your Event on a Weekly, Monthly or Daily basis (Daily Payments must be approved by RunSignup and are only for direct deposit). Weekly is the default option. Weekly Check payments are only processed if proceeds of at least \$1,000 are owed or if there is a transaction that is more than 90 days old, however we won't pay less than certain minimum amounts. RunSignup charges a \$10.00 fee to process a payment by check. The fee will be available to see on our site and will be deducted from registration proceeds prior to sending you a check. Direct Deposit weekly payments are no cost to you and are not subject to the \$1,000 minimum. Payments will be made on this basis with the exception of funds held to establish a refund reserve when required. The refund reserve will be paid to you via your selected payment method after the conclusion of your Event and after we have been able to verify that there are no chargebacks for your Event. All registration fees, except for Processing Fees are your exclusive property.

b. Refunds - You shall exclusively and directly be liable for and handle refunds. If RunSignup, for any reason has to handle refunds or chargebacks on your behalf You will be liable to RunSignup for the registration proceeds refunded to participants for Your Event as well as any applicable RunSignup processing fees for the original registration and refund and any fees from the credit card brands or Processors to process the chargebacks. RunSignup has a service that helps you process refunds, these refunds come out of your reserve funds and will not be processed if the reserve funds do not meet the refund requests. Additional funds can be added to the refund reserve as needed.

c. RunSignup reserves the right to withhold payments from an Event or Organizer if there are complaints from registrants or repeated chargebacks or if an Event has been cancelled and there are not sufficient funds available for refunds. RunSignup may require a holdback reserve from Events as a reserve for refunds and chargebacks. Additionally, that holdback may be increased for some Events based on the newness of the Event or newness of the registration history with RunSignup or based on RunSignup's internal underwriting review of the creditworthiness of the Organizer Data submitted for the Event Payment Account. RunSignup reserves the right to withhold and deduct payment from an Event or Organizer for chargebacks that are processed against the Event. RunSignup will release any Event holdbacks after an Event has been completed and it is determined that there are no additional refunds or chargebacks to be processed for that Event.

d. We may now or in the future use other Processors for payment processing. You agree and provide consent that if we decide to use another payment processing company that we may move your Payment Account or set up another similar Payment Account with any other payment processing company providing similar services for the processing and payment of Registration fees or other Event proceeds as long as there are no other material changes in the Services provided under this Agreement.

10. Payment of Registration Fees. In connection with our collection of fees in the provision of our Services, you agree as follows: (i) we may send registration fees collected by us, minus our Processing Fees, directly to you via the methods identified in Payments above and you warrant that you are an authorized representative of the Organizer in this regard and (ii) you shall indemnify us for any claims, loss or expenses (including attorney's fees) brought by the Organizer or any other individual, entity or organization that relates to or arises from our payment of funds to you (including a claim that we wrongfully paid such funds to you and should have paid a different individual, entity or organization).

11. Termination. This Agreement will remain in effect until terminated in accordance with its terms. Either party may terminate this Agreement upon written notice if the other party is in material breach and fails, within thirty (30) days of receipt of written notice of the breach, to correct the breach. In addition, RunSignup may immediately deactivate, suspend or terminate your use of the Service for your Event, or delist any Site, if you misuse the Service or the Sites in violation of the terms hereof, including i) by breaching Section 3 above or infringing our intellectual property rights in the Service or Sites; (ii) if RunSignup is unable to approve your Payment Account for processing or continued processing now or in the future in our sole discretion, based on our internal underwriting guidelines; or (iii) if you violate the [Code of](#)

[Conduct](#) for our Site. RunSignup may also terminate this Agreement, and your access to and use of the Service and Site(s), at any time after your Event is completed (or, as applicable, cancelled), with or without cause, upon written notice to you, but, unless you have misused the Service or the Sites in a fraudulent or other improper manner, you shall then have the right to retrieve your data in accordance with the terms below. Upon termination, all rights (including rights to access and use the Service and Site) and obligations shall automatically terminate and you shall promptly return all proprietary information and materials of ours to us. You agree that, following termination or expiration hereof, we may maintain your data and content (including Collected Data and Custom Content) in accordance with our then-current backup, retention and data retention policies and for the ongoing purposes authorized herein. Upon request within one (1) year after termination, we will make available to you (via electronic download or such other method pursuant to our then-standard practices) your content and data which remains in our possession. After such one-year period, we may, without obligation to do so, delete any or all of your data and/or content without liability. We can also terminate this Agreement if our payment processing vendors terminate our right to process or accept payments, whether with respect to you or our customers at large.

You may discontinue use of the Services at any time without penalty and without notice to RunSignup, however you will continue to be liable for any chargebacks or refunds for your event.

12. Representations and Warranties and Associated Disclaimers. Each party represents and warrants that it has the necessary and full right, power, authority and capability to enter into this Agreement and to perform its obligations hereunder; that it owns or controls the rights granted or licensed to the other party herein; that the execution and performance of its obligations under this Agreement will not violate any known rights of any third party, any contractual commitments or any applicable federal, state and local law or regulation; and that the marks, logos and intellectual property licensed to the other party herein do not violate the proprietary rights of a third party.

EXCEPT FOR THE WARRANTIES EXPRESSLY PROVIDED HEREIN, THE SERVICES AND THE SITES ARE PROVIDED "AS IS" AND EACH PARTY DISCLAIMS ALL OTHER WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. WITHOUT LIMITATION, RUNSIGNUP EXPRESSLY DISCLAIMS ANY WARRANTY, REPRESENTATION, COMMITMENT OR LIABILITY: (i) THAT THE USE OF THE SERVICES, THE SITES, THE CONTENT THEREON OR ANY ASSOCIATED INTELLECTUAL PROPERTY WILL BE UNINTERRUPTED OR ERROR FREE OR THAT THE OPERATION OR USE THEREOF WILL MEET YOUR REQUIREMENTS; (ii) REGARDING ANY WEBSITES (INCLUDING THIRD PARTY WEBSITE FOR WHICH A LINK IS PROVIDED FROM OUR SERVICE OR SITE), TECHNOLOGY, SOLUTIONS OR OTHER PRODUCTS OR SERVICES (INCLUDING PAYMENT GATEWAYS AND DATA VAULTS) PROVIDED OR MADE AVAILABLE BY THIRD PARTIES; AND (iii). REGARDING THE ACCURACY OF ANY INFORMATION OR CONTENT THAT YOU POST OR ACCESS THROUGH THE SERVICES OR THE SITES. YOU ARE SOLELY RESPONSIBLE FOR ALL ASPECTS OF THE EVENT, INCLUDING WITH RESPECT TO ALL DATA AND CONTENT WHICH YOU POST OR SHARE.

13. Indemnification.

We will defend, indemnify and hold you harmless from and against any damages, losses, and costs that directly arise out of a claim brought by a third party (i) which alleges that the Services (in the form which we make them available to you) infringe a third party's copyright, patent, trademark, trade secret or other intellectual property right enforceable in the United States; (ii) seeking damages resulting from the unauthorized disclosure of credit card information or other personal information (where "**personal information**" means personally identifiable information (PII) which is protected under applicable law) hereunder to the extent such damages are caused by our breach of data security measures which we commit to undertake in this Agreement. As a condition of our indemnity obligation, you must promptly notify us of any such claim; grant us sole control of the defense and settlement of any such claim; and cooperate with us to facilitate our ability to settle or defend the claim. In the event of a covered infringement claim, we will endeavor to obtain for you the right to continue using the Services, or to replace or modify the Services so that they are not infringing and materially similar. If these alternatives are not commercially reasonable, we will notify you and terminate the Services. We shall have no indemnity obligations to you if the infringement claim is caused by your misuse of the Services, or Your use of the Services in combination with unauthorized products or services. THESE ARE OUR EXCLUSIVE OBLIGATIONS WITH RESPECT TO INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS AND UNAUTHORIZED DISCLOSURE OF CREDIT CARD INFORMATION AND PII.

You shall indemnify, defend and hold harmless RunSignup and its directors, officers, employees, affiliates, contractors and agents (collectively, the "**RunSignup Indemnitees**"), against any damages, losses and costs that directly arise out of a claim brought by a third party (including an individual, entity or organization): (i) which alleges that your data, content or other information or materials infringes a third party's copyright, trademark, trade secret, patent or other intellectual property right enforceable in the United States; (ii) seeking damages for the unauthorized disclosure of Event Data or personally identifiable data by you or an Authorized User as a result of a breach of a warranty, covenant or obligation hereunder; (iii) which arises out of or is caused by a misuse of the Service by you or any of your Authorized Users in violation of the usage or licensing restrictions and/or prohibitions set forth in this Agreement; (iv) which is based on injury, harm or other damage to, or a dispute over payments made or refunds requested by, a participant, volunteer, sponsoring organization, entity or support resource involved in any Event or (as applicable) any of your club's running activities; (v) which arises from your breach of a representation or warranty provided hereunder (including, by way of example and not limitation, a claim brought by a third party provider of online Event management and/or registration services due to your breach of a representation or warranty in Section 12 above) or (vi) which is brought by a timer, event organizer, Event director or other organization (other than the Organizer which is entering into this Agreement) and is based on or arises out of the Service, the use of the Sites or other matters related to your Event. With the exception of gross negligence on the part of any Township employee, nothing herein shall be construed to waive, limit, or restrict any governmental immunity defense available to the Charter Township of Ypsilanti.

14. LIMITATION ON LIABILITY.

EXCEPT TO THE EXTENT PROHIBITED BY LAW, IN NO EVENT SHALL RUNSIGNUP BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE, EXEMPLARY OR CONSEQUENTIAL DAMAGES, INCLUDING ANY LOST PROFITS OR LOST REVENUE, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT. IN NO EVENT WILL THE LIABILITY OF RUNSIGNUP UNDER THIS AGREEMENT EXCEED: (A) THE AMOUNT OF PROCESSING FEES COLLECTED AND RETAINED BY US FOR YOUR EVENT FOR THE SIX (6) MONTH PERIOD PRECEDING THE DATE OF THE INITIAL CLAIM ASSERTED AGAINST US HEREUNDER; OR (B) IF WE DO NOT COLLECT OR RETAIN ANY PROCESSING FEES FOR YOUR EVENT, ONE HUNDRED DOLLARS (\$100). MULTIPLE CLAIMS SHALL NOT INCREASE THE CAPS. THE REMEDIES PROVIDED IN THIS AGREEMENT ARE EXCLUSIVE, SHALL APPLY TO ALL CAUSES OF ACTION (INCLUDING NEGLIGENCE) AND SHALL APPLY REGARDLESS OF THE FAILURE OF ESSENTIAL PURPOSES OF ANY LIMITED REMEDY AND EVEN IF A PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LIABILITIES. NOTHING SET FORTH ABOVE SHALL LIMIT OUR OBLIGATION TO PAY UNDISPUTED FEES PROPERLY DUE TO YOU UNDER THIS AGREEMENT.

15. Miscellaneous.

a. Independent Contractor Relationship; No Third-Party Beneficiaries. The parties are independent contractors and nothing contained in this Agreement will be construed to create an association, trust, partnership, agency or joint venture between the parties. Except as expressly set forth herein, this Agreement does not and is not intended to confer any rights or remedies, express or implied, upon any person other than the parties hereto.

b. Assignment. You may not assign or transfer any part of this Agreement without the prior written consent of RunSignup. We may assign this Agreement to an affiliate or in connection with a merger, acquisition, corporate reorganization, or sale of all or substantially all of its assets or a controlling interest in our stock, but will endeavor to provide notice of such assignment as soon as practicable after it occurs.

c. Force Majeure. Neither party will be liable to the other for any failure to perform any of its obligations under this Agreement during any period in which performance is delayed by circumstances not within such party's reasonable control, such as a natural disaster, act of war or terrorism, government action or orders, labor disruption, internet outages or interruptions or power outages. Notwithstanding the above, the terms and conditions of Sections 9(b) and 9(c) shall continue to remain in full force and effect despite the occurrence of a force majeure event. Additionally, Organizers shall remain financially responsible to Participants and/or RunSignup as applicable for any refunds and chargebacks necessitated by a Force Majeure event that causes a cancellation or interruption of an Event for which Services have been provided under this Agreement.

d. Compliance with Laws. Each of us shall abide by all applicable laws and regulations, including those addressing data security and export controls, regarding our exercise of rights and performance of obligations under this Agreement.

e. Entire Agreement; Severability; Waiver. This Agreement is the entire agreement between you and RunSignup with respect to its subject matter and supersedes all prior oral and written understandings, communications or agreements between you and us regarding that subject matter. No amendment to or modification of this Agreement will be valid or binding unless it is in writing and executed by authorized representatives of both parties. If any provision of this Agreement is found to be void or unenforceable, the provision will be stricken or modified and the remainder of this Agreement will remain in full force and will not be terminated. A waiver of any default is not a waiver of any subsequent default. All waivers must be in writing to be effective.

f. Governing Law and Jurisdiction. The laws of the State of New Jersey shall govern the interpretation and enforcement of this Agreement and any dispute arising out of or related hereto, without regard to its conflict of laws principles. The parties irrevocably submit to the exclusive jurisdiction of the state and federal courts located in New Jersey with respect to any dispute arising out of or relating to this Agreement.

g. Notices. All notices must be in writing and shall be sent by first class U.S. mail or a nationally known express or overnight courier (such as FedEx, UPS or the U.S. Postal Service). Notices to us shall be sent to our main address as listed on each Site and, for each notice, a copy shall also be sent to Our CFO. Notice to You may be sent to your address set forth in the Agreement. Notices shall be deemed given upon receipt thereof.

Company

Signature

Printed Name & Title

Date_____

RunSignUp, Inc.

Signature

Printed Name & Title

Date_____

**CHARTER TOWNSHIP OF YPSILANTI
2024 BUDGET AMENDMENT # 7**

May 21, 2024

AMOUNTS ROUNDED UP TO THE NEAREST DOLLAR

101 - GENERAL OPERATIONS FUND **Total Increase** \$30,060.00

Request to increase the budget for PTO payout at 75%. This will be funded by an appropriation of prior year fund balance.

Revenues:	Prior Year Fund Balance	101-000-699-999	\$2,302.00
		Net Revenues	<u><u>\$2,302.00</u></u>
Expenditures:	Salaries Pay Out	101-191-708.004	\$2,138.00
	FICA	101-191-715.000	\$164.00
		Net Expenditures	<u><u>\$2,302.00</u></u>

Request to increase the budget for the required voter ID cards sent out in December of 2023. The invoice was not received until after the close of year end and was paid out of the 2024 budget. This will be funded by an appropriation of prior year fund balance.

Revenues:	Prior Year Fund Balance	101-000-699-999	\$4,000.00
		Net Revenues	<u><u>\$4,000.00</u></u>
Expenditures:	Office Supplies	101-262-727.000	\$4,000.00
		Net Expenditures	<u><u>\$4,000.00</u></u>

Request to increase the budget for the purchase of a trailer for election equipment transportation as the old trailer was leaking. This will be funded by an appropriation of prior year fund balance.

Revenues:	Prior Year Fund Balance	101-000-699-999	\$10,158.00
		Net Revenues	<u><u>\$10,158.00</u></u>
Expenditures:	Equipment	101-262-977.000	\$10,158.00
		Net Expenditures	<u><u>\$10,158.00</u></u>

Request to increase the budget for summertime Internships provided through Michigan Works. We are contracting for 4 interns at \$3,400 per intern for the summer. This will be funded by an appropriation of prior year fund balance.

Revenues:	Prior Year Fund Balance	101-000-699-999	\$13,600.00
		Net Revenues	<u><u>\$13,600.00</u></u>
Expenditures:	Contractual Services	101-270-818.000	\$13,600.00
		Net Expenditures	<u><u>\$13,600.00</u></u>

**CHARTER TOWNSHIP OF YPSILANTI
2024 BUDGET AMENDMENT # 7**

May 21, 2024

213 - BIKE, SIDEWALK, REC, ROADS FUND (BSRII)	Total Increase	<u><u>\$110,000.00</u></u>
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Request to increase the budget for HVAC system at the Community Center. This will be funded 100% by a Department of Energy Grant (EECBG) when awarded.

Revenues:	Dept of Energy - EECBG	213-000-529.500	\$110,000.00
			<u>\$110,000.00</u>
		Net Revenues	<u><u>\$110,000.00</u></u>
Expenditures:	Cap Outlay/ Energy-Com Center	213-901-975.555	\$110,000.00
			<u>\$110,000.00</u>
		Net Expenditures	<u><u>\$110,000.00</u></u>

217 - FIRE SPECIAL MILLAGE CAPITAL FUND	Total Increase	<u><u>\$70,000.00</u></u>
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Request to increase the capital outlay line in the Fire Special Millage Capital Fund for the Hewitt Fire Station improvements. This was originally budget for 2024 in the Fire Fund 206, but there are additional funds of over \$200K in the special capital fund that must be used for capital or capital improvement. The original budget requested \$10,000 for engineering and \$60,000 for construction to repair Hewitt Station ceiling and gutters. This will be funded by an appropriation of prior year fund balance.

Revenues:	Prior Year Fund Balance	217-000-699.999	\$70,000.00
			<u>\$70,000.00</u>
		Net Revenues	<u><u>\$70,000.00</u></u>
Expenditures:	Capital Outlay Fire Station	217-901-976.005	\$70,000.00
			<u>\$70,000.00</u>
		Net Expenditures	<u><u>\$70,000.00</u></u>

Motion to Amend the 2024 Budget (#7)

Move to increase the General Fund budget by \$30,060 to \$26,966,268 and approve the department line item changes as outlined.

Move to increase the Bike, Sidewalk, Rec, Roads Fund (BSRII) budget by \$110,000 to \$4,406,036 and approve the department line item changes as outlined.

Move to increase the Fire Special Millage Capital Fund budget by \$70,000 to \$1,614,869 and approve the department line item changes as outlined.

AUTHORIZATIONS AND BIDS



MEMORANDUM

To: Charter Township of Ypsilanti Board of Trustees

From: John Hines, Municipal Services Director

Date: May 15, 2024

RE: **Request Authorization to seek sealed bids for pathway renovation and playground replacement at Appleridge Park as part of the Washtenaw County Community Development Block Grant (CDBG) projects funding.**

The Residential Services Department is requesting authorization to seek sealed bids for the renovation of the pathway and replacement of the playground equipment and decking at Appleridge Park that is budgeted in GL#213-901-974.008 and funded by the Washtenaw County CDBG funding.

At the February 21, 2023 Board of Trustees Meeting, the board approved the Township to submit an application to the Washtenaw County Office of Community and Economic Development for the 2023 Community Development Block Grant Funds. The application for 2023 focused on applying the funds from 2021, 2022 and 2023 for park improvements at Appleridge Park. The Improvements focused on improvements on the walkway around the park and replacing the playground equipment, base and nearby sitework.

Spicer Group was approved by the board to provide professional engineering services for this project and has worked in cooperation with Township Staff and County Staff members to follow the process for the CDBG program for the park improvements. RFP will be posted on MITN per Township Financial Policy after the Environmental review is completed by Washtenaw County.

Staff will return to the Board of Trustees to recommend and award the selection of a bidder.

Please find attached this memorandum the proposed construction documents and the bidding package as created by Spicer Group.

John Hines
Municipal Services Director
jhines@ypsitownship.org

**BIDDING DOCUMENTS
FOR**

APPLERIDGE PARK IMPROVEMENTS

**CHARTER TOWNSHIP OF YPSILANTI
YPSILANTI, MI**

Prepared By:
SPICER GROUP, INC.

Plans Included
DPL-1200-01-07

Project I.D. Number: 132276SG2022

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ADVERTISEMENT FOR BIDS

**APPLERIDGE PARK IMPROVEMENTS
CHARTER TOWNSHIP OF YPSILANTI**

May 21, 2024

Sealed Bids for the Appleridge Park Improvements will be received by CLERK'S OFFICE, Ypsilanti Township Civic Center, 7200 S. Huron River Dr., Ypsilanti MI., 48197, until **2:00 p.m.** local time on **June 25, 2024.**

The project consists of the replacement of playground equipment, expanding and paving the existing 2,500 Ln. Ft. gravel path, connect street sidewalks to the park, and ADA accessibility improvements throughout the park.

This project is funded with a CDBG grant. All relevant State and/or Federal requirements will apply. This project does require Davis-Bacon wage rates.

The Issuing Office for the Bidding Documents is the office of the ENGINEER, Spicer Group, Inc., Cindy Todd, Project Manager, 410-490-0413, or cynthia.todd@spicergroup.com. The contract documents for bidding purposes are available beginning **June 4, 2024**, on MITN Purchasing Group, Bidnetdirect.com; and Charter Township of Ypsilanti, 7200 Huron River Drive, Ypsilanti, MI 48197. **Bidders are encouraged to download plans from MITN at Bientedirect.com at no additional cost.** Neither Owner nor ENGINEER will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the Issuing Office. Bidders should direct correspondence to ENGINEER.

For bidders choosing to pick up copies of bid documents, copies may be obtained on or after 12:00 PM, local time June 4, 2024, at the CLERK'S OFFICE, Ypsilanti Township Civic Center, 7200 S. Huron River Dr., Ypsilanti MI., 48197 for no fee.

Bid Security in the form of a Bid Bond for a sum no less than 5% of the amount of the Bid will be required with each Bid.

The OWNER reserves the right to accept any Bid, reject any Bid, or waive irregularities in Bids.

No Bid may be withdrawn for a period of 60 calendar days after the scheduled closing time for receipt of bids.

John Hines, Municipal Services Director
Charter Township of Ypsilanti

++ END OF ADVERTISEMENT FOR BIDS ++

INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within 3 days of Owner's request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

- 4.01 *Site and Other Areas*
- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.
- 4.02 *Existing Site Conditions*
- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
1. The Supplementary Conditions identify:
 - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.

- b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
 - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
 - 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
 - 3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
 - B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
 - C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.
- 4.03 *Site Visit and Testing by Bidders*
- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.
 - B. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
 - C. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
 - D. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.
- 4.04 *Owner's Safety Program*
- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER’S REPRESENTATIONS

5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder’s safety precautions and programs;
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – PRE-BID CONFERENCE

6.01 No pre-bid conference will be held for this project. Bidders are encouraged to visit the site prior to bidding on this project.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted via email only to Cindy Todd at cynthia.todd@spicergroup.com. All email questions must be received by 5:00 P.M. on Tuesday, June 18, 2024. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received after 5:00 P.M. . June 18, 2023, may not be answered Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

ARTICLE 8 – BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder’s maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner’s exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS

11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract

award process of possible substitute or “or-equal” items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.

- 11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.
- 12.03 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers.
- 12.04 If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 12.05 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

ARTICLE 13 – PREPARATION OF BID

- 13.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”
- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.

- 13.03 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.04 A Bid by an individual shall show the Bidder's name and official address.
- 13.05 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 13.06 All names shall be printed in ink below the signatures.
- 13.07 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.08 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.09 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form..

ARTICLE 14 – BASIS OF BID

14.01 *Lump Sum*

- A. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.
- B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form.

14.02 *Unit Price*

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity" (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

14.03 *Allowances*

- A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

ARTICLE 15 – SUBMITTAL OF BID

- 15.01 With each copy of the Bidding Documents, a Bidder is furnished one Affidavit of Compliance – Iran Economic Sanctions Act (C210) This form must be signed, notarized and included with the submitted bid package.
- 15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project

title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to CLERK, Ypsilanti Township Civic Center, 7200 S. Huron River Dr., Ypsilanti MI., 48197

- 15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

- B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 20 – BONDS AND INSURANCE

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner’s requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

- 21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 22 – EQUAL EMPLOYMENT

- 22.01 Attention of Bidders is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against on any illegal basis with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, partisan considerations, genetic information, or a disability that is unrelated to the individual’s ability to perform the duties of a particular job or position as required by Public Act 453 of 1976 (Elliot-Larsen Civil Rights Act), Public Act 220 of 1976 (Persons with Disabilities Act), as amended, and Executive Directive 2019-09.

ARTICLE 23 – MINIMUM WAGE REQUIREMENTS

- 23.01 The Owner has specific minimum wage requirements that are as follows:
 - A. Davis-Bacon Act, July 2, 1964 (Title 40, USC, 276A)
 - B. Anti-Kickback Act (Title 18, USC 874)
 - C. U.S. Department of Labor Regulations and Standards (Title 29, 1, 3 and 5)
 - D. Equal Employment Opportunity Act, September 18, 1965 (Executive Order No. 11246)
 - E. Federal Occupational Safety and Health Act of 1970
 - F. Housing and Urban Development Act of 1968, Section 3, as amended, 12 USC, 1701u.

**BID FORM
FOR CONSTRUCTION CONTRACTS**

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

*Clerk’s Office
Ypsilanti Township Civic Center
7200 S Huron River Dr
Ypsilanti, MI 48197*

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 45days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

If no addenda have been issued, insert “N/A”. Bidder shall submit signed copies of the Addendum Acknowledgment receipt form issued with each addendum with the complete bid form.

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder 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 Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "Corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process.
 - 2. "Fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid 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.

ARTICLE 5 – BASIS OF BID

- 5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

SEE ATTACHED *EXHIBIT A*

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor’s overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete on or before **December 20, 2024** and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **January 24, 2025**.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;
 - B. Affidavit of Compliance – Iran Economic Sanctions Act;

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By:
[Signature] _____

[Printed name] _____
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

Bidder's License No.: _____
(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

**BID FORM
 APPLERIDGE PARK IMPORVMENTS
 YPSILANTI CHARTER TOWNSHIP
 WASHTENAW COUNTY, MICHIGAN**

Item No.	Est. Qty.	Unit	Description	Unit Price	Amount
<u>DEMOLITION & SITE PREPARATION</u>					
1	1	LS	Mobilization	Lump Sum	\$ _____
2	1	LS	Demolition/Site Preparation	Lump Sum	\$ _____
3.	1	LS	Excavation and Rough Grading	Lump Sum	\$ _____
4.	1	LS	Soil Erosion and Sedimentation Control	Lump Sum	\$ _____
<u>PLAYGROUND</u>					
5.	1	LS	Play Structures	Lump Sum	\$ _____
6.	1	LS	Swing Set	Lump Sum	\$ _____
7.	1	LS	6" Reinforced Concrete Edging (approx. 150 Ln. Ft.)	Lump Sum	\$ _____
8.	1	LS	Safety Surface, Engineered Wood Fiber, Compacted, w/ Geotextile Fabric, 12" depth (approx. 4550 Sq. Ft.)	Lump Sum	\$ _____
9.	1	LS	Playground Subsurface Drainage, 4" Perforated Pipe w/ Sock in Pea Stone (approx. 200 Ln. Ft.)	Lump Sum	\$ _____
10.	1	LS	Concrete Pad, Non-Reinforced, 4" depth (approx. 420 Sq. Ft.)	Lump Sum	\$ _____
11.	1	LS	Sand Subbase, Class II, 4" depth (approx. 56 Sq. Yd.)	Lump Sum	\$ _____
<u>TRAIL</u>					
12.	1	LS	8' wide, HMA Path, 2" depth (approx. 2500 Ln. Ft.)	Lump Sum	\$ _____
13.	1	LS	Crushed Limestone, 22A, C.I.P., 2" depth (approx. 2960 Sq. Yd)	Lump Sum	\$ _____
14.	1	LS	Crushed Limestone, 22A, C.I.P., 6" depth (approx. 554 Sq. Yd)	Lump Sum	\$ _____
<u>OTHER ITEMS</u>					
15.	2	EA	Park Bench w/ 1 Armrest & Backrest, Surface Mount, 6'	\$ _____	\$ _____
16.	1	EA	ADA Picnic Tables	\$ _____	\$ _____
17.	1	EA	Trash Receptacle w/ Rain Bonnet, Direct Bury	\$ _____	\$ _____
18.	1	LS	Site Restoration & Cleanup	Lump Sum	\$ _____
19.	1	LS	Construction Staking & Material Testing	Allowance	\$ 7,800.00
TOTAL BID AMOUNT.....					\$ _____

NOTICE OF AWARD

Date of Issuance:

Owner: Ypsilanti Charter Township Owner's Contract No.:
Engineer: Spicer Group, Inc. Engineer's Project No.: 132276SG2022
Project: Appleridge Park Improvements Contract Name: Appleridge Park Improvements

Bidder:

Bidder's Address:

TO BIDDER:

You are notified that Owner has accepted your Bid dated [] for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

[describe Work, alternates, or sections of Work awarded]

The Contract Price of the awarded Contract is: \$ [] [note if subject to unit prices, or cost-plus]

[] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically. [revise if multiple copies accompany the Notice of Award]

[] a set of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

- 1. Deliver to Owner [] counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security [e.g., performance and payment bonds] and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner:

Authorized Signature

Authorized Signature

By:

By:

Title:

Title:

Copy: Engineer

AGREEMENT

THIS AGREEMENT is by and between Ypsilanti Charter Township (“Owner”) and _____ (“Contractor”).

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:

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: replacement of playground equipment, improve existing gravel path, connect street sidewalks to the park, a new bus shelter, and ADA accessibility improvements throughout the park.

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Spicer Group, Inc.
3.02 The Owner has retained Spicer Group, Inc. (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time 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 completed on or before **December 20, 2024** and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **January 24, 2025.**
4.03 *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 times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. 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 \$600 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A 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 Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$600 for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

4.04 *Special Damages*

- A. In addition to the amount provided for liquidated damages, 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.

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 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):

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.

- B. 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 account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 1st 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 Work completed (with the balance being retainage). If the Work has been 50 percent 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. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 50 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 in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

- 7.01 All amounts not paid when due shall bear interest at the rate of 0 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
 - A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
 - E. 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 Site-related reports and

drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

- F. 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.
- G. 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.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. 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.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 7, inclusive).
 - 2. Performance bond (pages 1 to 3, inclusive).
 - 3. Payment bond (pages 1 to 4, inclusive).
 - 4. General Conditions (pages 1 to 65, inclusive).
 - 5. Supplementary Conditions (pages 1 to 5, inclusive).
 - 6. Specifications as listed in the table of contents of the Project Manual.
 - 7. The Drawings are listed on the document title page.
 - 8. Addenda (numbers █ to █, inclusive).
 - 9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages █ to █, inclusive).
 - 10. 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.
- B. The documents listed in Paragraph 9.01.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 9.

- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

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

10.02 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto 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 Documents.

10.03 *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.

10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall 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.

10.05 *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 10.05:
 1. “corrupt practice” means the offering, giving, receiving, or soliciting of any thing 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.

10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, 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.

B. Equal Opportunity

Contractor shall not 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 race, color, religion, national origin, age, sex, height, weight, marital status, or because of a handicap that is unrelated to the person’s ability to perform the duties of a particular job or position.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

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

OWNER:

CONTRACTOR:

By: _____

By: _____

Title: _____

Title: _____

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

NOTICE TO PROCEED

Owner:	Ypsilanti Charter Township	Owner's Contract No.:	
Contractor:		Contractor's Project No.:	
Engineer:	Spicer Group, Inc.	Engineer's Project No.:	132276SG2022
Project:	Appleridge Park Improvements	Contract Name:	Appleridge Park Improvements
		Effective Date of Contract:	

TO CONTRACTOR:

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on _____ . *[see Paragraph 4.01 of the General Conditions]*

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, the date of Substantial Completion is **December 20, 2024**, and the date of readiness for final payment is **January 24, 2025**

Before starting any Work at the Site, Contractor must comply with the following:
[Note any access limitations, security procedures, or other restrictions]

Owner:

By: _____
 Authorized Signature

Title: _____

Date Issued: _____

By: _____
 Authorized Signature

Title: _____

Date Issued: _____

Copy: Engineer

PERFORMANCE BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

Ypsilanti Charter Township
7200 S Huron River Dr
Ypsilanti, MI 48197

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*:

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Modifications to this Bond Form: None See Paragraph 16

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal *(seal)*

Surety's Name and Corporate Seal *(seal)*

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall 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 shall not be reduced or set off on account of any such unrelated obligations. No right of action shall 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 may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall 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 shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

Ypsilanti Charter Township
7200 S Huron River Dr
Ypsilanti, MI 48197

CONSTRUCTION CONTRACT

Effective Date of the Agreement:
Amount:
Description *(name and location):*

BOND

Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*
Amount:
Modifications to this Bond Form: None See Paragraph 18

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

CONTRACTOR AS PRINCIPAL

SURETY

(seal)
Contractor's Name and Corporate Seal

(seal)
Surety's Name and Corporate Seal

By: _____

Signature

By: _____

Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

to the Surety (at the address described in Paragraph 13).

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 shall 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 shall 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
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 shall 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 shall 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 shall 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 shall 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 satisfy 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 shall 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 shall be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall 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:

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

4. A brief description of the labor, materials, or equipment furnished;
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;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
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 shall be 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: Ypsilanti Charter Township
Contractor:
Engineer: Spicer Group, Inc.
Project: Appleridge Park Improvements
Owner's Contract No.:
Contractor's Project No.:
Engineer's Project No.: 132276SG2022
Contract Name: Appleridge Park Improvements

This [preliminary] [final] Certificate of Substantial Completion applies to:

- All Work
The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: [Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]

Amendments to Owner's responsibilities:
None
As follows

Amendments to Contractor's responsibilities:
None
As follows:

The following documents are attached to and made a part of this Certificate: [punch list; others]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

EXECUTED BY ENGINEER: RECEIVED: RECEIVED:
By: (Authorized signature) By: Owner (Authorized Signature) By: Contractor (Authorized Signature)
Title: Title: Title:
Date: Date: Date:

**STANDARD GENERAL CONDITIONS OF THE
CONSTRUCTION CONTRACT**

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY1.01 *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 form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting 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, or both; 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, or both; 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; or (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. 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), hazardous waste, and any substance, product, waste, or other material

of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree 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 the 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. *Engineer*—The individual or entity named as such in the Agreement.
21. *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.
22. *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. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *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.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
27. *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.

28. *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.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
30. *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.
31. *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.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *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.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *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.
36. *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.
37. *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 furnished by Owner which are designated for the use of Contractor.
38. *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.
39. *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.
40. *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 thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.

42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, 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.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *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.
48. *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 the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
 1. 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*:
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*:
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. 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 15.04).
- E. *Furnish, Install, Perform, Provide*:
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean 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, shall mean 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, shall mean 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. 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 Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), 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 executed 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 specifically 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 *Initial 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 for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall 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.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items 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 items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one 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 or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall 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.

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, shall mean 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, 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.

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 Documents 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 Documents 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 shall 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 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 thereunder.
- 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 give written notice to Owner and Contractor 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 editions, 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 shall preclude 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 thirtieth 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 sixtieth day after the day of Bid opening or the thirtieth 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 shall 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 shall 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 shall 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 the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the 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. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall 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 utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 - 4. acts of war or terrorism.
- D. 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.
- E. Paragraph 8.03 governs 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.

- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times 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.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor 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; 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 7.12, 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 at law; 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 shall 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 known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); 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 upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
 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.

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 either:
 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; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 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 the necessity of Owner's obtaining 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 above; 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. *Possible Price and Times Adjustments:*
 1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, 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 conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
 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; or
 - 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 as 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, or both, then any such adjustment shall 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, or both, 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.

5.05 *Underground Facilities*

- 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. Unless it is otherwise expressly provided in the Supplementary Conditions:
 - 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 - 2. 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 existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. 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 in the Contract Documents, or was not shown or indicated 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), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to 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. 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. *Possible Price and Times Adjustments:*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, 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. 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 conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. 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, or both, then any such adjustment shall 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, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

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

1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
2. 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 Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
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, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, 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.
- 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 or 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.H shall obligate 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 shall obligate 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 all of Contractor's obligations under the Contract. These bonds shall 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 Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, 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 shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. 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.

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

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. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, 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.
- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. 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, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of 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.
- G. 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.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect 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 shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.

- J. 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.

6.03 Contractor's Insurance

- A. *Workers' Compensation*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 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).
 4. Foreign voluntary worker compensation (if applicable).
- B. *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. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 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.
- C. *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 coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. 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.
 2. 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.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. 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.
 8. 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.

- D. *Automobile liability*: Contractor shall purchase and maintain 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. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *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.
- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such 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.
- H. *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 be responsible for purchasing and maintaining 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.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
1. include at least the specific coverages provided in this Article.
 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three 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.
 4. remain in effect at least until final payment (and longer if expressly required in this Article) 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.
 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed 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.

- J. 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.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. 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.

6.05 *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 full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 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 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.
 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.
 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).

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).
 6. extend to cover damage or loss to insured property while in transit.
 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.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *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 Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed 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.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- 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 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.
- E. *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 Paragraph 6.05, it may do so at Contractor's expense.
- F. *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.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, 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 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.

- B. 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:
 1. loss 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 perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner 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.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. 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 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.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 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 6.05 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 this Contract or applicable Laws and Regulations.

- C. 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.

ARTICLE 7 – CONTRACTOR’S RESPONSIBILITIES

7.01 *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. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *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 at all times maintain good discipline and order at the Site.
- B. 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 shall 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.

7.03 *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 shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall 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 shall 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.

7.04 *“Or Equals”*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, 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 material or equipment, or items from other proposed suppliers under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an “or equal” item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it 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) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it 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 shall result in any change in Contract Price. The Engineer’s denial of an “or-equal” request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment 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 material or equipment under the circumstances described below. To the extent possible such requests shall 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 material or equipment from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.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 material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall 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 that specified, and
 - 3) be suited to the same use as that 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 that specified, and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall 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 shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity 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 five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. 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, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, 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, Supplier, or other individual or entity, whether initially or as a replacement, shall 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 fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.

- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 - 2. shall create 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.

7.07 *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 a particular 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 shall be disclosed by Owner 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.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. 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

7.09 *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.

7.10 *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. Except where otherwise expressly required by applicable Laws and Regulations, 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 shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give 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 notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *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.

7.12 *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. 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.
- B. 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. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when 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.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. 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.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.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).
- F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall 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.

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of 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 threatened 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 thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
- b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
- c. determined and verified 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
- d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall 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 submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will 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.D.

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.D.
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. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
 1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. 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, conform to the information given in 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 shall 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.
 5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 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, shall 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, Sample, or other submittal shall 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.D.4.
- E. *Resubmittal Procedures:*
 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 submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

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 and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper 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.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 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. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.
- D. 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 shall 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 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 performance of the Work, provided that any

such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury 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 shall 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.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

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 utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. 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.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, 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.

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 at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner 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, or both. 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 shall 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. When applicable, any such equitable adjustment in Contract Price shall 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 is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

- 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. 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 to 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.
- C. 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 to Contractor.
- D. 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 shall 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 Documents (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 10.08. 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 *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 Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

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

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *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.

10.07 *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.

10.08 *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, shall 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 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 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *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 (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not 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, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.

2. *Work Change Directives:* 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 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.
3. *Field Orders:* 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. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *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. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes 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 shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate 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.

11.03 *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.

11.04 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall 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); or

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 11.04.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 11.04.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall 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 shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five 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 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.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 five 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 shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall 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 will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the

Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. 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. The supporting data shall 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. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall 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.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *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 that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 Execution of Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the 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 11.02, (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 in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *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 shall be submitted 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; and
 - 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.
- 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 shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall be incorporated in a Change Order 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. 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 shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, 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, shall 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 shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns

from sale of surplus materials and equipment shall 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, who 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 shall 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 for services specifically related to the Work.
5. Supplemental costs including 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, and hand tools not owned by the workers, 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.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the 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 property insurance established in accordance with Paragraph 6.05), 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 shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall 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 shall not include any of the following items:
1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, 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. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. 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.
 5. 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*: When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.
- E. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

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 on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a 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 on account of Work covered by allowances, and the Contract Price shall 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, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

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 will 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 therewith 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 shall 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 shall 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 shall 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 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 shall 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 special 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, or both, 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 shall 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 rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven 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 on account of 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. 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 shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and 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.
 - 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. 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, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, 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 on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of 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 that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated 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;

- l. there are other items entitling 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 shall 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 shall be treated as an amount due as determined by Paragraph 15.01.C.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 seven 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 shall 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 seven 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 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 6.05 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 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall 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 disputes that Contractor believes are unsettled; 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 Application and Acceptance:*
1. 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 ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall 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. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. 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. *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.
- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- 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 from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special

guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.

- 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 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 terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then 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 other adjacent areas;
 2. correct such defective Work;
 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, 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 therefrom.
- B. If 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 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 correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. 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.
- D. 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.
- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not 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, or both, directly attributable to any such suspension.

Any Change Proposal seeking such adjustments shall 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) ten 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) 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 seven 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 shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven 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 for (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 on account of loss of anticipated overhead, profits, or revenue, 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 seven 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, seven 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; and
 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising 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; or
 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 Documents requires the giving of written notice, it will be deemed to have been validly given if:
 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

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 shall not constitute a waiver of that provision, nor shall 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 or completion of the Contract or termination 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 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition). All provisions that are not so amended or supplemented remain in full force and effect.

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.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.03 *Subsurface and Physical Conditions*

SC-5.03 Delete Paragraphs 5.03.A and 5.03.B in their entirety and insert the following:

- A. No reports of exploration or test of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to the Owner.**

SC-5.06 Hazardous Environmental Conditions

SC 5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.**
- B. Not Used.**

ARTICLE 6 – BONDS AND INSURANCE

SC-6.03 *Contractor's Liability Insurance*

SC 6.03 Add the following new paragraph immediately after Paragraph 6.03.J:

K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

- 1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:**

\$1,000,000.00 limit each accident

- 2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:**

Combined single limit of \$1,000,000.00 each occurrence for bodily injury 7 property damage. Must include 60 day written notice for change of coverate, cancellation, or non-renewal of coverate. Must name "The Charter Township of Ypsilanti and its past, present, and future elected officials shall be named as "additional named insured" on the general liability policy with respect to the services provided under this contract" – Occurrence basis.

3. Automobile Liability under Paragraph 6.03.D of the General Conditions:

Covers owned, hired, and non-owned vehicles with personal protection insurance and property protection. Includes residual liability insurance with a combined single limit of \$1,000,000.00 each accident for bodily injury and property damage.

4. Owner's Protective Liability

Combined single limit of \$1,000,000.00 each occurrence for bodily injury & property damage.

5. Builder's Risk

Option. May be used to cover everything.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SC-7.02 Labor; Working Hours

SC-7.02.B. Add the following new subparagraphs immediately after Paragraph 7.02.B:

1. Regular working hours will be 7 A.M to 7 P.M.
2. Owner's legal holidays shall be defined as U.S. Federal Holidays.

SC-7.02.B. Amend the first and second sentences of Paragraph 7.02.B to state "...all Work at the Site shall be performed during regular working hours, Monday through Saturday. Contractor will not perform Work on a Sunday or any legal holiday."

SC-7.08 Permits

SC 7.08 Add the following new subparagraphs immediately after Paragraph 7.08.A:

- B. A Soil Erosion and Sedimentation Control (SESC) Permit is not required since the Owner is an Authorized Public Agency (APA). However, the Contractor will need to construct the project in accordance with SESC measure as described in the bidding plans and specifications.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

SC-10.03 Project Representative

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.A:

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
 1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
 2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
 3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other

Project-related meetings, and prepare and circulate copies of minutes thereof.

4. **Liaison:**
 - a. **Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.**
 - b. **Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.**
 - c. **Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.**
5. **Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.**
6. **Shop Drawings and Samples:**
 - a. **Record date of receipt of Samples and Contractor-approved Shop Drawings.**
 - b. **Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.**
 - c. **Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.**
7. **Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.**
8. **Review of Work and Rejection of Defective Work:**
 - a. **Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.**
 - b. **Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.**
9. **Inspections, Tests, and System Start-ups:**
 - a. **Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.**

- b. **Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.**

10. Records:

- a. **Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.**
- b. **Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.**
- c. **Maintain records for use in preparing Project documentation.**

11. Reports:

- a. **Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.**
- b. **Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.**
- c. **Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.**

- 12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.**

- 13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.**

14. Completion:

- a. **Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.**
- b. **Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.**

- c. **Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.**
- C. **The RPR shall not:**
 - 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, or Suppliers.**
 - 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 security or 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 from anyone other than Contractor.**
 - 8. **Authorize Owner to occupy the Project in whole or in part.**

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC-13.01 Cost of the Work

SC-13.01 Add the following to the end of Paragraph 13.01.B.1:

Contractor is required to observe and abide by The Charter Township of Ypsilanti’s Prevailing Wage and Living Wage requirements. The relevant Township ordinances, as well as the relevant Prevailing Wage Decision are included in the Bidding Documents.

Work Change Directive No.

Date of Issuance: _____ Effective Date: _____
 Owner: Ypsilanti Charter Township Owner's Contract No.: _____
 Contractor: _____ Contractor's Project No.: _____
 Engineer: Spicer Group, Inc. Engineer's Project No.: 132276SG2022
 Project: Appleridge Park Improvements Contract Name: Appleridge Park Improvements

Contractor is directed to proceed promptly with the following change(s):

Description:

Attachments: *[List documents supporting change]*

Purpose for Work Change Directive:

Directive to proceed promptly with the Work described herein, prior to agreeing to changes on Contract Price and Contract Time, is issued due to: *[check one or both of the following]*

- Non-agreement on pricing of proposed change.
- Necessity to proceed for schedule or other Project reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price \$ _____ [increase] [decrease].
 Contract Time _____ days [increase] [decrease].

Basis of estimated change in Contract Price:

- Lump Sum Unit Price
- Cost of the Work Other

RECOMMENDED:

AUTHORIZED BY:

RECEIVED:

By: _____
 Engineer (Authorized
 Signature)

By: _____
 Owner (Authorized
 Signature)

By: _____
 Contractor (Authorized
 Signature)

Title: _____

Title: _____

Title: _____

Date: _____

Date: _____

Date: _____

Approved by Funding Agency (if applicable)

By: _____

Date: _____

Title: _____

DRAFT FOR REVIEW
Change Order No.

Date of Issuance:	Effective Date:
Owner: Ypsilanti Charter Township	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: Spicer Group, Inc.	Engineer's Project No.: 132276SG2022
Project: Appleridge Park Improvements	Contract Name: Appleridge Park Improvements

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (if required)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: _____ Date: _____
Title: _____

Date of Issuance:	Effective Date:
Owner: Ypsilanti Charter Township	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: Spicer group, Inc.	Engineer's Project No.: 134586SG2023
Project: Appleridge Park Improvements	Contract Name: Appleridge Park Improvements

Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph III "Changes in the Work", for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:	_____	_____
	Specification(s)	Drawing(s) / Detail(s)

Description:

Attachments:

ISSUED:

RECEIVED:

By: _____
Engineer (Authorized Signature)

By: _____
Contractor (Authorized Signature)

Title: _____

Title: _____

Date: _____

Date: _____

Copy to: Owner

SECTION 01 10 00

SUMMARY

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Contract description.
 - 2. Contractor's use of Site.
 - 3. Work sequence.
 - 4. Owner occupancy.
 - 5. Permits.
 - 6. Specification conventions.

1.2 DESCRIPTION

- A. The Contractor shall furnish all the labor, material and construction equipment and perform all the work for this project as shown on the Drawings and described in the specifications. Contractor shall be responsible for the entire work until completed and accepted by the Owner.

1.3 CONTRACTOR'S USE OF SITE

- A. Limit use of Site to allow:
 - 1. Cooperate with Land Owners to minimize conflict. If disputes arise, contact the Engineer immediately.

1.4 WORK SEQUENCE

- A. Construct Work in a logical and efficient manner. Coordinate construction schedule and operations with Engineer

1.5 OWNER OCCUPANCY

- A. Schedule and substantially complete designated portions of the Work for occupancy before Substantial Completion of the entire Work.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

1.6 PERMITS

- A. Furnish necessary permits for construction of Work.

1.7 SPECIFICATION CONVENTIONS

- A. These Specifications are written in imperative mood and streamlined form. This imperative language is directed to Contractor unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Cash allowances.
- B. Application for Payment.
- C. Change procedures.
- D. Defect assessment.
- E. Unit prices.

1.2 CASH ALLOWANCES

- A. Costs Included in Cash Allowances: Cost of product to Contractor or Subcontractor, less applicable trade discounts; delivery to Site and applicable taxes unless stated otherwise in Allowance Schedule.
- B. Costs Not Included in Cash Allowances but Included in Contract Sum/Price: Product handling at Site including unloading, uncrating, and storage; protection of products from elements and from damage; and labor for installation and finishing unless stated otherwise in Allowance Schedule.
- C. Engineer Responsibilities:
 - 1. Consult with Contractor for consideration and selection of products suppliers and installers.
 - 2. Select products in consultation with Owner and transmit decision to Contractor.
 - 3. Prepare Change Order.
- D. Contractor Responsibilities:
 - 1. Assist Engineer in selection of products, suppliers.
 - 2. Obtain proposals from suppliers and installers and offer recommendations.
 - 3. Upon notification of selection by Engineer and Owner execute purchase agreement with designated supplier.
 - 4. Arrange for and process Shop Drawings, Product Data, and Samples. Arrange for delivery.
 - 5. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
- E. Differences in costs will be adjusted by Change Order.

1.3 APPLICATION FOR PAYMENT

- A. Engineer will prepare progress payments in accordance with the Payment Schedule shown in the Agreement.

- B. Format will follow the itemized bid in the Proposal.
- C. Contractor shall submit waivers for each progress payment.
- D. Payment will be subject to retainage as set forth in Public Act No. 524.

1.4 CHANGE PROCEDURES

- A. Submittals: Submit name of individual who is authorized to receive change documents and is responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Carefully study and compare Contract Documents before proceeding with fabrication and installation of Work. Promptly advise Engineer of any error, inconsistency, omission, or apparent discrepancy.
- C. Requests for Interpretation (RFI) and Clarifications: Allot time in construction scheduling for liaison with Engineer; establish procedures for handling queries and clarifications.
- D. Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing a field order.
- E. Engineer may issue a Bulletin or Notice of Changer including a detailed description of proposed change with supplementary or revised Drawings and Specifications. Contractor will prepare and submit estimate within (2) two days.
- F. Contractor may propose changes by submitting a request for change to Engineer, describing proposed change and its full effect on the Work. Include a statement describing reason for the change and the effect on Contract Sum/Price and Contract Time with full documentation and a statement describing effect on the Work.
- G. Stipulated Sum/Price Change Order: Based on Bulletin or Notice of Change and Contractor's price quotation and Contractor's request for Change Order as approved by Engineer.
- H. Unit Price Change Order: For Contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of that which are not predetermined, execute Work under Work Directive Change. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.
- I. Work Directive Change: Engineer may issue directive, signed by Owner, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.
- J. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Engineer will determine change allowable in Contract Sum/Price and Contract Time as provided in Contract Documents.

- K. Maintain detailed records of Work done on time and material basis. Provide full information required for evaluation of proposed changes and to substantiate costs for changes in the Work.
- L. Document each quotation for change in Project Cost or Time with sufficient data to allow evaluation of quotation.
- M. Change Order Forms: Architects/Engineer's Form.
- N. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.

1.5 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of Engineer, it is not practical to remove and replace the Work, Engineer will direct appropriate remedy or adjust payment.
- C. Authority of Engineer and Owner to assess defects and identify payment adjustments is final.
- D. Nonpayment for Rejected Products: Payment will not be made for rejected products.

1.6 UNIT PRICES

- A. Authority: Measurement methods are delineated in individual Specification Sections.
- B. Measurement methods delineated in individual Specification Sections complement criteria of this Section. In event of conflict, requirements of individual Specification Section govern.
- C. Engineer will take measurements and compute quantities accordingly. Provide assistance in taking of measurements.
- D. Unit Quantities: Quantities and measurements indicated on Bid Form are for Contract purposes only. Actual quantities provided shall determine payment.
- E. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application, or installation of item of the Work; overhead and profit.
- F. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Engineer multiplied by unit sum/price for Work incorporated in or made necessary by the Work.
- G. Measurement of Quantities:
 - 1. Weigh Scales: Inspected, tested, and certified by applicable State weights and measures department within past year.
 - 2. Platform Scales: Of sufficient size and capacity to accommodate conveying vehicle.

3. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel, or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
4. Measurement by Volume: Measured by cubic dimension using mean length, width, and height or thickness.
5. Measurement by Area: Measured by square dimension using mean length and width or radius.
6. Linear Measurement: Measured by linear dimension, at item centerline or mean chord.
7. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as completed item or unit of the Work.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 22 00

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SCOPE

- A. This section describes the method of measurement and basis of payment for all items of the work included in the Contract and indicated in the Bid Proposal. Provide all labor, material, tools, equipment and services required to complete the Work included in the Contract Documents. Items described in the Specifications and indicated on the Drawings, but not shown in this specification section, are considered incidental to the Project.
- B. Each bid item on the bid form includes all work items required to construct the work as shown on the drawings and indicated in the specifications, including those items not specifically stated below in this section.
- C. From time-to-time Contractors may receive written authorization to perform additions to or deletions from the Work, on a Unit Rate Price basis; the costs of Changes shall be calculated in accordance with the Unit Rate Pricing or “Add/Deduct” indicated on this Bid Form.

Unless otherwise noted, each Unit Rate Price includes all direct and indirect costs for labor, equipment, transportation, testing services, general work expenses, applicable taxes, overhead, and other costs required to complete the work.

- 1. The all-inclusive Unit Rate Prices are fixed for the duration of this Contract, and not subject to escalation.
- 2. The Unit Rate Prices shall include all Work the Contractor is required to perform without regard to the quantities involved, difficulty in performing the Work, materials or equipment required, and specific handling of materials and equipment.
- 3. All Unit Rate Prices shall apply at 100% of their value for both additions and deletions to the Scope of Work, unless mutually agreed to otherwise in accordance with the Contract Documents.

1.2 UNIT PRICE – MEASUREMENT AND PAYMENT

- A. Section 01 20 00 – Price and Payment Procedures Contract Sum/Price.
- B. Mobilization:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment for Mobilization, for the project.
- C. Demolition/Site Clearing:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment, for removal and proper disposal for Demolition/Site Clearing as shown on the drawings.

- D. Excavation & Rough Grading:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment for Excavation and Rough Grading, for a complete installation as shown on the drawings.

- E. Soil Erosion and Sedimentation Control:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material and equipment, permit fees, etc. required for soil erosion prevention and sedimentation control required for this project. Additional control measures shall be employed as required by site conditions and applicable enforcing agencies having project jurisdiction at no additional cost.

- F. Play Structures:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, materials, and equipment required, for a complete installation per manufacturer's instruction.

- G. Swing Set:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment for Swing Set, for a complete installation per manufacturer's instruction.

- H. 6" Reinforced Concrete Edging:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment for 6" Reinforced Concrete Edging, for a complete installation.

- I. Safety Surface, Engineered Wood Fiber, Compacted, w/ Geotextile Fabric 12" depth:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, materials, and equipment required for a complete installation per manufacturer's instruction.

- J. Playground Subsurface Drainage, 4" Perforated Pipe w/ Sock in Pea Stone:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, materials, and equipment required, for a complete installation per manufacturer's instruction.

- K. Concrete Pad, Non-Reinforced, 4" depth:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment, for Concrete Pad, Non-Reinforced, 4" depth, for a complete installation.

- L. Sand Subbase, Class II, 4" depth:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment for Sand Subbase, Class II, 4" depth, for a complete installation.

- M. 8' Wide, HMA Path, 2.5" depth:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment, 8' Wide, HMA Path, 2.5" depth, for a complete installation.

- N. Crushed Limestone Base, 22A, C.I.P. 2” Depth:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment for Crushed Limestone Base, 22A, C.I.P. 2” Depth, for a complete installation.

- O. Crushed Limestone Base, 22A, C.I.P. 6” Depth:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment for Crushed Limestone Base, 22A, C.I.P. 6” Depth, for a complete installation.

- P. Park Bench w/ 1 Armrest, Backrest, & Canopy, Surface Mounted, 6’:
 - 1. Basis of Measurement: At the unit price bid per each, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment for Park Bench w/ 1 Armrest, Backrest, & Canopy, Surface Mounted, 6’, for a complete installation.

- Q. ADA Picnic Tables:
 - 1. Basis of Measurement: At the unit price bid per each, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, and equipment for picnic tables, including assembly and security anchors, for a complete installation.

- R. Trash Receptacle w/ Rain Bonnet, Direct Bury:
 - 1. Basis of Measurement: At the unit price bid per each, as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, mounting, and equipment for a Trash Receptacle w/ Rain Bonnet, Direct Bury, for a complete installation per manufacturer’s instructions.

- S. Site Restoration/Cleanup:
 - 1. Basis of Measurement: At the lump sum price bid, as stated in the Proposal.
 - 2. Basis of Payment: Include all associated labor, material, and equipment for site restoration, cleanup, soil preparation, landscape grading, and seeding, for a complete installation.

- T. Construction Staking & Material Testing Allowance:
 - 1. Basis of Measurement: At the lump sum price bid as stated in the Proposal.
 - 2. Basis of Payment: Includes all associated labor, material, equipment, etc. for complete Construction Staking and Material Testing necessary to facilitate construction through the project as performed by Spicer Group.

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance.
- B. Product options.
- C. Product substitution procedures.

1.2 QUALITY ASSURANCE

- A. Contract is based on products and standards established in Contract Documents without consideration of proposed substitutions.
- B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.
- C. Substitution Proposals: Permitted for specified products except where specified otherwise. Do not substitute products unless substitution has been accepted and approved in writing by Owner.

1.3 PRODUCT OPTIONS

- A. See Section 01 60 00 - Product Requirements.

1.4 PRODUCT SUBSTITUTION PROCEDURES

- A. Engineer will consider requests for substitutions only within **15** days after date of Owner-Contractor Agreement.
- B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.
- C. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:
 - 1. Manufacturer's name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.
 - 2. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
 - 3. Reference to Article and Paragraph numbers in Specification Section.
 - 4. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
 - 5. Changes required in other Work.
 - 6. Availability of maintenance service and source of replacement parts as applicable.

7. Certified test data to show compliance with performance characteristics specified.
8. Samples when applicable or requested.
9. Other information as necessary to assist Engineer's evaluation.

D. A request constitutes a representation that Contractor:

1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
2. Will provide same warranty for substitution as for specified product.
3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
4. Waives claims for additional costs or time extension that may subsequently become apparent.
5. Will coordinate installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
6. Will reimburse Owner for review or redesign services associated with reapproval by authorities having jurisdiction.

E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals without separate written request or when acceptance will require revision to Contract Documents.

F. Substitution Submittal Procedure:

1. Submit requests for substitutions.
2. Submit three copies of Request for Substitution for consideration. Limit each request to one proposed substitution.
3. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
4. Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Coordination and Project conditions.
- B. Field Engineering
- C. Cutting and Patching
- D. Preconstruction meeting.
- E. Site mobilization meeting.
- F. Progress meetings.
- G. Preinstallation meetings.
- H. Closeout meeting.
- I. Alteration procedures.

1.2 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of various Sections of Bidding Documents to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing operating equipment in service.
- C. Coordination Meetings: In addition to other meetings specified in this Section, hold coordination meetings with personnel and Subcontractors to ensure coordination of Work.
- D. Coordinate completion and clean-up of Work of separate Sections in preparation for Substantial Completion and for portions of Work designated for Owner's partial occupancy.
- E. After Owner's occupancy of premises, coordinate access to Site for correction of defective Work and Work not complying with Contract Documents, to minimize disruption of Owner's activities.
- F. When finished surfaces are cut so that a smoother transition and new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Engineer.

- G. Where a change of plane of 1/4 inch or more occurs, submit recommendation for providing a smooth transition for Engineer review and request instructions from Engineer.
- H. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- I. Finish surfaces as specified in individual product sections.

1.3 ALLOWANCES

A. MATERIAL TESTING

- 1. The Contractor will provide, through the Professional (Spicer Group), testing of materials. The following general classifications of Work require testing and/or certificates of inspection:
 - a. Backfilling for Compaction and Density
 - b. Concrete Testing
- 2. Additional materials may be requested for testing by the Professional at any time.

B. CONSTRUCTION STAKING

- 1. The Contractor will provide, through the Professional (Spicer Group), reference points for construction, and the Professional will be responsible for laying out (staking) the Work. Staking by the Professional will be limited to the following:
 - a. Marking the Control Points.
 - b. Proposed improvements for location and grade, with offsets.
 - c. Staking grade with proposed cut/fill elevations, based on the grading plan.
 - d. The contract allowance lump sum price accounts for one (1) site visit to complete all necessary staking for this project.
 - e. Any additional staking requested beyond these limits will be at the Contractor's expense.
- 2. Contractor to locate and protect survey control, reference points, and construction staking. Restaking will be at the Contractor's expense.
- 3. Coordinate schedule for staking a minimum of ten (10) days before staking is needed.

C. Control datum for survey is that established by Owner provided survey shown on Drawings.

D. Engineer will provide construction staking. Call the Engineer to request staking at least 3 working days in advance of the time needed for the work.

E. Construction stakes removed or damaged by Contractor shall be replaced at Contractor's expense.

F. When finished surfaces are cut so that a smoother transition and new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Engineer.

G. Where a change of plane of 1/4 inch or more occurs, submit recommendation for providing a smooth transition for Engineer review and request instructions from Engineer.

H. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.

- I. Finish surfaces as specified in individual product sections.
- J. Where there are changes in open drain cross sections, excavate a 20-foot smooth transition between sections.

1.4 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements which affects:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of element.
 - 4. Visual quantities of sight-exposed elements.
 - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching to complete Work, and to:
 - 1. Fit the several parts together, to integrate with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and non-conforming Work.
 - 4. Remove samples of installed Work for testing.
- D. Execute work by methods which will avoid damage to other Work, and provide proper surfaces to receive patching and finishing.
- E. Cut rigid materials using masonry saw or core drill.
- F. Restore Work with new products in accordance with requirements of Contract Documents.
- G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.
- I. Identify any hazardous substance or condition exposed during the Work to the Engineer for decision or remedy.

1.5 PRECONSTRUCTION MEETING

- A. Engineer will schedule and preside over meeting.
- B. Attendance Required: Engineer, Owner, appropriate governmental agency representatives, applicable public and private utility companies, and Contractor.
- C. Minimum Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.

4. Submission of list of Subcontractors, list of products, schedule of values, and Progress Schedule.
5. Designation of personnel representing parties in Contract, along with contact phone number and Engineer.
6. Communication procedures.
7. Procedures and processing of requests for interpretations, field decisions field orders, submittals, substitutions, Applications for Payments, proposal request, Change Orders, and Contract closeout procedures.
8. Scheduling.
9. Critical Work sequencing.
10. Scheduling activities.
11. Utility Representatives comments and requirements.

D. Engineer will record minutes and distribute copies to participants after meeting.

1.6 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work.
- B. Engineer will make arrangements for meetings, prepare agenda with copies for participants, and preside over meetings.
- C. Attendance Required: Job superintendent, major Subcontractors, Contractors and suppliers, and Engineer, Owner, as appropriate to agenda topics for each meeting.
- D. Minimum Agenda:
 1. Review minutes of previous meetings.
 2. Review of Work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems impeding planned progress.
 5. Review of submittal schedule and status of submittals.
 6. Review of off-Site fabrication and delivery schedules.
 7. Maintenance of Progress Schedule.
 8. Corrective measures to regain projected schedules.
 9. Planned progress during succeeding work period.
 10. Coordination of projected progress.
 11. Maintenance of quality and work standards.
 12. Effect of proposed changes on Progress Schedule and coordination.
 13. Other business relating to Work.
- E. Contractor: Record minutes and distribute copies to participants within two days after meeting, with two copies each to Engineer, Owner, and those affected by decisions made.

1.7 CLOSEOUT MEETING

- A. Schedule Project closeout meeting with sufficient time to prepare for requesting Substantial Completion. Preside over meeting and be responsible for minutes.

- B. Attendance Required: Contractor, Subcontractors, Engineer, Owner, and others appropriate to agenda.
- C. Notify Engineer four days in advance of meeting date.
- D. Minimum Agenda:
 - 1. Start-up of facilities and systems.
 - 2. Operations and maintenance manuals.
 - 3. Testing, adjusting, and balancing.
 - 4. System demonstration and observation.
 - 5. Operation and maintenance instructions for Owner's personnel.
 - 6. Temporary indoor-air-quality plan and procedures.
 - 7. Contractor's inspection of Work.
 - 8. Contractor's preparation of an initial "punch list."
 - 9. Procedure to request Engineer inspection to determine date of Substantial Completion.
 - 10. Completion time for correcting deficiencies.
 - 11. Inspections by authorities having jurisdiction.
 - 12. Certificate of Occupancy and transfer of insurance responsibilities.
 - 13. Partial release of retainage.
 - 14. Final cleaning.
 - 15. Preparation for final inspection.
 - 16. Closeout Submittals:
 - a. Project record documents.
 - b. Operating and maintenance documents.
 - c. Operating and maintenance materials.
 - d. Affidavits.
 - 17. Final Application for Payment.
 - 18. Contractor's demobilization of Site.
 - 19. Maintenance.
- E. Record minutes and distribute copies to participants within two days after meeting, with two copies each to Engineer, Owner, and those affected by decisions made.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION – Not Used

END OF SECTION

SECTION 01 32 16

CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittals.
- B. Review and evaluation.
- C. Updating schedules.
- D. Distribution.

1.2 SUBMITTALS

- A. 5 days prior to the pre-construction meeting the Contractor shall submit a construction work schedule laying out the progress of the project for the Engineer's review.
- B. Schedule Updates:
 - 1. Overall percent complete, projected and actual.
 - 2. Completion progress by listed activity and sub activity, to within five days prior to submittal.
 - 3. Changes in Work scope and activities modified since submittal.
 - 4. Delays in submittals or resubmittals, deliveries, or Work.
 - 5. Adjusted or modified sequences of Work.
 - 6. Other identifiable changes.
 - 7. Revised projections of progress and completion.

1.3 REVIEW AND EVALUATION

- A. Participate in joint review and evaluation of schedules with Engineer at each submittal.
- B. Evaluate Project status to determine Work behind schedule and Work ahead of schedule.
- C. After review, revise schedules incorporating results of review, and resubmit within 10 days.

1.4 UPDATING SCHEDULES

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Update schedules to depict current status of Work.
- C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.

- D. Upon approval of a Change Order, include the change in the next schedule submittal.
- E. Indicate changes required to maintain Date of Substantial and Total Completion.
- F. Submit sorts as required to support recommended changes.
- G. Prepare narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken or proposed and its effect.

1.5 DISTRIBUTION

- A. Following joint review, distribute copies of updated schedules to Contractor's Project site file, to Subcontractors, suppliers, Engineer, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Definitions.
- B. Submittal procedures.
- C. Construction progress schedules.
- D. Proposed product list.
- E. Product data.
- F. Use of electronic CAD files of Project Drawings.
- G. Shop Drawings.
- H. Samples.
- I. Other submittals.
- J. Design data.
- K. Test reports.
- L. Certificates.
- M. Manufacturer's instructions.
- N. Manufacturer's field reports.
- O. Erection Drawings.
- P. Contractor review.
- Q. Engineer review.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action.

- B. Informational Submittals: Written and graphic information and physical Samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Engineer-accepted form.
- B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
- C. Identify: Project, Contractor, Subcontractor and supplier, pertinent Drawing and detail number, and Specification Section number appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite Project and deliver to Engineer. Coordinate submission of related items.
- F. For each submittal for review, allow **15** days excluding delivery time to and from Contractor.
- G. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.
- H. Allow space on submittals for Contractor and Engineer review stamps.
- I. When revised for resubmission, identify changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- K. Submittals not requested will not be recognized nor processed.
- L. Incomplete Submittals: Engineer will not review. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Engineer.

1.4 CONSTRUCTION PROGRESS SCHEDULES

- A. Comply with Section 01 32 16 - Construction Progress Schedule

1.5 PROPOSED PRODUCT LIST

- A. Within 15 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, indicate manufacturer, trade name, model or catalog designation, and reference standards.

1.6 PRODUCT DATA

- A. Product Data: Action Submittal: Submit to Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Submit number of copies Contractor requires, plus three copies Engineer will retain.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.7 ELECTRONIC CAD FILES OF PROJECT DRAWINGS

- A. Electronic CAD Files of Project Drawings: May only be used to expedite production of Shop Drawings for the Project. Use for other Projects or purposes is not allowed.
- B. Electronic CAD Files of Project Drawings: Distributed only under the following conditions:
 - 1. Use of files is solely at receiver's risk. Engineer does not warrant accuracy of files. Receiving files in electronic form does not relieve receiver of responsibilities for measurements, dimensions, and quantities set forth in Contract Documents. In the event of ambiguity, discrepancy, or conflict between information on electronic media and that in Contract Documents, notify Engineer of discrepancy and use information in hard-copy Drawings and Specifications.
 - 2. CAD files do not necessarily represent the latest Contract Documents, existing conditions, and as-built conditions. Receiver is responsible for determining and complying with these conditions and for incorporating addenda and modifications.
 - 3. User is responsible for removing information not normally provided on Shop Drawings and removing references to Contract Documents. Shop Drawings submitted with information associated with other trades or with references to Contract Documents will not be reviewed and will be immediately returned.
 - 4. Receiver shall not hold Engineer responsible for data or file clean-up required to make files usable, nor for error or malfunction in translation, interpretation, or use of this electronic information.
 - 5. Receiver shall understand that even though Engineer has computer virus scanning software to detect presence of computer viruses, there is no guarantee that computer viruses are not present in files or in electronic media.
 - 6. Receiver shall not hold Engineer responsible for such viruses or their consequences, and shall hold Engineer harmless against costs, losses, or damage caused by presence of computer virus in files or media.

1.8 SHOP DRAWINGS

- A. Shop Drawings: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.

- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a professional Engineer responsible for designing components shown on Shop Drawings.
 - 1. Include signed and sealed calculations to support design.
 - 2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
 - 3. Make revisions and provide additional information when required by authorities having jurisdiction.
- D. Submit number of opaque reproductions Contractor requires, plus two copies Engineer will retain.
- E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.9 SAMPLES

- A. Samples: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Samples for Selection as Specified in Product Sections:
 - 1. Submit to Engineer for aesthetic, color, and finish selection.
 - 2. Submit Samples of finishes, textures, and patterns for Engineer selection.
- C. Submit Samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate Sample submittals for interfacing work.
- D. Include identification on each Sample, with full Project information.
- E. Submit number of Samples specified in individual Specification Sections; Engineer will retain **one** Sample.
- F. Reviewed Samples that may be used in the Work are indicated in individual Specification Sections.
- G. Samples will not be used for testing purposes unless specifically stated in Specification Section.
- H. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.10 OTHER SUBMITTALS

- A. Closeout Submittals: Comply with Section 01 70 00 - Execution and Closeout Requirements.

- B. Informational Submittal: Submit data for Engineer's knowledge as Contract administrator or for Owner.
- C. Submit information for assessing conformance with information given and design concept expressed in Contract Documents.

1.11 TEST REPORTS

- A. Informational Submittal: Submit reports for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit test reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.12 CERTIFICATES

- A. Informational Submittal: Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Engineer, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product but must be acceptable to Engineer.

1.13 MANUFACTURER'S INSTRUCTIONS

- A. Informational Submittal: Submit manufacturer's installation instructions for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing, to Engineer in quantities specified for Product Data.
- C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.14 MANUFACTURER'S FIELD REPORTS

- A. Informational Submittal: Submit reports for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit report in duplicate within 5 days of observation to Engineer for information.
- C. Submit reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.15 ERECTION DRAWINGS

- A. Informational Submittal: Submit Drawings for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit Drawings for information assessing conformance with information given and design concept expressed in Contract Documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by Engineer or Owner.

1.16 CONTRACTOR REVIEW

- A. Review for compliance with Contract Documents and approve submittals before transmitting to Engineer.
- B. Contractor: Responsible for:
 - 1. Determination and verification of materials including manufacturer's catalog numbers.
 - 2. Determination and verification of field measurements and field construction criteria.
 - 3. Checking and coordinating information in submittal with requirements of Work and of Contract Documents.
 - 4. Determination of accuracy and completeness of dimensions and quantities.
 - 5. Confirmation and coordination of dimensions and field conditions at Site.
 - 6. Construction means, techniques, sequences, and procedures.
 - 7. Safety precautions.
 - 8. Coordination and performance of Work of all trades.
- C. Stamp, sign or initial, and date each submittal to certify compliance with requirements of Contract Documents.
- D. Do not fabricate products or begin Work for which submittals are required until approved submittals have been received from Engineer.

1.17 ENGINEER REVIEW

- A. Do not make "mass submittals" to Engineer. "Mass submittals" are defined as six or more submittals or items in one day or 15 or more submittals or items in one week. If "mass submittals" are received, Engineer's review time stated above will be extended as necessary to perform proper review. Engineer will review "mass submittals" based on priority determined by Engineer after consultation with Owner and Contractor.
- B. Informational submittals and other similar data are for Engineer's information, do not require Engineer's responsive action, and will not be reviewed or returned with comment.
- C. Submittals made by Contractor that are not required by Contract Documents may be returned without action.
- D. Submittal approval does not authorize changes to Contract requirements unless accompanied by Change Order.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality control.
- B. Tolerances.
- C. References.
- D. Labeling.
- E. Mockup requirements.
- F. Manufacturers' field services.

1.2 QUALITY CONTROL

- A. Monitor quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with specified standards as the minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- C. Perform Work using persons qualified to produce required and specified quality.
- D. Products, materials, and equipment may be subject to inspection by Engineer and Owner at place of manufacture or fabrication. Such inspections shall not relieve Contractor of complying with requirements of Contract Documents.
- E. Supervise performance of Work in such manner and by such means to ensure that Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.

1.3 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When such tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.

- C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current as of date of Contract Documents except where specific date is established by code.
- C. Obtain copies of standards and maintain on Site when required by product Specification Sections.
- D. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
- E. Neither contractual relationships, duties, or responsibilities of parties in Contract nor those of Engineer shall be altered from Contract Documents by mention or inference in reference documents.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities:
 - 1. Temporary electricity.
- B. Construction Facilities:
 - 1. Parking.
 - 2. Progress cleaning and waste removal.
 - 3. Fire-prevention facilities.
- C. Temporary Controls:
 - 1. Barriers.
 - 2. Enclosures and fencing.
 - 3. Security.
 - 4. Water control.
 - 5. Dust control.
 - 6. Erosion and sediment control.
 - 7. Noise control.
 - 8. Pest and rodent control.
 - 9. Pollution control.
- D. Removal of utilities, facilities, and controls.
- E. Protection of Installed Work.
- F. Protection of Existing.
- G. Progress Cleaning.

1.2 TEMPORARY ELECTRICITY

- A. Use of existing electrical service shall be permitted.
- B. Complement existing power service capacity and characteristics as required for construction operations.
- C. Provide power outlets with branch wiring and distribution boxes located as required for construction operations. Provide suitable, flexible power cords as required for portable construction tools and equipment.
- D. Provide main service disconnect and overcurrent protection at convenient location switch at source distribution equipment meter.

- E. Permanent convenience receptacles may be used during construction.

1.3 PARKING

- A. Arrange for temporary parking areas to accommodate construction personnel.
- B. Locate as approved by Architect/Engineer.
- C. If Site space is not adequate, provide additional off-site parking.
- D. Use of designated areas of existing on-Site streets and driveways used for construction traffic is permitted. Tracked vehicles are not allowed on paved areas.
- E. Use of designated areas of existing parking facilities used by construction personnel is permitted.
- F. Do not allow heavy vehicles or construction equipment in parking areas.
- G. Do not allow vehicle parking on existing pavement.
- H. Permanent Pavements and Parking Facilities:
 - 1. Before Substantial Completion, bases for permanent roads and parking areas may be used for construction traffic.
 - 2. Avoid traffic loading beyond paving design capacity. Tracked vehicles are not allowed.
 - 3. Use of Permanent parking structures is permitted.
- I. Removal, Repair:
 - 1. Remove temporary materials and construction at Substantial Completion.
 - 2. Remove underground work and compacted materials to depth of 2 feet fill and grade site as indicated.
 - 3. Repair existing and permanent facilities damaged by use, to original condition.
- J. Mud from site vehicles: Provide means of removing mud from vehicle wheels before entering streets.

1.4 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain Site in clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, before enclosing spaces.
- C. Broom and vacuum clean interior areas before starting surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and rubbish from Site and dispose of off-Site.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.5 FIRE-PREVENTION FACILITIES

- A. Prohibit smoking within buildings under construction and demolition. Designate area on Site where smoking is permitted. Provide approved ashtrays in designated smoking areas.
- B. Establish fire watch for cutting, welding, and other hazardous operations capable of starting fires. Maintain fire watch before, during, and after hazardous operations until threat of fire does not exist.
- C. Portable Fire Extinguishers: NFPA 10; 10-pound capacity, 4A-60B: C UL rating.
 - 1. Provide one fire extinguisher at each stairway on each floor of buildings under construction and demolition.
 - 2. Provide minimum of one fire extinguisher in every construction trailer and storage shed.
 - 3. Provide minimum of one fire extinguisher on roof during roofing operations using heat-producing equipment.

1.20 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise produced by construction operations.

1.20 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
- B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.21 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, and materials before Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary Work.
- C. Restore existing and permanent facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.
- D. A sufficient sum of money to remove and replace or repair any utilities damaged or relocated during the construction of the project shall be included in total contract amount.

1.22 PROTECTION OF INSTALLED WORK

- A. Protect installed work and provide special protection where specified in individual specification Sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.
- C. Prohibit traffic from landscaped areas.

1.23 PROTECTION OF EXISTING

CALL “MISS DIG” 811 or (1-800-482-7171) A MINIMUM OF THREE WORKING DAYS PRIOR TO CONSTRUCTION.

- A. Obtain a copy of Positive Response. Contact Miss Dig for additional assistance if there are any utilities not marked or cleared through the Positive Response System.
- B. Contact Miss Dig for additional assistance if there is a discrepancy in the field from the Positive Response System.
- C. Contact Miss Dig for additional assistance if utility is not found within the applicable “approximate locations” marked in the field.
- D. Protect landscaped areas. Damaged areas shall be replaced in kind.
- E. Utilities must remain in service. If it becomes necessary to interrupt a utility service, the utility authority must be notified immediately, and steps taken to restore temporary or permanent service as soon as possible.
- F. Expose utility and drainage piping crosses the trench, support the piping according to the utility authority’s standards and backfill to the top with compacted sand.

1.24 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Clean road surface daily to the Owner’s and/or Engineer’s satisfaction.
- C. A sufficient sum of money to remove and replace or repair any utilities damaged or relocated during the construction of the project shall be included in total contract amount.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Equipment electrical characteristics and components.

1.2 PRODUCTS

- A. At minimum, comply with specified requirements and reference standards.
- B. Specified products define standard of quality, type, function, dimension, appearance, and performance required.
- C. Furnish products of qualified manufacturers that are suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise. Confirm that manufacturer's production capacity can provide sufficient product, on time, to meet Project requirements.
- D. Domestic Products: Except where specified otherwise, domestic products are required and interpreted to mean products mined, manufactured, fabricated, or produced in United States or its territories.
- E. Do not use materials and equipment removed from existing premises except as specifically permitted by Contract Documents.
- F. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Comply with delivery requirements.
- B. Transport and handle products according to manufacturer's instructions.
- C. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.

- D. Provide equipment and personnel to handle products; use methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products according to manufacturer's instructions.
- B. Store products with seals and labels intact and legible.
- C. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable to product.
- D. For exterior storage of fabricated products, place products on sloped supports aboveground.
- E. Provide off-Site storage and protection when Site does not permit on-Site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products; use methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Products complying with specified reference standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and complying with Specifications; no options or substitutions allowed.
- C. Products Specified by naming One or More Manufactures with Provision for Substitutions: submit Request for Substitution for any manufacturer not named, according to Section 01 25 00 – Substitution Procedures.

PART 2 PRODUCTS

2.1 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Wiring Terminations: Furnish terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Include lugs for terminal box.

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 70 00

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Field engineering.
- B. Closeout procedures.
- C. Project record documents.
- D. Maintenance service.
- E. Warranties.
- F. Progress Payments.
- G. Examination.
- H. Preparation.
- I. Execution.
- J. Cutting and patching.
- K. Protecting installed construction.
- L. Final cleaning.

1.2 FIELD ENGINEERING

- A. Engineer will locate and Contractor shall protect survey control and reference points. Promptly notify Engineer of discrepancies discovered.
- B. Control datum for survey is established by Owner-provided survey indicated on Drawings.
- C. Prior to beginning Work, verify and establish floor elevations of existing facilities to ensure that new Work will meet existing elevations in smooth and level alignment except where specifically detailed or indicated otherwise.
- D. Verify setbacks and easements; confirm Drawing dimensions and elevations.
- E. Field engineering services provided by Engineer includes: Establish elevations, lines, and levels using recognized engineering survey practices.
- F. Maintain complete an accurate log of control and survey Work as Work progresses.

- G. Protect survey control points prior to starting Site Work; preserve permanent reference points during construction.
- H. Promptly report to Engineer loss or destruction of reference point or relocation required because of changes in grades or other reasons.
- I. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.

1.3 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed. Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's inspection.
- B. Provide submittals to Engineer that are required by governing or other authorities.
- C. Provide Consent of Surety and all Final Waivers.

1.4 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Remove sediment from storm sewers, and catch basins.
- C. Clean site; sweep paved areas, rake clean landscaped surfaces.
- D. Remove waste and surplus materials, rubbish, and construction facilities from the site.
- E. Landscape areas as required in documents.
- F. Restore roads, driveways, parking areas, lawns, drainage, and other items disturbed during construction to original condition or as required by the documents.

1.5 PROJECT RECORD DOCUMENTS

- A. Maintain on Site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, product data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Store record documents separate from documents used for construction.
- C. Record information concurrent with construction progress.
- D. Specifications: Legibly mark and record, at each product Section, description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates used.

3. Changes made by Addenda and modifications.
- E. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction as follows:
1. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in the Work, and change orders.
 2. Include locations of concealed elements of the Work.
 3. Identify depth of buried utility lines and provide dimensions showing distances from permanent facility components that are parallel to utilities.
 4. Dimension ends, corners, and junctions of buried utilities to permanent facility components using triangulation.
 5. Identify and locate existing buried or concealed items encountered during Project.
 6. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 7. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 8. Field changes of dimension and detail.
 9. Details not on original Drawings.
- F. Submit marked-up paper copy documents to Engineer before Substantial Completion.

1.6 MAINTENANCE SERVICE

- A. Furnish service and maintenance of components indicated in Specification Sections for 1 year from date of Substantial Completion.
- B. Examine system components at frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by manufacturer of original component.
- D. Do not assign or transfer maintenance service to agent or Subcontractor without prior written consent of Owner.

1.7 WARRANTIES

- A. Execute and assemble documents from Sub-contractors, suppliers, and manufacturers.
- B. Provide Table of Contents and assemble in three D size ring three ring binder with durable plastic cloth cover.
- C. Submit prior to final Application for Payment.
- D. Warranty all work for a period of one year from the date of the final progress payment.

1.8 PROGRESS PAYMENTS

- A. The Owner may request from the Contractor waivers for proof of payment to all sub-contractors and suppliers utilized on this project prior to issuing payments.

- B. The Owner may request from the Contractor a Sworn Statement listing all sub-contractors and suppliers, their involvement with the project, their subcontracted amount, amount paid to date, and balance due prior to issuing payment.
- C. Failure to provide this information may result in not receiving payments or payments not being issued in a timely manner.

1.9 CORRECTION PERIOD

- A. For the period of one year from the date of final payment, promptly correct work or replace materials that are found to be defective.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that existing Site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual Specification Sections.
- D. Verify that utility services are available with correct characteristics and in correct locations.

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance according to manufacturer's instructions.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer-required or -recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

3.3 EXECUTION

- A. Comply with manufacturer's installation instructions, performing each step in sequence. Maintain one set of manufacturer's installation instructions at Project Site during installation and until completion of construction.
- B. When manufacturer's installation instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Verify that field measurements are as indicated on approved Shop Drawings or as instructed by manufacturer.

- D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
 - 1. Secure Work true to line and level and within specified tolerances, or if not specified, industry-recognized tolerances.
 - 2. Physically separate products in place, provide electrical insulation, or provide protective coatings to prevent galvanic action or corrosion between dissimilar metals.
 - 3. Exposed Joints: Provide uniform joint width and arrange to obtain best visual effect. Refer questionable visual-effect choices to Engineer for final decision.
- E. Allow for expansion of materials and building movement.
- F. Climatic Conditions and Project Status: Install each unit of Work under conditions to ensure best possible results in coordination with entire Project.
 - 1. Isolate each unit of Work from incompatible Work as necessary to prevent deterioration.
 - 2. Coordinate enclosure of Work with required inspections and tests to minimize necessity of uncovering Work for those purposes.
- G. Mounting Heights: Where not indicated, mount individual units of Work at industry recognized standard mounting heights for particular application indicated.
 - 1. Refer questionable mounting heights choices to Engineer for final decision.
 - 2. Elements Identified as Accessible to Handicapped: Comply with applicable codes and regulations.
- H. Adjust operating products and equipment to ensure smooth and unhindered operation.
- I. Clean and perform maintenance on installed Work as frequently as necessary through remainder of construction period. Lubricate operable components as recommended by manufacturer.

3.4 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual Specification Sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate Work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Use durable sheet materials to protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

END OF SECTION

SECTION 03 10 00

CONCRETE FORMING AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Formwork for cast-in-place concrete.
 - 2. Shoring, bracing, and anchorage.
 - 3. Form accessories.
 - 4. Form stripping.
- B. Related Requirements:
 - 1. Section 03 20 00 - Concrete Reinforcing: Reinforcing steel and required supports for cast-in-place concrete.
 - 2. Section 03 30 00 - Cast-in-Place Concrete.
 - 3. Section 32 33 00 - Site Furnishings.

1.2 REFERENCE STANDARDS

- A. American Concrete Institute:
 - 1. ACI 117 - Specification for Tolerances for Concrete Construction and Materials.
 - 2. ACI 301 - Specifications for Structural Concrete.
 - 3. ACI 318 - Building Code Requirements for Structural Concrete.
 - 4. ACI 347 - Guide to Formwork for Concrete.
- B. American Forest & Paper Association:
 - 1. AF&PA - National Design Specification (NDS) for Wood Construction.
- C. American Society of Mechanical Engineers:
 - 1. ASME A17.1 - Safety Code for Elevators and Escalators.
- D. APA - The Engineered Wood Association:
 - 1. APA/EWA PS 1 - Voluntary Product Standard - Structural Plywood.
- E. ASTM International:
 - 1. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
 - 2. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
- F. West Coast Lumber Inspection Bureau:
 - 1. WCLIB - Standard No. 17 Grading Rules for West Coast Lumber.

1.3 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.

- B. Coordinate Work of this Section with other Sections of Work in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other Work.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit manufacturer information on void form materials and installation requirements.
- C. Shop Drawings:
 - 1. Indicate:
 - a. Formwork, shoring, and reshoring.
 - b. Pertinent dimensions, openings, methods of construction, types of connections, materials, joint arrangement and details, ties and shores, location of framing, studding and bracing, and temporary supports.
 - c. Means of leakage prevention for concrete exposed to view in finished construction.
 - d. Sequence and timing of erection and stripping, assumed compressive strength at time of stripping, height of lift, and height of drop during placement.
 - e. Vertical, horizontal, and special loads according to ACI 347, and camber diagrams when applicable.
 - f. Notes to formwork erector showing size and location of conduits and piping embedded in concrete according to ACI 318.
 - g. Procedure and schedule for removal of shores and installation and removal of reshores.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Delegated Design Submittals:
 - 1. Submit signed and sealed Shop Drawings with design calculations and assumptions for formwork, shoring, and reshores.
 - 2. Indicate loads transferred to structure during process of concreting, shoring, and reshoring.
 - 3. Include structural calculations to support design.
- F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
- G. Qualifications Statement:
 - 1. Coordinate following Subparagraph with requirements specified in QUALIFICATIONS Article.
 - 2. Submit qualifications for licensed professional.

1.5 QUALITY ASSURANCE

- A. Perform Work according to ACI 347, 301, and 318.
- B. For wood products furnished for Work of this Section, comply with AF&PA.
- C. Perform Work according to Municipal, State, and Federal standards.

1.6 QUALIFICATIONS

- A. Licensed Professional: Professional engineer experienced in design of specified Work and licensed in State of Michigan.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Inspection: Accept void forms on Site in manufacturer's original packaging and inspect for damage.
- C. Store materials off ground in ventilated and protected manner to prevent deterioration from moisture.

PART 2 - PRODUCTS

2.1 PERFORMANCE AND DESIGN CRITERIA

- A. Design, engineer, and construct formwork, shoring, and bracing according to ACI 318 to conform to design and applicable code requirements to achieve concrete shape, line, and dimension as indicated on Drawings.

2.2 WOOD FORM MATERIALS

- A. Form Materials: At discretion of Contractor.

2.3 PREFABRICATED FORMS

- A. Manufacturers:
 - 1. Sonoco Products Co.
 - 2. Substitutions: As specified in Section 01 60 00 - Product Requirements.
- B. Preformed Steel Forms:
 - 1. Description: Matched, tightly fitted, and stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished surfaces.
- C. FRP Forms: Matched, tightly fitted, and stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished concrete surfaces.
- D. Pan:
 - 1. Material: Steel.
 - 2. Configuration: Size and profile as required.
- E. Tubular Column:
 - 1. Description: Round spirally wound laminated fiber.
 - 2. Surface Treatment: Release agent, non-reusable.
 - 3. Sizes: As indicated on Drawings.

- F. Steel Forms:
 - 1. Description: Sheet steel, suitably reinforced.
 - 2. Design: For particular use as indicated on Drawings.
- G. Form Liners: Smooth, durable, grainless, and non-staining hardboard unless otherwise indicated on Drawings.
- H. Framing, Studding, and Bracing: Stud or No. 3 structural light-framing grade.

2.4 FORMWORK ACCESSORIES

- A. Form Ties:
 - 1. Type: Removable.
 - 2. Material: Galvanized.
 - 3. Length: Adjustable.
 - 4. Furnish waterproofing washer.
 - 5. Free of defects capable of leaving holes larger than 1 inch in concrete surface.
- B. Spreaders:
 - 1. Description: Standard, non-corrosive metal-form clamp assembly, of type acting as spreaders and leaving no metal within 1 inch of concrete face.
 - 2. Wire ties, wood spreaders, or through bolts are not permitted.
- C. Form Release Agent:
 - 1. Description: Colorless mineral oil that will not stain concrete or absorb moisture [or impair natural bonding or color characteristics of coating intended for use on concrete].
- D. Corners:
 - 1. Type: Chamfer,.
 - 2. Size: 3/4 by 3/4 inches.
 - 3. Lengths: Maximum possible.
- E. Dovetail Anchor Slot:
 - 1. Material: Galvanized steel.
 - 2. Thickness: 22 gage.
 - 3. Filling: Foam.
 - 4. Fasten slot to concrete formwork according to manufacturer instructions, and insert foam filler to prevent concrete from entering slot during pour.
- F. Flashing Reglets:
 - 1. Material: Galvanized steel.
 - 2. Thickness: 22 gage.
 - 3. Lengths: Maximum possible.
 - 4. Furnish alignment splines for joints.
 - 5. Filling: Foam.
 - 6. Fasten flashing reglet to concrete formwork according to manufacturer instructions, and insert foam to prevent concrete from entering reglet during pour.
- G. Vapor Retarder:
 - 1. Description: Polyethylene sheet.
 - 2. Thickness: 6 mils.

- H. Bituminous Joint Filler: Comply with ASTM D1751.
- I. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Size, strength, and character to maintain formwork in place while placing concrete.
- J. Waterstop:
 - 1. Description: Flexible strip of bentonite waterproofing compound in coil form for joints in concrete construction.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify lines, levels, and centers before proceeding with formwork.
- C. Verify that dimensions agree with Shop Drawings.
- D. If formwork is placed after reinforcement resulting in insufficient concrete cover over reinforcement, request instructions from Engineer before proceeding.

3.2 INSTALLATION

- A. Earth Forms: Not permitted.
- B. Formwork:
 - 1. Provide top form for sloped surfaces steeper than 1.5 horizontal to 1 vertical to hold shape of concrete during placement, unless it can be demonstrated that top forms can be omitted.
 - 2. Construct forms to correct shape and dimensions, mortar-tight, braced, and of sufficient strength to maintain shape and position under imposed loads from construction operations.
 - 3. Camber forms where necessary to produce level finished soffits unless indicated otherwise on Drawings.
 - 4. Positioning:
 - a. Carefully verify horizontal and vertical positions of forms.
 - b. Correct misaligned or misplaced forms before placing concrete.
 - 5. Complete wedging and bracing before placing concrete.
 - 6. Erect formwork, shoring, and bracing to achieve design requirements according to ACI 318.
 - 7. Stripping:
 - a. Arrange and assemble formwork to permit dismantling and stripping.
 - b. Do not damage concrete during stripping.
 - c. Permit removal of remaining principal shores.
 - 8. Obtain approval of Engineer before framing openings in structural members not indicated on Drawings.
 - 9. Install fillet and chamfer strips on external corners of beams, joists, and columns.
 - 10. Install void forms according to manufacturer instructions.
 - 11. Do not reuse wood formwork more than 2 times for concrete surfaces to be exposed to view.
 - 12. Do not patch formwork.
 - 13. Leave forms in place for minimum number of days according to ACI 347.

C. Form Removal:

1. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads, and removal has been approved by Engineer.
2. Loosen forms carefully; do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.
3. Store removed forms in manner that surfaces to be in contact with fresh concrete will not be damaged.
4. Discard damaged forms.
5. Form Release Agent:
 - a. Apply according to manufacturer instructions.
 - b. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.
 - c. Do not apply form release agent if concrete surfaces are indicated to receive special finishes or applied coverings that may be affected by agent.
 - d. Soak inside surfaces of untreated forms with clean water, and keep surfaces coated prior to placement of concrete.
6. Form Cleaning:
 - a. Clean forms as erection proceeds to remove foreign matter within forms.
 - b. Clean formed cavities of debris prior to placing concrete.
 - c. Flush with water or use compressed air to remove remaining foreign matter.
 - d. Ensure that water and debris drain to exterior through cleanout ports.
 - e. Cold Weather:
 - 1) During cold weather, remove ice and snow from within forms.
 - 2) Do not use de-icing salts.
 - 3) Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure; use compressed air or other dry method to remove foreign matter.
7. Reuse and Coating of Forms:
 - a. Thoroughly clean forms and reapply form coating before each reuse.
 - b. For exposed Work, do not reuse forms with damaged faces or edges.
 - c. Apply form coating to forms according to manufacturer instructions.
 - d. Do not coat forms for concrete indicated to receive "scored finish."
 - e. Apply form coatings before placing reinforcing steel.

D. Forms for Smooth Finish Concrete:

1. Use steel, plywood, or lined-board forms.
2. Use clean and smooth plywood and form liners, uniform in size, and free from surface and edge damage capable of affecting resulting concrete finish.
3. Install form lining with close-fitting square joints between separate sheets without springing into place.
4. Use full-sized sheets of form liners and plywood wherever possible.
5. Tape joints to prevent protrusions in concrete.
6. Apply forming and strip wood forms in a manner to protect corners and edges.
7. Level and continue horizontal joints.
8. Keep wood forms wet until stripped.

E. Architectural Form Liners:

1. Erect architectural side of formwork first.
2. Attach form liner to forms before installing form ties.
3. Install form liners square, with joints and pattern aligned.
4. Seal form liner joints to prevent grout leaks.
5. Dress joints and edges to match form liner pattern and texture.

- F. Forms for Surfaces to Receive Membrane Waterproofing:
 - 1. Use plywood or steel forms.
 - 2. After erection of forms, tape form joints to prevent protrusions in concrete.

- G. Framing, Studding, and Bracing:
 - 1. Maximum Spacing of Studs:
 - a. Boards: Maximum 16 inches o.c.
 - b. Plywood: 12 inches o.c.
 - 2. Size framing, bracing, centering, and supporting members for sufficient strength to maintain shape and position under imposed loads from construction operations.
 - 3. Construct beam soffits of material minimum 2 inches thick.
 - 4. Distribute bracing loads over base area on which bracing is erected.
 - 5. When placed on ground, protect against undermining, settlement, and accidental impact.

- H. Form Anchors and Hangers:
 - 1. Do not use anchors and hangers leaving exposed metal at concrete surface.
 - 2. Symmetrically arrange hangers supporting forms from structural-steel members to minimize twisting or rotation of member.
 - 3. Penetration of structural-steel members is not permitted.

- I. Inserts, Embedded Parts, and Openings:
 - 1. Install formed openings for items to be embedded in or passing through concrete Work.
 - 2. Locate and set in place items required to be cast directly into concrete.
 - 3. Install accessories straight, level, and plumb, and ensure that items are not disturbed during concrete placement.
 - 4. Joints:
 - a. Install waterstops continuous without displacing reinforcement.
 - 5. Openings:
 - a. Provide temporary ports or openings in formwork as required to facilitate cleaning and inspection.
 - b. Locate openings at bottom of forms to allow flushing water to drain.
 - 6. Close temporary openings with tight-fitting panels, flush with inside face of forms, and neatly fitted such that joints will not be apparent in exposed concrete surfaces.

- J. Form Ties:
 - 1. Provide sufficient strength and quantity to prevent spreading of forms.
 - 2. Place ties at least 1 inch away from finished surface of concrete.
 - 3. Leave inner rods in concrete when forms are stripped.
 - 4. Space form ties equidistant, symmetrical, and aligned vertically and horizontally unless indicated otherwise on Drawings.

- K. Arrange formwork to allow proper erection sequence and to permit form removal without damage to concrete.

- L. Construction Joints:
 - 1. Install surfaced pouring strip where construction joints intersect on exposed surfaces to provide straight line at joints.
 - 2. Just prior to subsequent concrete placement, remove strip and tighten forms to conceal shrinkage.

3. Appearance:
 - a. Show no overlapping of construction joints.
 - b. Construct joints to present same appearance as butted plywood joints.
4. Arrange joints in continuous line straight, true, and sharp.

M. Embedded Items:

1. Make provisions for pipes, sleeves, anchors, inserts, reglets, anchor slots, nailers, waterstops, and other features.
2. Do not embed wood or uncoated aluminum in concrete.
3. Obtain installation and setting information for embedded items furnished under other Sections.
4. Securely anchor embedded items in correct location and alignment prior to placing concrete.
5. Ensure that conduits and pipes, including those made of coated aluminum, meet requirements of ACI 318 regarding size and location limitations.

N. Openings for Items Passing through Concrete:

1. Frame openings in concrete where indicated on Drawings.
2. Establish exact locations, sizes, and other conditions required for openings and attachment of Work specified under other Sections.
3. Coordinate Work to avoid cutting and patching of concrete after placement.
4. Perform cutting and repairing of concrete required as result of failure to provide required openings.

O. Screeds:

1. Set screeds and establish levels for tops of and finish on concrete slabs.
2. Slope slabs to drain where required or as indicated on Drawings.
3. Before depositing concrete, remove debris from space to be occupied by concrete and thoroughly wet forms; remove freestanding water.

P. Screenshot Supports:

1. For concrete over waterproof membranes and vapor retarder membranes, use cradle-, pad-, or base-type screed supports that will not puncture membrane.
2. Staking through membrane is not permitted.

Q. Cleanouts and Access Panels:

1. Provide removable cleanout sections or access panels at bottoms of forms to permit inspection and effective cleaning of loose dirt, debris, and waste material.
2. Clean forms and surfaces against which concrete is to be placed.
3. Remove chips, sawdust, and other debris.
4. Thoroughly blow out forms with compressed air just before concrete is placed.

3.3 TOLERANCES

- A. Tolerances: Construct formwork to produce completed concrete surfaces within construction tolerances according to ACI 117.

3.4 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Requirements for inspecting and testing.

B. Inspection:

1. Inspect erected formwork, shoring, and bracing to ensure that Work complies with formwork design and that supports, fastenings, wedges, ties, and items are secure.
2. Notify Engineer after placement of reinforcing steel in forms but prior to placing concrete.
3. Schedule concrete placement to permit formwork inspection before placing concrete.

END OF SECTION

SECTION 03 20 00

CONCRETE REINFORCING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Reinforcing bars.
 - 2. Welded wire fabric.
 - 3. Reinforcement accessories.

- B. Related Requirements:
 - 1. Section 03 10 00 - Concrete Forming and Accessories.
 - 2. Section 03 30 00 - Cast-in-Place Concrete.
 - 3. Section 03 39 00 - Concrete Curing.

1.2 REFERENCE STANDARDS

- A. American Concrete Institute:
 - 1. ACI 301 - Specifications for Structural Concrete.
 - 2. ACI 318 - Building Code Requirements for Structural Concrete.
 - 3. ACI 530/530.1 - Building Code Requirements and Specification for Masonry Structures.
 - 4. ACI SP-66 - ACI Detailing Manual.

- B. American Welding Society:
 - 1. AWS D1.4 - Structural Welding Code - Reinforcing Steel.

- C. ASTM International:
 - 1. ASTM A184 - Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement.
 - 2. ASTM A615 - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
 - 3. ASTM A704 - Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement.
 - 4. ASTM A706 - Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement.
 - 5. ASTM A767 - Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement.
 - 6. ASTM A775 - Standard Specification for Epoxy-Coated Steel Reinforcing Bars.
 - 7. ASTM A884 - Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement.
 - 8. ASTM A934 - Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars.
 - 9. ASTM A996 - Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement.

10. ASTM A1064 - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.

- D. Concrete Reinforcing Steel Institute:
1. CRSI 10-MSP - Manual of Standard Practice.
 2. CRSI 10PLACE - Placing Reinforcing Bars.

1.3 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.
- B. Coordinate Work of this Section with placement of formwork, formed openings, and other Work.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Shop Drawings:
1. Indicate bar sizes, spacings, locations, splice locations, and quantities of reinforcing steel.
 2. Indicate bending and cutting schedules.
 3. Indicate supporting and spacing devices.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- D. Submit certified copies of mill test report of reinforcement materials analysis.
- E. Welder Certificates: Certify welders and welding procedures employed on Work, verifying AWS qualification within previous 12 months.
- F. Source Quality-Control Submittals: Indicate results of factory tests and inspections.
- G. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
- H. Qualifications Statement:
1. Welders: Qualify procedures and personnel according to AWS D1.1.

1.5 QUALITY ASSURANCE

- A. Perform Work according to ACI 301 ACI 318.
- B. Prepare Shop Drawings according to ACI SP-66.
- C. Perform Work according to Municipal, State, and Federal standards.

1.6 QUALIFICATIONS

- A. Welders: AWS qualified within previous 12 months for employed weld types.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

- B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
- C. Store materials according to manufacturer instructions.
- D. Protection:
 - 1. Protect materials from moisture by storing in clean, dry location remote from construction operations areas.
 - 2. Provide additional protection according to manufacturer instructions.

1.8 EXISTING CONDITIONS

- A. Field Measurements:
 - 1. Verify field measurements prior to fabrication.
 - 2. Indicate field measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 REINFORCEMENT

- A. Reinforcing Steel:
 - 1. Comply with ASTM A615.
 - 2. Yield Strength: 60 ksi.
 - 3. Billet Bars: Deformed.
 - 4. Finish: Uncoated.

2.2 FABRICATION

- A. Fabricate concrete reinforcement according to ACI 318.
- B. Form standard hooks for, 90-degree bends, stirrups and tie hooks as indicated on Drawings.
- C. Form reinforcement bends with minimum diameters according to ACI 318.
- D. Fabricate column reinforcement with offset bends at reinforcement splices.
- E. Form ties and stirrups from following:
 - 1. Bars No. 10 and Smaller: No. 3 deformed bars.
 - 2. Bars No. 11 and Larger: No. 4 deformed bars.
- F. Splicing:
 - 1. If not indicated on Drawings, locate reinforcement splices at point of minimum stress.
 - 2. Obtain approval of splice locations from Engineer.

2.3 ACCESSORY MATERIALS

- A. Tie Wire:
 - 1. Minimum 16 gage, annealed type.
- B. Chairs, Bolsters, Bar Supports, and Spacers:
- C. Size and Shape: To strengthen and support reinforcement during concrete placement conditions.

D. Epoxy Coating Patching Material: Type as recommended by coating manufacturer.

2.4 SOURCE QUALITY CONTROL

A. Provide shop inspection and testing of completed assembly.

B. Section 01 40 00 - Quality Requirements: Requirements for testing, inspection, and analysis.

C. Certificate of Compliance:

1. If fabricator is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at fabricator's facility conforms to Contract Documents.
2. Specified shop tests are not required for Work performed by approved fabricator.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Place, support, and secure reinforcement against displacement.

B. Do not deviate from required position beyond specified tolerance.

C. Do not weld crossing reinforcement bars for assembly except as permitted by Engineer.

D. Do not displace or damage vapor retarder.

E. Accommodate placement of formed openings.

F. Spacing:

1. Space reinforcement bars with minimum clear spacing according to ACI 318.
2. If bars are indicated in multiple layers, place upper bars directly above lower bars.

G. Maintain minimum concrete cover around reinforcement according to ACI 318 or as shown on the plans.

3.2 TOLERANCES

A. Section 01 40 00 - Quality Requirements: Requirements for tolerances.

B. Install reinforcement within following tolerances for flexural members, walls, and compression members:

1. Reinforcement Depth Greater Than 8 Inches:
 - a. Depth Tolerance: Plus or Minus 3/8 inch
 - b. Minus 3/8 inch
2. Reinforcement Depth Less Than or Equal to 8 Inches:
 - a. Depth Tolerance: Plus or Minus 1/2 inch
 - b. Minus 1/2 inch

3.3 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.

- B. Perform field inspection and testing according to ACI 318.
- C. Provide unrestricted access to Work and cooperate with appointed inspection and testing firm.
- D. Reinforcement Inspection:
 - 1. Placement Acceptance: Inspect specified and ACI 318 material requirements and specified placement tolerances.
 - 2. Welding: Inspect welds according to AWS D1.1.
 - 3. Periodic Placement Inspection: Inspect for correct materials, fabrication, sizes, locations, spacing, concrete cover, and splicing.
 - 4. Weldability Inspection: Inspect for reinforcement weldability if formed from steel other than ASTM A706.
 - 5. Continuous Weld Inspection: Inspect reinforcement according to ACI 318.
 - 6. Periodic Weld Inspection: Inspect other welded connections.

END OF SECTION

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes Cast-in-Place Concrete for Following Items:

1. Footings.
2. Slabs on grade.

B. Related Requirements:

1. Section 03 10 00 - Concrete Forming and Accessories.
2. Section 03 20 00 - Concrete Reinforcing.
3. Section 03 39 00 - Concrete Curing.
4. Section 31 23 23 - Fill.

1.2 REFERENCE STANDARDS

A. American Concrete Institute:

1. ACI 301 - Specifications for Structural Concrete.
2. ACI 305R - Guide to Hot Weather Concreting.
3. ACI 306.1 - Standard Specification for Cold Weather Concreting.
4. ACI 308.1 - Specification for Curing Concrete.
5. ACI 318 - Building Code Requirements for Structural Concrete.

B. ASTM International:

1. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
3. ASTM C33 - Standard Specification for Concrete Aggregates.
4. ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
5. ASTM C42 - Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
6. ASTM C94 - Standard Specification for Ready-Mixed Concrete.
7. ASTM C143 - Standard Test Method for Slump of Hydraulic-Cement Concrete.
8. ASTM C150 - Standard Specification for Portland Cement.
9. ASTM C172 - Standard Practice for Sampling Freshly Mixed Concrete.
10. ASTM C173 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
11. ASTM C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
12. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
13. ASTM C330 - Standard Specification for Lightweight Aggregates for Structural Concrete.
14. ASTM C494 - Standard Specification for Chemical Admixtures for Concrete.

15. ASTM C595 - Standard Specification for Blended Hydraulic Cements.
16. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
17. ASTM C685 - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing.
18. ASTM C845 - Standard Specification for Expansive Hydraulic Cement.
19. ASTM C989 - Standard Specification for Slag Cement for Use in Concrete and Mortars.
20. ASTM C1017 - Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete.
21. ASTM C1064 - Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete.
22. ASTM C1107 - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
23. ASTM C1116 - Standard Specification for Fiber-Reinforced Concrete.
24. ASTM C1157 - Standard Performance Specification for Hydraulic Cement.
25. ASTM C1218 - Standard Test Method for Water-Soluble Chloride in Mortar and Concrete.
26. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures.
27. ASTM D994 - Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
28. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
29. ASTM D1752 - Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.
30. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
31. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
32. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
33. ASTM E1643 - Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
34. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.

1.3 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.
- B. Coordinate placement of joint devices with erection of concrete formwork and placement of form accessories.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data on joint devices, attachment accessories, admixtures, and mix design.
- C. Design Data:
 1. Submit concrete mix design for each concrete strength.

2. Submit separate mix designs if admixtures are required for following:
 - a. Hot and cold weather concrete Work.
 - b. Air entrained concrete Work.
3. Identify mix ingredients and proportions, including admixtures.
4. Identify chloride content of admixtures and whether or not chlorides were added during manufacture.

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

E. Manufacturer Instructions: Submit installation procedures and interfacing required with adjacent Work.

F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

1.5 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

B. Project Record Documents: Record actual locations of embedded utilities and components concealed from view in finished construction.

1.6 QUALITY ASSURANCE

A. Perform Work according to ACI 301.

B. Comply with ACI 305R when pouring concrete during hot weather.

C. Comply with ACI 306.1 when pouring concrete during cold weather.

D. Acquire cement and aggregate from one source for Work.

E. Perform Work according to Municipal, State, and Federal standards.

1.7 AMBIENT CONDITIONS

A. Section 01 50 00 - Temporary Facilities and Controls: Requirements for ambient condition control facilities for product storage and installation.

B. Maintain concrete temperature after installation at minimum 50 degrees F for minimum seven days.

PART 2 - PRODUCTS

2.1 PERFORMANCE AND DESIGN CRITERIA

A. Vapor Retarder Permeance: Maximum 1 perm when tested according to ASTM E96, water method.

2.2 MATERIALS

- A. Concrete:
 - 1. Cement:
 - a. Comply with ASTM C150, Type IIA - Air Entraining.
 - b. Type: Portland.
 - 2. Normal Weight Aggregates:
 - a. Comply with ASTM C33.
 - b. Coarse Aggregate Maximum Size: According to ACI 301.
 - 3. Water:
 - a. Comply with ACI 318.
 - b. Potable, without deleterious amounts of chloride ions.
- B. Admixtures:
 - 1. Air Entrainment: Comply with ASTM C260.
 - 2. Chemical:
 - a. Comply with ASTM C494.
 - b. Type A - Water Reducing.
 - c. Type B - Retarding.
 - d. Type C - Accelerating.
 - e. Type D - Water Reducing and Retarding.
 - f. Type E - Water Reducing and Accelerating.
 - g. Type F - Water Reducing, High Range.
 - h. Type G - Water Reducing, High Range, and Retarding.
 - 3. Fly Ash: Comply with ASTM C618, Class F or C.
 - 4. Silica Fume: Comply with ASTM C1240.
 - 5. Slag:
 - a. Description: Ground-granulated blast-furnace slag.
 - b. Comply with ASTM C989.
 - c. Grade 100 or 120.
 - 6. Plasticizing:
 - a. Comply with ASTM C1017.
 - b. Type II, plasticizing and retarding.

2.3 CONCRETE MIX

- A. Select proportions for normal weight concrete according to ACI 301, Method 1.
- B. Concrete mixtures, general
 - 1. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both.
 - 2. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than Portland cement in concrete as follows:
 - a. Fly Ash: 25%
 - b. Ground Granulated Blast-Furnace Slag: 50%
 - c. Combined Fly Ash and Ground Granulated Blast-Furnace Slag: 50%
 - d. Portland cement minimum, with fly ash not exceeding 25%
 - 3. Limit water-soluble, chloride-ion content in hardened concrete to 0.15% by weight of cement.

4. Admixtures: Use admixtures according to manufacturer's written instructions.
 - a. Use water-reducing, high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
 - b. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
 - c. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.
 - d. Use air-entraining admixture in exterior exposed concrete unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having a total air content with a tolerance of plus or minus 1-1/2 percent within the following limits:
 - 1) Concrete structures and slabs exposed to freezing and thawing, deicer chemicals, or hydraulic pressure: 5.0 percent.
 - 2) Other concrete not exposed to freezing, thawing, or hydraulic pressure, or to receive a surface hardener: 2 to 4 percent.
- C. Concrete mixtures for building elements:
 1. Class A – Structural Concrete:
 - a. Minimum Compressive Strength: 3000 psi at 7 days.
 - b. Minimum Compressive Strength: 3500 psi at 28 days.
 - c. Slump Limit: 4-1 inches.
 2. Class B – Mud Mat Concrete or Slab On Fill Concrete:
 - a. Minimum Compressive Strength: 3000 psi at 7 days.
 - b. Minimum Compressive Strength: 3500 psi at 28 days.
 - c. Slump Limit: 4-1 inches.
 3. Class C – Fill or Superstructure Concrete
 - a. Minimum Compressive Strength: 3000 psi at 7 days.
 - b. Minimum Compressive Strength: 3500 psi at 28 days.
 - c. Slump: 4-1 inches.
- D. Admixtures:
 1. Include admixture types and quantities indicated in concrete mix designs only if approved by Engineer.
 2. Cold Weather:
 - a. Use accelerating admixtures in cold weather.
 - b. Use of admixtures will not relax cold-weather placement requirements.
 3. Hot Weather: Use set-retarding admixtures.
 4. Use calcium chloride only if approved by Engineer.
 5. Add air entrainment admixture to concrete mix for Work exposed to freezing and thawing or deicing chemicals.
 6. For concrete exposed to deicing chemicals, limit fly ash, pozzolans, silica fumes, and slag content as required.
- E. Average Compressive Strength Reduction: Not permitted.
- F. Ready-Mixed Concrete: Mix and deliver concrete according to ASTM C685.
- G. Site-Mixed Concrete: Mix concrete according to ACI 318.

2.4 ACCESSORIES

- A. Bonding Agent:
 - 1. Description: Two-component modified epoxy resin.
- B. Non-shrink Grout:
 - 1. Description: Premixed compound consisting of non-metallic aggregate, cement, and water-reducing and plasticizing agents.
 - 2. Comply with ASTM C1107.
 - 3. Minimum Compressive Strength: 2,400 psi.
- C. Bentonite Waterstops: Continuous 1 inch x ¾ inch strips, containing 75% bentonite by weight. Proper care and construction procedures shall be used to avoid damaging or displacing the strip while placing concrete. If the material exhibits considerable swelling prior to confinement in the joint, it must be replaced as directed by the Engineer. Joint shall be cleaned from debris and dry prior to replacement. Install per manufacturer's instructions as approved by the Engineer.
- D. Wall Sleeves: HDPE thermoplastic sleeves, "CS" model, used for non-concrete pipe penetrations requiring "Link-seals".
- E. Expansion Joints: ANSI/ASTM D1751, fiber type; 1/4 inch to 1 inch thick.
- F. Form Release Agent: Colorless material which will not stain concrete, absorb moisture or impair natural bonding or color characteristics of coating intended for use on concrete.
- G. Corners: Chamfered, wood strip type 3/4" x 3/4" size.
- H. Vapor Retarder: Clear polyethylene film, 6 mils thick, with joint tape. Joint tape as recommended by manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify requirements for concrete cover over reinforcement.
- C. Verify that anchors, seats, plates, reinforcement, and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with placing concrete.

3.2 PREPARATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.

- B. Previously Placed Concrete:
 - 1. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent.
 - 2. Remove laitance, coatings, and unsound materials.
- C. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels, and pack solid with non-shrink grout.
- D. Remove debris and ice from formwork, reinforcement, and concrete substrates.
- E. Remove water from areas receiving concrete before concrete is placed.

3.3 INSTALLATION

- A. Placing Concrete:
 - 1. Place concrete according to ACI 301.
 - 2. Notify testing laboratory and Engineer minimum 48 hours prior to commencement of operations.
 - 3. Ensure that reinforcement, inserts, embedded parts, formed expansion and contraction joints, and existing utilities are not disturbed during concrete placement.
 - 4. Install vapor retarder under interior slabs on grade according to ASTM E1643.
 - 5. Lap joints minimum 6 inches and seal watertight by taping edges and ends.
 - 6. Repairs:
 - a. Repair vapor retarder damaged during placement of concrete reinforcement.
 - b. Using vapor retarder material, lap over damaged areas minimum 6 inches and seal watertight.
 - 7. Joint Filler:
 - a. Separate slabs on grade from vertical surfaces with joint filler.
 - b. Place joint filler in floor slab pattern placement sequence; set top to required elevations; secure to resist movement by wet concrete.
 - c. Extend joint filler from bottom of slab to within 1/2 inch of finished slab surface.
 - 8. Joint Devices:
 - a. Coordination: Install construction joint devices in coordination with floor slab pattern placement sequence; set top to required elevations; secure to resist movement by wet concrete.
 - b. Install joint device anchors, maintaining correct position to allow joint cover to be flush with floor and wall finish.
 - c. Install joint covers in longest practical length when adjacent construction activity is complete.
 - 9. Deposit concrete at final position, preventing segregation of mix.
 - 10. Place concrete in continuous operation for each panel or section as determined by predetermined joints.
 - 11. Consolidate concrete.
 - 12. Maintain records of concrete placement, including date, location, quantity, air temperature, and test samples taken.
 - 13. Place concrete continuously between predetermined expansion, control, and construction joints.
 - 14. Do not interrupt successive placement and do not permit cold joints to occur.
 - 15. Place floor slabs in indicated checkerboard or saw-cut pattern.

16. Saw-Cut Joints:
 - a. Saw-cut joints within 12 hours after placing.
 - b. Use 3/16 inch thick blade.
 - c. Cut into 1/4 depth of slab thickness.
17. Screeding:
 - a. Screed floors and slabs on grade level.
 - b. Surface Flatness: maximum 1/4 inch in 10 feet.

B. Separate Floor Toppings:

1. Prior to placing floor topping, remove deleterious material, roughen substrate concrete surface, and broom and vacuum clean.
2. Place required dividers and reinforcement and other items to be cast in concrete.
3. Apply bonding agent to substrate.

C. Concrete Finishing:

1. Provide formed concrete surfaces to be left exposed with smooth finish.

D. Curing and Protection:

1. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
2. Protect concrete footings from freezing for minimum of five days.
3. Maintain concrete with minimal moisture loss at relatively constant temperature for period as necessary for hydration of cement and hardening of concrete.

3.4 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Requirements for inspecting and testing.

B. Inspection and Testing: Performed by Owner's testing laboratory according to ACI 318.

C. Provide unrestricted access to Work and cooperate with appointed testing and inspection firm.

D. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of Work.

E. Concrete Inspections:

1. Continuous Placement Inspection: Inspect for proper installation procedures.
2. Periodic Curing Inspection: Inspect for specified curing temperature and procedures.

F. Strength Test Samples:

1. Sampling Procedures: Comply with ASTM C172.
2. Cylinder Molding and Curing Procedures:
 - a. Comply with ASTM C31.
 - b. Cylinder Specimens: Field cured.
3. Sample concrete and make one set of three cylinders for every 75 cu. yd. or less of each class of concrete placed each day, and for every 5,000 sq. ft. of surface area for slabs and walls.
4. If volume of concrete for a class of concrete would provide less than five sets of cylinders, take samples from five randomly selected batches, or from every batch if less than five batches are used.
5. Make one additional cylinder during cold weather concreting and field cure.

- G. Field Testing:
 - 1. Slump Test Method: Comply with ASTM C143.
 - 2. Air Content Test Method: Comply with ASTM C173.
 - 3. Temperature Test Method: Comply with ASTM C1064.
 - 4. Compressive Strength Concrete:
 - a. Measure slump and temperature for each sample.
 - b. Measure air content in air-entrained concrete for each sample.

- H. Cylinder Compressive Strength Testing:
 - 1. Test Method: Comply with ASTM C39.
 - 2. Test Acceptance: According to ACI 318.
 - 3. Test one cylinder at seven days.
 - 4. Test one cylinder at 28 days.
 - 5. Retain one cylinder for 30 days for testing when requested by Engineer.
 - 6. Dispose of remaining cylinders if testing is not required.

- I. Core Compressive Strength Testing:
 - 1. Sampling and Testing Procedures: Comply with ASTM C42.
 - 2. Test Acceptance: According to ACI 318.
 - 3. Drill three cores for each failed strength test from failed concrete.

- J. Patching:
 - 1. Allow Engineer to inspect concrete surfaces immediately upon removal of forms.
 - 2. Honeycombing or Embedded Debris in Concrete:
 - a. Not acceptable.
 - b. Notify Engineer upon discovery.
 - 3. Patch imperfections according to ACI 301.

- K. Defective Concrete:
 - 1. Description: Concrete not conforming to required lines, details, dimensions, tolerances, or specified requirements.
 - 2. Repair or replacement of defective concrete will be determined by Engineer.
 - 3. Do not patch, fill, touch up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.

END OF SECTION

SECTION 03 39 00
CONCRETE CURING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Initial and final curing of horizontal concrete surfaces.

1.2 RELATED SECTIONS

- A. Section 03 30 00 – Cast-In-Place Concrete.

1.3 REFERENCES

- A. ACI 301 – Structural Concrete for Buildings.
- B. ACI 302 - Recommended Practice for Concrete Floor and Slab Construction.
- C. ACI 308 - Standard Practice for Curing Concrete.
- D. ASTM C171 - Sheet Materials for Curing Concrete.
- E. ASTM C309 - Liquid Membrane-Forming Compounds for Curing Concrete.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Product Data: Provide data on curing compounds, product characteristics, compatibility and limitations.
- C. Manufacturer's Installation Instructions: Indicate criteria for preparation and application.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 301 and 308.
- B. Maintain one copy of document on site.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products under provisions of Section 01 60 00.
- B. Deliver curing materials in manufacturer's packaging including application instructions.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Liquid Membrane Forming Curing Compound ASTM C309 Type 1 Class B, liquid acrylate type, clear, without fugitive dye; curing compounds shall not contain ingredients which might stain through, injure the concrete or prevent a good bond for subsequent coatings or finishes; manufactured by Sonneborn Building Products or equal.
- B. Absorptive Mats ASTM C171, cotton fabric or burlap-polyethylene, minimum 8 oz/sq yd. bonded to prevent separation during handling and placing.
- C. Water: Potable and not detrimental to concrete.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 70 00 – Execution and closeout requirements for application examination.
- B. Verify that substrate surfaces are ready to be cured.

3.2 EXECUTION - HORIZONTAL SURFACES

- A. Cure slabs in accordance with ACI 308.
- B. Spraying: Spray water over floor slab areas and maintain wet for 7 days.
- C. Membrane Curing Compound: Apply curing compound in accordance with manufacturer's instructions.

3.3 EXECUTION - VERTICAL SURFACES

- A. Cure surfaces in accordance with ACI 308.
- B. Spraying: Spray water over surfaces and maintain wet for 7 days.
- C. Membrane Curing Compound: Apply curing compound in accordance with manufacturer's instructions.

3.4 PROTECTION OF FINISHED WORK

- A. Protect finished Work under provisions of Section 01 50 00.

END OF SECTION

SECTION 11 68 13

PLAYGROUND EQUIPMENT

PART 1 GENERAL

1.1 SCOPE

- A. This section covers supplying, assembling and installing all playground equipment as shown on the drawings and as herein specified and/or required for a complete job. The Work shall include all equipment, signage, installation, inspection and guaranties.

1.2 RELATED SECTIONS

- A. Section 01 30 00 – Submittals.
- B. Section 03 30 00 – Cast-In-Place Concrete
- C. Section 32 18 16.33 – Playground Protective Surfacing.

1.3 REFERENCES

- A. CPSC – Consumer Product Safety Commission, Public Playground Safety Handbook.
- B. ASTM F1487 – American Society for Testing and Materials, Playgrounds for Public Use.
- C. ADA – Americans with Disabilities Act Accessibility Guidelines for Play Areas (ADAAG).

1.4 SUBMITTALS

- A. Furnish complete installation product information for all play equipment to the Owner's Representative for approval.
- B. At the completion of the project, the contractor must provide the Owner with:
 - 1. A written maintenance plan which describes in detail any and all requirements for maintenance and inspections.
 - 2. A maintenance kit containing at a minimum tools, touch-up paint, hardware and graffiti remover.

1.5 SUBSTITUTIONS

- A. The material, products and equipment specified establish a standard of required materials, required play activities, dimension, appearance, durability, quality and warranty to be met by any proposed substitution.
- B. No substitution will be considered unless such request includes complete drawings, cuts, performance and test data, and any other information which demonstrates that the equipment meets the specifications and conforms to the playground plans.

1.6 STANDARDS

- A. All play equipment shall be installed to meet or exceed CPSC, ASTM, ADA, UFAS and Michigan's Barrier Free Design Law.
- B. Manufacturer shall be ISO 9001 certified.
- C. Manufacturer shall show IPEMA certification of compliance for each component that the product conforms with the requirements of ASTM F1487.
- D. If a conflict occurs between any of the above listed standards, the stricter shall take precedence.

1.7 DELIVERY, STORAGE AND HANDLING

- A. All shipments shall include a packing list for each skid/container, specifying the part numbers and quantities on each skid or within each container.
- B. Play structure posts shall be individually packaged in sturdy, water-resistant, mar-resistant cardboard boxes. Other components shall be individually wrapped or bulk wrapped to provide protection during shipment. Small parts and hardware packages will be placed in crates for shipment. The components and crates are then shrink-wrapped to skids (pallets) to ensure secure shipping.

1.8 WARRANTY

- A. 100-YEAR LIMITED WARRANTY: On all aluminum posts, stainless steel fasteners, clamps, beams and caps, against structural failure due to corrosion/natural deterioration or manufacturing defects, and on steel posts and arches against structural failure due to material or manufacturing defects.
- B. 15-YEAR LIMITED WARRANTY: On all steel arches, all plastic components, all aluminum and steel components (except 100-year steel posts), climbers, decks and coatings (except Wiggle Ladders, Chain Ladders and Swing Chain) against structural failure due to material or manufacturing defects.
- C. 10-YEAR LIMITED WARRANTY: On concrete products against structural failure due to natural deterioration or manufacturing defects. Does not cover minor chips, hairline cracks or efflorescence.
- D. 8-YEAR LIMITED WARRANTY: On net climbers and climbing cables against defects in materials or manufacturing defects.
- E. 5-YEAR LIMITED WARRANTY: On cables and mallets against defects, on polycarbonate or bamboo panels against defects in materials or manufacturing defects. Does not cover damage which may be associated with the natural characteristics of aging, including but not limited to discoloration, splitting, cracking, warping, or twisting, nor the formation of algae, mold and other forms of fungal-type bodies.
- F. 3-YEAR LIMITED WARRANTY: On all other parts/products, swing seats and hangers, climber handholds, Wiggle Ladders, Chain Ladders and Swing Chain, Track Ride trolleys and bumpers,

all rocking equipment, belting material, resistance mechanisms, Seesaws, Wiggle Ring Bridge, etc., against failure due to corrosion/natural deterioration or manufacturing defects.

- G. This warranty does not include any cosmetic issues or wear and tear from normal use or misuse or abuse of the product. It is valid only if the play structures and/or equipment are erected to conform with manufacturers installation instructions and maintained according to the maintenance procedures furnished by the manufacturer.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Landscape Structures, represented by Penchura, LLC, 889 S. Old US23, Brighton, MI 48114, (888) 778-7529, www.penchura.com.

2.2 MATERIAL

- A. Material: All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all steel parts by the use of time-tested coatings such as zinc plating, galvanizing, ProShield finish, TenderTuff coating, etc.
- B. Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F879 unless otherwise indicated. All primary fasteners shall include a locking patch-type material that will meet the minimum torque requirements of IFI-125. Manufacturer to provide special tools for pinned tamperproof fasteners.
- C. TenderTuff Coating:
 - 1. Metal components to be TenderTuff-coated shall be thoroughly cleaned in a hot phosphatizing pressure washer, then primed with a water-based thermosetting solution.
 - 2. Primed parts shall be preheated prior to dipping in UV-stabilized, liquid polyvinyl chloride (PVC), then salt cured at approximately 400 degrees fahrenheit.
 - 3. The finished coating shall be approximately .080" thick at an 85 durometer with a minimum tensile strength of 1700 PSI and a minimum tear strength of 250 pounds/inch.
 - 4. Five standard colors are available all with a matte finish. Color: by Owner.
- D. ProShield Finish:
 - 1. All metal components with ProShield finish shall be thoroughly cleaned and phosphatized through a five-stage power washer.
 - 2. Parts are then thoroughly dried, preheated and processed through a set of automatic powder spray guns where a minimum .002" of epoxy primer is applied.
 - 3. A minimum .004" of architectural-grade Super-Durable polyester TGIC powder is applied.
 - 4. The average ProShield film thickness is .006".
 - 5. ProShield is formulated and tested per the following ASTM standards. Each color must meet or exceed the ratings listed below:
 - a. Hardness (D3363) rating 2H
 - b. Flexibility (D522) pass 1/8" mandrel
 - c. Impact (D2794) rating minimum 80 inch-pounds (9.038 newton meters)
 - d. Salt Fog Resistance (B117 and D1654) 4,000 hours and rating 6 or greater
 - e. UV Exposure (G154, 340 bulb) 3,000 hours, rating delta E of 2, and 90 percent gloss retention

- f. Adhesion (D3359, Method B) rating 5B
 - g. The Paint Line shall employ a "checkered" adhesion test daily.
 - h. Standard Colors – Colors: by Owner.
- E. Decks:
- 1. All decks shall be of modular design and have 5/16" diameter holes on the standing surface.
 - 2. There shall be a minimum of (4) slots in each face to accommodate face mounting of components.
 - 3. Decks shall be manufactured from a single piece of low carbon 12 GA (.105") sheet steel conforming to ASTM specification A-1011.
 - 4. The sheet shall be perforated with a return flange on the perimeter to provide reinforcement to ensure structural integrity.
 - 5. There shall be no unsupported area larger than 3.5 square feet.
 - 6. Decks shall be designed so that all sides are flush with the outside edge of the supporting posts.
 - 7. Decks shall be Tendertuff coated. Color: by Owner.
- F. Concrete Products:
- 1. Two processes are used to produce concrete products:
 - a. Glass Fiber Reinforced Concrete (GFRC) Products:
 - i. Glass fiber is alkali-resistant (AR) with high tensile properties formulated for concrete.
 - ii. GFRC nominal product thickness is 1" with a unit weight of about 12 lbs per square foot and an average ultimate flexural strength of 2,100 psi per ASTM C947.
 - iii. Finish: Exterior latex paint suited for concrete applications.
 - b. Precast Concrete Products: Wet-cast solid, molded concrete
 - i. Average compressive strength of 5,000 psi per ASTM C39.
 - ii. Unit weight range of about 115-145 lbs. per cubic foot.
 - iii. Finish: Exterior latex paint suited for concrete applications.
- G. Rotationally Molded Polyethylene Parts:
- 1. These parts shall be molded using prime compounded linear low-density polyethylene with a tensile strength of 2500 psi (per ASTM D638 and with color and UV-stabilizing additives.
 - 2. Wall thickness varies by product from .187" (3/16") to .312" (5/16").
- H. Recycled Permalene Parts:
- 1. These parts shall be manufactured from 3/4" high-density polyethylene that has been specially formulated for optimum UV stability and color retention.
 - 2. Products shall meet or exceed density of .960 G/cc per ASTM D1505, tensile strength of 2400 PSI per ASTM D638.
 - 3. Available in a three-layer product with (2) .100" thick exterior layers over a .550" thick recycled Black interior core.
 - 4. Standard colors. Color: by Owner.
- I. Footings:
- 1. Unless otherwise specified, the bury on all footings shall be 34" below Finished Grade (FG) on all in-ground play events/posts.
- J. Hardware Packages:
- 1. All shipments shall include individual component-specific hardware packages.

2. Each hardware package shall be labeled with the part number, description, a component diagram showing the appropriate component, package weight, a bar code linking the hardware package to the job number, assembler's name, date and time the package was assembled, work center number, and work order number.

K. Installation Documentation:

1. All shipments shall include a notebook or packet of order-specific, step-by-step instructions for assembly of each component, including equipment assembly diagrams, estimated hours for assembly, footing dimensions, concrete quantity for direct bury components, fall height information, area required information and detailed material specifications.

L. Maintenance Kit:

1. An order-specific maintenance kit shall be provided for each structure order. The kit will include a notebook or packet with a second set of installation documents and order-specific maintenance documentation with recommendations on how often to inspect, what to look for and what to do to keep the equipment in like-new condition.
2. The kit shall include touch-up primer, appropriate color touch-up paint, sandpaper, appropriate color touch-up PVC, graffiti remover and additional installation tools for the tamperproof fasteners.

M. Play Structure:

1. Site-specific Play Structure specifications, such as model names and numbers, can be found in the appendix.

PART 3 EXECUTION

3.1 PREPARATION

- A. Prior to any excavation, installation of any other related work, the contractor will verify the conditions of the site.

3.2 ASSEMBLY AND INSTALLATION

- A. To avoid transport damage, All Playground Equipment shall be unpacked and assembled at the installation site.
- B. All play equipment shall be assembled and installed in accordance with each manufacturer's recommendations.
- C. The Contractor shall be responsible for any assembly requirements and installation of all play equipment including concrete footers.

3.3 CONSTRUCTION INSPECTION

- A. Once the installation is complete, the manufacturer shall certify in writing to the Owner that the installation has been completed in strict accordance with the manufacturers specifications and requirements.

3.4 DISPOSAL OF EXCESS AND WASTE MATERIAL

- A. Remove excess excavated material, trash, debris and waste materials and legally dispose of such off the property, except as otherwise specifically noted.

END OF SECTION

SECTION 31 05 13
SOILS FOR EARTHWORK

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Subsoil materials.
 - 2. Topsoil materials.

- B. Related Sections:
 - 1. Section 31 05 16 - Aggregates for Earthwork.
 - 2. Section 31 22 13 - Rough Grading.
 - 3. Section 31 23 17 - Trenching.
 - 4. Section 32 91 19 - Landscape Grading.
 - 5. Section 32 92 19 - Seeding and Soil Supplements.
 - 6. Section 33 46 00 - Subdrainage: Filter aggregate.
 - 7. Section 31 25 00 - Erosion and Sedimentation Controls: Slope protection and erosion control.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

- B. ASTM International:
 - 1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m^{3 - 2. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m^{3 - 3. ASTM D2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).}}

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

- B. Samples: Maybe requested for submittal by the Engineer for testing. Submit, in air-tight containers, 10 lb sample of each type of fill to testing laboratory.

- C. Materials Source: Submit name of imported materials source.

- D. Manufacturer's Certificate: Certify soils meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

- A. Furnish each subsoil and topsoil material from single source throughout the Work. A second source maybe requested for approval by the Engineer.
- B. Perform Work in accordance with State of Michigan Department of Transportation standard specifications for construction.

PART 2 PRODUCTS

2.1 SUBSOIL MATERIALS

- A. Subsoil MDOT Subsoil: Native material conforming to State of Michigan Department of Transportation standard specifications for construction.
- B. Subsoil Type Municipal Subsoil:
 - 1. Native material.
 - 2. Graded.
 - 3. Free of lumps larger than 3 inches, rocks larger than 2 inches, and debris.

2.2 TOPSOIL MATERIALS

- A. Topsoil Type MDOT Topsoil: Native material conforming to State of Michigan Department of Transportation standard specifications for construction.
- B. Topsoil Type Municipal Native Topsoil:
 - 1. Native Topsoil.
 - 2. Graded.
 - 3. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds and foreign matter.
 - a. Screening: Double screened.
- C. Topsoil Type Municipal Imported Borrow Topsoil:
 - 1. Imported borrow.
 - 2. Friable loam.
 - 3. Reasonably free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds, and foreign matter.
 - a. Screening: Double screened.
 - 4. Acidity range (pH) of 5.5 to 7.5.
 - 5. Containing minimum of 4 percent and maximum of 25 percent inorganic matter.

2.3 SOURCE QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Testing and Inspection Services Testing and analysis of soil material.
- B. Testing and Analysis of Subsoil Material: Perform in accordance with AASHTO T180.
- C. Testing and Analysis of Topsoil Material: Perform in accordance with AASHTO T180.

- D. When tests indicate materials do not meet specified requirements, change material and retest.
- E. Furnish materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.1 EXCAVATION

- A. Excavate subsoil and topsoil as required for utility and/or road installation. Strip topsoil to full depth of topsoil for complete installation.
- B. Stockpile excavated material meeting requirements for subsoil materials and topsoil materials.
- C. Remove excess excavated materials subsoil and topsoil not intended for reuse, from site.
- D. Remove excavated materials not meeting requirements for subsoil materials and topsoil materials from site.

3.2 STOCKPILING

- A. Stockpile materials on site at locations approved by the Engineer.
- B. Stockpile in sufficient quantities to meet Project schedule and requirements.
- C. Separate differing materials with dividers or stockpile apart to prevent mixing.
- D. Stockpile topsoil 8 feet high maximum.
- E. Prevent intermixing of soil types or contamination.
- F. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.
- G. Stockpile unsuitable or hazardous materials on impervious material and cover to prevent erosion and leaching, until disposed of.

3.3 STOCKPILE CLEANUP

- A. Remove stockpile, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

END OF SECTION

SECTION 31 05 16

AGGREGATES FOR EARTHWORK

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Coarse aggregate materials.
 - 2. Fine aggregate materials.

- B. Related Sections:
 - 1. Section 31 05 13 - Soils for Earthwork.
 - 2. Section 31 22 13 - Rough Grading.
 - 3. Section 31 23 16 - Excavation.
 - 4. Section 31 23 17 - Trenching.
 - 5. Section 31 25 00 - Erosion and Sedimentation Controls.
 - 6. Section 32 11 23 - Aggregate Base Courses.
 - 7. Section 32 12 16 - Asphalt Paving.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO M147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base and Surface Courses.
 - 2. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

- B. ASTM International:
 - 1. ANSI/ASTM C117 – Test Method for Materials finer than 75 mm (No. 200) Sieve in Mineral Aggregates by Washing.
 - 2. ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - 3. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 4. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 5. ASTM D2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).
 - 6. ASTM D2992 – Test Methods of Density of Soil and Soil – Aggregate in Place by the Nuclear Method (Shallow Depth).
 - 7. ASTM D4318 - Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
 - 8. Test method for density of soil in place with loss by wash less than 15% - One Point Michigan Cone Test.
 - 9. Test method for density of soil in place with loss by was greater than 15% - One Point T-99 Test.
 - 10. MDOT Standard Specifications for Construction.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Materials Source: Submit name of imported materials suppliers.
- C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements of the Michigan Department of Transportation Construction standards for 6A or 22A crushed limestone.

1.4 QUALITY ASSURANCE

- A. Furnish each aggregate material from single source throughout the Work.
- B. Perform Work in accordance with State of Michigan’s Department of Transportation and the local municipality’s standards for construction.
- C. Maintain one copy of each document on site.

PART 2 PRODUCTS

2.1 COARSE AGGREGATE MATERIALS

- A. Coarse Aggregate Type A1:
 - 1. Conforming to State of Michigan’s Department of Transportation and the local municipality’s standards for construction.
 - 2. MDOT 6A compacted crushed limestone within the following limits:

Sieve Size	Percent Passing
1-1/2 inches	100
1 inch	95 to 100
1/2 inch	30 to 60
No. 200	2 to 1

- B. Coarse Aggregate Type A2:
 - 1. Conforming to State of Michigan’s Department of Transportation and the local municipality’s standards for construction.
 - 2. MDOT 22A compacted crushed limestone within the following limits:

Sieve Size	Percent Passing
1 inch	100
3/4 inch	90 to 100
3/8 inch	65 to 85
No. 8	30 to 50
No. 200	4 to 8

2.2 GRANULAR MATERIALS

- A. Fine Aggregate Type A3:
 - 1. Conforming to State of Michigan’s Department of Transportation and the local municipality’s standards for construction.
 - 2. MDOT Class II (Sand) within the following limits:

Sieve Size	Percent Passing
3 inches	95 to 100
1 inch	60 to 100
No. 4	50 to 100
No. 100	0 to 30
No. 200	0 to 7

- B. Fine Aggregate Type A4:
 - 1. Conforming to State of Michigan’s Department of Transportation and the local municipality’s standards for construction.
 - 2. Used for sanitary sewer backfill
 - a. 1ft over top of pipe only
 - 3. MDOT Class III A (Sand) within the following limits:

Sieve Size	Percent Passing
3/8 inches	100
No. 4	50 to 100
No. 100	0 to 30
No. 200	0 to 15

2.3 SOURCE QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Testing and inspection services.
- B. Coarse Aggregate Material - Testing and Analysis: Perform in accordance with MTM 108 and MTM 109 and other applicable MDOT testing standards.
- C. Fine Aggregate Material - Testing and Analysis: Perform in accordance with MTM 108 and MTM 109 and other applicable MDOT testing standards.
- D. When tests indicate materials do not meet specified requirements, change material and retest.

PART 3 EXECUTION

3.1 EXCAVATION

- A. Excavate aggregate materials from on-site locations designated by Engineer as specified in Section 31 22 13.

- B. Stockpile excavated material meeting requirements for coarse aggregate materials and fine aggregate materials.
- C. Remove excess excavated materials not intended for reuse, from site.
- D. Remove excavated materials not meeting requirements for coarse aggregate materials and fine aggregate materials from site.

3.2 STOCKPILING

- A. Stockpile materials on site at locations designated by Engineer.
- B. Stockpile in sufficient quantities to meet Project schedule and requirements.
- C. Separate different aggregate materials with dividers or stockpile individually to prevent mixing.
- D. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.
- E. Stockpile hazardous materials on impervious material and cover to prevent erosion and leaching, until disposed of.

3.3 STOCKPILE CLEANUP

- A. Remove stockpile, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.
- B. When borrow area is indicated, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

END OF SECTION

SECTION 31 10 00

SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Removing surface debris.
 - 2. Removing designated paving.
 - 3. Removing/Relocating designated trees, shrubs, and other plant life.
 - 4. Removing abandoned utilities.
 - 5. Excavating topsoil.

- B. Related Sections:
 - 1. Section 31 22 13 - Rough Grading
 - 2. Section 31 23 16 – Excavation
 - 3. Section 31 23 23 - Fill
 - 4. Section 32 91 19 – Landscape Grading
 - 5. Section 32 93 00 – Plants

1.2 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

- B. Product Data: Submit data for herbicide. Indicate compliance with applicable codes for environmental protection.

1.3 QUALITY ASSURANCE

- A. Conform to applicable code for disposal of debris.

- B. Perform Work in accordance with State of Michigan and Monitor Charter Township standard.

- C. Coordinate cleaning work with utility companies.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.

- B. Verify existing plant life designated to remain is tagged or identified.
- C. Identify waste area for placing removed materials.
- D. Identify salvage area for plants to be salvaged and relocated.

3.2 PREPARATION

- A. Call Miss Dig not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.

3.3 PROTECTION

- A. Locate, identify, and protect from damage utilities indicated to remain.
- B. Protect trees, plant growth, and features designated to remain, as final landscaping as specified in 01 50 00 – Temporary Facilities and Controls.
- C. Protect benchmarks, survey control points and existing structures from damage or displacement.
- D. All trees, shrubs, and bushes which are too large to be replace in kind, shall be left undisturbed, with the utility being installed in a boring and/or tunneling operation, unless written consent from the property owner to remove the tree is obtained.

3.4 CLEARING

- A. Clear areas required for access to site and execution of Work.
- B. Remove trees and shrubs indicated on the plans. Remove stumps
- C. Clear undergrowth and deadwood, without disturbing subsoil.
- D. Apply herbicide to remaining stumps to inhibit growth.
- E. Fill all depressions made by removal of stumps or roots with material suitable for backfill, as specified in Section 31 23 23.

3.5 REMOVAL

- A. Remove debris, rock, and extracted plant life from site.
- B. Remove paving, curbs, and as indicated on the plans.
- C. Remove abandoned utilities. Indicated removal termination point for underground utilities on Record Documents.
- D. Continuously clean-up and remove waste materials from site. Do not allow materials to accumulate on site.

- E. Do not burn or bury materials on site. Leave site in clean condition.

3.6 TOPSOIL EXCAVATION

- A. Excavate topsoil from areas to be further excavated, relandscaped, or regraded, without mixing with foreign materials for use in finish grading.
- B. Do not excavate wet topsoil.
- C. Stockpile in area designated on site and protect from erosion
- D. Remove excess topsoil not intended for reuse, from Site.

3.7 PLANT REMOVAL

- A. Tree Removal Within Property Limits: Remove or salvage trees and shrubs within the (limits of the right-of-way) (property limits) as indicated on the plans.
 - 1. Avoid damage to trees and shrubs designated to remain.
 - 2. Grub and remove tree stumps and shrubs felled within the (property limits) (right-of-way) to an authorized disposal site. Fill depressions created by such removal and material suitable for backfill as specified in Section 31 23 23.

END OF SECTION

SECTION 31 22 13

ROUGH GRADING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Excavating topsoil.
 - 2. Excavating subsoil.
 - 3. Cutting, grading, filling, rough contouring, and compacting the site for site structures.

- B. Related Sections:
 - 1. Section 01 40 00 - Quality Requirements
 - 2. Section 31 05 13 – Soils for Earthwork
 - 3. Section 31 05 16 – Aggregates for Earthwork
 - 4. Section 31 10 00 - Site Clearing
 - 5. Section 31 23 16 – Excavation
 - 6. Section 31 23 17 – Trenching
 - 7. Section 31 23 18 – Rock Removal
 - 8. Section 31 23 23 - Fill
 - 9. Section 32 91 19 - Landscape Grading

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

- B. ASTM International:
 - 1. ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - 2. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 3. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - 4. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 5. ASTM D2419 - Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
 - 6. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 7. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.3 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

- B. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with State of Michigan Department of Transportation standard specifications for construction.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Topsoil: Municipal Topsoil as specified in Section 31 05 13.
- B. Subsoil Fill: Municipal Subsoil as specified in Section 31 05 13.
- C. Structural Fill: MDOT 22A Compacted Crushed Limestone as specified in Section 31 05 16.
- D. Granular Fill: MDOT Class II Sand as specified in Section 31 05 16.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify site conditions under provisions of Section 01 30 00.
- C. Verify survey benchmark and intended elevations for the Work are as indicated on Drawings.
- D. Verify fill materials are acceptable.

3.2 PREPARATION

- A. Call Miss Dig at 811 not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Identify required lines, levels, contours, and datum.
- C. Notify utility company to remove and relocate utilities.
- D. Protect utilities indicated to remain from damage.
- E. Protect plant life, lawns, rock outcropping and other features remaining as portion of final landscaping.
- F. Protect benchmarks, survey control point, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

3.3 FILLING

- A. Fill areas to contours and elevations with unfrozen materials.
- B. Place fill material in continuous layers and compact in accordance with schedule at end of this section.
- C. Maintain optimum moisture content of fill materials to attain required compaction density.
- D. Slope grade away from building minimum 2 percent slope for minimum distance of 10 ft, unless noted otherwise.
- E. Make grade changes gradual. Blend slope into level areas.
- F. Repair or replace items indicated to remain damaged by excavation or filling.
- G. The Owner may have a use for the surplus excess excavated material. If they do it shall be their property and the Contractor's responsibility to transport said material to the Owner's stockyard. All cost associated with transporting, hauling, and loading said material shall be included in other pay items of this project.

3.4 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Top Surface of Subgrade: Plus or minus 1/10 foot from required elevation.

3.5 SPOIL LEVELING

- A. As indicated on Drawings, or as directed by Engineer.
- B. Contractor shall be responsible for loading, hauling and spreading of all excess excavated material generated from this project.
- C. Place no excavated materials on roads without written permission of the authorities having jurisdiction of said road.
- D. Remove excavation in areas adjacent to yards where there is not suitable place to deposit spoils and dispose of as indicated on the drawings or off site as directed by the Engineer.
- E. Place no spoils in a watercourse or drain.

3.6 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Test and analysis of fill material will be performed in accordance with MDOT Standards and with Section 01 40 00.
- C. Compaction testing will be performed in accordance with MDOT Standards and with Section 01 40 00.

- D. If testes indicate Work does not meet specified requirement, remove Work, replace and retest at no cost to the Owner.
- E. Frequency of Tests: As directed by the Engineer.

3.7 SCHEDULES

- A. Structural Fill:
 - 1. Fill Type MDOT 22A Compacted Crushed Limestone: To subgrade elevation.
 - 2. Compact uniformly to minimum 98 percent of maximum density.
- B. Subsoil Fill:
 - 1. Fill Type MDOT Class II Sand within the 1 on 1 influence of the road: To subgrade elevation.
 - 2. Fill Type Native Fill within the green belt outside the road influence.
 - 3. Compact uniformly to minimum 95 percent of maximum density.
- C. Topsoil Fill:
 - 1. Fill Type Municipal Topsoil: Proposed elevation, 4 inches thick.
 - 2. Compact uniformly to minimum 95 percent of maximum density.

END OF SECTION

SECTION 31 23 16

EXCAVATION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Soil densification.
 - 2. Excavating for paving, roads, and parking areas.
 - 3. Excavating for slabs-on-grade.
 - 4. Excavating for structures.

- B. Related Sections:
 - 1. Section 01 40 00 - Quality Requirements
 - 2. Section 01 50 00 - Temporary Facilities and Controls
 - 3. Section 31 05 13 – Soils for Earthwork
 - 4. Section 31 05 16 – Aggregates for Earthwork
 - 5. Section 31 10 00 - Site Clearing
 - 6. Section 31 22 13 - Rough Grading
 - 7. Section 31 23 17 – Trenching
 - 8. Section 31 23 18 – Rock Removal
 - 9. Section 31 23 23 - Fill
 - 10. Section 31 25 00 - Erosion and Sedimentation Controls

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 PREPARATION

- A. Call MISS DIG at 811 not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.

- B. Identify required lines, levels, contours, and datum.

- C. Notify utility company when specified to remove and relocate utilities.

- D. Identify known underground, above ground, and aerial utilities, stake, and flag locations.

- E. Protect above and below ground utilities indicated to remain from damage.

- F. Protect plant life, lawns, rock outcroppings and other features remaining as portion of final landscaping.

- G. Protect benchmarks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- H. Protect grade and slope stakes.

3.2 OPEN CHANNEL RELOCATION AND RESTORATION

- A. Clear site in accordance with Section 31 10 00 – Site Clearing.
- B. Excavate drain to dimensions and cross sections specified on drawings.
- C. Contractor shall check flow line elevations every 100 ft. (grade stakes will be provided by Engineer). Over excavation of 0.3 ft or greater will be filled with Type A1 – 6A compacted crushed limestone to the proposed flow line as incidental cost to the Contractor.
- D. Contractor shall remove all sediment from existing culverts to remain.
- E. When drain parallels a road, all excavation will be on field side slope unless stated on drawing or required by Engineer.
- F. Underpin adjacent structures which may be damaged by excavation work, including utilities and pipe chases.
- G. Machine slope banks to required slopes.
- H. Notify Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- I. Correct unauthorized excavation at no extra cost to Owner.
- J. Seed excavated areas daily in accordance with Section 32 92 19 – Seeding.
- K. Repair and replace field tile outlets as directed by Engineer.
- L. Match existing side slopes in reaches identified channel cleanout.
- M. Excess spoils on road sides and lawn areas are to be hauled away.
- N. When excavating one side slope of drain. The opposite ditch bank shall be cleared in accordance with Section 31 10 00 – Site Clearing. Grass vegetation should not be removed on opposite side slopes.

3.3 SPOIL LEVELING

- A. Seed spoils in accordance with Section 32 92 19 – Seeding.
- B. Place soil erosion and sedimentation control measures per SESC plan.
- C. Spoils placed on tillable land shall be spread evenly to allow for tilling.
- D. Spoils in wooded areas shall be stockpiled as shown on plans.

- E. Spoils are to be kept a minimum 3 feet from excavation area.
- F. No excavated materials shall be placed on roads without written permission of the authorities having jurisdiction of said road.
- G. Spoils excavated in areas adjacent to residential or lawn areas are to be removed from the area unless directed by the Engineer, shown on plans, or Contractor receives written permission from Landowner to level in area.
- H. No spoils are to be placed in any watercourse or drain.
- I. Side grade outs for watercourse and ditches shall be done at the time of open drain excavation or channel cleanout.
- J. Non-combustible items (i.e. roots and stumps), brush, or debris shall not be mixed with leveled spoil material.
- K. Shape leveled spoils to prevent the ponding of water behind spoil pile.
- L. Level spoils on the same side of the drain which excavation occurs. If excavation occurs from both sides of drain then made even spoil piles on both sides of drain unless otherwise directed by the Engineer.
- M. In agricultural areas, root rake and hand pick sticks and rocks so that foreign debris 1' in length and/or 6" in diameter is disposed of.

3.4 ROAD SHOULDER CONSTRUCTION

- A. Construct road shoulder and construct 2 horizontal to 1 vertical side slope to drain and valley shaped ditches.
- B. Prior to filling for shoulder construction, remove existing sediment, top soil, and vegetation from area to be filled.
- C. Fill and compact native material for road shoulder. Fill material shall be placed in 12"-24" lifts. Contractor will be responsible for the construction of stable side slopes.
- D. Fill materials must be dry and must be approved by Engineer. Fill materials will be native excavated material.

3.5 EXCAVATION

- A. Underpin adjacent structures which may be damaged by excavation work.
- B. Excavate subsoil to accommodate building foundations, paving and site structures, construction operations, and utility trenches.
- C. Slope banks with machine to angle of repose or less until shored.
- D. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- E. Trim excavation. Remove loose matter.

- F. Remove lumped subsoil, boulders, and rock up to 0.5 cu ft measured by volume. Remove larger material as specified in Section 31 23 18.
- G. Notify Engineer of unexpected subsurface conditions.
- H. Correct areas over excavated with structural fill type A2 as directed by Engineer.
- I. Remove excess and unsuitable material from site.

3.6 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Request visual inspection of bearing surfaces by Engineer before installing subsequent work.

3.7 PROTECTION

- A. Prevent displacement or loose soil from falling into excavation; maintain soil stability.
- B. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
- C. Protect structures, utilities and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth operations.

3.8 DUST CONTROL

- A. The Contractor shall implement measures to minimize dust, especially near residents, upon the Engineers request.

END OF SECTION

SECTION 31 23 17

TRENCHING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Excavating trenches for utilities within municipal right-of-way or easement.
2. Excavating trenches for utilities from 5 feet outside building to utility service.
3. Compacted fill from top of utility bedding to subgrade elevations.
4. Backfilling and compaction.

B. Related Sections:

1. Section 03 30 00 - Cast-In-Place Concrete
2. Section 31 05 13 - Soils for Earthwork
3. Section 31 05 16 - Aggregates for Earthwork
4. Section 31 22 13 - Rough Grading
5. Section 31 23 16 – Excavation
6. Section 31 23 18 – Rock Removal
7. Section 31 23 23 – Fill
8. Section 32 91 19 – Landscape Grading

1.2 REFERENCES

A. American Association of State Highway and Transportation Officials:

1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. ASTM International:

1. ASTM A-328 – Standard Specifications for Sheet Piling.
2. ASTM A-572 – Grades 60, High Strength.
3. ASTM A-690 – High Strength Corrosion Resistant.
4. ASTM C117 – Test Method for Materials Finer than 75mm (No. 200) Sieve in Mineral Aggregates by Washing.
5. ASTM C12 – Standard Practice for Installing Vitriified Clay Pipe Lines.
6. ASTM D-245-62T – Timber and lumber requirement.
7. ASTM C136 – Method for Sieve Analysis of Fine and Coarse Aggregates.
8. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
9. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
10. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
11. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
12. ASTM D2321 – Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity – Flow Applications.

13. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
14. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.3 DEFINITIONS

- A. Utility: Any buried pipe, duct, conduit, or cable.

1.4 REGULATORY REQUIREMENTS

- A. Conform to applicable OSHA regulations.

1.5 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Excavation Protection Plan: Describe sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property; include structural calculations to support plan.
- C. Product Data: Submit data for geotextile fabric indicating fabric and construction.
- D. Materials Source: Submit name of imported fill materials suppliers.
- E. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with State of Michigan and Ingham County standards.

1.7 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.8 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.

PART 2 PRODUCTS

2.1 FILL MATERIALS

- A. Subsoil Fill: Type S2 as specified in Section 31 05 13.
- B. Structural Fill: Type A1 as specified in Section 31 05 13.
- C. Granular Fill: Type A3 as specified in Section 31 05 16.

- D. Concrete: Structural concrete as specified in Section 03 30 00 Cast-in-Place Concrete with compressive strength of 3500 psi.

2.2 EXCAVATION SUPPORT MATERIALS

- A. Timber and lumber for shoring and bracing shall be new, merchantable pine. Douglas Fir or Spruce, unless otherwise shown or specified. Secondhand timber or lumber shall not be used where strength and/or appearance are important considerations.
- B. Steel for sheeting, shoring, and bracing shall be as per the referenced ASTM specifications.
- C. Temporary Sheeting: Select section modulus, embedment depth and bracing required to complete the work.

PART 3 EXECUTION

3.1 LINES AND GRADES

- A. Lay pipes to lines and grades indicated on Drawings.
 - 1. Engineer reserves right to make changes in lines, grades, and depths of utilities when changes are required for Project conditions.
- B. Use laser-beam instrument with qualified operator to establish lines and grades.

3.2 PREPARATION

- A. Call Miss Dig not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Identify required lines, levels, contours, and datum locations.
- C. Protect plant life, lawns, rock outcropping and other features remaining as portion of final landscaping.
- D. Protect benchmarks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- E. Maintain and protect above and below grade utilities indicated to remain.
- F. Establish temporary traffic control and detours when trenching is performed in public right-of-way. Relocate controls and reroute traffic as required during progress of Work.

3.3 TRENCHING

- A. Excavate subsoil required for utilities as shown on the plan, and as stated in the proposal.
- B. Excavate subsoil for utility piping and accessories as indicated on the drawings.
- C. Excavate on the required line to the depth required below the pipe grade for bedding thickness required.

- D. Remove lumped subsoil, boulders, and rock up of 1/6 cubic yard, measured by volume. Remove larger material as specified in Section 31 23 18.
- E. Do not advance open trench more than one pipe length ahead of installed pipe.
- F. Cut trenches to width indicated on Drawings. Remove water or materials that interfere with Work.
- G. Excavate bottom of trenches in accordance with trench details or specifications.
- H. Excavate trenches to depth indicated on Drawings. Provide uniform and continuous bearing and support for bedding material and utilities being installed.
- I. Excavate trench widths exceed the maximum specified above, the Owner's representative may require special bedding or the use of extra strength pipe at the Contractor's expense.
- J. Do not interfere with 45 degree bearing splay of foundations.
- K. When Project conditions permit, slope side walls of excavation starting 1 foot above top of pipe. When side walls cannot be sloped, provide sheeting and shoring to protect excavation as specified in this section.
- L. When subsurface materials at bottom of trench are loose or soft, excavate to greater depth as directed by Engineer until suitable material is encountered.
- M. Cut out soft areas of subgrade not capable of compaction in place. Backfill with Fill Type A and compact to density equal to or greater than requirements for subsequent backfill material.
- N. Trim excavation. Hand trim for bell and spigot pipe joints. Remove loose matter.
- O. Correct areas over excavated areas with compacted backfill as specified for authorized excavation or replace with fill concrete as directed by Engineer.
- P. Remove excess subsoil not intended for reuse, from site.
- Q. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- R. Notify Owner's representative of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.
- S. Protect excavation by methods required to prevent cave-in or loose soil from failing into excavation.
- T. Provide, operate, and maintain pumping equipment to keep trench free of water.
- U. Use trench boxes or other form of temporary protection when required by OSHA Standards or when protection of existing utilities is necessary.
- V. Stockpile excavated material in area designated on site in accordance with Section 31 05 13.

3.4 SHEETING AND SHORING

- A. Sheet, shore, and brace excavations to prevent danger to persons, structures and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.
- B. Support trenches more than 5 feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.
- C. Design sheeting and shoring to be removed at completion of excavation work.
- D. The Contractor is responsible for the design and location of all sheeting, shoring, and bracing.
- E. When required to properly support the surfaces of excavations and to protect the construction work and workmen, sheeting, bracing and shoring shall be provided.
- F. If the Owner's representative is of the opinion that at any point sufficient or proper supports have not been provided, he may order additional supports at the expense of the Contractor, but neither the placing of such additional supports by the order of the Owner's representative nor the failure of the Owner's representative to order such additional supports placed shall release the Contractor from his responsibility for the sufficiency of such supports and the integrity of the work.
- G. Damage to new or existing structures occurring through settlements due to failure or lack of sheeting or bracing shall be repaired by the Contractor at his own expense.
- H. Conflict of opinion as to whether the settlement is due to the work of the Contractor or to any other cause will be determined by the Owner's representative.
- I. In general, the sheeting and bracing shall be removed, as the trench or excavation is refilled, in such a manner as to avoid the caving in of the work.
- J. Fill voids left by the withdrawal of the sheeting by ramming, or otherwise as directed.
- K. Obtain permission of the Owner's representative prior to the removal of any shoring, sheeting or bracing.
- L. When sheeting and bracing is removed, the Contractor shall assume full responsibility for injury to structures or to other property or persons arising from failure to leave in place such sheeting or bracing.
- M. For the purpose of preventing injury to the structures, or to other property or to persons, the Contractor shall leave in place any sheeting or bracing shown on the plans or ordered in writing by the Owner's representative.
- N. Cutoff sheeting left in place at the elevation ordered but not be less than 18" below the final ground surface.
- O. Bracing remaining in place shall be driven up tight.
- P. Measurements and payment for sheeting and bracing ordered left in place will be made as extra work, unless noted otherwise.

- Q. The right of the Owner's representative to order sheeting and bracing left in place shall not be construed as creating any obligation on his part to issue such orders.
- R. Repair damage caused by failure of the sheeting, shoring, or bracing and for settlement of filled excavations or adjacent soil.
- S. Repair damage to new and existing Work from settlement, water or earth pressure or other causes resulting from inadequate sheeting, shoring, or bracing.

3.5 BACKFILLING

- A. Verify all materials to be reused as acceptable.
- B. Backfill trenches to proposed contours and elevations with unfrozen fill materials.
- C. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- D. Place geotextile fabric over Fill Type A1 prior to placing subsequent fill materials.
- E. Place material in continuous layers as follows:
 - 1. Subsoil Fill: Maximum 8 inches compacted depth.
 - 2. Structural Fill: Maximum 6 inches compacted depth.
 - 3. Granular Fill: Maximum 8 inches compacted depth.
- F. Place geotextile fabric over Type A1 fill bedding prior to placing last lift of bedding.
- G. Employ placement method that does not disturb or damage, utilities in trench, pavement, sidewalk, and driveways.
- H. Maintain optimum moisture content of fill materials to attain required compaction density.
- I. Do not leave more than 20 feet of trench open at end of working day.
- J. Protect open trench to prevent danger to Owner.
- K. Backfill against supported foundation walls.
- L. Make grade changes gradual. Blend slope into level areas.
- M. Slope fill away from structures a minimum 2 inches in 10 feet.
- N. Leave fill material stockpile areas completely free of excess fill materials.
- O. Employ a compaction method for trench backfill that does not disturb or damage installed utilities and existing utilities in the trench. Compact backfill to specified density. If required compaction is not achieved and verified using mechanical methods, settling or spiking the trench with water may be used as a compaction method in conformance with ASTM C13 and D2321, as approved by the Engineer.
- P. Backfill simultaneously around all sides of structures, manholes and catch basins.

3.6 TOLERANCES

- A. Top Surface of Backfilling under Paved Areas: Plus or minus 1/2 inch from required elevations.
- B. Top surface of fill for building pads plus or minus 1/4 inch from required elevations.
- C. Top Surface of General Backfilling: Plus or minus 1 inch from required elevations.

3.7 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01 40 00.
- B. Tests and analysis of fill material will be performed in accordance with MDOT Standard Requirements and with Section 01 40 00.
- C. Compaction testing will be performed in accordance with MDOT Standard Requirements and with Section 01 40 00.
- D. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.
- E. Frequency of Tests: As directed by Soils Engineer.
- F. Proof roll compacted fill surfaces under paving.

3.8 PROTECTION OF FINISHED WORK

- A. Section 01 70 00 - Execution and Closeout Requirements: Protecting finished work.
- B. Reshape and re-compact fills subjected to vehicular traffic during construction.

3.9 SCHEDULE

- A. Fill Under Grass Area:
 - 1. Subsoil Type S2 fill, to 6 inches below finish grade, compacted to 95 percent maximum dry density as determined by MDOT Standard Requirements.
- B. Fill Under Asphalt Paving:
 - 1. A3 to underside of aggregate base course elevation, compacted to 95 percent maximum dry density as determined by MDOT Standard Requirements.
- C. Fill Under Concrete Building Pads, Concrete Pads, Concrete Curb and Gutter and Sidewalks:
 - 1. A3 to within 4" of underside of concrete slab. All fill to be compacted to 95 percent maximum dry density as determined by MDOT Standard Requirements.
- D. Backfill for Utility Trenches:
 - 1. Bedding as specified in individual water and sewer utility standard detail sheets.

- E. Fill for Subgrade and Undercutting:
 - 1. A1 – (6A Compacted Crushed Limestone) fill to proposed subgrade elevation, compacted to 95 percent maximum dry density as determined by MDOT Standard Requirements.

END OF SECTION

SECTION 31 23 18

ROCK REMOVAL

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Removing identified and discovered rock during excavation.
 - 2. Expansive tools to assist rock removal.
- B. Related Sections:
 - 1. Section 31 22 13 - Rough Grading
 - 2. Section 31 23 16 - Excavation
 - 3. Section 31 23 17 - Trenching

1.2 DEFINITIONS

- A. Trench Rock: Solid mineral material with volume in excess of 0.5 cu ft or solid material that cannot be removed with 1/2 cu yd capacity excavator without drilling or blasting.

1.3 SCHEDULING

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Schedule Work to avoid disruption to occupied buildings nearby.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify site conditions and note subsurface irregularities affecting Work of this section.

3.2 PREPARATION

- A. Identify required lines, levels, contours, and datum.

3.3 ROCK REMOVAL BY MECHANICAL METHOD

- A. Excavate and remove rock by mechanical method.
 - 1. Drill holes and use wedges or mechanical disintegration compound to fracture rock.
- B. Cut away rock at bottom of excavation to form level bearing.

- C. Remove all lumped subsoil, boulders, and rocks 6 inches below bottom of pipe.
- D. In utility trenches, excavate to 6 inches below invert elevation of pipe and 18 inches wider than pipe diameter.
- E. Remove excavated materials from site.
- F. Correct unauthorized rock removal in accordance with backfilling and compacting requirements of Section 31 23 17.

3.4 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Request visual inspection of utility bearing surfaces by Engineer before bedding, install, and backfilling utility.

END OF SECTION

SECTION 31 23 19

DEWATERING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Dewatering system.
 - 2. System operation and maintenance.
 - 3. Water disposal.

- B. Related Sections:
 - 1. Section 31 05 16 - Aggregates for Earthwork.
 - 2. Section 31 23 16 - Excavation.
 - 3. Section 31 23 17 - Trenching.
 - 4. Section 31 25 00 - Erosion and Sedimentation Controls.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM C33 - Standard Specification for Concrete Aggregates.

1.3 DEFINITIONS

- A. Dewatering includes the following:
 - 1. Lowering of ground water table, intercepting horizontal water seepage, and water from utilities to prevent water from entering excavations trenches.
 - 2. Disposing of removed water.

- B. Surface Water Control: Removal of surface water within open excavations.

1.4 SYSTEM DESCRIPTION

- A. Provide dewatering and surface water control systems to permit Work to be completed on dry and stable subgrade.

1.5 PERFORMANCE REQUIREMENTS

- A. Design dewatering systems to:
 - 1. Lower water table within areas of excavation to below bottom of excavation to permit Work to be completed on dry and stable subgrade.
 - 2. Relieve hydrostatic pressures in confined water bearing strata below excavation to eliminate risk of uplift or other instability of excavation.
 - 3. Prevent damage to adjacent properties, buildings, structures, utilities, and facilities from construction operations.
 - 4. Prevent loss of fines, quick condition, or softening of foundation subgrade.
 - 5. Maintain stability of sides and bottoms of excavations and trenches.

- B. Design surface water control systems to:
 - 1. Collect and remove surface water and seepage entering excavation.

1.6 QUALITY ASSURANCE

- A. Comply with authorities having jurisdiction for the following:
 - 1. Water discharge and disposal from pumping operations.
- B. Obtain permit from EPA under National Pollutant Discharge Elimination System (NPDES), for storm water discharge from construction sites.
- C. Perform Work in accordance with Municipal, State and Federal Standards.

1.7 QUALIFICATIONS

- A. Installer: Company specializing in performing work of this section with minimum 3 years' experience and responsible for design, operation, and maintenance of dewatering system.
 - 1. Assume sole responsibility for dewatering and surface water control systems and for loss or damage resulting from partial or complete failure of protective measures and settlement or resultant damage caused by ground water control operations.

1.8 SEQUENCING

- A. Section 01 10 00 - Summary: Requirements for sequencing.
- B. Sequence work to obtain required permits before start of dewatering operations.
- C. Sequence work to install and test dewatering and surface water control systems minimum 1 day before starting excavation trenching.

1.9 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.
- B. Coordinate work to permit the following construction operations to be completed on dry stable substrate.
 - 1. Excavation for structures specified in Section 31 23 16.
 - 2. Trenching for utilities specified in Section 31 23 17.

PART 2 PRODUCTS

2.1 DEWATERING EQUIPMENT

- A. Select dewatering equipment to meet specified performance requirements.

2.2 ACCESSORIES

- A. Filter Sand: Fine aggregate Type MDOT Class II Sand as specified in Section 31 05 16.
- B. Filter Aggregates: Course aggregate type MDOT 6A Compacted Crushed Limestone as specified in Section 31 05 16.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Call Local Utility Line Information service at 811 not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.

3.2 PREPARATION

- A. Protect existing adjacent buildings, structures, and improvements from damage caused by dewatering operations.
- B. Maintain monitoring wells until groundwater is allowed to return to normal level.

3.3 DEWATERING SYSTEM

- A. Install dewatering system as required to complete work stated in the proposal.
- B. Locate system components to allow continuous dewatering operations without interfering with installation of permanent Work and existing public rights-of-way, sidewalks, and adjacent buildings, structures, and improvements.
- C. Install sand filter and aggregate surrounding the pump as required for dewatering.
- D. Use pumps in accordance with manufacturer's instructions.
- E. Connect pumps to discharge header. Install valves to permit pump isolation.

3.4 SURFACE WATER CONTROL SYSTEM

- A. Provide ditches, berms, and other devices to divert and drain surface water from excavation area as specified in Section 31 25 00.
- B. Divert surface water and seepage water within excavation areas into sumps and pump water into drainage channels storm drains settling basins in accordance with requirements of agencies having jurisdiction.
- C. Control and remove unanticipated water seepage into excavation.

3.5 SYSTEM OPERATION AND MAINTENANCE

- A. Operate dewatering system continuously until backfill is minimum 2 feet above normal ground water table elevation.
- B. Provide 24-hour supervision of dewatering system by personnel skilled in operation, maintenance, and replacement of system components.

- C. Conduct daily observation of dewatering system and monitoring system. Make required repairs and perform scheduled maintenance.
- D. Fill fuel tanks before tanks reach 25 percent capacity.
- E. Start emergency generators at least twice each week to check operating condition.
- F. When dewatering system cannot control water within excavation, notify Architect/Engineer and stop excavation work.
 - 1. Supplement or modify dewatering system and provide other remedial measures to control water within excavation.
 - 2. Demonstrate dewatering system operation complies with performance requirements before resuming excavation operations.
- G. Modify dewatering and surface water control systems when operation causes or threatens to cause damage to new construction, existing site improvements, adjacent property, or adjacent water wells.
- H. Correct unanticipated pressure conditions affecting dewatering system performance.
- I. Do not discontinue dewatering operations without Engineer's approval.

3.6 WATER DISPOSAL

- A. Discharge water into existing storm sewer system drainage channels settling basins specified in Section 31 25 00.

3.7 SYSTEM REMOVAL

- A. Remove dewatering and surface water control systems after dewatering operations are discontinued.
- B. Repair damage caused by dewatering and surface water control systems or resulting from failure of systems to protect property.

3.8 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. After dewatering system is installed, perform pumping test to determine when selected pumping rate lowers water level in well below pump intake. Adjust pump speed, discharge volume, or both to ensure proper operation of each pump.
- C. Submit weekly monitoring reports including the following:
 - 1. Dewatering flow rates.
 - 2. Piezometer readings.
 - 3. Test reports of discharge water analysis.
 - 4. Maintenance records for dewatering and surface water control systems.

END OF SECTION

SECTION 31 23 23

FILL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Backfilling building perimeter to subgrade elevations.
 - 2. Backfilling site structures to subgrade elevations.
 - 3. Fill under slabs-on-grade.
 - 4. Fill under paving.
 - 5. Fill for over-excavation.

- B. Related Sections:
 - 1. Section 01 40 00 - Quality Requirements
 - 2. Section 03 30 00 – Cast-In-Place Concrete
 - 3. Section 31 05 13 – Soils for Earthwork
 - 4. Section 31 05 16 – Aggregates for Earthwork
 - 5. Section 31 05 17 – Trenching
 - 6. Section 31 22 13 – Rough Grading
 - 7. Section 31 23 16 - Excavation
 - 8. Section 32 11 23 - Aggregate Base Course
 - 9. Section 32 91 19 – Landscape Grading

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

- B. ASTM International:
 - 1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³).
 - 2. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - 3. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³).
 - 4. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
 - 5. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 6. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

- B. Product Data: Submit data for geotextile fabric indicating fabric and construction.
- C. Materials Source: Submit name of imported fill materials suppliers.
- D. Manufacturer's Certificate: Certify Products meet or exceed Michigan Department of Transportation construction standards.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with Michigan Department of Transportation construction standards.
- B. Maintain one copy of each document on site.

PART 2 - PRODUCTS

2.1 FILL MATERIALS

- A. Structural Fill: MDOT Class I for lower area of excess excavation over 24", compacted to 97 percent of maximum density in accordance with MDOT standards.
- B. Granular Fill: MDOT Class II for dry excavation and backfill under structure compacted to 95 percent of maximum density in accordance with MDOT standards.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

3.2 PREPARATION

- A. Compact subgrade to density requirements for subsequent backfill materials.
- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with structural fill and compact to density equal to or greater than requirements for subsequent fill material.
- C. Proof roll to identify soft spots; fill and compact to density equal to or greater than requirements for subsequent fill material.

3.3 BACKFILLING

- A. Backfill areas to contours and elevations with unfrozen materials.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen or spongy subgrade surfaces.
- C. Place material in continuous layers as follows:
 - 1. Structural Fill: Maximum 6 inches compacted depth.
 - 2. Granular Fill: Maximum 18 inches compacted depth.

- D. Employ placement method that does not disturb or damage other work.
- E. Maintain optimum moisture content of backfill materials to attain required compaction density.
- F. Make gradual grade changes. Blend slope into level areas.
- G. Remove surplus backfill materials from site.
- H. Leave fill material stockpile areas free of excess fill materials.
- I. Slope grade away from structures or paved surfaces.

3.4 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Top Surface of Backfilling Under Paved Areas: Plus or minus 1/2 inch from required elevations.

3.5 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Perform laboratory material tests in accordance with ASTM D1557.
- C. Perform in place compaction tests in accordance with the following:
 - 1. Density Tests: ASTM D2922.
 - 2. Moisture Tests: ASTM D3017.
- D. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.

3.6 PROTECTION OF FINISHED WORK

- A. Section 01 70 00 - Execution and Closeout Requirements: Protecting finished work.
- B. Reshape and re-compact fills subjected to vehicular traffic.

3.7 SCHEDULE

- A. Fill Under Grass Area:
 - 1. Subsoil Type S2 fill, to 6 inches below finish grade, compacted to 95 percent maximum dry density as determined by MDOT Standard Requirements.
- B. Fill Under Asphalt Paving:
 - 1. A3 to underside of aggregate base course elevation, compacted to 95 percent maximum dry density as determined by MDOT Standard Requirements.
- C. Fill Under Concrete Building Pads, Concrete Pads, Concrete Curb and Gutter and Sidewalks:
 - 1. A3 to within 4" of underside of concrete slab. All fill to be compacted to 95 percent maximum dry density as determined by MDOT Standard Requirements.

- D. Backfill for Utility Trenches:
 - 1. Bedding as specified in individual water and sewer utility standard detail sheets.

- E. Fill for Subgrade and Undercutting:
 - 1. A1 – (6A Compacted Crushed Limestone) fill to proposed subgrade elevation, compacted to 95 percent maximum dry density as determined by MDOT Standard Requirements.

END OF SECTION

SECTION 31 25 00

EROSION AND SEDIMENTATION CONTROLS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Erosion Control Blanket.
 - 2. Sediment Ponds.
 - 3. Sediment Traps.
 - 4. Sit Stabilization.
 - 5. Silt Fence.

- B. Related Sections:
 - 1. Section 03 10 00 - Concrete Forming and Accessories
 - 2. Section 03 30 00 - Cast-In-Place Concrete
 - 3. Section 31 05 13 – Soils for Earthwork
 - 4. Section 31 05 16 – Aggregates for Earthwork
 - 5. Section 31 10 00 - Site Clearing
 - 6. Section 31 22 13 – Rough Grading
 - 7. Section 31 23 16 – Excavation
 - 8. Section 31 23 17 - Trenching
 - 9. Section 32 91 19 - Landscape Grading
 - 10. Section 32 92 19 - Seeding

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T88 - Standard Specification for Particle Size Analysis of Soils.
 - 2. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

- B. ASTM International:
 - 1. ASTM C127 - Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate.
 - 2. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 3. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 4. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 5. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
 - 6. ASTM D-4632 – Test Method for Tensile Strength and Elongation.
 - 7. ASTM D-3786 – Test Method for Mullen Burst.
 - 8. ASTM D-4533 – Test Method for Puncture Strength.
 - 9. ASTM D-4751 – Test Method for Apparent Opening Size.
 - 10. ASTM D-4491 – Test Method for Coefficient of Permeability.

1.3 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the Soil Erosion and Sedimentation Control, Part 91 of Act 451 of 1994, and corresponding rules of the Michigan Department of Environment, Great Lakes and Energy.
- B. CONTRACTOR shall obtain Act 451 Permit.
- C. CONTRACTOR shall obtain soil erosion permit.
- D. Maintain one copy of each document on site.

1.5 REGULATORY REQUIREMENTS

- A. Contractor shall obtain all permits and pay all fees for plan review and inspection as required by applicable enforcing agency having jurisdiction.
- B. Submit installation time schedule for temporary and permanent soil erosion and sedimentation control measures to applicable enforcing agency having jurisdiction, as well as to Engineer. Make submittals prior to start of construction.

1.6 METHOD OF PAYMENT

- A. All fees required by applicable enforcing agency shall be included in the other pay items for the project.

PART 2 PRODUCTS

2.1 SOIL EROSION AND SEDIMENT CONTROLS

- A. Permanent Measures: In accordance with applicable Section for specified materials.
- B. Temporary Measures: In accordance with standards and specifications for soil erosion and sediment control with approved plans and requirements of applicable enforcing agency.

2.2 PLANTING MATERIALS

- A. Seeding and Soil Supplements: Material, as specified in Section 32 92 19 Seeding.
- B. Mulch: Material, as specified in Section 32 92 19 Seeding.

2.3 SOURCE QUALITY CONTROL (AND TESTS)

- A. Section 01 40 00 - Quality Requirements: Testing, inspection and analysis requirements.
- B. Perform tests as required to ensure conformance with specified requirements.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify compacted subgrade is acceptable and ready to support devices and imposed loads.
- C. Verify gradients and elevations of required lines, levels, contours, and datum are correct.
- D. Field locate known utilities locations. Notify Engineer of conflicts and attain removal or relocation instructions prior to continuing installation activities.
- E. Maintain and protect existing utilities to remain.
- F. Verify the correct fabric is specified for the specific site.
- G. Beginning of installation means acceptance of existing conditions.
- H. Remove large stones or other debris which could damage the filter fabric and other erosion control material.

3.2 PROTECTION OF ADJACENT WORK

- A. Protect adjacent structures, and property, which may be damaged by execution of work.
- B. Protect existing trees, shrubs, landscaping, and lawn areas designated to remain.

3.3 STORAGE

- A. All geotextile material shall be stored in a wrap that protects it from ultraviolet radiation and abrasion.

3.4 SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION AND MAINTENANCE

- A. Construct soil erosion and sedimentation control measures in accordance with approved plans and requirements of applicable enforcing agency.
- B. Schedule planned control measures with construction operations to limit the area of any disturbed land to the shortest possible period of exposure.
- C. Permanent and minimum temporary control measures as scheduled on Drawings.
- D. Additional temporary measures (over and above those scheduled on Drawings) due to site grading/construction activities that any way differs from that shown on drawings.
- E. Conduct all earth changes so as to effectively reduce accelerated soil erosion and resulting sedimentation.
- F. Remove all sediment from runoff water before it leaves the site.

- G. Inspect, maintain, and repair temporary control measures until permanent control measures are implemented.

3.5 EROSION CONTROL BLANKET

- A. Repair washouts in area to be seeded.
- B. Prepare side slopes as shown on plans.
- C. Over excavate area equal to thickness of required topsoil and protection.
- D. Place topsoil as shown on plans.
- E. Rake in fertilizer; apply at the rate of 15 lbs per 1,000 sq. ft.
- F. Seed topsoil with ditch bank seeding mix at a rate of 6 lbs per 1,000 sq. ft.
- G. Place erosion control blanket over seeded areas.
- H. Place metal pins over seeded areas 2.0 ft on centers. As approved by Engineer.

3.6 SEDIMENTATION POND

- A. Clear and grub storage area and embankment foundation area site as specified in Section 31 10 00.
- B. Excavate key trench for full length of dam. Excavate emergency spillway in natural ground.
- C. Install pipe spillway, with anti-seep collar attached, at location indicated.
- D. Place forms, and reinforcing for concrete footing at bottom of riser pipe with trash rack and anti-vortex device, as specified in Section 03 10 00, and Section 03 20 00. Construction of embankment and trench prior to placing pipe is not required.
- E. Mix, place, finish, and cure concrete, as specified in Section 03 30 00.
- F. Do not use coarse aggregate as backfill material around pipe. Backfill pipe with suitable embankment material to prevent dam leakage along pipe.
- G. Construct rock basin at outlet end of pipe, as specified in this Section. Place embankment material, as specified in Section 31 23 17. When required, obtain borrow excavation for formation of embankment, as specified in Section 31 23 17.
- H. On entire sedimentation pond area, apply soil supplements and sow seed as specified in Section 32 92 19.
- I. Mulch seeded areas with hay as specified in Section 32 92 19.

3.7 SEDIMENT TRAPS

- A. Clear site, as specified in Section 31 10 00.

- B. Construct trap by excavating and forming embankments as specified in Section 31 23 16, and Section 31 23 17.
- C. Place coarse aggregate or rock at outlet as indicated on Drawings.
- D. Place geotextile fabric, as specified for rock energy dissipater.
- E. When required, obtain borrow excavation for formation of embankment, as specified in Section 31 23 16.
- F. On entire sediment trap area, apply soil supplements and sow seed as specified in Section 32 92 19.
- G. Mulch seeded areas with hay as specified in Section 32 92 19.

3.8 SITE STABILIZATION

- A. Incorporate erosion control devices indicated on the Drawings into the Project at the earliest practicable time.
- B. Construct, stabilize and activate erosion controls before site disturbance within tributary areas of those controls.
- C. Stockpile and waste pile heights shall not exceed 35 feet. Slope stockpile sides at 2: 1 or flatter.
- D. Stabilize any disturbed area of affected erosion control devices on which activity has ceased and which will remain exposed for more than 20 days.
 - 1. During non-germinating periods, apply mulch at recommended rates.
 - 2. Stabilize disturbed areas which are not at finished grade and which will be disturbed within one year in accordance with Section 32 92 19.
 - 3. Stabilize disturbed areas which are either at finished grade or will not be disturbed within one year in accordance with Section 32 92 19 permanent seeding specifications.
- E. Stabilize diversion channels, sediment traps, and stockpiles immediately.

3.9 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Inspect erosion control devices on a weekly basis and after each runoff event. Make necessary repairs to ensure erosion and sediment controls are in good working order.
- C. Field test concrete in accordance with Section 03 30 00.
- D. Compaction Testing: As specified in Section 31 23 17.
- E. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.

3.10 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for cleaning.
- B. When sediment accumulation in sedimentation structures has reached a point one-third depth of sediment structure or device, remove and dispose of sediment.
- C. Do not damage structure or device during cleaning operations.
- D. Do not permit sediment to erode into construction or site areas or natural waterways.
- E. Clean channels when depth of sediment reaches approximately one half channel depth.

3.11 PROTECTION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
- B. Protect temporary soil erosion control from elements, flowing water, or other disturbance until construction is complete.

END OF SECTION

SECTION 31 32 21

FILTER FABRIC

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Filter Fabric for Groundwater Infiltration Applications.
 - 2. Filter Fabric for Cobblestone Applications.
 - 3. Filter Fabric for Plain Riprap Applications and Concrete Box Culvert Joints.
 - 4. Filter Fabric for Heavy Riprap Applications.
 - 5. Filter Fabric for Articulated Concrete Mat Applications.

- B. Related Sections:
 - 1. Section 31 22 13 – Rough Grading
 - 2. Section 31 25 00 – Erosion and Sedimentation Controls
 - 3. Section 31 35 21 – Slope Protection and Erosion Control
 - 4. Section 31 37 00 - Riprap

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM D-4632 - Test method for Tensile Strength and Elongation
 - 2. ASTM D-3786 - Test method for Mullen Burst.
 - 3. ASTM D-4533 - Test method for Trapezoidal Tear Strength.
 - 4. ASTM D-3787 - Test method for Puncture Strength.
 - 5. ASTM D-4751 - Test method for Apparent Opening Size.
 - 6. ASTM D-4491 - Test method for Coefficient of Permeability

1.3 SUBMITTALS

- A. Section 01 70 00 – Execution and Closeout Requirements: Requirements for Submittals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Mechanically bonded, non-woven, long-chain polymeric fibers or yarns.
 - 1. Filter fabric for groundwater infiltration (french drains, trench drains, pipe joint wrap, etc.) and embankment filter fabric is to have, at minimum, the following properties:

Tensile Strength	100 lbs
Tensile Elongation (max)	100%
Mullen Burst	200 psi
Trapezoidal Tear Strength	40 lbs
Puncture Strength	65 lbs
Apparent Opening Size (max)	0.210 mm
Coef. Of Permeability	0.15 cm/sec

2. Filter fabric for cobblestone grade and bank protection shall have, at minimum the following properties:

Tensile Strength	120 lbs
Tensile Elongation (max)	100%
Mullen Burst	230 psi
Trapezoidal Tear Strength	45 lbs
Puncture Strength	70 lbs
Apparent Opening Size (max)	0.210 mm
Coef. Of Permeability	0.15 cm/sec
3. Filter fabric for plain riprap grade and bank protection shall have, a minimum, the following properties:

Tensile Strength	155 lbs
Tensile Elongation (max)	100%
Mullen Burst	315 psi
Trapezoidal Tear Strength	65 lbs
Puncture Strength	90 lbs
Apparent Opening Size (max)	0.210 mm
Coef. Of Permeability	0.15 cm/sec
Open Area	
4. Filter fabric for heavy rip-rap grade and bank protection to have, at minimum, the following properties:

Tensile Strength	200lbs
Tensile Elongation (max)	100%
Mullen Burst	350 psi
Trapezoidal Tear Strength	75 lbs
Puncture Strength	100 lbs
Apparent Opening Size (max)	0.210 mm
Coef. Of Permeability	0.15 cm/sec
Open Area	
5. Filter fabric for rock ford crossings to have, at minimum, the following properties:

Tensile Strength	265 lbs
Tensile Elongation (max)	120%
Mullen Burst	470 psi
Trapezoidal Tear Strength	130 lbs
Puncture Strength	160 lbs
Apparent Opening Size (max)	0.149 mm
Coef. Of Permeability	0.25 cm/sec
Open Area	

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 – Administrative Requirements: Verification of Existing Conditions before Starting Work.
- B. Verify compacted subgrade is acceptable and ready to support devices and imposed loads.
- C. Verify gradients and elevations of required lines, levels, contours, and datum are correct.

- D. Verify the correct fabric is specified for the specific use.
- E. At the time of installation, the filter fabric may be rejected at the discretion of the Engineer if it has been removed from its protective cover for over 72 hours or has defects, tears, punctures, flow deterioration, or damage incurred during manufacture, transportation or storage.
- F. No torn, punctured, or otherwise damaged fabric shall be installed.

3.2 PREPARATION

- A. Section 01 70 00 - Execution and Closeout Requirements specifies requirements for installation preparation.
- B. Remove large stones or other debris, which could damage the filter fabric.
- C. Adjacent Surfaces: Protect adjacent surfaces.

3.3 STORAGE

- A. During all periods of shipment and storage, the filter fabric shall be protected from abrasion, direct sunlight, ultraviolet rays, and temperatures greater than 140 degrees Fahrenheit (or as directed by the manufacturer). To the extent possible, the fabric shall be maintained wrapped in its protective covering.

3.4 INSTALLATION

- A. Install according to manufacturer's instructions.
- B. All joints/overlaps in material shall be a minimum of 2 feet.
- C. Any damaged material shall be repaired by placing a piece of fabric that is sufficiently large to cover the damaged area plus 2 feet of adjacent undamaged geotextile in all directions.
- D. Finish according to specific use requirements.
- E. Edges of filter fabric shall be toed in 12 inches unless specified otherwise. Work will not pass inspection if filter fabric is not "toed in."
- F. Maintain permanent control measures until final acceptance by Owner.
- G. Install silt fences around all catchbasin inlets, to be removed after final inspection of the project.
- H. Construct trap by excavating and forming embankments as specified in Section 31 23 16, and Section 31 23 17.
- I. Place coarse aggregate or rock at outlet as indicated on Drawings.
- J. Place geotextile fabric, as specified for rock energy dissipater.
- K. When required, obtain borrow excavation for formation of embankment, as specified in Section 31 23 16.

- L. On entire sediment trap area, apply soil supplements and sow seed as specified in Section 32 92 19.
- M. Mulch seeded areas with hay as specified in Section 32 92 19.

3.5 PROTECTION

- A. Section 01 70 00 - Execution and Closeout Requirements specifies requirements for protecting finished Work.
- B. Do not permit Traffic over unprotected surface.
- C. Take care placing material over filter fabric so as not to damage the material.

END OF SECTION

SECTION 32 11 23

AGGREGATE BASE COURSES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Aggregate subbase.
 - 2. Aggregate base course.

- B. Related Sections:
 - 1. Section 31 05 16 – Aggregates for Earth Work
 - 2. Section 31 22 13 – Rough Grading
 - 3. Section 31 23 17 – Trenching
 - 4. Section 32 11 23 – Aggregates Base Course
 - 5. Section 32 12 16 – Asphalt Paving
 - 6. Section 32 13 13 – Concrete Paving
 - 7. Section 32 91 19 – Landscape Grading
 - 8. Section 33 40 00 – Storm Sewerage Systems

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO M288 - Standard Specification for Geotextile Specification for Highway Applications.

- B. ASTM International:
 - 1. ANSI/ASTM C117 – Test Method for Materials Finer than 75 mm (No. 200) Sieve in Mineral Aggregates by Washing.
 - 2. ANSI/ASTM C136 – Method for Sieve Analysis of Fine and Coarse Aggregates.
 - 3. Test method for density of soil in place with loss by wash less than 15% - One Point Michigan Cone Test.
 - 4. Test method for density of soil in place with loss by wash greater than 15% - One Point T-99 Test.
 - 5. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - 6. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
 - 7. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 8. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
 - 9. MDOT Standard Specifications for Construction.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

- B. Product Data:
 - 1. Submit data for geotextile fabric and herbicide.
- C. Samples may be requested by the Engineer: Submit, in air-tight containers, 10 lb sample of each type of aggregate fill to testing laboratory.
- D. Materials Source: Submit name of aggregate materials suppliers.
- E. Manufacturer's Certificate: Certify Products meet or exceed specified requirements for MDOT 22A.

1.4 QUALITY ASSURANCE

- A. Furnish each aggregate material from single source throughout the Work.
- B. Perform Work in accordance with Bay County Road Commission standard.

PART 2 PRODUCTS

2.1 AGGREGATE MATERIALS

- A. Coarse Aggregate: Fill type MDOT 6A crushed limestone as specified in Section 31 05 16. Compacted to 98 percent density.
- B. Coarse Aggregate: Fill Type MDOT 22A crushed limestone as specified in Section 31 05 16. Compacted to 98 percent density.
- C. Fine Aggregate: Fill Type MDOT Class II Sand as specified in Section 31 05 16. Compacted to 98 percent density.

2.2 ACCESSORIES

- A. Geotextile Fabric: AASHTO M288; non-woven, polypropylene. Maybe required for winter construction.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify compacted substrate is dry and ready to support paving and imposed loads.
 - 1. Proof roll substrate with 3 ton in minimum two perpendicular passes to identify soft spots.
 - 2. Remove soft substrate and replace with compacted fill as specified in Section 31 23 23.
- C. Verify substrate has been inspected, gradients and elevations are correct.

3.2 PREPARATION

- A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.
- B. Do not place fill on soft, muddy, or frozen surfaces.

3.3 AGGREGATE PLACEMENT

- A. Install geotextile fabric over subgrade in accordance with manufacturer's instructions.
 - 1. Lap ends and edges minimum 12 inches.
 - 2. Anchor fabric to subgrade when required to prevent displacement until aggregate is installed.
- B. Gradation of Aggregate: In accordance with ASTM C136.
- C. Spread aggregate over prepared substrate to total compacted thickness as indicated on drawings and stated in the proposal.
- D. Roller compact aggregate to 98 percent maximum density.
- E. Level and contour surfaces to elevations, profiles, and gradients indicated.
- F. Add small quantities of fine aggregate to coarse aggregate when required to assist compaction.
- G. Maintain optimum moisture content of fill materials to attain specified compaction density. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
- H. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.4 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Maximum Variation From Flat Surface: 1/4 inch measured with 10 foot straight edge.
- C. Maximum Variation From Thickness: 1/4 inch.
- D. Maximum Variation From Elevation: 1/2 inch.

3.5 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Compaction testing will be performed in accordance with ASTM D2922.
- C. When tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to the Owner.
- D. Frequency of Tests: As determined by the Engineer in the field with a minimum of one test for every 500 square yards of each layer compacted aggregate.

3.6 COMPACTION

- A. Compact materials to 98 percent of maximum density as determined from test strip, in accordance with ASTM D2940.

3.7 SCHEDULES

- A. Asphalt Paving Base Course: Thickness varies as stated in the proposal, placed in one or two equal layers.
- B. Concrete Paving Base Course: Thickness varies as stated in the proposal, placed in single layer.

END OF SECTION

SECTION 32 12 16

ASPHALT PAVING

1.1 SUMMARY

- A. Section Includes:
 - 1. Asphalt materials.
 - 2. Asphalt paving base course, binder course, and wearing course.
 - 3. Asphalt paving overlay for existing paving.

- B. Related Requirement:
 - 1. Section 31 05 16 - Aggregates for Earthwork.
 - 2. Section 31 22 13 - Rough Grading.
 - 3. Section 31 23 16 - Excavation
 - 4. Section 31 23 17 - Trenching.
 - 5. Section 32 11 23 - Aggregate Base Courses.

1.2 REFERENCE STANDARDS

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO M17 - Standard Specification for Mineral Filler for Bituminous Paving Mixtures.
 - 2. AASHTO M29 - Standard Specification for Fine Aggregate for Bituminous Paving Mixtures.
 - 3. AASHTO M140 - Standard Specification for Emulsified Asphalt.
 - 4. AASHTO M208 - Standard Specification for Cationic Emulsified Asphalt.
 - 5. AASHTO M288 - Standard Specification for Geotextile Specification for Highway Applications.
 - 6. AASHTO M320 - Standard Specification for Performance-Graded Asphalt Binder.
 - 7. AASHTO M324 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
 - 8. AASHTO MP1a - Standard Specification for Performance-Graded Asphalt Binder.

- B. Asphalt Institute:
 - 1. AI MS-2 - Mix Design Methods for Asphalt Concrete and Other Hot- Mix Types.
 - 2. AI MS-19 - Basic Asphalt Emulsion Manual.
 - 3. AI SP-2 - Superpave Mix Design.

- C. ASTM International:
 - 1. ASTM C1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.
 - 2. ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
 - 3. ASTM D242 - Standard Specification for Mineral Filler For Bituminous Paving Mixtures.
 - 4. ASTM D692 - Standard Specification for Coarse Aggregate for Bituminous Paving Mixtures.
 - 5. ASTM D946 - Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction.

6. ASTM D977 - Standard Specification for Emulsified Asphalt.
7. ASTM D1073 - Standard Specification for Fine Aggregate for Bituminous Paving Mixtures.
8. ASTM D1188 - Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
9. ASTM D2027 - Standard Specification for Cutback Asphalt (Medium-Curing Type).
10. ASTM D2397 - Standard Specification for Cationic Emulsified Asphalt.
11. ASTM D2726 - Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures.
12. ASTM D2950 - Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods.
13. ASTM D3381 - Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction.
14. ASTM D3515 - Standard Specification for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.
15. ASTM D3549 - Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens.
16. ASTM D3910 - Standard Practices for Design, Testing, and Construction of Slurry Seal.
17. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
18. ASTM E408 - Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques.
19. ASTM E903 - Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres.
20. ASTM E1918 - Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field.
21. ASTM E1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.
22. MDOT 2012 Standard Specifications for Construction.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data:
 1. Submit product information for asphalt and aggregate materials.
 2. Submit mix design with laboratory test results supporting design.
- C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements for MDOT Standard Construction Specifications.

1.4 QUALITY ASSURANCE

- A. Mixing Plant: Conform to State of Michigan Department of Transportation Standard.
- B. Obtain materials from same source throughout.
- C. Perform Work in accordance with State of Michigan Department of Transportation standard.
- D. Maintain one copy of each document on site.

1.5 REGULATORY REQUIREMENTS

- A. Conform to applicable local codes for paving work.

1.6 QUALIFICATIONS

- A. Installer: Company specializing in performing work of this section with minimum 3 years documented experience.

1.7 AMBIENT CONDITIONS

- A. Section 01 50 00 - Temporary Facilities and Controls: Ambient conditions control facilities for product storage and installation.
- B. Do not place asphalt mixture when ambient air or base surface temperature is less than 40 degrees F, or surface is wet or frozen.
- C. Place asphalt mixture when temperature is not more than 15 degrees F less than initial mixing temperature.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Asphalt Cement: In accordance with MDOT standards.
- B. Aggregate for Leveling Course Mix: In accordance with MDOT standards.
- C. Aggregate for Wearing Course Mix: In accordance with MDOT standards.
- D. Fine Aggregate: In accordance with MDOT standards.
- E. Mineral Filler: In accordance with MDOT standards.

2.2 ACCESSORIES

- A. Primer: Homogeneous, medium curing, liquid asphalt in accordance with MDOT standards.
- B. Tack Coat: Homogeneous, medium curing, liquid asphalt in accordance with MDOT standards.

2.3 ASPHALT PAVING MIX

- A. Use dry material to avoid foaming. Mix uniformly.
- B. Base Course: provide mix in accordance with MDOT uniformity tolerances for bituminous mixtures.
- C. Leveling Course: provide mix in accordance with MDOT uniformity tolerances for bituminous mixtures.

- D. Wearing Course: provide mix in accordance with MDOT uniformity tolerances for bituminous mixtures.

2.4 SOURCE QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Testing, inspection and analysis requirements.
- B. Submit proposed mix design of each class of mix for review prior to beginning of Work.
- C. Submit MDOT approved job mix formula (JMF) of each mix for review 14 days prior to commencement of work.
- D. Test samples in accordance with AI MS-2 and MDOT standards.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify utilities indicated under paving are installed with excavations and trenches backfilled and compacted.
- C. Verify compacted subgrade and subbase is dry and ready to support paving and imposed loads.
 - 1. Proof roll subbase with 7 ton in minimum two perpendicular passes to identify soft spots.
 - 2. Remove soft subbase and replace with compacted fill as specified in Section 32 11 23.
- D. Verify gradients and elevations of base are correct.
- E. Verify gutter drainage grilles and frames manhole frames and valve boxes are installed in correct position and elevation.

3.2 PREPARATION

- A. Prepare subbase in accordance with State of Michigan Department of Transportation standards.

3.3 DEMOLITION

- A. Saw cut and notch existing paving, saw cutting shall be paid for as part of pavement removal.
- B. Clean existing paving to remove foreign material, excess joint sealant and crack filler from paving surface.
- C. Repair surface defects in existing paving to provide uniform surface to receive new paving.

3.4 INSTALLATION

- A. Subbase:
 - 1. Aggregate Subbase: Install as specified in Section 32 11 23.
- B. Primer:
 - 1. Apply primer in accordance with AI MS-2. State of Michigan Department of Transportation standards.
 - 2. Use clean sand to blot excess primer.
- C. Tack Coat:
 - 1. Apply bond coat on existing, abutting asphalt and concrete surfaces according to manufacturer's instructions and MDOT standards.
 - 2. Apply bond coat to contact surfaces of curbs, gutters, building walls and sidewalks. Prevent overspray from reaching adjacent surfaces.
 - 3. Coat surfaces of manhole and catch basin frames with oil to prevent bond with asphalt pavement. Do not bond coat these surfaces.
 - 4. Use clean sand to blot excess primer.
- D. Single Course Asphalt Paving:
 - 1. Install Work in accordance with State of Michigan Department of Transportation standards.
 - 2. Place asphalt within 24 hours of applying primer or tack coat.
 - 3. Place asphalt wearing course to compacted thickness as indicated on the drawings and stated in the proposal.
 - 4. Compact paving by rolling to specified density. Do not displace or extrude paving from position. Hand compact in areas inaccessible to rolling equipment.
 - 5. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.
- E. Double Course Asphalt Paving:
 - 1. Place asphalt binder course within 24 hours of applying primer or tack coat.
 - 2. Place binder course to compacted thickness indicated on drawings and as stated in the proposal.
 - 3. Place wearing course within 24 hours of placing and compacting binder course. When binder course is placed more than 24 hours before placing wearing course, clean surface and apply tack coat before placing wearing course.
 - 4. Place wearing course to compacted thickness indicated on drawings and as stated in the proposal.
 - 5. Install gutter drainage grilles and frames, manhole frames, valve and monument boxes in correct position and elevation.
 - 6. Compact each course by rolling to specified density. Do not displace or extrude paving from position. Hand compact in areas inaccessible to rolling equipment.
 - 7. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.
- F. Asphalt Paving Overlay
 - 1. Apply asphalt cement tack coat to existing paving surface at rate recommended by geotextile fabric manufacturer.

2. Install geotextile fabric in accordance with manufacturer's instructions to permit asphalt saturation of fabric. Lap fabric edge and end joints 4 inches.
3. Place wearing course to compacted thickness indicated on drawings and as stated in the proposal.
4. Compact overlay by rolling to specified density. Do not displace or extrude paving from position. Hand compact in areas inaccessible to rolling equipment.
5. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.

G. Hand Patching

1. Install uniform thickness surface slurry over existing paving in accordance with ASTM Install work according to current MDOT standards.
2. Place to compacted thickness as specified on plans.
3. Compact in maximum lifts by use of a machine vibrator or approved roller according to current MDOT standards.

H. Curbs

1. Install extruded asphalt curbs of profile as indicated on Drawings.

3.5 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- C. Scheduled Compacted Thickness: Within 1/4 inch.
- D. Variation from Indicated Elevation: Within 1/4 inch.

3.6 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Requirements for inspecting, testing.
- B. Take samples and perform tests in accordance with State of Michigan Department of Transportation Standards.
- C. Asphalt Paving Mix Temperature: Measure temperature at time of placement.
- D. Asphalt Paving Thickness: ASTM D3549; test one core sample from every 1000 square yards compacted paving.
- E. Asphalt Paving Density: ASTM D2950 nuclear method; density testing shall be performed at the discretion of the Engineer.

3.7 PROTECTION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.

- B. Immediately after placement, protect paving from mechanical injury for 3 days.

END OF SECTION

SECTION 32 15 00

CRUSHED STONE PATH

PART 1 GENERAL

1.1 SECTION INCLUDES

- B. Crushed stone limestone mix for path topping.
- B. Aggregate base course.

1.2 RELATED SECTIONS

- B. Section 02211 - Rough Grading.
- C. Section 02231 – Aggregate Base Course.
- D. Section 02923 - Landscape Grading.

1.3 REFERENCES

- B. ANSI/ASTM C117 - Test Method for Materials Finer than 75 mm (No. 200) Sieve in Mineral Aggregates by Washing.
- C. ANSI/ASTM C136 - Method for Sieve Analysis of Fine and Coarse Aggregates.
- D. Test method for density of soil in place with loss by wash less than 15% - One Point Michigan Cone Test.
- E. Test method for density of soil in place with loss by wash greater than 15% - One Point T-99 Test.
- F. MDOT Standard Specifications for Construction.
- G. ASTM D2992 - Test Methods of Density of Soil and Soil - Aggregate in Place by the Nuclear Method (Shallow Depth).

1.4 SUBMITTALS

- B. Submit under provisions of Section 01 30 00.

PART 2 PRODUCTS

1.1 MATERIALS

- A. Crushed stone topping: Shall be a 50/50 mix of MDOT 21AA crushed limestone aggregate and Limestone Dust.

B. Limestone Dust shall meet the following specification:

100%	3/8"
100%	#4
85-95%	#8
60-70%	#16
45-55%	#30
40-50%	#40
35-45%	#50
35-45%	#60
25-35%	#100
15-25%	Loss By Wash (LBW)

C. Aggregate for base course: MDOT 22A compacted crushed limestone.

D. Herbicide: Use Arsenal as manufactured by American Cyanamid Co. See the Material Safety Data sheets included in the specifications. Herbicide shall be guaranteed to keep the paths weed free for a minimum of 1 year.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify subbase and base have been inspected, gradients and elevations are correct, and are dry.

3.2 AGGREGATE PLACEMENT

A. Spread aggregate to a total compacted thickness as shown on detail sheet.

B. Place aggregate in 1-2" layer and roller compact.

C. Level and contour surfaces to elevations and gradients indicated.

D. Compact placed aggregate materials to achieve compaction to 95 percent of its maximum dry density in accordance with MDOT Standard requirements.

E. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.

F. Use mechanical vibrating tamping in areas inaccessible to compaction equipment.

3.3 TOLERANCES

A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge. Scheduled Compacted Thickness: Within 1/4 inch.

B. Variation from True Elevation: Within 1/2 inch.

3.4 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01 40 00.
- B. Gradation of Aggregate: In accordance with ASTM C136.
- C. Compaction testing will be performed as specified.
- D. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.
- E. Frequency of Tests: At the discretion of Engineer.

END OF SECTION

SECTION 32 18 16.33

PLAYGROUND PROTECTIVE SURFACES

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Playground Surfacing; typed as indicated on the drawings and in this section.

1.2 RELATED SECTIONS

- A. Section 01 33 00 – Submittals
- B. Section 03 30 00 – Cast-In-Place Concrete
- C. Section 11 68 13 – Playground Equipment
- D. Section 31 22 13 – Rough Grading
- E. Section 31 23 16 – Excavation
- F. Section 31 23 17 – Trenching
- G. Section 32 11 23 – Aggregate Base Courses
- H. Section 32 13 13 – Concrete Paving

1.3 REFERENCES

- A. CPSC – Consumer Product Safety Commission, Public Playground Safety Handbook.
- B. ASTM F1487 – American Society for Testing and Materials, Playgrounds for Public Use.
- C. ADAAG – Americans with Disabilities Act Accessibility Guidelines for Play Areas.
- D. ASTM C67 – Standard Test Method for Weathering and Aging of Surface Systems and Materials and Standard Test Method for Rubber – Deterioration in an Air Over.
- E. ASTM D412 – Standard Test Method for Vulcanized Rubber and Thermoplastic rubbers and Thermoplastic Elastomers-tension.
- F. ASTM D624 – Standard Test Method for Tear Strength of Conventional Bulcanized Rubber and Thermoplastic Elastomers.
- G. ASTM D2047 – Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull Meter Method.

- H. ASTM D2434 – Standard Test Method for Permeability of Granular Soils (Constant Head).
- I. ASTM D2859 – Standard Test Method for the Surface Flammability of Products (Burn Pill Test).
- J. ASTM D3776 – Standard Test Methods for Mass Per Unit Area (Weight) of Fabric.
- K. ASTM D3786 – Standard Test Method for Bursting Strength of Textile Fabrics - Diaphragm Bursting Strength Tester Method.
- L. ASTM D4491 – Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
- M. ASTM D4533 – Standard Test Method for Trapezoid Tearing Strength of Geotextiles.
- N. ASTM D4632 – Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- O. ASTM D4716 – Standard Test Method for Determining the (In plane) Flow rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head.
- P. ASTM D4751 – Standard Test Method for Determining Apparent Opening Size of a Geotextile.
ASTM D4833 – Standard Test Method for Index Puncture Resistance of Geomembranes, and Related Products.
- Q. ASTM D5199 – Standard Test Method for Measuring the Nominal Thickness of Geosynthetics.
- R. ASTM E108 – Standard Test Method for Fire Tests of Surface Systems and Materials.
- S. ASTM E303 – Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
- T. ASTM F1292 and F355-95 – Standard Test Method for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
- U. ASTM F1951 – Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
- V. ASTM F2075 – Standard Specification for Engineered Wood Fiber for Use as a Playground Safety Surface Under and Around Playground Equipment.
- W. 16 CFR 1500.44 – Method for Determining Extremely Flammable and Flammable Solids.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. Member of International Play Equipment Manufacturer’s Association (IPEMA).
 - 2. Total Liability Insurance Coverage: \$11,000,000.
 - 3. Sales Representatives Installers trained by National Playground Safety Institute (NPSI).

- B. Installer Qualifications:
 - 1. A firm or individual certified, licensed, or otherwise qualified by surfacing manufacturer as experienced and with sufficient trained staff to install manufacturer's products according to specified requirements.
 - 2. Certified installers who have successfully completed a Certified Installers Training Program.
- C. Workmanship: The Contractor is responsible for correction of work which does not conform to the specified requirements.

1.5 SUBMITTALS

- A. Submit under the provision of Section 01 33 00.
- B. Product Data: Submit manufacturer's product data, specifications, warranty, detailed drawings, maintenance, and installation instructions, ASTM F 1292 test results, ASTM F1951 Accessibility test results, ASTM F2075 test results, and IPEMA Certificates of Compliance, where applicable.
- C. Samples: Submit manufacturer's samples of each specified material.
- D. Manufacturer's / Installer's Certificates: Certify products meet or exceed the specified requirements.
- E. Quality Assurance / Control: Certificate of qualifications of the surfacing installer.
- F. Maintenance Instructions: Submit manufacturer's maintenance and cleaning instructions for playground surfacing.
- G. Warranty: Submit manufacturer's standard warranty.
- H. References: Submit at least 3 customers that have been using the product for at least 3 years.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer. Deliver engineered wood fiber playground surfacing to site in bulk.
- B. Storage: Store materials in a clean, dry area in accordance with manufacturer's instructions. Store engineered wood fiber playground surfacing to prevent contamination.
- C. Handling: Protect materials during handling and installation to prevent damage. Handle engineered wood fiber playground surfacing to prevent contamination.

1.7 COORDINATION

- A. Coordinate work with the work of other trades on the project.

1.8 WARRANTY

- A. Warranty covers Playground Surfacing for the following periods:
 - 1. Poured-In-Place Rubber:
 - a. Aromatic Urethane: 7 years.
 - b. Aliphatic Urethane: 10 years.
 - 2. Engineered Wood Fiber: 15 years.
 - 3. Wear Mats: 5 years.
- B. Operation Data: Submit for continuing Owner maintenance.
- C. Maintenance Data: Include methods for cleaning, replacement, and repair.

PART 2 PRODUCTS

2.1 MANUFACTURER / PRODUCT

- A. Poured-In-Place Rubber Safety Surfacing:
 - 1. Acceptable Manufacturer(s):
 - a. Vitriturf (represented by Penchura), 889 S. Old US 23, Brighton, MI 48114, 810-229-6245, www.penchura.com.
 - b. GT Impax Poured, Gametime represented by Sinclair Recreation), 128 East Lakewood Blvd, Ste 40, Holland, MI 48424, (800) 444-4954, www.sinclair-rec.com.
 - c. Or approved equal.
- B. Engineered Wood Fiber Safety Surfacing:
 - 1. Acceptable Manufacturer(s):
 - a. Wood carpet, Zeager Bros., Inc. (represented by Penchura), 889 S. Old US 23, Brighton, MI 48114, 810-229-6245, www.penchura.com
 - b. GT Impax Fiber, Gametime represented by Sinclair Recreation), 128 East Lakewood Blvd, Ste 40, Holland, MI 48424, (800) 444-4954, www.sinclair-rec.com.
 - c. Or approved equal.
- C. Rubber Wear Mats:
 - 1. Acceptable Manufacturer(s):
 - a. DynaCushion Beveled Wear Mat, Pierceton Rubber Products, Inc., 3076 South 900 East, Pierceton, IN 46562, 574-265-1996, www.dynacushion.com
 - b. Or approved equal.
 - 2. Wear Mats installation shall not create a trip hazard.
 - 3. Wear Mats will be installed in per the manufacturer's specifications and will be required in the following locations:
 - a. Swings – Wear mat shall be placed directly beneath the swing seat, minimum size four (4) feet by six (6) feet for each swing
 - b. Slides – Wear mat shall be placed directly under the slide exit, minimum size three (3) feet by three (3) feet.
 - c. Merry-go-rounds – Wear mat shall extend a minimum of three (3) feet beyond the outside edge of the merry-go-round, in all directions.

D. GEOTEXTILE FABRIC

1. Geotextile fabric shall be a polyester drainage fabric, non-woven, meeting or exceeding the following:

PROPERTIES	STANDARD	AMOCO 4546
<i>Physical</i>		<i>(or approved equal)</i>
<ul style="list-style-type: none"> • Grab Tensile Strength • Grab Tensile Elongation • Mullen Burst • Puncture • Trapezoidal Tear • UV Resistance 	<ul style="list-style-type: none"> • ASTM-D 4632 • ASTM- D 4632 • ASTM- D 3786 • ASTM- D 4833 • ASTM- D 4533 • ASTM- D 4355 	<ul style="list-style-type: none"> • 90 oz/yd² • 50% • 185 lb/in² • 55lbs. • 40 lbs. • 70/500 (%@_hr)
<i>Hydraulic</i>		
<ul style="list-style-type: none"> • Apparent Opening Size • Permittivity • Flow Rate 	<ul style="list-style-type: none"> • ASTM- D 4751 • ASTM- D 4491 • ASTM- D 4491 	<ul style="list-style-type: none"> • 70 (US std. Sieve no.) • 145 gal/min/feet²

E. PEASTONE

1. Peastone shall be natural smooth rock material. Supply sample of peastone to the Owner for approval prior to delivery to site.
2. Peastone is not an acceptable safety surfacing; it is only to be used in the drainage layer as indicated on the drawings.

PART 3 EXECUTION

3.1 INSPECTION

- A. Contractor shall thoroughly examine the areas and conditions under which excavation, filling, and grading are to be performed. Architect is to be notified, in writing, of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

3.2 PREPARATION

- A. Excavate play area as indicated on the drawings and to ensure proper safety use zones of play equipment.
- B. The subgrade shall be graded to a minimum of 1% and a maximum of 5% to insure positive drainage throughout the site.
- C. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated subsoil.
- D. The subgrade shall be compacted to 95% of the dry density, as determined by the provisions of AASHTO or T 205.
- E. Drainage Trenches
 1. Dig trenches and construct the drainage as indicated on the drawings.

2. Fabric and stone shall be placed in the trenches, to depths indicated on the drawings.
 3. Four (4) inch perforated pipe shall be placed in the trenches, as indicated on the drawings. Unless otherwise indicated on the plans, pipe shall have a minimum slope of 0.5%.
 4. All installation sites shall have positive grade to facilitate drainage away from the playground area and other active areas within the park.
- F. Install the playground equipment.
- G. Install the edging around the play area.
- H. Rubber Poured-In-Place Surfacing:
1. Aggregate Subbase:
 - a. Compacted irregular aggregate sized 0.75 inches or less in size with a
 - b. Minimum depth: 4 inches, or as indicated on the drawings.
 - c. Tolerance: 0.5”.
 2. Concrete Subbase:
 - a. Shall meet the requirements of Section 03 30 00.
 - b. Minimum Depth: Per manufacturer’s recommendations.
 - c. Tolerance: 0.125 inches per 10 feet.
 - d. Cure Time: 7-21 days, per the manufacturer’s recommendations.
 3. Asphalt Subbase:
 - a. Shall meet the requirements of Section 32 12 16.
 - b. Cure Time: 21-28 days, per the manufacturer’s recommendations.
 - c. New asphalt must be pressure washed prior to installation of rubber surfacing.
 - d. The Contractor shall flood the asphalt surface to ensure proper slope and tolerance.
 - i. Any areas holding water to cover a flat nickel shall be patched prior to installation of the rubber surfacing.

3.3 INSTALLATION

- A. Begin the safety surfacing only after the play equipment and edging have been installed.
- B. All surfacing types shall be installed to the proper depth with the finish surface elevation at the finish grade markers on the play equipment.
- C. Geotextile Fabric
1. Geotextile fabric shall be used as separation between the subsoil and safety surfacing.
 2. In areas where equipment exists, it is necessary to cut the fabric to fit. Once fitted, any cuts should be overlapped with fabric wherever possible.
 3. Geotextile fabric shall be placed on smooth subgrade and all wrinkles removed. All seams shall overlap a minimum of six (6) inches.
 4. Machinery shall not disturb or travel on the geotextile fabric.
- D. Wear Mats
1. Place all wear mats in the required areas per this specification, Part 2, 2.1, B.1.
 2. All wear mats shall be installed as per the manufacturer’s specifications to assure maximum impact protection for proposed equipment fall heights.

- E. Engineered Wood Fiber (EWF) Safety Surfacing
 1. Place Engineered Wood Fiber Safety Surfacing in all remaining areas, as indicated on the plans.
 2. Rake the EWF level.
 3. All material must be installed to allow for settling and natural compaction.

- F. Poured-In-Place Rubber Surfacing
 1. Thoroughly mix materials on site with a rotating tumbler.
 2. The surfacing thickness throughout the playground equipment use zone shall be required to meet the impact attenuation requirements of the manufacturer.
 3. Whenever practical, surfacing material shall be installed in one continuous pour on the same day of up to 2,000 square feet.
 - a. Where seams are required a step configuration will be constructed to maintain surfacing integrity.
 - i. Step the seam and fully coat the step of the previous work with polyurethane binder to ensure 100% bond with the new work.
 - b. Surfaces with multiple seams shall have a topcoat of urethane before being placed into use.
 - c. Butt joint seams are not acceptable, except for repairs.
 4. Apply adhesive in small quantities material can be placed before the adhesive dries.
 5. Primer will be used between the attenuation cushion layer and the wear course layer.
 6. Material shall cover all foundations and fill around all elements penetrating the surface.
 7. Minimize excessive adhesive on adjacent surfaces or play equipment. Spills of adhesive shall be promptly cleaned.
 8. The surface shall be allowed to cure in accordance with the manufacturer's instructions.
 - a. The surface shall be protected from all traffic during the curing period, or for a minimum of 48 hours.

3.4 GUARANTEE and MAINTENANCE

- A. All Materials and Installations shall be guaranteed by the manufacturer/supplier for a period of one year beyond the date of final acceptance by the Owner. The manufacturer/supplier shall provide a written maintenance plan to the Owner which describes, in detail, any, and all maintenance requirements which will need to be accomplished during the life of the safety surfacing.

3.5 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Remove excess excavated material, trash, debris and waste materials and legally dispose of such off the property, except as otherwise specifically noted.

3.6 ACCEPTANCE

- A. Inspection will be made jointly by the Contractor, Engineer, and the Owner's representative.
- B. Upon acceptance of the work by the Engineer and owner, the project will be approved for final payment.

END OF SECTION

SECTION 32 33 00

SITE FURNISHINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Furnishing and installing all items of site furnishings or amenities on drawings, as herein specified and/or as required for a complete job.
- B. Related Requirements:
 - 1. Section 01 30 00 - Submittal Procedures
 - 2. Section 03 30 00 – Cast-in-Place Concrete

PART 2 - PRODUCTS

2.1 MATERIAL

- A. Pedestal Trash Receptacle w/ Rain Bonnet (1 ea.): Dumor, www.dumore.com, Representative: Penchura, (888)778-4529, Model 41-32PL w/ CVR-30-BT. 32 gallon, Black powder coat frame with recycled plastic exterior. Plastic color to be determined by Owner. See drawings for details.
- B. Bench (2 ea.): Dumor, www.dumore.com, Representative: Penchura, (888)778-4529, 6-foot bench with backrest and one (1) end armrest, Model 34-60PL. Black powder coat frame with recycled plastic slats. Plastic color to be determined by Owner. See drawings for details.
- C. Pedestal Picnic Table, ADA (1 ea.): Dumor, www.dumore.com, Representative: Penchura, (888)778-4529, Model 76-23PL. 4' Square table. Three (3) seats, 2x4 recycled plastic. Black powder coat frame with recycled plastic top and seats. Plastic color to be determined by Owner. See drawings for details.
- D. Playground Equipment: As specified in Appendix A. Play equipment and accessories as manufactured by Landscape Structures, 601 7th Street South, Delano, MN 55328, Ph: 888-438-6574., <https://www.playlsi.com/>, or approved equal. Local Representative: Penchura, (888)778-4529.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. The Contractor shall be responsible for any assembly requirements and installation of site furnishings including concrete footings. Assemble and install per manufacturer's instructions.

END OF SECTION

SECTION 32 91 19

LANDSCAPE GRADING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Final grade topsoil for finish landscaping.
 - 2. Topsoil.
- B. Related Sections:
 - 1. Section 32 92 19 - Seeding.

1.2 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures
- B. Materials Source: Submit name of imported materials source.
- C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.3 QUALITY ASSURANCE

- A. Furnish each topsoil material from single source throughout the Work.
- B. Perform Work in accordance with MDOT Standard Specifications for Construction.
- C. Maintain one copy on site.

PART 2 - PRODUCTS

2.1 MATERIAL

- A. Topsoil:
 - 1. Minimum 3 or 4 inches compacted depth, unless otherwise stated.
- B. Topsoil: Friable loam; free of subsoil, roots, grass, excessive amount of weeds, stone, and foreign matter; acidity range (pH) of 5.5 to 7.5; containing a minimum of 4 percent and a maximum of 25 percent organic matter. Topsoil shall be imported as specified on the drawings.
- C. Contractor shall conduct fertility and calcium tests on all topsoil to be used in lawn and planting areas to assure that soil conditions are ready to receive plantings and will properly drain for use on athletic fields.
- D. Submit lab results or samples for testing as requested by the Owner or Engineer if imported topsoil is used.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify substrate base has been contoured and compacted.
- C. Beginning Work of this Section means acceptance of existing conditions.

3.2 PREPARATION

- A. Protect landscaping and other features remaining as final Work.
- B. Protect existing structures, fences, sidewalks, utilities, paving, and curbs.

3.3 SUBSTRATE PREPARATION

- A. Eliminate uneven areas and low spots.
- B. Remove debris, roots, branches, stones, in excess of 1/2 inch in size. Remove contaminated subsoil.
- C. Scarify surface to depth of 3 inches where topsoil is scheduled. Scarify in areas where equipment used for hauling and spreading topsoil has compacted subsoil.

3.4 PLACING TOPSOIL

- A. Place topsoil in areas where seeding, sodding, planting, and is required to nominal depth of 3 or 4 inches. Place topsoil during dry weather.
- B. Fine grade topsoil to eliminate rough or low areas. Maintain profiles and contour of subgrade.
- C. Remove roots, weeds, rocks, and foreign material while spreading.
- D. Manually spread topsoil close to plant material and site furnishings to prevent damage.
- E. Lightly compact Roll placed topsoil.
- F. Remove surplus subsoil and topsoil from site.
- G. Leave stockpile area and site clean and raked, ready to receive landscaping.

3.5 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Top of Topsoil: Plus or minus 1/2 inch.

3.6 PROTECTION OF INSTALLED WORK

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
- B. Prohibit construction traffic over topsoil.
- C. Protect landscaping and other features remaining as final Work.
- D. Protect existing structures, fences, roads, sidewalks, paving, mailboxes, and curbs.

END OF SECTION

SECTION 32 92 19

SEEDING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fertilizing.
2. Seeding.
3. Mulching.
4. Maintenance.

B. Related Sections:

1. Section 31 05 13 - Soils for Earthwork: Topsoil material.
2. Section 32 91 19 - Landscape Grading: Preparation of subsoil and placement of topsoil.

1.2 REFERENCES

A. ASTM International:

1. ASTM C602 - Standard Specification for Agricultural Liming Materials.

B. FS 0-F-241 – Fertilizers, Mixed, Commercial.

1.3 DEFINITIONS

- A. Weeds: Include Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

- B. Product Data: Submit data for seed mix, fertilizer, mulch, and other accessories.

- C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.5 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

- B. Operation and Maintenance Data: Include maintenance instructions, cutting method and maximum grass height; types, application frequency, and recommended coverage of fertilizer.

1.6 QUALITY ASSURANCE

- A. Provide seed mixture in containers showing percentage of seed mix, germination percentage, inert matter percentage, weed percentage, year of production, net weight, date of packaging, and location of packaging.
- B. Perform Work in accordance with State of Michigan Department of Transportation Standards.
- C. Provide signed affidavit stating the amount and type of seed, fertilizer, and mulch applied per acre.
- D. Maintain one copy of document on site.

1.7 REGULATOR REQUIREMENTS

- A. Comply with regulatory agencies for fertilizer and herbicide composition.

1.8 QUALIFICATIONS

- A. Seed Supplier: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing work of this section with minimum 3 years documented experience.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.
- B. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable.
- C. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

1.10 MAINTENANCE SERVICE

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for maintenance service.
- B. Maintain seeded and sodded areas immediately after placement until grass is well established, exhibits a vigorous growing condition and is accepted by Owner. Guarantee replacement of dead material for one year from date of substantial completion.
- C. Contractor shall be responsible for maintaining adequate seedbed moisture until the sodbed is established.

PART 2 PRODUCTS

2.1 SEED MIXTURE

- A. Furnish materials in accordance with Municipal, Federal and State Standards.

B. Grass Seed Mixture:

Kentucky Blue Grass	30 percent
Creeping Red Fescue Grass	40 percent
Perennial Rye Grass (Manhattan)	30 percent

C. Bio-Swale Seed Mixture: For rain Garden

2.2 ACCESSORIES

A. Mulch:

1. Straw Mulch: All seeding must be mulched at 1 ½ to 2 tons per acre, no less than 3” in depth, with a tie down asphalt tackifier net binding.
2. Conwed Fibers® Hydro Mulch® 2000

B. Fertilizer: FS 0-F-241, Commercial Grade A with 19 19 19 analysis.

C. Water: Clean, fresh and free of substances or matter which could inhibit vigorous growth of grass.

D. Lime: ASTM C602, Class T agricultural limestone containing a minimum 80 percent calcium carbonate equivalent.

E. Erosion Fabric: Jute matting, open weave.

F. Stakes: Softwood lumber, chisel pointed.

G. String: Inorganic fiber.

2.3 SOURCE QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Testing, inspection and analysis requirements.

B. Analyze to ascertain percentage of nitrogen, phosphorus, potash, soluble salt content, organic matter content, and pH value.

C. Provide recommendation for fertilizer and lime application rates for specified seed mix as result of testing.

D. Testing is not required when recent tests and certificates are available for imported topsoil. Submit these test results to testing laboratory. Indicate, by test results, information necessary to determine suitability.

E. Notify Engineer 72 hours prior to hydroseeding and fertilizing for approval to proceed.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.

- B. Verify prepared soil base is ready to receive the Work of this section.
- C. Landscape Seeding: Verify that prepared soil base is read to receive the work of this section. See Section 32 91 19 – Landscape Grading.

3.2 FERTILIZING

- A. Apply fertilizer at application rate 500 lbs per acre.
- B. Apply after smooth raking of topsoil and prior to roller compaction.
- C. Do not apply fertilizer at same time or with same machine used to apply seed.
- D. Mix fertilizer thoroughly into upper 2 inches of topsoil.
- E. Lightly water soil to aid dissipation of fertilizer. Irrigate top level of soil uniformly.

3.3 SEEDING

- A. Apply seed at rate of 500 lbs per acre evenly in two intersecting directions. Rake in lightly.
- B. Do not seed areas in excess of that which can be mulched on same day.
- C. Planting Season: May 1 to October 10 unless otherwise approved by the Engineer.
- D. Do not sow immediately following rain, when ground is too dry, or when winds are over 12 mph.
- E. Roll seeded area with roller not exceeding 112 lbs/linear foot.
- F. Immediately following seeding and compacting, apply mulch to thickness of 1/8 inches. Maintain clear of shrubs and trees.
- G. Apply water with fine spray immediately after each area has been mulched. Saturate to 4 inches of soil.

3.4 HYDROSEEDING

- A. Apply seed, fertilizer and mulch slurry with a hydraulic seeder at a rate of 200 lbs. per acre of seed, 500 lbs per acre of fertilizer and 14,000 lbs per acre of mulch, evenly on prepared seedbed. Do not apply slurry on shrubs or trees.
- B. Apply water with fine spray immediately after each area has been hydroseeded. Saturate to 3 inches of soil and maintain moisture levels two to four inches.
- C. Planting Season: May 1, to October 15, unless otherwise approved by the Engineer.

3.5 SEED PROTECTION

- A. Cover seeded slopes where grade is 6 inches per foot or greater with erosion fabric. Roll fabric onto slopes without stretching or pulling.

- B. Lay fabric smoothly on surface, bury top end of each section in 6 inch deep excavated topsoil trench. Overlap edges and ends of adjacent rolls minimum 12 inches. Backfill trench and rake smooth, level with adjacent soil.
- C. Secure outside edges and overlaps at 36 inch intervals with stakes.
- D. Lightly dress slopes with topsoil to ensure close contact between fabric and soil.
- E. At sides of ditches, lay fabric laps in direction of water flow. Lap ends and edges minimum 6 inches.

3.6 MAINTENANCE

- A. Immediately reseed areas which show bare spots.
- B. Repair any eroded areas and reseed immediately.
- C. Contractor shall guarantee a uniform grass growth over the entire project and shall reseed bare and thin areas until this is accomplished at no additional cost to the project.
- D. Water to prevent grass and soil from drying out.
- E. Roll surface to remove minor depressions or irregularities.
- F. Control growth of weeds. Apply herbicides. Remedy damage resulting from improper use of herbicides.
- G. Repair washouts or gullies.
- H. Protect seeded areas with warning signs during maintenance period.

END OF SECTION

Appendix A



2024 Playsystem Specifications

PlayBooster®, PlayShaper®, Evos®, Weevos®, Smart Play®, Hedra® and Forma™





All the materials used in the manufacturing of PlayBooster®, PlayShaper®, Evos®, Weevos®, Smart Play®, Hedra® and Forma™ playstructures have a proven track record of durability and are widely used in the playground industry.

All play components are designed to be in conformance with the ASTM F1487 Standard unless otherwise noted. To the best of our knowledge, they also conform to the U.S. Consumer Products Safety Commission (CPSC) Guidelines. Unless otherwise noted, all playstructures are considered accessible according to the 2010 ADA Standard for Accessible Design.

Play components noted with CSA are designed to be in conformance with CSA Z614, and play components noted with EN are designed to be in conformance with EN 1176.

General Specifications

Materials: All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all steel parts by the use of time-tested coatings such as zinc plating, galvanizing, ProShield® finish, TenderTuff™ coating, etc. Colors shall be specified.

ProShield® Finish: All metal components with ProShield finish shall be thoroughly cleaned and pretreated through a multi-stage wash system. Parts are then thoroughly dried, preheated and processed through a set of powder spray guns where a minimum .002" of epoxy primer is applied. A minimum .004" of architectural-grade Super Durable polyester TGIC powder is applied. The average ProShield film thickness is .006". Standard colors are available.

ProShield is formulated and tested per the following ASTM standards. Each color must meet or exceed the ratings listed below:

- Hardness (D3363) rating 2H
- Flexibility (D522) pass 1/8" mandrel
- Impact (D2794) rating minimum 80 inch-pounds
- Salt Fog Resistance (B117 and D1654) 4,000 hours and rating 6 or greater
- UV Exposure (G154, 340 bulb) 3,000 hours, rating delta E of 2, and 90 percent gloss retention*
- Adhesion (D3359, Method B) rating 5B

The Paint Line shall employ a "checkered" adhesion test daily.

* Certain colors may exceed delta E of 2.
Contact Landscape Structures for exceptions.

ProGuard™ Finish: Metal parts with ProGuard™ finish shall be cleaned and have a zinc alloy thermo-diffusion coating applied in accordance with ASTM A1059. It is highly corrosion and abrasion resistant, without flaking, peeling, blistering or chipping. ProGuard is applied standard to all Landscape Structures swing chain.

TenderTuff™ Coating: Metal components to be TenderTuff-coated shall be thoroughly cleaned in a hot phosphatizing wash system, then primed with a water-based thermosetting solution. Primed parts shall be preheated prior to dipping in UV stabilized, liquid polyvinyl chloride (PVC), then salt cured at approximately 400 degrees. The finished coating shall be approximately .080" thick at an 85 durometer with a minimum tensile strength of 1700 PSI and a minimum tear strength of 250 lbs/inch. Standard colors are available.

Belting, Textured: These parts shall be 0.315" thick mini rough top 3-ply rubber belting with polyester fabric layers. Black only.

Cables: These parts shall be made of tightly woven polyester-wrapped, six-stranded galvanized steel cable

with either a polypropylene or steel core. Cables will be 20mm in diameter. Standard colors are available. Some products available only in Black.

Concrete: Two processes are used to produce concrete products. (See specific product installation/specification documents). Finish is exterior latex paint suited for concrete applications. No color choices.

1. Glass Fiber Reinforced Concrete (GFRC) Products: Glass fiber is alkali-resistant (AR) with high tensile properties formulated for concrete. GFRC nominal product thickness is 1" with a unit weight of about 12 lbs per square foot and an average ultimate flexural strength of 2,100 PSI per ASTM C947.
2. Precast Concrete Products: Wet-cast solid, molded concrete with an average compressive strength of 5,000 PSI per ASTM C39. Unit weight range of about 115-145 lbs per cubic foot.

DigiFuse® Panels: These panels shall be manufactured from 1/4" thick aluminum sheet. Dye sublimation printed digital artwork is fused onto the powdercoated substrate.

GripX Platforms and Panels: These parts shall be manufactured from 3/4" UV-stabilized high-density polyethylene with a stippled pattern that enhances traction and appearance. No color choices; GripX will only be Black or Gray and predetermined for each product.

Hot Dipped Galvanized (HDG) Steel: Steel components to be Hot Dipped Galvanized shall be thoroughly cleaned of organic compounds and dirt through complete immersion in a hot alkali solution. Cleaned parts shall undergo acid pickling to remove rust or scale. All parts shall then be fluxed to eliminate surface oxides and promote intermetallic development. Prepped parts shall then be submerged in a bath of molten zinc until the part reaches 840° F and the zinc reacts to form zinc/iron intermetallic layers on all surfaces inside and out. Hot Dipped Galvanized Parts shall be manufactured and inspected according to ASTM A123.

Permalene®: These parts shall be manufactured from 3/4" high-density polyethylene that has been specially formulated for optimum UV stability and color retention. Products shall meet or exceed density of .960 G/cc per ASTM D1505, tensile strength of 2400 PSI per ASTM D638. Available in a three-layer product with (2) .100" thick colored exterior layers over a .550" thick recycled Black interior core, or as a solid white- or natural-colored panel. Standard colors are available.

Polycarbonate: Flat parts shall be made from 1/4" or 3/16" or 1/2" thick clear polycarbonate or 1/2" thick color-infused polycarbonate. Bubbles shall be vacuum formed from 1/4" thick clear polycarbonate. Standard colors are available.

Recycled Plastic Lumber: These boards shall be manufactured from UV-stabilized recycled high-density polyethylene. Thickness varies. Standard colors are available.

Rotationally Molded Polyethylene: These parts shall be molded using prime natural linear low-density polyethylene having a tensile strength of 2400 PSI per ASTM D638. Rotational molding resin is compounded with color and UV-stabilizing additives with a nominal wall thickness typically 1/4" with some variation depending upon product type. Standard colors are available.

Steel Decks: All steel decks shall be of modular design and have 5/16" diameter holes on the standing surface. There shall be a minimum of (4) slots in each face to accommodate face mounting of components. Decks shall be manufactured from a single piece of low carbon 12 GA (.105") sheet steel conforming to ASTM specification A-1011. The sheet shall be perforated with a return flange on the perimeter to provide the reinforcement necessary to ensure structural integrity. There shall be no unsupported area larger than 3.5 square feet. The unit shall then be TenderTuff-coated Brown or Gray only. Decks shall be designed so that all sides are flush with the outside edge of the supporting posts.

SteelX[®]: These parts shall be fabricated from 0.179" thick zinc plated flat steel and ProShield-finished.

Footings: Unless otherwise specified, the bury on all footings shall be 34" below Finished Grade (FG) on all in-ground play events/posts. Other types of anchoring are available upon request.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless-steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specification documents). All primary fasteners shall include a locking patch type material that will meet the minimum torque requirements of IFI-125. Manufacturer to provide special tools for pinned tamperproof fasteners.

Hardware Packages: All shipments shall include either individual component-specific hardware packages or bulk hardware packages specific to each fastener type. Component-specific hardware packages shall be labeled with the part number, description, a component diagram showing the appropriate component, package weight, a bar code linking the hardware package to the job number, assembler's name, date and time the package was assembled, work center number and work order number. Bulk hardware packages shall be labeled with the part number, description, a diagram showing the appropriate fastener, package weight, a bar code linking the hardware package to the job number, assembler's name, date and time the package was assembled, work center number and work order number.

Installation Documentation: All shipments shall include detailed step-by-step instructions for assembly of each component, including equipment assembly diagrams, estimated hours for assembly, footing dimensions, concrete quantity for direct bury components, fall height information, area required information and detailed material specifications.

Packing List: All shipments shall include a packing list for each skid/container, specifying the part numbers and quantities on each skid or within each container.

Packaging: All components shall be individually wrapped or bulk wrapped and placed on skids (pallets) then shrink-wrapped to provide protection during shipment. Small

parts and hardware packages will be placed in crates for shipment. Other components shall be individually wrapped or bulk wrapped to provide protection during shipment.

Maintenance Kit: An order-specific maintenance kit shall be provided for each structure order. The kit will include a notebook or packet with a second set of installation documents and order-specific maintenance documentation with recommendations on how often to inspect, what to look for and what to do to keep the equipment in like-new condition. The kit also includes touch-up primer, appropriate color touch-up paint, sandpaper, appropriate color touch-up PVC and additional installation tools for the tamperproof fasteners.

PlayBooster[®] General Specifications

Posts: Post length shall vary depending upon the intended use and shall be a minimum of 42" above the deck height. All posts shall be ProShield finished to specified color. All posts shall have a "finished grade marker" positioned on the post identifying the 34" bury line required for correct installation and the top of the loose fill protective surfacing. Top caps for posts shall be aluminum die cast from 369.1 alloy and ProShield finished to match the post color. All caps shall be factory installed and secured in place with interference fit. A molded low-density polyethylene cap, with drain holes, shall be pressed onto the bottom end of the post to increase the footing area.

Steel Posts: All steel PlayBooster posts are manufactured from 5" O.D. tubing with a wall thickness of .120" and shall be galvanized after rolling and shall have both the I.D. and the cut ends sprayed with a corrosion resistant coating.

Steel Post Mechanical Properties:

- Yield Strength (min): 50,000 PSI
- Tensile Strength (min): 55,000 PSI
- Elongation: 25% in 2 inches
- Modulus of Elasticity: 29.5 x 10⁶ PSI

Aluminum Posts: All aluminum PlayBooster posts are manufactured from 6005A-T61 extruded tubing conforming to ASTM B-221. Posts shall have a 5" outside diameter with a .125" wall thickness.

Aluminum Post Mechanical Properties:

- Yield Strength (min): 35,000 PSI
- Tensile Strength (min): 38,000 PSI
- Elongation: 10% in 2 inches
- Modulus of Elasticity: 10 x 10⁶ PSI

Arch Posts: Aluminum arch posts shall be manufactured from 6063-T6 alloy. The arch shall be formed to a 21" center line radius to complement the 42" center-to-center module. The arch shall be of one continuous piece construction. There shall be no welds or additional pieces mechanically fastened to manufacture the arch. Each arch shall be designed to provide a minimum of 90 1/2" clear span from the deck to the inside of the arch at the radius peak. Arches shall be ProShield finished to a specified color.

Clamps: All clamps are ProShield finished and, unless otherwise noted, shall be die cast using a 369.1 aluminum alloy and have the following mechanical properties:

- Ultimate Tensile: 47,000 PSI
- Yield Strength: 28,000 PSI
- Elongation: 7% in 2 inches
- Shear Strength: 29,000 PSI
- Endurance Limit: 20,000 PSI

PlayBooster® General Specifications *continued*

Each functional clamp assembly shall have an appropriate number of half clamps and shall be fastened to mating parts with (2) 3/8" x 1 1/8" pinned button head cap screws (SST) and (2) stainless-steel (SST) recessed "T" nuts. A 1/4" aluminum drive rivet with stainless steel pin is used to ensure a secure fit to the post.

PlayBooster® clamps have three functional applications and shall be named as follows:

1. Offset hanger clamp assembly
2. Deck hanger clamp assembly
3. Hanger clamp assembly

Netplex® Clamps: All clamps are ProShield finished and, unless otherwise noted, shall be die cast using a 369.1 aluminum alloy and have the following mechanical properties:

- Ultimate Tensile: 47,000 PSI
- Yield Strength: 28,000 PSI
- Elongation: 7% in 2 inches
- Shear Strength: 29,000 PSI
- Endurance Limit: 20,000 PSI

Each functional clamp assembly shall have an appropriate number of rope clamps and back clamps and shall be fastened to each other with (2) 5/8" x 1 1/2" pinned button head cap screws (SST) and (2) stainless-steel (SST) recessed "T" nuts. Either a face clamp shall be fastened to rope clamp with (2) 3/8" by 1-3/8" pinned button head cap screws or a single tab casting plate shall be fastened to rope clamp with (4) 3/8" by 1-3/8" pinned button head cap screws with 3/8" SAE flat washers. A 1/4" x 5/8" aluminum drive rivet with stainless steel pin is used to ensure a secure fit to the post.

GeoPlex® Clamps: All clamps are ProShield finished and, unless otherwise noted, shall be fabricated from 7GA using .179" (4.54 mm) T316 stainless steel.

- Ultimate Tensile: 84,000 PSI
- Yield Strength: 25,000 PSI

Each functional clamp assembly shall have an appropriate number of locking clamps and shall be fastened to mating parts with (2) 3/8" x 7/8" pinned button head cap screws (SST) with (2) 3/8" SAE flat washers. A 1/4" aluminum drive rivet with stainless steel pin is used to ensure a secure fit to the post.

PlayOdyssey® Structural Frame: Post length of the double ladder/central column shall vary depending upon the deck height and shall be flush with the bottom of a deck infill or a minimum of 46" above the deck height. All posts shall be ProShield finished to specified color. All posts shall have a "finished grade marker" positioned on the post identifying the 60" bury line required for correct installation and the top of the loose fill protective surfacing. Post caps shall be aluminum die cast from 369.1 alloy and ProShield finished to match the post color. All caps shall be factory installed and secured in place with (3) self-sealing rivets. A molded low-density polyethylene cap, with drain holes, shall be pressed onto the bottom end of the ladder posts to increase the footing area. Ladders are bolted together below grade to act as a single column for installation purposes. The deck support weldments/arms are comprised of 5/16" (.313") steel conforming to 1010 steel per ASTM A635 and welded to a 52" steel post. Arms are secured to each ladder post with (4) 5/8" x 1 1/2" pinned button head cap screws through (2) 1/4" flanges.

PlayOdyssey® Optional Aluminum Roof Posts: All formed aluminum PlayOdyssey roof posts are manufactured from 6063-T6 extruded tubing conforming to ASTM B-221. Posts shall have a 5" outside diameter with a .125" wall thickness. Post sleeve shall have 4.675" outside diameter with a .150" wall thickness. Post cap shall be aluminum die cast from 369.1 alloy and ProShield finished to match the post color. All caps shall be factory installed and secured in place with (3) self-sealing rivets.

Vibe® Handholds: Rotomolded shell, with 7 GA (.179") HRPO steel sheet insert that is zinc plated then ProShield finished. Standard colors are available.

Vibe Roof: Rotomolded shell, with 12 GA (.105") HRPO steel sheet insert that is zinc plated then ProShield finished. Standard colors are available..

Vibe Enclosures: Rotomolded shell, with 7 GA (.179") HRPO steel sheet insert that is zinc plated then ProShield finished. Standard colors are available. Option of 10 activity panels available in standard Permalene® colors. Also available bubble or window panel made of 1/4" clear polycarbonate.

PlayShaper® General Specifications

Posts: 2 3/8" square aluminum posts shall have a minimum wall thickness of .125" and be extruded of 6005A-T61 aluminum alloy and have rounded corners and ribbed faces for maximum safety. A cast aluminum top cap shall be installed at the factory with stainless steel knurled spacers and aluminum drive rivets. Flanges for panels and deck supports shall be extruded of 6061-T6 aluminum alloy and slide into slots extruded in posts. Flanges and deck supports shall be attached in the factory with stainless steel knurled spacers and aluminum drive rivets. All direct bury posts shall have a "finished grade marker" positioned on the post identifying the 34" bury line and the top of the required surfacing. A molded low-density polyethylene cap, with drain holes, shall be pressed onto the bottom end of the post to increase the footing area. Posts shall have a post number sticker for installation purposes. All surface mount posts shall be continuously welded to a 1/4" x 6" square 6061-T6 aluminum surface mount plate and allow for 2" of protective surfacing. Posts shall be ProShield finished to a specified color.

Aluminum Post Mechanical Properties:

- Yield Strength (min): 35,000 PSI
- Tensile Strength (min): 38,000 PSI
- Elongation: 10% in 2 inches
- Modulus of Elasticity: 10 x 10⁶ PSI

Arch Posts: Arch posts shall have the same shape as the posts and be extruded from 6063-T4 aluminum alloy. Roof support flanges shall be of the same shape and material as the panel flanges. Arch shall be formed in a 180 degree arc on a 21" center line radius. Arches shall be secured to standard length posts with solid aluminum sleeves that are tapped to receive (16) 3/8" x 5/8" pinned button head cap screws per arch. Arch posts shall be ProShield-finished to a specified color.

Evos® General Specifications

Arches: All steel arches are ProShield finished and manufactured from 5" O.D. galvanized tubing with a wall thickness of .120".

Steel Arch Mechanical Properties:

- Yield Strength (min): 50,000 PSI
- Tensile Strength (min): 55,000 PSI
- Elongation: 25% in 2 inches
- Modulus of Elasticity: 29.5×10^6 PSI

Clamps: All clamps are ProShield finished and, unless otherwise noted, shall be sand cast using a 356-T6 aluminum alloy and having the following mechanical properties:

- Ultimate Tensile: 35,000 PSI
- Yield Strength: 18,000 PSI
- Elongation: 8% in 2 inches

Weevos® General Specifications

Arches: All steel arches are ProShield finished and manufactured from 3-1/2" O.D. galvanized tubing with a wall thickness of .120".

Steel Arch Mechanical Properties:

- Yield Strength (min): 50,000 PSI
- Tensile Strength (min): 55,000 PSI
- Elongation: 25% in 2 inches
- Modulus of Elasticity: 29.5×10^6 PSI

Clamps: All clamps are ProShield finished and, unless otherwise noted, shall be sand cast using a 356-T6 aluminum alloy and having the following mechanical properties:

- Ultimate Tensile: 35,000 PSI
- Yield Strength: 18,000 PSI
- Elongation: 8% in 2 inches

Smart Play® General Specifications

Each Smart Play structure is unique. Please refer to the individual product installation/specification document for details.

Hedra® General Specifications

Frames: All Hedra frames are manufactured using 4-1/2" O.D. steel tubing with a wall thickness of .120". After welding, frames are shot blast per SSPC-SS6/NACE 3 commercial blast cleaning and shall be ProShield-finished to a specified color.

Perforated Panels: These parts are made from 3/16" thick 5052 H32 aluminum with .313 hole pattern .50 x 60°. Panels are ProShield-finished to a specified color.

Infill Panels: These parts made from 1/8" thick 5052 H32 aluminum with a hexagonal hole pattern. Panels are ProShield-finished to a specified color.

Forma™ General Specifications

Frames: All Forma frames are manufactured from 5" square steel tubing with a wall thickness of .120" and shall be galvanized after rolling and shall have both I.D. and the cut ends sprayed with a corrosion resistant coating. Frames are ProShield-finished to a specified color.

Frame Caps: Top caps for frames shall be aluminum die cast and ProShield finished to match the frame color. All caps shall be secured in place with 3/8" x 3/8" drive rivets.

Peg Caps: Peg caps shall be aluminum die cast and ProShield-finished to match the corresponding frame or bracket color. A provided Cap Wrench is used to snug Peg Cap over hardware.

Supports: Forma supports are manufactured from 2" square steel tubing with a wall thickness of .120". Supports are ProShield-finished to a specified color.





601 7th Street South, Delano, MN 55328-8605 USA 888.438.6574 763.972.5200 playlsi.com

Material Specifications
Quote: PEN1182632-01
4/25/2024

Material Specifications:

174018A

Belt Seat ProGuard Chains for 8' Beam Height

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Chain/ProGuard: Steel 3/16" (4,75 mm) straight link chain, 800 lb. (362,87 kilograms) working load limit. Finish: ProGuard.

Belt Seat: Molded from UV stabilized black EPDM rubber encapsulating a weldment comprised of a 22 GA (.029") (0,74 mm) spring stainless steel sheet and (4) .105" (2,67 mm) thick stainless steel washers. The belt seat elliptical shape measures 7" (178 mm) wide x 26" (660 mm) long x .700" (17,78 mm) thick.

Bolt Link: Stainless Steel

176038A

Full Bucket Seat ProGuard Chains for 8' Beam Height

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Chain/ProGuard: Steel 3/16" (4,75 mm) straight link chain, 800 lb. (362,87 kilograms) working load limit. Finish: ProGuard.

Full Bucket Seat: Made of U.V. stabilized high-quality black rubber encapsulating a 24 GA (.024") (0,61 mm) stainless steel reinforcement plate. Handles cast from 356-T6 aluminum alloy with black polyarmor paint finish. Handles attach to seat with (3) 1/4" (6,35 mm) x 1 5/16" (33,32 mm) long stainless steel rivets. The full bucket measures 9" (229 mm) deep x 10 1/2" (266,7 mm) wide.

177332A

Single Post Swing Frame 8' Beam Height Only

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Half Clamp: Cast aluminum. Finish: ProShield, color specified.

Beam: Weldment comprised of 2.375" (60,33 mm) O.D. RS-40 (.130" - .140") (3,30 mm-3,56 mm) galvanized steel tubing, 3" (76 mm) wide zinc-plated steel clamps and 1 1/4" (31,75 mm) housings w/bronze bushings. Finish: ProShield, color specified.

Post: See PlayBooster (PB) General Specifications.

177333A

Single Post Swing Frame Additional Bay 8' Beam Height Only

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Half Clamp: Cast aluminum. Finish: ProShield, color specified.

Beam: Weldment comprised of 2.375" (60,33 mm) O.D. RS-40 (.130" - .140") (3,30 mm-3,56 mm) galvanized steel tubing, 3" (76 mm) wide zinc-plated steel clamps and 1 1/4" (31,75 mm) housings w/bronze bushings. Finish: ProShield, color specified.

Post: See PlayBooster (PB) General Specifications.

182503A

Welcome Sign (LSI Provided) Ages 2-5 years Direct Bury

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Border: Permalene, black in color.

Sign Panel: Panel is fabricated from 1/8" (.125")(3,17 mm) aluminum plate. Finish: ProShield®, gray in color. (Sign) Digital image is transferred to a 1/8" (.125")(3,17 mm) ProShield coated aluminum plate, then infused into the ProShield.

Post: Weldment comprised 2.375" (60,33 mm) O.D. RS20 (.095-.105) (2,41 mm-2,67 mm) wall galvanized tube, 1/4" (6,35 mm) HRPO steel sheet and aluminum post cap. Finish: ProShield, color specified.

182503C

Welcome Sign (LSI Provided) Ages 5-12 years Direct Bury

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Post: Weldment comprised 2.375" (60,33 mm) O.D. RS20 (.095-.105) (2,41 mm-2,67 mm) wall galvanized tube, 1/4" (6,35 mm) HRPO steel sheet and aluminum post cap. Finish: ProShield, color specified.

Sign Panel: Panel is fabricated from 1/8" (.125")(3,17 mm) aluminum plate. Finish: ProShield®, gray in color. (Sign) Digital image is transferred to a 1/8" (.125")(3,17 mm) ProShield coated aluminum plate, then infused into the ProShield.

111228A

Square Tenderdeck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Deck Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Square Deck: Flange formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size measures 2 5/8" x 47" x 47" (66,68 mm x 1194 mm x 1194 mm). Finish: TenderTuff, color specified.

111231A

Triangular Tenderdeck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Deck Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Triangular Deck: Flange formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size measures 2 5/8" x 37 3/4" (66,68 mm x 958,85 mm). Finish: TenderTuff, color specified.

111273A

End Vertical Ladder w/Alum Posts DB

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Post: See PlayBooster (PB) General Specifications.

Vertical Ladder: Weldment comprised of 1.125" ((28,58 mm) O.D. x 11 GA (.120") (3,04 mm) steel tubing, 1.029" (26,14 mm) O.D. RS-20 (.070" - .080") (1,78 mm-2,03 mm) and 3/16" x 2" (4,75 mm x 51 mm) wide steel flat plates. Finish: TenderTuff, color specified.

111362A

Talk Tube 40' Tubing Kit PB

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Talk Tube Hose: Made from 1.75" (44,45 mm) O.D. HDPE conduit.

Hose Clamp: Band and housing made from 300 series stainless steel. Slotted screw with hex head and safety collar is cadmium-plated carbon steel.

111363A

Talk Tube At Grade Mounted DB Only

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Bug Screen: Weave .011 (0,28 mm) Ga. charcoal fiberglass screen.

Talk Tube Cover: One-color Permalene, Tan in color.

Talk Tube: Weldment comprised of 1.600" (42,16 mm) O.D. RS-40 (.108" - .132") (2,74 mm-3,35 mm) galvanized steel tubing, 14 GA. (.079") (2,00 mm) cold rolled steel sheet zinc plate, and 3/16" (4,75 mm) HRPO steel sheet. Finish: ProShield, color specified.

111403A

182"Alum Post For Roof DB

Post: See PlayBooster (PB) General Specifications.

111404A

148"Alum Post DB

Post: See PlayBooster (PB) General Specifications.

111404C

132"Alum Post DB

Post: See PlayBooster (PB) General Specifications.

111404D

124"Alum Post DB

Post: See PlayBooster (PB) General Specifications.

111404E

116"Alum Post DB

Post: See PlayBooster (PB) General Specifications.

119430A

Overhead Parallel Bars/Horiz Ladder

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Half Clamp: Cast aluminum. Finish: ProShield, color specified.

Overhead Parallel Bars: Weldment comprised of 2.375" (60,32 mm) O.D. RS-40 (.130" - .140") (3,30 mm-3,56 mm) galvanized steel tubing, 1.125" (28,58 mm) O.D. x 11 GA (.120") (3,04 mm) zinc plated steel and 1/4" (6,35 mm) HRPO flat steel. Finish: ProShield, color specified.

119646A

Tri-Deck Extension

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Triangular Deck Extension: Flange formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size of two of the three sides measures 2 5/8" x 37 7/8" (66,68 mm x 962,03 mm) on the face of the deck and the other side measures 2 5/8" x 43 3/4" (66,68 mm x 1111,25 mm). Finish: TenderTuff, color specified.

Deck Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

120902A

Handhold Leg Lift

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Half Clamp: Cast aluminum. Finish: ProShield, color specified.

Hand Hold/Leg Lift: Weldment comprised of formed 7/8" (22,23 mm) O.D. x 11 GA (.120") (3,04 mm) and 1/4" x 1 3/4" (6,35 mm x 44,45 mm) steel half clamps. Finish: TenderTuff, color specified.

123331B

Double Slide 48"Dk DB

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Rail: Extruded from 1.125" ((28,58 mm) O.D. x .312" (7,92 mm) wall. 6005-T5 aluminum. Finish: ProShield, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Slide Hood: Rotationally molded from U.V. stabilized linear low-density polyethylene, color specified.

Slide: Rotationally molded from U.V. stabilized linear low-density polyethylene, color specified.

Exit Support: Weldment comprised of 2.375" (60,33 mm) O.D. RS-20 (.095" - .105") (2,41 mm x 2,66 mm) galvanized steel tubing and 1/4" x 3" (6,35 mm x 76 mm) mounting plate. Finish: ProShield, color specified.

Rail Spacer: Fabricated from 1.312" (33,32 mm) O.D. x 16 GA (.065") (1,65 mm) steel tubing. Finish: ProShield, color specified.

123824A

Triple Ring Fling

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Half Clamp: Cast aluminum. Finish: ProShield, color specified.

Ring Swing Out: Weldment comprised of 1.125" (28,58 mm) O.D. x 11 GA (.120") (3,04 mm) black tubing and 2" (50,8 mm) O.D. x 1.50" (38,1 mm) I.D. stainless steel housing. Finish: TenderTuff, color specified.

Beam: Weldment comprised of 2.875" (73,03 mm) O.D. RS-40 (.160" - .170") (4,06 mm-4,32 mm) galvanized steel tubing, 1.250" (31,75 mm) diameter grade 304 stainless steel shaft and 1/4" (6,35 mm) HRPO flat steel. Finish: ProShield, color specified.

124863F

SlideWinder2 72"DK DB 2 Right 1 Left

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Support Base (SM): Weldment comprised of 1.660" (42,16 mm) O.D. RS-20 (.085" - .095") (2,16 mm-2,41 mm) galvanized steel tubing and 1/4" x 3" x 8" (6,35 mm x 76 mm x 203 mm) mounting plate. Finish: ProShield, color specified.

Rail: 1 1/8" (28,58 mm) O.D. 6061-T6 aluminum extrusion with 5/16" (7,92 mm) walls. Finish: ProShield, color specified.

Slide Sections: Rotationally molded from U.V. stabilized linear low-density polyethylene, color specified.

Exit Footer: Weldment comprised of 2.375" (60,33 mm) O.D. RS-20 (.095" - .105") (2,41 mm-2,66 mm) galvanized steel tubing and 1/4" x 3" x 7 1/2" (6,35 mm x 76 mm x 191 mm) HRPO steel mounting plate. Finish: ProShield, color specified.

Mid-Support: Weldment comprised of 1.900" (48,26 mm) O.D. RS20 (.090" - .100") (2,28 mm-2,54 mm) galvanized steel tubing and 7 GA. (.179") (4,54 mm) HRPO steel strap. Finish: ProShield, color specified.

Rail Spacer: Fabricated from 1.312" (33,32 mm) O.D. x 16 Ga. (.065") (1,65 mm) steel tubing. Finish: ProShield, color specified.

128608A

Summit Climber 1 Sides 72"Dk DB

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Summit Climber: Rotationally molded from U.V. stabilized linear low-density polyethylene, color specified.

Handhold Panel: Permalene, color specified.

Support Plate: Fabricated from 7 GA (.179") (4,55 mm) HRPO flat steel. Finish: ProShield, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 11/16" (42,85 mm). Finish: ProShield, color specified.

129816B

Square Peak Tile Roof No Logo Panel

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Square Tile Roof: Rotationally molded from U.V. stabilized linear low-density polyethylene. Roof measures 53 1/2" x 55 3/4" x 34 3/8" (1358,9 mm x 1416,05 mm x 882,65 mm) high, color specified.

Roof Sleeve: Cast from A356 aluminum alloy.

147424A

Clatterbridge 84 w/Barriers

COVER PLATE: Fabricated from 12 GA. (.105") (2,66 mm) HRPO plate. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Barrier: Weldment comprised of 1.900" (48,26 mm) O.D. RS-20 (.090" - .100") (2,28 mm-2,54 mm) galvanized steel tubing beam, 1.029" (26,14 mm) O.D. RS-20 (.070" - .080") (1,78 mm-2,03 mm) galvanized steel tubing and 7 GA. (.179") (4,55 mm) HRPO sheet steel. Finish: ProShield, color specified.

ATTACHMENT BRACKET: Fabricated from 11 GA. (.120") (3,04 mm) HRPO plate. Finish: TenderTuff, color specified.

MOUNTING BRACKET: Weldment comprised from 1/2" (12,7 mm) HRPO sheet steel, (2) 1/4" x 1 3/4" (6,35 mm x 44,45 mm) steel half clamps and 7/8" (22,23 mm) diameter 304L stainless steel tube. Finish: ProShield, color specified.

CABLE: Made of tightly woven, polyester-wrapped, six stranded galvanized-steel cable with a PVC wrapped galvanized steel core.

Clamps: Cast aluminum. Finish: ProShield, color specified.

PLANK: Weldment comprised from 12 GA. (.105") (2,67 mm) HRPO plate with 5/16" (7,92 mm) diameter perforated holes and threaded stainless steel inserts, plank measures 11 7/16" x 46 7/8" (290,50 mm x 1190,63 mm) long. Finish: TenderTuff, color specified.

148432B

Corkscrew Perm Handholds 72"Dk DB

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Handhold Panel: Recycled Permalene, color specified.

Corkscrew: Weldment comprised of 1.900" (48,26 mm) O.D. RS-20 (.090"-.100") (2,28 mm-2,54 mm) galvanized steel tubing, and 1.315" (33,40 mm) O.D. RS-20 (.080"-.090") (2,03 mm-2,28 mm) galvanized steel tubing. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 11/16" (42,85 mm). Finish: ProShield, color specified.

152907B

Deck Link w/Barriers Steel end panels 2 Steps

Barrier: Weldment comprised of 1.125" (28,58 mm) O.D. x 11 Ga. (.120") (3,04 mm) wall steel tubing, 5/8" (15,88 mm) O.D. steel bar with 203 or 303 stainless steel 3/8" (9,53 mm) threaded inserts. Finish: TenderTuff, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Step Section: Formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is 24 1/4" (615,95 mm) wide x 14" (356 mm) deep and is perforated with 5/16" (7,94 mm) diameter holes. Finish: TenderTuff, color specified.

SteelX Panels: Zinc plated 7 GA (.179") (4,55 mm) HRPO flat steel. Finish: ProShield, color specified.

Clamps: Cast aluminum. Finish: ProShield, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 11/16" (42,85 mm). Finish: ProShield, color specified.

152911C

Curved Transfer Module Left 48"Dk DB

Deck Support: Weldment comprised of 3 1/2" (88,9 mm) O.D. RS-20 (.125") (3,17 mm) galvanized steel tubing and 3/8" (9,53 mm) O.D. x 5" (127 mm) long CRS rod. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Step Support: Weldment comprised of 1.660" (42,16 mm) O.D. RS-20 (.080" - .095") (2,03 mm-2,41 mm) galvanized steel tubing and 1 3/4" x 1 3/4" x 1/8" (44,45 mm x 44,45 mm x 3,17 mm) HR angle. Finish: ProShield, color specified.

Deck: Flange formed from 12 GA (.105") (2,66 mm) HRPO sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes and measures 29" (737 mm) per (2) sides. Finish: TenderTuff, color specified.

Panels: Permalene, color specified.

Railings: Weldment comprised of 1.125" (28,58 mm) O.D. x 11 GA. (.120") (3,04 mm) steel tubing with 203 or 303 stainless steel 3/8" (9,53 mm) threaded inserts. Finish: TenderTuff, color specified.

Clamps: Cast aluminum. Finish: ProShield, color specified.

Step Sections/Top Step Section: Formed from 12 GA (.105") (2,66 mm) HRPO sheet steel conforming to ASTM A1011. Standing surface is 24 3/8" (619,13 mm) wide x 14" (355,6 mm) deep and is perforated with 5/16" (7,92 mm) diameter holes. Finish: TenderTuff, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 11/16" (42,85 mm). Finish: ProShield, color specified.

No Material Spec for 229829B

No Material Spec for 176131A

Landscape Structures Inc. ("Manufacturer") warrants that all playstructures and/ or equipment sold will conform in kind and in quality to the specifications manual for the products identified in the Acknowledgment of Order and will be free of defects in manufacturing and material.

Manufacturer further warrants:

100-YEAR LIMITED WARRANTY

On all PlayBooster® and PlayShaper® aluminum posts, stainless steel fasteners, clamps, beams and caps against structural failure due to corrosion/natural deterioration or manufacturing defects, and on PlayBooster steel posts against structural failure due to material or manufacturing defects.

15-YEAR LIMITED WARRANTY

On all Evos® and Weevos® steel arches, all plastic components (including TuffTimbers™ edging), all aluminum and steel components not covered above, Mobius® climbers, Rhapsody® Outdoor Musical Instruments, decks and TenderTuff™ coatings (except Wiggle Ladders, Chain Ladders and Swing Chain) against structural failure due to material or manufacturing defects.

10-YEAR LIMITED WARRANTY

On concrete products against structural failure due to natural deterioration or manufacturing defects. Does not cover minor chips, hairline cracks or efflorescence.

8-YEAR LIMITED WARRANTY

On Aeronet® climbers and climbing cables against defects in materials or manufacturing defects.

5-YEAR LIMITED WARRANTY

On Rhapsody® cables and mallets against defects in materials or manufacturing defects, on polycarbonate panels against defects in materials or manufacturing defects, and on bamboo panels against delamination due to defects in materials or manufacturing defects. Does not cover damage which may be associated with the natural characteristics of bamboo aging, including but not limited to discoloration, splitting, cracking, warping or twisting, nor the formation of algae, mold and other forms of fungal-type bodies on bamboo.

3-YEAR LIMITED WARRANTY

On all other parts, i.e.: Pulse® products, all swing seats and hangers, Mobius climber handholds, Wiggle Ladders, Chain Ladders and ProGuard™ Swing Chain, Track Ride trolleys and bumpers, all rocking equipment including Sway Fun® gliders, belting material, HealthBeat® resistance mechanism, Seesaws, etc., against failure due to corrosion/ natural deterioration or manufacturing defects.

The environment near a saltwater coast can be extremely corrosive. Some corrosion and/or deterioration is considered “normal wear” in this environment. Product installed within 500 yards (457 meters) of a saltwater shoreline will only be covered for half the period of the standard product warranty, up to a maximum of five years, for defects caused by corrosion. Products installed in direct contact with saltwater or that are subjected to salt spray are not covered by the standard warranty for any defects caused by corrosion.

This warranty does not include any cosmetic issues or wear and tear from normal use of the product, or misuse or abuse of the product. It is valid only if the playstructures and/or equipment are erected to conform with Landscape Structures’ installation instructions and maintained according to the maintenance procedures furnished by Landscape Structures Inc.

DRAFT FOR REVIEW



Apple Ridge Park



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Apple Ridge Park



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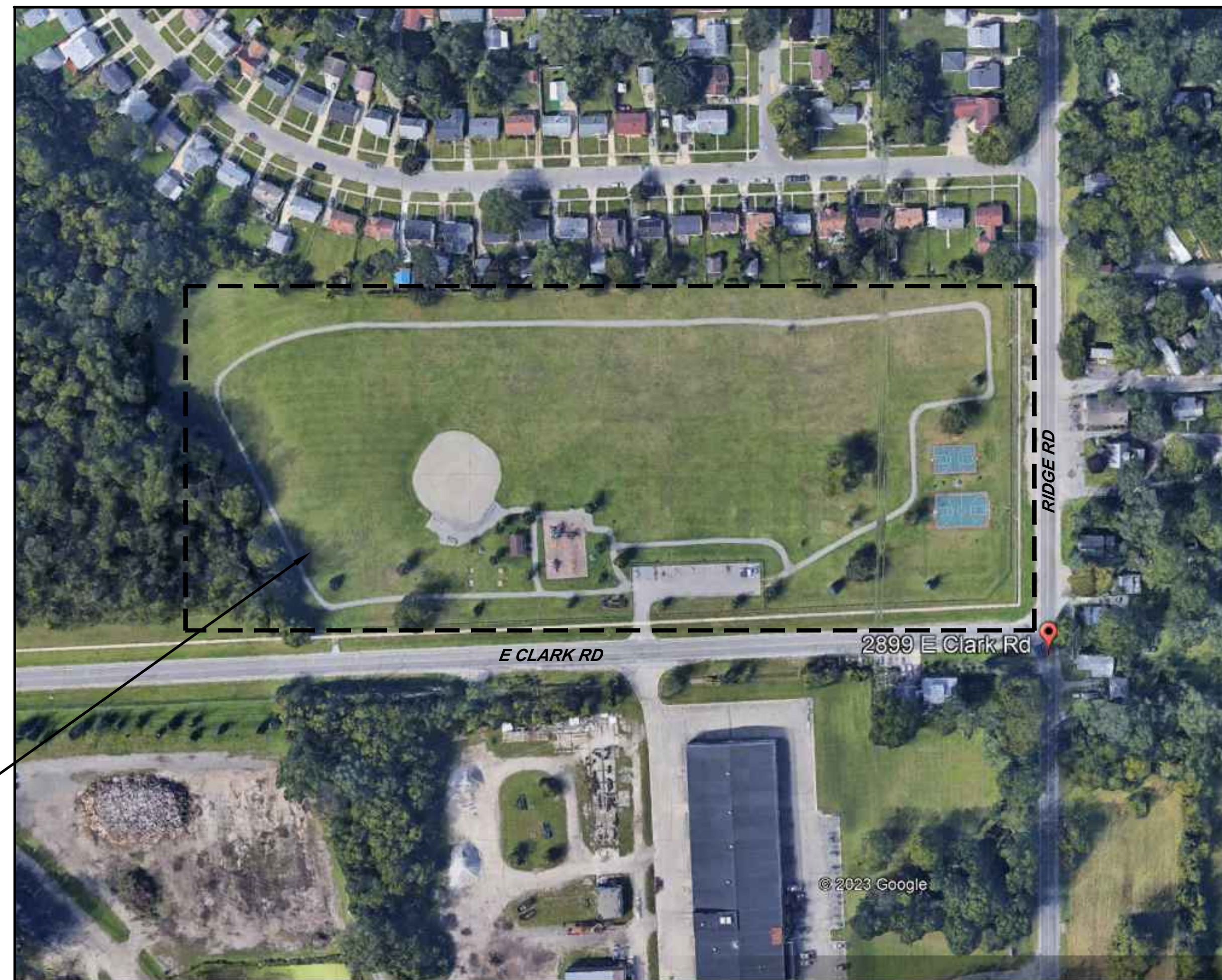
APPLERIDGE PARK YPSILANTI, MICHIGAN

CHARTER TOWNSHIP
OF YPSILANTI

PLAN INDEX			
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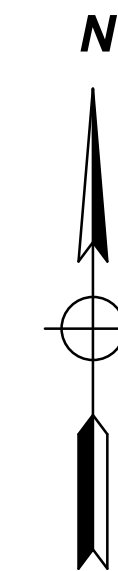


AREA MAP
NOT TO SCALE




PROJECT LOCATION
2681-2791 E. CLARK RD.

LOCATION MAP
NOT TO SCALE



SECTION 01 & T.03S.-R.07E.,
CHARTER TOWNSHIP OF YPSILANTI,
WASHTENAW COUNTY, MICHIGAN

DRAFT FOR REVIEW

BY	MARK	REVISIONS	DATE
<small>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREIN IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</small>			
APPLERIDGE PARK CHARTER TWP. OF YPSILANTI, MICHIGAN			
TITLE SHEET			
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</small>	
DE. BY: SET	CH. BY: CAT	PROJECT NO.	
DR. BY: SET	APP. BY:	132276SG2022	
STDS.	SHEET 01 OF 7	C	
DATE 08/23/2023	FILE NO. DPL-1200- 1	1	
SCALE N/A			

GENERAL NOTES

NO WORK SHALL BE PERFORMED BEFORE 7:00 AM OR AFTER 7:00 PM MONDAY THROUGH SATURDAY. NO WORK SHALL HAPPEN ON SUNDAYS OR HOLIDAYS. UNLESS AUTHORIZED BY THE OWNER.

CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS PRIOR TO START OF CONSTRUCTION, CONSTRUCTION STAKING AND INSPECTION.

CONTRACTOR TO PROVIDE DUST CONTROL AND SWEEP ROADS DAILY.

ALL EXCAVATED MATERIAL NOT TO BE REUSED OR DISPOSED OF ON SITE SHALL BE REMOVED FROM SITE. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSING MATERIALS ACCORDING TO LOCAL AND STATE REQUIREMENTS.

UNDERGROUND UTILITIES/MISS DIG FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 1-800-482-7171 OR 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER AS TO WHERE POSSIBLE CONFLICT EXISTS.

ALL CONSTRUCTION UNDER EXISTING UTILITIES, INCLUDING HOUSE SERVICES, SHALL BE COMPLETELY BACKFILLED WITH SAND, IN 12" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM UNIT WEIGHT.

ANY UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE SUPPORTED, PER THE SPECIFICATIONS OF THE INDIVIDUAL UTILITY COMPANY CLAIMING OWNERSHIP OF THE UTILITY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTH-DISTURBING ACTIVITIES. PLACE TURF ESTABLISHMENT ITEMS AS SOON AS POSSIBLE ON POTENTIAL ERODABLE SLOPES AS DIRECTED BY THE ENGINEER. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH EITHER SOD OR SEED/MULCH OR MULCH BLANKET AS DIRECTED BY THE ENGINEER.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE AND MAINTAINED UNTIL THE CONTRACT HAS BEEN COMPLETED AND ACCEPTED. MEASURES SHALL ONLY BE PAID FOR ONCE.

ALL CATCHBASINS AND SEDIMENTATION TRAP/BASIN SHALL BE CLEANED OUT UPON COMPLETION OF THE PROJECT.

ALL DEWATERING REQUIRED FOR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR FEATURE BEING INSTALLED.

CONTRACTORS SHALL FINISH GRADE, SEED, FERTILIZE, AND MULCH DAILY ON ALL DISTURBED AREAS.

CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL ACT, PART 91 OF ACT 451 OF 1994.

PROPERTY OWNERS PROPERTY OWNERS' NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THEIR ACCURACY IS NOT GUARANTEED.

TRAFFIC THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES. SIGNAGE MUST BE IN ACCORDANCE WITH THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL BE COORDINATED WITH THE ENGINEER AND GOVERNING ROAD AGENCY. PERMITS MAY BE REQUIRED.

PERMITS PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED BY THE APPROPRIATE AGENCIES.

CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE AGENCIES.

GENERAL NOTES CONT.

SITE WORK ALL TRENCHED CONSTRUCTION UNDER EXISTING, PROPOSED AND FUTURE GRAVEL, PAVED SURFACES OR UTILITIES SHALL BE COMPLETELY BACKFILLED WITH CLASS II SAND OR OTHER APPROVED GRANULAR MATERIAL IN 12" LAYERS AND COMPACTED TO 95% OF ITS MAXIMUM UNIT WEIGHT.

UNPAVED AREAS SHALL BE SMOOTHLY GRADED AND THE SURFACE STABILIZED BY SEEDING OR OTHERWISE. THE MAXIMUM DESIRABLE SLOPE IS 3 HORIZONTAL TO 1 VERTICAL UNLESS NOTED OTHERWISE.

CONTRACTOR IS RESPONSIBLE TO MAINTAIN POSITIVE DRAINAGE PATTERN TO ENSURE NO PONDING OF WATER ON ADJACENT EXISTING AND PROPOSED PAVED SURFACES.

DIMENSIONS SHOWN ARE GIVEN TO THE BACK OF CURBS AND FACE OF BUILDINGS UNLESS NOTED OTHERWISE.

WHERE A DISCREPANCY OCCURS BETWEEN PROPOSED WORK AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR CLARIFICATION.

PAVEMENT / SIDEWALK CONTRACTOR SHALL SAWCUT PAVEMENT AND CURB & GUTTER FOR A CLEAN EDGE TO INSTALL PROPOSED PAVEMENT AND CURB & GUTTER.

HMA PAVEMENT AND OR CONCRETE SHALL NOT BE PLACED WHEN THE SURFACE BEING OVERLAID IS WET, OR WHEN RAIN IS FORECAST OR THREATENING.

SIDEWALK SHALL BE CONSTRUCTED WITH A CROSS SLOPE SLOPED TOWARD THE STREET OR PARKING AREAS. SLOPES NOT TO EXCEED 2% UNLESS NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS OR PAVEMENT.

IN GRASS AREAS, THE SURFACE OF THE SIDEWALK SHALL BE ABOUT 1/4 INCH HIGHER THAN THE ADJACENT GROUND SURFACE, UNLESS NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS OR PAVEMENT.

THE CONTRACTOR SHALL PROTECT FRESH HMA OR CONCRETE FROM DAMAGE BY THE WEATHER, TRAFFIC OR VANDALISM. DAMAGED HMA OR CONCRETE SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

STORM SEWER GRADING AROUND MANHOLES/CATCHBASINS, FLARED END SECTIONS, AND OTHER INLETS SHALL BE SMOOTH AND SHAPED TO PROVIDE POSITIVE DRAINAGE INTO THE INLETS.

CONCRETE AND ACCESSORIES ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 301, ACI 350 AND MDOT STANDARD SPECIFICATION FOR CONSTRUCTION (LATEST EDITION). CONCRETE PLACED IN COLD WEATHER SHALL CONFORM TO ACI-308R. CONCRETE PLACED IN HOT WEATHER SHALL CONFORM TO ACI-305R.

CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.

CONCRETE SHALL HAVE A SLUMP RANGE OF 2"-4".

CONCRETE SUBJECT TO FREEZE/THAW CYCLES SHALL HAVE A AIR CONTENT OF 5%-7% BY VOLUME PER ASTM C260.

FINE AGGREGATE AND COARSE AGGREGATE SHALL CONFORM TO ASTM C33.

CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN TO OWNER FOR REVIEW AND APPROVAL.

NON-SHRINK GROUT SHALL CONFORM TO ASTM C1107 AND BE PREMIXED AND CONSIST OF COMPOUND CONSISTING OF NON-METALLIC AGGREGATE, CEMENT, WATER REDUCING AGENT AND PLASTICIZING AGENTS CAPABLE OF DEVELOPING MINIMUM COMPRESSIVE STRENGTHS OF 2,400 PSI IN 48 HOURS AND 7,000 PSI IN 58 DAYS.

WATERSTOP SHALL BE CONTINUOUS 1"x3/4" STRIPS CONTAINING 75% BENTONITE (WATERSTOP-RX-101 OR APPROVED EQUAL). INSTALL PER MANUFACTURERS INSTRUCTIONS.

CONCRETE REINFORCING STEEL SHALL CONFORM TO ASTM A615 AND HAVE A YIELD STRENGTH OF 60 ksi. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO OWNER FOR REVIEW AND APPROVAL.

EPOXY FOR ANCHOR BOLTS AND REINFORCING STEEL SHALL BE HILTI-HY-200 EPOXY INJECTABLE MORTAR. INSTALL PER MANUFACTURERS INSTRUCTIONS.

THREADED ANCHOR RODS SHALL BE HILTI HAS-R ANCHOR RODS (PICK TYPE FOR PROJECT = HAS-E CARBON STEEL ZINC COATED, HAS-B HIGH STRENGTH STEEL, HAS-R 304 STAINLESS STEEL, HAS-R 316 STAINLESS STEEL)

PLYWOOD FORMWORK SHALL BE CONSTRUCTED OF 5-PLY DOUGLAS FIR, SOUND SHEETS WITH CLEAN, TRUE EDGES. STEEL FORMS SHALL BE SMOOTH, TRUE AND UNDAMAGED. ALL FORMWORK SHALL BE STIFFENED OR BRACED TO SUPPORT THE WEIGHT OF THE CONCRETE WITH MINIMUM DEFLECTION. DO NOT REMOVE FORMS OR BRACING UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT AND IMPOSED LOADS.

PROVIDE 3/4" CHAMFER STRIPS ON EXTERNAL CORNERS OF VISUALLY EXPOSED CONCRETE CORNERS.

HOT POURED JOINT SEALANT SHALL CONFORM WITH ASTM D-3405.

ABBREVIATIONS

- BC = BACK OF CURB
- BM = BENCH MARK
- C/C = CENTER TO CENTER
- CB = CATCH BASIN
- CL = CENTERLINE
- CJ = CONSTRUCTION JOINT
- CMP = CORRUGATED METAL PIPE
- CSP = CORRUGATED STEEL PIPE
- CONC = CONCRETE
- DI = DUCTILE IRON PIPE
- EF = EACH FACE
- ELEC = ELECTRIC
- EL OR ELEV = ELEVATION
- EOM = EDGE OF METAL
- EOP = EDGE OF PAVEMENT
- EQ/SP = EQUALLY SPACED
- ESMT = EASEMENT
- EW = EACH WAY
- EX OR EXIST = EXISTING
- FF = FINISH FLOOR
- FL = FLOW LINE
- FS = FINISH SURFACE
- FG = FINISH GROUND
- GALV = GALVANIZED
- G = GUTTER
- HDS = HOT DIP GALVANIZED
- HDPE = HIGH DENSITY POLYETHYLENE
- HP = HIGH POINT
- HMA = HOT MIX ASPHALT
- HYD = HYDRANT
- INV = INVERT
- LP = LOW POINT
- OC = ON CENTER
- OH = OVERHEAD
- MH = MANHOLE
- MIN = MINIMUM
- MON = MONUMENT
- NFL = NOT FIELD LOCATED
- NTS = NOT TO SCALE
- PROP = PROPOSED
- PVC = POLYVINYL CHLORIDE
- RCP = REINFORCED CONCRETE PIPE
- ROW = RIGHT OF WAY
- SAW = SANITARY
- SB = SOIL BORING
- SS = STAINLESS STEEL
- STA = STATION
- STM = STORM
- SWR = SEWER
- TIB = TOP AND BOTTOM
- TC = TOP OF CURB
- TOB = TOP OF BANK
- TOS = TOE OF SLOPE
- TELE = TELEPHONE
- TRW = TOP OF RETAINING WALL
- TW = TOP OF WALK
- UNO = UNLESS NOTED OTHERWISE
- WM = WATER MAIN
- WS = WATER SURFACE ELEVATION

CONTACTS

OWNER
 JOHN HINES
 MUNICIPAL SERVICE DIRECTOR
 7200 S. HURON RIVER DRIVE
 YPSILANTI, MI 48197
 734-351-8947

PRIME PROFESSIONAL
 CINDY TODD
 SPICER GROUP, INC.
 1595 WEST LAKE LANSING ROAD
 EAST LANSING, MI 48823
 517-325-9977

FOR UTILITIES CONTACT

TELEPHONE SERVICE

AT&T
 Attn: Peter Wolkowski
 17651 Michigan Ave.
 Dearborn, MI 48126
 TEL 323-240-5465

GAS SERVICE

DTE Gas Company
 Data Integrity
 SE Region Mapping One Energy Plaza
 WCB 1710
 Detroit, MI 48226
 TEL 800-338-0178

ELECTRIC SERVICE

DTE Energy
 Room 570 SB
 SE Region Mapping One Energy Plaza
 Detroit, MI 48226
 TEL 313-235-440

CABLE SERVICE

Comcast
 Sigma Network Services
 27096 Oakmead Drive
 Perrysburg, OH 43551
 TEL 855-962-8585
 Attn: Brittney Hanson

WATER AND SEWER SERVICES

Ypsilanti Community Utilities Authority
 2777 State St
 Ypsilanti, MI 48498
 TEL 734-323-1699

WATER SERVICES

Great Lakes Water Authority
 6425 Huber St.
 Detroit, MI 48211
 TEL 313-378-4908

LINE TYPE LEGEND

- - EXISTING ROAD CENTERLINE
- - EXISTING WATER MAIN
- - EXISTING SANITARY SEWER OR FORCEMAIN
- - EXISTING STORM SEWER
- - EXISTING TELEPHONE CABLE
- - EXISTING GAS MAIN
- - EXISTING ELECTRIC
- - PROPOSED UTILITY
- - EXISTING CURB & GUTTER
- - PROPOSED CURB & GUTTER
- - FENCE LINE
- - OVERHEAD UTILITY
- - RAILROAD TRACKS
- - STATION LINE
- - LIMITS OF RIGHT OF WAY
- - EASEMENT
- - SILT FENCE
- - REVERSE PAN CURB & GUTTER
- - TREE LINE
- - EXISTING CONTOURS
- - PROPOSED CONTOURS

SYMBOL LEGEND

EXISTING SYMBOLS

- - MANHOLE
- ⊗ - CATCH BASIN
- ⊗ - CURB CATCH BASIN
- ⊗ - FIRE HYDRANT
- ⊗ - GAS VALVE
- ⊗ - WATER VALVE
- ⊗ - TELEPHONE PEDESTAL
- ⊗ - POWER POLE
- ⊗ - TELEPHONE POLE
- ⊗ - POWER AND TELEPHONE POLE
- ⊗ - LIGHT POLE
- ⊗ - GUY ANCHOR AND POLE
- ⊗ - MAIL BOX
- ⊗ - WATER METER
- ⊗ - TELEPHONE MANHOLE
- ⊗ - ELECTRIC MANHOLE
- ⊗ - MONITORING WELL
- ⊗ - HAND HOLE
- ⊗ - TRANSFORMER
- ⊗ - ELECTRICAL PEDESTAL
- ⊗ - BARRIER FREE PARKING
- △ - SPRINKLER
- ⊗ - RAILROAD SIGNAL
- ⊗ - ANTENNA
- ⊗ - SATELLITE DISH
- ⊗ - AIR CONDITIONING UNIT
- ⊗ - SOIL BORING
- ⊗ - BENCH MARK
- ⊗ - FOUND SURVEY CORNER
- - SET 1/2" IRON ROD
- - 1/4 SECTION CORNER
- ⊗ - BREAK IN LINE
- ⊗ - EXISTING SIGN-1 POST
- ⊗ - EXISTING SIGN-2 POST
- ⊗ - STUMP
- ⊗ - WETLANDS
- ⊗ - PINE
- ⊗ - BUSH
- ⊗ - TREE

PROPOSED SYMBOLS

- - MANHOLE
- ⊗ - CATCHBASIN
- ⊗ - FIRE HYDRANT
- ⊗ - WATER VALVE
- ⊗ - BARRIER FREE PARKING
- ⊗ - LIGHT POLES
- ⊗ - DRAINAGE FLOW
- ⊗ - SPOT ELEVATION LABELS
- ⊗ - GUTTER
- ⊗ - WALK
- ⊗ - TOP OF CURB
- ⊗ - FINISH SURFACE

DRAFT FOR REVIEW

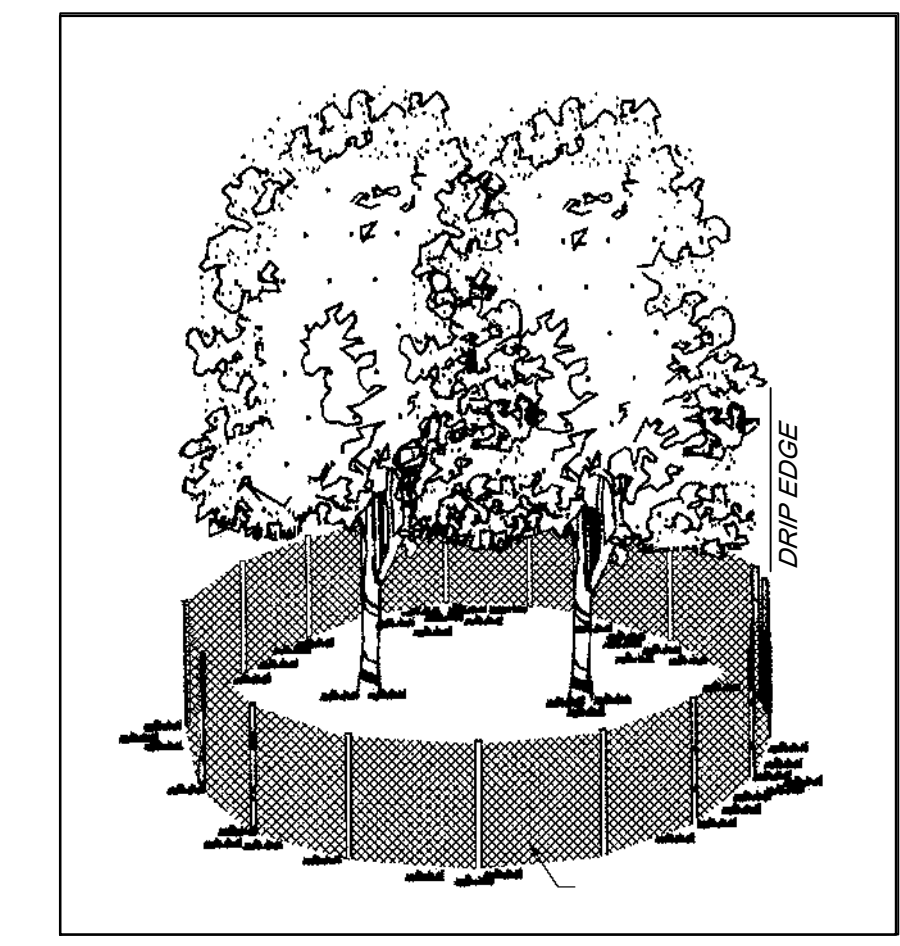
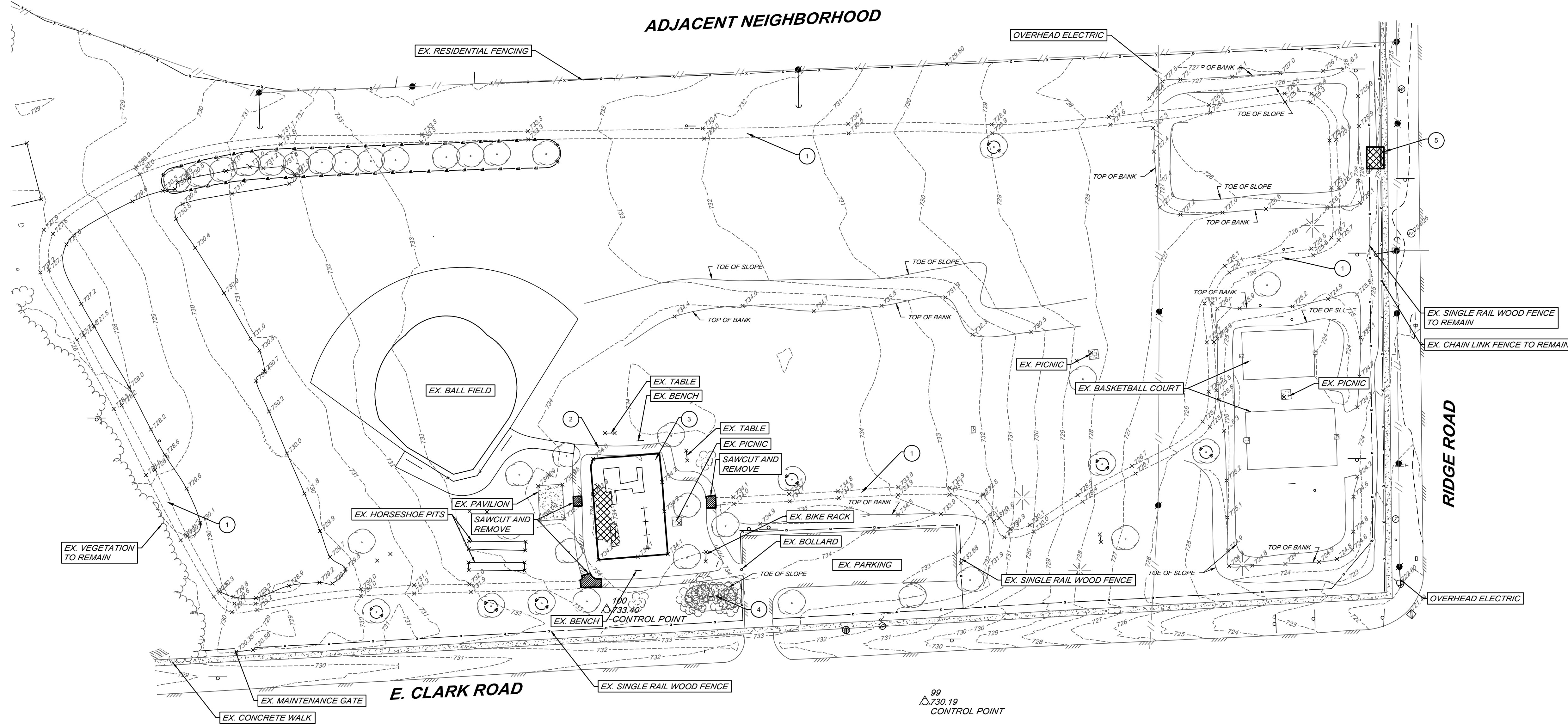
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APPLERIDGE PARK CHARTER TWP. OF YPSILANTI, MICHIGAN			
NOTES			
SACINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com			
DE. BY: SET	CH. BY: CAT	PROJECT NO. 132276SG2022	
DR. BY: SET	APP. BY:		
STDS.	SHEET 2 OF 7	C	
DATE 08/23/2023	FILE NO. DPL-1200- 2	2	
SCALE N/A			

DEMOLITION NOTES

1. PROTECT TREES, PLANT GROWTH, AND FEATURES DESIGNATED TO REMAIN, AS FINAL LANDSCAPING.
2. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE THE TAGGING OF SPECIFIC TREES/SHRUBS TO BE PRESERVED PRIOR TO BEGINNING DEMOLITION.
3. REMOVE TREES AND SHRUBS WITHIN LIMITS OF CONSTRUCTION AS NOTED. REMOVE STUMPS, MAIN ROOT BALL, ROOT SYSTEM TO A DEPTH OF 12 INCHES AND SURFACE ROCK.
4. CLEAR AREAS REQUIRED FOR ACCESS TO SITE AND EXECUTION OF WORK.
5. REMOVE NOTED WALLS, FOUNDATIONS, PAVING, CURBS, AND SIDEWALKS.
6. SAWCUT ALL PAVEMENT, CURBS AND WALKS NOTED FOR REMOVAL FOR A CLEAN EDGE.
7. REMOVE ALL CLEARED ITEMS FROM SITE AND PROPERLY DISPOSE OF.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR SEEDING ALL DISTURBED AREAS.
9. THE INTENT OF THE DEMOLITION PLAN IS TO SHOW THE GENERAL NATURE OF THE DEMOLITION REQUIRED FOR THIS PROJECT. GENERAL CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE TO VERIFY THE EXISTING CONDITIONS. THAT CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
10. COORDINATE AND VERIFY WITH THE OWNER ALL ITEMS TO BE SALVAGED PRIOR TO CONSTRUCTION.
11. ALL PARK AREAS NOT UNDER CONSTRUCTION WILL REMAIN OPEN AND USABLE TO THE PUBLIC.

DEMOLITION ITEMS

- 1 EX. GRAVEL PATH TO REMAIN, TO BE USED AS SUBBASE FOR PROPOSED HMA PATH. CONTRACTOR SHALL REMOVE ALL PLANT GROWTH FROM THE EXISTING STONE.
- 2 EX. HMA PATH TO REMAIN. SAWCUT AND REMOVE IN AREAS AS NOTED FOR A CLEAN EDGE.
- 3 EX. PLAYGROUND STRUCTURES, FOOTINGS, SURFACING, AND EDGING TO BE REMOVED AND DISPOSED OF OFF SITE.
- 4 EX. SIGN TO REMAIN AND BE PROTECTED. CLEAN UP SURROUNDING OVERGROWTH OF SHRUBS AND VEGETATION IN THE ATMOSPHERE OF THE SIGN.
- 5 EX. FENCING, SINGLE RAIL WOOD FENCE AND CHAIN LINK FENCE, TO BE REMOVED FOR ACCESS TO SITE AND TO CLEAR AREA FOR PROPOSED WORK. FENCING TO BE REMOVED TO THE MOST LOCAL POST.



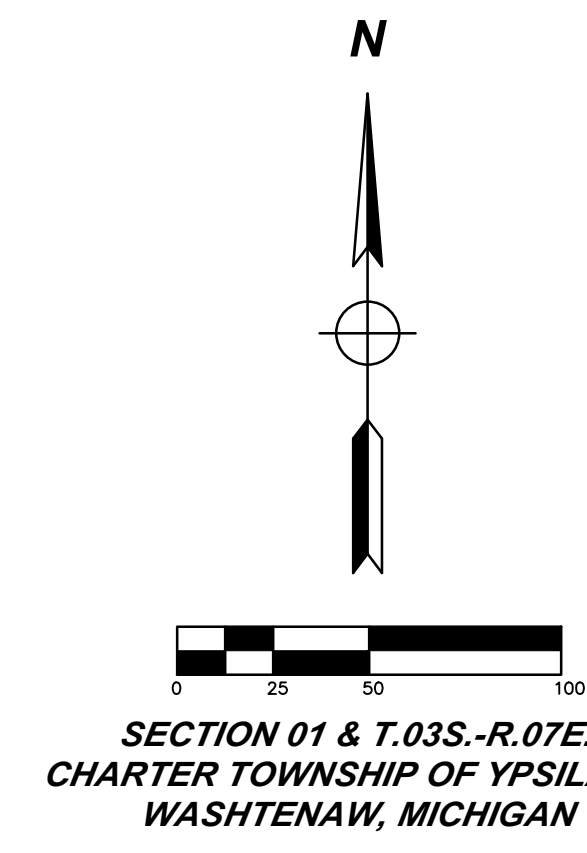
EXISTING TREES SHOWN ON THIS PLAN WHICH ARE TO REMAIN SHALL BE PROTECTED. TREE PROTECTION SHALL BE A MINIMUM 4' CHAIN LINK FENCE OR ORANGE SAFETY FENCE MOUNTED ON VERTICAL POSTS DRIVEN 2 FEET INTO THE GROUND. SEE PLAN FOR LOCATION. REMOVE ALL BARRIERS UPON COMPLETION OF PROJECT.

TREE PROTECTION DETAIL

NOT TO SCALE

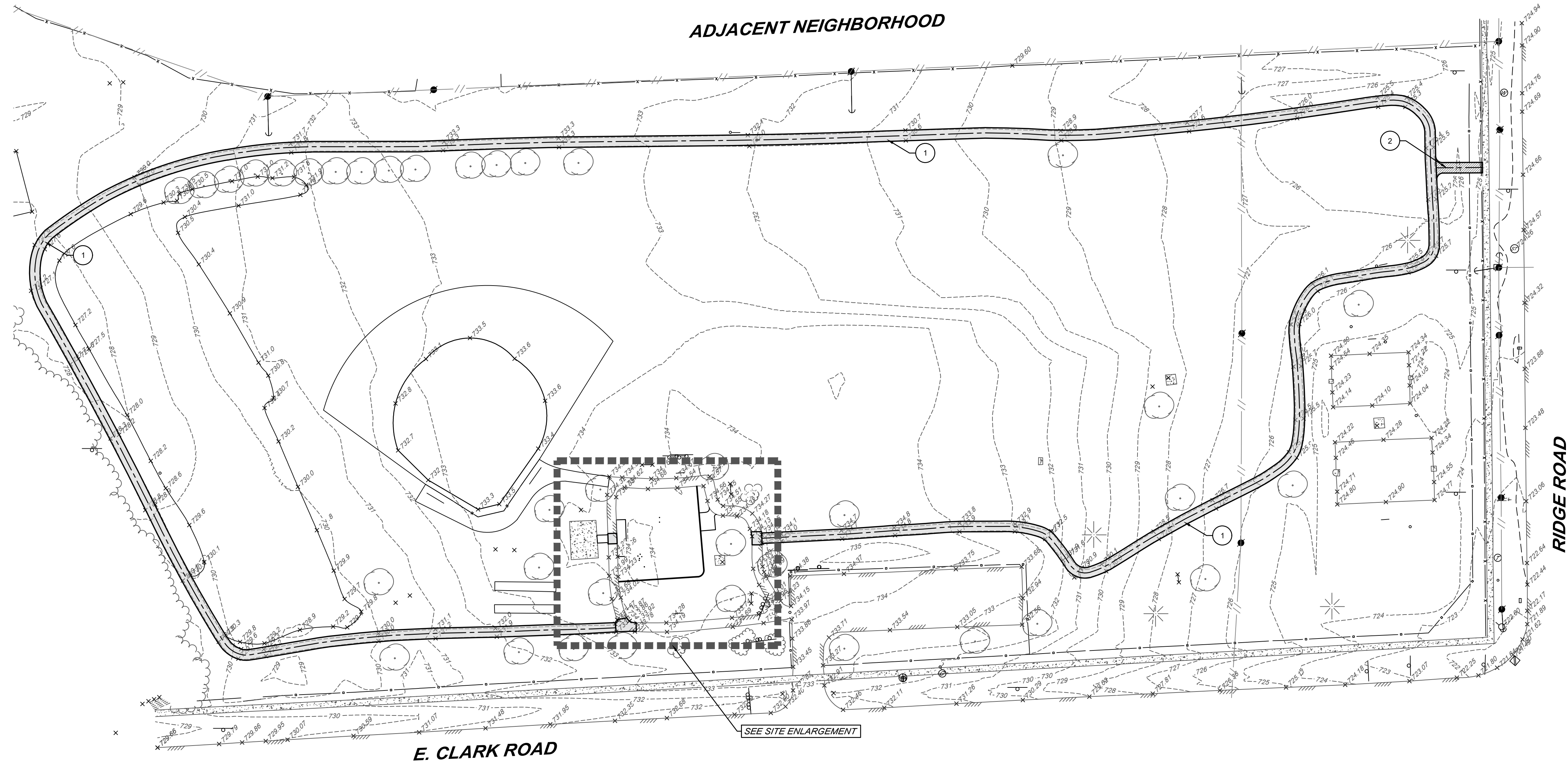
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<p>APPLERIDGE PARK CHARTER TWP. OF YPSILANTI, MICHIGAN</p>			
<p>EXISTING CONDITIONS DEMOLITION TREE PROTECTION</p>			
		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 49807 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com</p>	
DE. BY:	SET	CH. BY:	CAT
DR. BY:	SET	APP. BY:	
			PROJECT NO. 132276SG2022
STDS.			SHEET 3 OF 7
DATE	08/23/2023	FILE NO.	C
SCALE	1"=50'		3



SECTION 01 & T.03S.-R.07E.,
CHARTER TOWNSHIP OF YPSILANTI,
WASHTENAW, MICHIGAN

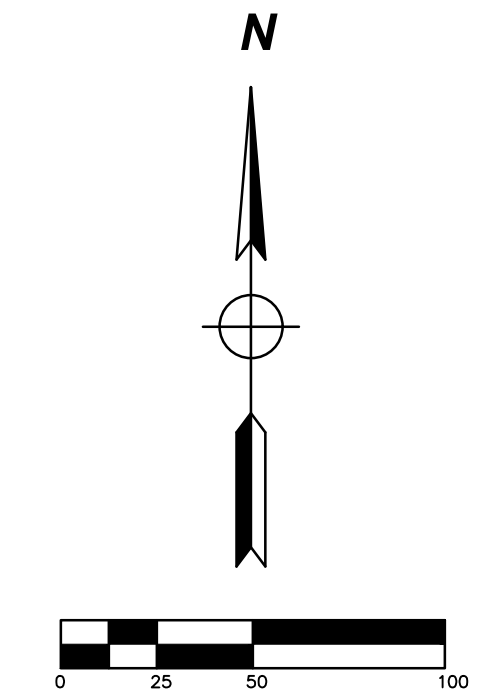
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 RET. F.B.
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- CONSTRUCTION NOTES:**
- 1 PROPOSED 8' WIDE HMA PATH. PATH TO FOLLOW EXISTING CRUSHED STONE PATH. ENDS OF WALK TO BE FLUSH WITH PROPOSED AND EXISTING SURFACES.4
 - 2 PROPOSED 8' WIDE HMA WALK. ENDS OF WALK TO BE FLUSH WITH PROPOSED AND EXISTING SURFACES.

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SITE PLAN			
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DE BY: SET	CH. BY: CAT	PROJECT NO.	
DR. BY: SET	APP. BY:	132276SG2022	
STDS.	SHEET 4 OF 7	<div style="font-size: 2em; font-weight: bold; margin: 0;">C</div> <div style="font-size: 2em; font-weight: bold; margin: 0;">4</div>	
DATE 08/23/2023	FILE NO. DPL-1200- 4		
SCALE 1" = 50'			

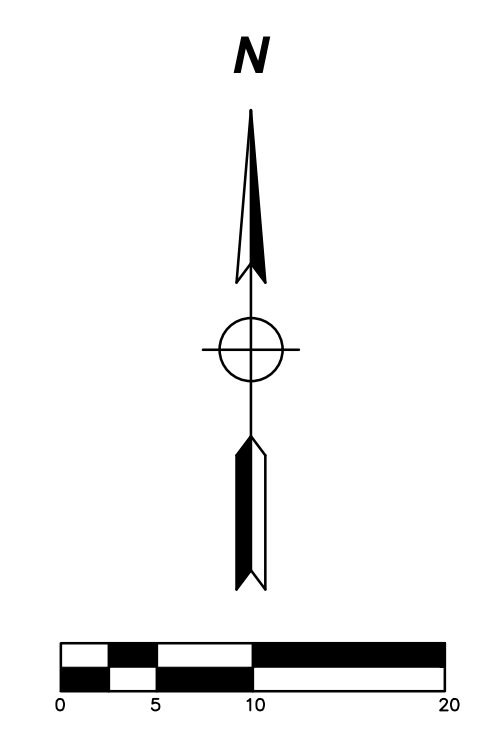
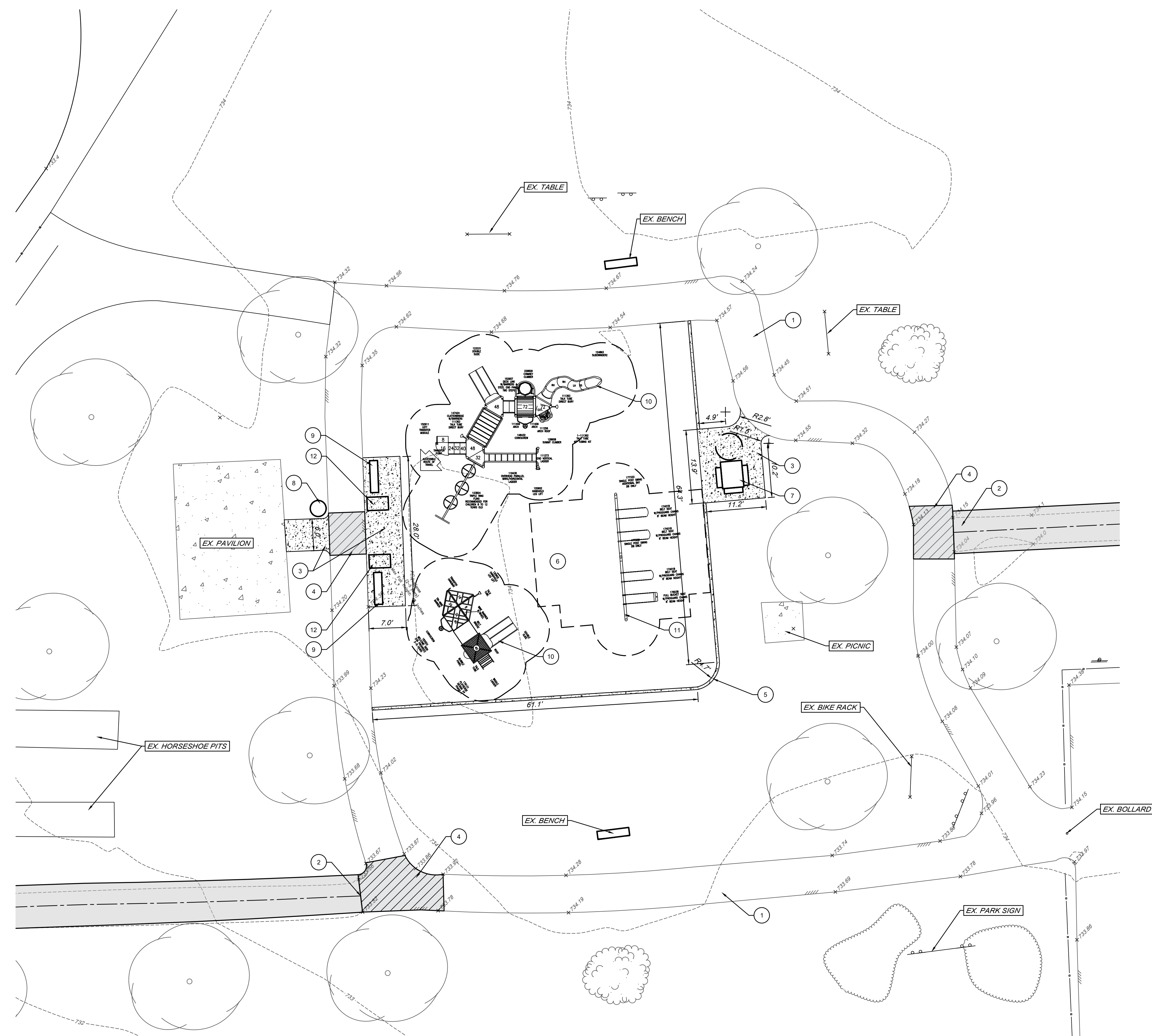


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- CONSTRUCTION NOTES:**
- 1 EXISTING ASPHALT PATH TO REMAIN
 - 2 PROPOSED 8' WIDE HMA PATH, ADA ACCESSIBLE. ENDS OF WALK TO BE FLUSH WITH EXISTING SURFACES.
 - 3 PROPOSED CONCRETE PAD. PAD TO BE FLUSH WITH PROPOSED AND EXISTING SURFACES.
 - 4 PROPOSED HMA PATH. SAWCUT, REMOVE AND REPLACE IN AREAS AS NOTED FOR CLEAN EDGE.
 - 5 PROPOSED CONCRETE CURB; FLUSH WITH PLAYGROUND SURFACE AND EXISTING WALKS. SURROUNDING LAWN SHALL SLOPE AT 1:50 MIN. & 1:6 MAX TO ENSURE POSITIVE DRAINAGE AWAY FROM PLAYGROUND.
 - 6 PROPOSED ENGINEERED WOOD FIBER (EWF) SURFACING; 4" UNDERDRAIN WITH SOCK, BACKFILLED WITH PEASTONE IN A 12" WIDE TRENCH. CONTRACTOR TO DETERMINE DRAIN CONNECTION BASED ON SITE CONDITIONS TO ENSURE POSITIVE DRAINAGE AWAY FROM PLAYGROUND.
 - 7 PROPOSED ADA PICNIC TABLE
 - 8 PROPOSED TRASH RECEPTACLE
 - 9 PROPOSED BENCH
 - 10 PROPOSED PLAYGROUND STRUCTURE. PLAYGROUND EQUIPMENT TO MEET WRITTEN SPECIFICATION FOR EACH PIECE, POSTS AND LANDINGS INCLUDING SUSTAINABILITY REQUIREMENTS, OR APPROVED EQUAL.
 - 11 PROPOSED SWING SET.
 - 12 CLEAR SPACE



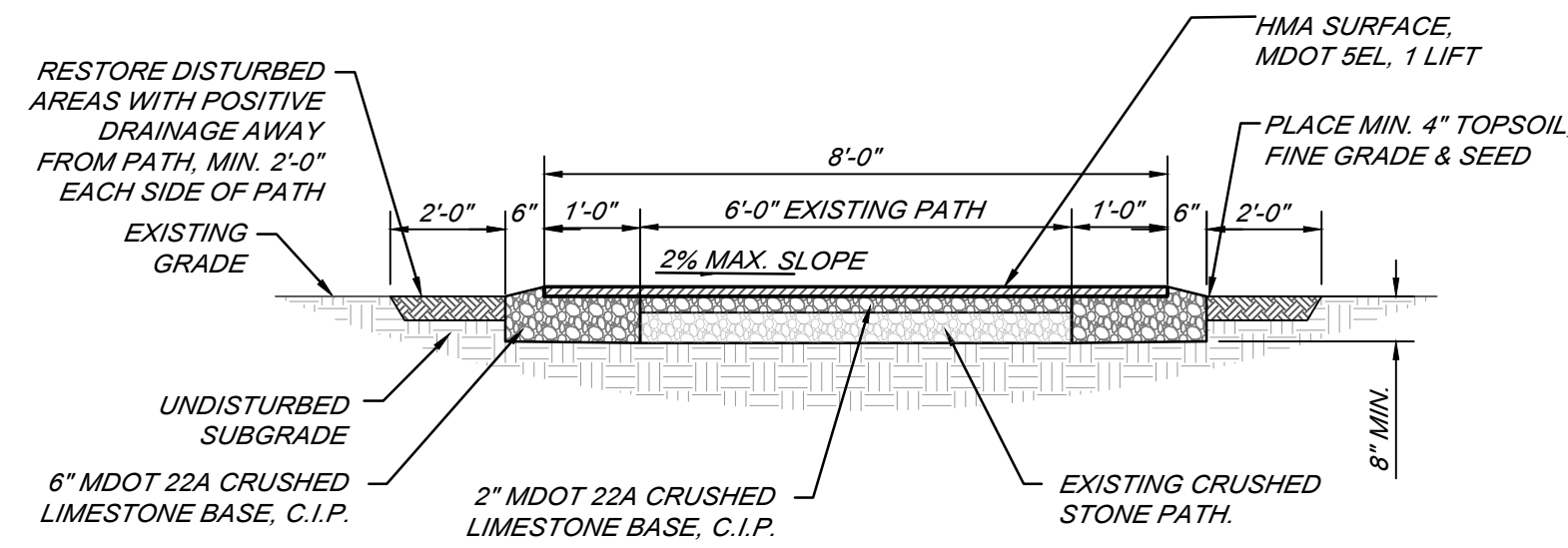
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SITE ENLARGEMENT PLAN					
<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</small>					
DE BY: SET	CH. BY: CAT	PROJECT NO. 132276SG2022			
DR. BY: SET	APP. BY:	SHEET 5 OF 7			
STDS.	FILE NO.	<table border="1" style="float: right;"> <tr> <td style="text-align: center;">C</td> </tr> <tr> <td style="text-align: center;">5</td> </tr> </table>		C	5
C					
5					
DATE 08/23/2023	FILE NO. DPL-1200- 5				
SCALE 1" = 10'					

PLOTTING SCALE: RET. F.B. PG. ACAD FILE:

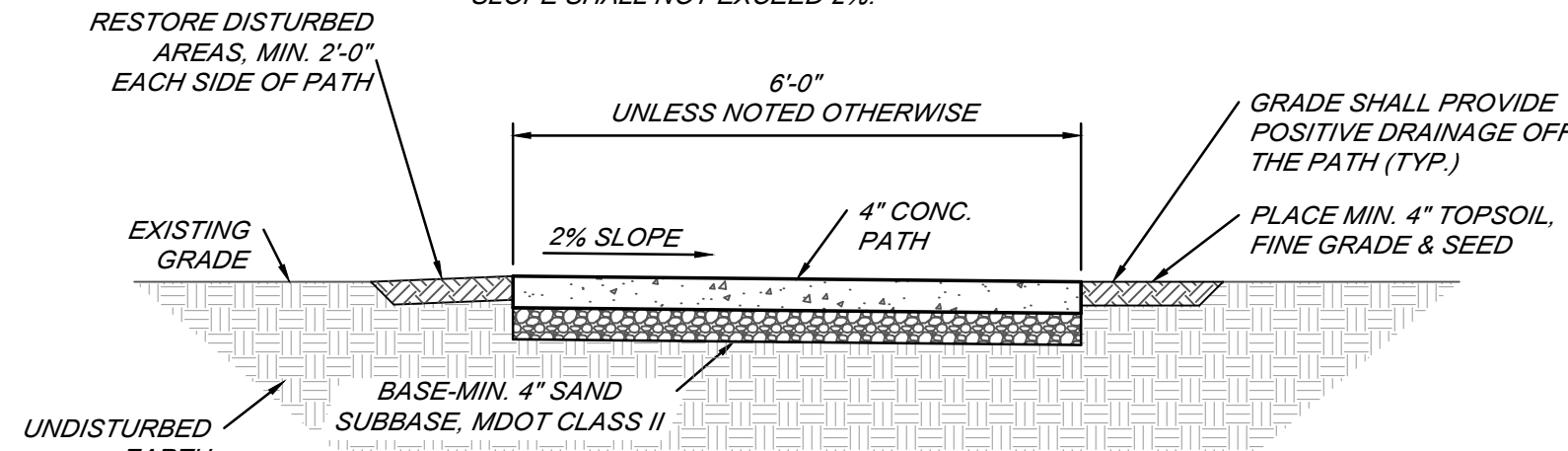
NOTE: THE PROPOSED ACCESSIBLE PATH RUNNING SLOPE SHALL NOT EXCEED 5% (1:20) & THE CROSS SLOPE SHALL NOT EXCEED 2%.



1 HMA PATH

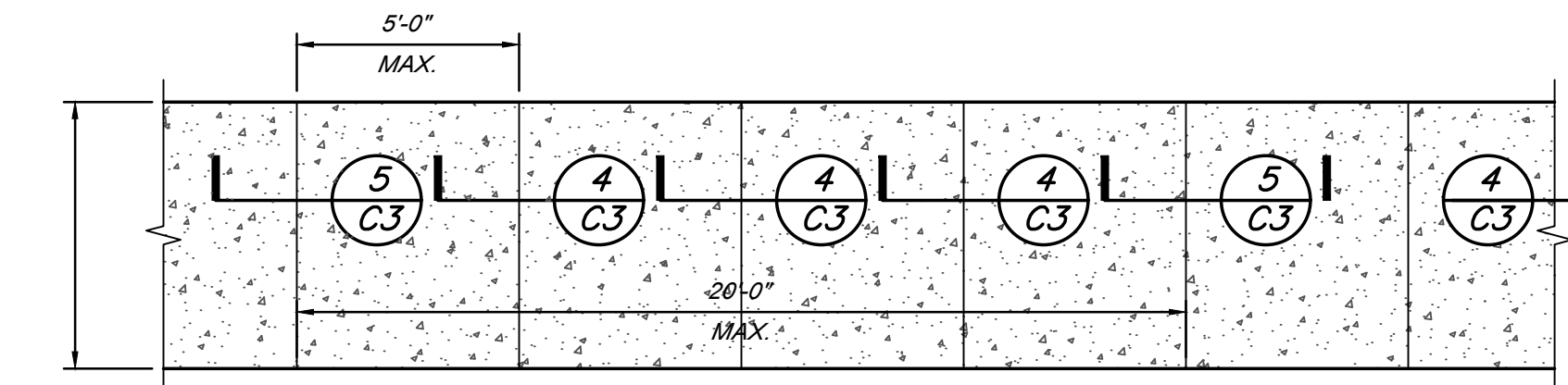
NTS

NOTE: THE PROPOSED ACCESSIBLE PATH RUNNING SLOPE SHALL NOT EXCEED 5% (1:20) & THE CROSS SLOPE SHALL NOT EXCEED 2%.



2 CONCRETE PAVING

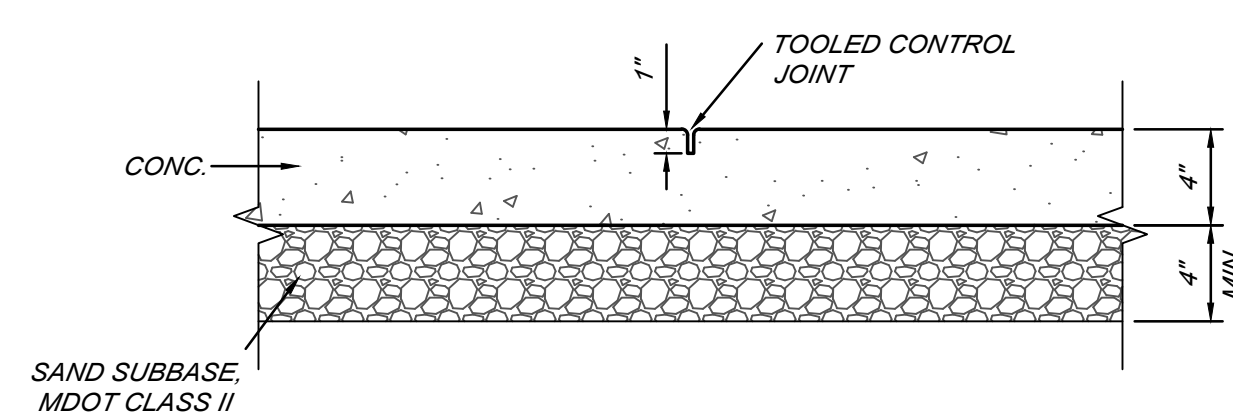
1/2"=1'-0"



3 TYP. EXPANSION & CONTROL JOINT LAYOUT

1/4"=1'-0"

NOTE: CONC. PATH'S SURFACE SHALL HAVE A LIGHT BROOM FINISH. CONTROL JOINTS WILL BE TOOLED.

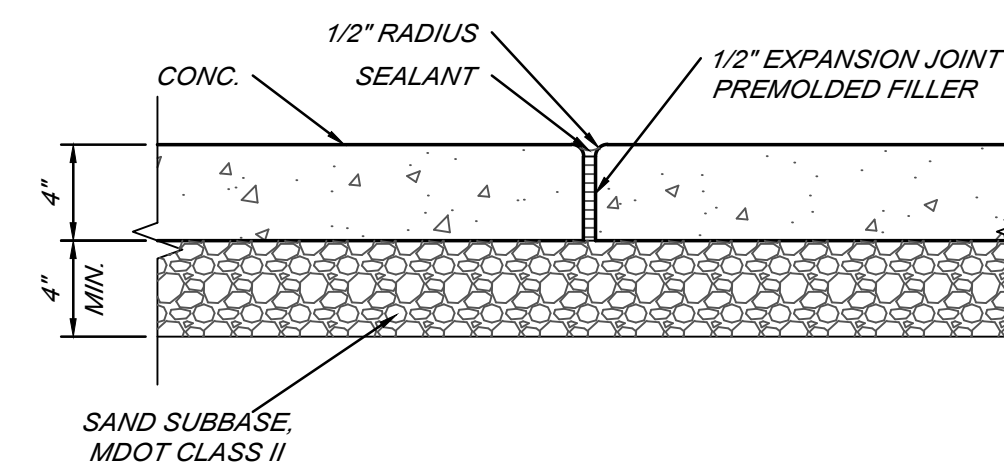


4 TYP. CONTROL JOINT

1-1/2"=1'-0"

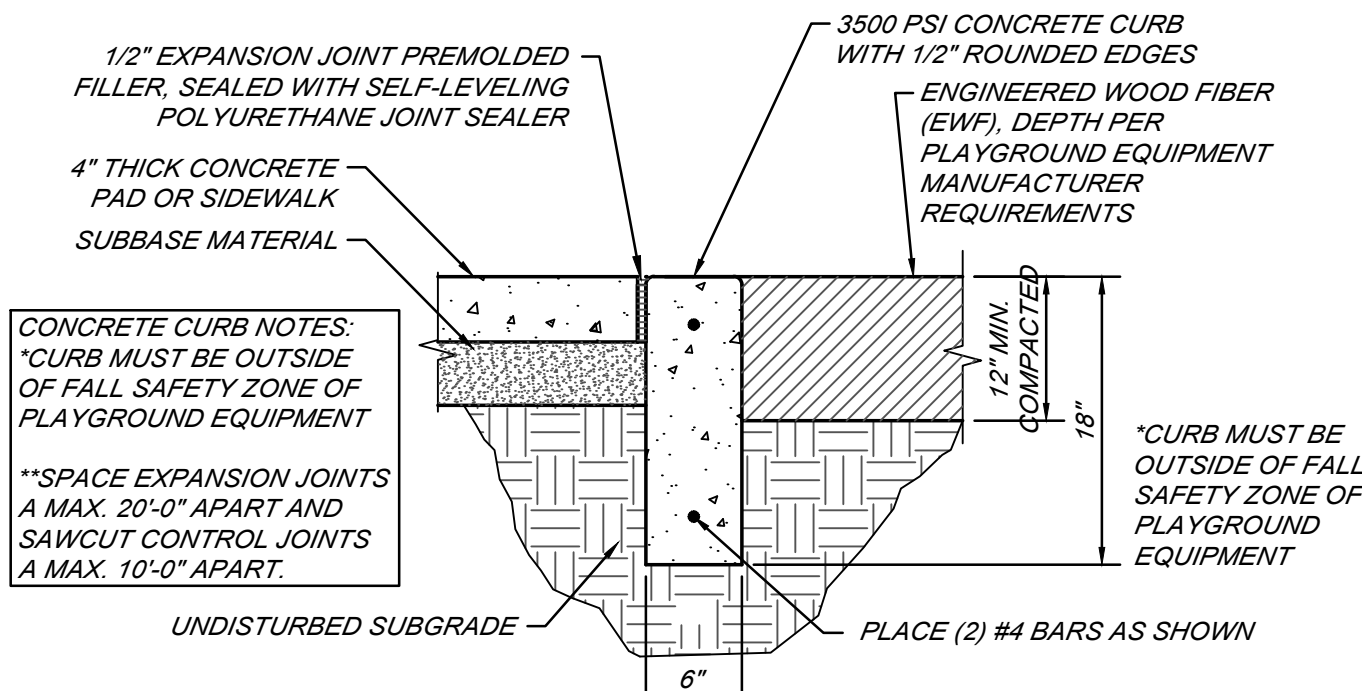
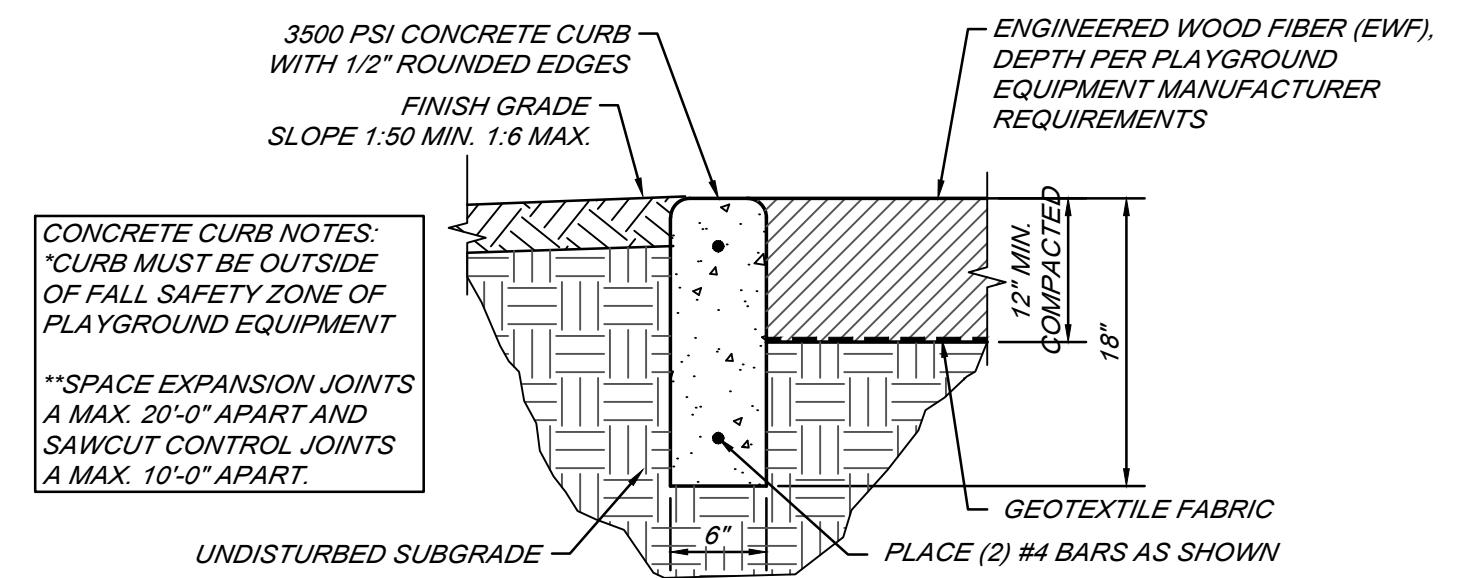
5 TYP. EXPANSION JOINT

1-1/2"=1'-0"



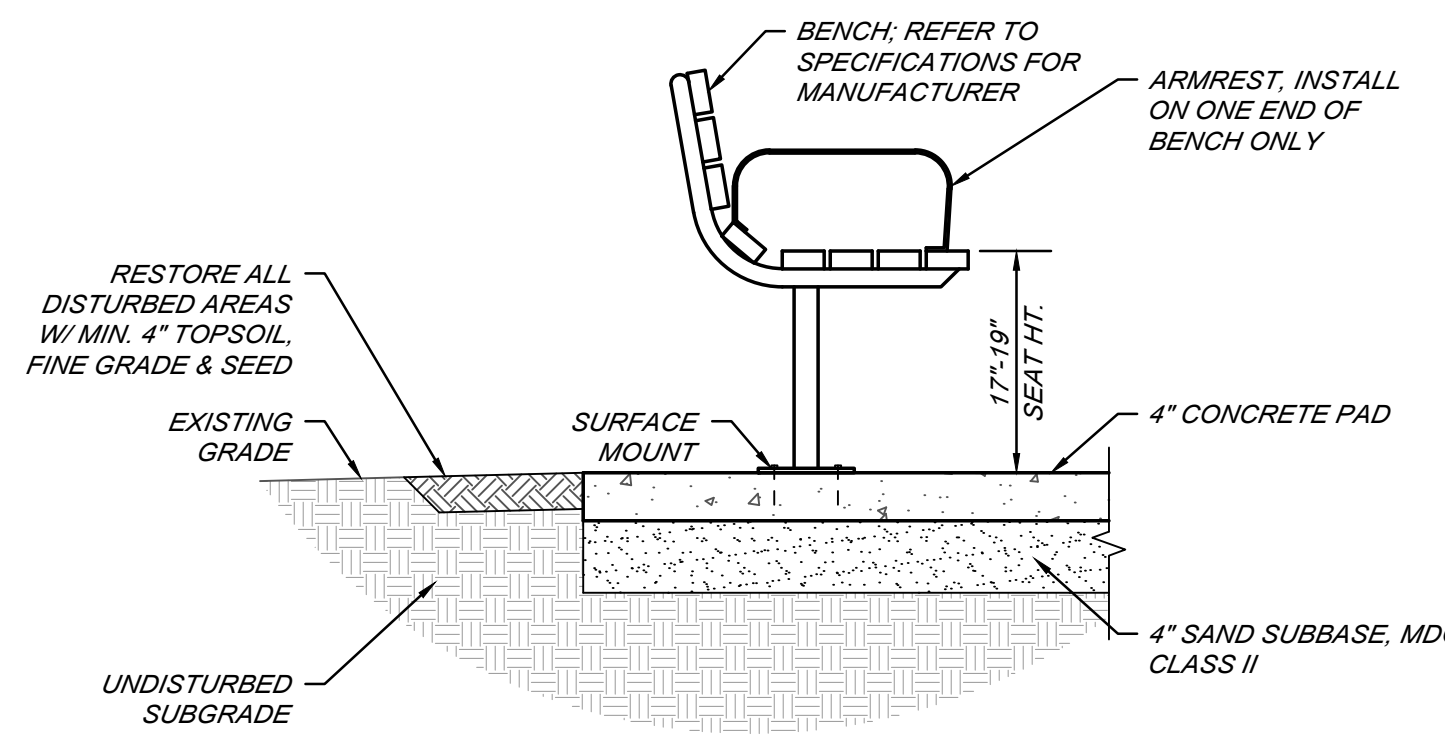
6 PLAYGROUND EDGE ALONG EXISTING GRADE

NTS



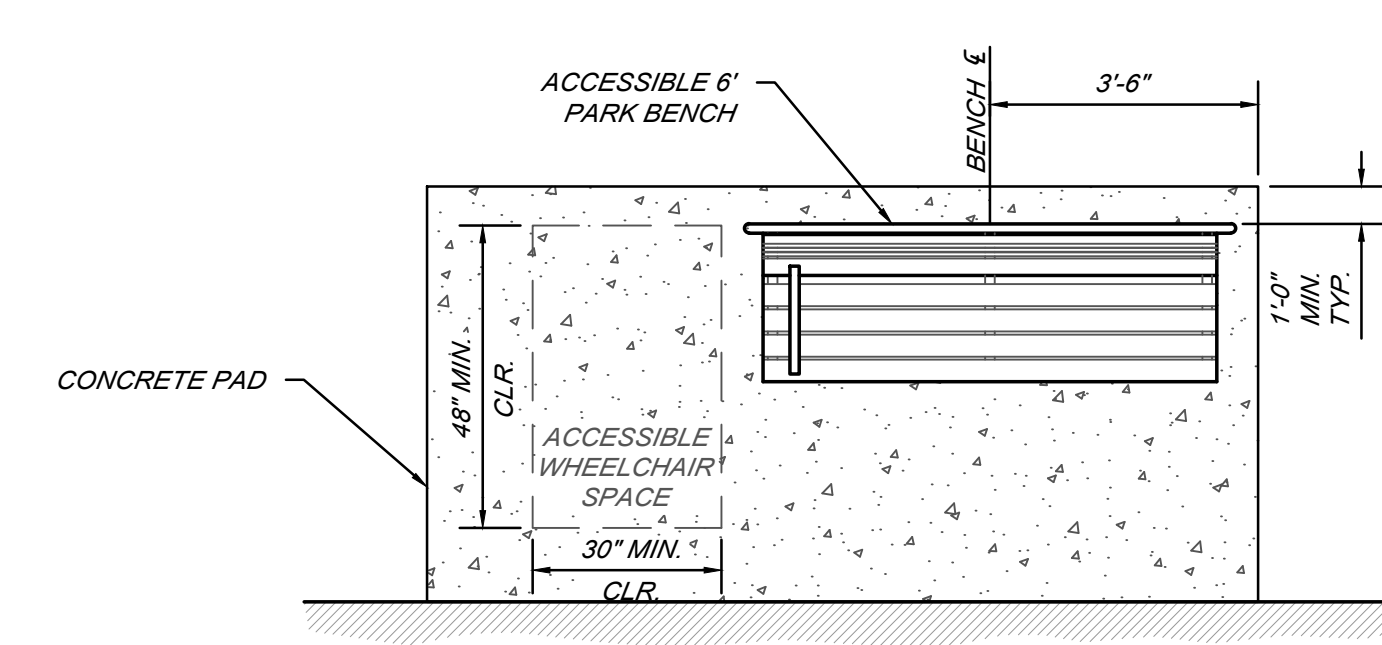
7 PLAYGROUND EDGE ALONG CONCRETE SIDEWALK

NTS



8 BENCH & CONCRETE PAD

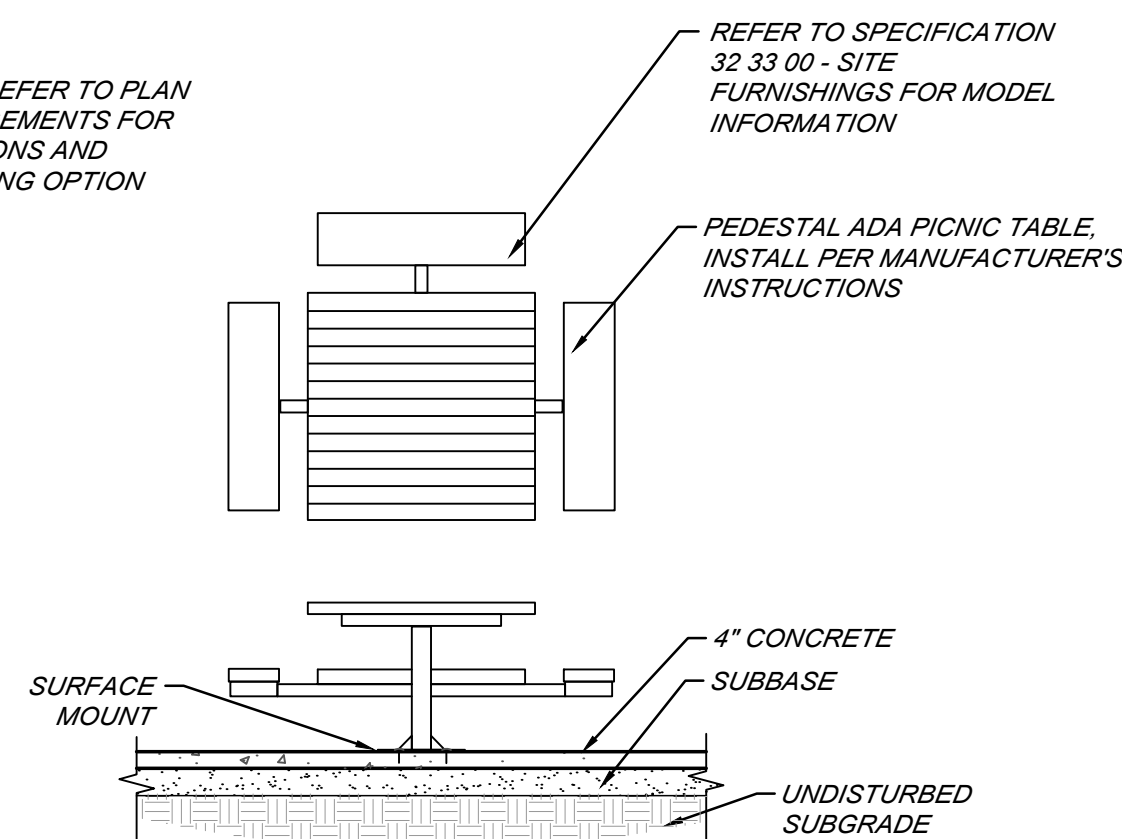
NTS



9 BENCH PLAN

NTS

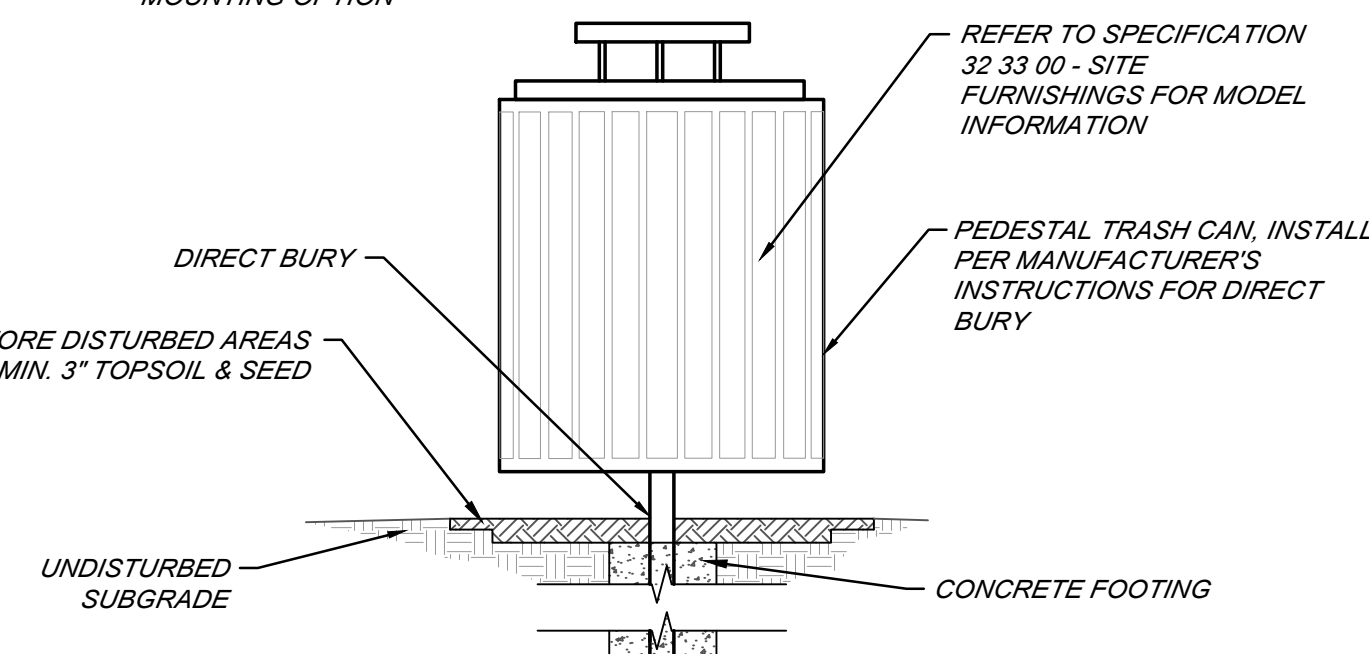
NOTE: REFER TO PLAN ENLARGEMENTS FOR LOCATIONS AND MOUNTING OPTION



10 PICNIC TABLE

NTS

NOTE: REFER TO PLAN ENLARGEMENTS FOR LOCATIONS AND MOUNTING OPTION



11 TRASH RECEPTACLE

1-1/2"=1'-0"

DRAFT FOR REVIEW

BY	MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>			
<p>APPLERIDGE PARK CHARTER TWP. OF YPSILANTI, MICHIGAN</p>			
<p>SITE DETAILS</p>			
<p>DE. BY: SET DR. BY: SET</p>		<p>CH. BY: CAT APP. BY:</p>	
<p>PROJECT NO. 132276SG2022</p>		<p>SHEET 6 OF 7</p>	
<p>DATE 08/23/2023</p>		<p>FILE NO. DPL-1200-6</p>	
<p>SCALE AS NOTED</p>		<p>C 6</p>	

ACAD FILE: PG. F.B. RET. PLOTTING SCALE:

MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS
EROSION & SEDIMENT CONTROL MEASURES

KEY	SESC MEASURE	SYMBOL	WHERE USED
1	SEEDING		When bare soil is exposed, temporarily or permanently, to erosive forces from wind and or water on flat areas, mild slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles.
2	MULCH		On flat areas, mild slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles when areas are subject to rutting impact, and erosive forces from wind or water.
7	RIPRAP		Along drain banks, shorelines, or where concentrated flows occur. Slows velocity, reduces erosion and sediment load.
60	STORM DRAIN INLET PROTECTION		Around the entrance to a newly constructed catch basin or an inlet that will capture runoff from an earth change activity.

DETAILED DRAWINGS AND SPECIFICATIONS ARE LOCATED IN THE MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS SOIL EROSION AND SEDIMENTATION CONTROL AUTHORIZED PUBLIC AGENCY PROCEDURES MANUAL

SYMBOLGY FOR INSERTION INTO CONSTRUCTION DRAWINGS:

	= PERMANENT MEASURE		= LIMITS OF DISTURBANCE
	= TEMPORARY MEASURE		= SILT FENCE
			= STONE ACCESS DRIVE

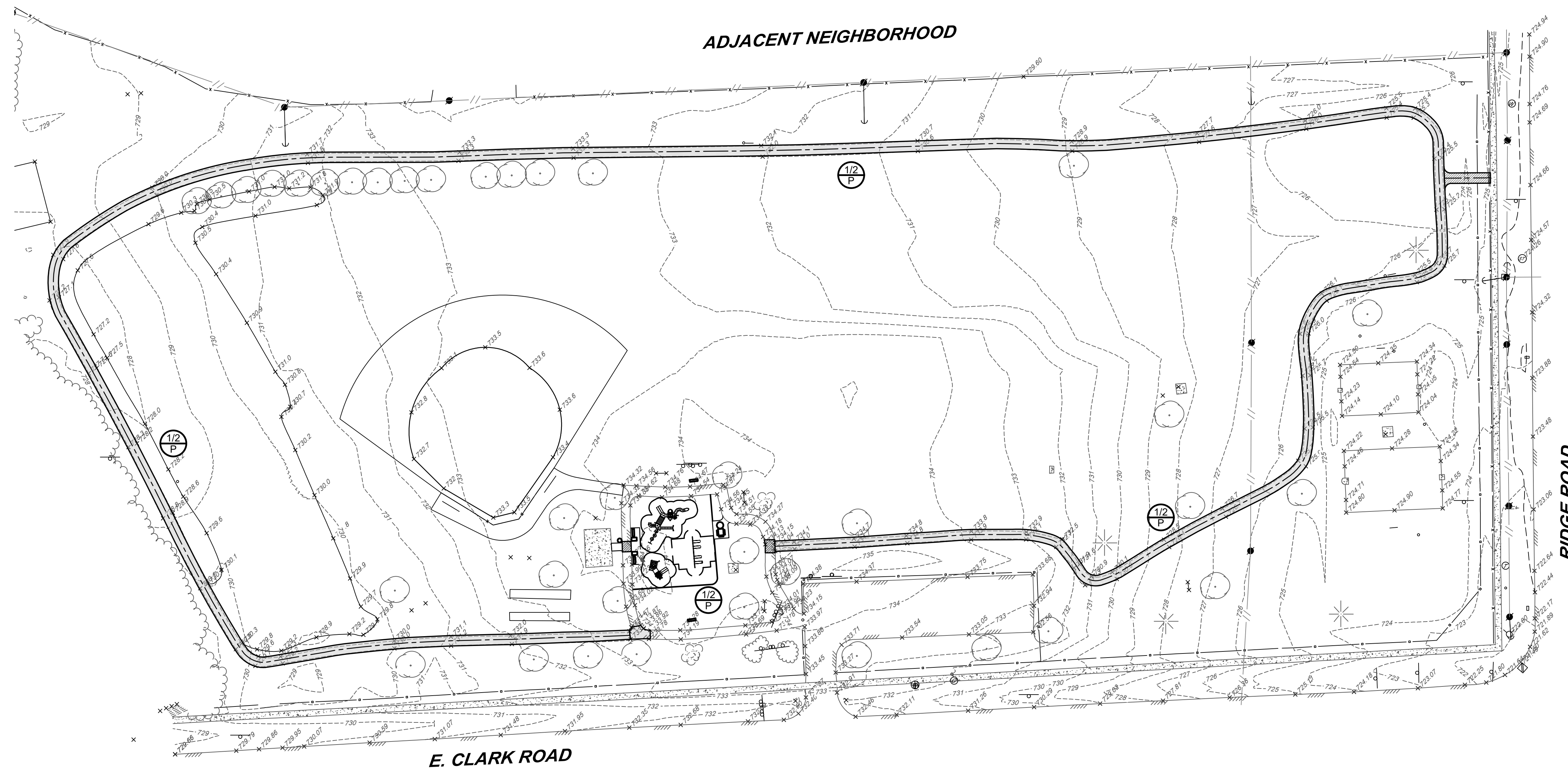
Contractor shall conform to Soil Erosion and Sedimentation Control Act, Part 91 of Public Act 451 of 1994, as amended. All catch basins, on the site and adjacent to the site, shall be covered with cloth filters for Soil Erosion and Sedimentation Control.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION.
- EROSION AND ANY SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
- DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION, SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
- CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES. HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAS BEEN ACCOMPLISHED AND APPROVED BY THE AGENCY WITH JURISDICTION.
- DEBRIS FROM THE PROJECT SHALL BE LEFT ON THE SITE BY DELIVERY OR CONSTRUCTION VEHICLES THROUGH THE USE OF CLEAN STONE EXITS. SHOULD THE STONE BECOME INEFFECTIVE IT WILL BE REPLACED. ALL CONSTRUCTION TRAFFIC WILL USE THE CLEAN STONE EXITS.
- IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDED AREAS WITH UNWEATHERED SMALL GRAIN STRAW OR HAY SPREAD UNIFORMLY AT THE RATE OF 1 - 1.2 TO 2 TONS PER ACRE. ANCHOR MULCH WITH DISC-TYPE MULCH ANCHORING TOOL OR OTHER MEANS AS APPROVED BY THE AGENCY WITH JURISDICTION.
- ALL MUD, DIRT, AND DEBRIS TRACKED OR SPILLED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
- PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGES HAVE BEEN COMPLETED WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES. TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE ESTABLISHED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED ALL DRAIN BANKS DISTURBED BY CONSTRUCTION SHALL BE RESTORED WITHIN FIVE CALENDAR DAYS AND SOD PEGGED IN PLACE.
- PARTICULAR CARE SHOULD BE TAKEN WHEN WORKING ALONG THE PERIMETER OF THE SITE. IN NO EVENT SHALL WORK AREA EXTEND BEYOND THE LIMITS INDICATED ON THE PLANS.
- SHOULD IT BE NECESSARY FOR THE CONTRACTOR TO DEWATER THE GROUND IN THE COURSE OF CONSTRUCTING THE PROPOSED UTILITY, THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY SOIL EROSION CONTROL DEVICE IN A MANNER THAT WILL FILTER ALL DISCHARGED WATER FROM THE DEWATERING OPERATION IN NO INSTANCE SHALL THE DEWATERING DISCHARGE BE PERMITTED TO FLOW UNFILTERED FROM THE CONSTRUCTION SITE.
- THE CONTRACTOR SHALL CONTROL THE DUST ON THE SITE DURING THE LIFE OF THE CONTRACT. IN ACCORDANCE WITH THE SPECIFICATIONS AND THE REQUIREMENTS OF THE COMMUNITY THIS DUST CONTROL SHALL BE ACCOMPLISHED BY THE APPLICATION OF A POSITIVE DUST PICK-UP METHOD WITH WATER ON HARD SURFACES. SUCH DUST CONTROL MATERIALS SHALL BE APPLIED AS OFTEN AS IS NECESSARY IN THE OPINION OF THE COMMUNITY TO CONTROL THE DUST.
- SHOULD THE SOIL EROSION CONTROL REQUIREMENTS BE NEGLECTED OR NOT ADEQUATELY FOLLOWED, THE COMMUNITY MAY REQUIRE THE CONTRACTOR TO CEASE CONSTRUCTION OPERATIONS AND TO APPLY HIS ENTIRE FORCE TO MEET THE REQUIREMENTS BEFORE PROCEEDING FURTHER WITH THE PROJECT.
- ALL WORK CONNECTED WITH SOIL EROSION AND SEDIMENTATION CONTROL, EITHER TEMPORARY OR PERMANENT, AS REQUIRED BY THE SOIL EROSION CONTROL PERMIT, IS TO BE IMPLEMENTED DURING CONSTRUCTION.

SEQUENCE OF CONSTRUCTION - SESC

- INSTALL ALL TEMPORARY SOIL EROSION CONTROL MEASURES PRIOR TO DISTURBING ANY EARTH ON THE SITE.
- STABILIZE SLOPES STEEPER THAN 1 ON 4, CHANNELS AND SWALES WITHIN 7 DAYS OF EARTH DISTURBANCE. INSTALL PERMANENT STABILIZATION MEASURES WITHIN 5 DAYS OF FINAL GRADING.
- DURING STORM SEWER INSTALLATION, ALL NEWLY CONSTRUCTED DRAINAGE STRUCTURES SHALL BE PROTECTED WITH A DRAINAGE STRUCTURE FILTER. THIS WORK WILL BE INCLUDED IN THE DRAINAGE STRUCTURE COST.
- INSTALL TOPSOIL, AND HYDROSEED ON DISTURBED RIGHT-OF-WAY WITHIN 5 DAYS OF COMPLETING UTILITY INSTALLATION.
- PLACE RIPRAP WITHIN 24 HOURS OF PLACING END SECTIONS OR OTHER DRAINAGE OUTLETS.
- CLEAN ALL ACCUMULATED SEDIMENT FROM CATCH BASINS, SEWERS AND PAVEMENT AREAS AS REQUIRED FOLLOWING COMPLETION OF CONSTRUCTION.
- THE EXACT SCHEDULE OF SOIL EROSION AND SEDIMENTATION CONTROL EVENTS (WITH DAY AND/OR DATES OF THE VARIOUS ACTIVITIES) SHALL BE SUBMITTED TO WASHTENAW COUNTY BY THE CONTRACTOR, FOR REVIEW AND APPROVAL, PRIOR TO OBTAINING A PERMIT.



TIMING SEQUENCE

OPERATION	SCHEDULE
TEMPORARY CONTROL MEASURES	_____
STRIPPING/STOCKPILING OF SOIL	_____
ROUGH GRADING/SEDIMENTATION CONTROL	_____
STORM UTILITIES	_____
PERMANENT CONTROL MEASURE	_____
SITE CONSTRUCTION	_____
FINISH GRADING	_____

* SCHEDULE TO BE FILLED OUT BY CONTRACTOR/PERMITEE.

DRAFT FOR REVIEW

BY	MARK	REVISIONS	DATE

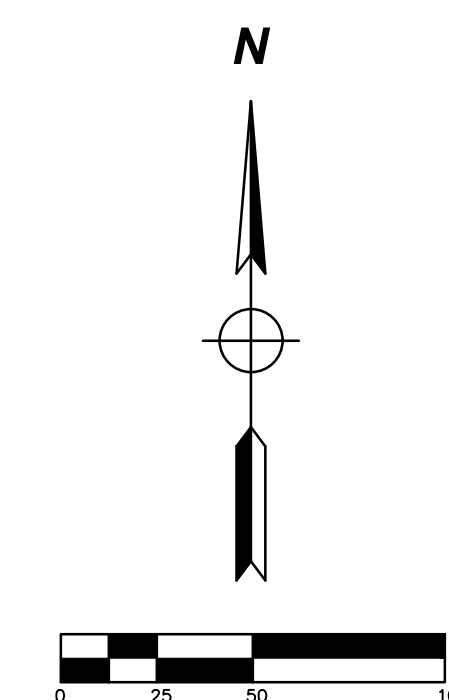
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**APPLERIDGE PARK
CHARTER TWP. OF YPSILANTI, MICHIGAN**

SOIL EROSION PLAN

Spicer group
SAGINAW OFFICE
230 S. Washington Ave.
Saginaw, MI 48607
Tel. 989-754-4717
Fax: 989-754-4440
www.SpicerGroup.com

DE BY: SET	CH. BY: CAT	PROJECT NO.
DR. BY: SET	APP. BY:	132276SG2022
STDS.	SHEET 7 OF 7	C
DATE 08/23/2023	FILE NO. DPL-1200- 7	7
SCALE 1" = 50'		



PRELIMINARY ESTIMATE OF COST
 APPLERIDGE PARK IMPROVMENTS
 YPSILANTI TOWNSHIP
 WASHTENAW COUNTY, MICHIGAN

Item No.	Est. Qty.	Unit	Description	Unit Price	Amount
<u>DEMOLITION & SITE PREPARATION</u>					
1	1	LS	Mobilization	Lump Sum	\$ 5,000.00
2	1	LS	Demolition/Site Preparation	Lump Sum	\$ 5,000.00
3.	1	LS	Excavation and Rough Grading	Lump Sum	\$ 25,000.00
4.	1	LS	Soil Erosion and Sedimentation Control	Lump Sum	\$ 3,000.00
<u>PLAYGROUND</u>					
5.	1	LS	Play Structures	Lump Sum	\$ 100,100.00
6.	1	LS	Swing Set	Lump Sum	\$ 5,600.00
7.	1	LS	6" Reinforced Concrete Edging (approx. 150 Ln. Ft.)	Lump Sum	\$ 6,000.00
8.	1	LS	Safety Surface, Engineered Wood Fiber, Compacted, w/ Geotextile Fabric, 12" depth (approx. 4550 Sq. Ft.)	Lump Sum	\$ 11,000.00
9.	1	LS	Playground Subsurface Drainage, 4" Perforated Pipe w/ Sock in Pea Stone (approx. 200 Ln. Ft.)	Lump Sum	\$ 14,000.00
10.	1	LS	Concrete Pad, Non-Reinforced, 4" depth (approx. 420 Sq. Ft.)	Lump Sum	\$ 16,800.00
11.	1	LS	Sand Subbase, Class II, 4" depth (approx. 56 Sq. Yd.)	Lump Sum	\$ 1,500.00
<u>TRAIL</u>					
12.	1	LS	8' wide, HMA Path, 2" depth (approx. 2500 Ln. Ft.)	Lump Sum	\$ 61,500.00
13.	1	LS	Crushed Limestone, 22A, C.I.P., 2" depth (approx. 2960 Sq. Yd)	Lump Sum	\$ 24,000.00
14.	1	LS	Crushed Limestone, 22A, C.I.P., 6" depth (approx. 554 Sq. Yd)	Lump Sum	\$ 8,500.00
<u>OTHER ITEMS</u>					
15.	2	EA	Park Bench w/ 1 Armrest & Backrest, Surface Mount, 6'	\$ 2,000.00	\$ 4,000.00
16.	1	EA	ADA Picnic Tables	\$ 5,000.00	\$ 5,000.00
17.	1	EA	Trash Receptacle w/ Rain Bonnet, Direct Bury	\$ 1,500.00	\$ 1,500.00
18.	1	LS	Site Restoration & Cleanup	Lump Sum	\$ 5,000.00
19.	1	LS	Construction Staking & Material Testing	Allowance	\$ 7,800.00
				Sub-Total	\$ 310,300.00
				Contingencies (10%)	\$ 27,708.00
				Engineering (18%)	\$ 55,700.00
				TOTAL	\$ 393,708.00

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 APPLERIDGE PARK IMPROVMENTS
 YPSILANTI TOWNSHIP
 WASHTENAW COUNTY, MICHIGAN

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					TOTAL	\$ 393,708.00



MEMORANDUM

To: Charter Township of Ypsilanti Board of Trustees

From: John Hines, Municipal Services Director

Date: May 15, 2024

RE: **Request Authorization to reject the bids for the replacement and installation of the Community Center Renovation HVAC project and accept the low quote from W.J. O’Neil for \$110,000.00.**

The Residential Services Department is requesting authorization to reject the second round of bids for the Community Center HVAC project and approve the low quote received by W.J. O’Neil for Community Center Renovation that will be funded through an Energy Efficiency and Conservation Block Grant (EECBG). The EECBG grant is an award of \$113,000 with no match required. This approval is contingent on a budget amendment for GL#213-901-975.555 and will be reimbursed to GL#213-000-529.500 when the grant funds are released to the township.

At the April 2nd 2024 Board of Trustees meeting, the board approved for the Residential Services Department along with Ernat Consulting to seek sealed bids for the second time at a reduced scope for the replacement and installation of the Community Center HVAC Units. On May 6th, 2024 bids were opened at the Township Civic Center where four bids were received. Bid Tab Below:

Bids:

Temperature Services -	\$73,507.00	(Does not include Gym Air Handler Unit)
W.J. O’Neil -	\$79,979.00	
Allied Building Services -	\$96,730.00/\$168,380.00	(without Gym Unit/ with Gym Unit)
Artic Air -	\$207,714.00	

The request to reject the second rounds of bids is due to the discrepancy of the bids received and prices caused by the discrepancies. The initial low quote provided by Temperature Services does not include the Gym Air Handler Unit, the quote provided by Allied Building Services at \$168,380.00 and Artic Air at \$207,714.00 that do include the gym unit are far above the amount budgeted as received by the grant.

W.J. O’Neil submitted a bid that included the gym unit at \$79,979.00. In the process of moving forward with their bid, they notified the Township that financial information received from the Gym Unit supplier caused an accounting error in their bid. Due to this error, they submitted a new price of \$110,000.00 which is still within budget and the lowest applicable bid. The costs associated with this project have increased substantially since notification of the award of the

Township Supervisor
Brenda L. Stumbo
Township Clerk
Heather Jarrell Roe
Township Treasurer
Stan Eldridge



**YPSILANTI
TOWNSHIP**
— RESIDENTIAL SERVICES DEPARTMENT —

Trustees
Ryan Hunter
John Newman II
Gloria Peterson
Debbie Swanson

grant and has been difficult to get bids within the budget and timeframe to execute the grant. Ernat Consulting and Township Staff trust the price increase provided by WJ O'Neil from their supplier is accurate based on what was submitted by the other bidders that included the Air Handler Unit.

John Hines
Municipal Services Director
jhines@ypsitownship.org

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

These Supplemental Instructions to Bidders (SIB) amend or supplement the Instructions to Bidders. All provisions that are not so amended or supplemented remain in full force and effect.

A. Time of Completion & Construction Schedule

Prior to the execution of the Contract, the CONTRACTOR shall submit an outline of his proposed order of work and indicate dates for completing the major items of work. Major items shall be considered to be removal of existing RTU units and replacement in kind. This schedule, when approved by the OWNER, shall become part of the Contract.

A pre-construction meeting shall be arranged prior to the start of work. The CONTRACTOR shall bring a tentative schedule to the pre-construction meeting. At this time, all Contract requirements shall be reviewed.

It is anticipated that construction will begin on or around July 8, 2024. The CONTRACTOR shall complete the proposed work, including final tests thereof, in order to have the HVAC project finished as of the substantial completion date. Final cleanup and restoration shall be finished by the project completion date, unless otherwise directed in writing by the OWNER.

Summary of anticipated dates:

Contract AwardMay 22, 2024
Notice to ProceedMay 31, 2024
Construction Start DateJuly 8, 2024
Substantial Completion DateJuly 26, 2024
Project Completion.....August 2, 2024

All requests for extensions of time shall be submitted in writing in accordance with Section 15 of the General Conditions. Such requests shall:

1. Detail the reason for the request.
2. Provide a realistic revised completion date.
3. Indicate any other areas that may be impacted by such an extension.

The CONTRACTOR shall request a deadline extension as soon as it has become apparent the completion date is unreasonable. In no case will a request be considered if it is submitted after the originally required completion date has passed.

A. HVAC replacement

The project proposal is the replacement of HVAC Units with 24 Energy Efficient Units at the Township Community Center. Below is the list and age of current units followed by the minimum specifications for the replacement units needed.

EXISTING:

ID	Make	Model Number	Serial Number	Year Installed
AHU-1	Trane	CSAA0010UAC00	K11C22502	
RTU-1	Trane	YSC036A3RLA2YD000A1000000	815100181L	2008
RTU-2A	Trane	YSC036A3RLA2YD000A1000000	815100177L	2008
RTU-6A	Bryant	580FPV03607ANGA	0504G30414	2004
RTU-7A	Bryant	580FPV036074ABGA	0504G30413	2004
RTU-8A	Bryant	580FPV036074ABGA	0504G30410	2004

MINIMUM REPLACEMENT REQUIREMENTS

AHU-1

Replacement to include improvement efficiency and SEER rating

1-year warranty

3-ton RTU (RTU-1, RTU-2A)

DX cooling, gas heat

Improved efficiency

Convertible configuration

208-230/60/3

Microprocessor controls

Low gas heat

Economizer Dry Bulb 0-100% with Barometric Relief

Through the base electrical

Non-fused disconnect

Lontalk(R) communications interface

Return air smoke detector

1st Year Labor warranty

SEER Rating \geq 15.0

3-ton RTU (RTU-6A, RTU-7A, RTU-8A)

208-230/3/60

Medium Gas Heat

3 Tons

One stage cooling

Standard Packaging

Dir Drive-EcoBlue-Med Static
Al/Cu - Al/Cu
Electro-Mechanical Ctl W7212
Vertical Economzier, Low Leak
SEER Rating \geq 15.0

Community Center Equipment Installation:

Scope of Work includes:

- Disconnect gas piping and electrical supply.
- Disconnect low voltage thermostat wiring.
- Provide crane and rigging to remove old unit.
- Provide crane and rigging to set new unit.
- Reconnect gas piping and electrical supply modifying as necessary.
- Reconnect low voltage thermostat wiring.
- Remove Lock out / Tag out.
- Startup unit and sequence check for proper operation.
- Cleanup job site and recycle defective parts and equipment.

B. Permits

The following permits will be required for project construction. The CONTRACTOR is required to comply with all terms and conditions of the permit as incidental to the unit prices bid and no extra compensation will be allowed.

- a. Permitting Agency: Charter Township of Ypsilanti SESC
- Contact at Agency: Dave Bellers
- Phone number: (734) 544-3653
- Permit Fee: Letter of Retainage (by Township)
- Bond Amount (if applicable): N/A
- Date of Application: Contractor needs to apply
- Person Responsible for Acquiring the Permit: Contractor
- Date Permit issued if already in hand: TBD

C. Minimum Wage Requirements and Compliance

The OWNER has specific minimum wage requirements that are as follows:

Davis-Bacon Act, July 2, 1964 (Title 40, USC, 276A)

Anti-Kickback Act (Title 18, USC 874)

U.S. Department of Labor Regulations and Standards (Title 29, 1, 3 and 5)

Equal Employment Opportunity Act, September 18, 1965 (Executive Order No. 11246)

Federal Occupational Safety and Health Act of 1970

Housing and Urban Development Act of 1968, Section 3, as amended, 12 USC, 1701u.

D. Pre-bid Meeting

No pre-bid meetings are scheduled for this project.

BID FORM
Community Center HVAC
Replacement
Charter Township of Ypsilanti


THIS BID IS SUBMITTED TO:
Charter Township of Ypsilanti
7200 S Huron River Dr
Ypsilanti, MI 48197

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

Bidder accepts all of the terms and conditions of the Advertisement to Bid, Instructions to Bidders and Supplemental Instructions to Bidders.

In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

- A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

Addendum No.	Addendum Date	Signature
_____	✓ _____	 _____
_____	_____	_____

- B. Bidder has visited the site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.
- F. Bidder does not consider that any further examinations, investigations, exploration, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder 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 Bidding Documents.
- H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.
- I. Bidder has given OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by OWNER is acceptable to Bidder.
- J. The Bidding Documents are generally sufficient to indicate and convey understanding of all

terms and conditions for the performance of the Work for which this Bid is submitted.

Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

BY: Nick Dehstrom

SIGNED: 

IRAN LINKED BUSINESS CERTIFICATION

Pursuant to Michigan Public Act 517 of 2012, any Bidder that submits a bid on a request for proposal with the Charter Township of Ypsilanti shall certify that Bidder is not an Iran linked business. An Iran linked business is not eligible to submit a bid on a request for proposal with the Charter Township of Ypsilanti. See attached definitions regarding this certification.

The undersigned Bidder does hereby certify, pursuant to Michigan Public Act 517 of 2012, that:

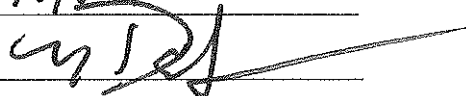
Bidder is not a person engaging in investment activities in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran, or

Bidder is not a financial institution that extends credit to another person if that person will use the credit to engage in investment activities in the energy sector of Iran.

Date:

5/6/2024

Signed:

A handwritten signature in black ink, appearing to be "M. J. [unclear]", written over a horizontal line.

DEFINITIONS

- (A) "Energy sector of Iran" means activities to develop petroleum or natural gas resources or nuclear power in Iran.
- (B) "Investment" means 1 or more of the following:
- i. A commitment or contribution of funds or property.
 - ii. A loan or other extension of credit.
 - m. The entry into or renewal of a contract for goods or services.
- (C) "Investment activity" means 1 or more of the following:
- i. A person who has an investment of \$20,000,000.00 or more in the energy sector of Iran.
 - ii. A financial institution that exceeds \$20,000,000.00 or more in credit to another person, for 45 days or more, if that person will use the credit for investment in the energy sector of Iran.
- (D) "Iran" means any agency or instrumentality of Iran.
- (E) "Iran linked business" means either of the following:
- i. A person engaging in investment activities in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers or products used to construct or maintain pipelines used to transport oil or liquefied natural gas for the energy sector of Iran.
 - ii. A financial institution that extends credit to another person, if that person will use the credit to engage in investment activities in the energy sector of Iran.
- (F) "Person" means any of the following:
- i. An individual, corporation, company, limited liability company, business association, partnership, society, trust, or any other nongovernmental entity, organization, or group.
 - ii. Any governmental entity or instrumentality of a government, including a multilateral development institution, as defined in section 1701(c) (3) of the international financial institutions act, 22 USC 262r(c) (3).
 - iii. Any successor, subunit, parent company, or subsidiary of, or company under common ownership or control with, any entity described in subparagraph (i) or (ii).
- (G) "Public entity" means this state or an agency or authority of this state, school district, community college district, intermediate school district, city, village, township, county, public authority, or public airport authority.

SUBCONTRACTOR LISTING

Bidder submits to use the following subcontractors for performance of the work in accordance with Article 9 of the Instructions to Bidders.

Note to Bidder: List all work you propose to sublet on this Contract. Include each subcontractors name, address, phone, fax and e-mail address. Also include a description of work to be performed by subcontractor. For example: restoration, landscaping, lighting, signage, bore and jack, etc. List approximate dollar value of the subcontract.

NAME, ADDRESS & PHONE NO. OF SUBCONTRACTOR	DESCRIPTION OF WORK	APPROXIMATE DOLLAR VALUE OF SUBCONTRACT
---	------------------------	---

Spears Crane Canton	Crane / Rigging	5% of Bid

**BID FORM for
Community Center
HVAC Replacement
Township of Ypsilanti, Washtenaw County, State of Michigan**

N/A

Subtotal Category 3 : _____ \$ _____

Subtotal Category 1: \$ 79,979

Subtotal Category 2: \$ 1

Subtotal Category 3: \$ _____

Total Bid Amount (Categories 1-3 incl.): \$ 79,979

May 6, 2024

John Hines
 Ypsilanti Community Center
 2025 East Clark Road
 Ypsilanti, Michigan 48198

RE: Ypsilanti Community Center RTU Replacement

W.J. O'Neil Company is pleased to provide the following proposal for the replacement of the rooftop units located at the Ypsilanti Community Center.

Community Center Equipment:

ID	Make	Model Number	Serial Number	Year Installed
AHU-1	Trane	CSAA0010UAC00	K11C22502	
RTU-1	Trane	YSC036A3RLA2YD000A1000000	815100181L	2008
RTU-2A	Trane	YSC036A3RLA2YD000A1000000	815100177L	2008
RTU-6A	Bryant	580FPV03607ANGA	0504G30414	2004
RTU-7A	Bryant	580FPV036074ABGA	0504G30413	2004
RTU-8A	Bryant	580FPV036074ABGA	0504G30410	2004

Community Center Equipment Installation:

Scope of Work includes:

- Disconnect gas piping and electrical supply.
- Disconnect low voltage thermostat wiring.
- Provide crane and rigging to remove old unit.
- Provide crane and rigging to set new unit.
- Reconnect gas piping and electrical supply modifying as necessary.
- Reconnect low voltage thermostat wiring.
- Remove Lock out / Tag out.
- Startup unit and sequence check for proper operation.
- Cleanup job site and recycle defective parts and equipment.





Community Center Equipment Specifications:

Trane 6-ton Unit (AHU -1)

- Standard Ship Cycle
- DX Cooling / Gas Heat
- Standard Efficiency
- R-410A
- 6 Ton
- 208-230/60/3
- Symbio 700
- High Gas Heat
- Economizer, DB with Barometric Relief
- Through the Base Electric
- Non-Fused Disconnect Switch
- Advanced Controls and LonTalk (LCI)
- Return Air Smoke Detector
- 1st Yr Labor Whole Unit

Trane 3-ton RTU (RTU-1, RTU-2A)

- DX cooling, gas heat
- Standard efficiency
- Convertible configuration
- 208-230/60/3
- Microprocessor controls
- Low gas heat
- Economizer Dry Bulb 0-100% with Barometric Relief
- Through the base electrical
- Non-fused disconnect
- Lontalk(R) communications interface
- Return air smoke detector
- 1st Year Labor warranty
- SEER Rating 14.0

Bryant 3-ton RTU (RTU-6A, RTU-7A, RTU-8A)

- 208-230/3/60
- Medium Gas Heat
- 3 Tons
- One stage cooling
- Standard Packaging
- Dir Drive-EcoBlue-Med Static
- Al/Cu - Al/Cu
- Electro-Mechanical Ctl W7212
- Vertical Economzier, Low Leak
- SEER Rating 14.0

Proposal price will be \$79,979

Mechanical
Contracting,
Pipe Fabrication,
Service, and
Controls
www.wjo.com

DETROIT
35457 Industrial Dr
Livonia, MI
48150

T 734.458.2300
F 734.458.2305

CHATTANOOGA
500 West 26th St.
Chattanooga, TN
37408

T 423.702.6000
F 423.702.6005





Bid Clarifications / Notes / Exclusions:

- Work to be performed M-F 8-4.
- Material warranty per manufacturer's specifications.
- 1st year labor warranty on new equipment.
- W.J. O'Neil Company will hold 15year compressor warranty on all new equipment if under Preventative Maintenance Program with W.J. O'Neil Company

Thank you for the opportunity to quote this service, we look forward to working with you in the near future. If you have any questions regarding our proposal, please contact the W.J. O'Neil office at 734-266-3338.

Sincerely,

W.J. O'Neil Company

N. Dahlstrom

Nick Dahlstrom
Account Executive

Mechanical
Contracting,
Pipe Fabrication,
Service, and
Controls
www.wjo.com

DETROIT
35457 Industrial Dr
Livonia, MI
48150

T 734.458.2300
F 734.458.2305

CHATTANOOGA
500 West 26th St.
Chattanooga, TN
37408

T 423.702.6000
F 423.702.6005



**CHARTER TOWNSHIP OF YPSILANTI
 HVAC Replacement at Community Center
 Bid Opening: May 6, 2024 2pm**

COMPANY NAME	BID AMOUNT	INSURANCE	BOND - IF APPLICABLE
Arctic Air	\$ 207,714.00		
Temperature Services	\$ 73,507.00		
WJ O'Neil	\$ 79,979.00		
Allied Building Service	\$ 96,730.00 / 168,380.00		

May 16, 2024

John Hines
Ypsilanti Community Center
2025 East Clark Road
Ypsilanti, Michigan 48198

RE: Ypsilanti Community Center RTU Replacement – Supplemental Project Pricing

W.J. O’Neil Company is pleased to provide the following supplemental proposal to encompass the additional cost outlined after bid was submitted.

Community Center Equipment:

ID	Make	Model Number	Serial Number	Year Installed
AHU-1	Trane	CSAA0010UAC00	K11C22502	
RTU-1	Trane	YSC036A3RLA2YD000A1000000	815100181L	2008
RTU-2A	Trane	YSC036A3RLA2YD000A1000000	815100177L	2008
RTU –6A	Bryant	580FPV03607ANGA	0504G30414	2004
RTU – 7A	Bryant	580FPV036074ABGA	0504G30413	2004
RTU-8A	Bryant	580FPV036074ABGA	0504G30410	2004

In addition to the original bid provided upon further review there were several supplemental items that needed to be added to the project to meet the energy initiative.

The following proposal includes the following:

- The additional cost of equipment to meet energy initiative standards.
- The labor and materials required to install equipment to meet standards.
- 1 year Labor warranty on new equipment.
- 10 year Compressor warranty, with PMA services provided by WJO.

Proposal price will be \$30,021





Thank you for the opportunity to quote this service, we look forward to working with you in the near future. If you have any questions regarding our proposal, please contact the W.J. O'Neil office at 734-266-3338.

Sincerely,

W.J. O'Neil Company

N. Dahlstrom

Nick Dahlstrom
Account Executive

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Contracting,
Pipe Fabrication,
Service, and
Controls
www.wjo.com

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Chattanooga, TN
37408

T 423.702.6000
F 423.702.6005



Your Intelligent Facility Partner, For Life



MEMORANDUM

To: Charter Township of Ypsilanti Board of Trustees

From: Jeffrey Yahr, Assistant Municipal Services Director

CC: John Hines, Municipal Services Director

Date: May 16th, 2024

RE: **Request Authorization to seek sealed bids for one (1) new Building Operations Ford Transit Van.**

The Residential Services Department is requesting authorization to seek sealed bids and request quotes for one (1) new Ford Transit Van-R3X 250 High Roof ELWB Cargo RWD for the Building Operations Department that was budgeted for 2024 in GL #661-268-985.000

The Transit Van is being requested due to the existing Building Op's Vans frequent daily use and the age (2015). The new Van would be larger and provide more useful functionality as it will be more suited to the building operations teams evolving tasks, roles, and responsibilities.

The maintenance staff use their current van #87 vehicle throughout each shift, everyday when work is being performed at the township's various building and park locations. In addition to daily maintenance transportation to get staff on site, the van also acts as a mobile workshop, material delivery vehicle and the primary cargo van used for election equipment and office furniture shuttle.

This new vehicle will be placed into the Building Operations vehicle fleet. With this vehicle addition, van #87 will be used as backup for maintenance and park operations and as an additional support vehicle for recreation and election events.

Bids will be accepted on Thursday, June 4th at which time they will be publicly opened at 10:00 a.m. Staff will return to the Board of Trustees to recommend and award the purchase of the vehicle.

Jeff Yahr
Assistant Municipal Services Director
jyahr@ypsitownship.org
734-544-3514

The Charter Township of Ypsilanti is seeking bids for:

One (1) Ford Transit Van R3X 250 High Roof ELWB Cargo RWD

Sealed bids for a new **Ford Transit Van-R3X 250 High Roof ELWB Cargo RWD** for the Residential Services Department – Building Operations received by Ypsilanti Township Clerk’s Office, at 7200 S. Huron River Drive, Ypsilanti, MI 48197 until **Thursday, June 4, 2024, at 10:00 a.m.** local time at which time bids received will be publicly opened and read. Bids may be submitted in person to the Ypsilanti Township Clerk’s Office labeled “Building Dept Ford Transit Van” or via MITN. Bids sent via email or by any other electronic means will not be accepted. For questions related to the bid, please contact Deputy Clerk, Lisa Stanfield at lstanfield@ypsitownship.org.

Charter Township of Ypsilanti
Clerk Heather Jarrell Roe
7200 S. Huron River Drive, Ypsilanti, MI 48197

GENERAL SPECIFICATIONS

All vehicles must be new and of the manufacturer's current models in production at the time of delivery. All standard or optional equipment to be included shall be as advertised by the manufacturer (OEM) and factory installed and shall not consist of substitute or aftermarket equipment. Optional equipment not available from the factory may be dealer installed.

Upon delivery of the vehicle from the dealer to the Ordering Entity

- Itemize pricing with total cost (should include all items listed in the deliverables section above as well as fees and delivery
- Vendor to include an estimated time of delivery.
- The Township will issue a Purchase Order for the approved amount.
- The vendor will invoice the Township after delivery.
- Vendor will allow up to 45 days for the Township to pay invoice without interest penalty.
- PO will be proof of Township commitment to purchase.

R3X0 T250 HR Cargo RWD; Current year.

- 148” Wheelbase
- Oxford White Color
- Cloth – Dark Palazzo Grey Interior
- Preferred Equipment Pkg.101A
- XL Trim
- 3.5L PFDI V6 (Gas)
- 10 Speed Transmission
- .235/65R16C BSW All Season
- 4.10 Limited Slip Axle
- Front Liscence Plate Bracket
- Vinyl F/R Floor Covering

- Fixed Rear Cargo Door Class
- Tie Down Cargo Hooks
- 9150# GVWR Package
- 2Way DRC/Pass Palazzo Cloth
- 50 State Emissions
- Back up Alarm
- Reverse Sensing System
- Shot-Arm PWR Heat Mirrors
- Manual Air Conditioner
- Privacy Glass
- E-85 Flex Fuel Capable
- VEHICLES SHALL BE EQUIPPED IN COMPLIANCE WITH ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS AND REGULATIONS. ALL VEHICLES MUST BE EQUIPPED TO COMPLY WITH ALL REQUIREMENTS OF THE MICHIGAN MOTOR VEHICLE CODE.
- ALL QUOTES SHALL BE DELIVERED PRICES, ALL FEES & DELIVERY INCLUDED!
- Charter Township of Ypsilanti is Tax Exempt and can supply proper documents.

Pre-delivery inspection and servicing: The term "Pre-Delivery Service and Inspection" as used in State of Michigan Specifications includes the following:

1. General appearance of body both interior and exterior for completeness and quality of workmanship.
2. Lubrication and fluid levels and correcting any leaks:
 - a. Radiator
 - b. Windshield Washer
 - c. Battery
 - d. Power steering pump
 - e. Brake master cylinder
 - f. Engine oil
 - g. Transmission fluid level.
3. Mechanical operation of vehicle:
 - a. Steering gear and linkage
 - b. Suspension assembly, front and rear
 - c. Proper tire pressure to normal rated road requirements
 - d. Hood latch
 - e. Head lights, aim and adjust
 - f. Front wheel toe in and torque wheel nuts
 - g. Seat and shoulder belts operative

- h. All locks and latches are to be operative.
- I. Windshield wiper and washer to be operative.
- j. Proper adjustment to all drive belts

4. A check of all electrical operations to include: headlights, side marker lights, temperature, alternator, oil pressure lights, parking lights, stop and taillights, directional signals, emergency flasher and parking brake lights.

5. Miscellaneous items to be furnished:

- a. Manufacturers Window Sticker shall not be removed from vehicle.
- b. Odometer Certification, vehicle window sticker, or line setting ticket, and Vehicle Curb Weight at time of delivery.
- c. Manufacturers or Dealers Pre-Delivery Check Sheet.
- d. Vehicle shall have a minimum of one fourth ($\frac{1}{4}$) tank of Fuel when delivered.
- e. Warranty Plate and Operators Manual(s) shall be delivered with vehicle at no cost to the State of Michigan.
- f. Completed RD108 application for title form.
- g. Invoice for each vehicle at the time of delivery.
- h. Vehicle Order Confirmation Sheet.

6. Deliveries shall be between the hours of 8 AM and 3 PM. No Weekend or Holiday Deliveries will be accepted.

Forty-eight (48) hour notice required prior to delivery.

Note: No dealer advertising decals are to be on vehicle.

It is intended that vehicles delivered in accordance with the Michigan specifications will be complete, including mechanical details, general workmanship and appearance, and shall be delivered complete with all warranty service books and identification plate.

Failure to adhere to specifications may be reason to delay payment.



MEMORANDUM

To: Charter Township of Ypsilanti Board of Trustees

From: Steve Demsmore, Ypsilanti Township Fire Chief

CC: John Hines, Municipal Services Director

Date: May 15, 2024

RE: Request Authorization to accept the low quote of \$47,092.28 from BMS Management for the Fire Station 3 repairs.

The Ypsilanti Township Fire Department with the Residential Services Department is requesting authorization to accept the quote of \$47,092.28 plus a \$5,000 contingency for a total of \$52,092.28 from BMS Management after Allied Building Service Company of Detroit withdrew their bid for the Fire Station 3 repairs. This project will be budgeted in 206-901-976.005 contingent on a budget amendment.

At the April 2nd 2024 Board of Trustees meeting, the board approved Allied Building Service Company of Detroit to complete to work at Fire Station 3. In contract discussions with OHM, Allied noticed a mistake in their accounting and due to that, rescinded their bid.

At the March 8, 2024 Bid Opening, two bids were received:

Allied Building Service Company of Detroit:	\$47,300.06
Decima, LLC:	\$114,473.71

The request accept the quote from BMS Management is due to their ability to handle this scope of work as they are a fire restoration company and have a vast knowledge of Fire Station infrastructure, the comparable cost to the initial awardee and the quicker timeline that is necessary to complete this project. With the roofing concerns that sit directly above two firetrucks; it is not recommended to go back out to bid which could add four to six weeks onto the project.

If approved, OHM advisors would still work with the YTFD to provide construction oversight.

Steve Demsmore
Ypsilanti Township Fire Chief

BMS CAT/Jarvis

BMS Cat of Michigan
41800 Executive Drive
Harrison Twp., MI 48045
Office: 586-954-4700
Fax: 586-954-4707

Insured: Ypsilanti Fire Department
Property:
48197
Business: 20 S. Hewitt
Ypsilanti, MI

Business: (734) 368-5342

Estimator: Brian Coral
Company: BMS Cat of Michigan

Business: (586) 954-4700

Contractor:
Company: BMS CAT of Michigan
Business: 41800 Executive Dr.
Harrison Twp., MI 48045

Business: (586) 954-4700

Claim Number:

Policy Number:

Type of Loss:

Date of Loss:
Date Inspected:

Date Received:
Date Entered: 10/30/2023 9:09 AM

Price List: MIAA8X_APR24
Restoration/Service/Remodel
Estimate: YPSI-FD-1

The information herein is an itemized estimate for repair to the property located at the above captioned address. This estimate has been prepared with the intention of restoring this property to its' "pre-loss" condition. The scope of repair, as outlined in this estimate, has been formulated based on non-destructive observation only. Therefore, only the items specifically mentioned herein have been included in this estimate for repair.

It is our intention this estimate be as thorough as possible. however, upon demolition of the affected areas, we reserve the right to make a re-evaluation of the damage. Should any hidden and/or additional damage be discovered or any other additional work or repair become necessary, for any reason, an addendum and/or modification to this document will be added to the claim. Furthermore, this estimate is subject to review and approval by the authorized representative of the appropriate insurance company.

BMS CAT/Jarvis

BMS Cat of Michigan
41800 Executive Drive
Harrison Twp., MI 48045
Office: 586-954-4700
Fax: 586-954-4707

YPSI-FD-1

Garage

DESCRIPTION	QTY
1. Remove Blown-in insulation - Machine removal	160.00 SF
2. R&R 5/8" drywall - hung, taped, floated, ready for paint	320.00 SF
Double layer on ceiling	
3. Additional cost for gluing drywall	320.00 SF
4. Tape joint for new to existing drywall - per LF	56.00 LF
5. Finish Carpenter - per hour	16.00 HR
Additional labor hours required to detach and reset ceiling accessories. 2 men @ 8 hours each	
6. Seal/prime (1 coat) then paint (2 coats) the surface area	200.00 SF
Match existing color and sheen as closely as possible	
7. Scissor lift - 20' platform height (per day)	5.00 DA
8. Rental equipment delivery / pick up	2.00 EA
9. Blown-in insulation - 10" depth - R26	160.00 SF

Gutters

DESCRIPTION	QTY
10. Remove and Replace 6" Gutters and Downspouts	1.00 EA
11. Install 6' Leaf Protection	1.00 EA

Windows

DESCRIPTION	QTY
12. Remove and replace 4 Anderson 400 Series Windows	1.00 EA
13. Remove and Replace Existing Wood Jambs (Oak)	1.00 EA
14. Stain & finish door/window trim & jamb - Large (per side)	8.00 EA

General

DESCRIPTION	QTY
15. Taxes, insurance, permits & fees (Bid Item) [OPEN ITEM]	1.00 EA
16. Haul debris - per pickup truck load - including dump fees	1.00 EA
17. Commercial Supervision / Project Management - per hour	20.00 HR

BMS CAT/Jarvis

BMS Cat of Michigan
41800 Executive Drive
Harrison Twp., MI 48045
Office: 586-954-4700
Fax: 586-954-4707

Grand Total

\$47,092.28

Brian Coral

Township Supervisor
Brenda L. Stumbo
Township Clerk
Heather Jarrell Roe
Township Treasurer
Stan Eldridge



**YPSILANTI
TOWNSHIP**
— OFFICE OF THE CLERK —

Trustees
Ryan Hunter
John Newman II
Gloria Peterson
Debbie Swanson

May 17th, 2024

Board of Trustees,

Please accept this as a request to go into closed session in accordance with the Open Meetings Act, MCL 15.268, specifically subsection (h) to consider material exempt from discussion or disclosure by state or federal statute.

Heather Jarrell Roe, Ypsilanti Township Clerk

OTHER BUSINESS

PUBLIC COMMENTS

BOARD MEMBER UPDATES
