

CONTRACT DOCUMENTS
FOR
BASEBALL AND SOFTBALL FIELD IMPROVEMENTS



NOVEMBER, 2011

BID NO. ITB-4194

PUBLIC SERVICES DEPARTMENT

CITY OF ANN ARBOR
301 East Huron Street
Ann Arbor, Michigan 48104

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ADVERTISEMENT FOR
FOR THE
BASEBALL AND SOFTBALL FIELD IMPROVEMENTS
CITY OF ANN ARBOR, MICHIGAN

BID NO. ITB-4194

Sealed Bids will be received by the City of Ann Arbor Procurement Office, 301 East Huron Street, Fifth Floor, Larcom City Hall, on or before Thursday, December 15, 2011 at 10:00 AM for construction of Baseball and Softball Field Improvements. Bids will be publically opened and read aloud at this time.

A pre-bid conference will be held Thursday, December 1, 2011 at 10:00 AM at the W.R. Wheeler Service Center. Attendance is highly recommended.

Work to be done includes improvements to ten (10) baseball and softball fields at four (4) parks. The project shall include fencing replacement, turf restoration, infield skin replacement, warning track replacement, irrigation upgrades and concrete work.

Bid documents may be downloaded from the following websites:

<http://www.a2gov.org/government/financeadminservices/procurement/Pages/OpenBidsandProposals.aspx> or www.govbids.com

Each proposal shall be accompanied by a certified check, or Bid Bond by a recognized surety, in the amount of 5% of the total of the bid price. A proposal, once submitted, becomes the property of the City. In the sole discretion of the City, the City reserves the right to allow a bidder to reclaim submitted documents provided the documents are requested and retrieved no later than 48 hours prior to the scheduled bid opening.

The successful Bidder will be required to furnish satisfactory performance and labor and material bonds in the amount of 100% of the bid price and satisfactory insurance coverage.

Precondition for entering into a Contract with the City of Ann Arbor is compliance with Chapter 112 of Title IX of the Code of the City of Ann Arbor. The successful Bidder may also be required to comply with Chapter 23 of Title I of the Code of the City of Ann Arbor. Further information is outlined in the Contract Documents.

After the time of opening, no Bid may be withdrawn for a period of 90 days. The City reserves the right to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

Any further information on bid documents may be obtained from the Procurement Office, (734) 794-6500 ext. 42506.

CITY OF ANN ARBOR, MICHIGAN

**CITY OF ANN ARBOR PROCUREMENT OFFICE
HUMAN RIGHTS CONTRACT COMPLIANCE FORM**
Entire Organization (Totals for All Locations where applicable)

Form #1

Name of Company/Organization _____ Date Form Completed _____

Name and Title of Person Completing this Form _____ Name of President _____

Address _____ County _____ Phone # _____
(Street address) (City) (State) (Zip) (Area Code)

Fax# _____ Email Address _____
(Area Code)

EMPLOYMENT DATA

Job Categories	Number of Employees (Report employees in only one category)														TOTAL COLUMNS A-N
	Male							Female							
	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native	Mixed	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaskan Native	Mixed	
A	B	C	D	F	G	H	I	J	K	L	M	N			
Exec/Sr. Level Officials															
Supervisors															
Professionals															
Technicians															
Sales															
Admin. Support															
Craftspeople															
Operatives															
Service Workers															
Laborers/Helper															
Apprentices															
Other															
TOTAL															
PREVIOUS YEAR TOTAL															

**CITY OF ANN ARBOR PROCUREMENT OFFICE
HUMAN RIGHTS CONTRACT COMPLIANCE FORM**
Local Office (Only those employees that will do local or on-site work, if applicable)

Form #2

Name of Company/Organization _____ Date Form Completed _____

Name and Title of Person Completing this Form _____ Name of President _____

Address _____ County _____ Phone # _____
(Street address) (City) (State) (Zip) (Area Code)

Fax# _____ Email Address _____
(Area Code)

EMPLOYMENT DATA

Job Categories	Number of Employees (Report employees in only one category)														
	Male							Female							TOTAL COLUMNS A-N
	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native	Mixed	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaskan Native	Mixed	
A	B	C	D	F	G	H	I	J	K	L	M	N			
Exec/Sr. Level Officials															
Supervisors															
Professionals															
Technicians															
Sales															
Admin. Support															
Craftspeople															
Operatives															
Service Workers															
Laborers/Helper															
Apprentices															
Other															
TOTAL															
PREVIOUS YEAR TOTAL															

City of Ann Arbor Procurement Office

INSTRUCTIONS FOR CONTRACTORS

For Completing CONTRACT COMPLIANCE FORM

City Policy

The “non discrimination in contracts” provision of the City Code, (Chapter 112, Section 9:161) requires contractors/vendors/grantees doing business with the City not to discriminate on the basis of actual or perceived race, color, religion, national origin, sex, age, condition of pregnancy, marital status, physical or mental limitations, source of income, family responsibilities, educational association, sexual orientation, gender identity or HIV status against any of their employees, any City employee working with them, or any applicant for employment. It also requires that the contractors/vendors/grantees include a similar provision in all subcontracts that they execute for City work or programs.

This Ordinance further requires that each prospective contractor/vendor submit employment data to the City showing current total employee breakdown by occupation, race and gender. This allows the Human Rights Office to determine whether or not the contractor/vendor has a workforce that is reflective of the availability of women and under-represented minorities within the contractor’s labor recruitment area (the area where they can reasonably be expected to recruit employees). ***This data is provided to the City on the Human Rights Contract Compliance Forms (attached).***

To complete the form:

1) If a company has more than one location, then that company must complete 2 versions of the form.

- **Form #1** should contain the employment data for the **entire corporation.**
- **Form #2** should contain the employment data for those employees:
 - who will be working on-site;
 - in the office responsible for completing the contract; or,
 - in the case of non-profit grantees, those employees working on the project funded by the City grant(s).

2) If the company has only one location, fill out Form #1 only.

3) Complete all data in the upper section of the form including the name of the person who completes the form and the name of the company/organization’s president.

4) Complete the Employment Data in the remainder of the form. Please be sure to complete all columns including the Total Columns on the far right side of the form, and the Total row and Previous Year Total row at the bottom of the form.

5) Return the completed form(s) to your contact in the City Department for whom you will be conducting the work.

For assistance in completing the form, contact:

Procurement Office of the City of Ann Arbor
734/794-6500 ext. 45206

If a contractor is determined to be out of compliance, the Procurement Office will work with them to assist them in coming into compliance.

→ RATE EFFECTIVE MAY 1, 2011-ENDING APRIL 29, 2012←

LIVING WAGE ORDINANCE – CITY OF ANN ARBOR

\$11.83 per hour

if the employer provides health care benefits*

\$13.19 per hour

if the employer does **NOT** provide health care benefits*

Employers providing services to or for the City of Ann Arbor or recipients of grants or financial assistance from the City of Ann Arbor for a value of more than \$10,000 in a twelve-month period of time ***must pay those employees performing work on a City of Ann Arbor contract or grant, the above living wage.***

ENFORCEMENT

The City of Ann Arbor may recover back wages either administratively or through court action for the employees that have been underpaid in violation of the law. Persons denied payment of the living wage have the right to bring a civil action for damages in addition to any action taken by the City.

Violation of this Ordinance is punishable by fines of not more than \$500/violation plus costs, with each day being considered a separate violation. Additionally, the City of Ann Arbor has the right to modify, terminate, cancel or suspend a contract in the event of a violation of the Ordinance.

** Health Care benefits include those paid for by the employer or making an employer contribution toward the purchase of health care. The employee contribution must not exceed \$.50 an hour for an average work week; and the employer cost or contribution must equal no less than \$1/hr for the average work week.*

The Law Requires Employers to Display This Poster Where Employees Can Readily See It.

For Additional Information or to File a Complaint Contact:

Linda Newton, Procurement Assistant
734/794-6500 ext. 45206 or lnewton@a2gov.org LW-1

City of Ann Arbor

**LIVING WAGE ORDINANCE
DECLARATION OF COMPLIANCE**

The Ann Arbor Living Wage Ordinance (Section 1:811-1:821 of Chapter 23 of Title I of the Code) requires that employers providing services to the City or recipients of grants for financial assistance (in amounts greater than \$10,000 in a twelve-month period of time) pay their employees who are working on the City project or grant, a minimum level of compensation known as the **Living Wage**. This wage must be paid to the employees for the length of the contract/project.

Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from the Ordinance. If this exemption applies to your firm, please check below:

- This company is exempt due to the fact that we employ or contract with fewer than 5 individuals.
- This **non-profit agency** is exempt due to the fact that we employ or contract with fewer than 10 employees.

The Ordinance requires that all contractors/vendors and/or grantees agree to the following terms:

- a) To pay each of its employees performing work on any covered contract or grant with the City, no less than the living wage, which is defined as \$11.83/hour when health care is provided, or no less than \$13.19/hour for those employers that do *not* provide health care. It is understood that the Living Wage will be adjusted each year on April 30, and covered employers will be required to pay the adjusted amount thereafter. The rates stated above include any adjustment for 2011.
- b) Please check the boxes below which apply to your workforce:
 - Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage without health benefits Yes _____ No _____
 - OR**
 - Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage with health benefits Yes _____ No _____
- c) To post a notice approved by the City regarding the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
- d) To provide the City payroll records or other documentation as requested; and,
- e) To permit access to work sites to City representatives for the purposes of monitoring compliance, investigating complaints or non-compliance.

The undersigned authorized representative hereby obligates the contractor/vendor or grantee to the above stated conditions under penalty of perjury and violation of the Ordinance.

Company Name

Address City State Zip

Signature of Authorized Representative

Phone (area code)

Type or Print Name and Title

Email address

Date signed

Questions about this form? Please contact:
Procurement Office City of Ann Arbor
Phone: 734/794-6576 Fax:734/994-1795

NOTICE OF PRE-BID CONFERENCE

A pre-bid conference for this project will be held on Thursday, December 1, 2011 at 10:00 AM at the W.R. Wheeler Service Center located at 4251 Stone School Road, Ann Arbor, Michigan 48108.

Attendance at this conference is optional, but highly recommended. Administrative and technical questions regarding this project will be answered at this time. If any questions arise whose answers constitute modifications to the bid documents, an addendum will be issued.

INSTRUCTIONS TO BIDDERS

General

Work to be done under this Contract is generally described through the detailed specifications and must be completed fully in accordance with the Contract Documents. All work to be done under this Contract is located in or near the City of Ann Arbor.

The City shall make available to all prospective Bidders, prior to receipt of the Bids, access to the area in which the work is to be performed. Advance notice should be given to the Administering Service Area/Unit in cases where access to the site must be arranged by the City.

Any proposal which does not conform fully with these instructions may be rejected.

Proposals

Proposals must be submitted on the "Proposal Forms" and "Bid Forms" provided, without removal from the binder, with each blank properly filled in. Sealed proposals will be received by the City of Ann Arbor Purchasing Division, Fifth Floor, City Hall, Ann Arbor, Michigan, at the time stipulated in the Advertisement, promptly after which proposals will be publicly opened and read aloud. Each proposal must be enclosed in a sealed envelope, endorsed across one end:

BID #ITB-4194, Proposal for Baseball and Softball Field Improvements

The City will evaluate Proposals based on cost as well as experience. Contractors that have not included the required list of similar work experience, associated references in Section 5 of the Bid Form may have their bid rejected.

The City intends to award a Contract(s) to the lowest responsible Bidder(s). On multi-divisional Contracts, separate divisions may be awarded to separate Bidders. The City may also utilize discounts offered in the Bid Forms, if any, to determine the lowest responsible Bidder on each division, and award multiple divisions to a single Bidder, so that the lowest total cost is achieved for the City. For unit price bids, the Contract will be awarded based upon the lump sum and unit prices stated by the bidder for the work items specified in the bid documents, with consideration given to any alternates selected by the City. If the City determines that the unit price for any item is materially different for the work item bid than either other bidders or the general market, the City, in its sole discretion, in addition to any other right it may have, may reject the bid as not responsible or non-conforming.

The acceptability of major subcontractors will be considered in determining if a Bidder is responsible. In comparing proposals, the City will give consideration to alternate proposals for items listed in the forms, or other alternates which the Bidder may wish to submit, but preference will be given to Base Bid Proposals.

The City reserves the right to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

Bid Security

Each proposal must be accompanied by a certified check, or Bid Bond by a surety licensed and authorized to do business within the State of Michigan, in the amount of 5% of the total of the bid price.

Withdrawal of Bids

After the time of opening, no Bid may be withdrawn for the period of days specified in the Advertisement.

Contract Time

Time is of the essence in the performance of the work under this Contract. The available time for work under this Contract is indicated on page C-1, Article III of the Contract. Interim milestones are indicated in Section 01000, paragraph 1.07. If these time requirements can not be met, the Bidder must stipulate on Bid Form Section 3 - Time Alternate its schedule for performance of the work. Consideration will be given to time in evaluating bids.

Liquidated Damages

A liquidated damages clause, as given on page C-2, Article III of the Contract, provides that the Contractor shall pay the City as liquidated damages, and not as a penalty, a sum certain per day for each and every day that the Contractor may be in default of completion of the specified work, within the time(s) stated in the Contract, on the Plans, or written extensions. Liquidated damages shall be assessed based on the intermediated deadlines stated in the Contract, on the Plans, or written extensions.

Liquidated damages clauses, as given in the General Conditions, provide further that the City shall be entitled to impose and recover liquidated damages for breach of the obligations under Chapter 112 of the City Code.

The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

Human Rights Information

Section 5, beginning at page GC-3, outlines the requirements for fair employment practices under City of Ann Arbor Contracts. To establish compliance with this Ordinance, the Bidder must complete and return with its bid completed copies of the white and pink Human Rights Division Contract Compliance Forms (copy attached) or an acceptable equivalent.

Wage Requirements

Section 4, beginning at page GC-1, outlines the requirements for payment of prevailing wages or of a “living wage” to employees providing service to the City under this Contract. The successful bidder must comply with all applicable requirements and may be required to provide documentary proof of compliance.

Major Subcontractors

The Bidder shall identify each major subcontractor it expects to engage for this Contract if the work to be subcontracted is 15% or more of the bid sum or over \$50,000, whichever is less. The Bidder also shall identify the work to be subcontracted to each major subcontractor.

PROPOSAL

City of Ann Arbor
Guy C. Larcom Municipal Building
Ann Arbor, Michigan 48107

Ladies and Gentlemen:

The undersigned, as Bidder, declares that this Bid is made in good faith, without fraud or collusion with any person or persons bidding on the same Contract; that this Bidder has carefully read and examined the bid documents, including Advertisement, Human Rights Division Contract Compliance Forms, Notice of Pre-Bid Conference, Instructions to Bidders, Supplemental Instructions to Bidders, Proposal, Bid Forms, Contract, Bond Forms, General Conditions, Standard Specifications, Detailed Specifications, all Addenda, and the Plans and understands them. The Bidder declares that it conducted a full investigation at the site and of the work proposed and is fully informed as to the nature of the work and the conditions relating to the work's performance. The Bidder also declares that it has extensive experience in successfully completing projects similar to this one.

The Bidder acknowledges that it has not received or relied upon any representations or warrants of any nature whatsoever from the City of Ann Arbor, its agents or employees, and that this Bid is based solely upon the Bidder's own independent business judgment.

The undersigned proposes to perform all work shown on the plans or described in the bid documents, including any addenda issued, and to furnish all necessary machinery, tools, apparatus, and other means of construction to do all the work, furnish all the materials, and complete the work in strict accordance with all terms of the Contract of which this proposal is one part.

In accordance with these bid documents, and Addenda numbered _____, the undersigned, as Bidder, proposes to perform at the sites in and/or around Ann Arbor, Michigan, all the work included herein for the amounts set forth in the Bid Forms.

The Bidder declares that it has become fully familiar with the liquidated damage clauses for completion times and for compliance with City Code Chapter 112, understands and agrees that the liquidated damages are for the non-quantifiable aspects of non-compliance and do not cover actual damages that may be shown and agrees that if awarded the Contract, all liquidated damage clauses form part of the Contract.

The Bidder declares that it has become fully familiar with the provisions of Chapter 14, Section 1:319 (Prevailing wages) and Chapter 23 (Living Wage) of the Code of the City of Ann Arbor and that it understands and agrees to comply, to the extent applicable to employees providing services to

the City under this Contract, with the wage and reporting requirements stated in the City Code provisions cited. Bidder further agrees that the cited provisions of Chapter 14 and Chapter 23 form a part of this Contract.

The Bidder encloses a certified check or Bid Bond in the amount of 5% of the total of the Bid Price. The Bidder agrees both to Contract for the work and to furnish the necessary Bonds and insurance documentation within 10 days after being notified of the acceptance of the Bid.

If this Bid is accepted by the City and the Bidder fails to Contract and furnish the required Bonds and insurance documentation within 10 days after being notified of the acceptance of this Bid, then the Bidder shall be considered to have abandoned the Contract and the certified check or Bid Bond accompanying this Proposal shall become due and payable to the City.

If the Bidder enters into the Contract in accordance with this Proposal, or if this Proposal is rejected, then the accompanying check or Bid Bond shall be returned to the Bidder.

In submitting this Bid, it is understood that the right is reserved by the City to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

SIGNED THIS _____ DAY OF _____, 2011.

Bidder's Name

Official Address

Telephone Number

Authorized Signature of Bidder

(Print Name of Signer Above)

LEGAL STATUS OF BIDDER

(The Bidder shall fill out the appropriate form and strike out the other two.)

Bidder declares that it is:

* A corporation organized and doing business under the laws of the state of _____, for whom _____, bearing the office title of _____, whose signature is affixed to this proposal, is authorized to execute contracts.

* A partnership, list all members and the street and mailing address of each:

Also identify the County and State where partnership papers are filed:

County of _____, State of _____

* An individual, whose signature with address, is affixed to this proposal: _____
(initial here)

BID FORM

Section 1 – Schedule of Prices

Project: Baseball and Softball Field Improvements
 Bid No.: ITB-4194

NOTES:

1. All bidders shall provide a Unit Price and Total Price for all bid items identified.
2. Quantities included in bid table represent estimated quantities for different work. Contractor shall be compensated for the actual number of repairs completed using the unit prices provided.
3. The City, at their sole discretion, may elect to delete any portion of the work delineated below, with no change to the unit prices provided.
4. Any item not provided in the following list shall be considered incidental.
5. Each item listed below shall be preceded by the description "Furnish all labor, materials, equipment, all related items necessary to field measure, prepare, deliver, install, maintain and restore." Any item not provided in the following list shall be considered incidental.

Item #	Item	Quantity	Unit	Unit Price	Total Price
General					
1	Insurance/Bonds	1	LS		
Veterans Memorial Park General					
1	Irrigation Improvements	1	LS		
2	Inlet Filter	9	EA		
3	Silt Fencing	505	LF		
Veterans Memorial Park Field 1					
1	Mobilization (5% max)	1	LS		
2	Remove Existing 6' H Fence	450	LF		
3	Remove Existing 8' H Fence	540	LF		
4	Remove Existing 10' H Fence	160	LF		
5	Remove Existing Backstop	1	EA		
6	Remove Existing Bench	2	EA		
7	Remove Warning Track Material	675	SYD		
8	Remove Infield Skin	1970	SYD		
9	6' H Fencing	810	LF		
10	6' H Removable Fencing	190	LF		
11	10' H Fencing	160	LF		
12	Backstop w/ planking	1	EA		
13	Dugout Bench	2	EA		
14	Foul Pole	2	EA		
15	Concrete Grade Beam	80	LF		
16	Concrete Pad	225	SYD		
17	Grading (incl. lip removal, restoration outside field of play, etc.)	1	LS		
18	Warning Track Material	705	SYD		
19	Infield Skin	2300	SYD		
20	Sod	7270	SYD		
21	Allowance: Maintenance and Guarantee Period	1	LS	\$5,000	\$5,000
22	Allowance: Contingency (Miscellaneous Field Improvements)	1	LS	\$3,000	\$3,000
Veterans Memorial Park Field 1 Subtotal					

Item #	Item	Quantity	Unit	Unit Price	Total Price
Veterans Memorial Park Field 2					
1	Mobilization (5% max)	1	LS		
2	Remove Existing 10' H Fence	280	LF		
3	Remove Existing Backstop	1	EA		
4	Remove Existing Bench	2	EA		
5	Remove Warning Track Material	405	SYD		
6	Remove Infield Skin	1400	SYD		
7	Remove and Replace 6' H Fence Fabric (Ex. Poles to Remain)	630	LF		
8	6' H Fencing	70	LF		
9	10' H Fencing	280	LF		
10	Backstop w/ planking	1	EA		
11	Dugout Bench	2	EA		
12	Foul Pole	2	EA		
13	Concrete Grade Beam	80	LF		
14	Concrete Pad	225	SYD		
15	Grading (incl. lip removal, restoration outside field of play, etc.)	1	LS		
16	Warning Track Material	560	SYD		
17	Infield Skin	1450	SYD		
18	Turf Restoration	4650	SYD		
19	Allowance: Maintenance and Guarantee Period	1	LS	\$5,000	\$5,000
20	Allowance: Contingency (Miscellaneous Field Improvements)	1	LS	\$3,000	\$3,000
Veterans Memorial Park Field 2 Subtotal					
Veterans Memorial Park Field 3 Subtotal					
1	Mobilization (5% max)	1	LS		
2	Remove Existing 10' H Fence	160	LF		
3	Remove Existing Backstop	1	EA		
4	Remove Existing Bench	2	EA		
5	Remove Warning Track Material	1071	SYD		
6	Remove Infield Skin	1450	SYD		
7	Remove and Replace 6' H Fence Fabric (Ex. Poles to Remain)	730	LF		
8	6' H Fencing	70	LF		
9	10' H Fencing	160	LF		
10	Backstop w/ planking	1	EA		
11	Dugout Bench	2	EA		
12	Foul Pole	2	EA		
13	Concrete Grade Beam	80	LF		
14	Concrete Pad	155	SYD		
15	Grading (incl. lip removal, restoration outside field of play, etc.)	1	LS		
16	Warning Track Material	570	SYD		
17	Infield Skin	1500	SYD		
18	Turf Restoration	4900	SYD		
19	Allowance: Maintenance and Guarantee Period	1	LS	\$5,000	\$5,000
20	Allowance: Contingency (Misc. Improvements)	1	LS	\$3,000	\$3,000
Veterans Memorial Park Field 3 Subtotal					

Item #	Item	Quantity	Unit	Unit Price	Total Price
Veterans Memorial Park Field 4 Subtotal					
1	Mobilization (5% max)	1	LS		
2	Remove Existing 6' H Fence	560	LF		
3	Remove Existing 10' H Fence	200	LF		
4	Remove Existing Backstop	1	EA		
5	Remove Existing Bench	2	EA		
6	Remove Warning Track Material	1060	SYD		
7	Remove Infield Skin	2090	SYD		
8	Remove and Replace 6' H Fence Fabric (Ex. Poles to Remain)	130	LF		
9	6' H Fencing	630	LF		
10	10' H Fencing	200	LF		
11	Backstop w/ planking	1	EA		
12	Dugout Bench	2	EA		
13	Foul Pole	2	EA		
14	Concrete Grade Beam	80	LF		
15	Concrete Pad	225	SYD		
16	Grading (incl. lip removal, restoration outside field of play, etc.)	1	LS		
17	Warning Track Material	800	SYD		
18	Infield Skin	2050	SYD		
19	Turf Restoration	6050	SYD		
20	Allowance: Maintenance and Guarantee Period	1	LS	\$5,000	\$5,000
21	Allowance: Contingency (Misc. Improvements)	1	LS	\$3,000	\$3,000
Veterans Memorial Park Field 4 Subtotal					
Veterans Memorial Park Field 5 Subtotal					
1	Mobilization (5% max)	1	LS		
2	Remove Existing 10' H Fence	185	LF		
3	Remove Existing Backstop	1	EA		
4	Remove Existing Bench	2	EA		
5	Remove Warning Track Material	1080	SYD		
6	Remove Infield Skin	1650	SYD		
7	Remove and Replace 6' H Fence Fabric (Ex. Poles to Remain)	930	LF		
8	6' H Fencing	70	LF		
9	10' H Fencing	185	LF		
10	Backstop w/ planking	1	EA		
11	Dugout Bench	2	EA		
12	Foul Pole	2	EA		
13	Concrete Grade Beam	80	LF		
14	Concrete Pad	230	SYD		
15	Grading (incl. lip removal, restoration outside field of play, etc.)	1	LS		
16	Warning Track Material	930	SYD		
17	Infield Skin	1440	SYD		
18	Turf Restoration	8320	SYD		
19	Sod	730	SYD		
20	Allowance: Maintenance and Guarantee Period	1	LS	\$5,000	\$5,000
21	Allowance: Contingency (Misc. Improvements)	1	LS	\$3,000	\$3,000
Veterans Memorial Park Field 5 Subtotal					

Item #	Item	Quantity	Unit	Unit Price	Total Price
Allmendinger Park - Fields 1 and 2					
1	Mobilization (5% max)	1	LS		
2	Silt Fencing	390	LF		
3	Remove Existing Backstop	1	LF		
4	Remove Existing Bench	4	LF		
5	Remove Infield Skin	2800	SYD		
6	Backstop w/ planking	2	EA		
7	Dugout Bench	4	EA		
8	Grading (incl. lip removal, restoration outside field of play, etc.)	1	LS		
9	Infield Skin	2800	SYD		
10	Turf Restoration	8100	SYD		
11	Allowance: Maintenance and Guarantee Period	1	LS	\$10,000	\$10,000
12	Allowance: Contingency (Misc. Improvements)	1	LS	\$6,000	\$6,000
Allmendinger Park Subtotal					
West Park					
1	Mobilization (5% max)	1	LS		
2	Irrigation Improvements	1	LS		
3	Inlet Filter	2	EA		
4	Remove Existing 6' H Fence	45	LF		
5	Remove Existing Bench	1	EA		
6	Remove Warning Track Material	1250	SYD		
7	Remove Infield Skin	2140	SYD		
8	Remove and Replace 6' H Fence Fabric (Ex. Poles to Remain)	90	LF		
9	Remove and Replace 10' H Fence Fabric (Ex. Poles to Remain)	235	LF		
10	6' H Fencing	250	LF		
11	Planking on Existing Backstop	1	EA		
12	Foul Pole	2	EA		
13	Grading (incl. lip removal, restoration outside field of play, etc.)	1	LS		
14	Warning Track Material	860	SYD		
15	Infield Skin	1460	SYD		
16	Turf Restoration	7560	SYD		
17	Sod	730	SYD		
18	Allowance: Maintenance and Guarantee Period	1	LS	\$5,000	\$5,000
19	Allowance: Contingency (Misc. Improvements)	1	LS	\$3,000	\$3,000
West Park Subtotal					

Item #	Item	Quantity	Unit	Unit Price	Total Price
Southeast Area Park - Fields 1 and 2					
1	Mobilization (5% max)	1	LS		
2	Inlet Filter	11	EA		
3	Remove Existing 6' H Fence	410	LF		
4	Remove Existing Bench	2	EA		
5	Remove Warning Track Material	1170	SYD		
6	Remove Infield Skin	4120	SYD		
7	Remove and Replace 6' H Fence Fabric (Ex. Poles to Remain)	830	LF		
8	Remove and Replace 10' H Fence Fabric (Ex. Poles to Remain)	440	LF		
9	6' H Fencing	150	LF		
10	Fence Post Replacement(Four 6' Posts, One 20' Post)	1	LS		
11	Planking on Existing Backstop	2	EA		
12	Dugout Bench	4	EA		
13	Foul Pole	2	EA		
14	Concrete Pad	330	SYD		
15	Grading (incl. lip removal, restoration outside field of play, etc.)	1	LS		
16	Warning Track Material	1140	SYD		
17	Infield Skin	4050	SYD		
18	Turf Restoration	13920	SYD		
19	Allowance: Maintenance and Guarantee Period	1	LS	\$10,000	\$10,000
20	Allowance: Contingency (Misc. Improvements)	1	LS	\$6,000	\$6,000
Southeast Area Park Subtotal					
TOTAL BASE BID					

BID FORM

Section 2 - Material and Equipment Alternates

The Base Bid proposal price shall include materials and equipment selected from the designated items and manufacturers listed in the bidding documents. This is done to establish uniformity in bidding and to establish standards of quality for the items named.

If the Contractor wishes to quote alternate items for consideration by the City, it may do so under this Section. A complete description of the item and the proposed price differential must be provided. Unless approved at the time of award, substitutions where items are specifically named will be considered only as a negotiated change in Contract Sum.

<u>Item Number</u>	<u>Description</u>	<u>Add/Deduct Amount</u>
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If the Bidder does not suggest any material or equipment alternate, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT propose any material or equipment alternate under the Contract.

Signature of Authorized Representative of Bidder _____

BID FORM

Section 3 - Time Alternate

If the Bidder takes exception to the time stipulated in Article III of the Contract, Time of Completion, page C-1, it is requested to stipulate below its proposed time for performance of the work. Consideration will be given to time in evaluating bids.

If the Bidder does not suggest any time alternate, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT propose any time alternate under the Contract.

Signature of Authorized Representative of Bidder _____

BID FORM

Section 4 - Major Subcontractors

For purposes of this Contract, a Subcontractor is anyone (other than the Contractor) who performs work (other than or in addition to the furnishing of materials, plans or equipment) at or about the construction site, directly or indirectly for or on behalf of the Contractor (and whether or not in privity of Contract with the Contractor), but shall not include any individual who furnishes merely the individual's own personal labor or services.

For the work outlined in these documents the Bidder expects to engage the following major subcontractors to perform the work identified:

<u>Subcontractor (Name and Address)</u>	<u>Work</u>	<u>Amount</u>
	Fencing	
	Sod	
	Concrete	
	Earthwork	
	Irrigation	
	Other	

If the Bidder does not expect to engage any major subcontractor, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT expect to engage any major subcontractor to perform work under the Contract.

Signature of Authorized Representative of Bidder _____

CONTRACT

THIS AGREEMENT is made on the _____ day of _____, 2012, between the CITY OF ANN ARBOR, a Michigan Municipal Corporation, 310 East Huron Street, Ann Arbor, Michigan 48104 (“City”) and _____ (“Contractor”)

(An individual/partnership/corporation, include state of incorporation)

(Address)

Based upon the mutual promises below, the Contractor and the City agree as follows:

ARTICLE I - Scope of Work

The Contractor agrees to furnish all of the materials, equipment and labor necessary; and to abide by all the duties and responsibilities applicable to it for the project titled “Baseball and Softball Field Improvements” in accordance with the requirements and provisions of the following documents, including all written modifications incorporated into any of the documents, which are incorporated as part of this Contract:

Human Rights Division Contract	General Conditions
Living Wage Declaration of Compliance Forms (if applicable)	Standard Specifications
Bid Forms	Detailed Specifications
Proposal	Plans
Contract and Exhibits	Addenda
Bonds	

ARTICLE II - Definitions

Administering Service Area/Unit means Public Services Area.

Supervising Professional or Owner means Senior Utilities Engineer or other persons acting under the authorization of the Administrator/Manager of the Administering Service Area/Unit.

Engineer or Owner’s Representative means Consulting Professional acting under the authorization of the Supervising Professional/Owner.

Project means, Baseball and Softball Field Improvements, Bid No. ITB-4194

ARTICLE III - Time of Completion

- (A) The work to be completed under this Contract shall begin immediately after the Contractor’s receipt of a fully executed Contract.
- (B) The entire work for this Contract shall be completed as described in the Construction Sequence as described in Section 01000 of the Specifications. Shorter completion times for certain portions of the work may be specified in the Detailed Specifications or Plans.

- (C) Failure to complete all the work within the time specified above, including any extension granted in writing by the Supervising Professional, shall obligate the Contractor to pay the City, as liquidated damages and not as a penalty, an amount equal to \$250.00 for each calendar day of delay in the completion of all the work. If any liquidated damages are unpaid by the Contractor, the City shall be entitled to deduct these unpaid liquidated damages from the monies due the Contractor.

As an independent requirement, where the Detailed Specifications or Plans identify certain portions of the work to be completed within a shorter period of time and the Contractor fails to complete each portion within the shorter period specified for each portion, including any extension granted in writing by the Project Supervisor, the City is entitled to deduct from the monies due the Contractor, as liquidated damages and not as a penalty, the amount equal to \$250.00 for each portion or Phase of the work not timely completed for each calendar day of delay in completion of each portion of the work.

The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

Liquidated damages under this section are in addition to any liquidated damages due under Section 5 of the General Conditions.

ARTICLE IV - The Contract Sum

- (A) The City shall pay to the Contractor for the performance of the Contract, the unit prices as given in the Bid Forms for the estimated base bid total of:

_____ Dollars (\$_____)

- (B) The amount paid shall be equitably adjusted to cover changes in the work ordered by the Supervising Professional but not required by the Contract Documents. Increases or decreases shall be determined only by written agreement between the City and Contractor.

ARTICLE V - Assignment

This Contract may not be assigned or subcontracted without the written consent of the City.

ARTICLE VI - Choice of Law

This Contract shall be construed, governed, and enforced in accordance with the laws of the State of Michigan. By executing this agreement, the Contractor and the City agree to venue in a court of appropriate jurisdiction sitting within Washtenaw County for purposes of any action arising under this Contract.

Whenever possible, each provision of the Contract will be interpreted in a manner as to be effective and valid under applicable law. The prohibition or invalidity, under applicable law, of any provision

will not invalidate the remainder of the Contract.

ARTICLE VII - Relationship of the Parties

The parties of the Contract agree that it is not a Contract of employment but is a Contract to accomplish a specific result. Contractor is an independent Contractor performing services for the City. Nothing contained in this Contract shall be deemed to constitute any other relationship between the City and the Contractor.

Contractor certifies that it has no personal or financial interest in the project other than the compensation it is to receive under the Contract. Contractor certifies that it is not, and shall not become, overdue or in default to the City for any Contract, debt, or any other obligation to the City including real or personal property taxes. City shall have the right to set off any such debt against compensation awarded for services under this agreement.

ARTICLE VIII - Notice

All notices given under this Contract shall be in writing, and shall be by personal delivery or by certified mail with return receipt requested to the parties at their respective addresses as specified in the Contract Documents or other address the Contractor may specify in writing.

ARTICLE IX - Indemnification

To the fullest extent permitted by law, for any loss not covered by insurance under this Contract, Contractor shall indemnify, defend and hold harmless the City, its officers, employees and agents harmless from all suits, claims, judgments and expenses including attorney's fees resulting or alleged to result, in whole or in part, from any act or omission, which is in any way connected or associated with this Contract, by the Contractor or anyone acting on the Contractor's behalf under this Contract. Contractor shall not be responsible to indemnify the City for losses or damages caused by or resulting from the City's sole negligence.

ARTICLE X - Entire Agreement

This Contract represents the entire understanding between the City and the Contractor and it supersedes all prior representations or agreements whether written or oral. Neither party has relied on any prior representations in entering into this Contract. This Contract may be altered, amended or modified only by written amendment signed by the City and the Contractor.

FOR CONTRACTOR

By _____
Its: _____

FOR THE CITY OF ANN ARBOR

By _____
John Hieftje, Mayor

By _____
Jacqueline Beaudry, City Clerk

Approved as to substance

By _____
Steve Powers, City Administrator

By _____
Sue F. McCormick, Public Service Area
Administrator

Approved as to form and content

Stephen K. Postema, City Attorney

PERFORMANCE BOND

- (1) _____ of _____ (referred to as "Principal"), and _____, a corporation duly authorized to do business in the State of Michigan (referred to as "Surety"), are bound to the City of Ann Arbor, Michigan (referred to as "City"), for
- \$ _____, the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by this bond.
- (2) The Principal has entered a written Contract with the City dated _____, 2010, for: _____ and this bond is given for that Contract in compliance with Act No. 213 of the Michigan Public Acts of 1963, as amended, being MCL 129.201 et seq.
- (3) Whenever the Principal is declared by the City to be in default under the Contract, the Surety may promptly remedy the default or shall promptly:
- (a) complete the Contract in accordance with its terms and conditions; or
 - (b) obtain a bid or bids for submission to the City for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, arrange for a Contract between such bidder and the City, and make available, as work progresses, sufficient funds to pay the cost of completion less the balance of the Contract price; but not exceeding, including other costs and damages for which Surety may be liable hereunder, the amount set forth in paragraph 1.
- (4) Surety shall have no obligation to the City if the Principal fully and promptly performs under the Contract.
- (5) Surety agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder, or the specifications accompanying it shall in any way affect its obligations on this bond, and waives notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work, or to the specifications.

SIGNED AND SEALED this _____ day of _____, 2012.

(Name of Surety Company)

By _____
(Signature)

Its _____
(Title of Office)

(Name of Principal)

By _____
(Signature)

Its _____
(Title of Office)

Approved as to form:

Name and address of agent:

Stephen K. Postema, City Attorney

LABOR AND MATERIAL BOND

- (1) _____
of _____ (referred to as "Principal"), and _____, a corporation duly authorized to do business in the State of Michigan, (referred to as "Surety"), are bound to the City of Ann Arbor, Michigan (referred to as "City"), for the use and benefit of claimants as defined in Act 213 of Michigan Public Acts of 1963, as amended, being MCL 129.201 et seq., in the amount of \$ _____, for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by this bond.
- (2) The Principal has entered a written Contract with the City, dated _____, 2010, for _____
_____; and this bond is given for that Contract in compliance with Act No. 213 of the Michigan Public Acts of 1963 as amended;
- (3) If the Principal fails to promptly and fully repay claimants for labor and material reasonably required under the Contract, the Surety shall pay those claimants.
- (4) Surety's obligations shall not exceed the amount stated in paragraph 1, and Surety shall have no obligation if the Principal promptly and fully pays the claimants.

SIGNED AND SEALED this _____ day of _____, 2012.

(Name of Surety Company)
By _____
(Signature)
Its _____
(Title of Office)

(Name of Principal)
By _____
(Signature)
Its _____
(Title of Office)

Approved as to form:

Name and address of agent:

Stephen K. Postema, City Attorney

GENERAL CONDITIONS

Section 1 - Execution, Correlation and Intent of Documents

The Contract Documents shall be signed in 2 copies by the City and the Contractor.

The Contract Documents are complementary and what is called for by any one shall be binding. The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work. Materials or work described in words which so applied have a well-known technical or trade meaning have the meaning of those recognized standards.

In case of a conflict among the Contract Documents listed below in any requirement(s), the requirement(s) of the document listed first shall prevail over any conflicting requirement(s) of a document listed later.

- (1) Addenda in reverse chronological order;
- (2) Detailed Specifications;
- (3) Standard Specifications;
- (4) Plans;
- (5) General Conditions;
- (6) Contract;
- (7) Bid Forms;
- (8) Bond Forms;
- (9) Proposal.

Section 2 - Order of Completion

The Contractor shall submit with each invoice, and at other times reasonably requested by the Supervising Professional, schedules showing the order in which the Contractor proposes to carry on the work. They shall include the dates at which the Contractor will start the several parts of the work, the estimated dates of completion of the several parts, and important milestones within the several parts.

Section 3 - Familiarity with Work

The Bidder or its representative shall make personal investigations of the site of the work and of existing structures and shall determine to its own satisfaction the conditions to be encountered, the nature of the ground, the difficulties involved, and all other factors affecting the work proposed under this Contract. The Bidder to whom this Contract is awarded will not be entitled to any additional compensation unless conditions are clearly different from those which could reasonably have been anticipated by a person making diligent and thorough investigation of the site.

The Bidder shall immediately notify the City upon discovery and in every case prior to submitting its Bid, of every error or omission in the bidding documents that would be identified by a reasonably competent, diligent Bidder. In no case will a Bidder be allowed the benefit of extra compensation or time to complete the work under this Contract for extra expenses or time spent as a result of the error or omission.

Section 4 - Wage Requirements

Under this Contract, the Contractor shall conform to Chapter 14 of Title I of the Code of the City of Ann Arbor as amended; which in part states "...that all craftsmen, mechanics and laborers employed directly on the site in connection with said improvements, including said employees of subcontractors, shall receive the prevailing wage for the corresponding classes of craftsmen, mechanics and laborers, as determined by statistics for the Ann Arbor area compiled by the United

States Department of Labor. At the request of the City, any Contractor or subcontractor shall provide satisfactory proof of compliance with the contract provisions required by the Section".

Where the Contract and the Ann Arbor City Ordinance are silent as to definitions of terms required in determining Contract compliance with regard to prevailing wages, the definitions provided in the Davis-Bacon Act as amended (40 U.S.C. 278-a to 276-a-7) for the terms shall be used.

Further, to the extent that any employees of the Contractor providing services under this Contract are not part of the class of craftsmen, mechanics and laborers who receive a prevailing wage in conformance with Section 1:319 of Chapter 14 of Title I of the Code of the City of Ann Arbor, the Contractor agrees to conform to Chapter 23 of Title I of the Code of the City of Ann Arbor, as amended, which in part states:

1:814. Applicability.

- (1) This Chapter shall apply to any person that is a Contractor/vendor or grantee as defined in Section 1:813 that employs or Contracts with five (5) or more individuals; provided, however, that this Chapter shall not apply to a non-profit Contractor/vendor or non-profit grantee unless it employs or Contracts with ten (10) or more individuals.
- (2) This Chapter shall apply to any grant, Contract, or subcontract or other form of financial assistance awarded to or entered into with a Contractor/vendor or grantee after the effective date of this Chapter and to the extension or renewal after the effective date of this Chapter of any grant, Contract, or subcontract or other form of financial assistance with a Contractor/vendor or grantee.

1:815. Living Wages Required.

- (1) Every Contractor/vendor or grantee, as defined in Section 1:813, shall pay its covered employees a living wage as established in this Section.
 - (a) For a covered employer that provides employee health care to its employees, the living wage shall be \$9.42 an hour, or the adjusted amount hereafter established under Section 1:815(3).
 - (b) For a covered employer that does not provide health care to its employees, the living wage shall be \$10.91 an hour, or the adjusted amount hereafter established under Section 1:815(3).
- (2) In order to qualify to pay the living wage rate for covered employers providing employee health care under subsection 1:815(1)(a), a covered employer shall furnish proof of said health care coverage and payment therefore to the City Administrator or his/her designee.
- (3) The amount of the living wage established in this Section shall be adjusted upward no later than April 30, 2002, and every year thereafter by a percentage equal to the percentage increase, if any, in the federal poverty guidelines as published by the United States Department of Health and Human Services for the years 2001 and 2002. Subsequent annual adjustments shall be based upon the percentage increase, if any, in the United States Department of Health and Human Services poverty guidelines when comparing the prior calendar year's poverty guidelines to the present calendar year's guidelines. The applicable percentage amount will be converted to an amount in cents by multiplying the existing wage

under Section 1.815(1)(b) by said percentage, rounding upward to the next cent, and adding this amount of cents to the existing living wage levels established under Sections 1:815(1)(a) and 1:815(1)(b). Prior to April 1 of each calendar year, the City will notify any covered employer of this adjustment by posting a written notice in a prominent place in City Hall, and, in the case of a covered employer that has provided an address of record to the City, by a written letter to each such covered employer.

Section 5 - Non-Discrimination

The Contractor agrees to comply with the nondiscrimination provisions of Chapter 112 of the Ann Arbor City Code and to take affirmative action to assure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate any inequality based upon race, national origin or sex. The Contractor agrees to comply with the provisions of Section 9:161 of Chapter 112 of the Ann Arbor City Code and in particular the following excerpts:

9:161 NONDISCRIMINATION BY CITY CONTRACTORS

- (1) All Contractors proposing to do business with the City of Ann Arbor shall satisfy the nondiscrimination administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All Contractors shall receive approval from the Director prior to entering into a Contract with the City, unless specifically exempted by administrative policy. All City Contractors shall take affirmative action to insure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon race, national origin or sex.
- (2) Each prospective Contractor shall submit to the City data showing current total employment by occupational category, sex and minority group. If, after verifying this data, the Director concludes that it indicates total minority and female employment commensurate with their availability within the Contractor's labor recruitment area, i.e., the area from which the Contractor can reasonably be expected to recruit, said Contractor shall be accepted by the Director as having fulfilled affirmative action requirements for a period of one year at which time the Director shall conduct another review. Other Contractors shall develop an affirmative action program in conjunction with the Director. Said program shall include specific goals and timetables for the hiring and promotion of minorities and females. Said goals shall reflect the availability of minorities and females within the Contractor's labor recruitment area. In the case of construction Contractors, the Director shall use for employment verification the labor recruitment area of the Ann Arbor-Ypsilanti standard metropolitan statistical area. Construction Contractors determined to be in compliance shall be accepted by the Director as having fulfilled affirmative action requirements for a period of six (6) months at which time the Director shall conduct another review.
- (3) In hiring for construction projects, Contractors shall make good faith efforts to employ local persons, so as to enhance the local economy.
- (4) All Contracts shall include provisions through which the Contractor agrees, in addition to any other applicable Federal or State labor laws:

(a) To set goals, in conference with the Human Resources Director, for each job category or

division of the work force used in the completion of the City work;

- (b) To provide periodic reports concerning the progress the Contractor has made in meeting the affirmative action goals it has agreed to;
 - (c) To permit the Director access to all books, records and accounts pertaining to its employment practices for the purpose of determining compliance with the affirmative action requirements.
- (5) The Director shall monitor the compliance of each Contractor with the nondiscrimination provisions of each Contract. The Director shall develop procedures and regulations consistent with the administrative policy adopted by the City Administrator for notice and enforcement of non-compliance. Such procedures and regulations shall include a provision for the posting of Contractors not in compliance.
- (6) All City Contracts shall provide further that breach of the obligation not to discriminate shall be a material breach of the Contract for which the City shall be entitled, at its option, to do any or all of the following:
- (a) To cancel, terminate, or suspend the Contract in whole or part and/or refuse to make any required periodic payments under the Contract;
 - (b) Declare the Contractor ineligible for the award of any future Contracts with the City for a specified length of time;
 - (c) To recover liquidated damages of a specified sum, said sum to be that percentage of the labor expenditure for the time period involved which would have accrued to minority group members had the affirmative action not been breached;
 - (d) Impose for each day of non-compliance, liquidated damages of a specified sum, based upon the following schedule:

<u>Contract Amount</u>	<u>Assessed Damages Per Day of Non-Compliance</u>
\$ 10,000 - 24,999	\$ 25.00
25,000 - 99,999	50.00
100,000 - 199,999	100.00
200,000 - 499,999	150.00
500,000 - 1,499,999	200.00
1,500,000 - 2,999,999	250.00
3,000,000 - 4,999,999	300.00
5,000,000 - and above	500.00

- (e) In addition the Contractor shall be liable for any costs or expenses incurred by the City of Ann Arbor in obtaining from other sources the work and services to be rendered or performed or the goods or properties to be furnished or delivered to the City under this Contract.

Section 6 - Materials, Appliances, Employees

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, and other facilities necessary or used for the execution and completion of the work. Unless otherwise specified, all materials incorporated in the permanent work shall be new, and both workmanship and materials shall be of the highest quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Contractor shall at all times enforce strict discipline and good order among its employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work assigned.

Adequate sanitary facilities shall be provided by the Contractor.

Section 7 - Qualifications for Employment

The Contractor shall employ competent laborers and mechanics for the work under this Contract. For work performed under this Contract, employment preference shall be given to qualified local residents.

Section 8 - Royalties and Patents

The Contractor shall pay all royalties and license fees. It shall defend all suits or claims for infringements of any patent rights and shall hold the City harmless from loss on account of infringement except that the City shall be responsible for all infringement loss when a particular process or the product of a particular manufacturer or manufacturers is specified, unless the City has notified the Contractor prior to the signing of the Contract that the particular process or product is patented or is believed to be patented.

Section 9 - Permits and Regulations

The Contractor must secure and pay for all permits, permit or plan review fees and licenses necessary for the prosecution of the work. These include but are not limited to City building permits, right-of-way permits, lane closure permits, right-of-way occupancy permits, and the like. The City shall secure and pay for easements shown on the plans unless otherwise specified.

The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the Contract Documents are at variance with those requirements, it shall promptly notify the Supervising Professional in writing, and any necessary changes shall be adjusted as provided in the Contract for changes in the work.

Section 10 - Protection of the Public and of Work and Property

The Contractor is responsible for the means, methods, sequences, techniques and procedures of construction and safety programs associated with the work contemplated by this Contract. The Contractor, its agents or sub-contractors, shall comply with the "General Rules and Regulations for the Construction Industry" as published by the Construction Safety Commission of the State of Michigan and to all other local, State and National laws, ordinances, rules and regulations pertaining to safety of persons and property.

The Contractor shall take all necessary and reasonable precautions to protect the safety of the public. It shall continuously maintain adequate protection of all work from damage, and shall take all necessary and reasonable precautions to adequately protect all public and private property from injury or loss arising in connection with this Contract. It shall make good any damage, injury or loss to its work and to public and private property resulting from lack of reasonable protective precautions, except as may be due to errors in the Contract Documents, or caused by agents or employees of the City. The Contractor shall obtain and maintain sufficient insurance to cover damage to any City property at the site by any cause.

In an emergency affecting the safety of life, or the work, or of adjoining property, the Contractor is, without special instructions or authorization from the Supervising Professional, permitted to act at its discretion to prevent the threatened loss or injury. It shall also so act, without appeal, if authorized or instructed by the Supervising Professional.

Any compensation claimed by the Contractor for emergency work shall be determined by agreement or in accordance with the terms of Claims for Extra Cost - Section 15.

Section 11 - Inspection of Work

The City shall provide sufficient competent personnel for the inspection of the work.

The Supervising Professional shall at all times have access to the work whenever it is in preparation or progress, and the Contractor shall provide proper facilities for access and for inspection.

If the specifications, the Supervising Professional's instructions, laws, ordinances, or any public authority require any work to be specially tested or approved, the Contractor shall give the Supervising Professional timely notice of its readiness for inspection, and if the inspection is by an authority other than the Supervising Professional, of the date fixed for the inspection. Inspections by the Supervising Professional shall be made promptly, and where practicable at the source of supply. If any work should be covered up without approval or consent of the Supervising Professional, it must, if required by the Supervising Professional, be uncovered for examination and properly restored at the Contractor's expense.

Re-examination of any work may be ordered by the Supervising Professional, and, if so ordered, the work must be uncovered by the Contractor. If the work is found to be in accordance with the Contract Documents, the City shall pay the cost of re-examination and replacement. If the work is not in accordance with the Contract Documents, the Contractor shall pay the cost.

Section 12 - Superintendence

The Contractor shall keep on the work site, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Supervising Professional. The superintendent will be responsible to perform all on-site project management for the Contractor. The superintendent shall be experienced in the work required for this Contract. The superintendent shall represent the Contractor and all direction given to the superintendent shall be binding as if given to the Contractor. Important directions shall immediately be confirmed in writing to the Contractor. Other directions will be confirmed on written request. The Contractor shall give efficient superintendence to the work, using its best skill and attention.

Section 13 - Changes in the Work

The City may make changes to the quantities of work within the general scope of the Contract at any time by a written order and without notice to the sureties. If the changes add to or deduct from the extent of the work, the Contract Sum shall be adjusted accordingly. All the changes shall be executed under the conditions of the original Contract except that any claim for extension of time caused by the change shall be adjusted at the time of ordering the change.

In giving instructions, the Supervising Professional shall have authority to make minor changes in the work not involving extra cost and not inconsistent with the purposes of the work, but otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the Supervising Professional, and no claim for an addition to the Contract Sum shall be valid unless the additional work was ordered in writing.

The Contractor shall proceed with the work as changed and the value of the work shall be determined as provided in Claims for Extra Cost - Section 15.

Section 14 - Extension of Time

Extension of time stipulated in the Contract for completion of the work will be made if and as the Supervising Professional may deem proper under any of the following circumstances:

- (1) When work under an extra work order is added to the work under this Contract;
- (2) When the work is suspended as provided in Section 20;
- (3) When the work of the Contractor is delayed on account of conditions which could not have been foreseen, or which were beyond the control of the Contractor, and which were not the result of its fault or negligence;
- (4) Delays in the progress of the work caused by any act or neglect of the City or of its employees or by other Contractors employed by the City;
- (5) Delay due to an act of Government;
- (6) Delay by the Supervising Professional in the furnishing of plans and necessary information;
- (7) Other cause which in the opinion of the Supervising Professional entitles the Contractor to an extension of time.

The Contractor shall notify the Supervising Professional within 7 days of an occurrence or conditions which, in the Contractor's opinion, entitle it to an extension of time. The notice shall be in writing and submitted in ample time to permit full investigation and evaluation of the Contractor's claim. The Supervising Professional shall acknowledge receipt of the Contractor's notice within 7 days of its receipt. Failure to timely provide the written notice shall constitute a waiver by the Contractor of any claim.

In situations where an extension of time in Contract completion is appropriate under this or any other section of the Contract, the Contractor understands and agrees that the only available adjustment for events that cause any delays in Contract completion shall be extension of the required time for Contract completion and that there shall be no adjustments in the money due the Contractor on account of the delay.

Section 15 - Claims for Extra Cost

If the Contractor claims that any instructions by drawings or other media issued after the date of the Contract involved extra cost under this Contract, it shall give the Supervising Professional written notice within 7 days after the receipt of the instructions, and in any event before proceeding to execute the work, except in emergency endangering life or property. The procedure shall then be as provided for Changes in the Work-Section 13. No claim shall be valid unless so made.

If the Supervising Professional orders, in writing, the performance of any work not covered by the Contract Documents, and for which no item of work is provided in the Contract, and for which no unit price or lump sum basis can be agreed upon, then the extra work shall be done on a Cost-Plus-Percentage basis of payment as follows:

- (1) The Contractor shall be reimbursed for all reasonable costs incurred in doing the work, and shall receive an additional payment of 15% of all the reasonable costs to cover both its indirect overhead costs and profit;
- (2) The term "Cost" shall cover all payroll charges for employees and supervision required under the specific order, together with all worker's compensation, Social Security, pension and retirement allowances and social insurance, or other regular payroll charges on same; the cost of all material and supplies required of either temporary or permanent character; rental of all power-driven equipment at agreed upon rates, together with cost of fuel and supply charges for the equipment; and any costs incurred by the Contractor as a direct result of executing the order, if approved by the Supervising Professional;
- (3) If the extra is performed under subcontract, the subcontractor shall be allowed to compute its charges as described above. The Contractor shall be permitted to add an additional charge of 5% percent to that of the subcontractor for the Contractor's supervision and contractual responsibility;
- (4) The quantities and items of work done each day shall be submitted to the Supervising Professional in a satisfactory form on the succeeding day, and shall be approved by the Supervising Professional and the Contractor or adjusted at once;

- (5) Payments of all charges for work under this Section in any one month shall be made along with normal progress payments. Retainage shall be in accordance with Progress Payments-Section 16.

No additional compensation will be provided for additional equipment, materials, personnel, overtime or special charges required to perform the work within the time requirements of the Contract.

When extra work is required and no suitable price for machinery and equipment can be determined in accordance with this Section, the hourly rate paid shall be 1/40 of the basic weekly rate listed in the Rental Rate Blue Book published by Dataquest Incorporated and applicable to the time period the equipment was first used for the extra work. The hourly rate will be deemed to include all costs of operation such as bucket or blade, fuel, maintenance, "regional factors", insurance, taxes, and the like, but not the costs of the operator.

Section 16 - Progress Payments

The Contractor shall submit each month, or at longer intervals, if it so desires, an invoice covering work performed for which it believes payment, under the Contract terms, is due. The submission shall be to the City's Finance Department - Accounting Division. The Supervising Professional will, within 10 days following submission of the invoice, prepare a certificate for payment for the work in an amount to be determined by the Supervising Professional as fairly representing the acceptable work performed during the period covered by the Contractor's invoice. To insure the proper performance of this Contract, the City will retain a percentage of the estimate in accordance with Act 524, Public Acts of 1980. The City will then, following the receipt of the Supervising Professional's Certificate, make payment to the Contractor as soon as feasible, which is anticipated will be within 15 days.

An allowance may be made in progress payments if substantial quantities of permanent material have been delivered to the site but not incorporated in the completed work if the Contractor, in the opinion of the Supervising Professional, is diligently pursuing the work under this Contract. Such materials shall be properly stored and adequately protected. Allowance in the estimate shall be at the invoice price value of the items. Notwithstanding any payment of any allowance, all risk of loss due to vandalism or any damages to the stored materials remains with the Contractor.

In the case of Contracts which include only the Furnishing and Delivering of Equipment, the payments shall be; 60% of the Contract Sum upon the delivery of all equipment to be furnished, or in the case of delivery of a usable portion of the equipment in advance of the total equipment delivery, 60% of the estimated value of the portion of the equipment may be paid upon its delivery in advance of the time of the remainder of the equipment to be furnished; 30% of the Contract Sum upon completion of erection of all equipment furnished, but not later than 60 days after the date of delivery of all of the equipment to be furnished; and payment of the final 10% on final completion of erection, testing and acceptance of all the equipment to be furnished; but not later than 180 days after the date of delivery of all of the equipment to be furnished, unless testing has been completed and shows the equipment to be unacceptable.

With each invoice for periodic payment, the Contractor shall enclose a Contractor's Declaration - Section 43, and an updated project schedule per Order of Completion - Section 2.

Section 17 - Deductions for Uncorrected Work

If the Supervising Professional decides it is inexpedient to correct work that has been damaged or that was not done in accordance with the Contract, an equitable deduction from the Contract price shall be made.

Section 18 - Correction of Work Before Final Payment

The Contractor shall promptly remove from the premises all materials condemned by the Supervising Professional as failing to meet Contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute the work in accordance with the Contract and without expense to the City and shall bear the expense of making good all work of other Contractors destroyed or damaged by the removal or replacement.

If the Contractor does not remove the condemned work and materials within 10 days after written notice, the City may remove them and, if the removed material has value, may store the material at the expense of the Contractor. If the Contractor does not pay the expense of the removal within 10 days thereafter, the City may, upon 10 days written notice, sell the removed materials at auction or private sale and shall pay to the Contractor the net proceeds, after deducting all costs and expenses that should have been borne by the Contractor. If the removed material has no value, the Contractor must pay the City the expenses for disposal within 10 days of invoice for the disposal costs.

The inspection or lack of inspection of any material or work pertaining to this Contract shall not relieve the Contractor of its obligation to fulfill this Contract and defective work shall be made good. Unsuitable materials may be rejected by the Supervising Professional notwithstanding that the work and materials have been previously overlooked by the Supervising Professional and accepted or estimated for payment or paid for. If the work or any part shall be found defective at any time before the final acceptance of the whole work, the Contractor shall forthwith make good the defect in a manner satisfactory to the Supervising Professional. The judgment and the decision of the Supervising Professional as to whether the materials supplied and the work done under this Contract comply with the requirements of the Contract shall be conclusive and final.

Section 19 - Acceptance and Final Payment

Upon receipt of written notice that the work is ready for final inspection and acceptance, the Supervising Professional will promptly make the inspection. When the Supervising Professional finds the work acceptable under the Contract and the Contract fully performed, the Supervising Professional will promptly sign and issue a final certificate stating that the work required by this Contract has been completed and is accepted by the City under the terms and conditions of the Contract. The entire balance found to be due the Contractor, including the retained percentage, shall be paid to the Contractor by the City within 30 days after the date of the final certificate.

Before issuance of final certificates, the Contractor shall file with the City:

- (1) The consent of the surety to payment of the final estimate;
- (2) The Contractor's Affidavit in the form required by Section 44.

In case the Affidavit or consent is not furnished, the City may retain out of any amount due the Contractor, sums sufficient to cover all lienable claims.

The making and acceptance of the final payment shall constitute a waiver of all claims by the City except those arising from:

- (1) unsettled liens;
- (2) faulty work appearing within 12 months after final payment;
- (3) hidden defects in meeting the requirements of the plans and specifications;
- (4) manufacturer's guarantees.

It shall also constitute a waiver of all claims by the Contractor, except those previously made and still unsettled.

Section 20 - Suspension of Work

The City may at any time suspend the work or any part by giving 5 days notice to the Contractor in writing. The work shall be resumed by the Contractor within 10 days after the date fixed in the written notice from the City to the Contractor to do so. The City shall reimburse the Contractor for expense incurred by the Contractor in connection with the work under this Contract as a result of the suspension.

If the work, or any part, shall be stopped by the notice in writing, and if the City does not give notice in writing to the Contractor to resume work at a date within 90 days of the date fixed in the written notice to suspend, then the Contractor may abandon that portion of the work suspended and will be entitled to the estimates and payments for all work done on the portions abandoned, if any, plus 10% of the value of the work abandoned, to compensate for loss of overhead, plant expense, and anticipated profit.

Section 21 - Delays and the City's Right to Terminate Contract

If the Contractor refuses or fails to prosecute the work, or any separate part of it, with the diligence required to insure completion, ready for operation, within the allowable number of consecutive calendar days specified plus extensions, or fails to complete the work within the required time, the City may, by written notice to the Contractor, terminate its right to proceed with the work or any part of the work as to which there has been delay. After providing the notice the City may take over the work and prosecute it to completion, by Contract or otherwise, and the Contractor and its sureties shall be liable to the City for any excess cost to the City. If the Contractor's right to proceed is terminated, the City may take possession of and utilize in completing the work, any materials, appliances and plant as may be on the site of the work and useful for completing the work. The right of the Contractor to proceed shall not be terminated or the Contractor charged with liquidated damages where an extension of time is granted under Extension of Time - Section 14.

If the Contractor is adjudged a bankrupt, or if it makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of its insolvency, or if it persistently or repeatedly refuses or fails except in cases for which extension of time is provided, to supply enough properly skilled workers or proper materials, or if it fails to make prompt payments to subcontractors or for material or labor, or persistently disregards laws, ordinances or the instructions of the Supervising Professional, or otherwise is guilty of a substantial violation of any provision of the Contract, then the City, upon the certificate of the Supervising Professional that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the Contractor 3 days written notice, terminate this Contract. The City may then take possession of the premises and of all materials, tools and appliances thereon and without prejudice to any other remedy it may have, make good the deficiencies or finish the work by whatever method it may deem expedient, and deduct the cost from the payment due the Contractor. The Contractor shall not be entitled to receive any further payment until the work is finished. If the expense of finishing the work, including

compensation for additional managerial and administrative services exceeds the unpaid balance of the Contract Sum, the Contractor and its surety are liable to the City for any excess cost incurred. The expense incurred by the City, and the damage incurred through the Contractor's default, shall be certified by the Supervising Professional.

Section 22 - Contractor's Right to Terminate Contract

If the work should be stopped under an order of any court, or other public authority, for a period of 3 months, through no act or fault of the Contractor or of anyone employed by it, then the Contractor may, upon 7 days written notice to the City, terminate this Contract and recover from the City payment for all acceptable work executed plus reasonable profit.

Section 23 - City's Right to Do Work

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the City, 3 days after giving written notice to the Contractor and its surety may, without prejudice to any other remedy the City may have, make good the deficiencies and may deduct the cost from the payment due to the Contractor.

Section 24 - Removal of Equipment and Supplies

In case of termination of this Contract before completion, from any or no cause, the Contractor, if notified to do so by the City, shall promptly remove any part or all of its equipment and supplies from the property of the City, failing which the City shall have the right to remove the equipment and supplies at the expense of the Contractor.

The removed equipment and supplies may be stored by the City and, if all costs of removal and storage are not paid by the Contractor within 10 days of invoicing, the City upon 10 days written notice may sell the equipment and supplies at auction or private sale, and shall pay the Contractor the net proceeds after deducting all costs and expenses that should have been borne by the Contractor and after deducting all amounts claimed due by any lien holder of the equipment or supplies.

Section 25 - Responsibility for Work and Warranties

The Contractor assumes full responsibility for any and all materials and equipment used in the construction of the work and may not make claims against the City for damages to materials and equipment from any cause except negligence or willful act of the City. Until its final acceptance, the Contractor shall be responsible for damage to or destruction of the project (except for any part covered by Partial Completion and Acceptance - Section 26). The Contractor shall make good all work damaged or destroyed before acceptance. All risk of loss remains with the Contractor until final acceptance of the work (Section 19) or partial acceptance (Section 26). The Contractor is advised to investigate obtaining its own builders risk insurance.

The Contractor shall guarantee the quality of the work for a period of one year. The Contractor shall also unconditionally guarantee the quality of all equipment and materials that are furnished and installed under the Contract for a period of one year. At the end of one year after the Contractor's receipt of final payment, the complete work, including equipment and materials furnished and installed under the Contract, shall be inspected by the Contractor and the Supervising Professional. Any defects shall be corrected by the Contractor at its expense as soon as practicable but in all cases within 60 days. Any defects that are identified prior to the end of one year shall also be inspected by

the Contractor and the Supervising Professional and shall be corrected by the Contractor at its expense as soon as practicable but in all cases within 60 days.

The Contractor shall assign all manufacturer or material supplier warranties to the City prior to final payment. The assignment shall not relieve the Contractor of its obligations under this paragraph to correct defects.

Section 26 - Partial Completion and Acceptance

If at any time prior to the issuance of the final certificate referred to in Acceptance and Final Payment - Section 19, any portion of the permanent construction has been satisfactorily completed, and if the Supervising Professional determines that portion of the permanent construction is not required for the operations of the Contractor but is needed by the City, the Supervising Professional shall issue to the Contractor a certificate of partial completion, and immediately the City may take over and use the portion of the permanent construction described in the certificate, and exclude the Contractor from that portion.

The issuance of a certificate of partial completion shall not constitute an extension of the Contractor's time to complete the portion of the permanent construction to which it relates if the Contractor has failed to complete it in accordance with the terms of this Contract. The issuance of the certificate shall not release the Contractor or its sureties from any obligations under this Contract including bonds.

If prior use increases the cost of, or delays the work, the Contractor shall be entitled to extra compensation, or extension of time, or both, as the Supervising Professional may determine.

Section 27 - Payments Withheld Prior to Final Acceptance of Work

The City may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any certificate to the extent reasonably appropriate to protect the City from loss on account of:

- (1) Defective work not remedied;
- (2) Claims filed or reasonable evidence indicating probable filing of claims by other parties against the Contractor;
- (3) Failure of the Contractor to make payments properly to subcontractors or for material or labor;
- (4) Damage to another Contractor.

When the above grounds are removed or the Contractor provides a Surety Bond satisfactory to the City which will protect the City in the amount withheld, payment shall be made for amounts withheld under this section.

Section 28 - Contractor's Insurance

- A. The Contractor shall procure and maintain during the life of this Contract, including the

guarantee period and during any warranty work, such insurance policies, including those set forth below, as will protect itself from all claims for bodily injuries, death or property damage which may arise under this Contract; whether the acts were made by the Contractor or by any subcontractor or anyone employed by them directly or indirectly. The following insurance policies are required:

1. Worker's Compensation Insurance in accordance with all applicable state and federal statutes. Further, Employers Liability Coverage shall be obtained in the following minimum amounts:

Bodily Injury by Accident - \$500,000 each accident
Bodily Injury by Disease - \$500,000 each employee
Bodily Injury by Disease - \$500,000 each policy limit

2. Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 07 98. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements including, but not limited to: Products and Completed Operations, Explosion, Collapse and Underground coverage or Pollution. Further, the following minimum limits of liability are required:

\$1,000,000 Each occurrence as respect Bodily Injury Liability or Property Damage Liability, or both combined.

\$2,000,000 Per Job General Aggregate

\$1,000,000 Personal and Advertising Injury

\$2,000,000 Products and Completed Operations Aggregate

3. Motor Vehicle Liability Insurance, including Michigan No-Fault Coverages, equivalent to, as a minimum, Insurance Services Office form CA 00 01 07 97. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. Further, the limits of liability shall be \$1,000,000 for each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.
4. Umbrella/Excess Liability Insurance shall be provided to apply excess of the Commercial General Liability, Employers Liability and the Motor Vehicle coverage enumerated above, for each occurrence and for aggregate in the amount of \$1,000,000.

B. Insurance required under Section A.2 and A.3 of this Contract shall be considered primary as respects any other valid or collectible insurance that the City may possess, including any self-insured retentions the City may have; and any other insurance the City does possess shall be considered excess insurance only and shall not be required to contribute with this insurance. Further, the Contractor agrees to waive any right of recovery by its insurer against the City.

C. In the case of all Contracts involving on-site work, the Contractor shall provide to the City before the commencement of any work under this Contract documentation demonstrating it

has obtained the above mentioned policies. Documentation must provide and demonstrate an unconditional 30 day written notice of cancellation in favor of the City of Ann Arbor. Further, the documentation must explicitly state the following: (a) the policy number; name of insurance company; name and address of the agent or authorized representative; name and address of insured; project name; policy expiration date; and specific coverage amounts; (b) any deductibles or self-insured retentions which shall be approved by the City, in its sole discretion; (c) that the policy conforms to the requirements specified. An original certificate of insurance may be provided as an initial indication of the required insurance, provided that no later than 21 calendar days after commencement of any work the Contractor supplies a copy of the endorsements required on the policies. Upon request, the Contractor shall provide within 30 days a copy of the policy(ies) to the City. If any of the above coverages expire by their terms during the term of this Contract, the Contractor shall deliver proof of renewal and/or new policies to the Administering Service Area/Unit at least ten days prior to the expiration date.

- D. Any Insurance provider of Contractor shall be admitted and authorized to do business in the State of Michigan and shall carry and maintain a minimum rating assigned by A.M. Best & Company ' s Key Rating Guide of "A-" Overall and a minimum Financial Size Category of "V". Insurance policies and certificates issued by non-admitted insurance companies are not acceptable unless approved in writing by the City.

Section 29 - Surety Bonds

Bonds will be required from the successful bidder as follows:

- (1) A Performance Bond to the City of Ann Arbor for the amount of the bid(s) accepted;
- (2) A Labor and Material Bond to the City of Ann Arbor for the amount of the bid(s) accepted.

Bonds shall be executed on forms supplied by the City in a manner and by a Surety Company satisfactory to the City Attorney.

Section 30 - Damage Claims

The Contractor shall be held responsible for all damages to property of the City or others, caused by or resulting from the negligence of the Contractor, its employees, or agents during the progress of or connected with the prosecution of the work, whether within the limits of the work or elsewhere. The Contractor must restore all property injured including sidewalks, curbing, sodding, pipes, conduit, sewers or other public or private property to not less than its original condition with new work.

Section 31 - Refusal to Obey Instructions

If the Contractor refuses to obey the instructions of the Supervising Professional, the Supervising Professional shall withdraw inspection from the work, and no payments will be made for work performed thereafter nor may work be performed thereafter until the Supervising Professional shall have again authorized the work to proceed.

Section 32 - Assignment

Neither party to the Contract shall assign the Contract without the written consent of the other. The Contractor may assign any monies due to it to a third party acceptable to the City.

Section 33 - Rights of Various Interests

Whenever work being done by the City's forces or by other Contractors is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Supervising Professional, to secure the completion of the various portions of the work in general harmony.

The Contractor is responsible to coordinate all aspects of the work, including coordination of, and with, utility companies and other Contractors whose work impacts this project.

Section 34 - Subcontracts

The Contractor shall not award any work to any subcontractor without prior written approval of the City. The approval will not be given until the Contractor submits to the City a written statement concerning the proposed award to the subcontractor. The statement shall contain all information the City may require.

The Contractor shall be as fully responsible to the City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by it.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and all other Contract Documents applicable to the work of the subcontractors and to give the Contractor the same power to terminate any subcontract that the City may exercise over the Contractor under any provision of the Contract Documents.

Nothing contained in the Contract Documents shall create any contractual relation between any subcontractor and the City.

Section 35 - Supervising Professional's Status

The Supervising Professional has the right to inspect any or all work. The Supervising Professional has authority to stop the work whenever stoppage may be appropriate to insure the proper execution of the Contract. The Supervising Professional has the authority to reject all work and materials which do not conform to the Contract and to decide questions which arise in the execution of the work.

The Supervising Professional shall make all measurements and determinations of quantities. Those measurements and determinations are final and conclusive between the parties.

Section 36 - Supervising Professional's Decisions

The Supervising Professional shall, within a reasonable time after their presentation to the Supervising Professional, make decisions in writing on all claims of the City or the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the Contract Documents.

Section 37 - Storing Materials and Supplies

Materials and supplies may be stored at the site of the work at locations agreeable to the City unless specific exception is listed elsewhere in these documents. Ample way for foot traffic and drainage must be provided, and gutters must, at all times, be kept free from obstruction. Traffic on streets shall be interfered with as little as possible. The Contractor may not enter or occupy with agents, employees, tools, or material any private property without first obtaining written permission from its owner. A copy of the permission shall be furnished to the Supervising Professional.

Section 38 - Lands for Work

The Contractor shall provide, at its own expense and without liability to the City, any additional land and access that may be required for temporary construction facilities or for storage of materials.

Section 39 - Cleaning Up

The Contractor shall, as directed by the Supervising Professional, remove at its own expense from the City's property and from all public and private property all temporary structures, rubbish and waste materials resulting from its operations unless otherwise specifically approved, in writing, by the Supervising Professional.

Section 40 - Salvage

The Supervising Professional may designate for salvage any materials from existing structures or underground services. Materials so designated remain City property and shall be transported or stored at a location as the Supervising Professional may direct.

Section 41 - Night, Saturday or Sunday Work

No night or Sunday work (without prior written City approval) will be permitted except in the case of an emergency and then only to the extent absolutely necessary. The City may allow night work which, in the opinion of the Supervising Professional, can be satisfactorily performed at night. Night work is any work between 8:00 p.m. and 7:00 a.m. No Saturday work will be permitted unless the Contractor gives the Supervising Professional at least 48 hours but not more than 5 days notice of the Contractor's intention to work the upcoming Saturday.

Section 42 - Sales Taxes

Under State law the City is exempt from the assessment of State Sales Tax on its direct purchases. Contractors who acquire materials, equipment, supplies, etc. for incorporation in City projects are not likewise exempt. State Law shall prevail. The Bidder shall familiarize itself with the State Law and prepare its Bid accordingly. No extra payment will be allowed under this Contract for failure of the Contractor to make proper allowance in this bid for taxes it must pay.

CONTRACTOR'S DECLARATION

I hereby declare that I have not, during the period _____, 201_, to _____, 201_, performed any work, furnished any materials, sustained any loss, damage or delay, or otherwise done anything in addition to the regular items (or executed change orders) set forth in the Contract titled Baseball and Softball Field Improvements, for which I shall ask, demand, sue for, or claim compensation or extension of time from the City, except as I hereby make claim for additional compensation or extension of time as set forth on the attached itemized statement. I further declare that I have paid all payroll obligations related to this Contract that have become due during the above period and that all invoices related to this Contract received more than 30 days prior to this declaration have been paid in full except as listed below.

There is/is not (Contractor please circle one and strike one as appropriate) an itemized statement attached regarding a request for additional compensation or extension of time.

Contractor

Date

By _____
(Signature)

Its _____
(Title of Office)

Past due invoices, if any, are listed below.

CONTRACTOR'S AFFIDAVIT

The undersigned Contractor, _____, represents that on
, 20___, it was awarded a Contract by the City of Ann Arbor, Michigan to _____ under the
terms and conditions of a Contract titled Baseball and Softball Field Improvements.

The Contractor represents that all work has now been accomplished and the Contract is complete.

The Contractor warrants and certifies that all of its indebtedness arising by reason of the Contract
has been fully paid or satisfactorily secured; and that all claims from subcontractors and others for
labor and material used in accomplishing the project, as well as all other claims arising from the
performance of the Contract, have been fully paid or satisfactorily settled. The Contractor agrees
that, if any claim should hereafter arise, it shall assume responsibility for it immediately upon
request to do so by the City of Ann Arbor.

The Contractor, for valuable consideration received, does further waive, release and relinquish any
and all claims or right of lien which the Contractor now has or may acquire upon the subject
premises for labor and material used in the project owned by the City of Ann Arbor.

This affidavit is freely and voluntarily given with full knowledge of the facts.

Contractor
By _____
(Signature)
Its _____
(Title of Office)

Subscribed and sworn to before me, on this ____ day of _____, 20__
_____, _____ County, Michigan

Notary Public
My commission expires on: _____

STANDARD SPECIFICATIONS

All work under this Contract shall be performed in accordance with the Public Services Department Standard Specifications in effect at the date of availability of the Contract Documents stipulated in the Advertisement. All work under this Contract which is not included in these Standard Specifications, or which is performed using modifications to these Standard Specifications, shall be performed in accordance with the Detailed Specifications included in these Contract Documents.

A copy of the Public Services Department Standard Specifications may be purchased from the Engineering Division, (Fourth Floor, City Hall, Ann Arbor, Michigan), for \$35.00 per copy. In addition, a copy of these Standard Specifications is available for public viewing at the Engineering Division office, for review Monday through Friday between the hours of 8:30 a.m. and 4:00 p.m.

SECTION 01000

GENERAL REQUIREMENTS

1.00 GENERAL

1.01 DESCRIPTION OF WORK

- A. Work under this Contract consists of improvements to ten (10) existing baseball and softball fields at Veterans Memorial Park, Allmendinger Park, West Park and Southeast Area Park.
- B. Contract drawings are included which give specific locations for all work under this Contract.

1.02 EXISTING FACILITIES ACCESS

- A. The project sites are located within public parks and the CONTRACTOR shall be responsible for maintaining access to existing facilities for public use during the construction period.
- B. Access to existing facilities shall not be temporarily disrupted without coordination with and prior approval of the OWNER.

1.03 CONSTRUCTION WATER

- A. Water for construction is not available from the OWNER. The CONTRACTOR shall be responsible for providing all necessary water.

1.04 CONSTRUCTION POWER

- A. Electrical power to be used during construction is not available from the OWNER. The CONTRACTOR shall be responsible for providing all power generation.

1.05 NOTIFICATION OF UTILITIES

- A. The CONTRACTOR shall notify all utilities prior to any excavation. Information regarding size and location is available from the utility.
- B. MISS DIG - The Detroit Edison Co., Michigan Consolidated Gas Co., and the telephone companies are members of a utility communication system called "MISS DIG" that provides service to participating utilities. The contractors shall contact "MISS DIG" not less than 72 hours before starting construction for assistance in locating utilities or for any work to be done near utilities.

1.06 WORK SCHEDULE

- A. The CONTRACTOR shall provide a work schedule meeting the construction sequence below. The schedule shall be complete and shall show in detail the manner in which he proposes to complete the work under this Contract. The purpose of the schedule is to assist the OWNER in notifying the public of inconveniences, and to determine if the CONTRACTOR is reasonably proceeding with the work to assure completion within the specified time.
- B. Construction activities are prohibited on the weekends.

General Requirements

1.07 CONSTRUCTION SEQUENCE

- A. The CONTRACTOR will be required to follow the following phasing schedule:
- B. Phase 1: Work to occur between April 1, 2012 and June 30, 2012. Turf must be fully established for play by May 4, 2013.
 - 1. Allmendinger Park Fields 1 and 2
- C. Phase 2: Work to occur between August 20, 2012 and November 16, 2012. Turf must be fully established for play by May 4, 2013.
 - 1. Veterans Memorial Park Fields 1, 2, 3, 4 and 5
 - 2. Southeast Area Park Fields 1 and 2
 - 3. West Park Field 1

1.08 CONSTRUCTION PERMITS

- A. The CONTRACTOR will be required to follow the requirements established by all permits necessary for the construction of this project. The following is a list of all permits that must be obtained prior to the beginning of construction.
 - 1. Soil Erosion and Sedimentation Control Permit, as part of Public Act 451 (1994), Part 91, City of Ann Arbor.
 - 2. City of Ann Arbor Building Permit (Building, Electrical and other applicable trades).
- B. The Soil Erosion and Sedimentation Control permit shall be applied for by the CONTRACTOR. The plan review fee will be paid for by the CONTRACTOR. The CONTRACTOR will be required to obtain the permit, pay all associated fees, and adhere to all requirements of the permit. The CONTRACTOR must submit a copy of the permit to the OWNER and/or OWNER's REPRESENTATIVE prior to construction.
- C. The City of Ann Arbor Building Permit for various trades shall be applied for by the CONTRACTOR. The plan review fee will be paid for by the CONTRACTOR. The CONTRACTOR will be required to obtain the permit, pay for all associated fees and adhere to all requirements of the permit. The CONTRACTOR must submit a copy of the permit to the OWNER and/or OWNER's REPRESENTATIVE prior to construction.

1.09 CONSTRUCTION STAKING

- A. The CONTRACTOR will be required to contact the ENGINEER for staking 48 hours in advance of necessary staking. The ENGINEER will provide construction staking, in accordance with the GENERAL CONDITIONS for the complete project only one time. Any and all stakes that are destroyed or tampered with after staking are to be replaced at the CONTRACTORS expense.

1.10 PROJECT PROGRESS MEETING

- A. It shall be the responsibility of the CONTRACTOR to have a representative present at each meeting. The meetings shall be held at least once a month as directed by the ENGINEER.

General Requirements

1.11 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

A. General

1. The method of measurement and the basis of payment for each item in the Proposal will be as specified in the Bid Form. The items are generally grouped by the section of the Specifications under which the particular unit of work is detailed. There will be no payment allowed for any unit of work not specifically mentioned in the Proposal as a bid item, and any such unit of work not mentioned in the Proposal, but necessary for the completion of the Project, will be considered as incidental to the construction of the Project.

B. Measurement

1. Quantities of work completed under the Contract will be measured by the ENGINEER according to the United States standard measures. When tons are specified, the unit shall be the ton of 2,000 pounds. When measurements are stated in miles, stations, acres, they will be horizontal measurements unless specified otherwise. Where measurements are specified to be "in place," they will be taken along the actual surface of the completed item to obtain lineal, area, or volume measurements.

C. Payment

1. In each and every instance, where a Basis of Payment is specified, it shall be understood to be prefaced by the following statement, "The Contract Unit Price bid in the Proposal will be payment in full for all labor, materials, and equipment necessary to furnish and install the following according to the Plans and Specifications". Payment shall be made on the basis of the actual quantity of the item completed and accepted at the unit price for such item named in the Proposal. Surface restoration percentages identified under these items will not be paid until landscaping has been completed.

END OF SECTION

SECTION 01330

SUBMITTAL PROCEDURES

1.00 GENERAL

1.01 SECTION INCLUDES

- A. Submittal Procedures
- B. Shop Drawings
- C. Manufacturers' Instructions
- D. Construction Schedule

1.02 SUBMITTAL PROCEDURES

- A. Package each submittal appropriately for shipping and handling. This shall include an index either on the transmittal or within the submittal itself. Transmit each submittal from CONTRACTOR to ENGINEER using a transmittal form. Submittals received from sources other than CONTRACTOR will be returned without action. Use separate transmittals for items from different specification sections. Number each submittal consecutively. Resubmittals should have the same number as the original, plus a letter designation for each Resubmittal (i.e. 7-A, 7-B, etc.)
- B. Indicate on the transmittal relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include CONTRACTOR's certification that information complies with Contract Document requirements. On Resubmittal, all changes shall be clearly identified for ease of review. Resubmittals shall be reviewed for the clearly identified changes only. Any changes not clearly identified will not be reviewed and original submittal shall govern.
- C. Include the following information on the label for processing and recording action taken.
 - 1. Project name.
 - 2. Date.
 - 3. Name and address of ENGINEER.
 - 4. Name and address of CONTRACTOR.
 - 5. Name and address of subcontractor.
 - 6. Name and address of supplier.
 - 7. Name of manufacturer.
 - 8. Number and title of appropriate specification sections.
 - 9. Drawing number and detail references, as appropriate.
- D. Schedule submittals to expedite the Project, and deliver to ENGINEER at business address. Coordinate submission of related items. Coordinate related activities that require sequential activity.
- E. Review and approve shop drawings, project data, and samples before submitting them.
- F. Verify field measurements, field construction criteria, catalog numbers, and similar data. Indicate on the submission exactly what was verified.
- G. Any markings done by CONTRACTOR shall be done in a color other than red. Red is reserved for ENGINEER's marking.

Submittal Procedures

- H. The number of copies to be submitted will be determined at the pre-construction conference. Reproducible may be submitted and will be marked and returned to CONTRACTOR. Blue or black line prints shall be submitted in sufficient quantity for distribution to ENGINEER and OWNER recipients.
- I. Coordinate each submittal with the requirements of the Contract Documents.
- J. Provide space for CONTRACTOR and ENGINEER review stamps.
- K. Apply CONTRACTOR's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- L. Submit the number of copies that the CONTRACTOR requires, plus three copies that will be retained by the OWNER and ENGINEER.
- M. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- N. No claim will be allowed for damages or extension of time because of delays in the work resulting from rejection of material or from revision and resubmittal of shop drawings, project data, or samples.
- O. No extension of contract time will be authorized because of failure to transmit submittals to ENGINEER sufficiently in advance of the work to permit processing.
- P. ENGINEER reserves the right to withhold action on a submittal required coordination with other submittals until related submittals are received.
- Q. Do not install materials or equipment which require submittals until the submittals are returned with ENGINEER's/OWNER's stamp and initials or signature indicating approval. The OWNER shall have final approval authority.
- R. CONTRACTOR's responsibility of errors, omissions, and deviations from requirements of Contract Documents in submittals is not relieved by the ENGINEER's review.
- S. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with requirements.
- T. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.
- U. Submittals not requested in conformance with this Specification will not be recognized or processed.
- V. Revise and resubmit as required, identify all changes made since the previous submittal.

1.03 SHOP DRAWINGS

- A. Shop Drawings: Submit to ENGINEER for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Produce copies and distribute in accordance with SUBMITTAL PROCEDURES.

Submittal Procedures

- B. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of shop drawings. Standard information prepared without specific reference to the project is not considered shop drawings.
- C. Shop drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings. Include the following information:
 - 1. Dimension.
 - 2. Identification of products and materials included.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurements.
- D. Standard manufactured items in the form of catalog work sheets showing illustrated cuts of the items to be furnished, scale details, sizes, dimensions, quantity, and all other pertinent information should be submitted and approved in a similar manner.
- F. Measurements given on shop drawings or standard catalog sheets, as established from Contract Drawings and as approved by ENGINEER, shall be followed. When it is necessary to verify field measurements, they shall be checked and established by CONTRACTOR. The field measurements so established shall be followed by CONTRACTOR and by all affected trades.

1.04 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to ENGINEER for delivery to OWNER in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.05 CONSTRUCTION SCHEDULE

- A. Bar Chart Schedule:
 - 1. Prepare a fully developed, horizontal bar chart type construction schedule. Submit within 30 days of the date established for commencement of the work.
 - 2. Provide a separate item bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the work as indicated on schedule of values.
 - 3. Prepare schedule of sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for entire construction period.
 - 4. Secure time commitments for performing critical elements of the work from parties involved. Coordinate each element on schedule with other construction activities, including the OWNER's operation of the facility and other Contractors on site; include minor elements involved in the sequence of the work. Show each activity in proper sequence. Indicate graphically sequences necessary for completion of related portions of the work.

Submittal Procedures

5. Coordinate construction schedule with schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other schedules.
 6. Indicate completion in advance of the date established for substantial completion. Indicate substantial completion of schedule to allow time for ENGINEER's procedures necessary for certification of substantial completion.
- B. Schedule Updating: Revise schedule after each meeting or activity, where revisions have been recognized or made within two weeks following the meeting or activity.

2.00 PRODUCTS

Not Applicable

3.00 EXECUTIONS

3.01 ENGINEER'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, ENGINEER will review each submittal, mark to indicate action taken, and return promptly.
1. Compliance with specified characteristics is CONTRACTOR's responsibility.
- B. Action Stamp: ENGINEER will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:
1. Final Unrestricted Release: Where submittals are marked "No Exceptions Taken" that part of the work covered by the submittal may proceed provided it complies with the requirements of the Contract Documents; final acceptance will depend upon the compliance.
 2. Final-But-Restricted Release: When submittals are marked "Make Corrections Noted" that part of the work covered by the submittal may proceed, provided it complies with notation or correction on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
 3. Returned for Resubmittal: When submittal is marked "Rejected" or "Revise and Resubmit" do not proceed with the part of the work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
 - a. Do not permit submittals marked "Rejected" or "Revise and Resubmit" to be used at site, or elsewhere where work is in progress.
 4. Additional Information Needed: When submittal is marked "Submit Specified Item" CONTRACTOR shall submit requested information.
 5. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Acknowledge Receipt".

Submittal Procedures

6. The approval of ENGINEER shall not relieve CONTRACTOR of responsibility for errors on drawings or submittals as ENGINEER's checking is intended to cover compliance with drawings and specifications and not enter into every detail of the shop work.

END OF SECTION

SECTION 02010

SITE GENERAL PROVISIONS

1.00 GENERAL

1.01 DESCRIPTION

- A. The CONTRACTOR shall provide all labor, materials, tools and equipment necessary for the preparation and completion of the site of the project.

1.02 PROTECTION OF TREES

- A. All trees which are to be preserved and which, in the opinion of the ENGINEER, might be subject to damage by the CONTRACTOR's operations, shall be adequately protected against damage to the bark by 2-inch thick vertical planking securely wired or tied completely around the tree trunk. Such protection shall not be removed until authorized by the ENGINEER.
- B. Machine excavation shall not be made within a circular area of any tree, the diameter of the area in feet being equal to the diameter of the tree in inches. If hand excavation within this area cuts across a large root of a tree, the cutting of which, in the opinion of the ENGINEER, would be injurious to the tree, the CONTRACTOR shall tunnel under such root and protect it from injury throughout the work.
- C. No trees are to be removed without the expressed approval of the governmental body having jurisdiction thereof, and of the ENGINEER.

1.03 TEMPORARY ROADWAYS

- A. The location of any temporary roadways and/or access drives shall be subject to the approval of the OWNER.

1.04 WORK AREA AND STORAGE OF MATERIALS

- A. CONTRACTOR shall submit a proposed site access plan to the OWNER and ENGINEER for review at each park. The access plan shall include locations of equipment access points and materials storage locations.
- B. CONTRACTOR shall install standard 6-foot high chain link fence around the perimeter of the staging area. Provide gated access as necessary with padlock and chains. At the completion of the project, CONTRACTOR shall remove all fencing around the staging area, restore and return the space to existing or better conditions.
- C. The working area shall be organized in an orderly manner with storage and tool sheds, offices and sanitary facilities, parking areas for employees, and all other necessary facilities developed and maintained by the CONTRACTOR. The CONTRACTOR shall keep the site and all haul roads reasonably clean and dust free.

Site General Provisions

- D. All materials, supplies and equipment, whether furnished by the CONTRACTOR or by the OWNER, shall be delivered, stored and handled as to prevent the inclusion of foreign materials and/or damage by water, freezing, breakage or other causes. The ENGINEER may require the CONTRACTOR to provide an enclosed storage shed for the storage of the above mentioned materials, supplies and equipment. Packaged materials shall be delivered in the original unopened containers and shall be stored until ready for use. All materials which have been stored shall meet the requirements of the Specifications at the time they are used in the project.
- E. Where the CONTRACTOR is required to do work within the rights-of-way under the jurisdiction of governmental bodies, he shall meet the requirements of said governmental bodies for the work and storage within their jurisdiction. Such requirements must be met as a minimum requirement, and if the specifications given herein impose further limitations on the work, they shall also be met as the required work standard.

1.05 EXISTING PUBLIC UTILITIES

- A. The CONTRACTOR shall conduct his operations so as not to damage any existing utility whether shown in the Plans or not. The CONTRACTOR shall correct, at his own expense, any injury caused during the operations of his subcontractors or suppliers.

1.06 NOTIFICATION TO UTILITIES

- A. Prior to the start of any operations in the vicinity of any utilities, the CONTRACTOR shall notify the utility companies and request that they stake out the locations of the utilities in question.

1.07 SANITARY REQUIREMENTS

- A. The CONTRACTOR shall provide adequate sanitary facilities for all persons employed on the project. The sanitary facilities shall conform in every way to the requirements of the "General Safety Rules and Regulations for the Construction Industry".

1.08 UTILITIES

- A. The CONTRACTOR shall make all necessary arrangements for the provisions of all utility services, temporary or permanent, required under this Contract. The CONTRACTOR shall pay all costs for such connections and services.
- B. All utility services shall be inspected by and shall meet the requirements of the applicable codes and governmental bodies.

2.00 PRODUCTS

Not Applicable

3.00 EXECUTION

3.01 CONTROL OF WATER POLLUTION AND SILTATION

- A. General Requirements
 - 1. The CONTRACTOR shall conduct his work in a manner to comply with the Soil Erosion and Sedimentation Control Act of 1972, (MICH P.A. 347) that will not cause damaging siltation or

Site General Provisions

pollution of the water in streams, rivers, lakes and reservoirs. All work of water pollution and siltation control is subject to inspection by the Department of Natural Resources.

2. All applicable regulations of fish and wildlife agencies and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the Contract.
3. Construction operations shall be conducted in such manner as to reduce erosion to the practicable minimum and prevent damaging siltation to streams or lakes. The area of erodible land exposed to the elements by grading operations, including gravel pits, waste or disposal areas and haul roads, at any one time shall be subject to approval of the ENGINEER and the duration of such exposure prior to final trimming and finishing of the areas shall be as short as practical. The ENGINEER shall have full authority to order the suspension of grading and other operations pending adequate and proper performance of trimming, finishing and maintenance work or to restrict the area of erodible land exposed to the elements.
4. Gravel or stone, consisting of durable particles of rock and containing only negligible quantities of fines, shall be used for construction pads, and haul roads.
5. The disturbance of lands and waters that are outside the limits of construction as staked is prohibited, except as found necessary and approved by the ENGINEER.
6. The CONTRACTOR shall conduct his work in such manner as to prevent the entry of fuels, oils, bituminous materials, chemicals, sewage or other harmful materials into streams, rivers, lakes or reservoirs.
7. Water from aggregate washing or other operations containing sediment shall be treated by filtration, by use of a settling basin or other means to reduce the sediment content to a level acceptable to the Department of Natural Resources.

B. Temporary Control Requirements

1. The CONTRACTOR shall provide temporary soil erosion and sedimental controls according to current local soil conservation district soil erosion and sedimentation control standards and specifications or revisions thereof.
2. The CONTRACTOR shall not pump water directly from the excavation into a storm sewer but shall construct and maintain stilling basins to receive the pumpage with an overflow from the basins to the storm sewer. The basins shall be of sufficient size to allow proper settling of sediment before the water flows into the storm sewer. The CONTRACTOR shall remove and/or restore the basin area to original condition after backfilling is complete.
3. 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 the final earth change has been completed or where significant earth change activity ceases, temporary soil erosion control measures shall be implemented within 30 calendar days. All temporary soil erosion control measures shall be maintained until permanent soil erosion control measures are implemented.

Site General Provisions

3.02 FINISH GRADING, TOP SOIL

- A. After all backfilling and rough grading has been completed and thoroughly compacted, the entire disturbed area at the site shall be graded to smooth, even surfaces as shown by the proposed new contours shown on the Plans. The portion of the disturbed area where no new contours are shown shall be graded to smooth, even surfaces approximating the original surfaces.
- B. All debris and larger stones and sticks and the like shall be removed and disposed of and the entire disturbed area made ready for the addition of top soil and seeding.

END OF SECTION

SECTION 02800

SITE SPECIALTIES

1.00 GENERAL

1.01 DESCRIPTION

A. Provide labor, materials, and equipment necessary for complete installation of the following items as show on the Drawings and specified herein. Work under this Section includes the following:

1. Chain Link Backstop;
2. Foul Poles;
3. Dugout Benches;
4. Bases;
5. Warning Track;
6. Infield Skin;
7. Mound and Home Plate Clay
8. Top Rail Fence Cover

1.02 SUBMITTALS

- A. Submit manufacturer's current product literature for each manufactured product specified herein.
- B. Submit color samples of applicable products prior to ordering. OWNER to select final colors.

2.00 PRODUCTS

2.01 CHAIN LINK BACKSTOP

- A. Chain Link Backstop shall be manufactured by PW Athletic Mfg. Co. or approved equal. Dimensions shall be per the detail in the drawings. Backstop materials shall have a galvanized finish at Veterans Memorial Park, Allmendinger Park and Southeast Area Park. Backstop materials shall have a black PVC coated finish at West Park.
- B. At all backstops, existing or new, CONTRACTOR shall install three (3) 2" x 12" dark green 100% recycled plastic planks for a total height of 3 feet. The width of the planks shall match the width along the central rear portion of the backstop.

2.02 FOUL POLES

- A. Foul Poles shall be PW Athletic Mfg. Co. Pro Series Foul Ball Pole Model No. 1273, or approved equal.

2.03 DUGOUT BENCHES

- A. Dugout benches shall be 15' long anodized aluminum bench and back with galvanized steel frame, Model 1261-1 by Miracle Recreation Company, or approved equal.

2.04 BASES

- A. Baseball and softball field bases shall be Rogers Complete Break Away Bases. Contractor shall supply a complete break away base system at each field including base top, base plate, and base anchor. Base anchors shall be installed at each base line location as listed on the contract drawings. On the eight softball fields, first base shall be installed with a double base system with an orange base.

Site Specialties

- B. Home plate shall be Rogers Pro Style Official Home Plate.
- C. Pitchers plate shall be Rogers Pro Style 4 Sided Pitcher's Rubber.

2.05 WARNING TRACK

- A. Warning track material shall be clean, crushed brick mixed with #10 limestone resulting in a mix that is reddish brown in color, having a yield of 1.3 tons per cubic yard and possessing the following particle size analysis:

Sieve Designation	Range of % Passing
3/8"	100
No. 4	90-100
No. 8	60-78
No. 16	42-55
No. 30	20-40
No. 50	8-20
No. 100	5-12
No. 200	0-5

2.06 INFIELD SKIN

- A. Infield mix shall be clean, dry clay mixed with washed mason-type sand resulting in a weed-free mixture that is reddish brown in color having a yield of 1.35 tons per cubic yard. The mix shall be specifically designed and manufactured for use on baseball and softball fields and possess the following particle size analysis:

1. Total sand content shall be 65-69 percent.
2. The combined amount of sand retained on the medium, coarse and very coarse sieves shall be 45-50 percent.
3. The combined amount of silt and clay shall be 31-35 percent.
4. The ratio of silt divided by clay, otherwise known as the SCR, shall be 0.5 – 1.0.
5. No particles greater than 3 millimeters.
6. Equal to or less than 5 percent of particles shall be retained on the 2 millimeter.

- B. Infield conditioner shall be Red Infield Conditioner by Diamond Pro, or approved equal.

2.07 MOUND AND HOME PLATE CLAY

- A. Mound and home plate clay shall be DuraPitch Premium Mound Clay by Diamond Pro, or approved equal.

2.08 TOP RAIL FENCE COVER

- A. Top rail fence cover shall be bright yellow 4.5" diameter weather-treated and UV-protected polyethylene cap.

Site Specialties

3.00 EXECUTION

3.01 CHAIN LINK BACKSTOP

- A. Chain Link Backstop and planking shall be installed per the contract drawings and the manufacturer's recommendations.

3.02 FOUL POLES

- A. Foul Poles shall be installed per the contract drawings and the manufacturer's recommendations with all stainless steel hardware.

3.03 DUGOUT BENCHES

- A. Dugout benches shall be installed per the contract drawings and the manufacturer's recommendations.

3.04 BASES

- A. Bases shall be installed per the contract drawings and the manufacturer's recommendations.

3.05 WARNING TRACK

- A. Remove existing warning track as necessary to meet proposed finish grade. New warning track material shall be minimum 4-inches thick.
- B. Place the material in lifts of 2 inches and compact with a minimum 1-ton vibratory roller until an optimum compaction between 90 percent and 95 percent is achieved. Scarify the surface to facilitate bonding of the next lift and repeat until finish grade elevation is achieved.
- B. Finish grade of the warning track shall be smooth and have a uniform 1 to 2 percent drop away from the outfield.

3.06 INFIELD SKIN

- A. Remove existing infield skin material as necessary to meet proposed finish grade. New infield skin material shall be minimum 4-inches thick in all locations and minimum 6-inches thick within a 5' radius of all bases.
- B. Place the material in lifts of 2 inches and compact with a minimum 1-ton vibratory roller until an optimum compaction between 90 percent and 95 percent is achieved. Scarify the surface to facilitate bonding of the next lift and repeat until finish grade elevation is achieved.
- C. Finish grade the infield with a laser device that allows accuracy to +/- 1/8 inch. A slope of 1/2 percent to 1 percent shall be placed on the infield surface in order to facilitate surface drainage.
- D. The finished surface of the infield shall be smooth and free from any visible dips, humps, bumps or other blemishes which would hinder the removal of water through positive surface drainage. Where warranted, a finished elevation survey shall be conducted to assure proper installation.
- E. Following successful inspection, infield conditioner shall be applied to the infield surface. This topdressing shall be added at a rate of one 50-pound bag per 100 square ft.

Site Specialties

3.07 MOUND AND HOME PLATE CLAY

- A. At all pitcher's mounds excavate an area 4' wide by 10' long starting 1' behind the pitchers mound to a depth of 4-inches. At all home plates excavate the two batter's boxes (4' x 8') and the catcher's box (4' x 6') to a depth of 5-inches.
- B. Install mound and home plate clay back to finish grade per manufacturer's recommendations.

3.08 TOP RAIL FENCE COVER

- A. Top rail fence cover shall be secured with ties a minimum of every 3 feet. Top rail fence cover shall be installed on all outfield and foul line fencing less than 10' in height.

END OF SECTION

SECTION 02810

UNDERGROUND IRRIGATION SYSTEM

1.00 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of contract, including general and supplementary conditions and specifications sections, apply to work of this section.

1.02 DESCRIPTION

- A. Install complete and working underground irrigation system and appurtenances according to plans and specifications provided.

1.03 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Irrigation products (i.e.: sprinklers, valves, controllers) shall be provided by a single distributor. All irrigation system components shall be supplied by the regionally authorized distributors to provide single source responsibility for warranty, service, and operations to conform to specifications in all respects.
- B. Contractor's Qualifications: Irrigation Contractor must meet the following criteria:
 - 1. Irrigation Contractor to have established business for a minimum of 5 years.
 - 2. Contractor's primary business is to be irrigation installation. Primary defined as 60% of the contractor business is to be derived from irrigation installation. Verification may be required.
 - 3. Irrigation Contractor to be insured and capable of bonding.
 - 4. Irrigation Contractor must have previous experience installing similar size jobs (submit with bid form unless pre-approved).
 - 5. Irrigation Contractor shall submit "Contractors qualifications statement", included in this package (submit with bid form unless pre-approved).

1.04 RELATED WORK

A. Electrical

- 1. Irrigation Contractor to supply and install the following:
 - a. 115V Power for the controllers at locations indicated on drawings.

B. General

- 1. Irrigation Contractor to supply and install the following:
 - a. Sleeving for the irrigation system (size and type as specified on drawings).
 - b. Cores through wall for irrigation entry and exit and conduit sleeves (size and type as specified on drawings).

Underground Irrigation System

- c. Point of Connection: All plumbing up to the Irrigation Contractor's point of connection as specified on drawings.

1.05 SITE CONDITIONS

- A. Before excavation, the Contractor shall obtain location of all cables, conduits, sewers, septic tanks, and other underground utilities, and shall be cautious as not to damage them. If such obstacles conflict with the proposed work, the Contractor shall immediately notify the Owner's Representative for arrangements for relocation.
- B. In the event of damage, the Contractor shall repair or replace these lines at their expense to the satisfaction of the Owner's Representative.

1.06 SUBMITTALS

- A. Submit manufacturer's data sheets for all materials (sprinkler heads, valves, controllers, dripper line, tubing, pipe) and all other related items to Owner's Representative.
- B. Submit contractor's qualification form with bid form.
- C. Submit all other shop drawings as required.

2.00 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. All sprinkler heads, valves and controllers for this project shall be manufactured by the Toro Company, Riverside, CA. There will be no product substitutions to ensure consistency with existing products, maintenance, repairs and replacement parts.

2.02 PIPE

- A. All PVC pipe shall be pressure pipe as manufactured by J-M Manufacturing or Cresline Plastic Pipe Company. High-impact virgin polyvinyl-chloride (PVC-1120) conforming to NSF Standard 14 and ASTM D-2241 for thermoplastic pipe with minimum 160 PSI test strength. Pipe shall have standard thermoplastic pipe dimension ratio of SDR-26 and shall be marked or stamped every 5 feet to indicate brand, strength rating, size and standards. See drawing for sizes specified.
- B. Solvent and primer used on PVC pipe shall meet the requirements of ASTM D-2564 and shall be approved by the National Sanitation Foundation. All solvent and primer shall be used in accordance with manufacturer's specification. Primer shall be purple in color. Solvent shall be used as is from original container. No thinner shall be added to the solvent to change its viscosity. If viscosity or consistency is unsuitable, the solvent shall not be used.

2.03 PIPE SLEEVES

- A. Pipe sleeves shall meet the requirements listed in the table below. Sleeve sizes and locations are based on a single pipe being installed in a sleeve. Contractor shall verify sleeve sizes with the drawings.

Underground Irrigation System

<u>Pipe Size</u>	<u>Sleeve Size</u>	<u>Sleeve Type</u>
¾-inch to 1-inch	2-inch	PVC 160 or Sch 40 DWV
1¼-inch to 1½-inch	3-inch	PVC 160 or Sch 40 DWV
2-inch to 2½-inch	4-inch	PVC 160 or Sch 40 DWV
3-inch	6-inch	PVC 160 or Sch 40 DWV

2.04 FITTINGS

- A. All fittings 1-1/2" through 3" shall be Schedule 40 PVC solvent weld, type 1, meeting the requirements of ASTM D-2466. No saddles allowed. All 4" fittings shall be gasketed joint Harco PVC Class 200 meeting ASTM D1784 DR21 requirements. Bell shall be gasket joint conforming to ASTM3139 with gaskets conforming to ASTM F477.

2.05 VALVES

- A. Valves shall be of the type and size as specified on drawings.
- B. All valves shall be protected by a two-piece valve box assembly consisting of a removable cover and box. Enclosure shall be rigid plastic material composed of fibrous components chemically inert and unaffected by moisture, corrosion and temperature changes. Boxes shall be sized as follows: Minimum of 10" valve box and cover shall be used for all automatic valves 1-1/2" and smaller and for all manual gate valves and quick coupling valves. Minimum of 12" valve box and cover shall be used for all automatic valves 2" and larger. Side walls to extend at least 2 inches below the bottom of the valve body; for deep mainline appropriate extensions shall be used to reach depth of valves. Valve box shall not bear directly on pipe. Manufacturer shall be Pentek.

2.06 QUICK COUPLING VALVES

- A. Quick coupling valves shall be of the type and size specified on the drawings.

2.07 SPRINKLER HEADS

- A. Sprinkler heads shall be of the type and size specified on the drawings.

2.08 CONTROLLERS

- A. Controllers shall be of the type and size specified on the drawings.

2.09 SWING JOINTS

- A. All sprinkler heads with a 1" or larger inlet shall be attached to the PVC pipe using Spears 5807 series one-piece swing joint assembly or approved Blu-Lock. Match model to inlet size of sprinkler head.
- B. All quick coupling valves shall be installed using a galvanized swing joint assembly or approved Spears #5815-01010 with brass nipple. Size shall match inlet size of quick coupling valve.

2.10 WIRE AND WIRE SPLICES

- A. All wire shall be 600 volt soft annealed copper, PVC insulated, UL approved, type UF. Wire sizes shall be as called for on drawing.

Underground Irrigation System

- B. All 24 volt wire connections shall be made using water-tight 3M DBY connectors. All field splices shall be contained in a 10" valve box.

2.11 SPARE PARTS

- A. Provide (10) 1" rotors. All sprinkler heads shall be complete with nozzles. Provide one (1) electric valve of each size.

3.00 EXECUTION

3.01 LAYOUT AND STAKING

- A. Piping layout is diagrammatic. Irrigation contractor shall verify site conditions. Any deviations from the plan shall be approved by the Owner's Representative prior to installation.
- B. All sprinkler heads, valves and mainline line routing shall be staked prior to installation for approval upon request of Owner's Representative

3.02 TRENCHING

- A. Trenches shall be excavated so that irrigation lines are installed with the following minimum depths for pipe cover:
 - 1. All PVC lateral pipe 1-1/4" and 2-1/2": Minimum depth - 14".
 - 2. All PVC mainline pipe: Depth as specified below:
 - 2-1/2" - 4" pipe size - 16" cover
 - 6" - 8" pipe size - 20" cover
 - 10" pipe size - 24" cover
 - 3. All wire:
 - 115V power wire - 24" or as required by code.
 - 24V control wire - 14" or as required by code.
- B. All PVC lateral piping shall be pulled. PVC pipe 2-1/2" and smaller must be pulled and minimum depth requirements are maintained.
- C. All PVC mainline piping shall be trenched.
- D. Trench excavation in excess of required depth shall have bottom graded and tamped prior to any pipe placement.
- E. Where trenching of PVC or polyethylene pipe lines is not possible because of adverse soil conditions or obstructions, and backhoe operation is required, provide labor, materials and equipment for this operation, including full trench backfilling with soil if required in opinion of Owner's Representative. Site restoration of these areas shall be directed by Owner's Representative. It shall be a part of this contract and shall be performed in the following manner:
 - 1. Return to grade with 4" of top soil and restore per the requirements of the contract documents. Backfill material shall be free from debris, including rocks, large stones, clay

Underground Irrigation System

clumps or other unsuitable substances and care shall be taken to prevent settling and damage to pipe during and after backfilling operations. When backfilling, soil shall be tamped in 6-inch layers with a minimum of 6 inches of acceptable soil in turf areas.

- F. Depth of sleeves shall be as noted on installation details on drawing.
- G. Where existing pavement must be cut to install irrigation system adhere to the following procedure:
 - 1. Saw cut pavement 6-inches wider than trench and excavate to required depth and width. Remove debris and excavated material from the site.
 - 2. Backfill with MDOT Class II sand material, placing in 6-inch lifts compacted to 95% modified proctor.
 - 3. Repair or replace pavement cuts with equivalent materials and finishes.
 - 4. At walkways, jack piping under paving material, if possible.

3.03 INSTALLATION

- A. Unless otherwise indicated, comply with requirements of Uniform Plumbing Code.
- B. Piping
 - 1. All mainlines and headers shall be kept to a minimum of 2 feet from all existing or proposed trees.
 - 2. PVC pipe shall be laid on solid undisturbed soil or on thoroughly compacted full bed of clean fill so as to assure full bedding, proper alignment and minimum slope for drainage.
 - 3. PVC pipe ends and PVC fittings shall be thoroughly cleaned for full depth of fitting with liquid cleaner cement. Method of application shall be in accordance with manufacturer's recommendations for solvent weld connections.
 - 4. Lay pipe on solid sub-base, uniformly sloped without humps or depressions.
 - 5. At wall penetrations, pack the opening around pipe with non-shrink grout. At exterior face, leave perimeter slot approximately 1/2 inch wide by 4/5 inch deep. Fill this slot with backer rod and an acceptable elastomeric sealant.
 - 6. Install PVC pipe in dry weather when temperature is above 40 degrees F (4 degrees C) in strict accordance with manufacturer's instructions. Allow joints to cure at least 24 hours at temperature above 40 degrees F (4 degrees C) before testing, unless otherwise recommended by manufacturer.
- C. Sprinkler Heads
 - 1. Install lawn heads at manufacturer's recommended heights.
 - 2. Install shrubbery heads flush with grade as indicated on drawing.

Underground Irrigation System

3. Locate part-circle heads to maintain minimum distance of 4 inches from walls and fences and 24 inches from stone dust or infield boundaries, unless otherwise indicated.
 4. All irrigation heads shall be installed on swing joints or as specified on drawing.
 5. All nozzles shall match sprinkler head manufacturer.
- D. Point of connection shall be as indicated on drawings. Contractor shall verify point of connection with the Owner's Representative. All above grade piping shall be galvanized steel.
- E. Install cross connection protection according to state and local plumbing codes. All exposed piping shall be galvanized steel pipe.
- F. Use dielectric fittings at connections where pipes of dissimilar metals are joined.

3.04 THRUST BLOCKS

- A. Provide concrete thrust blocks on thrust side of mainline pipe wherever pipe changes direction at tees, bends, or dead ends, and at any other location where thrust is to be expected.
- B. Refer to pipe manufacturer's recommendations for type and method of thrust blocks.

3.05 TESTING AND INSPECTION

- A. Owner's authorized representative shall be responsible for inspection of the Contractor's work while such work is in progress. The Contractor will be notified of any work which does not meet the installation instructions and will be required to correct such work.
- B. Upon completion of construction, the Contractor will test the entire system under the normal working conditions. Upon visual inspection of the ground, should any leak be found, it shall be promptly repaired. All components will be checked for proper operation. Any malfunctioning equipment or leak shall be repaired and retested until it is in satisfactory working condition. Contractor is not responsible for existing irrigation mainline, valves or related components.

3.06 DRAWINGS OF RECORD / O&M MANUAL

- A. After completion of system and before final payment, Contractor shall furnish to Owner a reproducible copy of a drawing of record of the entire system showing sprinkler heads, valves, drains, controllers and pipelines to scale with dimensions on all sleeves, valves, splices and anywhere required.
- B. After completion of the system and before final payment, Contractor shall provide to the Owner, instruction sheets including a maintenance and operations manual and parts lists covering all operating equipment that shall be bound into a folder and furnished to the Owner. Contractor shall also provide all necessary special tools for maintaining the system.

3.07 MAINTENANCE, GUARANTEE AND WARRANTY

- A. After completion, testing and acceptance of the system, instruct Owner in the operation and maintenance of the system. Following acceptance, thoroughly flush and drain the system for winter, and in the following spring, put the system into operation at no additional expense to the Owner.

Underground Irrigation System

- B. A full 5 year manufacturer's warranty on all sprinkler heads, electric valves and controllers shall be provided by the Irrigation Contractor. Any part proven to be defective within the 5 year warranty period shall be replaced with no cost to the Owner for parts. After the 1 year labor warranty has expired, the Owner shall be responsible for the labor to replace defective sprinkler heads, electric valves or controllers.

END OF SECTION

SECTION 02930

FINISH GRADING, SODDING AND SEEDING

1.00 GENERAL

1.01 SUMMARY

- A. This Section includes the following:
1. Fine grading.
 2. Furnishing and applying new topsoil.
 3. Furnishing and applying fertilizers.
 4. Seeding.
 5. Sodding.
 6. Turf Restoration
 7. Replanting unsatisfactory or damaged areas.
 8. Post Planting Responsibilities.

1.02 SUBMITTALS

- A. Certification of grass seed from seed vendor for each grass-seed mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
- B. Certification of each seed mixture for sod, identifying sod source, including name and telephone number of supplier.
- C. Certification of all fertilizers.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Seed: Deliver seed in original sealed, labeled, and undamaged containers, bearing seed analysis and the date of the seed testing. The testing shall be within a period of six months prior to commencement of planting operations.
- B. Sod: harvest, deliver, store, and handle sod according to the requirements of the American Sod Producers Association's (ASPA) "Specifications for Turfgrass Sod Materials and Transplanting/Installing".
- C. Fertilizer: Delivered in bags or other convenient containers, each fully labeled, conforming to applicable state fertilizer laws, bearing the grade and the trade name of the producer.
- D. The CONTRACTOR is responsible for proper storage & security of all seeding materials.

Finish Grading, Sodding and Seeding

1.04 COORDINATION AND SCHEDULING

- A. Planting Season: Sow seed and install sod during normal planting seasons and per project schedule. Optimal time for seed is between April 1 and June 1, and between August 15 and October 15.
- B. Weather Limitations: Proceed with planting only when existing and forecast weather conditions are suitable for work. At option and under full responsibility of CONTRACTOR, planting operations may be conducted under unseasonable conditions, but without additional compensation.
- C. Do not install sod if irrigation system is not operating properly.

1.05 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by OWNER or others unless permitted in writing by OWNER and then only after arranging to provide temporary utility services according to requirements indicated:
- B. Notify OWNER not less than seven (7) days in advance of proposed utility interruptions.
- C. Do not proceed with utility interruptions without OWNER's written permission.
- D. Contact local utility protection service and non-member utilities for area where Project is located before excavating.
- E. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by construction activity, settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- F. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways per local codes and as shown on the plans.
- G. Any damage caused by the CONTRACTOR shall be repaired to the satisfaction of the OWNER at the CONTRACTOR's expense.

2.00 PRODUCTS

2.01 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed. All seed shall have a germination rate of 90% and a purity of 98%.
- B. For baseball fields: Install Scotts Double Eagle Sports Turf MVP or equal
 - 1. Courtyard Kentucky Bluegrass 25%
 - 2. Kentucky Bluegrass 25%
 - 3. Coventry Kentucky Bluegrass 20%
 - 4. Majesty Perennial Ryegrass 15%
 - 5. Ascend Perennial Ryegrass 15%

Finish Grading, Sodding and Seeding

- C. Seed mix substitutes will be acceptable with documentation demonstrating the turf is suitable for high traffic sports applications, high level of disease resistance, low growth habit, and ability to fill in heavily worn areas.
- D. Grass seed mixes for reestablishing areas outside of the sports fields disturbed during construction will be selected on a case-by-case basis.

2.02 SOD

- A. Sod to be grown in soils similar to the site. Sod grown on soils that will create layering effect and effect water infiltration will not be accepted. Sod grown on peat type soils will not be accepted. Sod mix and supplier shall be approved by OWNER.
- B. Sod shall be cut and delivered within twenty-four (24) hours.
- C. Sod shall be free of noxious weeds and grasses.
- D. Sod shall have a soil layer no less than one-half (1/2) inch and no more than one (1) inch in thickness and shall have enough moisture to allow for proper rolling and handling.
- E. Sodding shall not take place when the topsoil is saturated or frozen.
- F. Sod shall be a healthy, thick turf having undergone a program of regular fertilization.
- G. Sod shall be a minimum of 1 year old and no more than 3 years old at the time of installation.
- H. Sod shall consist of three improved varieties of elite bluegrass selected from the following: Able I, Boutique, Brilliant, Brooklawn, Chicago II, Everest, Midnight and Midnight Star.
- I. Sod size shall be either in 2' x 5' rolls or 4' x 50'.
- J. Sod may be supplied by:
 - 1. Huggett Sod Farm: 4114 E. Marlette Road, Marlette, MI 48453 (989) 635-7482
 - 2. Bryant Sod Farm: 5120 McDowell Lapeer, MI 48446 (810) 667-4010
 - 3. Or approved equal.

2.03 IMPORTED TOPSOIL

- A. CONTRACTOR shall locate a suitable amount of topsoil and provide a soil test demonstrating its suitability for sustaining a healthy turf for baseball and softball field use.
- B. Topsoil should be free of stones 1 inch or larger in any dimension, and other extraneous materials harmful to plant growth.
- C. CONTRACTOR to amend topsoil per soil test recommendations.

Finish Grading, Sodding and Seeding

3.00 EXECUTION

3.01 EXAMINATION

- A. Prior to sodding, OWNER must approve condition of the seedbed. Inadequate seedbed preparation shall result in the reworking of the area to the complete satisfaction of the OWNER.
- B. Do not proceed until unsatisfactory conditions have been corrected.
- C. The CONTRACTOR is solely responsible to determine the quantity of cut and fill required to complete the work and to locate a suitable source and amount of topsoil.

3.02 TOPSOIL PLACEMENT

- A. The application of topsoil shall occur only when conditions are favorable so as to minimize damage to the subgrade.
- B. Where undesirable soils exist within the subgrade, it will be the responsibility of the CONTRACTOR not to contaminate the topsoil during the replacement or finishing process. All undesirable soils or objects will be removed from the topsoil seedbed at the cost of the CONTRACTOR.
- C. Topsoil shall be placed and spread over the areas graded as shown on the plans in such a manner so that after compaction and natural settling the topsoil will conform to finished grades as shown.
- D. Provide a smooth transition between adjacent existing grades and new grades.
- E. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

3.03 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
- B. Remove stones and extraneous materials using means that may include hand-picking. OWNER will not accept prepared seedbeds containing stones or extraneous materials.

3.04 FINISH GRADING AND PLANTING PREPARATION

- A. Areas to be planted shall be finish graded to provide surface drainage.
- B. Undulations and unsightly variations in grade which will not permit the use of normal mowing equipment without scalping shall be removed so that proper use of such equipment may be accomplished.
- C. Limit preparation to areas that will be planted in the immediate future.
- D. Loosen existing topsoil to a minimum depth of 4 inches. Remove stones, sticks, roots, rubbish, and other extraneous matter larger than 1 inch in any dimension.

Finish Grading, Sodding and Seeding

- E. Mix soil amendments and fertilizers with new topsoil per recommendations from soil report. Delay mixing fertilizer if planting does not follow placing of topsoil within a few days. Either mix soil before spreading or apply soil amendments and fertilizers on surface of spread topsoil and mix thoroughly into top 4 inches of topsoil before planting
- F. Preparation of unchanged grades within play areas, areas are unaltered or undisturbed by excavating, grading, or surface soil stripping operations, shall be prepared as follows:
 - 1. Till surface soil to a depth of at least 6 inches. Apply required soil amendments if needed and mix thoroughly into top 4 inches of soil. Trim high areas and fill in depressions. Till soil to a homogenous mixture of fine texture.
 - 2. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - 3. Remove waste material, including grass, vegetation, and turf, and properly dispose of it.
 - 4. Grade areas to a smooth, even surface with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future. Remove trash, debris, stones and earth clods larger than 1 inch in any dimension, and other objects that may interfere with planting or maintenance operations.
 - 5. Restore prepared areas if eroded or otherwise disturbed after fine grading and before planting.

3.05 SOD INSTALLATION

- A. No sod installation shall take place without ensuring that irrigation is available immediately upon completion of the sodded area for watering.
- B. The topsoil shall be in a friable condition prior to placing the sod. Topsoil not in a friable condition prior to sod installation shall be harrowed with a spring-tooth drag or other means approved by the OWNER.
- C. At the time of the placing, both the sod and the topsoil shall be moist. The sod shall be carefully placed by hand in rows at right angles to the slopes, commencing at the base of the area to be sodded and working upward. Pitchforks shall not be used to handle sod and dumping from vehicles will not be permitted.
- D. Areas to receive sod shall be fine graded such that once the sod is placed, the finish grade blends smoothly with adjacent areas.
- E. The transverse joints of sod strips shall be staggered and the sod carefully laid to produce tight joints. The sod shall present a smooth even surface, free from bumps, depressions, spaces, gaps, and voids.
- F. Trim all overlapped pieces to provide a tight fit. Dispose of trimmings properly.
- G. Where sodding limits meets existing turf, or paved areas, fine grade area so that sod surface is at-grade with adjacent area.
- H. Anchor sod on slopes exceeding 5:1 with a minimum of two (2) wood pegs per sod strip, or as recommended by supplier, to prevent slippage. Pegs shall be driven beneath the mower cutting height to avoid interference with future mowing operations.

Finish Grading, Sodding and Seeding

3.06 TURF RESTORATION

A. Hollow-Core Aeration

1. This method is to be used to improve the quality of existing fields.
2. Mow turf to a relatively short height prior to aeration.
3. Perform aeration when conditions are suitable and tractor ruts will not occur.
4. Use "hollow core" aeration equipment.
5. Cores should be at least a 1/2 of an inch in diameter and 4 inches deep.
6. Aeration holes shall occur at a rate of 20 per square foot. Multiple passes in perpendicular directions may be necessary.

B. Topdress

1. Topdressing is the process of introducing new soils to existing turf.
2. Perform topdress operation after hollow core aeration.
3. Use 80% sand in the particulate range of 0.5 to 2.0 mm, 15% topsoil, and 5% organic material such as peat.
4. Evenly apply 1/2" of material.
5. Lightly rake topdress material and aeration plugs to level low spots and fill in core holes.

C. Overseed

1. Overseeding should occur after aeration, topdressing and raking.
2. See seed mix specification.
3. Seed with "slit seeder" or similar.
4. Apply seed at a rate of approximately 5 lbs per 1000 square feet for perennial rye, and 3 lbs per 1000 sq. ft. for Kentucky bluegrass.
5. Install 1/2 of application rate in each of two directions at 90 degree angles to one another.
6. Apply starter fertilizer. Starter fertilizer shall not include phosphorous.

D. Turn-over, scarify and fine grade existing soil.

1. Turn-over existing soil to an approximate depth of 4".
2. It is not necessary to remove existing vegetation; this will turn with the soil.
3. Scarify surface to break up large clumps and prepare surface for fine grading.
4. Fine grade surface to eliminate rough and low areas and achieve a level surface.
5. Rake surface clean of roots, weeds, debris and stones 1" or larger using Bobcat's Rockhound (or equivalent).

3.07 REPLANTING UNSATISFACTORY OR DAMAGED TURF AREAS

- A. Areas damaged by CONTRACTOR's operations, including storage of materials or equipment and movement of vehicles must be repaired at the CONTRACTOR's expense. Also recondition turf areas where settlement or washouts occur or where minor regrading is required.
- B. Remove topsoil containing foreign materials resulting from CONTRACTOR's operations, including oil drippings, fuel spills, stone, gravel, and other construction materials, and replace with new topsoil.
- C. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and properly dispose of them.
- D. Provide new planting soil as required to fill low spots and meet new finish grades.

Finish Grading, Sodding and Seeding

- E. Apply necessary soil amendments and starter fertilizers.
- F. Do not use wet seed or seed that is moldy or otherwise damaged in transit or storage.
- G. Seed shall be uniformly distributed over designated areas. As much as possible, seeding shall be done perpendicular to the slope of the land.
- H. Seed shall be selected on a case-by-case basis.

3.08 MAINTENANCE AND GUARANTEE PERIOD

- A. The CONTRACTOR shall assume responsibility for maintaining his work to the end of the guarantee period. The guarantee period shall be for one (1) full year from the date of substantial completion. During this period, the CONTRACTOR shall make maintenance trips during the growing season as necessary to provide an established, thriving, and maintained turf. Maintenance visits shall be documented and efforts logged to serve as a record. Records shall be submitted on a regular basis for OWNER approval.
- B. Restrict traffic from all turf areas until grass is established. Erect signs and barriers as required.
- C. Lawn maintenance shall begin immediately after the grass seed or sod is in and continues until provisional acceptance with the following requirements:
 - 1. Lawns shall be protected and maintained by watering, mowing, and reseeding/resodding as necessary for at least 30 days and much longer as necessary to establish a uniform, weed free stand of the specified grasses and until specific lawn acceptance has been made.
 - 2. Maintenance includes deposition of additional topsoil and resodding as may be required to correct all settlement and erosion up to the date of final acceptance.
 - 3. CONTRACTOR shall mow lawn areas as soon as lawn top growth reaches 3" height. Cut back to 2-1/2 inch height. Repeat mowing as required to maintain specified height. After first mowing, grass shall be mowed every 3 days at same height. Mowing should be done using reel type mowers only; no rotary mowers may be used. After third mowing the OWNER shall be responsible for mowing, even though grass may not have reached standards for acceptance.
 - 4. CONTRACTOR shall spot weed new turf areas as needed.
 - 5. For sodded areas, CONTRACTOR shall apply 1 lb/1000 sf. of nitrogen 30 days after sod installation.
 - 6. For sodded areas, CONTRACTOR shall perform a hollow core aeration 30 days after sod installation. Aeration cores shall be at least 1/4" in diameter, 3" deep and at a rate of 15 per square foot.
 - 7. CONTRACTOR shall apply herbicides as required to control weed growth or undesirable grass species.
 - 8. CONTRACTOR shall apply fungicides and insecticides as required to control diseases and turfgrass pests.
- D. The CONTRACTOR agrees to guarantee all plantings for one year from time of planting. This guarantee includes furnishing new plantings as well as labor and material for installation of replacements. All replacement plantings shall be guaranteed and maintained for an additional period of one year.
- E. Inspection of the plantings will be made jointly by the CONTRACTOR and ENGINEER at the completion of planting. All plants not in a healthy, growing condition shall be removed and replaced with plants of like kind, size and quality as originally specified before the close of the

Finish Grading, Sodding and Seeding

- next planting season. CONTRACTOR to provide notification at least 10 working days before requested inspection date.
- F. The CONTRACTOR shall be required to produce a satisfactory stand of grass. Scattered bare spots no larger than 2 inches shall not total more than 3 square feet in any 100 sq. ft area.
 - G. Upon acceptance, the OWNER will assume lawn maintenance.
 - H. The OWNER shall be responsible for operation of the irrigation system. Immediately after completion of planting of any specific area, the CONTRACTOR shall notify the OWNER to commence a regular germination watering program. As the CONTRACTOR is responsible for an established turf, he shall notify the OWNER of the time and frequency of waterings. CONTRACTOR shall inspect the coverage of the irrigation system to determine if any sprinkler heads require adjustments. The CONTRACTOR may be requested to coordinate and assist in establishing proper water procedures, quantities of application of water, time periods for watering, and any other pertinent factors to provide the finest possible growth of grass.
 - I. The CONTRACTOR will guarantee his WORK for a period of one (1) year. An allowance of \$5,000 per field shall be included in the CONTRACTOR's bid and shall be retained by the OWNER for the entire Warranty and Guaranteed period after which it shall be paid to the CONTRACTOR following his satisfactory completion of maintenance and correction of any additional punchlist items which may have manifested in that time.
 - J. Through the guarantee period and as part of the OWNER's acceptance criteria, CONTRACTOR shall perform maintenance as follows:
 - K. CONTRACTOR shall be responsible for mowing at each field until all turf is fully established and ready for play.

END OF SECTION

SECTION 03010

CONCRETE WORK

1.00 GENERAL

1.01 DESCRIPTION

A. Concrete work shall include the furnishing of all labor, materials, formwork, reinforcing, tools and equipment required to construct, place and finish all concrete work for a complete and functioning installation in accordance with the Contract Documents, including the following items:

1. Footings and/or foundations;
2. Slabs on grade;
3. Fence work;
4. Reinforcing;
5. Joints and joint materials;
6. Concrete fill;
7. Installing all inserts, anchors and anchor bolts as shown and/or specified.

1.02 REFERENCE SPECIFICATIONS

A. The American Concrete Institute's Standard Specifications for Structural Concrete for Buildings (ACI 301-99) is hereby made part of this Section as amended below, unless otherwise noted on the Plans or specified herein. The CONTRACTOR shall familiarize himself with, and his work shall be guided by, the ACI 301-99 and the Supplemental Requirements listed below. All ASTM or ACI Standards and Recommended Practices as referenced in ACI 301-99 are also hereby made parts of these Specifications.

1.03 QUALITY ASSURANCE

- A. At least one person shall be present at all times during the execution of this work who shall be thoroughly trained and experienced in the handling and placing of the concrete work and who shall direct all work performed under this Section.
- B. Only thoroughly trained and experienced journeyman concrete finishers shall be used in finishing exposed concrete surfaces.

2.00 PRODUCTS

2.01 SUPPLEMENTAL REQUIREMENTS

A. The supplemental requirements listed below are to be used in conjunction with ACI 301-99. Their numbering refers to the chapter and paragraph number of ACI 301-99 and intends to explain and/or modify the requirements therein:

2.1.2. Use Type I or Type III Portland Cement

3.2 All concrete shall conform to the following:

28-day compressive strength	4000 psi
Air-entrainment	6 ± 1%
Fiber-reinforced	0.1 – 0.2% by volume
Slump	± 4 inches
W/C ratio	0.43
Cement content	6 sack/cyd (fly ash and slag shall not be used as a substitute to cement content)

Concrete Work

- 3.4.1. The water-cement ratio shall not exceed 0.43 by weight.
- 3.6. Use ASTM C33 Size 467 aggregate for footings and foundations; Size 57 aggregate for beams, slabs, and walls 12 inches or thicker; Size 67 aggregate for balance of work.
- 3.7.1. Calcium chloride or admixtures containing calcium chloride shall not be used.
- 3.8.1.2. Cement content shall not be less than 564 lbs per cubic yard of concrete. Fly ash on slag shall not be used as a substitute for cement.
- 4.1.3. Earth cuts as forms for vertical surfaces shall be permitted when neat and clean for footings and foundations, subject to ENGINEER's review.
- 4.2.4. Chamfer strips shall be required in the corners of concrete forms to produce beveled edges on permanently exposed surfaces. Chamfers shall be 3/4-inch x 3/4-inch unless otherwise noted on the Plans.
- 4.3.1. The tolerance limits as specified in Table 4.3.1. of ACI 301-99 shall apply.
- 4.5.5. Forms and shoring which support the weight of concrete in beams and slabs shall not be removed until the concrete has reached a minimum strength of 3,000 psi.
- 5.1.1. Reinforcing shop drawings shall be one reproducible (mylar or sepia) copy and one print.
- 5.2.1. All reinforcement shall be ASTM A615 Grade 60.

Plain bars are not permitted.
- 6.1.1. Construction joints shall be located as described in ACI 301-99. In general, slab and wall pours shall not exceed 1,200 sq ft surface area in one concrete placement between construction joints. The longer edge shall not be greater than twice the shorter edge for any one concrete pour between construction joints.
- 6.1.4. Bond through construction joints shall generally be obtained by method outlined in 6.1.4.1. or 6.1.4.3. of ACI 301-99, unless otherwise noted on the Plans.
- 6.2.2. Use bituminous type of expansion joint filler at intersections of walls and slabs on grade except where noted otherwise on the Plans.

Use a non-extruding and resilient bituminous type of expansion joint filler in slabs on grade, where slab to slab is joined.
- 8.6. Concreting under water will not be permitted except when so reviewed by the ENGINEER.
- 9.3. Tie holes shall be thoroughly filled with non-shrink patching mortar. The layout of tie holes and exterior finish of the tie holes on surfaces permanently exposed to view on the outside shall be submitted to the ENGINEER for review.
- 10.2.2. Smooth form finish, as described in paragraph 10.2.2. of ACI 301-99 shall be used on all surfaces exposed to view.

Concrete Work

3.00 EXECUTION

3.01 SURFACE CONDITIONS

A. Inspection

1. Before starting the work of this Section, the installed work of all other trades shall be inspected and verified complete to the point that concrete work may properly begin.
2. Verify that all items to be embedded in concrete are in place.
3. Verify that concrete may be placed to the lines and elevations indicated on the Plans with all required clearances from reinforcement.

B. Discrepancies

1. In the event of any discrepancy between Plans and Specification requirements, and actual field conditions, the ENGINEER shall be immediately notified before beginning work.
2. In areas of discrepancy, concrete work shall not proceed until all such discrepancies are fully and correctly resolved.

3.02 PREPARATION

A. General

1. All construction scrap and debris shall be removed from the areas in which concrete will be placed.
2. Areas in which concrete will be placed shall be thoroughly cleaned to ensure the proper placement and bonding of concrete.
3. All concrete handling and transporting equipment shall be clean and free of dirt or other deleterious materials which would affect the quality of concrete work.

B. Notification

1. The ENGINEER shall be notified of the placing of concrete at least 48 hours in advance of such work.

3.03 SLABS

A. General

1. Concrete work for slab construction shall conform to "Recommended Practice for Concrete Floor and Slab Construction" (ACI-302).

B. Preparation of Subgrade for Slabs on Ground

1. The subgrade shall be well drained and of adequate and uniform load bearing nature. The in-place density of the subgrade soils shall be at least the minimum required in the Specifications. The bottom of an undrained granular base course shall not be lower than the adjacent finished grade.

Concrete Work

2. The subgrade shall be free of frost before concrete placing begins.
3. The subgrade shall be moist at the time of concreting. If necessary, it shall be dampened with water in advance of concreting, but there shall be no free water standing on neither the subgrade nor any muddy or soft spots when the concrete is placed.

C. Edge Forms and Screeds

1. Edge forms and intermediate screed strips shall be set accurately to produce the designated elevations and contours of the finished surface and shall be sufficiently strong to support vibration. The concrete surface shall be aligned to the contours of screed strips by the use of strike-off templates.
2. When formwork is cambered, screeds shall be set to a like camber to maintain the proper concrete thicknesses.
3. Screeds shall be removed before initial concrete set and depressions immediately filled to form a smooth monolithic surface.

D. Placement

1. Mixing and placing shall be carefully coordinated with finishing. Concrete shall not be placed on the subgrade or forms more rapidly than it can be spread, straight edged, and darried or bull floated. These operations must be performed before bleeding water has an opportunity to collect on the surface.
2. To obtain good surfaces and avoid cold joints, the size of finishing crews shall be planned with due regard for the effects of concrete temperature and atmospheric conditions on the rate of hardening of the concrete.

E. Jointing

1. Joints in slabs on grade shall be located and detailed as indicated in the Contract Documents. If saw-cut joints are required or permitted, cutting shall be timed properly with the set of the concrete: cutting shall be started as soon as the concrete has hardened sufficiently to prevent aggregates being dislodged by the saw, and shall be completed before shrinkage stresses become sufficient to produce cracking.

F. Consolidation

1. Concrete in slabs shall be thoroughly consolidated. Consolidation of slabs shall be obtained with internal vibrators.

G. Finishes (See paragraph 3.05.H for Finishing Tolerance)

1. All concrete flatwork such as slabs on grade shall at first receive a "floated finish". After the concrete has been placed, consolidated, struck off, and leveled, the concrete shall not be worked further until ready for floating. Floating shall begin when the water sheen has disappeared and when the surface has stiffened sufficiently to permit the operation. During or after the first floating, planeness of surface shall be checked by the CONTRACTOR with a 10-ft. straightedge applied at not less than two different angles. All high spots shall be cut down and all low spots filled during this procedure to produce a surface within Class B tolerance throughout. The slab shall then be ref bated immediately to a uniform sandy texture.

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2. Outside slabs shall receive a broom or belt finish. Immediately after concrete has received the "float finish" as specified in 3.03.G.1 above, it shall be given a coarse transverse scored texture by drawing a broom or burlap belt across the surface.

3.04 CURING AND PROTECTION

A. General

1. Beginning immediately after placement, concrete shall be protected from premature drying, excessively hot or cold temperatures, and mechanical injury, and shall be maintained with minimal moisture loss at a relatively constant temperature for the period necessary for hydration of the cement and hardening of the concrete. The materials and methods of curing shall be in accordance with ACI 308 and subject to review by the ENGINEER.

B. Preservation of Moisture

1. For concrete surfaces not in contact with forms, ponding or continuous sprinkling shall be applied immediately after completion of placement and finishing and be continued for a minimum of three (3) days. After the initial 3-day period, one of the following procedures shall be applied:
 - a. Ponding or continuous sprinkling;
 - b. Application of absorptive mats or fabric kept continuously wet;
 - c. Application of sand kept continuously wet;
 - d. Continuous application of mist spray;
 - e. Application of other moisture-retaining covering as approved.
 - f. Application of a curing compound conforming to "Specification for Liquid Membrane-Forming Compounds for Curing Concrete" (ASTM C 309) – "Cure and Seal". The compound shall be applied in accordance with the recommendations of the manufacturer immediately after any water sheen which may develop after finishing has disappeared from the concrete surface. It shall not be used on any surface against which additional concrete or other material is to be bonded unless it is proven that the curing compound will not prevent bond, or unless positive measures are taken to remove it completely from areas to receive bonded applications.
2. Moisture loss from surfaces placed against wooden forms or metal forms exposed to heating by the sun shall be minimized by keeping the forms wet until they can be safely removed. After form removal, the concrete shall be cured until the end of the time prescribed in 3.04.B.3 below by one of the methods of 3.0.B.1 above.
3. Curing in accordance with 3.0.B.1 and 2 above shall be continued for at least 14 days in the case of all concrete.

C. Temperature, Wind and Humidity

1. Cold Weather: When the mean daily outdoor temperature is less than 40°F, the temperature of the concrete shall be maintained between 50°F and 70°F for 14 days. Arrangements for heating, covering, insulating, and housing the concrete work shall be made in advance of

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placement and shall be adequate to maintain the required temperature without injury due to concentration of heat. Combustion heaters shall not be used during the first 24 hours unless precautions are taken to prevent exposure of the concrete to exhaust gases.

2. Hot Weather: When necessary, provision for windbreaks, shading, fog spraying, sprinkling, ponding, or wet covering with a light colored material shall be made in advance of placement, and such protective measures shall be taken as quickly as concrete hardening and finishing operations will allow.
3. Rate of Temperature Change: Changes in temperature of the air immediately adjacent to the concrete during and immediately following the curing period shall be kept as uniform as possible and shall not exceed 5°F in any one hour or 50°F in any 24-hour period.

D. Protection from Mechanical Injury

1. During the curing period, the concrete shall be protected from damaging mechanical disturbances, such as load stresses, heavy shock, and excessive vibration. All finished concrete surfaces shall be protected from damage by construction equipment, materials, or methods, by application of curing procedures, and by rain or running water. Structures shall not be loaded in such a way as to overstress the concrete.

3.05 PERFORMANCE OF WORK

- A. All concrete work in this Section shall be performed in full accordance with the previously stated requirements of this Section.

3.06 CLEANING UP

- A. At the completion of the concrete work required in this Section to the satisfaction of and review by the ENGINEER, all extraneous concrete debris, materials and equipment shall be removed from the job site.

END OF SECTION