

CONTRACT DOCUMENTS
FOR

Annual Crack Sealing / Crack Filling



April 05, 2007

BID NO. 3846

Public Services Area / Field Operations Unit

CITY OF ANN ARBOR
100 North Fifth Avenue
Ann Arbor, Michigan 48104

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ADVERTISEMENT FOR
FOR THE
CITY OF ANN ARBOR, MICHIGAN

BID NO. 3846

Sealed Bids will be received by the Procurement Division, Fifth Floor, City Hall, on or before 2:00 P.M., Monday, April 23, 2007 for Crack Sealing and Crack Filling. Bids will be publicly opened and read aloud at this time.

Work to be done includes the application of Overband Crack Sealant on City Streets, Routing and Sealing cracks on bike paths, application of Polymerized Emulsion Pavement Repair and all related work. Bid documents may be obtained on or after April 05, 2007 from the office of the Procurement Division, Fifth Floor, City Hall, Ann Arbor, Michigan.

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After the time of opening, no Bid may be withdrawn for a period of 45 days.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 may be obtained from the Public Services Area, Field Operations Unit, Technical Services, (734) 994-2465.

CITY OF ANN ARBOR, MICHIGAN

CITY OF ANN ARBOR HUMAN RIGHTS OFFICE
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) | | | | | | | | | | | | |
|--------------------------------|--|---------------------------------|-------|-----------------------|--|-------------------------------------|--------|---------------------------------|-------|-----------------------|---|---|-------------------------|
| | Male | | | | | | Female | | | | | | TOTAL COLUMNS A-M |
| | White | Black or African American | Asian | Hispanic or Latino | Native Hawaiian or Other Pacific Islander | American Indian or Alaska Native | White | Black or African American | Asian | Hispanic or Latino | Native Hawaiian or Other Pacific Islander | American Indian or Alaskan Native | |
| A | B | C | D | F | G | H | I | J | K | L | M | | |
| 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 HUMAN RIGHTS OFFICE

CONTRACT COMPLIANCE FORM

Local Office (Only those employees that will do local or on-site work, if applicable)

Name of Company/Organization _____ Date Form Completed _____

Name and Title of Person Completing this Form _____

Fax# _____ Email Address _____

(Area Code)

EMPLOYMENT DATA

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

Questions about this form? Call 734/997-1380 or Email: jcarpenter@ci.ann-arbor.mi.us

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 \$9.91/hour when health care is provided, or no less than \$11.48/hour for those employers that do *not* provide health care. It is understood that the Living Wage will be adjusted upward each year on April 30, and covered employers will be required to pay the adjusted amount thereafter. The rates stated above include the adjustment for 2006.

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: Human Resources Office City of Ann Arbor 734/994-2803 fax: 734/994-2590

NOTICE OF PRE-BID CONFERENCE

A pre-bid conference for this project will be held on Tuesday, April 17, 2007 at 10:00 a.m. in the City Council Work Room, Second Floor, 100 North Fifth Avenue, Ann Arbor, Michigan.

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, Third 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 # 3846, Proposal for Annual Crack Sealing / Crack Filling

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. 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, 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, 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.

The contract will start on or about June 1, 2007. The first year of the contract must be completed before July 1, 2007. The second and third years will run July 1, 2007 to June 30, 2008 and July 1, 2008 to June 30, 2009 or until each years approved contract funds have been expended. The proposed agreement may be terminated by either party at the end of each Fiscal year (June 30) provided that by 45 days prior to the end of the year written notice is given of the intention to terminate the agreement.

SIGNED THIS _____ DAY OF _____, 200__.

Bidder's Name

Authorized Signature of Bidder

Official Address

Telephone Number (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: Annual Crack Sealing / Crack Filling
 DIVISION I: Overband Crack Sealing

| <u>Item</u> | <u>Description</u> | <u>Unit</u> | <u>Estimated Quantity</u> | <u>Unit Price</u> | <u>Total Price</u> |
|-------------------|-------------------------|-------------|-------------------------------|-------------------|--------------------|
| 901 | Overband Crack Seal | Lbs. | 100,000 | \$ _____ | \$ _____ |
| 1301 | Lighted Arrow – Type B | Day | 15 | \$ _____ | \$ _____ |
| 1304 | Temporary Sign – Type B | Day | 100 | \$ _____ | \$ _____ |
| 1305 | No-Parking Sign | Each | 75 | \$ _____ | \$ _____ |
| TOTAL DIVISION I: | | | | \$ _____ | |

Project: Annual Crack Sealing / Crack Filling
 DIVISION II: Routing and Sealing Asphalt Bike Paths

| <u>Item</u> | <u>Description</u> | <u>Unit</u> | <u>Estimated Quantity</u> | <u>Unit Price</u> | <u>Total Price</u> |
|--------------------|--|-------------|-------------------------------|-------------------|--------------------|
| 911 | Hot Poured Crack Fill - Material | Lbs. | 15,000 | \$ _____ | \$ _____ |
| 912 | Hot Poured Crack Fill – Cleaning and Sealing, Routing | Feet | 75,000 | \$ _____ | \$ _____ |
| 1304 | Temporary Sign – Type B | Day | 100 | \$ _____ | \$ _____ |
| TOTAL DIVISION II: | | | | \$ _____ | |

BID FORM

Section 1 - Schedule of Prices

Project: Annual Crack Sealing / Crack Filling
DIVISION I: Polymerized Emulsion Pavement Repair

| <u>Item</u> | <u>Description</u> | <u>Unit</u> | <u>Estimated Quantity</u> | <u>Unit Price</u> | <u>Total Price</u> |
|---------------------|---|-------------|-------------------------------|-------------------|--------------------|
| 921 | Polymerized Emulsion Pavement Repair | Gallon | 1300 | \$ _____ | \$ _____ |
| 1301 | Lighted Arrow – Type B | Day | 15 | \$ _____ | \$ _____ |
| 1304 | Temporary Sign – Type B | Day | 100 | \$ _____ | \$ _____ |
| 1305 | No-Parking Sign | Each | 75 | \$ _____ | \$ _____ |
| TOTAL DIVISION III: | | | | \$ _____ | _____ |

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> |
|--------------------|--------------------|--------------------------|
|--------------------|--------------------|--------------------------|

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 - 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. The City reserves the right to reject any subcontractors for any reason

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

| <u>Subcontractor (Name and Address)</u> | <u>Work</u> | <u>Amount</u> |
|---|-------------|---------------|
|---|-------------|---------------|

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 _____, 200_, between the CITY OF ANN ARBOR, a Michigan Municipal Corporation, 100 N. Fifth Avenue, 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 Annual Crack Sealing / Crack Filling, Division 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 |
| Compliance Forms | Standard Specifications |
| Living Wage Declaration of | Detailed Specifications |
| Compliance Forms | Plans |
| (if applicable) | Addenda |
| Bid Forms | |
| Proposal | |
| Contract and Exhibits | |
| Bonds | |

ARTICLE II - Definitions

Administering Service Area/Unit means Public Services Area / Field Operations Unit

Supervising Professional means Operations Specialist or other persons acting under the authorization of the Administrator/Manager of the Administering Service Area/Unit.

Project means Annual Crack Sealing / Crack Filling, Division Bid No. 3846

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 within 30 consecutive calendar days. Shorter completion times for certain portions of the work are specified in the Detailed Specifications.

- (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 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 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 identified in the Detailed Specifications for each portion 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 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.

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 _____
Roger W. Fraser, City Administrator

By _____
Sue McCormick,
Public Services 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 _____, 200__, 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 _____, 200__.

(Name of Surety Company)

(Name of Principal)

By

(Signature)

By

(Signature)

Its

(Title of Office)

Its

(Title of Office)

Name and address of agent:

Approved as to form:

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 _____, 200____, 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 _____, 200__.

(Name of Surety Company)

(Name of Principal)

By
(Signature)

By
(Signature)

Its
(Title of Office)

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 a 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 therefor 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 AA= Overall and a minimum Financial Size Category of AV= . 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 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 _____.

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 _____, 200
_____, _____ 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.

**DETAILED SPECIFICATION FOR
COORDINATION AND COOPERATION WITH OTHERS
AND WORK BY OTHERS**

The Contractor is required to comply with the requirements of article 1.05.06 of the MDOT Standard Specifications, "Cooperation by Contractor."

The contractor is solely responsible for contacting MISS DIG at least three (3) days prior to beginning any work. The following is a list of Utility Owners that may have facilities located within the Right-of-Way. This list is not intended to be complete, or to substitute for the contractors' responsibility to contact MISS DIG, but is provided for the contractors' information.

The City of Ann Arbor
Michigan Consolidated Gas Company
Detroit Edison Company
Ameritech - Michigan Bell Telephone Company
MCI Communications
Sprint Communications
Columbia Cable of Michigan

Stoppages created solely by the operations of the utility companies which delay utility revisions on any portion of this project may be considered as a basis of claim for an extension of time for project completion. The Owners of public or private utilities which will not interfere with the completed project and which do not present a hazard to the public or an extraordinary hazard to the Contractor's operations will not be required to move their facilities on or from the street right-of-way.

The Contractor is solely responsible for any delays, damages, costs and/or charges incurred due to and/or by reason of any utility, structure, feature and/or site condition, whether shown on the Plans or not, and the Contractor shall repair and/or replace, at its sole expense, to as good or better condition, any and all utilities, structures, features and/or site conditions which are impacted by reason of the work, or injured by its operations, or injured during the operations of its subcontractors or suppliers.

No extra payments or adjustments to unit prices will be made for damages, delays, costs and/or charges due to existing utilities, structures, features and/or site conditions not shown or being incorrectly shown or represented on the Plans.

DETAILED SPECIFICATION FOR PROTECTION OF UTILITIES

Damages to utilities by the Contractor's operations shall be repaired by the utility owner at the Contractor's expense.

Delays to the work due to utility repairs are the sole responsibility of the Contractor.

The Contractor shall keep construction debris out of utilities at all times. The Contractor shall be back charged an amount of \$50.00 per day for each manhole/inlet/utility pipe which contains construction debris caused as a result of the Contractor's (including subcontractors and suppliers) work.

The Contractor is solely responsible for any damages to the utilities or abutting properties due to construction debris.

Certain sanitary and storm sewers within the influence of construction may have been cleaned and videotaped prior to construction. The City may also choose to videotape utility line(s) during or after the work of this Contract to inspect them for damages and/or construction debris. If such inspection shows damage and/or debris, then all costs of such inspection, cleaning, repairs, etc, shall be the Contractor's sole responsibility. If such inspection is negative, the City will be responsible for the costs of such inspection.

DETAILED SPECIFICATION FOR MATERIALS AND SUPPLIES CERTIFICATIONS

All materials and supplies provided in this contract shall be certified by the manufacturer or supplier as having been tested for compliance with the Material Specifications in this section. If requested by the Supervising Professional the Contractor shall provide access and samples for testing as determined appropriate by the Supervising Professional

The Contractor shall Certify to the Supervising Professional that the Material was used properly.

The Supplier shall supply documentation to the fact that the Contractor is properly trained to use the material.

The Contractor shall submit all certifications to the Supervising Professional for review and approval a minimum of three business days prior to any scheduled delivery, installation, and/or construction of same.

DETAILED SPECIFICATION FOR MAINTAINING PRIVATE DRIVEWAY ACCESS

The Contractor shall maintain access to all drives throughout the course of construction. Drives shall never be closed during non-working hours, unless otherwise authorized in writing by the Supervising Professional.

**DETAILED SPECIFICATION FOR
WORKING IN THE RAIN**

The Contractor shall not work in the rain unless authorized in writing by the Supervising Professional.

The Supervising Professional may delay or stop the work due to threatening weather conditions under the authority of Section 35 of the General Conditions.

The Contractor shall not be compensated for unused materials or downtime due to rain, or the threat of rain.

The Contractor is solely responsible for repairing all damages to the work and to the site, including road infrastructures, road subgrades, and any adjacent properties, which are caused as a result of working in the rain.

**DETAILED SPECIFICATION FOR
WORKING IN THE DARK**

The Contractor shall not work in the dark.

The Supervising Professional may stop the work, or may require the Contractor to defer certain work to another day, if, in the Supervising Professional's opinion, the work cannot be completed within the remaining daylight hours, or if inadequate daylight is present to either properly perform or inspect the work.

The Contractor will not be compensated for unused materials or downtime, when delays or work stoppages are directed by the Supervising Professional for darkness and/or inadequate remaining daylight reasons.

The Contractor is solely responsible for repairing all damages to the work and to the site, including road infrastructures, road subgrades, and any adjacent properties, which are caused as a result of working in the dark.

**DETAILED SPECIFICATION FOR
LOCATIONS OF WORK**

OVERBAND CRACK SEALING

| | | |
|-------------------|-----------------------|--------------------------|
| E ANN ST | N STATE ST | GLEN AVE |
| E ANN ST | ZINA PITCHER PL | OBSERVATORY ST |
| S ASHLEY ST | W HURON ST | W MADISON ST |
| BARTON DR | WHITMORE LAKE RD | 85' E/NORTHSIDE AV |
| BARTON DR | 85' E/NORTHSIDE AV | PONTIAC TR |
| BARTON DR | PONTIAC TR | 410'N/TRAVER RD |
| BARTON DR | 410'N/TRAVER RD | PLYMOUTH RD |
| BEAKES ST | N DIVISION ST | N MAIN ST |
| BOARDWALK DR | DEAD END (BUS GARAGE) | EISENHOWER PKWY |
| BROOKS ST | SUNSET RD | MILLER AV |
| CATHERINE ST | MAIN ST | GLEN ST |
| DEPOT ST | N MAIN ST | BROADWAY BRIDGE (SEC 02) |
| DEXTER AV | E/LINE M-14 BRIDGE | N MAPLE RD |
| S DIVISION ST | PACKARD ST | HILL ST |
| S DIVISION ST | HILL ST | E HOOVER AV |
| EARHART RD | GLAZIER WY | END OF MEDIAN (SB LANES) |
| EARHART RD | END OF MEDIAN | GEDDES RD |
| E EISENHOWER PKWY | S MAIN ST (WB) | S STATE ST |
| E EISENHOWER PKWY | STONE SCHOOL RD | PACKARD RD (EB LANE) |

| | | |
|----------------------------------|-------------------------|--------------------------|
| W EISENHOWER PKWY | ANN ARBOR - SALINE ROAD | S MAIN ST (WB) |
| W EISENHOWER PKWY | ANN ARBOR - SALINE ROAD | S MAIN ST (EB) |
| ELLSWORTH RD – after POLYMERIZED | S STATE ST | PLATT RD |
| FERNWOOD AV | PACKARD RD | LORRAINE ST |
| S FIRST ST | W HURON ST | W WILLIAM ST |
| FULLER RD | END OF CURB | HURON PKWY |
| FULLER ST | WB/MAIDEN LANE | BRIDGE |
| GEDDES AV | WB/N UNIVERSITY AV | WASHTENAW AV |
| GEDDES AV after POLYMERIZED | WASHTENAW AV | 254' E/AWIXA RD |
| GRANGER AV | S STATE ST | PACKARD ST |
| GREEN RD | NIXON RD | GETTYSBURG RD |
| GREEN RD | FREDERICK RD | GLAZIER WY |
| GREENVIEW DR | W STADIUM BLVD | SCIO CHURCH RD |
| HILL ST | S MAIN ST | PACKARD ST |
| HILL ST | S FOREST AV | WASHTENAW AV |
| HILL ST | WASHTENAW AV | GEDDES AV |
| HURON PKWY | PLYMOUTH RD (SB LANES) | N LINE GEDDES |
| HURON PKWY | 2675' S LINE E HRD | WASHTENAW AVE |
| HURON PKWY | WASHTENAW AVE | PLATT RD |
| N INGALLS ST | E KINGSLEY ST | E HURON ST |
| JACKSON AV | WAGNER RD | PCC SEC 03 |
| KING GEORGE BLVD | SB/PACKARD RD | E EISENHOWER PKWY |
| E KINGSLEY ST | N STATE ST | N INGALLS ST |
| W LIBERTY ST | CITY LIMITS | 75' W/S MAPLE BLVD |
| E MADISON ST | S MAIN ST | S FIFTH AV |
| E MADISON ST | S FIFTH AV | S STATE ST |
| S MAIN ST | WILLIAM ST | S/LINE STADIUM BLVD |
| S MAIN ST | S/LINE STADIUM BLVD | ANN ARBOR-SALINE RD |
| E MEDICAL CENTER DR | FULLER ST | W MEDICAL CENTER DR |
| MOORE ST | PONTIAC ST | BROADWAY ST |
| NEWPORT RD | S/END M-14 BRIDGE | MILLER AV |
| NIXON RD | S'SIDE BLUETT DR | N/LINE HURON PKWY |
| PACKARD ST | S STATE ST | E STADIUM BLVD |
| PACKARD ST | WB/EISENHOWER PKWY | END MED E/HIKONE |
| PACKARD ST | END MEDIAN E/HIKONE | 180' E/ELMWOOD AV |
| PHOENIX DR | VARSIY DR | VARSIY DR |
| PITTSFIELD BLVD | WASHTENAW AV | PACKARD RD |
| PLATT RD | WASHTENAW AV | HURON PKWY |
| PLATT RD | HURON PKWY | PACKARD RD |
| RESEARCH PARK DR | S STATE ST | 533'N OF S RESEARCH PARK |
| RESEARCH PARK DR | RESEARCH PARK DR | 533'N OF S RESEARCH PARK |
| N SEVENTH ST | MILLER AV | W HURON ST |
| S SEVENTH ST | W HURON ST | W MADISON ST |
| E STADIUM BLVD | WHITE ST | PACKARD ST |
| E STADIUM BLVD after POLYMERIZED | PACKARD ST | WASHTENAW AV |
| W STADIUM BLVD | 520' S OF LIBERTY ST | S MAIN ST |
| S STATE ST after POLYMERIZED | N SIDE MADISON ST | S SIDE ROSE AV |
| S STATE ST | NB/EB I-94 RAMP | ELLSWORTH RD |
| S STATE ST | SB/EB I-94 RAMP | ELLSWORTH RD |
| STIMSON ST | S STATE ST | S INDUSTRIAL HWY |
| THOMPSON ST | E LIBERTY ST | PACKARD |
| TUEBINGEN PKWY | TRAVER BLVD | HURON PKWY |

| | | |
|-----------------|----------------|--------------------|
| N UNIVERSITY AV | S STATE ST | N/MED GEDDES SEC 1 |
| N UNIVERSITY AV | S STATE ST | S/MED GEDDES SEC 1 |
| VARSITY DR | E ELLSWORTH RD | PHOENIX DR |
| E WASHINGTON ST | S MAIN ST | FLETCHER ST |
| W WASHINGTON ST | S FIRST ST | S MAIN ST |
| E WILLIAM ST | S MAIN ST | THOMPSON ST |
| W WILLIAM ST | S FIRST ST | S MAIN ST |

BIKE PATHS

Year one will be Gallup Park. After the completion of the first year of Sealing, the City will evaluate the product and determine which parks can benefit from the work that has been done. The City and the Contractor will then review all potential parks to review any possible problems and determine the schedule and limits of year two and three of the project.

The City may reduce or eliminate year two and three due to budgetary or other reasons

POLYMERIZED EMULSION PAVEMENT REPAIR SYSTEM

| | | |
|---------------------------|-------------|---------------|
| ELLSWORTH RD | S STATE ST | PLATT RD |
| GEDDES AVE | OBSERVATORY | AWIXA |
| E STADIUM BLVD east bound | PACKARD ST | BROCKMAN BLVD |
| S STATE ST | HOOVER ST | ROSE AV |

The streets listed are for year one. Year two and year three streets shall be given to the contractor in the March of each contract year.

DETAILED SPECIFICATION FOR SCHEDULE AND PERFORMANCE OF WORK

Work to be performed as part of the first year of this contract will occur between June 1, 2007 and June 30, 2007. The second a year of work shall be completed between July 1 2007 and June 30, 2008. The third year of work shall be completed between July 1, 2008 and June 30, 2009. When the Contractor begins work for year two or year three they shall complete the entire contract year within 30 consecutive days.

On Residential streets, no work shall be performed before 7:00 A.M., after 9:00 P.M. or on Sundays. For the Major Streets, work will be permitted between 9:00 A.M. and 3:30 P.M. or from 6:30 P.M. to 9:00 P.M.

The Contractor shall notify the Supervising Professional by 12:00 each day, how many crews will be on site the following week day. If Saturday or Sunday work is to be scheduled, the Contractor will notify the Supervising Professional no later than the end of work on Wednesday.

It is the City's intent to begin work in the Northwest area of town, completing all streets in an area and moving counter clockwise throughout the City. Additional local streets will be added as needed if the contractor intends to work before 9:00 A.M. or between 3:30 P.M. and 6:30 P.M. All added local streets will be within the current area of work for the major street.

DETAILED SPECIFICATION FOR OVERBAND CRACK SEALING

I. Description - This work consists of furnishing all labor, equipment, and materials necessary for the treatment of cracks in bituminous pavements by the Overband Crack Fill Method. All surface preparation and crack sealing shall be done in accordance with these special provisions.

II. Materials. The work herein described shall consist of preparation and sealing of pavement cracks with the following materials or approved equals:

1. **Composition.** 93.0 percent minimum by weight asphalt cement, PG64-22 with penetration value of 60-75.

7.0 percent minimum by weight of the asphalt cement polypropylene fibers (*recycled fibers are not permitted*).

Note: Up to 1 percent latex rubber may be substituted for asphalt cement to control tracking.

2. **Specially Designed Fine-denier, Short-cut Staple Polypropylene Fiber.**

| | | |
|---------------------------|----------------------|-------------|
| Denier | 15 +/- 3 | ASTM D 1577 |
| Length | 10 mm +/- 2 mm | |
| Crimps | None | ASTM D 3987 |
| Tensile strength, minimum | 40,000 psi (272 mPa) | |
| Specify gravity | 0.91 | |
| Minimum melting point | 320°F (106°) | |

3. **Sealant Physical Properties.** Crack shall be filled by the “over-fill bead method.”

| | | |
|------------------------|---|------------------------|
| Thickness | Min. 0.065” (1.65 mm) Max 0.1875” (4.75 mm) | |
| Width | 4” (102 mm) | |
| Strength (at break): | 72°F (22°C) | Min. 500 psi (3.4 MPa) |
| Strength (at break): | 0°F (-17°C) | Min. 500 psi (3.4 MPa) |
| Elongation (at break): | 72°F (22°C) | Min. 50% |
| | 0°F (-17°C) | Min. 10% |

4. **General.** Operating temperature in the kettle should be 260° - 295°F (126°-146°C) and shall never exceed 295°F (146°C).

III. Construction Methods

A. Preparation of surface - The surface shall be thoroughly clean and dry when the sealant/membrane is applied. Cleaning of cracks will be with a minimum 4100 kPa compressed air and hand tools as necessary to remove dust, dirt, moisture, vegetation and foreign materials that would prevent bonding of the material. Cleaning work is to be done concurrently with the application process. Air compressors shall be portable and capable of furnishing not less than 4100 kPa air pressure at the nozzle. The compressor shall be equipped with traps that will maintain the compressed air free of oil and water.

- B. Mixing Procedures** – The Crack Seal shall be blended in an oil-jacketed double wall kettle equipped with a full sweep agitator (reversing rotary auger action) and separate thermometers for oil bath and blending vat. A 5 cm recirculating pump is to provide circulation of the materials when not applying the crack sealant. A pump equal to or better than a Roper 5 cm hot asphalt pump is to be used. Unit must be capable of mixing 5000 pound minimum batches of material. Operating temperature in the kettle should be 260° to 290°F and shall never exceed 295°F. Automatic temperature controls and an automatic safety shutoff system shall be used. Weigh tickets for the asphalt cement shall be used in determining the specified proportion of fiber to be blended into the asphalt cement. Fibers shall be added to the asphalt cement and thoroughly mixed in the kettle.

- C. Application** - The material is to be applied to the crack and pavement surface with specially designed applicator heads which are round and concave. The diameter of these heads determine the width of the band of material on the crack. These heads range in size from 4” to 6” in diameter. The applicator wand is to be equipped with a material shutoff control operated by the applicator person. This control is necessary for a neat job and prevents excess material from being applied. The filled cracks or joints shall be scraped promptly with a "V" or "U" shaped squeegee or similar hand tool to smooth the overfill.

- D. Weather Limitations** - No material shall be applied unless the ambient air temperature is 40°F and rising. No material shall be applied while the surface is wet.

- E. Maintaining Traffic** - The provisions as specified in the MMUTCD for Highway Construction are applicable in maintaining traffic during all phases of this contract. The follow vehicle should be equipped with an illuminated Target Arrow, Type B, which shall be visible from the rear. The Contractor shall conduct his operations and use his equipment in such a manner that two way traffic will be provided at all times. Vehicles will be equipped with warning devices adequate for the traffic volumes anticipated. An additional vehicle may be required on roads where traffic volumes or prevailing conditions indicate a need for additional safety precautions during working conditions. All traffic cones shall be no smaller than 18” in height and must be placed at intervals not exceeding 100’. Any Items needed for Traffic Control which are not included in the Bid Items shall be considered incidental.

IV. Basis of Payment - Payment for this work shall be made at the contract unit price per Kg of crack sealant. The unit price includes all materials, equipment, tools, labor incidental to the preparation and sealing of cracks and all traffic control per the MMUTCD. The quantities will be the number of pounds of hot applied sealant in place, completed and accepted.

| <u>Pay Item</u> | <u>Pay Unit</u> |
|------------------------|-----------------|
| Overband Crack Sealing | Lbs. |

**DETAILED SPECIFICATION FOR
HOT-APPLIED, POLYMERIC SEALANT (HI-SPEC)**

- I. General** This work shall include furnishing all labor, tools, equipment and material for the cleaning and preparing of pavement cracks/joints and applying hot applied polymeric sealants.
- II. Materials** HI-SPEC Polymeric Hot-Applied Sealant is a premium-quality, single-component joint sealing compound. It is formulated with a carefully balanced blend of 100% virgin polymer, asphalt, plasticizers and inert, reinforcing fillers to produce a hot-pour joint sealant with excellent bonding properties, high resiliency, ductility and resistance to degradation from weathering. It will not become brittle at low temperatures; will not flow or migrate from the joint at temperatures up to 140°F (60°C)

SPECIFICATIONS

ASTM D 3405
ASTM D 6690, Type I, II and III
AASHTO M 301
Federal Specification SS-S-1401C
FAA Specification Item P-605
Corps of Engineers CRD-C 530

TECHNICAL DATA

| | |
|-------------------------------------|--|
| Pour point | 370°F (188°C) |
| Prolonged heating | 6 hours |
| Penetration | Less than .90 cm |
| Flow | Less than .3 cm |
| Bond | Passed 100% extension @ 0°F(-17°C) Passed 50% extension @ -20°F (-29°C) |
| Resiliency | More than 60% |
| Asphaltic Concrete Compatibility | Compatible |

- III. USE AND APPLICATION** HI-SPEC should be melted in an oil-jacketed melter-applicator equipped with an agitator and separate temperature thermometers for oil bath and melting vat. Sealing may be done at air temperatures of 4 C and higher. NOTE: Application of sealant into frozen or wet pavement will result in loss of bond and premature failure of the sealant.

* Concrete Pavement - Suggested joint configuration is a 1 to 1 ratio of 1/2" (12.7 mm) minimum width formed by sawing or by routing as directed by the Supervising Professional, cleaned by media blasting, blown out with oil-free compressed air, and installation of CERA-ROD Heat-Resistant Backer Rod. Joint interfaces must be dry and free of dust. Fill sealant flush with the pavement surface.

* Asphalt Pavement - Suggested crack configuration is a 1 to 1 ratio of 1/2" (12.7 mm) minimum width. Cracks 1/2" (12.7 mm) or less in width should be routed with a carbide-tipped router or sawed to a minimum width of 1/2" (12.7 mm). If cracks are 2" (50.8 mm) or more deep, CERA-ROD Heat-Resistant Backer Rod should be installed. Crack interfaces should be cleaned by wire brushing or compressed air and must be dry. A heat lance may be used for this purpose. Fill cracks from the bottom up; overfill the crack and follow with a soft rubber U-shaped squeegee to form a "wipe zone" of approximately 3-4 inches (76.2 to 101.6 mm) wide along the crack and flush with the pavement surface.

* Maintenance Sealing - Old joint sealing material must be routed out of the joint to a depth of 1 to 1-1/2 inches (25.4 to 38.1 mm). Interfaces must be cleaned by sawing, sandblasting or mechanical abrasion. CERA-ROD Heat-Resistant Backer Rod should be installed to form a 1 to 1 ratio reservoir.

IV. **PACKAGING** 50 lb. (22.7 kg) container or 55 lb. (24.95 kg) cartons. Each carton contains two 27.5 lb. (12.475 kg) buns in polypropylene liners.

V. **PRECAUTIONS** DO NOT DILUTE. Do not heat to temperatures above 390°F (199°C). Reheating or prolonged (over 6 hours) heating at or above the safe temperature of 390°F (199°C) could cause this material to gel in the application equipment. A rapid increase in viscosity, accompanied with stringiness, signals the approach of gelling. Should this happen, the material must be rapidly pumped from the melting kettle and discarded. For optimum sealant performance all material left in the melter-kettle should be drawn off and discarded. Lines should be flushed out clean. Do not dilute with solvent. Read and follow application information and precautions.

VI. **Maintaining Traffic** - The provisions as specified in the MMUTCD for Highway Construction are applicable in maintaining traffic during all phases of this contract. The follow vehicle should be equipped with an illuminated Target Arrow, Type B, which shall be visible from the rear. The Contractor shall conduct his operations and use his equipment in such a manner that two way traffic will be provided at all times. Vehicles will be equipped with warning devices adequate for the traffic volumes anticipated. An additional vehicle may be required on roads where traffic volumes or prevailing conditions indicate a need for additional safety precautions during working conditions. All traffic cones shall be no smaller than 450 mm in height and must be placed at intervals not exceeding 30 meters. Any items needed for Traffic Control which are not included in the Bid Items shall be considered incidental.

VII. **Measurement and Payment** The completed work as measured for Joint/Crack Sealing will be paid for at the contract unit price as follows:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--|-----------------|
| Hot Poured Rubber Crack Filling - Preparing and Sealing, Routing | Foot |
| Hot Poured Rubber Crack Filling - Material | Lbs. |

The Preparing and Sealing will cover all labor and equipment needed to perform the work, the Material will be paid for separately. The Contractor is to provide an itemized invoice of work completed per each City street.

**DETAILED SPECIFICATION FOR
POLYMERIZED EMULSION PAVEMENT REPAIR SYSTEM**

- I. Description** This repair system shall consist of furnishing, preparing and systematically applying a polymerized emulsion and aggregates to pavement cracks, joints, ravels and potholes. The applied material shall completely fill the entire cavity and provide a durable wearing surface.
- II. Materials** This specification has been designed to yield a set of distinguishing characteristics for a product quite different from standard material. The binder is not a conventional asphalt cement. It is a bituminous material of superior elastic and bonding properties. These test requirements reflect an effort to keep as close as possible to recognized specifications, while yet identifying the unique properties of the binder.

Upon making an emulsion from this base stock, the materials that impart the improved qualities must be in the asphalt prior to emulsification.

A. Polyfil

(Test on Residue*)

| | <u>Min.</u> | <u>Max.</u> |
|--|-------------|-------------|
| ASTM D5 Penetration, 25°C., 100 grams, 5 sec. | 90 | 130 |
| ASTM D36 Softening Point (°C) | 65 | 90 |
| ASTM D113 Ductility, 4°C. (Cm) | 45 | - |
| ** ASTM D113 Elastic Recovery, 4°C. 10 cm (%) | 70 | - |
| *** ASTM D-4 Force Ductility at 4°C., 30 cm. (kPa) | | 6.4 |
| Prop.P226 | | |
| ASTM D113 Elongation, 4°C (%) | 1000 | - |

(Test on Emulsion)

| | | |
|--|----|----------|
| ASTM D244 Viscosity, 50°C., (S.F. sec) | 50 | 400 |
| ASTM D244 Storage Stability, 24 hrs. | - | 1 |
| ASTM D244 Sieve Test, 20 mesh, % | - | .1 |
| ASTM D244 Demulsibility (%) | 40 | - |
| ASTM D244 Percent Solids (%) | 68 | - |
| ASTM D244 Particle Charge | | Positive |

* By Distillation.

** When the specimen is extended 10 cm. the extended area is severed in the middle by a pair of shears. After 1 hour at the test temperature, the severed ends are returned to contact and the ductilometer reading is read again. The sample must recover at least 70% of the 10 cm. distance.

*** A standard ductility apparatus is modified by the addition of a load cell. The sample is extended to a length of 30 cm and the force required is recorded a 1 cm intervals. It should not exceed the stated maximum of 6.4 kPa. over this range. At elongations greater than 30 cm, the force should rise characteristic of rubber polymers.

- B. Aggregate.** It is the intent of this application to provide a durable aggregate wearing surface while providing the proper aggregate and emulsion mix for filling large joints and potholes. Selection shall be made by the Supervising Professional prior to start of the project. Aggregate type shall be selected to achieve the proper design for the intended pavement.

All aggregates used shall be 100% crushed and meet the quality requirements of Section 703.05 of the Ohio Department of Transportation.

| | <u>Sieve Size</u> | <u>% Passing</u> |
|--|-------------------|------------------|
| (Type A Gradation) | 3/8 | 100 |
| | 4 | 85-100 |
| | 8 | 10-40 |
| | 16 | 0-10 |
| (Type B Gradation) Blast Furnace Slag | 3/8 | 100 |
| | 4 | 100 |
| | 8 | 0-20 |
| | 16 | 0-5 |

- III. Weather Limitations** The pavement repair shall not be performed when the atmospheric temperature is less than 0 degrees C. or less during the preceding 12 hours. Minimum application surface temperature shall be 5 degrees during material application. Materials shall not be placed if impending weather conditions are such that proper curing may not be obtained.

- IV. Equipment** All equipment required for performance of the work shall be subject to approval before construction is permitted to begin and shall be maintained in a satisfactory operating condition. In addition to equipment described herein, the contractor shall furnish squeegees and other small tools which may be essential to the satisfactory completion of the work.

- A. AGGREGATE APPLICATION.** The aggregate delivery system shall be a continuous flow unit and shall be capable of accurately delivering the aggregate to the emulsion by air conveying. The air velocity shall permit a minimum conveying distance of 35 ft. The aggregate shall be discharged from a flexible hose uniformly and show no sign of intermittent discharge. The distance between discharge opening and surface will vary depending upon area to be covered. The aggregate shall make contact to the emulsion in a vertical position and will show no signs of asphalt displacement. The finished layer of aggregate shall be contained to the area in which to be covered.

The emulsion shall show no signs of prebreaking prior to the attachment of stone particles. Discharge equipment shall be capable of delivering from 0 to 150 lbs.. of aggregate per minute. Operator placing the aggregate shall be capable of starting or stopping as required to reduce excess placement of aggregate.

- B. POLYMERIZED EMULSION APPLICATION.** The polymerized emulsion shall be pumped so as not to cause excessive agitation prior to contact of pavement surface. Application of emulsion shall be applied at a temperature range of 120°F. - 170°F. and shall never exceed 212°F., nor shall any load be continuously reheated. The application shall be performed by placing a uniform ribbon, 4" in width + or -, and a surface thickness of 1/8" to 3/16". Repeated applications may be required to allow complete filling of pavement voids. The repeated application shall be accomplished without increasing ribbon width or thickness. It is necessary to allow adequate time for settlement pending size and depth of cavity. The completed polymerized emulsion ribbon will show no signs of settlement, visually indicating that all cavities are completely filled. The emulsion will show no signs of horizontal drainage prior to the application of cover aggregate.
- C. SPECIAL NOTE.** If settling of emulsion in joints or cracks continues after three applications, then aggregate shall be placed in the cavity. This will stop settlement and the application of emulsion shall be continued.
- V. SURFACE TREATMENT** Surface treatment will consist of sealing areas that exceed 4" in width. This process will follow the emulsion and aggregate application specification.
- VI. SURFACE PREPARATION** Areas to be treated shall be free of all vegetation. This shall be accomplished by high pressure water blasting, minimum 6,000 P.S.I. Immediately prior to material placement all areas shall be routed to maximum size and depth by use of compressed oil-free air, minimum 125 CPM at 100 P.S.I. After air cleaning, there shall be no visible signs of standing moisture.
- VII. PAVEMENT REPAIR METHOD** This item shall consist of repairing pavement depressions, potholes, cold seam ravels and fractures exceeding 2" in width and 2" in depth.
1. Follow procedure for surface preparation.
 2. Prime existing areas with polymerized emulsion at an application rate of 0.10 to 0.25 gallons per square yard.
 3. Place the polymerized emulsion and the specified gradation of aggregate to primed area. Bitumen content shall range from 8 to 12% by dry weight of aggregate. Placement of the materials shall be accomplished by injecting the emulsion and aggregate into the cavity. At least 90% of the aggregate shall be coated. No additional hand mixing shall be required.
 4. Strike off mixture level with adjacent pavement.
 5. Apply emulsion to repaired area at an application rate or 0.25 to 0.33 gallons per square yard. Cover aggregate shall be applied to emulsion by the preceding cover aggregate specification.

VIII. COMPLETION OF SYSTEM The finished product shall receive rolling that may be accomplished by either vehicular traffic or pneumatic rolling.

IX. FINAL CLEAN-UP Vacuum sweeping shall be completed within three hours of material application. Initial sweeping shall remove all loose or unbound materials. All debris shall be removed from job site. A second sweeping shall be accomplished within forty-eight hours but not prior to twenty-four hours, if necessary.

X. SPECIAL PROVISIONS Contractor shall maintain, during all lane closures, a minimum of two (2) machines in operation.

Contractor shall protect existing raised pavement markers during the operation. Any raised pavement marker that is discolored, tracked, obliterated or damaged by the contractor's negligence shall be cleaned or replaced at his own expense, as directed by the Supervising Professional.

XI. METHOD OF MEASUREMENT The quantities will be the number of gallons of Polyfil Emulsion.

XII. BASIS OF PAYMENT Payment for this work will be made at the contract unit price per gallon for preparation and filling of cracks and potholes in the existing pavement, complete in place, which price includes all materials, equipment, tools, and labor incidental thereto.

| <u>ITEM</u> | <u>UNIT</u> | <u>DESCRIPTION</u> |
|-------------|-------------|---------------------------------|
| SPECIAL | GALLON | POLYFIL EMULSION WITH AGGREGATE |