

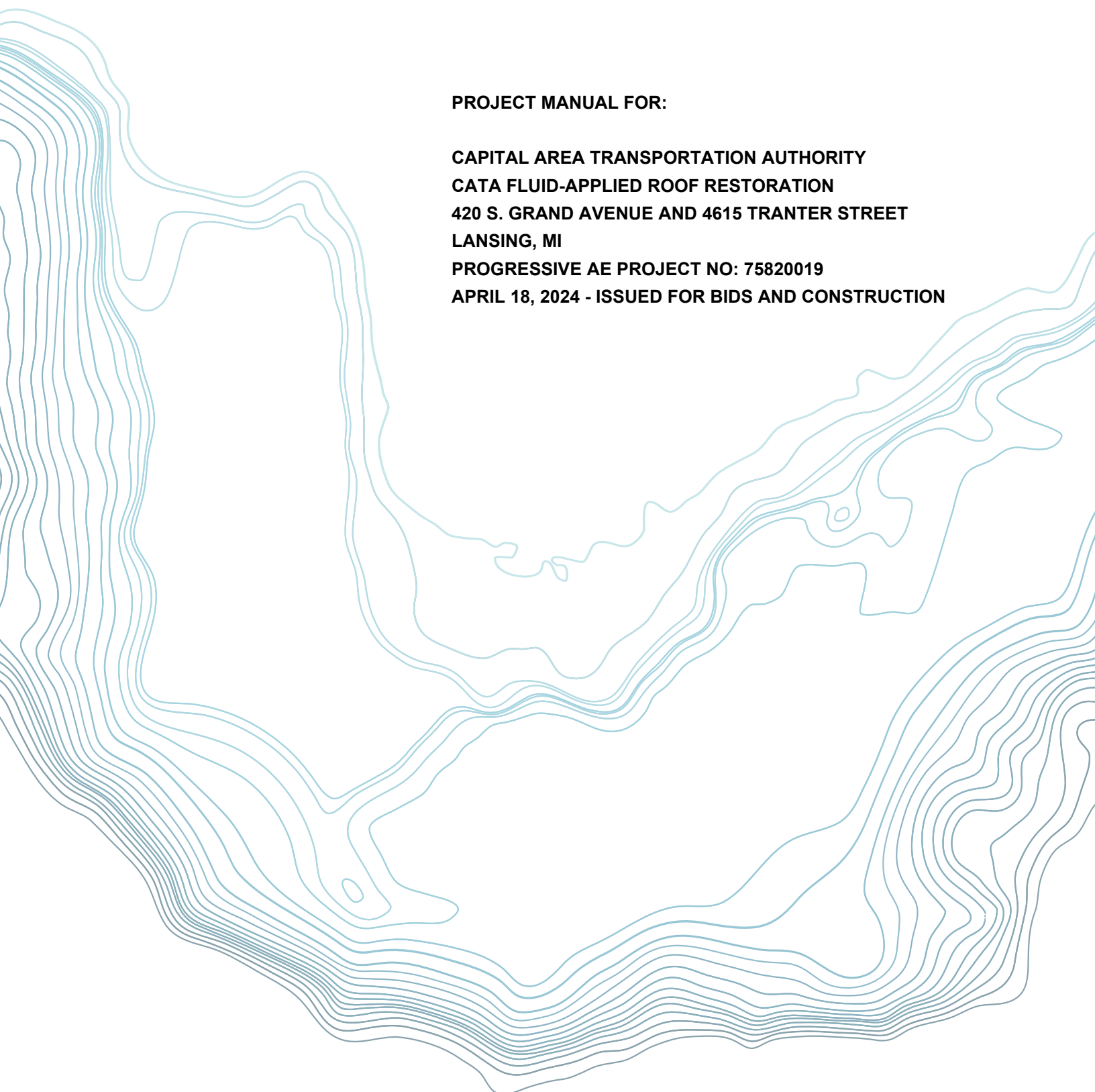


PROJECT MANUAL FOR:

**CAPITAL AREA TRANSPORTATION AUTHORITY
CATA FLUID-APPLIED ROOF RESTORATION
420 S. GRAND AVENUE AND 4615 TRANTER STREET
LANSING, MI**

PROGRESSIVE AE PROJECT NO: 75820019

APRIL 18, 2024 - ISSUED FOR BIDS AND CONSTRUCTION



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**PROJECT MANUAL FOR:
CAPITAL AREA TRANSPORTATION AUTHORITY
CATA FLUID-APPLIED ROOF RESTORATION
420 S. GRAND AVENUE AND 4615 TRANTER STREET
LANSING, MI**

**PREPARED FOR:
CAPITAL AREA TRANSPORTATION AUTHORITY
4615 TRANTER STREET
LANSING, MI 48910**

**PREPARED BY:
PROGRESSIVE AE
1811 4 MILE ROAD, NE
GRAND RAPIDS, MI 49525-2442
616/361-2664 (TELEPHONE)
616/447-3367 (PLAN ROOM HOTLINE)
PRINTROOM@PROGRESSIVEAE.COM**

**PROJECT NO: 75820019
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SECTION 00 1113 ADVERTISEMENT FOR BIDS

FROM:

1.01 THE OWNER (HEREINAFTER REFERRED TO AS OWNER):

- A. Capital Area Transportation Authority
- B. Address:
 - 4615 Tranter Street
 - Lansing, MI, 48910

1.02 AND THE ARCHITECT (HEREINAFTER REFERRED TO AS ARCHITECT):

- A. Progressive AE
- B. Address:
 - 1811 4 Mile Road NE
 - Grand Rapids, MI 49525

1.03 TO: POTENTIAL BIDDERS

- A. Your firm is invited to submit an offer under seal to Owner for construction of a fluid-applied roof coating and alteration work located at 420 S. Grand Avenue and 4615 Tranter Street before 2:00 pm local standard time on the 20th day of May, 2024, for:
- B. Project: CATA Fluid-Applied Roof Restoration
- C. Architect's Project Number: 75820019.
- D. Project Description: Partial fluid-applied roof coating membrane application including insulation and membrane replacement or repairs at 420 S. Grand Avenue and 4615 Tranter Street..
- E. Bid Documents for a Stipulated Sum contract may be obtained from the office of the Design Professional free of charge upon receipt of a deposit, by cash, in the amount of \$0 for one set.
- F. Bidders will be required to provide Bid security in the form of a Bid Bond of a sum no less than 5 percent of the Bid Amount.
- G. Refer to other bidding requirements described in Document 00 2113 - Instructions to Bidders and Document 00 3100 - Available Project Information.
- H. Submit your offer on the Bid Form provided. Bidders may supplement this form as appropriate.
- I. Your offer will be required to be submitted under a condition of irrevocability for a period of 90 days after submission.
- J. The Owner reserves the right to accept or reject any or all offers.

END OF SECTION

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SECTION 00 2113 INSTRUCTIONS TO BIDDERS

SUMMARY

1.01 INSTRUCTIONS TO BIDDERS

- A. The instructions in this document amend or supplement the Instructions To Bidders and other provisions of the Bidding and Contract Documents.

1.02 DOCUMENT INCLUDES

- A. Bid Documents and Contract Documents
 - 1. Definitions
 - 2. Contract Documents Identification
 - 3. Availability
 - 4. Examination
 - 5. Inquiries/Addenda
 - 6. Product/Assembly/System Substitutions
- B. Bid Submission
- C. Bid Enclosures/Requirements
 - 1. Security Deposit
 - 2. Bid Form Requirements

INVITATION

2.01 PROPOSAL SUBMISSION

- A. Proposals signed and under seal, executed, and dated will be received at the office of the Owner at 4615 Tranter Street, Lansing, MI 48910 before 2:00 p.m. local standard time on the 20th day of May, 2024.

2.02 INTENT

- A. The intent of this bid request is to obtain an offer to perform work to complete CATA Fluid-Applied Roof Restoration located at 420 S. Grand Avenue, and 4615 Tranter Street for a Stipulated Sum contract, in accordance with the Contract Documents.

2.03 WORK IDENTIFIED IN THE CONTRACT DOCUMENTS

- A. Work of this proposed Contract comprises roofing demo, roof restoration, insulation replacement, membrane repairs and replacement, and fluid-applied coating application.

2.04 CONTRACT TIME

- A. Perform the Work in 6 months. The bidder may suggest a revision to the Contract Time with a specific adjustment to the Bid Amount.

BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 CONTRACT DOCUMENTS IDENTIFICATION

- A. The Contract Documents are identified as Project Number 75820019, as prepared by the Architect who is located at 1811 4 Mile Road NE, Grand Rapids, MI 49525, and with contents as identified in the Table of Contents.

3.02 AVAILABILITY

- A. Proposal documents will be available through the office of the Architect, electronically. Contact Chris Sholl at CSholl@weareprogressiveae.com

3.03 INQUIRIES/ADDENDA

- A. Addenda may be issued during the proposal period. All Addenda become part of the Contract Documents. Include resultant costs in the Proposal Amount.
- B. Verbal answers are not binding on any party.

3.04 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

- A. When a request to substitute a product is made, Architect may or may not approve the substitution. If it is approved an Addendum will be issued to known bidders.

SECTION 00 2113 INSTRUCTIONS TO BIDDERS

- B. In submission of substitutions to products specified, bidders shall include in their bid all changes required in the Work and changes to Contract Time and Contract Sum to accommodate such substitutions. A later claim by the bidder for an addition to the Contract Time or Contract Sum because of changes in work necessitated by use of substitutions shall not be considered.
- C. Provide complete information on required revisions to other work to accommodate each proposed substitution.
- D. Provide products as specified unless substitutions are submitted in this manner and accepted.
- E. See Section 01 6000 - Product Requirements for additional requirements.

SITE ASSESSMENT

4.01 PREBID CONFERENCE

- A. A proposers conference has been scheduled for 10:00 a.m. local standard time on the 1st day of May at the location of 4615 Tranter Ave, Lansing, MI 48910.
- B. Representatives of Architect will be in attendance.
- C. Summarized minutes of this meeting will be circulated to attendees. These minutes will not form part of the Contract Documents.
- D. The pre bid conference is NOT mandatory. However, no site visits will be allowed outside of the scheduled pre bid conference.
- E. Information relevant to the Proposal Documents will be recorded in an Addendum, issued to Bid Document recipients.

QUALIFICATIONS

5.01 EVIDENCE OF QUALIFICATIONS

- A. To demonstrate qualification for performing the Work of this Contract, bidders may be requested to submit written evidence of financial position, license to perform work in the State of Michigan.

5.02 SUBCONTRACTORS/SUPPLIERS/OTHERS

- A. Owner reserves the right to reject a proposed subcontractor for reasonable cause.
- B. Refer to General Conditions.

BID SUBMISSION

6.01 SUBMISSION PROCEDURE

- A. Proposers shall be solely responsible for the delivery of their proposal in the manner and time prescribed.
- B. Submit one copy of the executed offer on the Bid Forms provided, signed and sealed with the required security in a closed opaque envelope, clearly identified with bidder's name, project name and Owner's name on the outside.

6.02 BID INELIGIBILITY

- A. Proposals that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of the Owner, be declared unacceptable.

PROPOSAL ENCLOSURES/REQUIREMENTS

7.01 SECURITY DEPOSIT

- A. Proposals shall be accompanied by a security deposit as follows:
 - 1. Bid Bond of a sum no less than 5 percent of the Bid Amount on AIA A310 Bid Bond Form.
- B. Endorse the Bid Bond in the name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.
- C. The security deposit will be returned after delivery to the Owner of the required Performance and Payment Bond(s) by the accepted bidder.
- D. After a proposal has been accepted, all securities will be returned to the respective bidders and other requested enclosures.
- E. If no contract is awarded, all security deposits will be returned.

SECTION 00 2113 INSTRUCTIONS TO BIDDERS

7.02 PERFORMANCE ASSURANCE

- A. Include the cost of performance assurance bonds as a supplement to the Bid Amount.

7.03 FEDERAL CERTIFICATIONS

- A. Bidders must submit the following with their bid if it is considered to be responsive:
 1. DBE Participation Form
 2. Debarment and Suspension - Primary
 3. Debarment and Suspension - Lower
 4. Iran Linked Business
 5. Build America Buy America Certification
 6. Lobbying

OFFER ACCEPTANCE/REJECTION

8.01 DURATION OF OFFER

- A. Proposals shall remain open to acceptance and shall be irrevocable for a period of ninety (90) days after the bid closing date.

8.02 ACCEPTANCE OF OFFER

- A. Owner reserves the right to accept or reject any or all offers.
- B. After acceptance by Owner, Architect on behalf of Owner, will issue to the successful bidder, a written Bid Acceptance.

END OF SECTION

**CERTIFICATION OF PRIMARY CONTRACTOR REGARDING DEBARMENT, SUSPENSION, AND
OTHER RESPONSIBILITY MATTERS**
Applies to All Contracts over \$25,000

The Primary Contractor, _____, certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three (3) year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or Local) with commission of any of the offense enumerated in paragraph (2) of this certification; and
4. Have not within a three (3) year period preceding this application/proposal had one (1) or more public transactions (Federal, State, or Local) terminated for cause or default.

If the above named Primary Contractor is unable to certify to any of the statements in this certification, the Primary Contractor shall attach an explanation to this certification.

The Primary Contractor, _____, certifies or affirms the truthfulness and accuracy of the contents of the statements submitted on or with this certification and understands that the provision of 31 U.S.C. Section 3801 et seq. are applicable thereto.

Signature and Title of Authorized Official

DBE PARTICIPATION FORM

Separate information is required for each DBE subcontractor. This form may be duplicated as necessary.

1. DBE Firm Name: _____

Address: _____

2. Dollar amount awarded: _____

3. Description of work to be performed : _____

4. CONTRACTOR'S COMMITMENT TO USE DBE FIRM

_____ is committed to utilize the DBE
(Name of Contractor)

contractor to utilize the above named DBE subcontractor/supplier in the manner and amount described on this form.

Dated _____
(Authorized Signature)

5. DBE'S COMMITMENT TO PARTICIPATE

_____, as a DBE firm, is committed to
(Name of subcontractor/supplier)

perform the work as described above for the amount specified.

Dated _____
(Authorized Signature)

6. NO SUBCONTRACT OPPORTUNITIES, AVAILABLE.

_____, has no subcontractor opportunities
(Name of subcontractor/supplier)

available for work to be performed.

Dated _____
(Authorized Signature)

BLANK forms are NOT acceptable. If DBE subcontractor opportunities are available please fill out sections 1 thru 5. If no subcontractor opportunities available fill out section 6. SIGNATURES ARE REQUIRED.

DBE PARTICIPATION FORM

Separate information is required for each DBE subcontractor. This form may be duplicated as necessary.

1. DBE Firm Name: _____ Sub contractor name and address _____
Address: _____

2. Dollar amount awarded: _____ Amount awarded to Sub contractor _____

3. Description of work to be Performed: _____

_____ Work description. _____

4. **CONTRACTOR'S COMMITMENT TO USE DBE** Prime contractor fills out.
_____ is committed to utilize the DBE
(Name of Contractor)
contractor to utilize the above named DBE subcontractor/supplier in the manner
and amount described on this form.
Dated _____ (Authorized Signature)

5. **DBE'S COMMITMENT TO PARTICIPATE** Sub contractor fills out.
_____ as a DBE firm, is committed to
(Name of subcontractor/supplier)
perform the work as described above for the amount specified.
Dated _____ (Authorized Signature)

6. **NO SUBCONTRACT OPPORTUNITIES, AVAILABLE.** Prime contractor fills out.
_____, has no subcontractor opportunities
(Name of subcontractor/supplier)
available for work to be performed.
Dated _____ (Authorized Signature)

DBE PARTICIPATION FORM

Prior to Contract award, the apparent successful bidder shall submit a written assurance of meeting the above goals and shall include names of DBE subcontractors, addresses of contact persons, a description of work to be performed and dollar values of each proposed DBE subcontract. Contact information should be filled out on the DBE Participation Form on the backside of this sheet. The DBE certification (which is a federal requirement) also needs to be filled out with the contract dollar amount, address, etc.

If the goals were not met, the bidder (prime) must demonstrate an honest intent to meet the DBE project goal and shall document the steps he/she has taken to obtain DBE subcontractor participation.

Failure to provide required documentation of good faith efforts may be reason for disqualification of the Bid / Proposal.

Reasonable effort to consider DBE subcontractors will include the following actions.

- a. Soliciting through all reasonable and available means the interest of all certified DBE's who have the capability to perform work under the contract. This shall include attendance at pre-bid meetings, advertising and /or written notices. The bidder shall allow sufficient time to allow the DBE's to respond to the solicitation.
- b. Selecting portions of the work to be performed by DBE's.
- c. Providing interested DBE's with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- d. Negotiations in good faith with interested DBE's. It will be the responsibility of the bidder to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or materials consistent with the available DBE's. **Evidence of negotiations shall include the names, addresses, and telephone numbers of DBE's that were considered and a description of the information provided regarding the plans and specifications for the work selected for subcontractors, and evidence as to why additional agreements could not be reached for DBE's to perform the work.**
- e. Not rejecting DBE's as being unqualified without sound reasons based on a thorough investigation of their capabilities.
- f. Efforts to assist interested DBE's in obtaining bonding, lines of credit, or insurance as required.
- g. Efforts to assist interested DBE's in obtaining necessary equipment, supplies, materials, or related assistance or services.
- h. Use of services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations that provide assistance in the recruitment and placement of DBE's.

The prime contractor agrees not to terminate for convenience a DBE subcontractor, and then perform the work of the terminated subcontract with its own forces or those of an affiliate, without CATA prior written consent. When a DBE subcontractor is terminated, or fails to complete its work on the contract for any reason, the prime contractor agrees to make every effort to find another DBE subcontractor to substitute for the original DBE. These efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated.

DBE PARTICIPATION FORM

Work Category: _____
Trade Opportunity: _____
DBE Contractor Contacted: Name: _____
Phone: _____ Date Contacted ___/___/_____
Qualifications: _____
Decision: _____

Work Category: _____
Trade Opportunity: _____
DBE Contractor Contacted: Name: _____
Phone: _____ Date Contacted ___/___/_____
Qualifications: _____
Decision: _____

Work Category: _____
Trade Opportunity: _____
DBE Contractor Contacted: Name: _____
Phone: _____ Date Contacted ___/___/_____
Qualifications: _____
Decision: _____

Work Category: _____
Trade Opportunity: _____
DBE Contractor Contacted: Name: _____
Phone: _____ Date Contacted ___/___/_____
Qualifications: _____
Decision: _____

Copy this page as much as required to document intent.

**CERTIFICATION OF LOWER-TIER PARTICIPANTS (SUBCONTRACTORS) REGARDING
DEBARMENT, SUSPENSION, AND OTHER INELIGIBILITY AND VOLUNTARY
EXCLUSION**

The Lower Tier Participant (Subcontractor to the Primary Contractor), _____, certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

If the above named Lower Tier Participant (Subcontractor) is unable to certify to any of the statements in this certification, such participant shall attach an explanation to this proposal.

The Lower-Tier participant (Subcontractor), _____, certifies or affirms the truthfulness and accuracy of the contents of the statements submitted on or with this certification and understands that the provisions of 31. U.S.C. Sections 3801 et seq. are applicable thereto.

Signature and Title of Authorized Official

**VENDOR CERTIFICATION THAT IT IS NOT AN
“IRAN LINKED BUSINESS”**

Pursuant To Michigan law, (*the Iran Economic Sanctions Act, 2012 PA 517, MCL 129.311 et seq.*), before accepting any bid or proposal, or entering into any contract for goods or services with any prospective Vendor, the Vendor must first certify that it is not an “IRAN LINKED BUSINESS,” as defined by law.

Vendor	
Legal Name	
Street Address	
City	
State, Zip	
Corporate I.D. Number/State	
Taxpayer I.D. #	

The undersigned, with: 1) full knowledge of all Vendors business activities, 2) full knowledge of the requirements and possible penalties under the law MCL 129.311 et seq. and 3) the full and complete authority to make this certification on behalf of the Vendor, by his/her signature below, certifies that: the Vendor is NOT an “IRAN LINKED BUSINESS” as required by MCL 129.311 et seq., and as such that Vendor is legally eligible to submit a bid and be considered for a possible contract to supply goods and/or services to the County of Kent.

Signature of Vendor’s Authorized Agent:	
Printed Name of Vendor’s Authorized Agent:	
Witness Signature:	
Printed Name of Witness:	

CAPITAL AREA TRANSPORTATION AUTHORITY
STANDARD TERMS AND CONDITIONS OF PROCUREMENT

A. THE FOLLOWING TERMS AND CONDITIONS WILL BE A PART OF THE CONTRACT AWARDED.

1. CHANGES. CATA, at any time, by a written order, and without notice to the sureties, may make changes within the general scope of this contract, in (a) drawings, designs or specifications where the supplies to be furnished are specifically manufactured for CATA in accordance therewith; (b) method of shipment or packing; and (c) place of delivery. If any such change causes an increase or decrease in the cost of, or the time required for performance of this contract, whether changed or not changed by such order, an equitable adjustment shall be made by written modification of the contract. Any claim by the Contractor for adjustment under this clause must be asserted within thirty (30) days from the date of receipt by the Contractor of the notification of change; provided that CATA, if it decides that the facts justify the action, may receive and act upon any such claim if asserted prior to dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes." However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.
2. TERMINATION FOR DEFAULT. CATA, by written notice, may terminate the contract awarded on the basis of this proposal, in whole or in part, for failure of the Contractor to perform any of the provisions hereof. In such event, the Contractor shall be liable for damages, including the excess cost of reprocurring similar supplies or services, provided, that if (a) it is determined for any reason that the Contractor was not in default or, (b) the Contractor's failure to perform is without his control, fault or negligence, the termination shall be deemed to be a termination for convenience under the following Paragraph 3.
3. TERMINATION FOR CONVENIENCE. CATA, by written notice, may terminate the contract, awarded on the basis of this proposal, in whole or in part, when it determines it is in the best interest of CATA. If this contract is for supplies and is so terminated, the Contractor shall be compensated in accordance with its auditable cost incurred at the time of notification of termination. To the extent that the contract is for services and is so terminated, CATA shall be liable only for payment in accordance with the payment provisions of the contract for services rendered to the effective date of termination.
4. ADDITIONAL INFORMATION. The Contractor shall promptly furnish any additional information requested by CATA relative to the equipment it proposes.
5. SUPPLIER RESPONSIBILITY. No advantage shall be taken by the Contractor or its Subcontractor in the omission of any part or detail which goes to make the equipment complete and operable for use by CATA. In case of any variance, this specification shall overrule Contractor or Subcontractor specifications. The Contractor shall assume responsibility for all materials used whether the same is manufactured by the Contractor or purchased ready made from a source outside Contractor's company. In the case of the replacement of a Subcontractor, the Contractor must, within five (5) working days, notify CATA in writing of the replacement and provide name, address, telephone number, and the type of service.
6. DELIVERY. Service and/or equipment will be delivered to Capital Area Transportation Authority, 4615 Tranter Street, Lansing, Michigan 48910. The Authority will assume custody of all property at one of its other locations, if so directed, in writing by CATA. Invoices shall be furnished with the delivery of each item. CATA reserves the right to inspect all deliveries or services before acceptance.
7. BREACH OF CONTRACT. If the Contractor shall fail, refuse or neglect to comply with the terms of these contract conditions, such failure shall be deemed a total breach of contract. Contractor shall be subject to all legal remedies that CATA may have and CATA may recover,

in addition to any damages or costs relating to failure to comply, its reasonable attorneys' fees resulting from Contractor's breach.

8. DISPUTES (AFTER BID AWARD). Except as otherwise provided in the contract, any dispute concerning a question of fact arising under the contract which is not disposed of by agreement between CATA and Contractor shall be decided by CATA's Program Manager in writing, with a copy mailed or otherwise furnished to the Contractor. The decision of CATA shall be final and conclusive unless within ten (10) days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to CATA a written appeal addressed to CATA's Chief Executive Officer for the determination of such appeal, which shall be final and conclusive, unless determined by a court of competent jurisdiction to have been fraudulent or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending a final decision of the dispute, the Contractor shall proceed diligently with the performance of the contract and in accordance with CATA's decision.
9. DELIVERY EXTENSION AND DELAYS. CATA reserves the right to extend, postpone or reschedule delivery in case the delivery of service equipment, under this contract, shall be necessarily delayed because of strike, injunction, civil disturbance, government controls, or by reason of any cause or circumstance beyond the control of the Contractor, as detailed in writing by the Contractor, the time of completion or a delivery shall be extended by a number of days to be determined in each instance by CATA.
10. INSTALLATION. If specified, the Contractor shall install and place in operation, subject to approval by CATA, the equipment at the Contractor's expense within thirty (30) days from issuance of a notice to install issued by CATA.
11. INSTALLATION EXTENSION AND DELAYS. CATA reserves the right to extend, postpone, or reschedule installation in case the installation of equipment under this contract shall be necessarily delayed because of strike, injunction, civil disturbance, government controls, or by reason or cause or circumstances beyond the control of the Contractor. The time of completion or installation shall be extended by a number of days to be determined in each instance by CATA.
12. ASSEMBLY. If required, the Contractor shall assemble the equipment at its expense prior to installation.
13. ACCESSORIES. The Contractor shall furnish, without additional cost, all accessories required to permit CATA to operate any equipment being provided.
14. TRAINING. The Contractor, without additional cost, shall properly train CATA personnel in the operation and maintenance of the equipment provided.
15. SERVICE MANUAL AND WIRING SCHEMATIC. If specified, the Contractor will provide at least one copy of a service manual and at least one copy of a wiring schematic for individual components and other schematics and drawings.
16. WARRANTY. The Contractor shall describe its policy or warranty(s) both on workmanship and material as applying to the equipment, along with the method or adjustment, and shall be further subject to warranty requirements of CATA as set forth in the following Paragraph 17.
17. CATA WARRANTY. The Contractor agrees that the supplies or services furnished under this contract shall be covered by the most favorable warranties the Contractor gives any customer for such equipment and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to CATA by any other clause of this contract. The Contractor shall state the warranty and supply with its bid.

18. **INSURANCE.** The Contractor shall place and maintain with responsible insurance carriers the following insurance. The Contractor shall deliver to CATA, upon request, certificates of insurance which shall provide thirty (30) days' written notice to be given to CATA in the event of cancellation. Contractor shall require all Subcontractors to maintain adequate insurance coverage.
- (a) Workers' Compensation and Employer's Liability Insurance.
 - (1) Workers' Compensation in compliance with the applicable state and federal laws.
 - (2) Employer's Liability. Limit \$1,000,000.
 - (b) Commercial General Liability Insurance, including Professional Liability, Blanket contractual, XCU Hazards, Broad Form Property Damage, Completed Operations, and Independent Contractor's Liability, all applicable to Personal Injury, Bodily Injury and Property Damage to a combined single limit of \$1,000,000 each occurrence/claim, subject to a \$2,000,000 annual aggregate for Professional Liability, Completed Operations and Personal Injury other than Bodily Injury.
 - (c) Automobile Liability Insurance, including owned, hired and non-owned automobiles, Bodily Injury and Property Damage, to a combined single limit of \$1,000,000 each occurrence.
19. **INDEMNIFICATION.** In addition to the protection afforded by any policy of insurance, the Contractor agrees to indemnify and save harmless CATA, the Michigan Department of Transportation ("MDOT"), the Federal Transit Administration ("FTA"), and all officers, agents, and employees thereof:
- (a) From any and all claims by persons, firms, or corporations for labor, materials, supplies, or services provided to the Contractor in connection with the Contractor's performance of the contract; and
 - (b) From any and all claims for injuries to or death of any and all persons, for loss of or damage to property, for environmental damage, degradation and response, and cleanup costs, and for attorney fees and related costs arising out of, under, or by reason of the Contractor's negligent performance of the contract.
- CATA will not be subject to any obligations or liabilities by Subcontractors of the Contractor or their Subcontractors or any other person not a party to this contract without its specific consent and notwithstanding its concurrence in or approval of the award of any contract or subcontract or the solicitation thereof.
20. **ACCEPTANCE OF MATERIAL - NO RELEASE.** Unless CATA otherwise agrees in writing, acceptance of any portion of the material prior to final acceptance shall not release the Contractor from liability for faulty workmanship or materials or for failure to fully comply with all of the terms of this contract. CATA reserves the right and shall be at liberty to inspect all materials and workmanship at any time during the manufacturing process, and shall have the right to reject all materials and workmanship which do not conform with the contract requirements and specifications; provided, however, that CATA is under no duty to make such inspection and no inspection so made shall relieve Contractor from any obligation to furnish materials and workmanship in accordance with the contract requirements and specifications.
21. **FINAL ACCEPTANCE.** Upon final acceptance by CATA of all work to be performed by the Contractor, CATA will so notify the Contractor in writing. The date of final acceptance shall commence the warranty period.
22. **LIQUIDATED DAMAGES.** If the Contractor fails to deliver the requirements by the date as set forth in the bid documents scheduled for delivery, CATA shall be paid damages for each consecutive calendar day thereafter until the goods are delivered, unless a completion date is

extended by CATA in writing. Inasmuch as the amount of such damages will be extremely difficult to ascertain, the Contractor agrees to compensate CATA the sum of \$ **Not Applicable** per day, which sum is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages that CATA will suffer by reason of said delay and default and not as a penalty; and CATA shall have the right to deduct such sum from any amounts which may otherwise become due under contract.

23. NO ASSIGNMENT OF CONTRACT. Contractor may not assign or transfer any interest in the contract without the prior written consent of CATA.
24. DEFECTIVE WORKMANSHIP AND MATERIAL. When and as often as CATA determines that the work done or being done under the contract or the kind of quality or materials supplied in connection therewith are not fully and completely in accordance with any requirement of the contract documents, it may give notice of such noncompliance to the Contractor in writing and the Contractor shall immediately upon receipt of such notice do all things required to remedy such noncompliance without additional cost to CATA. If the Contractor fails to comply with such written notice, then CATA, upon written notice to the Contractor, shall deduct the cost of repair, replacement or correction of defective or damaged work from the compensation due or to become due to the Contractor.
25. WAIVER OF BREACH. The waiver by either party hereto or any breach of any provision of this contract by the other party shall not operate or be construed as a waiver of any subsequent breach of the same or any other provision of this contract by either party hereto.
26. OWNERSHIP OF DOCUMENTS. All original documents, calculations, and work product produced by CONTRACTOR, whether produced on paper or electronic media or otherwise in performance of this Agreement, shall be the property of CATA. CONTRACTOR shall have the right to retain a copy of such documents, calculations, and work product. CONTRACTOR shall make available to CATA copies of all CONTRACTOR correspondence, notes, and other papers relating to the work, upon request of CATA. All works of original authorship created in the scope of this Agreement are "works made for hire", as that term is used in connection with the U.S. Copyright Act. To the extent that by operation of law CONTRACTOR retains any intellectual property rights to any work product, CONTRACTOR hereby irrevocably assigns and licenses to CATA all right, title, and interest in such work product, including copyrights and patents, and agrees to execute such assignments and licenses as may be required in the opinion of CATA's legal counsel to confirm this provision. The work product produced by CONTRACTOR in the performance of services under this Agreement is intended for use by CATA solely for the purpose intended. Any use or reuse of such work product by CATA for any purpose other than its intended purpose shall be at the sole risk of CATA and without any liability or responsibility of CONTRACTOR. To the extent that the work product produced by CONTRACTOR contains standard design or construction details or other standardized material previously developed by CONTRACTOR in its professional architectural, engineering, and planning practices, then CONTRACTOR shall have the right to reuse any such material on other projects for other clients or persons without the prior knowledge or permission of CATA and without the payment of any compensation to CATA, provided that the reuse or continued use of such material contains no CATA identifying information or confidential information.
27. EXCUSES FOR FAILURE TO PERFORM OR DELAYS. The Contractor will not be in default by reason of any failure in the performance of this contract, if such failure arises out of causes beyond the control and without the fault or negligence of Contractor. Such causes may include, but are not limited to, acts of God or the public enemy, acts of the government either in its sovereign or contractual capacity, fires, floods, and strikes. But in every case, a failure to perform must be beyond the control and without the fault or negligence of the Contractor or its Subcontractors. An excusable delay will permit the Contractor an extension of time for such reasonable period as may be mutually agreed upon between the parties.

28. COMPUTATION OF TIME. In computing a period of time prescribed by these conditions, the following rules apply:
- (a) "Day" means days of the week (e.g., Monday through Friday), not business days.
 - (b) The day of the act or event after which the designated period of time begins is not included.
 - (c) The last day of the period is included, unless it is a Saturday, Sunday, or legal holiday. In that event, the period runs until the end of the next day that is not a Saturday, Sunday or legal holiday.

29. NOTICE. All notices and other communications required under this Contract shall be given in writing, signed by an authorized representative, and be personally delivered or delivered by overnight courier, or certified mail (return receipt requested) to the addresses set forth below:

To CATA: Chief Executive Officer
Capital Area Transportation Authority
4615 Tranter Street
Lansing, MI 48910

To Contractor: _____

With a copy to: _____

30. JURISDICTION. This Contract will be governed by the internal laws of the State of Michigan without reference to its choice of law rules. Exclusive jurisdiction and venue of any suit, action or claim relating to this contract will be in the Ingham County Circuit Court or the Federal District Court for the Western District of Michigan.
31. This contract constitutes the entire contract between the parties and supercedes all negotiations, commitments, and previous contracts and may be modified only by a further written contract which is executed by a duly authorized officer of each of the parties.
32. COST COMPUTATION. The Federal Acquisition Regulation, 48 CFR, Chapter 1, Part 31.2, shall be used, in all instances, to determine the amount of costs incurred by Contractor that CATA shall be required to pay, or reimburse, to Contractor, including, without limitation, where this Agreement requires CATA to pay Contractor's costs as part of the contract price, where the contract price is adjusted resulting from changes to the requirements of Agreement, and when calculating the amount due Contractor pursuant to Termination for Convenience clause.
33. TRAVEL EXPENSES. CATA shall not reimburse Contractor for travel costs, including accommodations, meals, transportation and fuel costs, unless the travel activity and the travel costs have been approved in advance by an authorized representative of CATA. All travel costs to be paid by CATA shall not exceed amounts determined in conformance with the Federal Acquisition Regulation, 48 CFR Section 31.205-46, Travel Costs.

B. TERMS INCLUDED IN CONTRACTS FUNDED IN WHOLE OR PART BY FTA, MDOT, OR OTHER GOVERNMENTAL AGENCY.

1. NONDISCRIMINATION.

- (a) Compliance with Regulations. Contractor shall comply with Federal Regulations relative to nondiscrimination of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, and Title 23, Code of Federal Regulations, Part 710.405(b), as they may be amended from time to time (hereinafter referred to as the Regulations), and with Executive Order 11246 titled Equal Employment opportunity, as amended by Executive Order 11375, and as supplemented by Department of Labor Regulation (41 CFR 60) which are herein incorporated by reference and made a part of this contract. Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, Contractor agrees to comply with any implementing requirements FTA may issue.
- (b) Nondiscrimination. With regard to the work performed by it during this contract, Contractor shall not discriminate on the grounds of race, color, sex, disability, or national origin in the selection and retention of Subcontractors, including procurement of materials and leases of equipment. Contractor shall not participate either directly or indirectly in discrimination prohibited by Section 21.5 and Part 710.405(b) of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- (c) In connection with the performance of services under this contract, Contractor agrees to comply with the State of Michigan provisions for "prohibition of discrimination in state contracts" as set forth in Appendix A dated March 19, 1998, a copy of which is attached hereto and made a part hereof.
- (d) ADA Access. All work performed and all services provided pursuant to this contract shall be in compliance with Federal policy to ensure that elderly individuals and individuals with disabilities have an equal right to use of public transportation services and facilities. To the extent this Contract requires planning and design of services and facilities, special efforts shall be made to implement the transportation and accessibility rights of elderly individuals and individuals with disabilities. The work performed and services provided in this Contract shall be in compliance with all State and Federal statutes and laws ensuring equal access of transportation services and facilities for the elderly and individuals with disabilities, including 49 U.S.C. § 5301(d), § 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, The Americans with Disabilities Act of 1990, as amended, 42 U.S.C. § 12101 *et seq.*, and the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 *et seq.*, and any applicable implementing Federal regulations or directives as they may from time to time be promulgated or amended.
- (e) This provision B.1 (a)-(e) will be included in all subcontracts relating to this contract. Further, each contract which Contractor signs with a Subcontractor must include the following assurance:

The Contractor, Subrecipient, or Subcontractor shall not discriminate on the basis of race, color, national origin, creed, disability, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of US DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

2. DBE REQUIREMENTS.

- (a) Contractor will carry out the applicable requirements of the Michigan Department of Transportation's Disadvantaged Business Enterprise ("DBE") program and 49 CFR 26,

including, but not limited to those requirements set forth in Appendix B, attached hereto and made a part hereof. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as CATA deems appropriate, which may include, but is not limited to, withholding monthly progress payments, assessing sanctions, liquidated damages and/or disqualifying the Contractor from future bidding as non-responsible.

- (b) Contractor shall pay its subcontractors performing work related to this contract for satisfactory performance of that work no later than thirty (30) days after the Contractor's receipt of payment for that work from CATA. In addition, Contractor shall return any retainage payments to those subcontractors within thirty (30) days after the subcontractor's work related to this contract is satisfactorily completed. Contractor must promptly notify CATA whenever a DBE subcontractor performing work related to this contract is terminated or fails to complete the work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The Contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of CATA.
3. CONTINGENT FEES. The Contractor warrants that it has not employed or retained any company or person, other than a bonafide employee 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 a bonafide employee 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 or violation of this warranty, CATA shall have the right to annul this contract without liability.
4. RECORDS/AUDITS. The Contractor shall maintain and retain, and shall require all its subcontractors to maintain and retain, complete and accurate books, documents, papers, accounting records, contracts, and other evidence with respect to allowable costs incurred and manpower expended under this contract. All such records shall be maintained on the basis of generally-accepted accounting principles and shall be clearly identified and readily accessible. The Contractor shall provide during regular business hours to the U.S. Secretary of Transportation, the FTA Administrator, the Comptroller General of the United States, and CATA, or their duly authorized representatives, access to such data and records, and the right to inspect and audit all data and records of the Contractor relating to its performance under the contract, and to make transcripts therefrom as necessary. Contractor shall retain all work data, documents, records, accounts and reports related to this contract for a period of three (3) years from the date of final payment under this contract or from expiration or other termination of this contract. In the event of a dispute as to allowable costs or any other issue under this contract, Contractor will thereafter continue to maintain such records until the dispute has been resolved.
5. CONFLICT OF INTEREST. The Contractor certifies that, to the best of its knowledge, no CATA employee or office of any public agency interested in this contract has any pecuniary interest in the business of the Contractor and that no person associated with the Contractor has any interest that would conflict in any manner or degree with the performance of this contract.
6. INTEREST OF MEMBER OF CONGRESS OR DELEGATES TO CONGRESS. No member of Congress or delegates to the Congress of the United States shall be admitted to any share or part of the contract, or to any benefit arising therefrom. This shall not be construed to prevent any such person from owning stock in a publicly owned corporation.
7. DEBARMENT AND SUSPENSION. Contractor must comply with U.S. DOT regulations "Nonprocurement Suspension and Debarment", 2 CFR Part 1200, which adopt and supplement the U.S. Office of Management and Budget ("U.S. OMB") "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 CFR Part 180. Contractor will not make any contract, subcontract, or lease for the project without first confirming that

its proposed contractor, subcontractor, or lessee is not listed as barred or excluded from participating in government contracts in the System for Award Management (SAM) at www.sam.gov.

Contractor agrees to comply with federal debarment and suspension regulations and guidelines when administering any contract or subcontract of \$25,000 or more, regardless of tier. A contract or subcontract award may not be made to a prospective contractor or subcontractor if that contractor is excluded or disqualified under the standards of the U.S. DOT regulations in the U.S. OMB Guidelines, unless the federal government has provided an exception as permitted under those regulations and guidelines. In addition, contracts of any amount for federally required audit services or for contracts which require the consent of a federal official are also covered by these DOT regulations and U.S. OMB Guidelines. Contractor must obtain the compliance of lower tier contractors, subcontractors, and lessees with the U.S. DOT debarment and suspension regulations and the U.S. OMB Guidelines that apply to them. The Contractor further agrees to include provisions requiring compliance as set forth above in lower tier covered transactions.

8. MDOT AND FTA TERMS. All contractual provisions that the Michigan Department of Transportation ("MDOT") or the Federal Transit Administration ("FTA"), by law or regulation, require to be included in contracts supported by state or federal financial assistance, including the requirements set forth in FTA Circular 4220.1F, as updated and amended, and the Master Agreement between CATA and FTA as it may be amended, are hereby incorporated by reference. FTA required terms and MDOT required terms shall be deemed to control in the event of a conflict with other provisions contained in this contract. Contractor shall not refuse to comply with any CATA request to conform this contract to include MDOT or FTA required contractual provisions. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any CATA requests which would cause CATA to be in violation of the FTA mandated contractual provisions.
9. COMPLIANCE WITH LAWS. The Contractor shall at all times observe and comply with all laws, ordinances, and regulations of the state, federal, local, and city government which may, in any manner, affect the performance of the contract.
10. CLEAN AIR. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* If state or local air pollution regulations are in force, the more restrictive criteria shall govern. The Contractor and any subcontractors or suppliers must submit evidence to CATA that the governing air pollution criteria will be met. The Contractor agrees to report each violation to CATA and understands and agrees that CATA will, in turn, report each violation as required to FTA and the appropriate EPA Regional Office. The Contractor also agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FTA.
11. BUILD AMERICA BUY AMERICA PROVISIONS. Contractor agrees to comply with 49 U.S.C. 5323(j) and FTA's Build America Buy America Regulations in 49 CFR Part 661. These require that iron, steel, manufactured products, and construction materials used in FTA funded projects be produced in the United States, with specific provisions that apply to rolling stock procurements, unless a waiver has been granted by FTA or the product is subject to a general waiver. The continued accuracy of the certificate, attached as Appendix C, entitled "Build America Buy America Certification", submitted with Contractor's proposal/bid is a term and condition of this Agreement.
12. CERTIFICATION REGARDING LOBBYING. This procurement is subject to the Federal Transportation Administration Lobbying requirements. The attached certificate, entitled Certificate Regarding Lobbying (Appendix D), must be signed and returned as a term and condition of this Agreement and its terms are incorporated by reference herein.
13. PREVAILING WAGE. N/A

14. BID BOND. N/A
15. PROTESTS. Any protests shall be filed timely in accordance with the CATA Procurement Protest Procedures. These Procedures are available from the CATA Purchasing & Contracts Manager and the CATA CEO/Executive Director, at the following address: Capital Area Transportation Authority, 4615 Tranter Street, Lansing, MI 48910.
16. PERFORMANCE & PAYMENT BONDS. N/A
17. FEDERAL CHANGES. Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between CATA and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor shall not, by action or by inaction, cause CATA to be in violation of FTA regulations, policies, procedures, or directives. Contractor's failure to comply with this paragraph shall constitute a material breach of this contract.
18. NO GOVERNMENT OBLIGATION. Notwithstanding any concurrence by the Federal Government or MDOT in, or approval of, the solicitation or award of this Agreement, absent the express written consent by the Federal Government or by MDOT, neither the Federal Government nor the State of Michigan is a party to this Agreement, and neither shall be subject to any obligations or liabilities to CATA, the Contractor or any other party (whether or not a party to this Agreement) pertaining to any matter resulting from this Agreement. The Contractor agrees to include this clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.
19. CLEAN WATER. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 *et seq.* The Contractor agrees to report each violation to CATA and understands and agrees that CATA will, in turn, report each violation as required to FTA and the appropriate EPA Regional Office. The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.
20. ENERGY CONSERVATION. The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.
21. RECOVERED MATERIALS. The Contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act ("RCRA"), as amended (42 U.S.C. 6962), including, but not limited to, the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in subpart B of 40 CFR Part 247.
22. FLY AMERICA REQUIREMENTS. Contractor agrees to comply with 49 U.S.C. 40118 ("Fly America Act") in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and subrecipients of federal funds and their contractors are required to use United States Flag air carriers for U.S. Government financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a United States Flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.
23. CARGO PREFERENCE. The Contractor agrees (a) to use privately owned United States Flag commercial vessels to ship at least 50% of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment,

material, or commodities pursuant to the underlying contract to the extent such vessels are available at fair and reasonable rates for United States Flag commercial vessels; (b) to furnish within twenty (20) working days following the date of loading of shipments originating within the United States or within thirty (30) working days following the date of loading for shipments originating outside the United States, a legible copy of the rated, "on-board" commercial ocean bill of lading, in English, for each shipment of cargo described in the preceding paragraph to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, D.C., 20590. CATA (through the Contractor in the case of a subcontractor's bill of lading); and (c) to include these requirements in all subcontracts issued pursuant to this contract where the subcontract may involve the transport of equipment, material, or commodities by ocean vessel.

24. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS.

- (a) The Contractor acknowledges that the provisions of the Program Fraud Civil Rights Act of 1986, as amended, 31 U.S.C. § 3801 *et seq.* and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, or may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
- (b) The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under authority of 49 U.S.C. § 5307, the Federal Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, or the applicable Federal law to the extent the Federal Government deems appropriate.
- (c) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

25. SAFE OPERATIONS OF MOTOR VEHICLES

- (a) Seat Belt Use – Contractor is encouraged to adopt and promote on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned vehicles, company-rented vehicles, or personally operated vehicles. The terms "company-owned" and "company-leased" refer to vehicles owned or leased either by the Contractor or CATA.
- (b) Distracted Driving – Contractor agrees to adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while using an electronic device supplied by an employer and driving a vehicle the driver owns or rents, a vehicle either Contractor or CATA owns, leases, or rents, or a privately-owned vehicle when on official business in connection with the work performed under this agreement.

APPENDIX A

PROHIBITION OF DISCRIMINATION IN STATE CONTRACTS

In connection with the performance of work under this contract, Contractor agrees as follows:

1. In accordance with Act 453, Public Acts of 1976, Contractor hereby agrees not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or as a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, or marital status. Further, in accordance with Act No. 220, Public Acts of 1976 as amended by Act No. 478, Public Acts of 1980, Contractor hereby agrees not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of a disability that is unrelated to the individual's ability to perform the duties of a particular job or position. A breach of the above covenants shall be regarded as a material breach of this contract.
2. Contractor hereby agrees that any and all subcontracts to this contract, whereby a portion of the work set forth in this contract is to be performed, shall contain a covenant the same as hereinabove set forth in Section 1 of this Appendix.
3. Contractor will take affirmative action to insure that applicants for employment and employees are treated without regard to their race, color, religion, national origin, age, sex, height, weight, marital status or a disability that is unrelated to the individual's ability to perform the duties of a particular job or position. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
4. Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, age, sex, height, weight, marital status or disability that is unrelated to the individual's ability to perform the duties of a particular job or position.
5. Contractor or its collective bargaining representative will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representative of the Contractor's commitments under this appendix.
6. Contractor will comply with all relevant published rules, regulations, directives, and orders of the Michigan Civil Rights Commission which may be in effect prior to the taking of bids for any individual state project.
7. Contractor will furnish and file compliance reports within such time and upon such forms as provided by the Michigan Civil Rights Commission, said forms may also elicit information as to the practices, policies, program, and employment statistics of each subcontractor as well as Contractor itself, and said Contractor will permit access to its books, records, and accounts by the Michigan Civil Rights Commission and/or its agent, for purposes of investigation to ascertain compliance with this contract and relevant with rules, regulations, and orders of the Michigan Civil Rights Commission.
8. In the event that the Civil Rights Commission finds, after a hearing held pursuant to its rules, that Contractor has not complied with the contractual obligations under this Agreement, the Civil Rights Commission may, as part of its order based upon such findings, certify said findings to the Administrative Board of the State of Michigan, which Administrative Board may order the cancellation of the contract found to have been violated and/or declare Contractor ineligible for future contracts with the state and its political and civil subdivisions, departments, and officers, and including the governing boards of institutions of higher education, until Contractor complies with said order of the Civil Rights Commission. Notice of said declaration of future ineligibility may be given to any or all of the persons with whom Contractor is declared ineligible to contract as a contracting party in future contracts. In any case before the Civil Rights Commission in which cancellation of an existing contract is a possibility, the contracting agency shall be notified of such possible remedy and shall be given the option by the Civil Rights Commission to participate in such proceedings.
9. Contractor will include, or incorporate by reference, the provisions of the foregoing paragraphs (1) through (8) in every subcontract or purchase order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission, and will provide in every subcontract or purchase order that said provisions will be binding upon each subcontractor or seller.

APPENDIX B

ASSURANCES THAT CONTRACTORS AND SUBCONTRACTORS MUST MAKE PURSUANT TO US DOT REGULATION 49 CFR § 26, et seq

- A. Contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex, in the performance of this contract. Contractor shall carry out applicable requirements of 49 CFR § 26 in the award and administration of DOT-assisted contracts. Failure of the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
1. Withholding monthly progress payments;
 2. Assessing sanctions;
 3. Liquidated damages; and/or
 4. Disqualifying the Contractor from further bidding as non-responsible.
- B. Each contract Contractor signs with a subcontractor must include the preceding assurance.

APPENDIX C

BUILD AMERICA BUY AMERICA CERTIFICATION

STEEL, IRON, MANUFACTURED PRODUCTS, AND CONSTRUCTION MATERIALS

This procurement is subject to federal "Build America Buy America" Requirements set forth in 49 U.S.C. 5323(j) and in Federal Transit Administration ("FTA") regulations at 49 CFR Part 661, which require that steel, iron, and manufactured products used in FTA-funded procurements be produced in the United States. Special requirements apply to rolling stock, as defined in the regulations. See 49 U.S.C. 5323(j)(2)(C), 49 CFR 661.11. In some cases, the requirement may be waived (49 CFR 661.7).

The "Build America Buy America" Certificate below **must** be completed and submitted with your bid/proposal. A bid/ proposal which does not include the Certificate or where both certificates are signed will be considered non-responsive.

****PLEASE SIGN ONLY ONE OF THE TWO CERTIFICATES BELOW ****

CERTIFICATE ONE: <p style="text-align: center;">BUILD AMERICA BUY AMERICA CERTIFICATE</p> <p>The bidder hereby certifies that it <u>WILL</u> comply with the requirements of 49 U.S.C. 5323(j)(1) and applicable regulations in 49 CFR 661.</p> <p>Signature: _____</p> <p>Title: _____</p> <p>Date: _____</p>
--

CERTIFICATE TWO: <p style="text-align: center;">BUILD AMERICA BUY AMERICA CERTIFICATE</p> <p>The bidder hereby certifies that it <u>CANNOT</u> comply with the requirements of 49 U.S.C. 5323(j), but it may qualify for an exception to the requirement pursuant to 49 U.S.C. 5323(j)(2), as amended, and the applicable regulations in 49 CFR 661.7.</p> <p>Signature: _____</p> <p>Title: _____</p> <p>Date: _____</p>

APPENDIX D

CERTIFICATE REGARDING LOBBYING

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS, AND COOPERATIVE AGREEMENTS
(To be submitted with each bid or offer exceeding \$100,000).

The undersigned Contractor certifies to the best of his or her knowledge and belief that:

1. No federal appropriated funds have been paid or will be paid by or on behalf of the undersigned to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
2. If any funds other than federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, Disclosure Form to Report Lobbying, in accordance with its instructions (as amended by "Government Wide Guidance for New Restrictions on Lobbying", 61 Fed. Reg. 1413 (11/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. § 1601, et seq.).
3. The undersigned shall require that the language of this Certification be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This Certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this Certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required Certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required Certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Contractor, _____ certifies or affirms to the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801, et seq., apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name & Title of Contractor's Authorized Official

Date

SECTION 00 3100 AVAILABLE PROJECT INFORMATION

SECTION 00 3100 - AVAILABLE PROJECT INFORMATION

PART 1 GENERAL

1.01 EXISTING CONDITIONS

- A. Certain information relating to existing surface and subsurface conditions and structures is available to bidders but will not be part of Contract Documents, as follows:
- B. Existing Conditions Surveys: Entitled Roofing Field Report, dated 10/15/2021.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

Superior Services R.S.H., Inc.
 Corporate Headquarters - 5411 W. Grand River Avenue
 Lansing, MI 48906
 (800) 843-6561



INVOICE

Capitol Area Transportation Authority (C.A.T.A.)
 4615 Tranter Street
 Lansing, MI 48910

DATE 07/23/2021
 DUE DATE 08/02/2021
 INVOICE # 1448299
 CUST. ID

PROPERTY:
 C.A.T.A.
 4615 Tranter Street
 Lansing, MI 48910

DESCRIPTION	AMOUNT
Labor: (Serviceman 1) 1.81hrs @ \$85.00/hr	\$153.85
Labor: (Serviceman 2) 1.81hrs @ \$85.00/hr	\$153.85
Caulk/Lap Sealant 2 Tube @ \$8.27	\$16.54
Duro-Last Membrane SQ/FT 4 Sq Ft @ \$1.45	\$5.80
Service Mobilization 1 EA @ \$90.00	\$90.00

WORK PERFORMED
 Took core samples of the roof per customers request. Checked 5 spots and both roofs have 1.5 inch insulation, a layer of EPDM, and a layer of Duro-Last.

SUBTOTAL \$420.04
 BALANCE DUE \$420.04
 Please make all checks payable to:
Superior Services RSH, Inc.

Note: We strive to complete repairs as efficiently as possible. However, non-warranted repairs are not guaranteed and may require additional follow-up repairs.

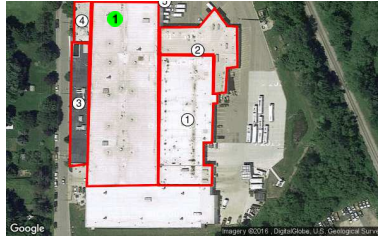
PAYMENT TERMS: Balance net 10 days from completion of work.
 FINANCE CHARGES will apply if the balance is unpaid 30 days from date of invoice. The "FINANCE CHARGES" are computed on a periodic rate of 1.7% per month which, is an ANNUAL PERCENTAGE RATE of 20.4%.
 CREDIT CARD SURCHARGE: A surcharge of 3% will be charged on payment amounts exceeding \$5,000.00 per contract paid by credit card.

Thank you for your business.



Property:
 C.A.T.A.
 4615 Tranter Street
 Lansing, MI 48910

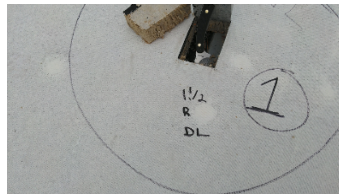
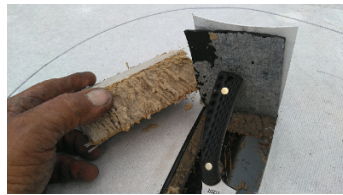
INVOICE # 1448299
 Capitol Area Transportation Authority
 (C.A.T.A.)
 4615 Tranter Street
 Lansing, MI 48910



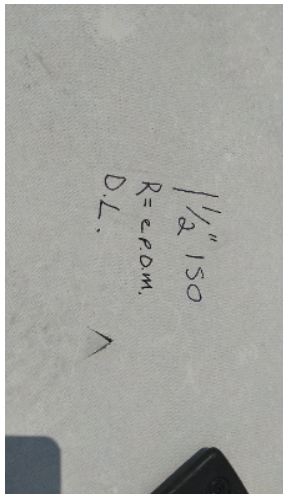
Distributed By: Superior Services R.S.H., Inc.
 Date dispatched: 07/06/2021
 Time dispatched: 03:29 PMEST

Acknowledged: 07/21/2021 02:24 PM
 Signed: Joe

1 Problem:



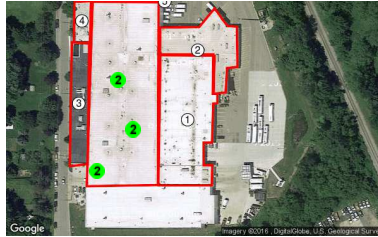
1 Corrective Action:





Property:
C.A.T.A.
4615 Tranter Street
Lansing, MI 48910

INVOICE # 1448299
Capitol Area Transportation Authority
(C.A.T.A.)
4615 Tranter Street
Lansing, MI 48910



Distributed By: Superior Services R.S.H., Inc.
Date dispatched: 07/06/2021
Time dispatched: 03:29 PMEST

Acknowledged: 07/21/2021 02:24 PM
Signed: Joe

2 Problem:



2 Corrective Action:



SECTION 00 4100 BID FORM

THE PROJECT AND THE PARTIES

1.01 FOR: CATA FLUID-APPLIED ROOF RESTORATION

1.02 DATE: _____ (BIDDER TO ENTER DATE)

1.03 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)

- A. Bidder's Full Name _____
 - 1. Address _____
 - 2. City, State, Zip _____

1.04 OFFER

- A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Progressive AE for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:
- B. Fluid-applied roof coating: _____ dollars
(\$ _____), in lawful money of the United States of America.
- C. Itemized cost breakdown for each facility:
 - 1. CATA Transportation Center (CTC) - \$ _____
 - 2. CATA Storage Facility (Tranter) - \$ _____
- D. We have included the required security deposit as required by the Instruction to Bidders.
- E. The performance assurance bonds are not included in the Bid Amount. The cost of the performance assurance bonds are a sum of:
- F. _____ dollars (\$ _____)
- G. All applicable federal taxes are included and State of Michigan taxes are included in the Bid Sum.

1.05 ACCEPTANCE

- A. This offer shall be open to acceptance and is irrevocable for 90 days from the bid closing date.
- B. In the event our bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

1.06 CONTRACT TIME

- A. If this Bid is accepted, we will complete the project by October 2, 2024.

1.07 CHANGES TO THE WORK

- A. When Architect establishes that the method of valuation for Changes in the Work will be net cost plus a percentage fee in accordance with General Conditions, our percentage fee will be:
 - 1. ___10___ percent overhead and profit on the net cost of our own Work;
 - 2. ___5___ percent on the cost of work done by any Subcontractor.
- B. On work deleted from the Contract, our credit to Owner shall be Architect-approved net cost plus ___0___ of the overhead and profit percentage noted above.

1.08 ADDENDA

- A. The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.
 - 1. Addendum # _____ Dated _____.
 - 2. Addendum # _____ Dated _____.

1.09 BID FORM SUPPLEMENTS

- A. The following Supplements are attached to this Bid Form and are considered an integral part of this Bid Form:
 - 1. Document 00 4322 - Unit Prices Form: Include a listing of unit prices specifically requested by the Contract Documents.
 - 2. Document 00 4336 - Proposed Subcontractors Form: Include the names of all Subcontractors and the portions of the Work they will perform.

SECTION 00 4100 BID FORM

1.10 BID FORM SIGNATURE(S)

- A. The Corporate Seal of
- B. _____
- C. (Bidder - print the full name of your firm)
- D. was hereunto affixed in the presence of:
- E. _____
- F. (Authorized signing officer, Title)
- G. (Seal)
- H. _____
- I. (Authorized signing officer, Title)

1.11 IF THE BID IS A JOINT VENTURE OR PARTNERSHIP, ADD ADDITIONAL FORMS OF EXECUTION FOR EACH MEMBER OF THE JOINT VENTURE IN THE APPROPRIATE FORM OR FORMS AS ABOVE.

END OF BID FORM

SECTION 00 4322 UNIT PRICES FORM

PARTICULARS

1.01 THE FOLLOWING IS THE LIST OF UNIT PRICES REFERENCED IN THE BID SUBMITTED BY:

1.02 (BIDDER) _____

1.03 TO (OWNER): CAPITAL AREA TRANSPORTATION AUTHORITY

1.04 DATED _____ AND WHICH IS AN INTEGRAL PART OF THE BID FORM.

1.05 THE FOLLOWING ARE UNIT PRICES FOR SPECIFIC PORTIONS OF THE WORK AS LISTED, AND ARE APPLICABLE TO AUTHORIZED VARIATIONS FROM THE CONTRACT DOCUMENTS.

UNIT PRICE LIST

ITEM DESCRIPTION	QUANTITY	UNIT VALUE
-------------------------	-----------------	-------------------

A. Provide unit cost to remove and replace existing wet insulation with new insulation at 1-1/2" thickness. Cost to include cutting and patching of membrane and removal of damaged materials from project site and will be adjusted to a prorated value where insulation is found to be more than 1-1/2" in coordination with pricing in Item B.

Price per SQ.FT. \$ _____

B. Provide unit cost to remove and replace existing wet insulation with new base and tapered insulation not-to-exceed 5" overall thickness. Cost to include cutting and patching of membrane and removal of damaged materials from project site. Cost will be adjusted to a prorated value where insulation is discovered to be less than 5" in coordination with pri Item A.

Price per SQ.FT. \$ _____

C. Provide unit cost to replace existing Roof Drains. Provide new precoated cast iron roof drain model Zurn Z100-4"/6" (or approved equal) with combination membrane flashing clamp/gravel guard. Cut and patch insulation and reflash pvc membrane in to clamping ring. Repair insulation below drain body to match existing.

Price per EACH \$ _____

END OF SECTION

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SECTION 00 4325 SUBSTITUTION REQUEST FORM - DURING PROCUREMENT

PROJECT: CATA FLUID-APPLIED ROOF RESTORATION

PROJECT NO. : 75820019

To: Progressive AE; Attention: Seth Horton; *hortons@progressiveae.com*

Re: _____

From: _____ Date: _____

DESCRIPTION:

Specification Title: _____

Section No.: _____ Page: _____

Article/Paragraph: _____

Proposed Substitution: _____

Manufacturer: _____

Trade Name: _____

Model No.: _____

Web Site: _____

SUPPORTING DATA ATTACHED:

- Attached data to include product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are to be clearly identified.

- Attached data to also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

() Drawings () Product Data () Samples () Tests () Reports () _____

THE UNDERSIGNED CERTIFIES:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.

- Same warranty will be furnished for proposed substitution as for specified product.

- Same maintenance service and source of replacement parts, as applicable, is available.

- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.

- Proposed substitution does not affect dimensions and functional clearances.

- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Signed by: (printed)

(signature)

Address:

Email: _____

A/E'S REVIEW AND ACTION:

() Substitution approved - Make submittals in accordance with Specification Section 01 6000 - Product Requirements, Substitution Procedures.

() Substitution approved as noted - Make submittals in accordance with Specification Section 01 6000, Substitution Procedures.

() Substitution rejected - Use specified materials.

() Substitution request received too late - Use specified materials.

Remarks _____

SECTION 00 4325 SUBSTITUTION REQUEST FORM - DURING PROCUREMENT

Signed by: _____ Date: _____

END OF SECTION

SECTION 00 4336 PROPOSED SUBCONTRACTORS FORM

PARTICULARS

1.01 HERewith IS THE LIST OF SUBCONTRACTORS REFERENCED IN THE BID SUBMITTED BY:

1.02 (BIDDER) _____

1.03 DATED _____ AND WHICH IS AN INTEGRAL PART OF THE BID FORM.

1.04 THE FOLLOWING WORK WILL BE PERFORMED (OR PROVIDED) BY SUBCONTRACTORS AND COORDINATED BY US:

LIST OF SUBCONTRACTORS

	WORK SUBJECT	SUBCONTRACTOR NAME
1.05	_____	_____
1.06	_____	_____
1.07	_____	_____
1.08	_____	_____
1.09	_____	_____

END OF SECTION

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SECTION 00 5000 CONTRACTING FORMS AND SUPPLEMENTS

PART 1 GENERAL

1.01 CONTRACTOR IS RESPONSIBLE FOR OBTAINING A VALID LICENSE TO USE ALL COPYRIGHTED DOCUMENTS SPECIFIED BUT NOT INCLUDED IN THE PROJECT MANUAL.

1.02 AGREEMENT AND CONDITIONS OF THE CONTRACT

- A. The Agreement is based on CATA Standard Contract for Construction.
- B. The General Conditions are based on the Standard Terms and Conditions of Procurement as stipulated in 00 2113 Instruction to Bidders.

1.03 FORMS

- A. Post-Award Certificates and Other Forms:
 - 1. Application for Payment Forms: AIA G702 with AIA G703 (for Contractors).

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01 1000 SUMMARY

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: CATA Fluid-Applied Roof Restoration
- B. The Project consists of the roof restoration of existing membrane and repair replacement of insulations and membranes of both the CTC and the Tranter Street Facility.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price.

1.03 DBE PARTICIPATION

- A. DBE Subcontractor participation: CATA project goal is 1.28% of total project cost.

1.04 OWNER OCCUPANCY

- A. Owner intends to occupy the Project while work is ongoing.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

- A. Arrange use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Use of site and premises by the public.
- B. Provide access to and from site as required by law and by Owner:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.

END OF SECTION

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SECTION 01 2000 PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

1.02 RELATED REQUIREMENTS

- A. Section 00 5000 - Contracting Forms and Supplements: Forms to be used.
- B. Section 01 2200 - Unit Prices: Monetary values of unit prices; Payment and modification procedures relating to unit prices.

1.03 SCHEDULE OF VALUES

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- B. Forms filled out by hand will not be accepted.
- C. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- D. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization.
- E. Include in each line item, the amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.
- F. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.
- G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- D. Forms filled out by hand will not be accepted.
- E. Execute certification by signature of authorized officer.
- F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- H. Submit one electronic and three hard-copies of each Application for Payment.
- I. Include the following with the application:
 - 1. Transmittal letter as specified for submittals in Section 01 3000.
 - 2. Construction progress schedule, revised and current as specified in Section 01 3000.
 - 3. Current construction photographs specified in Section 01 3000.
 - 4. Partial release of liens from Subcontractors and vendors.
 - 5. Affidavits attesting to off-site stored products.
 - 6. Retainage: 10 percent through substantial completion and 5 percent thereafter until final payment.
- J. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

SECTION 01 2000 PRICE AND PAYMENT PROCEDURES

1.05 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 10 days.
- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
 - 1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
 - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
 - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.
 - 4. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.
- E. Substantiation of Costs: Provide full information required for evaluation.
 - 1. On request, provide the following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 - 2. Support each claim for additional costs with additional information:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
 - 3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- F. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- G. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- H. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- I. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All closeout procedures specified in Section 01 7000.
 - 2. Requirements of Owner - Contractor Agreement.

SECTION 01 2000 PRICE AND PAYMENT PROCEDURES

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01 2200 UNIT PRICES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. List of unit prices, for use in preparing Bids.
- B. Measurement and payment criteria applicable to Work performed under a unit price payment method.
- C. Defect assessment and non-payment for rejected work.

1.02 RELATED REQUIREMENTS

- A. Document 00 4322 - Unit Prices Form: List of Unit Prices as supplement to Bid Form.

1.03 COSTS INCLUDED

- A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.04 UNIT QUANTITIES SPECIFIED

- A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements of actual Work will determine the payment amount.

1.05 MEASUREMENT OF QUANTITIES

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Take all measurements and compute quantities. Measurements and quantities will be verified by Architect.
- C. Assist by providing necessary equipment, workers, and survey personnel as required.

1.06 PAYMENT

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Architect, multiplied by the unit price.
- B. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected Products.

1.07 DEFECT ASSESSMENT

- A. Replace Work, or portions of the Work, not complying with specified requirements.
- B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of Architect.
 - 2. The defective Work will be partially repaired to the instructions of the Architect, and the unit price will be adjusted to a new unit price at the discretion of Architect.
- C. The individual specification sections may modify these options or may identify a specific formula or percentage price reduction.
- D. The authority of Architect to assess the defect and identify payment adjustment is final.

1.08 SCHEDULE OF UNIT PRICES

- A. Items: Partial Roof Replacement; Section 07 0150.19.
- B. Items: [Roof Drain Replacement]; See Section 04 322 Unit Price Forms for Narrative

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01 2500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

- A. Section 00 4325 - Substitution Request Form - During Procurement: Required form for substitution requests made prior to award of contract (During procurement).
- B. Section 00 6325 - Substitution Request Form - During Construction: Required form for substitution requests made after award of contract (During construction).
- C. Section 01 6000 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

1.03 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
 - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
 - a. Unavailability.
 - b. Regulatory changes.
 - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
 - a. Substitution requests offering advantages solely to the Contractor will not be considered.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
 - 4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
 - 5. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
 - 1. Note explicitly any non-compliant characteristics.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
 - 1. Forms included in the Project Manual are adequate for this purpose, and must be used.
- D. Limit each request to a single proposed substitution item.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

- A. Submittal Time Restrictions:
- B. Submittal Form (before award of contract):
 - 1. Submit substitution requests by completing the form in Section 00 4325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submittal Form (after award of contract):

SECTION 01 2500 SUBSTITUTION PROCEDURES

1. Submit substitution requests by completing the form in Section 00 6325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- B. Submit request for Substitution for Cause immediately upon discovery of need for substitution, but not later than 7 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
- C. Substitutions will not be considered under one or more of the following circumstances:
 1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
 2. Without a separate written request.
 3. When acceptance will require revisions to Contract Documents.

3.04 RESOLUTION

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.
 1. Architect's decision following review of proposed substitution will be noted on the submitted form.

3.05 ACCEPTANCE

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

3.06 CLOSEOUT ACTIVITIES

- A. See Section 01 7800 - Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record. Include both approved and rejected Requests.

END OF SECTION

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Progress meetings.
- B. Construction progress schedule.
- C. Progress photographs.
- D. Number of copies of submittals.
- E. Requests for Interpretation (RFI) procedures.
- F. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 6000 - Product Requirements: General product requirements.
- B. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.
- C. Section 01 7800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.03 PROJECT COORDINATOR

- A. Project Coordinator: General Contractor.
- B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for site access, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Project Coordinator.
- D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities. Responsibility for providing temporary utilities and construction facilities is identified in Section 01 1000 - Summary.
- F. Coordinate field engineering and layout work under instructions of the Project Coordinator.
- G. Make the following types of submittals to Architect through the Project Coordinator:
 - 1. Requests for Interpretation.
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Design data.
 - 6. Manufacturer's instructions and field reports.
 - 7. Applications for payment and change order requests.
 - 8. Coordination drawings.
 - 9. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 10. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
- B. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
- C. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of work progress.
 - 3. Field observations, problems, and decisions.

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

4. Identification of problems that impede, or will impede, planned progress.
 5. Planned progress during succeeding work period.
 6. Other business relating to work.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.02 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
1. Prepare a separate RFI for each specific item.
 - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
 - b. Do not forward requests which solely require internal coordination between subcontractors.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Approval of substitutions (see Section - 01 6000 - Product Requirements)
 - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
 - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
- E. Review Time: Architect will respond and return RFIs to Contractor within two business days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- F. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
 2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
 3. Notify Architect within two calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

3.03 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
1. Product data.
 2. Shop drawings.
 3. Samples for selection.

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.04 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.05 SUBMITTAL REVIEW

- A. Submittals for Review: Architect will review each submittal and take appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals or an actual stamp on hard copies of submittals.
- D. Architect's Action: General: Except for submittals for the record and similar purposes, where action and return on submittals are required or requested, the Architect will review each submittal and mark with appropriate "action" within 10 working days. Where the submittal must be held for coordination, the Architect will so advise the Contractor without delay. The Architect's review of a specific item shall not indicate review of an assembly of which the item is a component.
 - 1. Architect's Action Stamp: The Architect will stamp each submittal to be returned with a uniform, self explanatory action stamp, appropriately marked and executed. It shall read as follows:
 - a. "This submittal is reviewed for general conformance with the design concept of the project and with information given in the Contract Documents. This review shall not constitute approval of safety precautions and is not conducted for substantiating instructions for installation or performance of equipment or systems. This review does not relieve the contractor of responsibility for conformance with the Contract Documents and applicable codes, all of which have priority over this submittal. The Architect/Engineer does not warrant or represent that the information within the submittal is either accurate or complete. The contractor is responsible for coordinating and verifying all quantities, dimensions, tolerances, clearances, fabrication processes, techniques, sequences, means, methods of construction and compatibility of materials. It is also understood that the contractor has reviewed and coordinated all related trades and components of an assembly prior to issuing a submittal for review."
 - b. Marking X No Exceptions Taken
 - 1) Final unrestricted release. Where the submittals are marked as above, the work covered by the submittal may proceed, provided it complies with the requirements of the contract documents; acceptance of the work will depend upon that compliance.
 - c. Marking X Make Corrections Noted
 - 1) Final but restricted release. When submittals are marked as above, work covered by submittal may proceed, provided it complies with both Architect's notations or corrections on the submittal and with the requirements of the contract documents; acceptance of the work will depend on that compliance.
 - d. Marking X Revise and Resubmit

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

- 1) Returned for resubmittal. When submittal is marked as above, revise or prepare new submittal in accordance with Architect's notations stating reasons for returning submittal; cloud all revisions to expedite review; resubmit submittal without delay. Repeat if necessary to obtain a different action marking. Do not permit submittals with the above marking to be used at the project site or elsewhere where work is in progress.
- e. Marking X Rejected
- 1) Returned for resubmittal. When the submittal is marked as above, do not proceed with the work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise the submittal, or prepare a new submittal in accordance with the Architect's notations stating the reasons for returning the submittal. Resubmit the submittal without delay. Repeat if necessary to obtain a different action marking. Do not permit submittals with the above marking to be used at the project site or elsewhere where work is in progress."
- f. Marking X For Record Purposes Only
- 1) No Action Taken/Required or Not Required for Review. When a submittal is marked as above, the A/E has retained submittal for their record keeping purposes or to track informational submittals that do not require review or approval. These submittals are processed only as a record of the construction.

END OF SECTION

SECTION 01 4000 QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. Testing and inspection agencies and services.
- C. Control of installation.
- D. Manufacturers' field services.

1.02 RELATED REQUIREMENTS

- A. Document 00 3100 - Available Project Information: Soil investigation data.
- B. Section 01 3000 - Administrative Requirements: Submittal procedures.
- C. Section 01 6000 - Product Requirements: Requirements for material and product quality.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
 - 1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

1.04 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

1.05 TESTING AND INSPECTION AGENCIES AND SERVICES

- A. Contractor shall employ and pay for services of an independent testing agency to perform other specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- C. Contractor Employed Agency:
 - 1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM E699, ASTM C1021, ASTM C1077, ASTM C1093, and ASTM D3740.
 - 2. Inspection agency: Comply with requirements of ASTM D3740 and ASTM E329.
 - 3. Laboratory: Authorized to operate in the State in which the Project is located.
 - 4. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
 - 5. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

SECTION 01 4000 QUALITY REQUIREMENTS

- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TESTING AND INSPECTION

- A. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
 - 5. Perform additional tests and inspections required by Architect.
 - 6. Submit reports of all tests/inspections specified.
- B. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.
- C. Contractor Responsibilities:
 - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 - 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 - 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 - 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 - 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- D. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- E. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.03 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship as applicable, and to initiate instructions when necessary.

SECTION 01 4000 QUALITY REQUIREMENTS

- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.04 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not complying with specified requirements.

END OF SECTION

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SECTION 01 4100 REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY OF REFERENCE STANDARDS

- A. Regulatory requirements applicable to this project are the following:
 - 1. 28 CFR 36 - Nondiscrimination by Public Accommodations and in Commercial Facilities; Final Rule; Department of Justice; current edition.
 - 2. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
 - 3. 29 CFR 1910 - Occupational Safety and Health Standards; current edition.
 - 4. ICC (IFC) - International Fire Code; 2012.
 - 5. NFPA 101 - Life Safety Code; 2015.
 - 6. Building Code: Michigan Building Code 2015.
 - 7. Plumbing Code: Michigan Plumbing Code 2015.
 - 8. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
 - 9. Electrical Code: NEC 2014 (State of Michigan Electrical Code) 2014 National Electrical Code with Part 8 amendments 2015.
 - 10. Energy Code: Michigan Uniform Energy Code 2015.
 - 11. Erosion and Sedimentation Control Regulations:.
 - 12. Wetland Protection: Goemare-Anderson Wetland Protection Act 203 1979 and all subsequent amendments.
 - 13. Construction Lien Laws:
 - 14. Wage Rates:<https://sam.gov/wage-determination/MI20210084/8>
 - 15. Equal Opportunity for Employment (Michigan): comply with all applicable provisions of the Federal Civil rights Act and the Michigan Fair Employment Practices Act.

1.02 RELATED REQUIREMENTS

- A. Section 01 4000 - Quality Requirements.

1.03 PERMITS, FEES, AND NOTICES

- A. Contractor(s) responsibilities shall be in accordance with the Standard Terms and Conditions of the Contract.

1.04 QUALITY ASSURANCE

- A. Contractor's Designer Qualifications: Refer to Section - 01 4000 - Quality Requirements.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01 6000 PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Transportation, handling, storage and protection.
- B. Product option requirements.
- C. Substitution limitations.
- D. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Section 01 2500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 01 4000 - Quality Requirements: Product quality monitoring.
- C. Section 01 7419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. See Section 01 4000 - Quality Requirements, for additional source quality control requirements.
- C. Use of products having any of the following characteristics is not permitted:
 - 1. Made using or containing CFC's or HCFC's used in the manufacturing process.
 - 2. Containing lead, cadmium, or asbestos.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

- A. See Section 01 2500 - Substitution Procedures.

3.02 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

SECTION 01 6000 PRODUCT REQUIREMENTS

- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication..
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 7800 CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project record documents.
- B. Operation and maintenance data.
- C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

- A. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Section 01 7000 - Execution and Closeout Requirements: Contract closeout procedures.
- C. Individual Product Sections: Specific requirements for operation and maintenance data.
- D. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
 - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
 - 2. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
 - 3. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
 - 1. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 2. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.

SECTION 01 7800 CLOSEOUT SUBMITTALS

3. Field changes of dimension and detail.
4. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Additional information as specified in individual product specification sections.
- D. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.
- C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

3.05 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

END OF SECTION

SECTION 07 0150.16 MAINTENANCE CLEANING OF MEMBRANE ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pressure washing of roof membrane including membrane flashings, with full water reclamation prior to applicaiton of fluid applied coating.

1.02 RELATED REQUIREMENTS

- A. Section 00 3100 - Available Project Information: Roofing Field Reports.
- B. Section 01 2300 - Alternates: Alternate #1.
- C. Section 07 0150.19 - Preparation for Re-Roofing
- D. Section 07 0150.74 - Rehilitation of Single Ply Roofing: Roofing rehabilitation section for repair and restoration coating of roofing membrane.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's data for cleaning compounds.
- C. Work Plan: For maintenance cleaning, including description of means and methods for water reclamation.
 - 1. Information only.
- D. Cleaning System Operator Qualification Statement.
 - 1. Information only.

1.04 QUALITY ASSURANCE

- A. Operator Qualifications: Trained and approved by manufacturer of cleaning equipment, with a record of successful roofing membrane cleaning.
- B. Regulatory Requirements: Comply with governing EPA regulations. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.05 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately below roof area to be maintained. Conduct operations so Owner's operations are not disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
- B. Protect building to be cleaned, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from maintenance operations.
- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Pre-cleaning Treatment: Detergent-free.
 - 1. Basis of Design: Product: Tremco, Inc., RoofTec PREKLEEN.
 - 2. Or Approved Equals in accordance with Substitutions: See Section 01 6000 - Product Requirements.
- B. Pressure Wash Cleaning Solution: VOC, detergent, phosphate, and surfactant free.
 - 1. Basis of Design: Product: Tremco, Inc., RoofTec RENEW Cleaner.
 - 2. Garland D7 or Simple Green Oxy Solve Cleaning Solutions.
 - 3. Or Approved Equals in accordance with Substitutions: See Section 01 6000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

- A. Water Reclamation: Provide maintenance cleaning of membrane roofing that provides 100 percent reclamation of cleaning water and complies with applicable provisions of the US EPA National Pollutant Discharge Elimination System (NPDES) program and requirements of local authorities having jurisdiction.

PART 3 EXECUTION

3.01 PREPARATION

- A. Comply with warranty requirements of existing roof membrane manufacturer.

SECTION 07 0150.16 MAINTENANCE CLEANING OF MEMBRANE ROOFING

- B. Shut off rooftop utilities and service piping before beginning the Work.
- C. Test existing roof drains to verify that they are not blocked or restricted. Immediately notify Owner of any blockages or restrictions.
- D. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work. Cover air-intake louvers before proceeding with maintenance cleaning work that could affect indoor air quality or activate smoke detectors in the ductwork.
- E. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors.

3.02 MAINTENANCE CLEANING OF ROOF MEMBRANE

- A. Pretreat membrane and flashings when recommended by cleaning equipment manufacturer based upon site assessment of membrane condition.
- B. Apply pressure wash cleaning solution onto membrane and flashing surfaces.
- C. Pressure wash membrane and flashings using equipment and methods recommended in writing by cleaning equipment manufacturer for specific application. Utilize rotating wash head equipment operated at not less than 2,000 psi. Use equipment utilizing vacuum removal of wash water and residues.

3.03 DISPOSAL

- A. Collect cleaning water and associated cleaning compounds and residual material and process to meet US EPA and local environmental requirements for legal discharge.

END OF SECTION 070150.16

SECTION 07 0150.19 PREPARATION FOR RE-ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Partial replacement, patching and flashing of existing roofing system in preparation for fluid applied coating system in designated areas as indicated on drawings.
- B. PVC roofing membrane, mechanically fastened conventional application.
- C. Insulation, flat and tapered.
- D. Flashings.
- E. Roofing stack boots.
- F. Temporary roofing protection.

1.02 RELATED REQUIREMENTS

- A. Section 00 3100 - Available Project Information: Roofing Field Report.
- B. Section 01 2200 - Unit Prices: Unit Price for Partial Roofing Replacement.

1.03 REFERENCE STANDARDS

- A. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2016.
- B. ASTM C1153 - Standard Practice for Location of Wet Insulation in Roofing Systems Using Infrared Imaging; 2010 (Reapproved 2015).

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate with affected mechanical and electrical work associated with roof penetrations.
- B. Schedule work to coincide with commencement of installation of new roofing system.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit for each type of material.
- C. Installer's Qualification Statement.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.
 - 1. When same installer as new roofing system, comply with related requirements of section indicated for new roofing system.
- B. Preconstruction Testing: Conduct testing by an independent test agency, in accordance with provisions of Section 01 4000 - Quality Requirements.
 - 1. Infrared Roof Moisture Survey: Conduct ground-based, walk-over type survey of roofing system in accordance with ASTM C1153.
 - a. Conduct survey using non-destructive testing (NDT) procedures.
 - 2. Submit report of roofing survey including thermal images of suspect roof areas and corresponding daytime photos of these same areas.

1.07 FIELD CONDITIONS

- A. Existing Roofing System: PVC - Single-Ply roofing.
- B. Do not remove existing roofing membrane when weather conditions threaten the integrity of building contents or intended continued occupancy.
- C. Maintain continuous temporary protection prior to and during installation of new roofing system.
- D. Provide notice at least three days before starting activities that will affect normal building operations.
- E. Owner will occupy building areas directly below re-roofing area.
 - 1. Provide Owner with at least 48 hours written notice of roofing activities that may affect their operations and to allow them to prepare for upcoming activities as necessary.
 - 2. Do not disrupt Owner's operations or activities.
 - 3. Maintain access of Owner's personnel to corridors, existing walkways, and adjacent buildings.

SECTION 07 0150.19 PREPARATION FOR RE-ROOFING

1.08 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Existing Warranties: Perform this work using methods and materials that will maintain existing roof system warranties.
 - 1. Notify existing roof system warrantor prior to starting this work and obtain written instructions for procedures necessary to maintain this existing warranty.
 - 2. Upon completion of this work, notify warrantor of reroofing completion and obtain documentation to verify that existing roofing system has been inspected and warranty is still in effect.
 - a. Submit documentation upon project closeout.

PART 2 PRODUCTS

2.01 ROOFING

- A. PVC Membrane Roofing: One ply membrane, mechanically fastened, over insulation.

2.02 MATERIALS

- A. Patching Materials: Provide necessary materials in accordance with requirements of existing roofing system.
- B. Temporary Roofing Protection Materials:
 - 1. Contractor's responsibility to select appropriate materials for temporary protection of roofing areas as determined necessary for this work.

2.03 POLYISOCYANURATE (ISO) BOARD INSULATION: RIGID CELLULAR FOAM, COMPLYING WITH ASTM C1289.

- A. Classifications:
 - 1. Type II:
 - a. Class 2 - Faced with coated polymer-bonded glass fiber mat facers on both major surfaces of core foam.
 - b. Compressive Strength: Classes 1-2-3, Grade 2 - 20 psi (138 kPa), minimum.
 - c. Thermal Resistance, R-value: At 1-1/2 inch thick; Class 1, Grades 1-2-3 - 8.4 (1.48) at 75 degrees F.
 - 2. Tapered Board: Same classification as flat insulation. Slope as indicated; minimum thickness .5 inch; fabricate of fewest layers possible.

2.04 ACCESSORIES

- A. Fasteners: Type and size as required and compatible with existing and new roofing system to resist local wind uplift.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing roof surface has been cleared of materials being removed from existing roofing system and ready for next phase of work as required.

3.02 PREPARATION

- A. Sweep roof surface clean of loose matter.
- B. Remove loose refuse and dispose of properly off-site.

3.03 MATERIAL REMOVAL

- A. Remove only existing roofing materials that can be replaced with new materials the same day.
- B. Remove damaged insulation and fasteners, cant strips, blocking.

3.04 INSTALLATION

- A. Coordinate scope of this work with requirements for installation of new roof coating system, mechanical and structural work.

3.05 PROTECTION

- A. Provide protection of existing roofing system that is not having work performed on it.
- B. Provide temporary protective sheeting over uncovered deck surfaces.

SECTION 07 0150.19 PREPARATION FOR RE-ROOFING

- C. Install recover board over existing membrane.

END OF SECTION

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PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wet area removal and infill at indicated wet areas.
- B. Miscellaneous repairs and remedial work as required by manufacturer.
- C. Preparation of roof membrane for fluid applied system application.
- D. Application of reinforced fluid-applied roof membrane and flashings over existing mechanically attached PVC membrane roof.

1.02 RELATED REQUIREMENTS

- A. Section 00 3100 - Available Project Information: Roofing Field Reports.
- B. Section 07 0150.16 - Maintenance Cleaning of Membrane Roofing: Reclaimed water cleaning system for preparation of existing roof substrate.
- C. Section 07 0150.19 - Preparation for Re-Roofing:

1.03 REFERENCE STANDARDS

- A. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- B. ASTM D3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings; 2005 (Reapproved 2018).
- C. ASTM D2697 - Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings
- D. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings; 2020a.
- E. ASTM G152 - Standard Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
- F. ASTM G154 - Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials; 2016.
- G. ASTM G155 - Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials; 2013.

1.04 ROOFING CONFERENCES

- A. Roofing Rehabilitation Preinstallation Conference: Conduct conference at Project site. Review methods and procedures related to roofing system.
 - 1. Meet with Architect and Owner; roofing coating materials manufacturer's representative; roofing rehabilitation installer including project manager and foreman; and installers whose work interfaces with or affects rehabilitation including installers of roof accessories and roof-mounted equipment requiring removal and replacement as part of the Work.
 - 2. Review temporary protection requirements for existing roofing system that is to remain uncoated, during and after installation.
 - 3. Review methods and procedures related to re-coating preparation, including coating manufacturer's written instructions.
 - 4. Review roof drainage during each stage of coating and review roof drain plugging and plug removal procedures.
 - 5. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 6. Review base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect coating.
 - 7. Review HVAC shutdown and sealing of air intakes.
 - 8. Review shutdown of fire-suppression, fire-protection, fire-alarm and fire-detection systems.
 - 9. Review procedures for asbestos removal or unexpected discovery of asbestos-containing materials.
 - 10. Review governing regulations and requirements for insurance and certificates if applicable.
 - 11. Review existing conditions that may require notification of Owner before proceeding.

SECTION 07 0150.74 REHABILITATION OF SINGLE PLY ROOFING

1.05 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Roofing Coating Preparation: Existing roofing that is to remain and be prepared to accept restorative coating application.
- C. Patching: Removal of a portion of existing membrane roofing system from deck or removal of selected components and accessories from existing membrane roofing system and replacement with similar materials.
- D. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.
- E. Existing to Remain: Existing items of construction that are not indicated to be removed.

1.06 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating coating membrane materials, flashing materials, insulation, and fasteners.
- C. Shop Drawings: Indicate joint or termination detail conditions and conditions of interface with other materials.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Manufacturer's Installation Instructions: Include standard installation instructions, acceptable installation temperature range, and procedures for unusual perimeter conditions.
- F. Installer's Qualification Statement.
- G. Roofing Inspector Qualifications.
- H. Field Quality Control Test Report.
- I. Inspection Reports: Daily reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions required and carried out.
- J. Maintenance Data: To include in maintenance manuals.
- K. Warranty: Unexecuted sample copies of manufacturer and installer warranties.
- L. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.07 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a daily on-site supervisor with a minimum of three years' experience installing products similar to those specified, able to communicate verbally with Contractor, Architect, and employees, and the following:
 - 1. Qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. Roofing Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Part 3, Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. Roofing Inspector to be one of the following:
 - 1. An authorized full-time technical employee of the manufacturer.
 - 2. An independent party certified as a Registered Roof Observer by the Roof Consultants Institute, retained by the Contractor or the Manufacturer and approved by the Manufacturer.

1.08 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with rehabilitation work only when existing and forecasted weather conditions permit Work to proceed without water entering into existing roofing system or building.
 - 1. Store all materials prior to application at temperatures recommended by manufacturer.

SECTION 07 0150.74 REHABILITATION OF SINGLE PLY ROOFING

2. Apply coatings within range of ambient and substrate temperatures recommended by manufacturer.
 3. Do not apply roofing in snow, rain, fog, or mist.
 4. Do not apply roofing during moderate to high winds.
- B. Protect building to be rehabilitated, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from rehabilitation operations.
 - C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
 - D. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
 - E. Owner will occupy portions of building immediately below re-coating area. Conduct re-coating so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours notice of activities that may affect Owner's operations.

1.09 WARRANTY

- A. Manufacturer: Manufacturer's standard NDL warranty form, covering work of this Section, in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period.
 1. Warranty Period: 20 years from date of completion.
 2. Warranty must run for a continuous 20 years without need for renewal.
- B. Installer Warranty: Installer's warranty signed by Installer, covering the Work of this Section, on form acceptable to Roofing Manufacturer and Owner.
 1. Warranty Period: 2 years from date of completion.
- C. Manufacturer Inspection Services: Coordinated by manufacturer and performed by manufacturer's technical representative. Inspection will result in a report of maintenance responsibilities necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the base bid. Resulting maintenance requirements is the responsibility of the Owner.
 1. Inspections to occur in following years: 2, 5, 10, and 15 following substantial completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design: Tremco, Inc; AlphaGuard BIO BC (base coat) and AlphaGuard BIO (top coat) that are named in Part 2 articles: www.tremcoroofing.com
- B. Garland; Garland Liqui-Tec base and top coats: www.garlandco.com
- C. Or Approved Equals in accordance with Substitutions: See Section 01 6000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

- A. General Performance: Rehabilitated roofing to withstand exposure to weather without failure or leaks due to defective manufacture or installation.
 1. Accelerated Weathering: Roofing system to withstand 5000 hours of exposure when tested according to **ASTM G 152**, ASTM G154, or ASTM G155.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.
- C. Exterior Fire-Test Exposure: Roofing system exterior fire-test exposure performance following application of rehabilitation coating shall be not be less than that of the preredhabilitated roof performance when tested in accordance with ASTM E108, based upon manufacturer's tests of identical applications.

2.03 MATERIALS, GENERAL

- A. General: Rehabilitation materials recommended by roofing system manufacturer for intended use and compatible with components of existing membrane roofing system.
- B. Infill Materials: Where required to replace test cores and to patch existing roofing, use infill materials matching existing membrane roofing system materials, unless otherwise indicated.

SECTION 07 0150.74 REHABILITATION OF SINGLE PLY ROOFING

- C. Temporary Roof Drainage: Design and selection of materials for temporary roof drainage are responsibilities of the Contractor.

2.04 FLUID-APPLIED ROOFING MEMBRANE COATING

- A. Polyurethane Elastomeric Fluid-Applied System: Two-coat fluid-applied roofing membrane formulated for application over prepared existing roofing substrate.
 - 1. Polyurethane roof coating system base coat, bio-based, low-odor low-VOC two-part, for use with a compatible top coat.
 - a. Basis of Design: Tremco, AlphaGuard BIO Base Coat.
 - b. Minimum Thickness, Base Coat reinforced over PVC Roofing: 48 mils (1.21 mm) dry.
 - 2. Polyurethane roof coating system top coat, bio-based low-odor low-VOC two-part, for application over compatible base coat.
 - a. Basis of Design: Tremco, AlphaGuard BIO Top Coat.
 - b. Minimum Thickness: 32 mils (0.81 mm) dry.
 - c. Color: White
 - 3. Primer for Asphaltic and Single-Ply Membranes: Water-based, polymer-modified quick-dry low odor primer.
 - a. Basis of Design: Tremco, AlphaGuard WB Primer.
 - 4. Primer for Non-Porous Surfaces: Single-part, water based primer to promote adhesion of urethanes to metals, PVC vent stack and other non-porous surfaces.
 - a. Basis of Design: Tremco, AlphaGuard M-Prime.
 - 5. Primer for Intercoat and Substrate Adhesion: Single-part, quick-drying primer to promote adhesion of urethane products to previous urethane coats and to other approved surfaces.
 - a. Basis of Design: Tremco, Geogard Primer.
 - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 5 g/L.
 - c. Coverage Rate, 400 sq. ft/ gal.: 4 mils (0.10 mm) wet.
- B. Fluid-Applied Roofing Reinforcing Fabric:
 - 1. Polyester Reinforcing and Protection Fabric: 100 percent stitch-bonded .

2.05 AUXILIARY ROOFING REHABILITATION MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with existing roofing system and roofing coating system.
- B. Seam Reinforcing Fabric:
 - 1. Polyester Reinforcing and Protection Fabric: 100 percent stitch-bonded mildew-resistant polyester fabric intended for reinforcement of compatible fluid-applied membranes and flashings.
 - a. Basis of Design: Tremco, Permafab.
 - b. Weight: 3 oz./sq. yd (102 g/sq. m).
- C. Joint Sealant: Elastomeric joint sealant compatible with applied coating, with movement capability appropriate for application.
 - 1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
- D. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.

2.06 WALKWAYS

- A. Slip Resistant Product for Fluid-Applied Walkways:
 - 1. Full reinforcement fabric in areas of walkways indicated on drawings.
 - 2. Aggregate, Slip Resistant Silica Sand: Silica sand, broadcast into fluid-applied roof coating products for use as aggregate fill for slip-resistant, abrasion-resistant coating applications.
 - a. Aggregate: Slip Resistant Silica Sand.
 - b. Size: 20 - 40 mesh.
 - c. Application Rate: Minimum 20 lb/100 sq ft (1 k/m²).
 - 3. Provide in contrasting color to top coat to identify areas of extra protection and slip resistance..

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine existing roofing substrates, with Installer present, for compliance with requirements and for other conditions affecting application and performance of roof coatings.
 - 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance.
 - 2. Verify compatibility with and suitability of substrates.
 - 3. Verify that substrates are visibly dry and free of moisture.
 - 4. Verify that existing roofing membrane surfaces have adequately aged to enable proper bond with base coat.
 - 5. Verify that existing roofing membrane is free of blisters, splits, open laps, indications of shrinkage, and puncture damage or other indications of impending roof system failure.
 - 6. Commencing application of coatings indicates acceptance of surfaces and conditions.

3.02 PREPARATION

- A. Shut down air intake equipment in vicinity of Work in coordination with Owner. Cover air intake louvers before proceeding with coating work that may affect indoor air quality or activate smoke detectors in the ductwork.
 - 1. Verify rooftop utilities and service piping affected by the Work have been shut off before commencing Work.
- B. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
 - 1. Do not permit water to enter into or under existing membrane roofing system components that are to remain.

3.03 ROOFING COATING PREPARATION

- A. Removal of Wet Insulation: Remove portions of roofing membrane with underlying wet insulation. Remove wet insulation, fill in tear-off areas to match existing insulation and membrane, and prepare patched membrane for application of roof coating.
- B. Repair of Ponding Areas: Repair areas indicated as ponding areas or areas of inadequate drainage by removing roof membrane, adding additional insulation as required to provide minimum slopes to drain required by roofing rehabilitation coating manufacturer, and replace membrane with material matching existing. Submit photographic report indicating compliance.
 - 1. Refer to drawings for drain locations and tapered saddles.
- C. Membrane Surface Preparation:
 - 1. Remove walkway pads from existing roofing membrane.
 - 2. Remove blisters, ridges, buckles, roofing membrane fastener buttons projecting above the membrane, and other substrate irregularities from existing roofing membrane that would inhibit application of uniform, waterproof coating.
 - 3. Substrate Cleaning: Clean substrate in accordance with requirements of Section 070150.16 - Maintenance Cleaning of Membrane Roofing.
 - 4. Verify existing substrate is dry before proceeding with application of coating. Spot check substrates with an electrical capacitance moisture-detection meter.
 - 5. Verify adhesion of new products.
- D. Existing Flashing and Detail Preparation: Repair flashings, gravel stops, copings, and other roof-related sheet metal and trim elements. Reseal joints, replace loose or missing fasteners, and replace components where required to leave in a watertight condition.
 - 1. Do not damage metal counterflashings that are to remain. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish.
 - 2. Roof Drains: Remove drain strainer and clamping ring. Grind metal surfaces down to clean, bare, metal.
- E. Surface Priming: Prime surfaces to receive fluid-applied coating using coating manufacturer's recommended product for surface material. Apply at application rate recommended by manufacturer.
 - 1. Ensure primer does not puddle and substrate has complete coverage.

SECTION 07 0150.74 REHABILITATION OF SINGLE PLY ROOFING

2. Allow to cure completely prior to application of base coating.
- F. Membrane Repair: Repair membrane at locations with irregularities using seam sealer mastic and reinforcing fabric.
- G. Membrane Seam Reinforcement: Reinforce membrane seams using seam sealer mastic and reinforcing fabric of width specified; center reinforcing fabric on seam.

3.04 FLUID-APPLIED FLASHING APPLICATION

- A. Fluid-Applied Flashing and Detail Base Coat Application: Complete base coat and fabric reinforcement at parapets, curbs, penetrations, and drains prior to application of field of fluid-applied membrane. Apply base coat in accordance with manufacturer's written instructions.
 1. Apply base coat on prepared and primed surfaces and spread coating evenly. Extend coating minimum of 8 inches up vertical surfaces and 4 inches onto horizontal surfaces.
 2. Back roll to achieve minimum coating thickness indicated in Part 2 - PRODUCTS, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 3. Reinforcing Fabric: Embed fabric reinforcement into wet base coat. Lap adjacent flashing pieces of fabric minimum 3 inches along edges and 6 inches at end laps.
 - a. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.
 4. Roof Drains: Install base coat onto surrounding membrane surface and metal drain bowl flange. Install target piece of fabric reinforcement immediately into wet base coat and roll to fully embed and saturate fabric. Reinstall clamping ring and strainer following application of top coat. Replace broken drain ring clamping bolts.

3.05 FLUID-APPLIED MEMBRANE APPLICATION

- A. Fluid-Applied Membrane Base Coat: Apply base coat to field of membrane in accordance with manufacturer's written instructions.
 1. Apply base coat on prepared and primed surfaces and spread coating evenly.
 2. Back roll to achieve minimum coating thickness indicated in Part 2 - PRODUCTS, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 3. Reinforcing Fabric: Embed fabric reinforcement into wet base coat. Lap adjacent flashing pieces of fabric minimum 3 inches along edges and 6 inches at end laps.
 - a. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.
- B. Fluid-Applied Membrane Top Coat: Apply top coat to field of membrane and flashings uniformly in a complete, continuous installation.
 1. Allow base coat to cure prior to application of top coat.
 2. Following curing of base coat and prior to application of top coat, sand raised or exposed edges of fabric reinforcement.
 3. Prime base coat prior to application of top coat if top coat is not applied within 72 hours of the base coat application, using manufacturer's recommended primer.
 4. Apply top coat extending coating up vertical surfaces and out onto horizontal surfaces. Install top coat over field base coat and spread coating evenly.
 5. Back roll to achieve minimum coating thickness indicated in Part 2 - PRODUCTS, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 6. Avoid foot traffic on new fluid-applied membrane for a minimum of 24 hours.
- C. Slip-Resistant Walkway Topcoat: Apply walkway second topcoat following application and curing of top coat. Locate as indicated on Drawings.
 1. Mask walkway location with tape.
 2. Prime first top coat prior to application of walkway top coat if walkway top coat is not applied within 72 hours of the first top coat application, using manufacturer's recommended primer.
 3. Apply walkway topcoat and back roll to achieve minimum coating thickness indicated in Part 2 - PRODUCTS, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses. Provided in contrasting color to original top coat.

SECTION 07 0150.74 REHABILITATION OF SINGLE PLY ROOFING

4. Broadcast Slip-Resistant Top Coat Aggregate in wet top coat at rate indicated in Part 2 - PRODUCTS listing or as otherwise recommended by coating manufacturer.
 - a. Back roll sand and top coat creating even dispersal of sand. Remove masking immediately.

3.06 FIELD QUALITY CONTROL

- A. Roof Inspection: Contractor shall engage roofing system manufacturer's technical personnel to inspect roofing installation, and submit report to the Architect and Owner. Notify Architect and Owner 48 hours in advance of dates and times of inspections. Inspect work as follows:
 1. Upon completion of preparation of first component of work, prior to application of re-coating materials.
 2. Following application of re-coating to flashings and application of base coat to field of roof.
 3. Upon completion of re-coating but prior to re-installation of other roofing components.
- B. Repair fluid-applied membrane where test inspections indicate that they do not comply with specified requirements.
- C. Arrange for additional inspections, at Contractor's expense, to verify compliance of replaced or additional work with specified requirements.

3.07 PROTECTING AND CLEANING

- A. Demolished materials to be removed from Project site.
- B. Protect roofing system from damage and wear during remainder of construction period.
- C. Correct deficiencies in or remove coating that does not comply with requirements, repair substrates, and reapply coating.
- D. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION

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SECTION 07 6200 SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including flashings and counterflashings.
- B. Sealants for joints within sheet metal fabrications.

1.02 REFERENCE STANDARDS

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2020.
- B. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- D. CDA A4050 - Copper in Architecture - Handbook; current edition.
- E. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

1.04 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.
- B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with 10 years of documented experience.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Anodized Aluminum: ASTM B209/B209M, 3005 alloy, H12 or H14 temper; 20 gauge, 0.032 inch thick; clear anodized finish.
 - 1. Clear Anodized Finish: AAMA 611, AA-M12C22A41, Class I, clear anodic coating not less than 0.7 mil, 0.0007 inch thick.

2.02 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- E. Fabricate corners from one piece with minimum 18-inch long legs; seam for rigidity, seal with sealant.

2.03 ACCESSORIES

- A. Fasteners: Stainless steel, with soft neoprene washers.
- B. Primer Type: Zinc chromate.
- C. Concealed Sealants: Non-curing butyl sealant.
- D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.

PART 3 EXECUTION

3.01 PREPARATION

- A. Install surface mounted reglets true to lines and levels, and seal top of reglets with sealant.

3.02 INSTALLATION

- A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted..

SECTION 07 6200 SHEET METAL FLASHING AND TRIM

- B. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- C. Seal metal joints watertight.

END OF SECTION

CAPITAL AREA TRANSPORTATION AUTHORITY CATA FLUID-APPLIED ROOF RESTORATION

420 S. GRAND AVE AND 4615 TRANTER ST LANSING, MI 48933 AND 48910

DRAWING INDEX

GENERAL
TD001 TITLE DRAWING

ARCHITECTURAL
A101 ROOF PLAN - CTC
A102 ROOF PLAN - TRANTER

progressive | ae

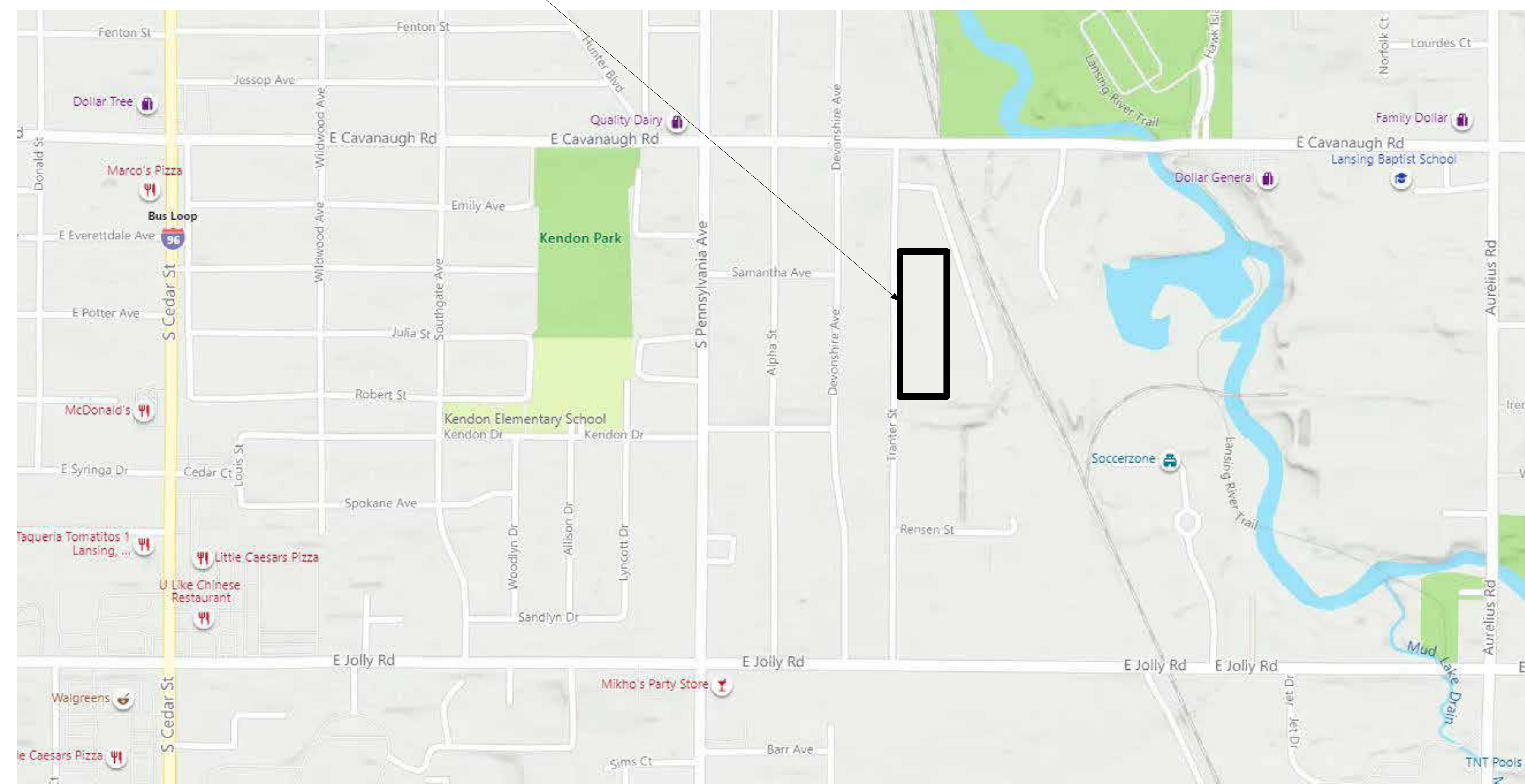
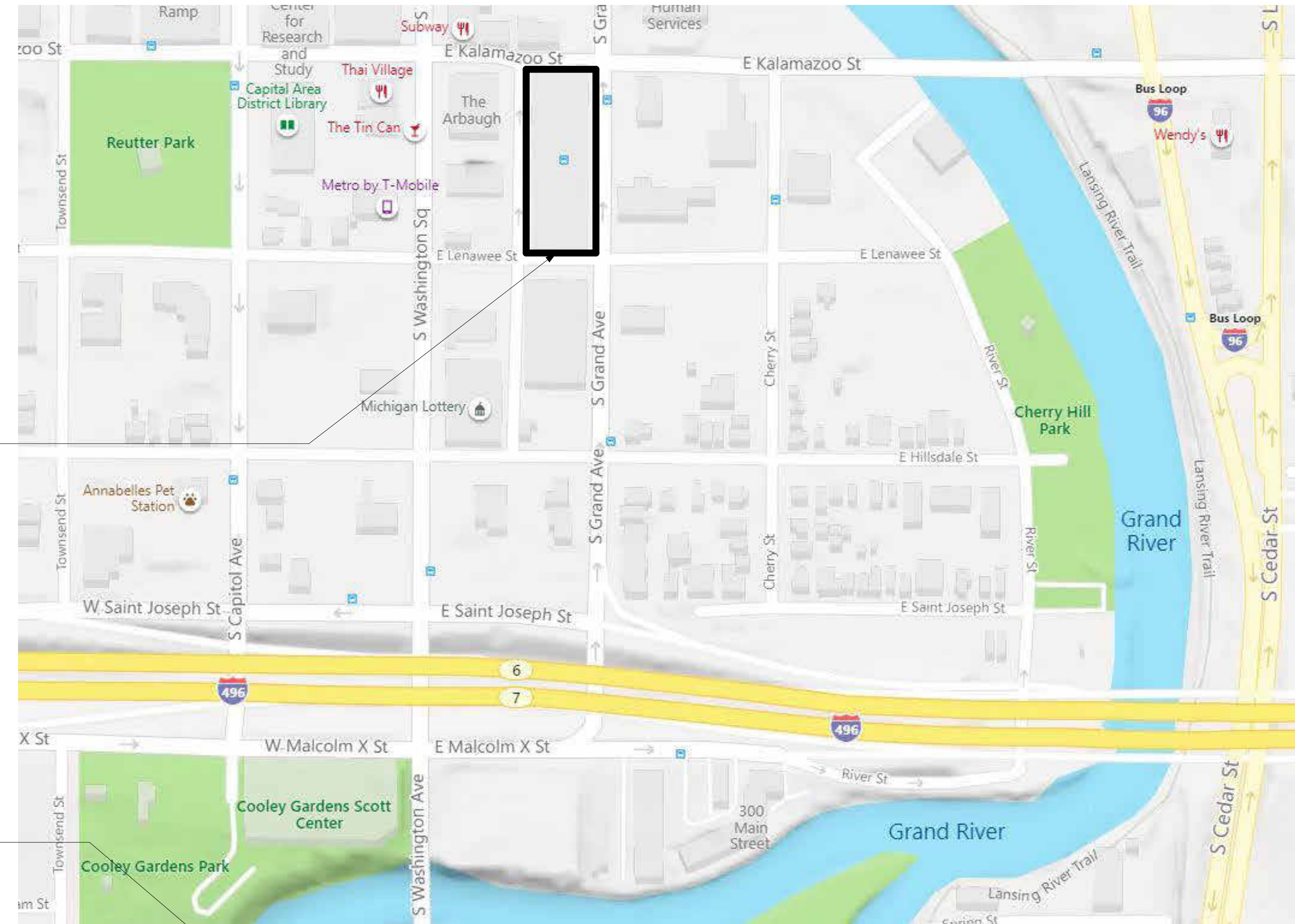
CAPITAL AREA TRANSPORTATION AUTHORITY
CATA FLUID-APPLIED ROOF RESTORATION

1811 4 Mile Rd NE Grand Rapids, MI 49525 616.361.2964 www.progressiveae.com

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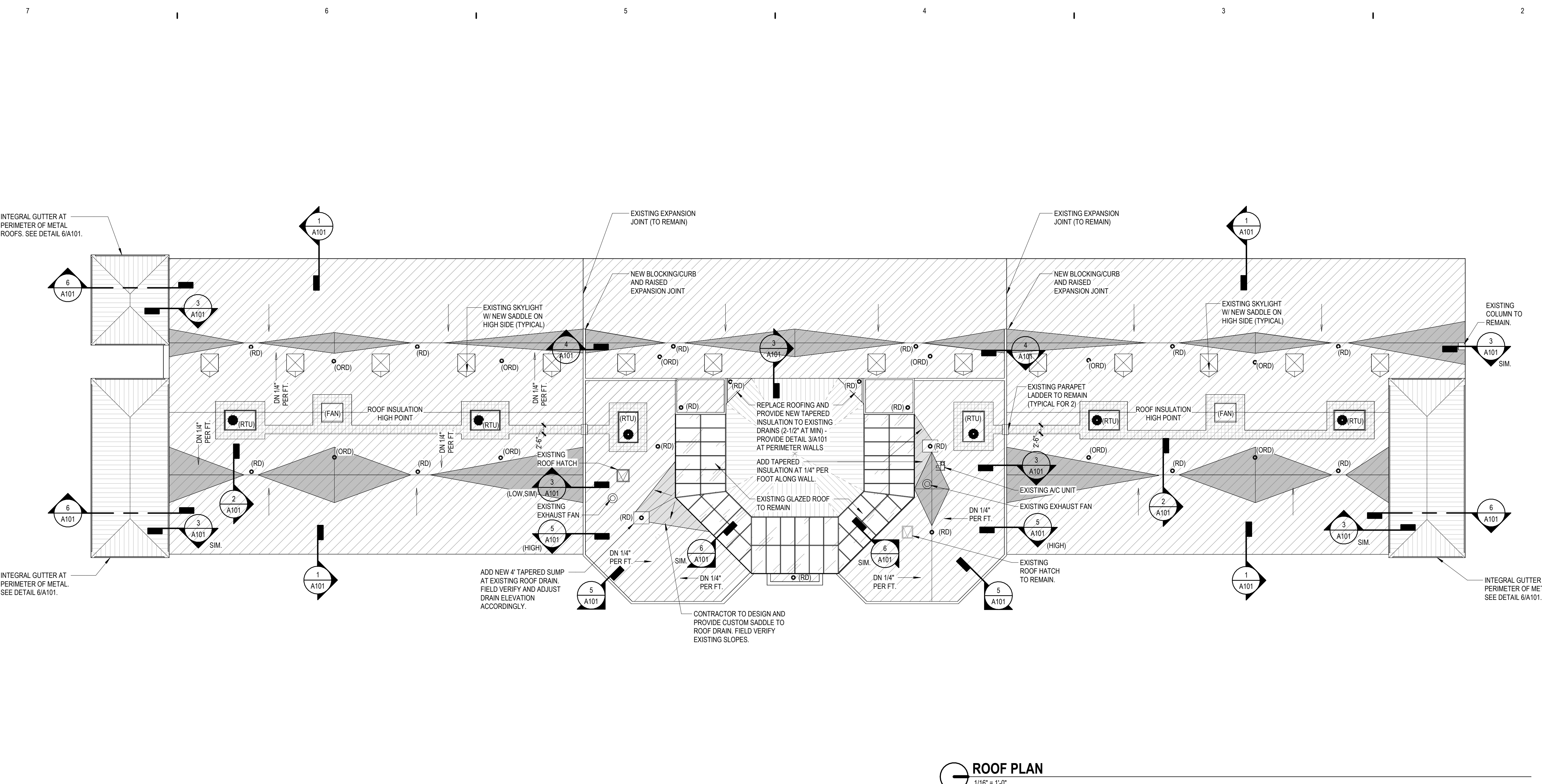
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ISSUANCE
BIDS AND CONSTRUCTION
4/18/2024

REVISIONS
NO. DATE DESCRIPTION

FILE NUMBER 7882019
PROJECT MANAGER SEH
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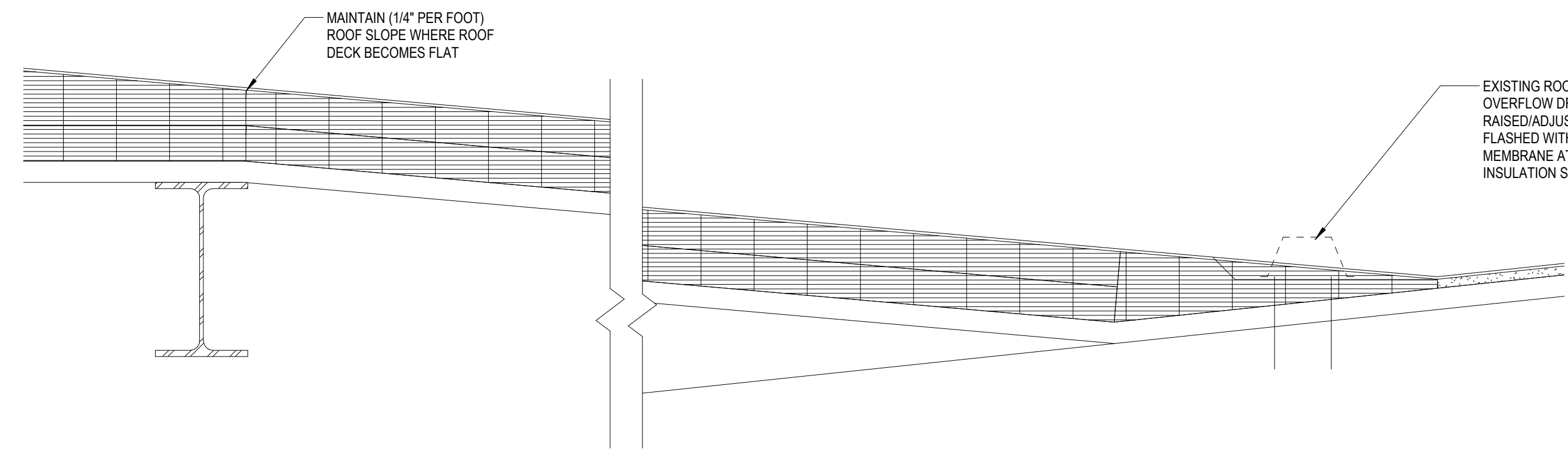
TITLE DRAWING
TD001



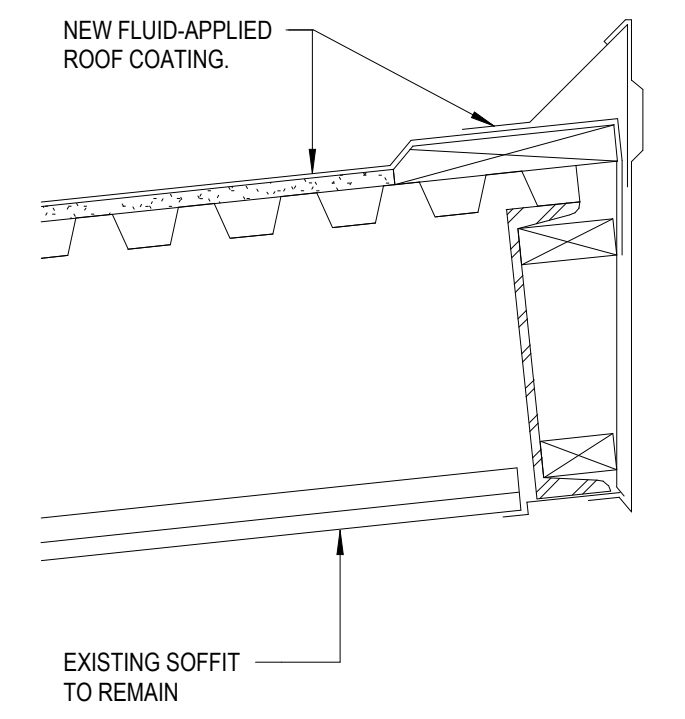
ROOF PLAN
1/16" = 1'-0"

- GENERAL NOTES**
- EXISTING BUILDING CONDITIONS ARE BASED ON OWNER-PROVIDED DRAWINGS AND FIELD VERIFICATION. VERIFY EXACT LOCATIONS AND CONDITIONS IN FIELD PRIOR TO CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, NOTIFY ARCHITECT FOR CLARIFICATION.
 - PATCH ALL DISTURBED EXISTING SURFACES WITH MATERIALS TO MATCH EXISTING ADJACENT SURFACE CONSTRUCTION UNLESS NOTED OTHERWISE.
 - ROOF DRAINS ARE SHOWN BASED ON FIELD OBSERVATIONS AND EXISTING DRAWINGS. EXACT LOCATIONS ARE TO BE FIELD-VERIFIED. MAINTAIN ANY ADDITIONAL EXISTING SCUPPERS AND DRAINS THAT ARE NOT SHOWN HERE.
 - REMOVE ROOF VENTS AND PATCH ROOFING - TYPICAL ALL LOCATIONS.
 - WHERE DECORATIVE LIGHTS EXIST AT PARAPETS AND PERIMETER EDGES, REMOVE AND REINSTALL FOR FLUID-APPLIED COATING APPLICATION. COORDINATE WITH OWNER.
 - ADJUST MECHANICAL EQUIPMENT, ROOF AND OVERFLOW DRAIN ELEVATION IN COORDINATION WITH TAPERED INSULATION.
 - CONTRACTOR TO CONDUCT A THERMAL SCAN MOISTURE SURVEY TO DETERMINE EXTENT OR INSULATION REPLACEMENT (SEE SPECIFICATIONS).

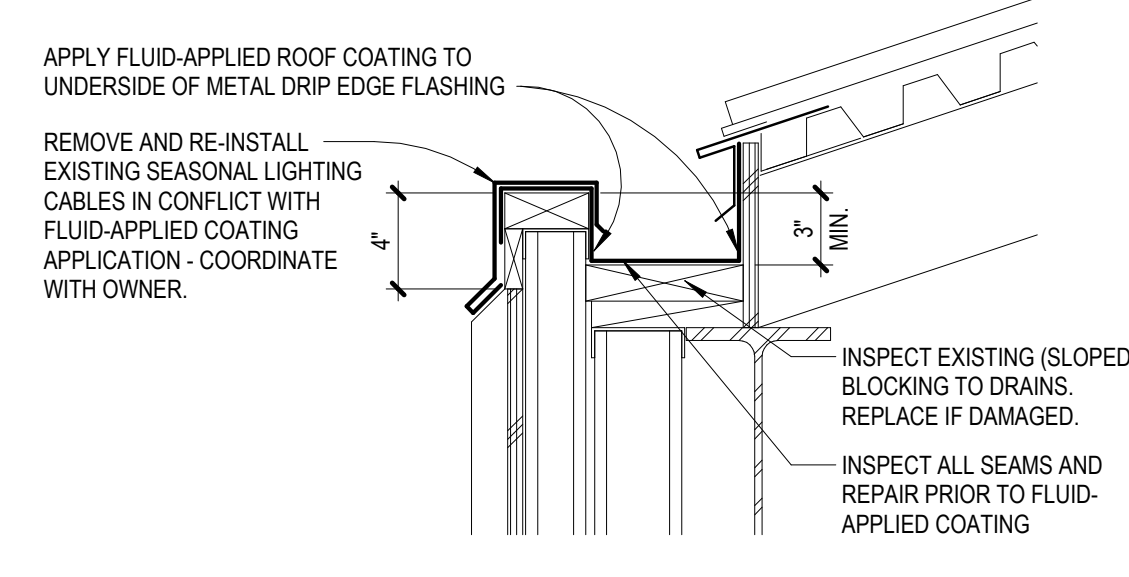
- ROOF LEGEND**
- EXISTING ROOF TO REMAIN
 - FLUID-APPLIED ROOF MEMBRANE COATING OVER EXISTING PVC MEMBRANE. COATING TO EXTEND TO UNDERSIDE OR OUTSIDE FACE OF ROOF EDGE FLASHING.
 - INDICATES DIRECTION OF SLOPE. 1/4" PER FOOT UNLESS NOTED OTHERWISE
 - INDICATES TAPERED INSULATION SADDLE/CRICKET - CUT AND PATCH EXISTING PVC MEMBRANE TO INSTALL TAPERED INSULATION DIRECTLY OVER EXISTING INSULATION.
 - EXISTING METAL ROOF PANELS
 - FLUID-APPLIED COATING WITH INTEGRAL TRACTION CONTROL SURFACE.
 - PRIMARY ROOF DRAIN
 - SECONDARY (OVERFLOW) ROOF DRAIN



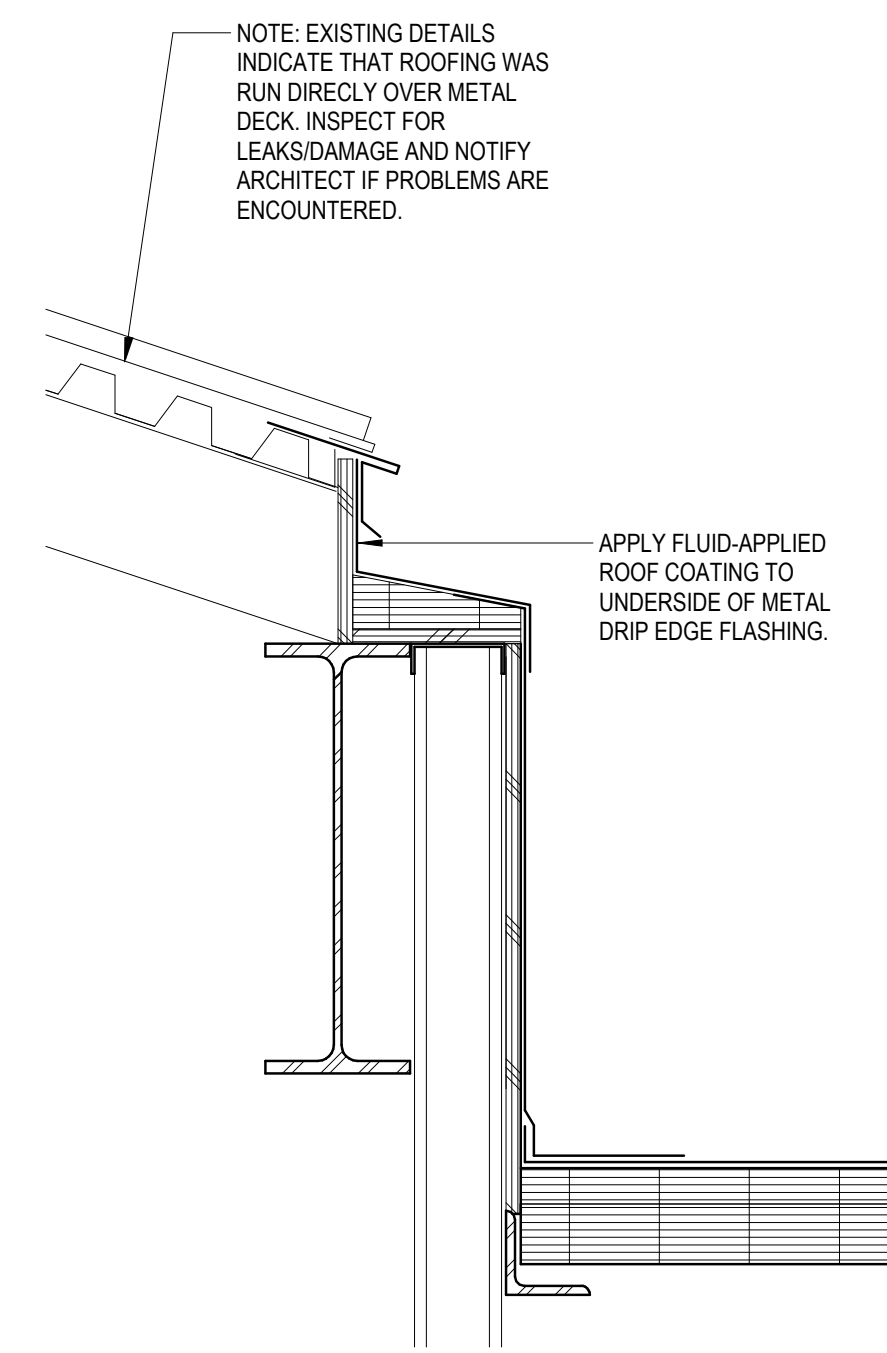
2 CTC - INSULATION TRANSITION DETAIL
1 1/2" = 1'-0"



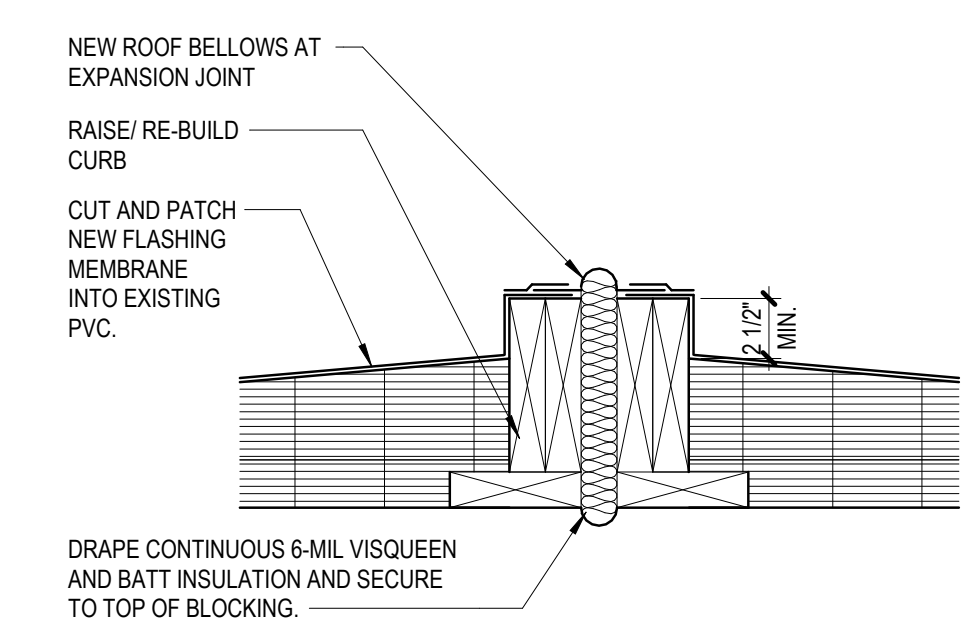
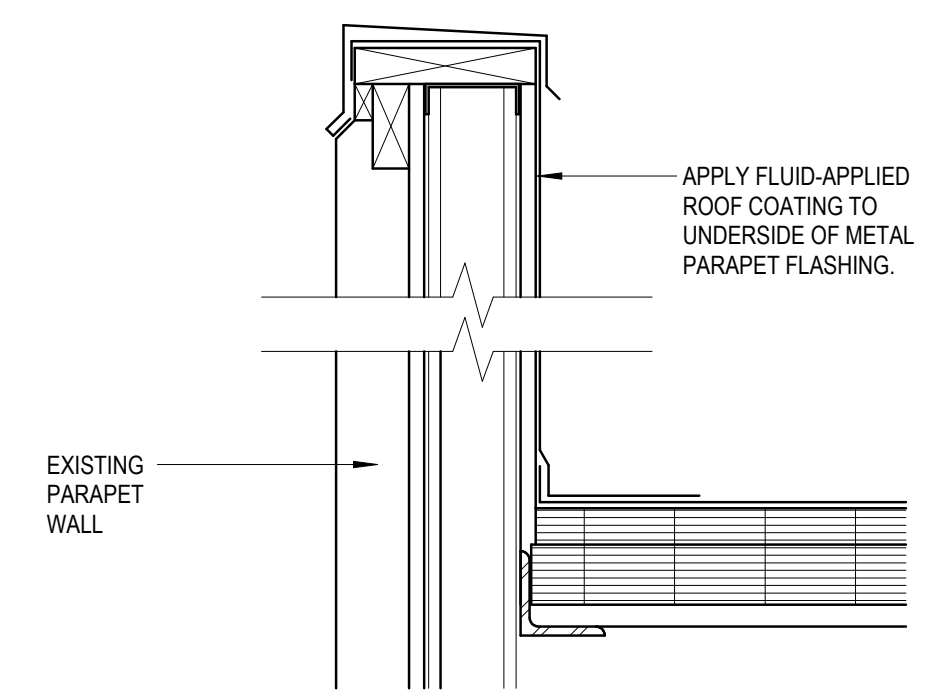
1 CTC - ROOF EDGE DETAIL
1 1/2" = 1'-0"



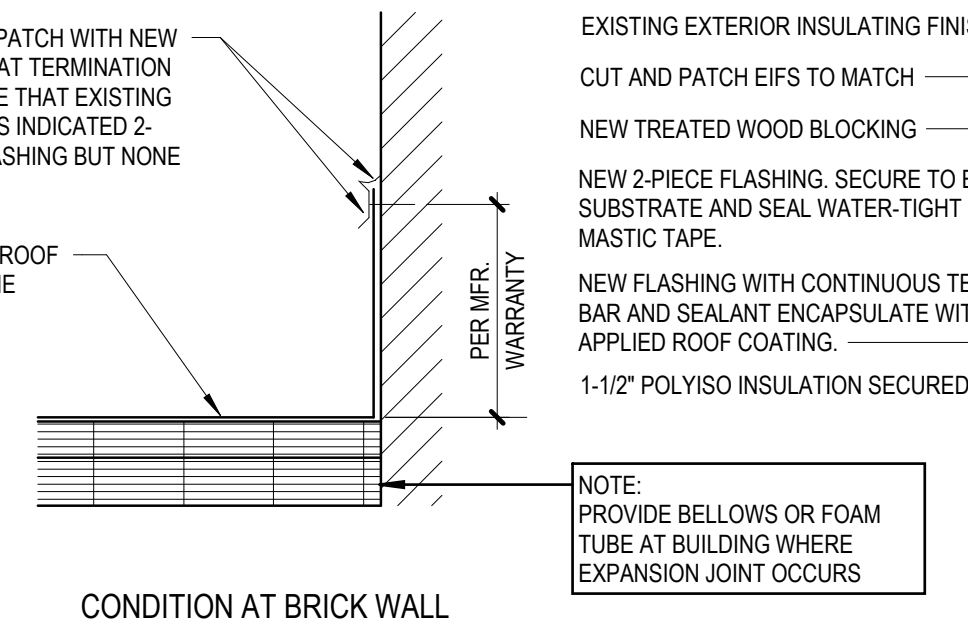
6 CTC - ROOF TERMINATION METAL ROOF
1 1/2" = 1'-0"



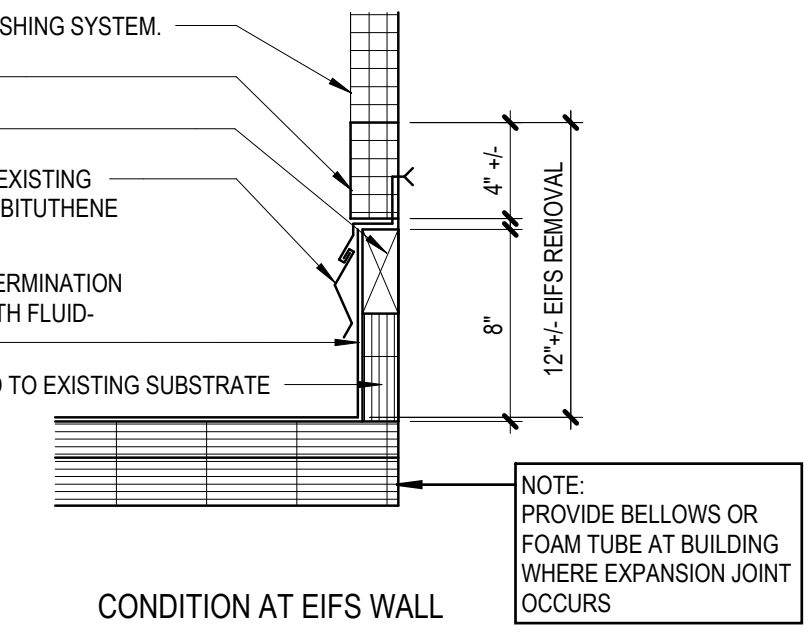
5 CTC - ROOF TERMINATION AT PARAPET
1 1/2" = 1'-0"



4 CTC - ROOF DETAIL AT EXPANSION JOINT
1 1/2" = 1'-0"



3 CTC - ROOF TERMINATION DETAILS
1 1/2" = 1'-0"



4/18/2024, 10:45:59 AM
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 A101
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ROOF LEGEND

EXISTING ROOF TO REMAIN

FLUID-APPLIED ROOF MEMBRANE COATING OVER EXISTING PVC MEMBRANE. COATING TO EXTEND TO UNDERSIDE OR OUTSIDE FACE OF ROOF EDGE FLASHING.

ROOF SLOPE → INDICATES DIRECTION OF SLOPE - 1/4" PER FOOT UNLESS NOTED OTHERWISE

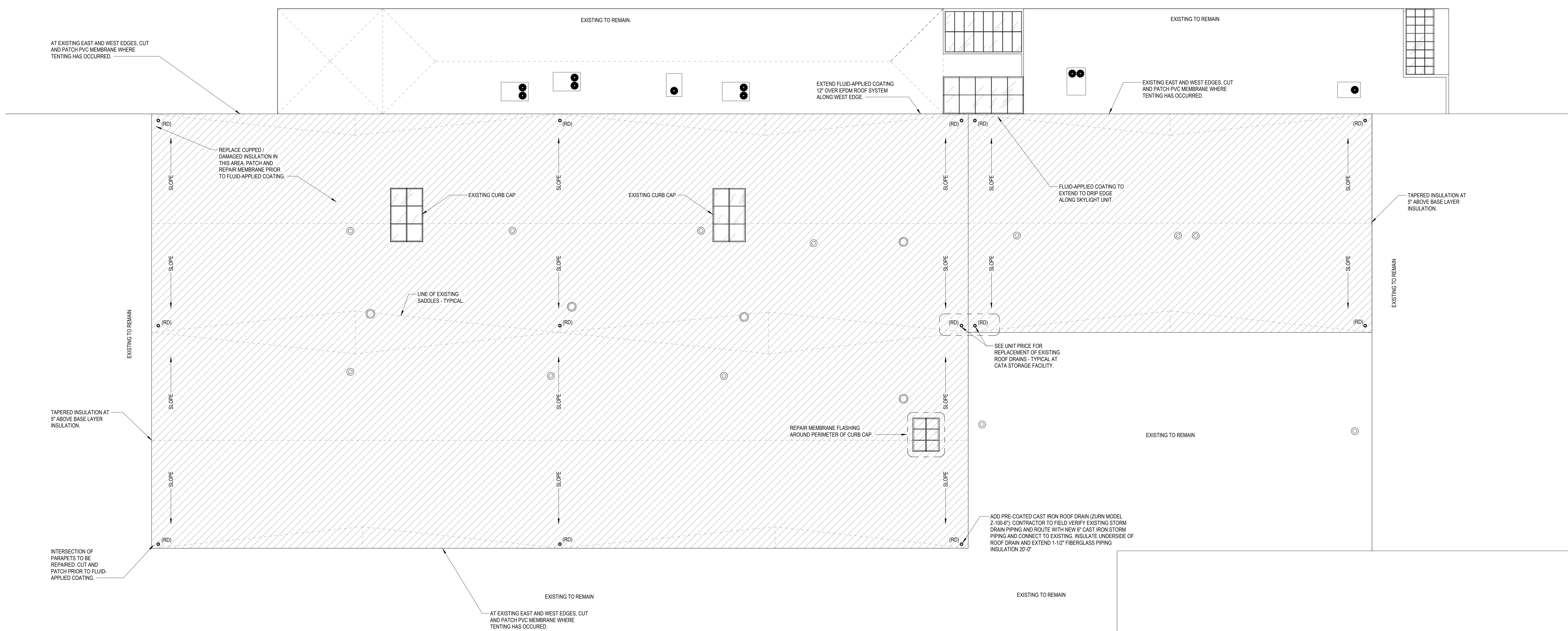
INDICATES TAPERED INSULATION SADDLE/CRICKET - CUT AND PATCH EXISTING PVC MEMBRANE TO INSTALL TAPERED INSULATION DIRECTLY OVER EXISTING INSULATION.

EXISTING METAL ROOF PANELS

FLUID-APPLIED COATING WITH INTEGRAL TRACTION CONTROL SURFACE.

PRIMARY ROOF DRAIN (RD)

SECONDARY (OVERFLOW) ROOF DRAIN (ORD)



ROOF PLAN
1/16" = 1'-0"

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 35
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