

BIDDER'S COMPANY NAME

REQUEST FOR PROPOSAL

6153

PARKING DECK REPAIR

FOR WASHTENAW COUNTY

Prepared By:

Washtenaw County Purchasing Division
Administration Building

P.O. Box 8645
220 N. Main B-35
Ann Arbor, MI 48107

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WASHTENAW COUNTY

Finance Department

Purchasing Division

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REQUEST FOR PROPOSAL # 6153

July 26, 2004

Washtenaw County Purchasing Division, on behalf of Washtenaw County Facilities Management, is seeking proposals for Parking Deck Repairs to the structure located at the corner of Ann St. and 4th Avenue in downtown Ann Arbor, adjacent to the Washtenaw County Courthouse at 101 E. Huron St., Ann Arbor, MI 48104.

Sealed Proposals: Vendor will deliver one (1) original containing original signature(s) and (4) four copies, clearly marked as such, in an envelope labeled "SEALED RFP # 6153" to the following address:

Washtenaw County Purchasing Division
Administration Building
P.O. Box 8645
220 N. Main St., Room B-35
Ann Arbor, MI 48107

By 3:00 pm on Monday, August 16, 2004.

This submission shall include the entire Request for Proposal document with any amendments if issued, and will be accompanied by a Qualified Surety Bid Bond/Security or Cashiers Check for 5% of the contract total. Proposals received after the above cited time will be considered a late quote and are not acceptable unless waived by the Purchasing Manager.

Please direct procedural questions regarding this RFP to Robert Devault at (734) 222-6760. Please direct technical questions to Dave Shirley, Operations and Maintenance Manager, at (734) 222-3793 or (734) 260-4801. Detail drawings are attached; large blueprint sized drawings are available upon request and/or can be obtained in digital form. Contact Dave Shirley for more information.

Bidders are *strongly encouraged to attend* the pre-bid conference, to be held August 04, 2004, at 110 N. 4th Ave. (map follows) at 3:00pm in the 2nd floor conference room. If you are unable to attend this conference, please contact Dave Shirley to arrange an individual site tour.

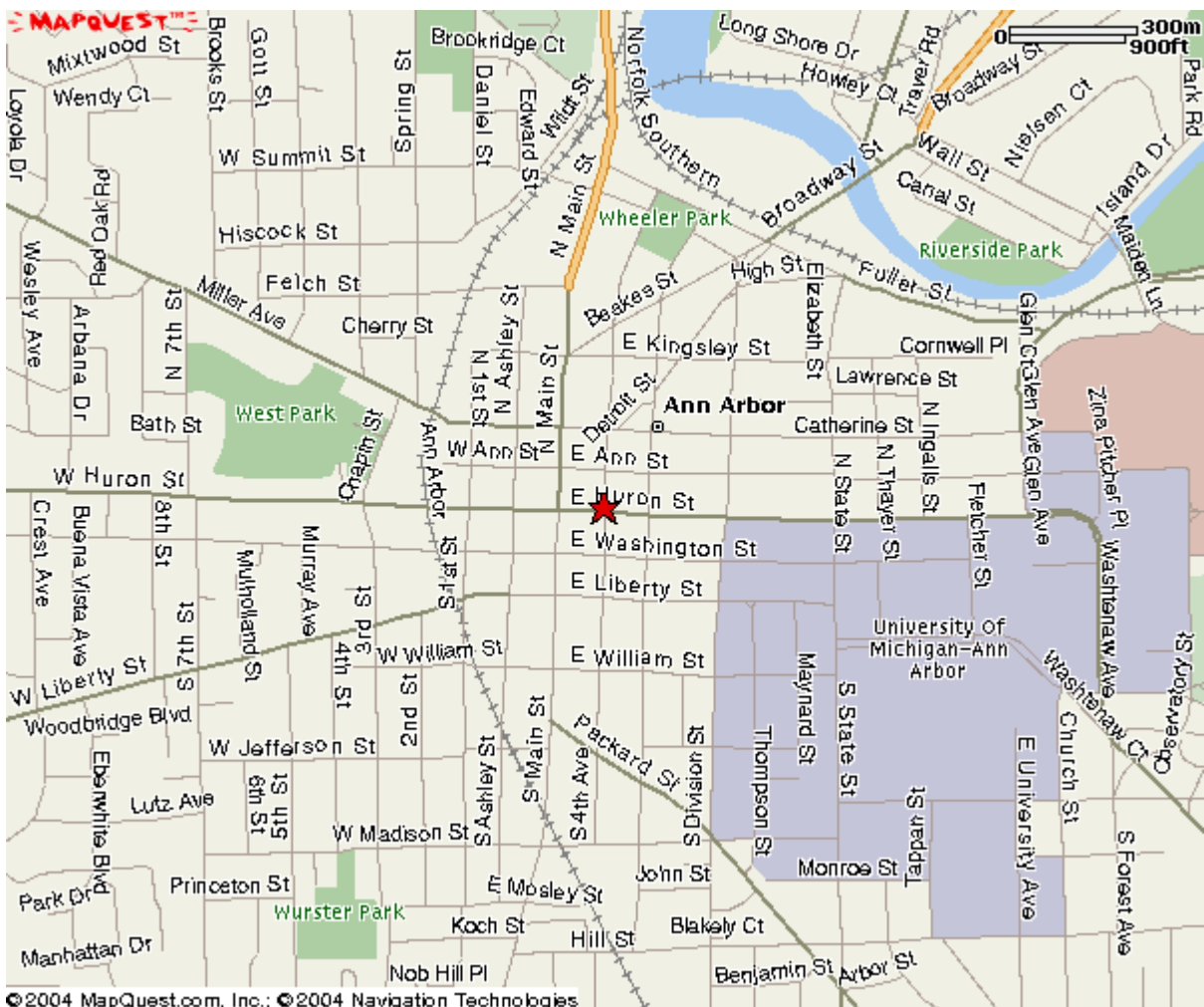
Note: Vendors may bid on all or part(s) of this project. Please see details in "Scope of Work" and "Bid Form," pages 1-6.

Map of 110 N. 4th Ave., downtown Ann Arbor, MI

Metered street parking is available, or you may utilize the parking structure at the corner of Ann & Ashley Streets (1 block north, 1 block west of 110 N. 4th Ave.)

Pre-bid meeting to be held August 04, 2004 in 2nd floor conference room

[South]



[North]

TABLE OF CONTENTS

Section No.	Description	Page(s)
1	Scope of Services	1-2
2	Bid Form	3-6
3	General Requirements	7
4	Administrative Requirements	8-11
5	Quality Requirements	12-13
6	Temporary Facilities and Controls	14-15
7	Product Requirements	16-18
8	Execution and Closeout Requirements	19-21
9	Selective Demolition	22-23
10	Conventional and Microsilica Concrete Restoration	24-34
11	Epoxy Injection	35-40
12	Sealants	41-44
13	Sample Boilerplate Contract	45-49
14	Detail Prints (Also available in large blueprint size upon request, and/or via email as CAD or other file type document.)	RS101, RS102, RS103

SCOPE OF SERVICES

All vendors are required to bid on Item A, Site Preparation. In addition, vendors may choose to bid on B, C, and D or any combination thereof.

A. SITE PREPARATION

- **Mobilization:** coordinating, scheduling, obtaining, and assembling all equipment, materials, permits, supplies, manpower, and other essentials and incidentals necessary to perform the work defined in this Contract at the construction site.
- **Quantities verification:** furnish all labor, materials, equipment, supervision, and incidentals necessary to measure and verify the quantities on the construction documents. The Contractor shall measure and verify quantities within 2 weeks of mobilization and start-up. The Contractor shall also verify and record quantities on a reproducible set of prints for the Owner. Engineer shall review and confirm quantities prior to payment application to Owner.
- **Dust barriers:** furnish all labor, materials, equipment, supervision, and incidentals necessary to install temporary dust barriers and maintain them during all dust related operations.
- **Traffic control:** furnish all labor, materials, equipment, supervision, signage, and incidentals necessary to maintain uninterrupted traffic flow during project. This stipulation may require evening and weekend work.
- **Shoring:** furnish all labor, materials, equipment, supervision, and incidentals necessary to install proper temporary shoring and to maintain the shores in place until work requiring the shores is complete and concrete has properly cured.

B. FLOOR SURFACE AND CEILING REPAIR

- **Floor slab repair patch:** furnish all labor, materials, equipment, supervision, and incidentals necessary to locate existing spalls, locate and remove delaminated and unsound concrete, prepare the cavities, and install patching material to restore the floor slab to original condition and appearance. Repair material to be microsilica concrete. *Refer to Detail 1-RS102.*
- **Ceiling repair:** furnish all labor, materials, equipment, supervision, and incidentals necessary to locate existing spalls, locate and remove delaminated unsound concrete, prepare cavities, and install patching material to restore the ceiling to original condition and appearance. *Refer to Detail 1-RS103.*
- **Wall repair:** furnish all labor, materials, equipment, supervision, and incidentals necessary to locate existing spalls and remove unsound concrete, prepare the cavities, and install patching material to restore the wall. *Refer to Details 2-RS102.*
- **Full depth repair (if required – please bid per square foot):** furnish all labor, materials, equipment, supervision, and incidentals necessary to locate and remove full depth unsound floor concrete, prepare the cavity, and install patching material to restore floor to original condition and appearance. Patch material to be conventional normal weight concrete. Shoring for formwork is incidental to this work item. *Refer to Detail 2-RS102.*

C. BEAM AND COLUMN REPAIRS

- **Beam repairs:** furnish all labor, materials, equipment, supervision and incidentals necessary to locate existing spalls, locate and remove delaminated and unsound concrete, prepare the cavities, and install patching materials to restore concrete beams to original condition and appearance. *Refer to Detail 3-RS102 and Details 3, 4, and 5-RS103.*
- **Column repairs:** furnish all labor, materials, equipment, supervision, and incidentals necessary to locate existing spalls, locate and remove delaminated and unsound concrete, prepare the cavities, and install patching materials to restore concrete columns to original condition and appearance. *Refer to Details 4 & 5-RS103.*
- **Supplemental steel supports:** furnish all labor, materials, equipment, supervision and incidentals necessary to install supplementary steel columns. *Refer to Detail 7-RS102.*
- **Full depth repair (if required – please bid per square foot):** furnish all labor, materials, equipment, supervision, and incidentals necessary to locate and remove full depth unsound floor concrete, prepare the cavity, and install patching material to restore floor to original condition and appearance. Patch material to be conventional normal weight concrete. Shoring for formwork is incidental to this work item. *Refer to Detail 2-RS102.*

D. CRACK REPAIR AND JOINT CONSTRUCTION

- **Crack repair, construction and control joint, cove seal:** furnish all labor, materials, equipment, supervision, and incidentals necessary to locate, prepare and seal construction joints, control joints, and cove seals and random cracks in the concrete floor and/or topping. *Refer to Detail 6-RS102.*
- **Epoxy inject cracks:** furnish all labor, materials, equipment, supervision, and incidentals necessary to locate, prepare and epoxy inject cracks that are less than ¼" in width. *Refer to technical specifications for more information.*

END OF SCOPE OF SERVICES

BID FORM

NAME OF BIDDER: _____

BUSINESS ADDRESS: _____

TELEPHONE NUMBER: _____

EMAIL ADDRESS: _____

PROJECT: Washtenaw County Parking Deck Repairs

PROPOSALS DUE: 3:00pm, August 16, 2004

Washtenaw County reserves the right to reject any or all bids, to waive or not waive informalities or irregularities in bids or bidding procedures, and to accept or further negotiate cost, terms, or conditions of any bid determined by the County to be in the best interests of the County even though not the lowest bid. If a proposal is selected, it will be the most advantageous regarding price, quality of service, the Contractor's qualifications and capabilities to provide the specified service, and other factors that the County may consider. The County does not intend to award a contract fully on the basis of any response made to the proposal; the County reserves the right to consider proposals for modifications at any time before a contract would be awarded, and negotiations would be undertaken with that contractor whose proposal is deemed to best meet the County's specifications and needs. Proposals must be signed by an official authorized to bind the contractor to its provisions for at least a period of 90 days. Failure of the successful bidder to accept the obligation of the contract may result in the cancellation of any award.

Washtenaw County reserves the right to delete or to add work items during the term of this contract. Unit prices shall include all charges for incidental expenses or items necessary to complete the work shown on the project drawings or detailed in the project specifications, insurance, overhead and profit. The County retains the right to accept or reject said unit prices.

As a condition of contract award, the Contractor will be required to furnish in the amount of 100% the contract price, satisfactory Performance Bond/Payment Bond and Certificates of Insurance.

UNIT PRICES AND PROPOSAL BREAKDOWN:

The quantities provided in each of the following items are intended to provide the Bidder with an estimate of the work. They are not meant to be exact quantities as measured in the field or calculated from the project drawings. It is the responsibility of the Contractor to verify these quantities at the time of payment with the Owner. Payments will not be authorized without verification.

Work Item	Quantity	Unit	Unit Price	Total
A. Site preparation				
Mobilization, quantities verification, dust barriers, traffic control, shoring	1	Lump sum		
TOTAL FOR ITEM A:				
B. Floor Surface and Ceiling Repair				
Floor slab repair patch	100	S.F.		
Ceiling repair	2,000	S.F.		
Wall repair	600	S.F.		
Full depth repair	TBD	S.F.		
TOTAL FOR ITEM B:				
C. Beam and Column Repairs				
Beam repairs	500	S.F.		
Column repair	300	S.F.		
Supplemental steel supports (may require foundation)	5	Lump sum		
Full depth repair	TBD	S.F.		
TOTAL FOR ITEM C:				
D. Crack Repair and Joint Construction				
Crack repair, construction and control joint, cove seal	800	L.F.		
Epoxy inject cracks	100	L.F.		
TOTAL FOR ITEM D:				
E. Performance/Payment Bond:				
F. Permit Fees:				
TOTAL FOR ITEMS A, (B / C / D), E & F:				
<i>(items A, E, and F must be included in all bids)</i>				

TOTAL BASE BID FOR WORK ITEMS A, E, F PLUS (circle all that apply) B / C / D:

_____ DOLLARS (\$ _____)

CONSTRUCTION DURATION: _____ DAYS

- Notes: 1. The contractor may break out additional bid items and list above.
2. Total bidding items must equal the Base Bid amount.
3. The total Base Bid amount must not be exceeded without prior written authorization by the Owner.

ALTERNATES

VOLUNTARY ALTERNATES:

The following Voluntary Alternates are offered by the Bidder.

The undersigned agrees that the amounts indicated below shall be added to or deducted from the Base Bid as indicated, for each Voluntary Alternate which is accepted.

DESCRIPTION OF VOLUNTARY ALTERNATE

	ADD	DEDUCT
1. _____	\$ _____	\$ _____
2. _____	\$ _____	\$ _____
3. _____	\$ _____	\$ _____

ADDENDA

The Bidder acknowledges s/he has received and included in the Base Bid the modifications of the work described in the following Addenda:

- Addendum No. _____ Dated _____
Addendum No. _____ Dated _____
Addendum No. _____ Dated _____

Non-Collusive Bidding Certification

By submitting this bid, the Bidder certifies that (a) the prices in this bid have been arrived at independently without collusive consultation, communication or agreement for the purpose of restricting competition as to any matter relating to such prices with any other bidder or with any competitor; (b) the prices quoted in this bid have not been and will not be knowingly disclosed, directly or indirectly, by the Bidder to any other bidder; competitors of such bid; and (c) no attempt has been made, and none will be made, by the Bidder to induce any other person, partnership corporation to submit a bid or not to submit a bid (complementary or otherwise) for the purpose of restricting competition.

ACCEPTANCE OF PROPOSAL

The undersigned bidder agrees to furnish performance/payment bonds in the amount of 100% of the contract price, submit Certificates of Insurance, and execute a Contract

(boilerplate attached at end of this document), providing they are notified of the acceptance within 60 calendar days after the time set for receipt of proposals.

The undersigned has carefully examined the Bidding and Contract Documents, including the Instructions to Bidders, General Conditions of the Contract, General Requirements, Specifications, Drawings, and any and all addenda issued, and agrees to be bound by all requirements thereof in the submission of this proposal, and in the performance of the Contract if awarded to them on this proposal.

The undersigned bidder does hereby declare that the bidder has the legal status checked below:

- _____ Individual
- _____ Co-Partnership
- _____ Corporation incorporated in the state of _____
- _____ Joint business under an assumed name.

The names and addresses of all persons indicated as partners in this proposal are as follows:

NAME	ADDRESS
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

This proposal is submitted in the name of:

(Name of Contractor)

By: (Signature) _____ (Title)

Signed and sealed this _____ day of _____, 2004

END OF BID FORM

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- A. Project: Washtenaw County Parking Deck Repairs
Attached to 101 E. Huron St.; SW corner of Ann St./4th Ave.
Ann Arbor, MI 48104
- B. Owner: Washtenaw County Facilities Management
Attn: Dave Shirley, Operations & Maintenance Manager
110 N. 4th Ave.; PO Box 8645
Ann Arbor, MI 48107-8645
(734) 222-3793
- C. Architect: Dan Joseph Architects, LLC
PO Box 40
Manchester, MI 48158
(734) 428-1900
- D. Engineer: Soil and Materials Engineers, Inc.
43980 Plymouth Oaks Blvd.
Plymouth, MI 48170-2584
(734) 454-9900
- E. The Work consists of existing Parking Deck Repairs.

1.2 WORK RESTRICTIONS

- A. Contractor's Use of Premises: During construction, Contractor will have restricted use of work site. Contractor's use of site is limited by Owner's right to perform work or employ other contractors on portions of Project. Contractor shall provide maximum safe use of the site to the owner at all times.
 - 1. Owner will occupy adjacent Building and limited areas of Parking Deck where feasible, during construction. Perform construction during work hours established in advance by Owner, which may require evening and weekend work in order to eliminate disruption to facility's operation. Clean up work areas and return to a useable condition at the end of each work period.

END OF GENERAL REQUIREMENTS

ADMINISTRATIVE REQUIREMENTS

PART 2 - GENERAL

2.1 PROJECT MANAGEMENT AND COORDINATION

- A. Coordinate construction to ensure efficient and orderly installation of each part of the Work.
- B. Conduct progress meetings at Project site at regular intervals. Notify Owner of meeting dates and times. Require attendance of each subcontractor or other entity concerned with current progress or involved with planning or coordination of future activities.
 - 1. Record minutes and distribute to each party present and to parties who should have been present.

2.2 SUBMITTAL PROCEDURES

- A. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 1. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 2. Owner will will discard submittals received from sources other than Contractor.
 - 3. Identify deviations from the Contract Documents on submittals.
 - 4. Submit 4 copies of each submittal.
- B. Place a permanent label or title block on each submittal for identification. Provide a 6- by 8-inch space on the label or beside title block to record review and approval markings and action taken. Include the following information on the label:
 - 1. Project name.
 - 2. Date.
 - 3. Name and address of Contractor.
 - 4. Name and address of subcontractor or supplier.
 - 5. Number and title of appropriate Specification Section.
- C. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Owner.

- D. Owner will review each action submittal, make marks to indicate corrections or modifications required, stamp and mark as appropriate to indicate action taken, and return copies less those retained.
- E. Contractor's Construction Schedule Submittal Procedure: Submit 4 copies of schedule within 5 days after date established for Commencement of the Work.
- F. Where Submittal requirements are found to be in conflict (elsewhere within the contract documents), the most stringent shall govern the requirement of the Submittal.

PART 3 - PRODUCTS

3.1 ACTION SUBMITTALS

- A. Product Data: Mark each copy to show applicable choices and options. Include the following:
 - 1. Data indicating compliance with specified standards and requirements.
 - 2. Notation of coordination requirements.
 - 3. For equipment, include rated capacities, dimensions, weights, required clearances, and furnished specialties and accessories.
- B. Shop Drawings: Submit Project-specific information drawn to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit 4 opaque copies on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches. Owner will return one copy. Include the following:
 - 1. Dimensions, fabrication and installation drawings, roughing-in and setting diagrams, and relationship to adjoining construction.
 - 2. Identification of products and materials.
 - 3. Notation of coordination requirements.
 - 4. Notation of dimensions established by field measurement.
- C. Samples: Submit Samples finished as specified and physically identical with material or product proposed for use. Where variations are inherent in the material, submit 4 sets of paired units to show full range of variations. Include name of manufacturer and product name on label.

3.2 INFORMATION SUBMITTALS

- A. Qualification Data: Include a list of three (3) completed projects similar in scope and type with project names and addresses, names and addresses of architects and owners, and any other relevant information.

- B. Product Certificates: Prepare written statements on manufacturer's letterhead, including signature of entity responsible for preparing certification, certifying that product complies with requirements.

3.3 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Owner.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit 4 copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor, to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

3.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Work Schedule: Submit a project work schedule within 5 days of date established for the Notice of Award.
- B. Time Frame: Extend schedule from date established for the Notice of Award to date of Final Completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows a later completion date, unless specifically authorized by Change Order.
- C. Distribute copies of approved schedule to Owner, who will distribute to Architect, subcontractors, testing and inspecting agencies, and parties identified by Contractor with a need-to-know schedule responsibility.
- D. Updating: At biweekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule during each regularly scheduled progress meeting.
 - 1. As the Work progresses, indicate Actual Completion percentage for each activity.

- E. Revise the schedule after each meeting or activity where revisions have been made. As Work progresses, mark each bar to indicate actual completion. Distribute updated copies to same parties.

PART 4 - EXECUTION (Not Applicable)

END OF ADMINISTRATIVE REQUIREMENTS

QUALITY REQUIREMENTS

PART 5 - GENERAL

5.1 SECTION REQUIREMENTS

- A. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
1. Testing and inspecting services are specified in other Sections of these Specifications or are required by authorities having jurisdiction and shall be performed by independent testing agencies.
 2. Where quality-control services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these services.
 3. Contractor is responsible for scheduling times for tests, inspections, and obtaining samples and notifying testing agency.
 4. Retesting and Re-inspecting: Contractor shall pay for additional testing and inspecting required as a result of tests and inspections indicating noncompliance with requirements.
- B. Submittals: Testing agency shall submit a certified written report of each test and inspection to Contractor, Owner, Architect, and to authorities having jurisdiction when they so direct. Reports of each inspection, test, or similar service shall include the following:
1. Name, address, and telephone number of testing agency.
 2. Project title and number.
 3. Date of issue.
 4. Dates and locations of samples and tests or inspections.
 5. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 6. Names of individuals making tests and inspections.
 7. Description of the Work and test and inspection method.
 8. Complete test or inspection data, test and inspection results, an interpretation of test results, and comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 9. Recommendations on retesting and re-inspecting.
 10. Name and signature of laboratory inspector.
- C. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated; and where required by authorities having jurisdiction, that is acceptable to authorities.

- D. Testing Agency Responsibilities: Testing agency shall cooperate with the Owner, Architect and Contractor in performing its duties and shall provide qualified personnel to perform inspections and tests.
 - 1. Agency shall promptly notify Owner, Architect and Contractor of irregularities or deficiencies in the Work observed during performance of its services.
 - 2. Agency shall not release, revoke, alter, or increase requirements of the Contract Documents nor approve or accept any portion of the Work.
 - 3. Agency shall not perform any duties of Contractor.

- E. Auxiliary Services: Cooperate with testing agencies and provide auxiliary services as requested, including the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of materials for testing, and assistance in obtaining samples.
 - 4. Facilities for storage and field curing of test samples.
 - 5. Security and protection for samples and for testing and inspecting equipment.

- F. Special Tests and Inspections: Owner will engage a qualified special inspector to conduct special tests and inspections required by authorities having jurisdiction.

- G. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits.

- H. Where Testing requirements are found to be in conflict (elsewhere within the contract documents), the most stringent shall govern the requirement of Testing.

PART 6 - PRODUCTS (Not Applicable)

PART 7 - EXECUTION (Not Applicable)

END OF QUALITY REQUIREMENTS

TEMPORARY FACILITIES AND CONTROLS

PART 8 - GENERAL

8.1 SECTION REQUIREMENTS

- A. Use Charges: Cost or use charges for temporary facilities shall be included in the Contract Sum.
- B. Use water and electric power from Owner's existing system without metering and without payment of use charges.
- C. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

PART 9 - PRODUCTS

9.1 EQUIPMENT

- A. Heating Equipment: Provide when required vented, self-contained heaters with thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

PART 10 - EXECUTION

10.1 TEMPORARY UTILITIES

- A. General: Do not interrupt Owners existing utility service, to make connections for temporary services.
- B. Sanitary Facilities: Provide temporary toilets. Comply with regulations and health codes for type, number, location, operation, and maintenance of facilities.
- C. Heating and Cooling: Provide temporary heating and cooling required for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

- D. Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

10.2 TEMPORARY SUPPORT FACILITIES

- A. Provide storage and other support facilities as necessary for construction operations.
- B. Provide waste-collection containers in sizes adequate to handle waste from construction operations. Collect waste daily and, when containers are full, legally dispose of waste off-site. Comply with requirements of authorities having jurisdiction.
- C. Install project identification and other signs in locations approved by Owner to inform the public and persons seeking entrance to Project.

10.3 TEMPORARY SECURITY AND PROTECTION FACILITIES

- A. Provide temporary environmental protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Provide measures to prevent airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
- C. If required provide temporary enclosures for protection of construction from inclement weather and for containment of heat.
- D. Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- E. Furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site at or below work areas.
- F. Install and maintain temporary fire-protection facilities. Comply with NFPA 241.

10.4 TERMINATION AND REMOVAL

- A. Remove temporary facilities and controls no later than Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

END OF TEMPORARY FACILITIES AND CONTROLS

PRODUCT REQUIREMENTS

PART 11 - GENERAL

11.1 SECTION REQUIREMENTS

- A. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
- B. Product Substitutions: Substitutions include changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor after award of the Contract.
 - 1. Submit 4 copies of each request for product substitution.
 - 2. Submit requests within 5 days after the Notice of Award.
 - 3. Do not submit unapproved substitutions on Shop Drawings or other submittals.
 - 4. Identify product to be replaced and show compliance with requirements for substitutions. Include a detailed comparison of significant qualities of proposed substitution with those of the Work specified, a list of changes needed to other parts of the Work required to accommodate proposed substitution, and any proposed changes in the Contract Sum or the Contract Time should the substitution be accepted.
 - 5. Owner will review with Architect the proposed substitution and if determined acceptable, notify Contractor by Change Order.
- C. Comparable Product Requests:
 - 1. Submit 4 copies of each request for comparable product. Do not submit unapproved products on Shop Drawings or other submittals.
 - 2. Identify product to be replaced and show compliance with requirements for comparable product requests. Include a detailed comparison of significant qualities of proposed substitution with those of the Work specified.
 - 3. Owner will review with Architect the proposed product and notify Contractor of its acceptance or rejection.
- D. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 4. Store materials in a manner that will not endanger Project structure.
 5. Store products that are subject to damage by the elements, under cover in a weather tight enclosure above ground, with ventilation adequate to prevent condensation.
- E. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

PART 12 - PRODUCTS

12.1 PRODUCT OPTIONS

- A. Provide products that comply with the Contract Documents, are undamaged, and are new at the time of installation.
1. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
 2. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
- B. Product Selection Procedures:
1. Where Specifications name a single product or manufacturer, provide the item indicated that complies with requirements.
 2. Where Specifications include a list of names of products or manufacturers, provide one of the items indicated that complies with requirements.
 3. Where Specifications include a list of names of products or manufacturers, accompanied by the term "available products" or "available manufacturers," provide one of the named items that complies with requirements. Comply with provisions for "comparable product requests" for consideration of an unnamed product.
 4. Where Specifications name a product as the "basis-of-design" and include a list of manufacturers, provide the named product. Comply with provisions for "comparable product requests" for consideration of an unnamed product by the other named manufacturers.
 5. Where Specifications name a single product as the "basis-of-design" and no other manufacturers are named, provide the named product. Comply with provisions for "comparable product requests" for consideration of an unnamed product by another manufacturer.

- C. Unless otherwise indicated, Owner will select color, pattern, and texture of each product from manufacturer's full range of options that includes both standard and premium items.

PART 13 - EXECUTION (Not Applicable)

END OF PRODUCT REQUIREMENTS

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 14 - GENERAL

14.1 CLOSEOUT SUBMITTALS

- A. Record Drawings: Maintain a set of prints of the Contract Drawings as Record Drawings. Mark to show actual installation where installation varies from that shown originally.
 - 1. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

PART 15 - PRODUCTS (Not Applicable)

PART 16 - EXECUTION

16.1 EXAMINATION AND PREPARATION

- A. Examine substrates and conditions for compliance with manufacturer's written requirements including, but not limited to, surfaces that are sound, level, plumb, smooth, clean, and free of deleterious substances; substrates within installation tolerances; and application conditions within environmental limits. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to survey and existing benchmarks.
- C. Take field measurements as required to fit the Work properly. Where fabricated products are to be fitted to other construction, verify dimensions by field measurement before fabrication and, when possible, allow for fitting and trimming during installation.

16.2 CUTTING AND PATCHING

- A. Do not cut structural members or operational elements without prior written approval of Owner.
- B. Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

- C. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

16.3 INSTALLATION

- A. Comply with manufacturer's written instructions for installation. Anchor each product securely in place, accurately located and aligned with other portions of the Work. Clean exposed surfaces and protect from damage.
- B. Clean Project site and work areas daily, including common areas.

16.4 FINAL CLEANING

- A. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion:
 - 1. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances. Sweep concrete floors broom clean.
 - 2. Clean light fixtures, lamps, globes, and reflectors.
 - 3. Clean Project site, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits.

16.5 CLOSEOUT PROCEDURES

- A. Substantial Completion: Before requesting Substantial Completion inspection, complete the following:
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Submit specific warranties, maintenance service agreements, and similar documents.
 - 3. Obtain and submit releases permitting Owner unrestricted use of the Work.
 - 4. Submit Record Drawings operation and maintenance manuals, and similar final record information.
 - 5. Complete testing of systems.
 - 6. Remove temporary facilities and barricades.
 - 7. Complete final cleaning requirements, including touchup painting.
 - 8. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Submit a written request for inspection for Substantial Completion. On receipt of request, Owner will proceed with inspection or advise Contractor of unfulfilled requirements. Owner will prepare the Certificate of Substantial Completion after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.

- C. Request inspection for Final Completion, once the following are complete:
 - 1. Submit a copy of Substantial Completion inspection list stating that each item has been completed or otherwise resolved for acceptance.
 - 2. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- D. Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
- E. Submit a written request for final inspection for acceptance. On receipt of request, Owner will proceed with inspection or advise Contractor of unfulfilled requirements. Owner will prepare final Certificate for Payment after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.

16.6 DEMONSTRATION AND TRAINING

- A. Engage qualified instructors to instruct Owner's personnel to maintain systems, subsystems, and equipment not part of a system. Include a detailed review of the following:
 - 1. Include instruction for basis of system design, troubleshooting, maintenance, and repairs.

END OF EXECUTION AND CLOSEOUT REQUIREMENTS

SELECTIVE DEMOLITION

PART 17 - GENERAL

17.1 SECTION REQUIREMENTS

- A. Items indicated to be removed and salvaged remain Owner's property. Remove, clean, and deliver to Owner's designated storage area.
- B. Comply with EPA regulations and hauling and disposal regulations of authorities having jurisdiction.
- C. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- D. It is not expected that hazardous materials will be encountered in the Work. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Owner. Owner will remove hazardous materials under a separate contract.

PART 18 - PRODUCTS (Not Applicable)

PART 19 - EXECUTION

19.1 DEMOLITION

- A. Maintain services/systems indicated to remain and protect them against damage during selective demolition operations. Before proceeding with demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of the building.
- B. Locate, identify, flag, utility services and mechanical/electrical systems serving areas to be selectively demolished.
- C. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- D. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain or construction being demolished.
- E. Provide temporary weather protection to prevent water leakage and damage to structure and interior areas.

- F. Protect walls, ceilings, floors, and other existing finish work that are to remain.
- G. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.
- H. Promptly remove demolished materials from Owner's property and legally dispose of them. Do not burn demolished materials.

END OF SELECTIVE DEMOLITION

CONVENTIONAL & MICROSILICA CONCRETE RESTORATION

PART 1 - GENERAL

1.10 RELATED DOCUMENTS

1.11 Drawings and General Conditions of the Contract Documents of the Project apply to the work described in this section.

1.12 Sealants Section

1.20 DESCRIPTION OF WORK

1.21 The work required under this Division shall include all materials, labor, equipment and services necessary to furnish and install in accordance with the Drawings and Specifications all items listed, but not limited to:

Concrete repair work greater than 3 inches in depth, as detailed on Drawings and as described herein, including reinforcing, placing floor repairs, formed beam repairs, and formed column repairs.

1.22 Extent of repairs shall include the full area as noted on the Drawings or marked in the field.

1.30 QUALITY ASSURANCE

1.31 General Contractor, subcontractors, and manufacturers: Firms with 10 years of prior successful experience with the construction and installation of concrete repair systems.

1.32 Industry Standards: Except as otherwise shown or specified, comply with applicable recommendations and details in the latest editions of MDOT, ASTM and ACI Publications.

1.33 Warranty: The Contractor shall provide a five (5) year warranty for defects in workmanship and materials for the work after final acceptance by the Owner. The Contractor shall agree to replace defects in the work during this time period at no cost to the Owner.

1.34 The Owner may employ and pay for the services of an Engineer/Consultant to perform quality control and testing during installation to determine if materials and methods conform to the Specifications. Retesting of materials failing to pass the designated specifications will be paid for by the Contractor.

1.35 The Engineer/Consultant or the Owner's Representative shall not act as foreman or perform other duties for the Contractor. Work will be checked as it progresses, but failure to detect any defective work or materials shall not in any way prevent later rejections when such defect is discovered, nor shall it obligate the Owner for final acceptance. The Engineer/Consultant and the Owner's Representative are not authorized to revoke, alter, relax, enlarge, or release any requirements of the specifications, nor to approve or accept any portion of the work. The presence or absence of the Consultant or the Owner's Representative shall in no way relieve the Contractor of his/her

responsibility to furnish materials and construction in full compliance with the plans and specifications.

1.36 The Contractor shall furnish such casual labor as is necessary to obtain and handle samples at the project or at other sources of materials.

1.37 The Contractor is responsible to advise the Owner sufficiently in advance of operations (at least 24 hours) to allow completion of quality tests and for the assignment of personnel.

1.40 SUBMITTALS

1.41 The Contractor is responsible for providing four (4) copies of the following submittals to the Owner. These submittals must be reviewed by the Project Owner prior to any authorized concrete restoration operations.

- A. A complete list of materials proposed for use including names, sources and descriptions.
- B. Manufacturer's product data with application and installation instructions for proprietary materials and items.
- C. Prepare one field sample of each type of patching compound to be used in presence of the Engineer/Owner to verify proper mixing procedures.
- D. Letter from the manufacturer stating acceptance of the applicator for the proposed work.
- E. Manufacturer's literature and usage directions for proposed concrete repair system.
- F. Material Safety Data Sheets (MSDS) for material anticipated to be used on this project, and which are classified as hazardous by appropriate regulations.
- G. Shoring Plan.

1.42 Shop Drawings: Submit four (4) sets of complete shop drawings including elevations showing reinforcing details and splices. Typical details shall be drawn at scale depicting cross sections, and sealants. Coordinate detail drawings with adjacent construction.

1.43 Test Reports: Provide four (4) copies of independent testing of proposed concrete and concrete patch mixes, indicating compliance with these specifications.

1.44 After all required submittals have been reviewed, and prior to any restoration representatives of the Owner, Architect, and Engineer in attendance to review specific project installation details and scheduling.

1.50 QUALITY CONTROL

- 1.51 The Contractor shall inspect the marked surfaces and compare the distress with the Project Drawings. The Owner shall be notified if the Contractor believes there is significant additional work to be done which was not shown on the Drawings or marked in the field. The Engineer/Owner shall review the conditions noted, and determine if the distress requires additional work.
- 1.52 Notify the Owner 24 hours in advance of surface repair material placement operations, to permit inspection and checking by the Engineer/Owner
- 1.60 SITE CONDITIONS
 - 1.61 Building components damaged during this work shall be restored to original condition or shall be replaced with new materials. Restore if damaged by this work to the satisfaction of the Owner's Representative.
 - 1.62 The Contractor shall remove all demolished building material and debris from the site and dispose of it in a legal manner.
 - 1.63 Protect the existing building, site and automobiles from flying or falling debris during the demolition process. Provide protection so as not to disrupt deck operations or cause damage to the structure, its contents, or vehicles during this work.
 - 1.64 The scheduling and sequence of the repair operations shall be carefully coordinated with the Owner.
 - 1.65 Confine equipment, storage of materials and debris, and the operations and movement of workmen within limits established by the Owner/Owner's Representative.
 - 1.66 Proceed with this work only when weather conditions will permit unrestricted use of materials and installation methods for the work being done. No work is to be done if temperature is anticipated to be below 45° F for the next 24 hour period, unless special protection is provided in accordance with ACI 306R.
 - 1.67 Barricade work areas resulting from this work and post with warning lights. Operate warning lights as recommended by authorities having jurisdiction.
- 1.70 DELIVERY, STORAGE AND HANDLING
 - 1.71 All materials shall be delivered to the site in their original containers with seals unbroken, and with each container bearing a label identifying the contents and the manufacturer. All materials shall be of manufacturers listed herein and accepted by the Owner's Representative.
 - 1.72 All labels shall clearly indicate:
 - A. Name of manufacturer
 - B. Manufacturer's product name or product number
 - C. Manufacturer's lot number

- D. Mix ratio
- E. Conformance with the injection adhesive specification
- F. SPI hazardous material rating and appropriate warnings for handling.

1.73 Store materials in dry areas and protect. All material shall be stored at temperatures above 40° F. Any material damaged by moisture, temperature, and/or poor storage or handling procedures shall be replaced at the Contractor's expense.

1.80 REFERENCES

1.81 Materials and construction methods shall follow the practice defined by the following standard specifications unless otherwise specified:

- A. The 2003 MDOT "Standard Specifications for Construction".
- B. American Society for Testing and Materials (ASTM) Standards Specified.
- C. "Building Code Requirements for Reinforced Concrete" American Concrete Institute, herein referred to as ACI 318.
- D. ACI 304 "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete".
- E. ACI 308 "Recommended Practice for Curing Concrete".
- F. ACI 304 "Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete".

1.90 GUARANTEE

1.91 Prior to final acceptance of work, the Contractor shall supply the Owner with a performance guarantee agreement. This agreement shall guarantee the Concrete Repair Work against failure of any kind for a period of five (5) years from the date of acceptance of this project. The agreement shall cover all defects in materials and workmanship and failures except those caused by hail, fire, tornado, or physical damage from extraneous sources.

1.92 During the guarantee period, the defective installation shall be inspected within 24 hours after receipt of notice from the Owner and, if found to be within the meaning of the guarantee, shall be restored within 10 days after receipt of notice from the Owner to the standard of the original specification without cost to the Owner.

PART 2 - PRODUCTS

2.10 MILD STEEL REINFORCEMENT

2.11 Mild steel reinforcement shall conform to ASTM A615, yield strength 60 KSI.

- 2.12 Provide stainless steel or plastic tipped legs on chairs and other accessories in contact with the form work of exposed concrete.
- 2.13 Bar supports shall be manufactured from a dielectric material or coated with a dielectric material such as epoxy or vinyl that is compatible with concrete.
- 2.14 Epoxy coating materials for mild steel reinforcement and steel accessories shall be:
 - A. Scotchkote 213 by the 3M Company.
 - B. Flintflex 531-6086 by the E. I. Dupont Company.
 - C. Epoxiplate R346 or R349 by the Armstrong Products Company.
 - D. Epoxy Powder 720-A-009 by the Cook Paint and Varnish Company.
- 2.15 Fabricate reinforcing bars to conform to required shapes and dimensions with tolerances complying with CRSI "Manual of Standard Practice."
- 2.16 Bends in reinforcing are standard 90 degree bends unless noted otherwise.
- 2.17 Epoxy coated reinforcement shall conform to ASTM A775. Fabricator and applicator to provide installer with written instructions to handle, store and place epoxy coated reinforcing to prevent damage to the coating.
- 2.20 CAST-IN PLACE CONCRETE
 - 2.21 Portland cement shall be Type I or III, ASTM C150.
 - 2.22 Use of any admixture must be approved by the Engineer/Owner and when approved, shall conform to ACI 301 Article 2.2.
 - 2.23 Aggregates shall conform to ASTM C33.
 - A. Fine aggregate shall be clean, sharp, natural sand, free from loams, clay lumps, or deleterious substances, meeting MDOT 2NS Specifications.
 - B. Coarse aggregate shall be clean, uncoated, graded aggregate containing no clay, loam for foreign matter, meeting MDOT 6AA Specifications.
 - C. Provide each type of aggregate from a single source.
 - 2.24 Concrete shall be 4500 psi, air entrained
 - 2.25 Conventional concrete shall be air entrained 6% plus or minus 1%. Air-entrained concrete shall be obtained by the use of an approved air entraining admixture.
 - 2.26 The water-cement ratio shall not exceed 0.45 by weight.
 - 2.27 The maximum slump for concrete shall be 4".

- 2.28 Selection of concrete proportions shall be in accordance with ACI 301. Minimum cement content for any concrete mix design shall be 6.5 sacks (611 lbs.) per cubic yard.
- 2.29 Cover Material For Curing
- Curing materials shall conform to one of the following specifications:
- A. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2.
 - B. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.
 - C. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.
 - D. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.
- 2.30 MICROSILICA CONCRETE FOR SURFACE DECK REPAIRS
- 2.31 Portland Cement shall comply with ASTM C150, Type I. Use one brand of cement throughout project.
- 2.32 Aggregates shall conform to ASTM C33.
- A. Fine aggregate shall be clean, sharp, natural sand, free from loams, clay lumps, or deleterious substances, meeting MDOT 2NS Specifications.
 - B. Coarse aggregate shall be clean, uncoated, graded aggregate containing no clay, loam or foreign matter, meeting MDOT 26A Specifications. Maximum size shall be 3/8".
 - C. Provide each type of aggregate from a single source.
 - D. Microsilica additive shall conform to ASTM 1240
- 2.33 Water shall be clean and free from deleterious materials.
- 2.34 Air-Entraining Admixture shall comply with ASTM C-260; use for all exterior concrete. Air content 5%, plus or minus 1.5%.
- 2.35 Compressive Strength: 5000 psi, minimum at 28 days minimum.
- 2.36 Slump Range: 3" to 5".
- 2.37 Minimum cement content shall be 658 lbs/c. y.
- 2.38 Microsilica concrete shall be fiber reinforced with polypropylene fibers conforming to the following physical properties:

- A. Absorption: None
- B. Specific Gravity: 0.9
- C. Fiber Length: 1/2", 3/4"
- D. Melt Point: 163 degrees Celsius
- E. Flash Point: 316 degrees Celsius

2.39 Cover Material For Curing

Curing materials shall conform to one of the following specifications:

- A. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2.
- B. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.
- C. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.
- D. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.

2.40 LATEX MODIFIED CONCRETE (MDOT L-C) SURFACE REPAIRS

2.41 Portland Cement shall comply with ASTM C150, Type I. Use one brand of cement throughout project.

2.42 Aggregates shall conform to ASTM C33.

- A. Fine aggregate shall be clean, sharp, natural sand, free from loams, clay lumps, or deleterious substances, meeting MDOT 2NS Specifications.
- B. Coarse aggregate shall be clean, uncoated, graded aggregate containing no clay, loam for foreign matter, meeting MDOT 25A Specifications. Maximum size shall be 3/8".
- C. Provide aggregate from a single source.
- D. Latex additive requirement per 2003 MDOT Standard Specifications.

2.43 Water shall be clean and free from deleterious materials.

2.44 Air-Entraining Admixture shall comply with ASTM C-260; use for all exterior concrete. Air content 5%, plus or minus 1.5%.

2.45 Compressive Strength: 4500 psi, minimum at 28 days minimum of 7sk mix.

2.46 Slump Range: 4" to 6".

2.47 Minimum cement content shall be 700 lbs/c. y.

2.50 REPAIR MATERIALS

2.51 Spalls and delamination repairs

A. Products and acceptable manufacturers:

1. "Sikatop 123 Plus"; by Sika Corporation
2. "Duralop Gel"
3. "Masterplate 220"

PART 3 - EXECUTION

3.10 GENERAL

- 3.11 Work is to be scheduled and done in such a manner to allow for maximum use of the entire facility by Owner.
- 3.12 Dispose daily of all old concrete and other debris resulting from this work off the site in an approved manner.
- 3.13 Do not close or obstruct streets, walks, or facilities in the area occupied and used by the Owner and the public, without prior written permission from the Owner and local authorities having jurisdiction.
- 3.14 Provide and maintain temporary protection to prevent damage to the patching system during their installation until cured and to adjacent surfaces due to the work of the section.
- 3.15 Provide all necessary shielding of existing materials, vehicles, and equipment, which are to remain within or adjacent to work area.
- 3.16 For all concrete demolition work, use the methods shown on the project drawings. If chipping is necessary, use 15 and 30 pound chipping hammers with chisel point bits.

3.20 MILD STEEL REINFORCEMENT

- 3.21 The Engineer shall review existing reinforcement.
- 3.22 The Contractor shall furnish and install supplementary reinforcement to replace damaged and defective reinforcement as specified.
- 3.23 Reinforcement exposed during surface preparation that has lost more than 20% of the original cross sectional area shall be considered defective and supplemented with additional reinforcement.
- 3.24 Supplement defective reinforcing by the addition of reinforcement of equal diameter and extend it beyond the damaged portion of the bar creating a Class B splice per ACI-318. Secure new rebar to the existing rebar with wire ties.

3.30 JOINTS

3.31 Longitudinal and transverse joints shall be constructed true to line with their faces perpendicular to the surface. Joints shall not vary more than 1/2 inch from a true line or from their designated position. Seal control and construction joints in accordance with Section 07920 of the project specifications.

3.40 CONCRETE REPAIR

3.41 Defective concrete areas marked in the structure shall be removed as shown on the drawings. Slab concrete shall be removed in accordance with the methods shown on the project drawings. If chipping is necessary, the edges must be perpendicular to the surface or slightly undercut. No feather edges will be permitted.

3.42 Sawcut the perimeter of all surface repairs a minimum of 3/4" and completely remove weak, loose and unsound concrete. Use power driven hand tools and regular hand tools for this work. Use care to ensure that removal methods and tools do not damage or weaken sound concrete. If reinforcing steel is exposed, continue to remove sound concrete to a depth of 1/2" below the bottom of the reinforcing steel.

3.43 Clean concrete surfaces of dirt, laitance, corrosion, or other contamination.

3.44 Clean exposed reinforcing steel of scale, dirt, rust, or other foreign coatings which would reduce bond to concrete patching material.

3.45 Coat exposed re-steel with a corrosion inhibitor coating prior to placing concrete. Coating shall fully cover bar with no pin holes as per the manufacturers recommendations.

3.46 Owner to be notified for inspection of prepared areas before proceeding with patching. Prepared areas must be inspected and accepted before proceeding.

3.50 PROTECTION

3.51 Protect the concrete from damage until acceptance of the work.

3.52 Clean adjoining concrete surfaces, and wash free of stains, discoloration, dirt and other foreign material just prior to final inspection.

3.53 Clean all areas and remove all debris, rubbish and excess material from the site which may have been caused by the work of this Section.

3.60 SPALLS AND DELAMINATIONS

3.61 Spalled Delaminated Concrete Removal and Surface Preparation

- A. All defective concrete areas marked in the Deck shall be removed down to sound concrete. Continue to remove sound concrete to expose undamaged reinforcing steel in patch area. If chipping is necessary, the edges must be perpendicular to the surface or slightly undercut. No feather edges will be permitted.
- B. Sawcut the perimeter of all surface repairs a minimum of 3/4" and completely remove weak, loose and unsound concrete. Use power driven hand tools and regular hand tools for this work. Use care to ensure that removal methods and tools do not damage or weaken sound concrete.
- C. Clean concrete surfaces of dirt, laitance, corrosion, or other contamination;
- D. Clean exposed reinforcing steel of scale, dirt, rust, or other foreign coatings and epoxy coat.
- E. Owner's Representative to be notified for inspection of prepared areas before proceeding with patching. Prepared areas must be inspected and accepted before proceeding.

3.62 Spalled Delaminated Concrete Patching Application

- A. Coat exposed re-steel with an epoxy coating prior to placing concrete patches. Coating shall fully cover bar with no pin holes as per the manufacturer's recommendations.
- B. The area to be patched and a band at least 6 inches wide surrounding it should be dampened in accordance with patching material manufacturer' directions. Substrate surfaces should be saturated surface dry prior to application with no glistening water.
- C. Mix patching material in strict compliance with manufacturer's directions.
- D. Patching material must be scrubbed into substrate filling all pores and voids. Force material against edge of repair, working toward center. Provide full surface coverage.
- E. Allow patching material to set to desired stiffness, cut and then finish with wood or sponge float for a smooth surface. Finish to match existing adjoining surfaces.
- F. If priming is required, follow manufacturer's written directions.
- G. Curing requirements will comply with manufacturer's requirements for patching compound.
- H. Clean equipment and adjacent surfaces in accordance with patching material manufacturer's directions.

3.70 TROWEL APPLIED MORTAR

The work covered in this section includes all labor, equipment, materials, supervision and incidentals as necessary to prepare deteriorated or damaged

concrete surfaces and install patches to overhead and vertical surfaces to restore original surface condition and integrity.

A. Materials

1. "Sika 123"; Sika Corp.
2. "Tammstach Spread Crete Red Line"
3. "Masterplate 220"

B. Patch Installation

1. The cavity surfaces shall be clean and dry prior to commencement of patch installation.
2. A bonding grout consisting of equal parts by volume of sand and cement with sufficient water to achieve the consistency of stiff "pancake batter", shall be applied to all cavities. The slurry shall be applied evenly to a uniform thickness 1/16" minimum to 1/8" maximum throughout. Grout shall not be allowed to dry or dust prior to placement of the patch or overlay material.
3. If patching is delayed, the first coat of grout may be retempered with a second to prevent drying. If the second coat dries, the cavity shall not be patched until it has been recleaned and prepared as specified. Grout shall not be applied to more cavities than can be patched within 1/2 hour by available manpower.
4. Placement of patching materials shall immediately follow grout application. The properly proportioned and mixed patch material shall be placed using trowels to consolidate the patch such that no voids exist within the new material and continuous contact with the base concrete is achieved. Supplement wire mesh shall be required for delamination and spall repairs greater than two inches in depth. Fresh bonding grout is required between successive lifts.
5. On windy days, or when the relative humidity is less than 50%, after the concrete has been allowed to cure for at least four hours, damp cure the concrete for 24 hours by misting with a fine water spray. Do not use curing compounds, Curing time shall be extended when the curing temperature falls below 55° F. When the curing temperature falls below 50° F curing shall be considered to have been interrupted.

END OF CONVENTIONAL AND MICROSILICA CONCRETE RESTORATION

EPOXY INJECTION

PART 1 - GENERAL

1.10 RELATED DOCUMENTS

1.11 Drawings and General Conditions of the Contract Documents of the Project apply to the work described on this section.

1.12 Sealants Section

1.20 DESCRIPTION OF WORK

1.21 The work required under this Division shall include all materials, labor, equipment and services necessary to furnish and install in accordance with the Drawings and Specifications all items listed, but not limited to:

Epoxy injection of cracks including beams, columns, and floor slabs.

1.30 QUALITY ASSURANCE

1.31 General Contractor, subcontractors, and manufacturers: Firms with 10 years of prior successful experience with the construction and installation of concrete repair systems described in this section.

1.32 Industry Standards: Except as otherwise shown or specified, comply with applicable recommendations and details in the latest editions of MDOT, ASTM and ACI Publications.

1.33 Warranty: The Contractor shall provide a five (5) year warranty for defects in workmanship and materials for the work after final acceptance by the Owner. The Contractor shall agree to replace defects in the work during this time period at no cost to the Owner.

1.34 The Owner may employ and pay for the services of an Engineer/Consultant to perform quality control and testing during installation to determine if materials and methods conform to the Specifications. Retesting of materials failing to pass the designated specifications will be paid for by the Contractor.

1.35 The Engineer/Consultant or the Owner's Representative shall not act as foreman or perform other duties for the Contractor. Work will be checked as it progresses, but failure to detect any defective work or materials shall not in any way prevent later rejections when such defect is discovered, nor shall it obligate the Owner for final acceptance. The Engineer/Consultant and the Owner's Representative are not authorized to revoke, alter, relax, enlarge, or release any requirements of the specifications, nor to approve or accept any portion of the work. The presence or absence of the Engineer/Consultant or the Owner's Representative shall in no way relieve the Contractor of his/her responsibility to furnish materials and construction in full compliance with the plans and specifications.

1.36 The Contractor shall furnish such casual labor as is necessary to obtain and handle samples at the project or at other sources of materials.

- 1.37 The Contractor is responsible to advise the Owner sufficiently in advance of operations (at least 24 hours) to allow completion of quality tests and for the assignment of personnel.

1.40 SUBMITTALS

- 1.41 The Contractor is responsible for providing four (4) copies of the following submittals to the Owner's Representative. These submittals must be reviewed by the Owner's Representative prior to any authorized concrete restoration operations.
- A. A complete list of materials proposed to be used including names, sources and descriptions.
 - B. Manufacturer's product data with application and installation instructions for proprietary materials and items.
 - C. Prepare one field sample of each type of epoxy injection material to be used in presence of the Owner's Representative to verify proper mixing procedures.
 - D. Letter from the manufacturer stating acceptance of the applicator for the proposed work.
 - E. Manufacturers literature and usage directions for proposed epoxy injection repair system.
 - F. Material Safety Data Sheets (MSDS) for material anticipated to be used on this project, and which are classified as hazardous by appropriate regulations.
- 1.42 Test Reports: Provide six copies of independent testing of proposed concrete and concrete patch mixes, indicating compliance with these specifications.
- 1.43 After all required submittals have been reviewed, and prior to any restoration work, the Contractor is responsible to convene a pre-construction meeting with representatives of the Owner, Owner's Representative and Suppliers in attendance to review specific project installation details and scheduling.

1.50 QUALITY CONTROL

- 1.51 The Contractor shall inspect and compare the distress with the Project Drawings. The Owner's Representative shall be notified if the Contractor believes there is significant additional work to be done which was not shown on the Drawings or marked in the field. The Engineer/Owner shall review the conditions noted, and determine if the distress requires additional work.
- 1.52 Notify the Owner 24 hours in advance of surface repair material placement operations, to permit inspection and checking by the Owner/Owner's Representative.

1.60 SITE CONDITIONS

- 1.61 Building components damaged during this work shall be restored to original condition or shall be replaced with new materials. Restore if damaged by this work to the satisfaction of the Owner's Representative.
 - 1.62 The Contractor shall remove all demolished building material and debris from the site and dispose of it in a legal manner.
 - 1.63 Protect the existing building, site and automobiles from flying or falling debris during the demolition process. Provide protection so as not to disrupt deck operations or cause damage to the structure, its contents, or vehicles during this work.
 - 1.64 The scheduling and sequence of the repair operations shall be carefully coordinated with the Owner's Representative and Owner.
 - 1.65 Confine equipment, storage of materials and debris, and the operations and movement of workmen within limits established by the Owner's Representative.
 - 1.66 Proceed with this work only when weather conditions will permit unrestricted use of materials and installation methods for the work being done. No work is to be done if temperature is anticipated to be below 45° F for the next 24 hour period, unless special protection is provided in accordance with manufacturer's recommendations.
 - 1.67 Barricade work areas resulting from this work and post with warning lights. operate warning lights as recommended by authorities having jurisdiction.
- 1.70 DELIVERY, STORAGE AND HANDLING
- 1.71 All materials shall be delivered to the site in their original containers with seals unbroken, and with each container bearing a label identifying the contents and the manufacturer. All materials shall be of manufacturers listed herein and accepted by the Owner's Representative.
 - 1.72 All labels shall clearly indicate:
 - A. Name of manufacturer
 - B. Manufacturer's product name or product number
 - C. Manufacturer's lot number
 - D. Mix ratio
 - E. Conformance with the injection adhesive specification
 - F. SPI hazardous material rating and appropriate warnings for handling.
 - 1.73 Store materials in dry areas and protect. All material shall be stored at temperatures above 40° F. Any material damaged by moisture, temperature, and/or poor storage or handling procedures shall be replaced at the Contractor's expense.
- 1.80 GUARANTEE

- 1.81 Prior to final acceptance of work, the Contractor shall supply the Owner with a performance guarantee agreement. This agreement shall guarantee the Concrete Repair Work against failure of any kind for a period of five (5) years from the date of acceptance of this project. The agreement shall cover all defects in materials and workmanship and failures except those caused by hail, fire, tornado, or physical damage from extraneous sources.
- 1.82 During the guarantee period, the defective installation shall be inspected within 24 hours after receipt of notice from the Owner and, if found to be within the meaning of the guarantee, shall be restored within 10 days after receipt of notice from the Owner to the standard of the original specification without cost to the Owner.

PART 2 - PRODUCTS

2.10 EPOXY ADHESIVE

- 2.11 Epoxy resin shall be a 2-component, 100% solids, moisture tolerant, low viscosity, high strength, multi-purpose, epoxy adhesive.
- 2.12 Sealant shall conform to ASTM C-881 and AASHTO M-235 specifications.
- 2.13 Minimum tensile properties shall be 6,200 psi at 14 days (ASTM D-638), and the minimum shear strength (ASTM D-732) at 14 days shall be 4,300 psi
- 2.14 Minimum flexural strength (ASTM D-790) at 14 days shall be 5,400 psi.
- 2.15 Bond strength (ASTM C-882) of hardened concrete to hardened concrete (moist cure) shall be 2,200 psi at 14 days and 3,000 psi at 2 days (dry cure).
- 2.16 Water Absorption (ASTM D-570) after 24 hours shall not exceed 1.5%, and the modulus of elasticity shall be 350,000 psi at 7 days.
- 2.17 Minimum compressive strength in psi (ASTM D-695) shall be:

Cure	40F	73F	90F
8 hours	-	-	90
16 hours	-	3,000	7,300
1 days	-	4,500	8,400
3 days	1,800	10,000	8,700
7 days	6,100	11,300	10,400
14 days	6,800	11,700	10,400
28 days	8,400	12,000	10,400

2.18 Minimum deflection temperature (ASTM D-648) at 7 days shall be 122F with a fiber stress loading of 264 psi.

2.19 Epoxy adhesive shall be Sikadur 52 or equivalent.

2.20 SEALANT FOR INJECTION PORTS AND CRACKS

2.21 Port and crack sealant shall be a 2-component, 100% solids, moisture tolerant, high modulus, high strength structural epoxy paste/adhesive.

2.22 Sealant shall conform to ASTM C-881 and AASHTO M-235 specifications.

2.23 Minimum tensile properties shall be 3,600 psi at 14 days (ASTM D-638), and the minimum shear strength (ASTM D-732) at 14 days shall be 3,400 psi

2.24 Minimum flexural strength (ASTM D-790) at 14 days shall be 4,400 psi.

2.25 Bond strength (ASTM C-882) of hardened concrete to hardened concrete (moist cure) shall be 2,300 psi at 2 days, 2,400 psi at 14 days and 3,300 psi at 2 days (dry cure).

2.26 Water Absorption (ASTM D-570) after 24 hours shall not exceed 0.79%, the modulus of elasticity shall be 390,000 psi at 7 days.

2.27 Minimum compressive strength (ASTM D-695) shall be:

Cure	40F	73F	90F
2 hours	-	-	900
4hours	-	140	5,400
8 hours	-	6,800	8,800
16 hours	400	9,600	10,100
1 days	3,900	9,800	11,700
3 days	6,700	11,300	11,900
7 days	9,100	12,000	13,000
14 days	10,400	12,000	13,000
28 days	11,200	12,000	13,000

2.28 Minimum deflection temperature (ASTM D-648) at 7 days shall be 128F with a fiber stress loading of 264 psi.

2.29 Sealant shall be Sikadur 31, Hi-Mod Gel.

PART 3 - EXECUTION

3.10 GENERAL

- 3.11 Work is to be scheduled and done in such a manner to allow for maximum use of the entire facility by Owner.
- 3.12 Dispose daily of all debris resulting from this work off the site in an approved manner.
- 3.13 Do not close or obstruct streets, walks, or facilities in the area occupied and used by the Owner and the public, without prior written permission from the Owner and local authorities having jurisdiction.
- 3.14 Provide and maintain temporary protection to prevent damage to the repair systems during their installation until cured and to adjacent surfaces due to the work of the section.
- 3.15 Provide all necessary shielding of existing materials, vehicles, and equipment, which are to remain within or adjacent to work area.

3.20 EPOXY INJECTION PROCEDURE

- 3.21 The minimum substrate and ambient temperature shall be 45 degrees.
- 3.22 Do not thin materials with solvent.
- 3.23 Set appropriate injection ports.
- 3.24 Seal injection ports and crack.
- 3.25 When the sealant has cured, using automated injection equipment, inject cracks starting with the lowest port and proceeding upwards until ports are full. Do not proceed to the next port until the next highest port is beginning to show signs of epoxy material moving into the port. Inject cracks with steady pressure.
- 3.26 Do not inject cracks greater than ¼" without consulting the Owner's Representative.

3.30 PROTECTION

- 3.31 Protect the repaired area from damage until acceptance of the work.
- 3.32 Clean concrete surfaces adjoining, and wash free of stains, discoloration, dirt and other foreign material just prior to final inspection.
- 3.33 Clean up all areas and remove all debris, rubbish and excess from the site that may have been caused by the work on this Section.

END OF EPOXY INJECTION

SEALANTS

PART 1 – GENERAL

1.10 SCOPE OF WORK

1.11 Furnish all labor, materials, equipment and services for the removal and replacement of existing caulking in joints and cracks between concrete components and the installation of new sealants as shown on the drawings. Contractor shall also route and seal cracks as shown on the drawings.

1.12 All requirements of the project documents, including the General Conditions, and the remainder of the Technical Provisions, apply to the work of this section.

1.20 SAFETY AND PROTECTION

1.21 All manufacturers' safety precautions concerning the safe use of the specified materials, proper disposal of waste or unused portions and all other environmental concerns addressed by the manufacturer shall be strictly adhered to.

1.30 JOB CONDITIONS

1.31 Confine equipment, storage of materials and debris, and the operations and movement of workmen within limits established by the Owner's Representative.

1.32 Existing components and finishes damaged during this work shall be restored to original condition or shall be replaced with new materials as directed by the Owner's Representative.

1.33 Proceed with this work only when weather conditions will permit unrestricted use of materials and installation methods for the work being done.

1.40 QUALITY CONTROL – GENERAL REQUIREMENTS

1.41 The Owner, at his option, may employ and pay for the services of a Engineer/Consultant to perform quality control and testing during installation to determine if materials and methods conform to the Specifications.

1.42 The Engineer/Consultant shall not act as foreman or perform other duties for the Contractor. Work will be checked as it progresses, but failure to detect any defective work or materials shall not in any way prevent later rejections when such defect is discovered, nor shall it obligate the Owner for final acceptance. The Engineer/Consultant is not authorized to revoke, alter, relax, enlarge, or release any requirements of the specifications, nor to approve or accept any portion of the work. The presence or absence of Owner or Engineer/Consultant representatives shall in no way relieve the Contractor of his/her responsibility to furnish materials and construction in full compliance with the plans and specifications.

1.43 The Contractor shall furnish such casual labor as is necessary to obtain and handle samples at the project or at other sources of materials.

1.44 The Contractor is responsible to advise the Engineer/Owner sufficiently in advance of operations to allow completion of quality tests and for the assignment of personnel. A minimum of 24 hour notice to the Owner is required in order to schedule field personnel for quality control testing.

1.50 QUALITY ASSURANCE

1.51 The work shall comply with the latest editions of the following standard specifications unless otherwise specified.

A. 2003 Edition of Michigan Department of Transportation, Standard Specifications for Construction.

B. American Society of Testing and Materials (ASTM) Standards.

1.60 SAMPLES

1.61 General

A. Samples shall be submitted for all items as requested. In addition, the Engineer and Owner reserve the right to require samples of substitute materials or workmanship when deemed necessary to approve of such substitution, even though samples may not have been required of the material originally specified.

B. Materials purchased, or fabrication commenced prior to final approval of samples, shall be at the sole risk of the Contractor.

C. If the initial sample is not approved, prepare and submit additional sets until approval is obtained.

D. Materials supplied or installed which do not conform to the quality, or other determinant of the approved samples will be rejected, and shall be replaced with satisfactory materials at the Contractor's expense.

1.62 Sample Submittals

A. Samples shall be submitted in four (4) sets, unless otherwise specified for a particular item under an individual specification section.

B. Each sample shall be clearly identified on a tag attached, showing the name of the Owner, the project number and title, the names of the Contractor, Supplier, the number identification and the location of the material source.

C. Samples shall be delivered to the Owner's Representative, prior to commencement of the work.

D. Contractor shall be responsible for all costs of packing, shipping and incidental expenses connected with delivery of the samples to the Owner's Representative.

1.70 SUBMITTALS

- 1.71 The Contractor shall submit the following items to the Owner's Representative within ten (10) working days after award of Contract. The submittals will need to be reviewed and accepted prior to start of site operations.
- A. Two samples of proposed sealant with primers if recommended by the manufacturer.
 - B. Installation procedures and manufacturers recommendations for each product.

1.80 WARRANTY

- 1.81 Contractor shall provide a written warranty agreeing to remove and reinstall any sealant applied under this contract which fails within two (2) years of final acceptance.

PART 2 – PRODUCTS

2.00 MATERIALS

- 2.01 A thermosetting building sealant polysulfide (Thiokol), polyurethane or approved equal shall be used to caulk joints and cove seals in the new overlay and patches.
- 2.02 Primer for sealant shall be of the type recommended by the caulking manufacturer.
- 2.03 Backer rods shall be closed cell polyethylene or an open celled polyethylene rod or as recommended by the sealant manufacturer. All backer rods shall be a minimum of 50% larger than the opening to be caulked.
- 2.04 Bond breaks shall be a tape material recommended by the sealant manufacturer.

PART 3 – EXECUTION

3.00 PREPARATION

- 3.01 Clean all surfaces to receive sealant with oil free solvents and mechanically to remove all loose concrete and foreign materials that will effect the bonding compatibility of the sealant. The surface shall be protected from recontamination with any material that will not effect bonding of the sealant. All applicable manufacturer recommendations and procedures shall be strictly followed.
- 3.02 Protect areas adjacent to the sealant application from the effects of preparation and sealant application. All spillage of cleaners or sealant products must be completely removed.

- 3.03 Primers recommended by the sealant manufacturer shall be used. The use shall follow all recommended procedures including application rates and drying time.

3.10 INSTALLATION

- 3.11 Install backer rods where needed with a blunt rod or roller. The backer rod must be a minimum of 50% larger than the joint. The rod shall be placed at a proper depth to produce the desired joint sealant shape.
- 3.12 Install bond breaker where needed tight to the backer rod or bottom of the joint. Take care to place the bond breaker only on the bottom of the joint and not where bond is desired.
- 3.13 Apply sealant as recommended by the manufacturer and protect the sealant from all traffic until it has cured. If the manufacturer recommends an adhesive it shall be applied prior to sealant installation in accordance to the manufacturer's recommendations.
- 3.14 Immediately following sealant application all masking shall be removed and all excess or spilled sealant removed.
- 3.15 The Contractor shall protect the sealant from damage by his workman. Any damaged or improperly installed sealant shall be removed and replaced at the contractor expense.

END OF SEALANTS

SERVICE CONTRACT

(NAME OF CONTRACTOR)

AGREEMENT is made this _____ day of _____, 2004, by the COUNTY OF WASHTENAW, a municipal corporation, with offices located in the County Administration Building, 220 North Main Street, Ann Arbor, Michigan 48107("County") and **(NAME OF CONTRACTOR)** located at **(CONTRACTOR'S ADDRESS)** ("Contractor").

In consideration of the promises below, the parties mutually agree as follows:

ARTICLE I - SCOPE OF SERVICES

The Contractor will **(SPELL OUT SCOPE OF SERVICE)**

ARTICLE II - COMPENSATION

Upon completion of the above services and submission of invoices the County will pay the Contractor an amount not to exceed **(SPELL OUT DOLLAR AMOUNT)**.

ARTICLE III - REPORTING OF CONTRACTOR

Section 1 - The Contractor is to report to **(DEPARTMENT HEAD TITLE)** and will cooperate and confer with him/her as necessary to insure satisfactory work progress.

Section 2 - All reports, estimates, memoranda and documents submitted by the Contractor must be dated and bear the Contractor's name.

Section 3 - All reports made in connection with these services are subject to review and final approval by the County Administrator.

Section 4 - The County may review and inspect the Contractor's activities during the term of this contract.

Section 5 - When applicable, the Contractor will submit a final, written report to the County Administrator.

Section 6 - After reasonable notice to the Contractor, the County may review any of the Contractor's internal records, reports, or insurance policies.

ARTICLE IV - TERM

This contract begins on **(MONTH, DAY, YEAR)** and ends on **(MONTH, DAY, YEAR)**.

ARTICLE V - PERSONNEL

Section 1 - The contractor will provide the required services and will not subcontract or assign the services without the County's written approval.

Section 2 - The Contractor will not hire any County employee for any of the required services without the County's written approval.

Section 3 - The parties agree that the Contractor is neither an employee nor an agent of the County for any purpose.

ARTICLE VI - INDEMNIFICATION AGREEMENT

The contractor will protect, defend and indemnify Washtenaw County, its officers, agents, servants, volunteers and employees from any and all liabilities, claims, liens, fines, demands and costs, including legal fees, of whatsoever kind and nature which may result in injury or death to any persons, including the Contractor's own employees, and for loss or damage to any property, including property owned or in the care, custody or control of Washtenaw County in connection with or in any way incident to or arising out of the occupancy, use, service, operations, performance or non-performance of work in connection with this contract resulting in whole or in part from negligent acts or omissions of contractor, any sub-contractor, or any employee, agent or representative of the contractor or any sub-contractor.

ARTICLE VII - INSURANCE REQUIREMENTS

The Contractor will maintain at its own expense during the term of this Contract, the following insurance:

1. Workers' Compensation Insurance with Michigan statutory limits and Employers Liability Insurance with a minimum limit of \$100,000 each accident for any employee.
2. Comprehensive/Commercial General Liability Insurance with a combined single limit of \$1,000,000 each occurrence for bodily injury and property damage. The County shall be added as "additional insured" on general liability policy with respect to the services provided under this contract.
3. Automobile Liability Insurance covering all owned, hired and nonowned vehicles with Personal Protection Insurance and Property Protection Insurance to comply with the provisions of the Michigan No Fault Insurance Law, including residual liability insurance with a minimum combined single limit of \$1,000,000 each accident for bodily injury and property damage.

Insurance companies, named insureds and policy forms shall be subject to the approval of the Washtenaw County Administrator. Such approval shall not be unreasonably withheld. Insurance policies shall not contain endorsements or policy conditions which reduce coverage provided to Washtenaw County. Contractor shall be responsible to Washtenaw County or insurance companies insuring Washtenaw County for all costs resulting from both financially unsound insurance companies selected by Contractor and their inadequate insurance coverage. Contractor shall furnish the Washtenaw County Administrator with satisfactory certificates of insurance or a certified copy of the policy, if requested by the County Administrator.

No payments will be made to the Contractor until the current certificates of insurance have been received and approved by the Administrator. If the insurance as evidenced by the certificates furnished by the Contractor expires or is canceled during the term of the contract, services and related payments will be suspended. Contractor shall furnish the County Administrator's Office with certification of insurance evidencing such coverage and endorsements at least ten (10) working days prior to commencement of services under this contract. Certificates shall be addressed to the County Administrator, P. O. Box 8645, Ann Arbor, MI, 48107, and shall provide for 30 day written notice to the Certificate holder of cancellation of coverage.

ARTICLE VIII - COMPLIANCE WITH LAWS AND REGULATIONS

The Contractor will comply with all federal, state and local regulations, including but not limited to all applicable OSHA/MIOSHA requirements and the Americans with Disabilities Act.

ARTICLE IX - INTEREST OF CONTRACTOR AND COUNTY

The Contractor promises that it has no interest which would conflict with the performance of services required by this contract. The Contractor also promises that, in the performance of this contract, no officer, agent, employee of the County of Washtenaw, or member of its governing bodies, may participate in any decision relating to this contract which affects his/her personal interest or the interest of any corporation, partnership or association in which he/she is directly or indirectly interested or has any personal or pecuniary interest. However, this paragraph does not apply if there has been compliance with the provisions of Section 3 of Act No. 317 of the Public Acts of 1968 and/or Section 30 of Act No. 156 of Public Acts of 1851, as amended by Act No. 51 of the Public Acts of 1978, whichever is applicable.

ARTICLE X - CONTINGENT FEES

The Contractor promises that it has not employed or retained any company or person, other than bona fide employees working solely for the Contractor, to solicit or secure this contract, and that it has not paid or agreed to pay any company or person, other than bona fide employees working solely for the Contractor, any fee, commission, percentage, brokerage fee, gifts or any other consideration contingent upon or resulting from the award or making of this contract. For breach of this promise, the County may cancel this contract without liability or, at its discretion, deduct the full amount of the fee, commission, percentage, brokerage fee, gift or contingent fee from the compensation due the Contractor.

ARTICLE XI - EQUAL EMPLOYMENT OPPORTUNITY

The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, sexual orientation, national origin, physical handicap, age, height, weight, marital status, veteran status, religion and political belief (except as it relates to a bona fide occupational qualification reasonably necessary to the normal operation of the business).

The Contractor will take affirmative action to eliminate discrimination based on sex, race, or a handicap in the hiring of applicant and the treatment of employees.

Affirmative action will include, but not be limited to: Employment; upgrading, demotion or transfer; recruitment advertisement; layoff or termination; rates of pay or other forms of compensation; selection for training, including apprenticeship.

The Contractor agrees to post notices containing this policy against discrimination in conspicuous places available to applicants for employment and employees. All solicitations or advertisements for employees, placed by or on the behalf of the Contractor, will state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, sexual orientation, national origin, physical handicap, age, height, weight, marital status, veteran status, religion and political belief.

ARTICLE XII - PREVAILING WAGE RATES

The Contractor agrees that all craftsmen, mechanics and laborers it employs to work on this project shall, at a minimum, receive the prevailing wages and fringe benefits of the Building Trade Department for corresponding classes of craftsmen, mechanics and laborers for the Washtenaw County area, as determined and published by the Davis-Bacon Division of the United States Department of Labor. Contractor agrees that all subcontracts entered into by the Contractor shall contain a similar provision (known as the Construction Unity Board memorandum of understanding or "CUB agreement") covering any sub-contractor's employees who perform work on this project.

ARTICLE XIII - EQUAL ACCESS

The Contractor shall provide the services set forth in Article I without discrimination on the basis of race, color, religion, national origin, sex, sexual orientation, marital status, physical handicap, or age.

ARTICLE XIV - OWNERSHIP OF DOCUMENTS AND PUBLICATION

All documents developed as a result of this contract will be freely available to the public. None may be copyrighted by the Contractor. During the performance of the services, the Contractor will be responsible for any loss of or damage to the documents while they are in its possession and must restore the loss or damage at its expense. Any use of the information and results of this contract by the Contractor must reference the project sponsorship by the County. Any publication of the information or results must be co-authored by the County.

ARTICLE XV - ASSIGNS AND SUCCESSORS

This contract is binding on the County and the Contractor, their successors and assigns. Neither the County nor the Contractor will assign or transfer its interest in this contract without the written consent of the other.

ARTICLE XVI - TERMINATION OF CONTRACT

Section 1 - Termination without cause. Either party may terminate the contract by giving thirty (30) days written notice to the other party.

ARTICLE XVII - PAYROLL TAXES

The Contractor is responsible for all applicable state and federal social security benefits and unemployment taxes and agrees to indemnify and protect the County against such liability.

ARTICLE XVIII - PRACTICE AND ETHICS

The parties will conform to the code of ethics of their respective national professional associations.

ARTICLE XIX- CHANGES IN SCOPE OR SCHEDULE OF SERVICES

Changes mutually agreed upon by the County and the Contractor, will be incorporated into this contract by written amendments signed by both parties.

ARTICLE XX - CHOICE OF LAW AND FORUM

This contract is to be interpreted by the laws of Michigan. The parties agree that the proper forum for litigation arising out of this contract is in Washtenaw County, Michigan.

ARTICLE XXI - EXTENT OF CONTRACT

This contract represents the entire agreement between the parties and supersedes all prior representations, negotiations or agreements whether written or oral.

ATTESTED TO:

WASHTENAW COUNTY

By:_____

By:_____

Peggy M. Haines (DATE)

Robert E. Guenzel (DATE)

County Clerk/Register

County Administrator

APPROVED AS TO CONTENT:

CONTRACTOR

By:_____

By:_____

(DEPARTMENT HEAD) (DATE)

(CONTRACTOR'S NAME) (DATE)

APPROVED AS TO FORM:

By:_____

Curtis N. Hedger (DATE)

Office of Corporation Counsel