



BOARD OF SUPERVISORS AGENDA ITEM REPORT
CONTRACTS / AWARDS / GRANTS

☒ Award ☐ Contract ☐ Grant

Requested Board Meeting Date: 11/19/19

** = Mandatory, information must be provided*

or Procurement Director Award ☐

***Contractor/Vendor Name/Grantor (DBA):**

VSS International, Inc. (Headquarters: Sacramento, CA); Southern Arizona Paving & Construction Co.
(Headquarters: Tucson, AZ)

***Project Title/Description:**

Pavement Preservation - Seal Coat

***Purpose:**

Award: Master Agreement No. MA-PO-20-074. This Master Agreement is for an initial term of one (1) year in the annual shared award amount not to exceed \$5,000,000.00 (including sales tax) and includes four (4) one-year renewal options. Administering Department: Transportation.

***Procurement Method:**

Pursuant to Pima County Procurement Code 11.12.010, Competitive sealed bidding, Solicitation No. IFB-PO-2000019 was conducted. Two (2) responses were received. Award is to the lowest, responsive and responsible bidders.

PRCUID: 349665

Attachments: Notice of Recommendation for Award and Master Agreement

***Program Goals/Predicted Outcomes:**

Project will allow for pavement preservation treatment of roadways within Pima County for up to five (5) years.

***Public Benefit:**

Existing Roadways identified will receive pavement preservation treatments for use by the traveling public. Pavement preservations treatments extend the life of the pavement and allow for a higher return on investment.

***Metrics Available to Measure Performance:**

Identified roadways will receive specified pavement preservation treatments within the Contract term.

***Retroactive:**

No.

Contract / Award Information

Document Type: MA Department Code: PO Contract Number (i.e., 15-123): 20-074
Effective Date: 11/19/19 Termination Date: 11/18/20 Prior Contract Number (Synergen/CMS): _____
☒ Expense Amount: \$* 5,000,000.00 ☐ Revenue Amount: \$ _____

*Funding Source(s) required: Various Funds

Funding from General Fund? ☐ Yes ☒ No If Yes \$ _____ % _____

Contract is fully or partially funded with Federal Funds? ☐ Yes ☒ No

If Yes, is the Contract to a vendor or subrecipient? _____

Were insurance or indemnity clauses modified? ☐ Yes ☒ No

If Yes, attach Risk's approval.

Vendor is using a Social Security Number? ☐ Yes ☒ No

If Yes, attach the required form per Administrative Procedure 22-10.

Amendment / Revised Award Information

Document Type: _____ Department Code: _____ Contract Number (i.e., 15-123): _____
Amendment No.: _____ AMS Version No.: _____
Effective Date: _____ New Termination Date: _____
Prior Contract No. (Synergen/CMS): _____

☐ Expense or ☐ Revenue ☐ Increase ☐ Decrease Amount This Amendment: \$ _____

Is there revenue included? ☐ Yes ☐ No If Yes \$ _____

*Funding Source(s) required: _____

Funding from General Fund? ☐ Yes ☐ No If Yes \$ _____ % _____

Grant/Amendment Information (for grants acceptance and awards) ☐ Award ☐ Amendment

Document Type: _____ Department Code: _____ Grant Number (i.e., 15-123): _____
Effective Date: _____ Termination Date: _____ Amendment Number: _____
☐ Match Amount: \$ _____ ☐ Revenue Amount: \$ _____

*All Funding Source(s) required: _____

*Match funding from General Fund? ☐ Yes ☐ No If Yes \$ _____ % _____

*Match funding from other sources? ☐ Yes ☐ No If Yes \$ _____ % _____

*Funding Source: _____

*If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)? _____

Contact: Matthew Sage, CPPB 11/19 11/19
Department: Procurement 11/19 Telephone: 520-724-8586
Department Director Signature/Date: [Signature] 11/04/19
Deputy County Administrator Signature/Date: [Signature] 11/6/19
County Administrator Signature/Date: [Signature] 11/6/19
(Required for Board Agenda/Addendum Items)



NOTICE OF RECOMMENDATION FOR AWARD

Date of Issue: October 29, 2019

The Procurement Department hereby issues formal notice to respondents to Solicitation No. IFB-PO-2000019 for Pavement Preservation – Seal Coat that the following listed respondents will be recommended for award as indicated below. The award action is scheduled to be performed by the Board of Supervisors on or after November 19, 2019.

Award is recommended to the lowest, responsive and responsible Bidders:

<u>AWARDEE NAME</u>	<u>BID AMOUNT</u>	<u>SHARED ANNUAL AWARD AMOUNT</u>
VSS International, Inc.	\$6,191,612.00	\$5,000,000.00

Southern Arizona Paving & Construction Co. \$9,649,228.00

Issued by: Matthew Sage, CPPB; Procurement Officer

Telephone Number: (520) 724-8586

This notice is in compliance with Pima County Procurement Code §11.12.010(C) and §11.20.010(C).

Copy to: Pima County SBE via e-mail at SBE@pima.gov.



MASTER AGREEMENT

PIMA COUNTY, ARIZONA

THIS IS NOT AN ORDER - TRANSMISSION CONSTITUTES
CONTRACT EXECUTION

Master Agreement No: 2000000000000000074

MA Version: 1

Page: 3 of 4

Description: Pavement Preservation - Seal Coat

I S S U E R	<p>Pima County Procurement Department 130 W. Congress St. 3rd Fl Tucson AZ 85701</p> <p>Issued By: MATTHEW SAGE Phone: 5207248586 Email: matthew.sage@pima.gov</p>
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T E R M S	<p>Initiation Date: 11-19-2019 Expiration Date: 11-18-2020</p> <table><tr><td>NTE Amount:</td><td></td></tr><tr><td>Used Amount:</td><td>\$0.00</td></tr></table>	NTE Amount:		Used Amount:	\$0.00
NTE Amount:					
Used Amount:	\$0.00				

V E N D O R	<p>VSS International, Inc. 3785 Channel Drive West Sacramento CA 95691</p> <p>Contact: Jeff Roberts Phone: 916-373-1500 Email: vssi_contracts@slurry.com Terms: 0.00 % Days: 30</p>
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Shipping Method:

Delivery Type:

FOB:

Modification Reason

This Master Agreement is for an initial term of one-year in the annual shared amount of \$5,000,000.00 and includes four (4) one-year renewal options.

Attachment: Offer Agreement

This Master Agreement incorporates the attached documents, and by reference all instructions, Standard Terms and Conditions, Special Terms and Conditions, and requirements that are included in or referenced by the solicitation documents used to establish this agreement. All transactions and conduct are required to conform to these documents.



MASTER AGREEMENT DETAILS

Master Agreement No: 2000000000000000074

MA Version: 1

Page: 4 of 4

Line Description

1	Fog Seal (SS-1H) (Chip & Fog Seal) Discount UOM Unit Price Stock Code VPN MPN 0.0000 % TON \$400.00
2	Emulsion (CRS-2P) (Chip & Fog Seal) Discount UOM Unit Price Stock Code VPN MPN 0.0000 % TON \$428.00
3	Cover Material (Chip & Fog Seal) Discount UOM Unit Price Stock Code VPN MPN 0.0000 % TON \$125.00
4	Polymer Modified Asphalt Emulsion Fog Coat (BSA-35) Discount UOM Unit Price Stock Code VPN MPN 0.0000 % TON \$1,865.00
5	Polymer Modified Asphalt Emulsion Micro Seal (CSS-1H) Discount UOM Unit Price Stock Code VPN MPN 0.0000 % TON \$876.00
6	Micro Seal Surface Treatment Aggregate (Type 2) Discount UOM Unit Price Stock Code VPN MPN 0.0000 % TON \$124.00
7	Crack Seal - Category 1 Discount UOM Unit Price Stock Code VPN MPN 0.0000 % LB \$1.92
8	Asphaltic Concrete Patching & Prep for Surface Treatment Discount UOM Unit Price Stock Code VPN MPN 0.0000 % TON \$411.48
9	Flagging Services (Uniformed Officer) (Off Duty) Discount UOM Unit Price Stock Code VPN MPN 0.0000 % HOUR \$45.00

ATTACHMENT 2 TO AMENDMENT 1**OFFER AGREEMENT, Revised 10/10/19****1. INTENT:**

This document is intended to establish a Master Agreement ("MA") to provide Pima County ("County") with placing Crack Seal, Chip Seal with Fog Seal, Micro Seal Surface Treatment, or Rejuvenating Fog Seal, and other maintenance-related items as needed and as per specifications and requirements at various locations within Pima County on an "as required basis" by issue of a Delivery Order ("DO"). The projects may also include asphalt patching where necessary, pavement removal is incidental to that work. Pavement markings, symbols, and legends are considered incidental. Maintenance and protection of traffic is considered incidental.

All work and terms shall be governed by the Pima Association of Governments' (PAG) *Standard Specifications for Public Improvements* as modified by the Pima County Department of Transportation's Supplement to the PAG Standard Specifications for Public Improvements except as modified by this MA or special provisions. PAG Specification Section 102 (Bidding Requirements and Conditions) and PAG Specification Section 103 (Award and Execution of Contract) are not applicable to this MA.

The intent is to award a shared indefinite delivery/indefinite quantity MA in the annual amount of \$5,000,000.00 with up to five (5) qualified Contractors. County will select up to five (5) Contractors that submitted the lowest, responsive and responsible bidders based on the Total Bid to enter into the MA. The initial term of the MA will be one (1) year from the date of award by the Board of Supervisors.

As defined by the Pima County Standard Terms and Conditions included herein, this MA is non-exclusive and County may terminate it for any reason without penalty or cost.

All Goods and Services that Contractor offers or provides pursuant to the MA will conform to the requirements defined by or referred to by the solicitation documents including *Solicitation Amendment*, *Instructions to Offerors*, *Standard Terms and Conditions*, and this *Offer Agreement*, all of which are incorporated herein.

This document, including all attachments and documents incorporated by reference, constitutes the entire MA between the parties pertaining to the subject matter hereof, and merges all prior or contemporaneous agreements and understandings, oral or written, herein.

2. CONTRACT TERM, RENEWALS, EXTENSIONS & REVISIONS:

The initial term of the MA will be for a one (1) year period and include four (4) one-year renewal options that the parties may exercise upon written agreement as follows:

Contract extensions, renewals, or revisions will occur through the issuance by County to Contractor of a revised MA document setting forth the requested changes. Failure by Contractor to object in writing to the proposed revisions, terms, conditions, scope modifications and/or specifications within ten (10) calendar days of issuance by County will signify acceptance of all such changes by Contractor and the revision will be binding upon the parties.

3. CONTRACTOR MINIMUM QUALIFICATIONS:

The Contractor certifies that it is competent, willing and responsible for performing the services or providing the products in accordance with all requirements of the solicitation and this MA. Contractor certifies that it possesses all licenses required by applicable Agencies to satisfy the requirements of this MA.

Contractors performing work under this MA must hold the proper license issued by the State of Arizona Registrar of Contractors to perform these services.

4. PRODUCT OR SERVICE SPECIFICATIONS & SCOPE:

Contractor will provide for COUNTY all labor, materials and equipment necessary to complete the work identified in individual DOs awarded to CONTRACTOR under this Agreement. All work will be done per specifications called for in DOs, **Exhibit "A" Special Provisions (1 page)**, **Exhibit "B" Technical Specifications (1 page)**, and **Exhibit "C" Supplemental Specifications (22 pages)**, and other documents incorporated into this Agreement, all made a part hereof.

5. OFFER ACCEPTANCE AND ORDER RELEASES:

County will accept offer(s) and execute this contract by issue of a MA (recurring requirements) to be effective on the document's date of issue without further action by either party. The MA will document the terms of the agreement.

Pursuant to the executed MA, departments requiring services defined herein will issue a DO to the Contractor via facsimile, e-mail or telephone.

For each DO, County will select the Bidding Contractor whose total bid, based on the quantities provided by the County in the Scope of Work and in accordance with the Item #, Task Name, and unit rates provided herein, is the lowest, responsive bidder.

The County will contact the apparent low Bidder and provide the Scope of Work and schedule for each DO and request confirmation via signature confirming the total bid and availability. Upon receipt, a Notice to Proceed will be issued by the County. If the apparent low Bidder is unable to confirm or meet the schedule requirements within two (2) working days, County will contact the next apparent low Bidder. This process will continue until the County has issued a Notice to Proceed. Bituminous adjustments will, if applicable, will be adjusted according to the Arizona Department of Transportation (ADOT) index at the time the DO is issued. No fuel adjustments will be considered.

Contractor must not supply materials or services that are not specified on the MA and are not documented or authorized by a DO at the time of provision. County accepts no responsibility for control of or payment for materials or services not documented by a County DO.

Contractor will establish, monitor, and manage an effective contract administration process that assures compliance with all requirements of this contract. In particular, Contractor will not provide goods or services in excess of the executed contract items, item quantity, item amount, or contract amount without prior written authorization by contract revision that County has properly executed and issued. Any items Contractor provides in excess of those stated in the contract are at Contractor's own risk. Contractor will decline verbal requests to deliver items in excess of the contract and will report all such requests in writing to the County Procurement Department within one (1) workday of the request. The report must include the name of the requesting individual and the nature of the request.

6. ACCEPTANCE OF GOODS AND SERVICES:

The County Department designated on the issued DO will accept goods and services only in accordance with this contract. Such acceptance is a prerequisite to the commencement of payment terms.

7. COMPENSATION & PAYMENT:

The MA issued to accept Contractor's offer will define the not-to-exceed amount of the contract.

Contractor's unit prices must include all incidentals and associated costs required to comply with and satisfy all requirements of this solicitation, which includes the *Instructions to Offerors*, *Standard Terms and Conditions*, and Offer Agreement. County will make no payments for items not in the contract.

Quantities in this solicitation are estimates only. County reserves the right to increase or decrease quantities and amounts. County makes no guarantee regarding actual orders for items or quantities during the term of the agreement. County is not responsible for Contractor inventory or order commitment.

UNIT PRICES (Net 30-day Payment Terms)

ITEM #	TASK NAME Items to include and satisfy all Solicitation & Offer Agreement requirements, General & Item Specifications	ESTIMATED ANNUAL USAGE QUANTITY	UOM	UNIT PRICE \$	EXTENDED AMOUNT \$
4040125	Fog Seal (SS-1H) (Chip & Fog Seal)	250	Tons	\$400.00	\$100,000.00
4040127	Emulsion (CRS-2P) (Chip & Fog Seal)	1,800	Tons	\$428.00	\$770,400.00
4040159	Cover Material (Chip & Fog Seal)	12,000	Tons	\$125.00	\$1,500,000.00
4040138	Polymer Modified Asphalt Emulsion Fog Coat (BSA-35)	500	Tons	\$1,865.00	\$932,500.00
4040153	Polymer Modified Asphalt Emulsion Micro Seal (CSS-1H, Per specification provided)	857	Tons	\$876.00	\$750,732.00
4040200	Micro Seal Surface Treatment Aggregate (Type 2)	6,000	Tons	\$124.00	\$744,000.00
4040301	Crack Seal – Category 1	500,000	LBs	\$1.92	\$960,000.00
4060002	Asphaltic Concrete Patching and Preparation for for Surface Treatment (PAG 2 or PAG 3)	1,000	Tons	\$411.48	\$411,480.00
7010077	Flagging Services (Uniformed Officer) (Off Duty)	500	Hour	\$45.00	\$22,500.00
				TOTAL BID	\$6,191,612.00

Price Escalation. All unit prices include compensation for Contractor to implement and actively conduct cost and price control activities. Pricing will remain firm during the initial year of the contract term after which the parties may consider price increases no more frequently than once per year. Contractor will submit a written request to County that includes supporting documents justifying requested increases at least ninety (90) days prior to the renewal date. Contractor will provide evidence, cite sources, demonstrate specific conditions and document how those conditions affect the cost of its performance, and identify specific efforts Contractor has taken to control and reduce those and other costs to avoid the need to increase prices. County will review proposed pricing and determine if it is allowable, fair and reasonable, and in the best interest of County to accept the proposal. County will automatically apply a bituminous adjustment during the renewal period based on the month of the renewal. County reserves the right to continue, accept or reject the price proposal, or terminate and re-solicit the contract.

The parties may negotiate and establish unit pricing in writing under the contract for items included in the scope of the contract that does not have previously defined unit pricing.

Standard payment terms are net thirty (30) days from the date of valid invoice document and do not commence until the later of 1) the receiving County Department receives goods or services into County's payment system or 2) County Financial Operations receives and verifies Contractor's invoice.

OPTIONAL EARLY PAYMENT DISCOUNT TERM: Pima County Administrative Procedure No. 22-35 Section 2.2.4 defines County's practice regarding discounts for early payment. Contractor offers the following discounts to those prices to be used for all orders issued pursuant to this contract. County will utilize the existing payment code that best matches that offered and does not exceed the offered discount percentage. Payment days cannot be less than ten (10) calendar days. Contractor will submit valid invoice document consistent with the associated DO to County Finance Department at least seven (7) calendar days prior to the date on which the discounted payment is due. If desired, for any order issued pursuant with this contract, Contractor may offer early payment discounts that exceed this Standard Early Payment Discount.

Standard Early Payment Discount Percent: N/A % if payment tendered within N/A Days as above.

Contractor will submit Request(s) for Payment or Invoices to the location and entity defined by County's DO document.

All Invoice documents will reference the County's DO number under which the services or products were ordered. **ALL** Invoice line items will utilize the item description, precise unit price and unit of measure defined by the County's order document. County may return invoices that include line items or unit prices that do not match those documented by the County's order to Contractor unprocessed for correction. **Contractor will not accept orders, or provide services or products that cumulatively exceed the contract amount.**

Contractor will provide detailed documentation in support of payment requests, which should be consistent with and not exceed County's DO. Contractor will bill County within one (1) month after the date on which Contractor's right to payment accrues ("Payment Accrual Date"), which, unless this contract specifically provides otherwise, is the date Contractor delivers goods, performs services or incurs costs. Invoices must assign each billed amount to an appropriate line item of County's DO and document each Payment Accrual Date. County may refuse to pay any amount that Contractor bills in which does not conform to County's DO. County will refuse to pay any amount that Contractor bills more than six (6) months after the Payment Accrual Date, pursuant to A.R.S. § 11-622(C).

8. DELIVERY:

"On-Time" delivery is an essential part of the consideration that Contractor is to provide to County under the contract. Contractor will make delivery in accordance with the Instructions to Offerors, Standard Terms and Conditions and to the location(s) on the DO.

9. TAXES, FEES, EXPENSES:

Pursuant to IRS Publication 510, County is exempt from federal excise taxes for goods. County is subject to State and City sales tax. County will pay no separate charges for delivery, drayage, express, parcel post, packing, insurance, license fees, permits, costs of bonds, surcharges, or bid preparation unless the contract expressly includes such charges and the solicitation documents itemize them.

10. OTHER DOCUMENTS:

Contractor and County in entering into this contract have relied upon information provided or referenced by Pima County Solicitation No. IFB-PO-2000019 including the Instructions to Offerors, Offer Agreement, Standard Terms and Conditions, Solicitation Amendments, Contractor's Bid Offer, documents submitted by Contractor or References to satisfy Minimum Qualifications and any other information and documents that Contractor has submitted in its response to County's Solicitation. The Contract incorporates these documents as though set forth in full herein, to the extent not inconsistent with the provisions of this contract.

11. INSURANCE:

The Insurance Requirements herein are minimum requirements for this Contract and in no way limit, the indemnity covenants contained in this Contract. Contractor's insurance shall be placed with companies licensed in the State of Arizona and the insureds shall have an "A.M. Best" rating of not less than A- VII. Pima County in no way warrants that the minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

Minimum Scope and Limits of Insurance:

Contractor shall procure and maintain, until all contractual obligations have been discharged, the insurance coverage with limits of liability not less than stated below. Pima County in no way warrants that the minimum insurance limits contained herein are sufficient to protect the Contractor from liabilities that arise out of the performance of the work under this Contract. The Contractor is free to purchase additional insurance that required by the County. If necessary, Contractor may obtain commercial umbrella or excess insurance to satisfy the County's Insurance Requirements.

Commercial General Liability (CGL) – Occurrence Form with limits of \$2,000,000 Each Occurrence and \$2,000,000 General Aggregate. Policy shall include bodily injury, property damage, personal/advertising injury and products – completed operations.

Business Automobile Liability – Bodily Injury and Property Damage for any owned, hired, and/or non-owned automobiles used in the performance of this Contract with a Combined Single Limit (CSL) of \$1,000,000 each accident.

Workers' Compensation (WC) and Employers' Liability – Arizona Statutory requirements and Employer's Liability coverage with policy limits of \$1,000,000 and each accident and each person - disease.

Professional Liability (Errors and Omissions) Insurance – This insurance is required by Pima County when Professional Liability or any other E&O coverage is excluded from the Contractor's CGL policy. The E&O policy limits shall be not less than \$2,000,000 Each Claim and \$2,000,000 Annual Aggregate. The insurance policy shall cover professional misconduct or negligent acts of anyone performing any services under this contract.

Network Security (Cyber)/Privacy Insurance: Coverage shall have minimum limits not less than \$2,000,000 Each Claim with a \$2,000,000 Annual Aggregate. The insurance shall include, but not be limited to, coverage for third party claims and losses with respect to network risks (such as data breaches, unauthorized access or use, ID theft, theft of data) and invasion of privacy regardless of the type of media involved in the loss of private information, crisis management and identity theft response costs. This should also include breach notification costs, credit remediation and credit monitoring, defense and claims expenses, regulatory defense costs plus fines and penalties, cyber extortion, computer program and electronic data restoration expenses coverage (data asset protection), network business interruption, computer fraud coverage, and funds transfer loss.

Claim-Made Insurance Coverage - If any part of the Required Insurance is written on a claims-made basis, any policy retroactive date must precede the effective date of this Contract, and Contractor must maintain such coverage for a period of not less than three (3) years following Contract expiration, termination or cancellation.

Additional Insurance Requirements:

The policies shall include, or be endorsed to include, as required by this written agreement, the following provisions:

Additional Insured: The General Liability and Business Automobile Liability Policies shall each be endorsed to include Pima County, its departments, districts, boards, commissions, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the Contractor.

Subrogation: The General Liability, Business Automobile Liability and Workers' Compensation policies shall each contain a waiver of subrogation endorsement in favor of Pima County, and its departments, districts, boards, commissions, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

Primary Insurance: The Contractor's policies shall stipulate that the insurance afforded the Contractor shall be primary and that any insurance carried by Pima County, its agents, officials, or employees shall be excess and not contributory insurance.

Insurance provided by the Contractor shall not limit the Contractor's liability assumed under the indemnification provisions of this Contract.

Notice of Cancellation:

Each Required Insurance policy must provide, and certificates specify, that County will receive not less than thirty (30) days advance written notice of any policy cancellation, except 10-days prior notice is sufficient when the cancellation is for non-payment of a premium.

Verification of Coverage:

Contractor shall furnish Pima County with certificates of insurance as required by this Contract. An authorized representative of the insurer shall sign the certificates.

All certificates and endorsements, as required by this written agreement, are to be received and approved by Pima County before work commences. Each insurance policy required by this Contract must be in effect at, or prior to, commencement of work under this Contract. Failure to maintain the insurance coverages or policies as required by this Contract, or to provide evidence of renewal, is a material breach of contract.

All certificates required by this Contract shall be sent directly to Pima County Procurement Department. The Certificate of Insurance shall include the Pima County project or contract number and project description on the certificate. Pima County reserves the right to require complete copies of all insurance policies required by this Contract at any time.

Neither the County's failure to obtain a required insurance certificate or endorsement, the County's failure to object to a non-complying insurance certificate or endorsement, or the County's receipt of any other information from the Contractor, its insurance broker(s) and/or insurer(s), constitutes a waiver of any of the Insurance Requirements.

Approval and Modifications:

The Pima County Risk Manager may approve a modification of the Insurance Requirements without the necessity of a formal Contract amendment, but the approval must be in writing.

12. PAYMENT AND PERFORMANCE BONDS:

Payment and Performance Bonds are required under this Master Agreement. Bonds may be submitted on an annual basis for the full value of all services reasonably anticipated during the Master Agreement year or may be provided on a delivery-order by delivery-order basis; in the latter case, Offeror may anticipate additional delivery orders and provide bonds in reasonable increments. At no time shall the cumulative value of the bonds be less than the total value of the services performed by Offeror under this Agreement, including delivery orders awarded to Offeror but not yet completed. If bonds are secured on a delivery-order by delivery-order basis, County will obtain the appropriate bonds from Offeror upon issuance and release of the Delivery Order.

13. ACKNOWLEDGEMENT of SOLICITATION AMENDMENT(S):

Contractor acknowledges that it incorporates the following solicitation amendments in its offer and this contract:

Amendment #	Date	Amendment #	Date	Amendment #	Date
1	10/10/2019				
2	10/16/2019				

14. SMALL BUSINESS ENTERPRISE (SBE) CERTIFICATION:

Is your firm SBE-certified as defined by the solicitation "Instruction to Offerors" section? Yes ☐ No ☒ (Select one)

If 'Yes', have you included your certification document? Yes ☐ No ☒ (Select one)

NOTE: If you do not submit the SBE Certification document with your bid, County will not apply the SBE Preference.

Remainder of page intentionally left blank

15. BID/OFFER CERTIFICATION:

CONTRACTOR LEGAL NAME: VSS International, Inc.

BUSINESS ALSO KNOWN AS: VSS International, Inc.

MAILING ADDRESS: 3785 Channel Drive

CITY/STATE/ZIP: West Sacramento, CA 95691

REMIT TO ADDRESS: 3785 Channel Drive

CITY/STATE/ZIP: West Sacramento, CA 95691

CONTACT PERSON NAME/TITLE: Jeff Roberts, Senior Vice President

PHONE: (916) 373-1500 **FAX:** (916) 373-0183

CONTACT PERSON EMAIL ADDRESS: vssi_contracts@slurry.com

EMAIL ADDRESS FOR ORDERS & CONTRACTS: vssi_contracts@slurry.com

CORPORATE HEADQUARTERS ADDRESS: 3785 Channel Drive, West Sacramento, CA 95691

WEBSITE: www.slurry.com

By signing and submitting these Offer Agreement documents, the undersigned certifies that they are legally authorized to represent and bind Contractor to legal agreements, that all information submitted is accurate and complete, that Contractor has reviewed the Pima County Procurement website for solicitation amendments and has incorporated all such amendments to its offer, that Contractor is qualified and willing to provide the items requested, and that Contractor will comply with all requirements of the solicitation. The Unit Pricing includes all costs incidental to the provision of the items in compliance with the above documents; no additional payment will be made. Conditional offers that modify the solicitation requirements may be deemed not 'responsive' and County may not evaluate them. Contractor's submission of a signed Offer Agreement must constitute a firm offer and upon the issuance of a MA issued by the Pima County Board of Supervisors will form a binding contract that will require Contractor to provide the goods or services and materials described in this solicitation. The undersigned hereby offers to furnish the goods or services in compliance with all terms, conditions, specifications that the solicitation defines or references, which includes Pima County Standard Terms & Conditions, this Offer Agreement and other documents as listed in this Offer Agreement's "Other Documents" article.

SIGNATURE:  **DATE:** October 14, 2019

Jeff Roberts, Senior Vice President

PRINTED NAME & TITLE OF AUTHORIZED CONTRACTOR REPRESENTATIVE EXECUTING OFFER

PHONE AND E-MAIL: (916) 373-1500 vssi_contracts@slurry.com

Approved as to form:



KELL OLSON

10/31/19
Deputy County Attorney

Date

PIMA COUNTY STANDARD TERMS AND CONDITIONS**1. OPENING:**

Pima County ("County") will publicly open responses on the date and at the location as stated in the *Invitation for Bid (IFB)*. The County will read each respondent's name, and for responses to an IFB will also read the total bid amount. County will open proposals so as to avoid disclosure of the contents of any proposal to competing Offerors during the evaluation process. County invites all interested parties to attend the bid opening.

2. EVALUATION:

County will evaluate responses to determine which are most advantageous to County considering conformity to the specifications stated in the IFB, and other factors, regardless of solicitation type.

If County makes an award, County will enter into an agreement with one or more Contractor(s) that submitted the lowest responsive bid(s) that County determined responsible for providing the required goods or services. Unless otherwise specified on the IFB document, County will determine the low or lowest bids considering all items listed in the Unit Price Schedule.

County, at its sole discretion, reserves the following rights: 1) to waive informalities in the bid or bid procedure; 2) to reject the response of any persons or corporations that have previously defaulted on any contract with County or who have engaged in conduct that constitutes a cause for debarment or suspension as set forth in County Code Section 11.32; 3) to reject any and all responses; 4) to re-advertise for bids previously rejected; 5) to otherwise provide for the purchase of such equipment, supplies materials and services as may be required herein; 6) to award on the basis of price and other factors, including but not limited to such factors as delivery time, quality, uniformity of product, suitability for the intended task, and bidder's ability to supply; 7) to increase or decrease the item quantity or eliminate any item of this solicitation prior to the award. Pricing evaluations will be based on pre-tax pricing proposed by Contractor.

3. AWARD NOTICE:

County will post a *Notice of Recommendation for Award* for IFB on the Procurement website available for review by interested parties. The Procurement Department will maintain a tabulation of the bids or ranking of proposals.

4. AWARD:

The Board of Supervisors will make the contract award in accordance with the Pima County Procurement Code. County reserves the right to reject any or all proposals, bids or to waive irregularities and informalities in the best interest of County. Unless County expressly agrees otherwise, resulting contracts are not exclusive, they are for the sole convenience of County, and County reserves the right to obtain like goods or services from other sources.

5. WAIVER:

Each Offeror, by submission of a proposal, bid or proposal waives any and all claims for damages against County or its officers or employees when County exercises any of its reserved rights.

6. ACKNOWLEDGEMENT AND ACCEPTANCE:

If Contractor's terms of sale are inconsistent with the terms of the resultant contract, the terms herein will govern, unless County accepts Contractor's terms in writing. No oral agreement or understanding will in any way modify this contract or the terms and conditions herein. Contractor's acceptance, delivery or performance called for herein will constitute unqualified acceptance of the terms and conditions of the resultant contract.

7. INTERPRETATION and APPLICABLE LAW:

The laws of the State of Arizona govern the interpretation and construction of this Contract. If any of Contractors' terms or conditions is not in agreement with County's terms and conditions as set forth herein, County's will govern. This contract incorporates the complete agreement of the parties with respect to the subject matter of this contract. No oral agreement or other understanding will in any way modify the terms and conditions of this contract.

8. WARRANTY:

Contractor warrants goods or services to be satisfactory and free from defects.

9. QUANTITY:

Contractor will not exceed or reduce the quantity of goods ordered without written permission from County in the form of a properly executed Master Agreement ("MA") or Delivery Order ("DO"), revision or amendment as the County's Procurement Code requires. All quantities are estimates and County provides no guarantee regarding actual usage.

10. RESERVED**11. DELIVERY:**

On-time delivery of goods and services is an essential part of the consideration that County will receive.

Contractor must provide a guaranteed delivery date, or interval period from order release date to delivery if the Price proposal document requires it. Upon receipt of notification of delivery delay, County at its sole option and at no cost to County may cancel the order or extend delivery times. Such extension of delivery times will not be valid unless an authorized representative of County extends it to Contractor in writing.

To mitigate or prevent damages from delayed delivery, County may require Contractor to deliver additional quantity utilizing express modes of transport, or overtime, all costs to be Contractor's responsibility. County reserves the right to cancel any delinquent order, procure from an alternate source, or refuse receipt of or return delayed deliveries, all at no cost to County. County reserves the right to cancel any order or refuse delivery upon default by Contractor concerning time, cost, or manner of delivery.

Contractor is not responsible for unforeseen delays caused by fires, strikes, acts of God, or other causes beyond Contractor's control, provided that Contractor provides County immediate notice of delay.

12. SPECIFICATION CHANGES:

County has the right to make changes in the specifications, services, or terms and conditions of an order. If such changes cause an increase or decrease in the amount due under an order or in time required for performance, County will make an acceptable adjustment and will modify the order in writing. No verbal agreement for adjustment is acceptable.

Nothing in this clause reduces Contractor's responsibility to proceed without delay in the delivery or performance of an order.

13. RESERVED**14. RESERVED****15. PAYMENT TERMS:**

Payment terms are net thirty (30) days, unless the contract specifies otherwise.

16. ACCEPTANCE OF MATERIALS AND SERVICES:

County will not execute an acceptance or authorize payment for any service, equipment or component prior to delivery and verification that the delivery meets all specification requirements.

17. RIGHTS AND REMEDIES OF COUNTY FOR DEFAULT:

In the event any item that Contractor furnishes in the performance of the contract should fail to conform to the specifications thereof, or to the sample that Contractor submitted, County may reject same, and it thereupon becomes the duty of Contractor to reclaim and remove the same, without expense to County, and immediately replace all such rejected items with others conforming to the specifications or samples. Should Contractor fail, neglect, or refuse immediately to do so, County has the right to purchase in the open market, in lieu thereof, a corresponding quantity of any such items and to deduct from any monies due or that may become due to Contractor the difference between the price named in the MA and the actual cost to County.

In the event Contractor fails to make prompt delivery as specified of any item, the same conditions as to the rights of County to purchase in the open market and invoke the reimbursement condition above apply, except when delivery is delayed by fire, strike, freight embargo, or acts of god or of the government. In the event of cancellation of the MA, or DO, either in whole or in part, by reason of the default or breach by Contractor, Contractor will bear and pay for any loss or damage sustained by County in procuring any items which the Contractor agreed to supply. The rights and remedies of County provided above are not exclusive and are in addition to any other rights and remedies provided by law or under the contract.

18. FRAUD AND COLLUSION:

Each Contractor, by submission of a bid, certifies that no officer or employee of County or of any subdivision thereof: 1) has aided or assisted Contractor in securing or attempting to secure a contract to furnish labor, materials or supplies at a higher price than that proposed by any other Contractor; 2) has favored one Contractor over another by giving or withholding information or by willfully misleading the bidder in regard to the character of the material or supplies called for

or the conditions under which the proposed work is to be done; 3) will knowingly accept materials or supplies of a quality inferior to those called for by any contract; 4) has any direct or indirect financial interest in the proposal or resulting contract. Additionally, during the conduct of business with County, Contractor will not knowingly certify, or induce others to certify, to a greater amount of labor performed than has been actually performed, or to the receipt of a greater amount or different kind of material or supplies that has been actually received. If County finds at any time that Contractor has in presenting any proposal(s) colluded with any other party or parties for the purpose of preventing any other proposal being made, then County will terminate any contract so awarded and that person or entity will be liable for all damages that County sustains.

19. COOPERATIVE USE OF RESULTING CONTRACT:

As allowed by law, County has entered into cooperative procurement agreements that enable other Public Agencies to utilize procurement agreements that County has developed. Participating agencies may contact Contractor with requests to provide services and products pursuant to the pricing, terms and conditions defined by the County MA. Minor adjustments are allowed subject to agreement by both Contractor and Requesting Party to accommodate additional cost or other factors not present in the County's agreement and required to satisfy particular Public Agency code or functional requirements and within the intended scope of the solicitation and resulting contract. The parties to the cooperative procurement will negotiate and transact any such usage in accordance with State, County and other Public Agency procurement rules, regulations and requirements. Contractor will hold harmless County, its officers, employees, and agents from and against all liability, including without limitation payment and performance associated with such use. Contractor may view a list of agencies that are authorized to use County contracts at the Procurement Department Internet home page: <http://www.pima.gov/procure> by selecting the link titled *Authorized Use of County Contracts*.

20. PATENT INDEMNITY:

Contractor will indemnify, defend and hold County, its officers, agents and employees, harmless from liability of any nature or kind, including costs and expenses, for infringement or use of any copyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in connection with the MA and DO. County may require Contractor to furnish a bond or other indemnification to County against any and all loss, damage, costs, expenses, claims and liability for patent or copyright infringement.

21. INDEMNIFICATION:

Contractor will indemnify, defend, and hold harmless County, its officers, employees and agents from and against any and all suits, actions, legal administrative proceedings, claims or demands and costs attendant thereto, arising out of any act, omission, fault or negligence by Contractor, its agents, employees or anyone under its direction or control or on its behalf in connection with performance of the MA, DO. Contractor warrants that all products and services provided under this contract are non-infringing. Contractor will indemnify, defend and hold County harmless from any claim of infringement arising from services provided under this contract or from the provision, license, transfer or use for their intended purpose of any products provided under this Contract.

22. UNFAIR COMPETITION AND OTHER LAWS:

Responses must comply with Arizona trade and commerce laws (Title 44 A.R.S.) and all other applicable County, State, and Federal laws and regulations.

23. COMPLIANCE WITH LAWS:

Contractor will comply with all federal, state, and local laws, rules, regulations, standards and Executive Orders, without limitation. In the event any services that Contractor provides under this contract require a license issued by the Arizona Registrar of Contractors (ROC), Contractor certifies that a Contractor licensed by ROC to perform those services in Arizona will provide such services. The laws and regulations of the State of Arizona govern the rights, performance and disputes of and between the parties. Any action relating to this Contract must be filed and maintained in a court of the State of Arizona in Pima County.

Any changes in the governing laws, rules, and regulations during an agreement apply, but do not require an amendment or revisions.

24. ASSIGNMENT:

Contractor may not assign its rights to the contract, in whole or in part, without prior written approval of County. County may withhold approval at its sole discretion, provided that County will not unreasonably withhold such approval.

25. CANCELLATION FOR CONFLICT OF INTEREST:

This contract is subject to cancellation pursuant to A.R.S. §§38-506 and 38-511, the pertinent provisions of which are incorporated into this Contract by reference.

26. NON-DISCRIMINATION:

CONTRACTOR agrees to comply with all provisions and requirements of Arizona Executive Order 2009-09 which is hereby incorporated into this contract as if set forth in full herein including flow down of all provisions and requirements to any subcontractors. During the performance of this contract, Contractor must not discriminate against any employee, client or any other individual in any way because of that person's age, race, creed, color, religion, sex, disability or national origin.

27. NON-APPROPRIATION OF FUNDS:

County may cancel this contract pursuant to A.R.S. § 11-251(42) if for any reason the County Board of Supervisors does not appropriate funds for the stated purpose of maintaining the contract. In the event of such cancellation, County has no further obligation, other than payment for services or goods that County has already received.

28. PUBLIC RECORDS:

Disclosure. Pursuant to A.R.S. § 39-121 et seq., and A.R.S. § 34-603(H) in the case of construction or Architectural and Engineering services procured under A.R.S. Title 34, Chapter 6, all documents submitted in response to the solicitation resulting in award of this Contract, including, but not limited to, pricing schedules, product specifications, work plans, and any supporting documents are public records. As such, those documents are subject to release and/or review by the general public upon request, including competitors.

Records Marked Confidential; Notice and Protective Order. If Contractor reasonably believes that some of those records contain proprietary, trade-secret or otherwise-confidential information, Contractor must prominently mark those records "CONFIDENTIAL." In the event a public-records request is submitted to County for records marked CONFIDENTIAL, County will notify Contractor of the request as soon as reasonably possible. County will release the records 10 business days after the date of that notice, unless Contractor has, within that period, secured an appropriate order from a court of competent jurisdiction, enjoining the release of the records. County will not, under any circumstances, be responsible for securing such an order, nor will County be in any way financially responsible for any costs associated with securing such an order.

The Contractor agrees to waive confidentiality of any price terms in the event of a contract award.

29. RESERVED**30. AMERICANS WITH DISABILITIES ACT:**

Contractor will comply with all applicable provisions of the Americans with Disabilities Act (public law 101-336, 42 USC 12101-12213) and all applicable federal regulations under the act, including 28 CFR parts 35 and 36.

31. NON-EXCLUSIVE:

Contracts resulting from this solicitation are non-exclusive and are for the sole convenience of County, which reserves the right to obtain like goods and services from other sources for any reason.

32. PROTESTS:

An interested party may file a protest regarding any aspect of a solicitation, evaluation, or recommendation for award. Protests must be in accordance with the Pima County Procurement Code, Section 11.20.010.

33. TERMINATION:

County reserves the right to terminate any MA, DO, or award, in whole or in part, at any time, without penalty or recourse, when in the best interests of County. Upon receipt of written notice, Contractor will immediately cease all work as directed by the notice, notify all subcontractors of the effective date of termination and take appropriate actions to minimize further costs to County. In the event of termination under this paragraph, all documents, data, and reports prepared by Contractor under the contract become the property of County and Contractor must promptly deliver them to County. Contractor is entitled to receive just and equitable compensation for work in progress, work completed and materials accepted before the effective date of the termination.

34. ORDER OF PRECEDENCE-CONFLICTING DOCUMENTS:

In the event of inconsistencies between contract documents, the following is the order of precedence, superior to subordinate, that will apply to resolve the inconsistency: MA or DO, Offer Agreement or contract attached to a MA or DO, or these standard terms and conditions; any other solicitation documents.

35. INDEPENDENT CONTRACTOR:

The status of Contractor is that of an independent Contractor. Contractor and Contractor officer's agents or employees are not considered employees of County and are not entitled to receive any employment-related fringe benefits under the County Merit System. Contractor is responsible for payment of all federal, state and local taxes associated with the compensation received pursuant to this Contract and will indemnify and hold County harmless from any and all liability which County may incur because of Contractor's failure to pay such taxes. Contractor is solely responsible for its program development and operation.

36. BOOKS AND RECORDS:

Contractor will keep and maintain proper and complete books, records and accounts, which will be open at all reasonable times for inspection and audit by duly authorized representatives of County. In addition, Contractor will retain all records relating to this contract at least five (5) years after its termination or cancellation or, if later, until any related pending proceeding or litigation has been closed.

37. COUNTERPARTS:

The parties may execute the MA that County awards pursuant to this solicitation in any number of counterparts, and each counterpart is considered an original, and together such counterparts constitute one and the same instrument.

For the purposes of the MA and DO, the signed proposal of Contractor and the signed acceptance of County are each an original and together constitute a binding MA, if all other requirements for execution are present.

38. AUTHORITY TO CONTRACT:

Contractor warrants its right and power to enter into the MA or DO. If any court or administrative agency determines that County does not have authority to enter into the MA or DO, County is not liable to Contractor or any third party by reason of such determination or by reason of the MA or DO.

39. FULL AND COMPLETE PERFORMANCE:

The failure of either party to insist on one or more instances upon the full and complete performance with any of the terms or conditions of the MA or DO to be performed on the part of the other, or to take any action permitted as a result thereof, is not a waiver or relinquishment of the right to insist upon full and complete performance of the same, or any other covenant or condition, either in the past or in the future.

The acceptance by either party of sums less than may be due and owing it at any time is not an accord and satisfaction.

40. SUBCONTRACTORS:

Contractor is fully responsible for all acts and omissions of any subcontractor and of persons directly or indirectly employed by any subcontractor, and of persons for whose acts Contractor may be liable to the same extent that Contractor is responsible for the acts and omissions of persons that it directly employs. Nothing in this contract creates any obligation on the part of County to pay or see to the payment of any money due any subcontractor, except as may be required by law.

41. SEVERABILITY:

Each provision of this Contract stands alone, and any provision of this Contract that a court finds to be prohibited by law is ineffective to the extent of such prohibition without invalidating the remainder of this Contract.

42. LEGAL ARIZONA WORKERS ACT COMPLIANCE:

For the procurement of services in the State of Arizona, Contractor hereby warrants that it will at all times during the term of this Contract comply with all federal immigration laws applicable to Contractor's employment of its employees, and with the requirements of A.R.S. § 23-214 (A) (together the "State and Federal Immigration Laws"). Contractor will further ensure that each subcontractor who performs any work for Contractor under this contract likewise complies with the State and Federal Immigration Laws.

County has the right at any time to inspect the books and records of Contractor and any subcontractor in order to verify such party's compliance with the State and Federal Immigration Laws.

Any breach of Contractor's or any subcontractor's warranty of compliance with the State and Federal Immigration Laws, or of any other provision of this section, is a material breach of this Contract subjecting Contractor to penalties up to and including suspension or termination of this Contract. If the breach is by a subcontractor, and the subcontract is suspended or terminated as a result, Contractor will take such steps as may be necessary to either self-perform the services that would have been provided under the subcontract or retain a replacement subcontractor as soon as possible so as not to delay project completion.

Contractor will advise each subcontractor of County's rights, and the subcontractor's obligations, under this Article by including a provision in each subcontract substantially in the following form:

"Subcontractor hereby warrants that it will at all times during the term of this contract comply with all federal immigration laws applicable to Subcontractor's employees, and with the requirements of A.R.S. § 23-214 (A). Subcontractor further agrees that County may inspect the Subcontractor's books and records to ensure that Subcontractor is in compliance with these requirements. Any breach of this paragraph by Subcontractor is a material breach of this contract subjecting Subcontractor to penalties up to and including suspension or termination of this contract."

Any additional costs attributable directly or indirectly to remedial action under this Article is the responsibility of Contractor. In the event that remedial action under this Article results in delay to one or more tasks on the critical path of Contractor's approved construction or critical milestones schedule, such period of delay will be excusable delay for which Contractor is entitled to an extension of time, but not costs.

43. CONTROL OF DATA PROVIDED BY COUNTY:

For those projects and contracts where County has provided data to enable the Contractor to provide contracted services or products, unless County otherwise specifies and agrees in writing, Contractor will treat, control and limit access to said information as confidential and will under no circumstances release any data provided by County during the term of this contract and thereafter, including but not limited to personal identifying information as defined by A.R.S. § 44-1373, and Contractor is further prohibited from selling such data directly or through a third party. Upon termination or completion of the contract, Contractor will either return all such data to County or will destroy such data and confirm destruction in writing in a timely manner not to exceed sixty (60) calendar days.

44. ISRAEL BOYCOTT CERTIFICATION:

Pursuant to A.R.S. § 35-393.01, if Contractor engages in for-profit activity and has 10 or more employees, and if this Contract has a value of \$100,000.00 or more, Contractor certifies it is not currently engaged in, and agrees for the duration of this Contract to not engage in, a boycott of goods or services from Israel. This certification does not apply to a boycott prohibited by 50 U.S.C. § 4842 or a regulation issued pursuant to 50 U.S.C. § 4842.

END OF PIMA COUNTY STANDARD TERMS AND CONDITIONS

EXHIBIT “A”

SPECIAL PROVISIONS (1 page)

GENERAL NOTES

1. Project Location

This project is located within Pima County at various locations within the metro Tucson area.

2. Scope of Work

The projects will consist of placing Crack Seal, Chip Seal with Fog Seal, Micro seal surface treatment, or Rejuvenating Fog Seal at various locations within Pima County. The projects may also include asphalt patching where necessary, pavement removal is incidental to that work. Pavement markings, symbols, and legends are considered incidental. Maintenance and protection of traffic is considered incidental.

3. Contract Time

The work specified for each project shall be given a specific contract time.

4. Specifications and Details

The work embraced herein shall be performed in accordance with the requirements of the following separate documents:

- Pima County/City of Tucson, Standard Specifications for Public Improvements, 2015 Edition.
- Pima County/City of Tucson, Standard Details for Public Improvement, 2015 Edition.
- Pima County/City of Tucson, Pavement Marking Design Manual, Second Edition August 2012.
- Pima County/City of Tucson Signing Manual, May 2012.
- Pima County Traffic Signal Design Manual, January 2012.
- U.S. Department of Transportation, Federal Highway Administration, Manual on Uniform Traffic Control Devices for Streets and Highways, 2003 Edition.
- State of Arizona, Department of Transportation Division of Highways, Part 1 – Construction Standard Drawings, October 2004.
- State of Arizona Department of Transportation Division of Highways, Part 2 – Structures Section Standard Drawings, June 1992, with current edition Structural Detail Drawings series.
- State of Arizona, Department of Transportation Division of Highways, Part 3 – Traffic Signals and Lighting Standard Drawings, March 2004 with updates thru December 2008.
- State of Arizona, Department of Transportation Division of Highways, Part 4 – Signing and Marking Standard Drawings, January 2002 with updates thru December 2008.

5. Project limits

The Contractor shall perform all work within the public right-of-way, legally obtained easements and property legally acquired by the Agency. The contractor shall assume all responsibility and liability for any encroachment upon private property. The use of private property for construction yards will be allowed only if zoning requirements allows its use for this purpose.

6. Work Hours/Noise Abatement Ordinance

Construction noise abatement and start/stop times shall be in accordance with Pima Ordinance No. 1999-61: Regulating the Excessive, Unnecessary and Annoying Noises in Pima County.

End of Exhibit “A”

EXHIBIT “B”

TECHNICAL SPECIFICATIONS (1 page)

Explanation of items:

Chip & Fog Seal: Work under this item shall be performed, measured and paid, as described in Section 404 of the Standard Specifications and the Supplemental Specifications with a Chip Seal treatment followed by a Fog Seal treatment.

Micro Seal Surface Treatment: Work under this item shall consist of providing, transporting, and placing micro seal surface treatment to the locations noted in the contract. The work shall be performed, measured and paid, as described in Revised Section 404 of the of the Standard Specifications and the Supplemental Specifications.

Fog Seal (Rejuvenating): Work under this item shall be performed, measured and paid, as described in Revised Section 404 of the Standard Specifications and the Supplemental Specifications.

Asphaltic: Work under this item shall be performed, measured and paid, as described in Revised Section 404 of the Standard Specifications and the Supplemental Specifications.

Crack Sealing: Work under this item shall consist of providing, transporting, and placing Crack Seal to the locations noted in the contract. The work shall be performed, measured and paid, as described in Revised Section 404 of the of the Standard Specifications and the Supplemental Specifications. Payment for this work will be by the lbs. of crack seal material directed for use by the Engineer, including all labor and materials and will be full compensation for the work performed.

Pavement markings, symbols, and legends: This work shall consist of documenting the existing pavement marking, raised pavement markers, symbols, legends, and detection loops configuration prior to construction and re-marking the pavement and placing raised pavement markers, symbols, legends, and detection loops upon the new traffic surface in accordance with the Section 700 of the Standard Specifications and Standard Drawings and the current details in the PCDOT Striping Manual. The materials shall be thermo plastic for the long line stripes and tape/ thermal plastic for crosswalks, stop bars, symbols, and legends. The contractor shall coordinated work with the county contractor at the existing Speed Zones. Payment for this work will be included in the unit price for each item.

Maintenance and protection of traffic: This work shall consist of providing flagging services, providing, installing, and maintaining temporary traffic control devices. The cost of providing devices, developing traffic control plans, resetting barricades, and providing vehicles shall be considered incidental to the work. The work shall be performed, as described in Section 701 of the Standard Specifications and Standard Drawings. Payment for this work will be included in the unit price for each item.

Misc. work: Work under this item shall consist of performing Misc. work not shown on the plans or described in the specifications. The work shall be paid as described in Section 109-5 of the Standard Specifications and Standard Drawings. Payment will be made at the specified rates and will be full compensation for the work performed.

EXHIBIT “C”

SUPPLEMENTAL SPECIFICATIONS (22 pages)

The following are modifications to the Standard Specifications:

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

107-8 PUBLIC CONVENIENCE AND SAFETY of the Standard Specifications is modified to add:

When requested by the Engineer, the contractor shall participate in any public or neighborhood meeting called by the Engineer or any other appropriate authority, for the purpose on informing the public concerning the nature, timing, status or scheduling of the work.

107-15.01 National Pollution Discharge Elimination System of the Standard Specifications is hereby deleted. See Section 810 of these Special Provisions.

107-18 INSURANCE of the Standard Specifications is superseded by Article 11 of the Offer Agreement.

107-21 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES of the Standard Specifications is modified to add:

The following utilities may have facilities in the project area:

<u>Owner</u>	<u>Contact</u>	<u>Phone Number</u>
AT&T Communications	Paul Diaz	(520) 629-8709
El Paso Natural Gas	Elwin O. Denmar	(520) 746-4225
Comcast Cable Communications	Mike Ginn	(520) 744-5477
Cox Communications	Ike Cruse	(520) 889-9062, Ext.104
Metropolitan Water	Tom Caito	(520) 575-8100
MCI – Verizon	Dean Boyers	(972) 729-6322
Pima County Department of Wastewater Management	Debbie Stratton	(520) 740-8224
Qwest Corporation	Larry Lewis	(520) 292-8255
Southwest Gas Corporation	Kevin Ballent	(520) 794-6054
Trico Electric Cooperative	Paul Newton	(520) 744-2944, Ext.1324
Tucson Electric Power	Cynthia Garcia	(520) 918-8246
Tucson Water	Tony Tineo	(520) 791-5080 Ext 131

It shall be the responsibility of the contractor to contact the utility companies in order for them to determine if there is a need for any bracing or shoring of power or telephone poles during the construction of this project. If bracing or shoring is necessary, the contractor shall accomplish this work to the satisfaction of the utility company.

No measurement or direct payment will be made for bracing or shoring.

The contractor shall take full responsibility of costs incurred due to damage to utilities as a result of grading or excavation operations. Utility locations shown on the Plans are approximate, and all utilities are not necessarily shown. The possibility of conflicts with existing utilities-in-service exists. If conflicting utilities interfere with the contractor's normal progress towards completion of this project, the Pima County Department of Transportation may, at its option, authorize the contractor to relocate said conflicting utilities by force account in accordance with the provisions of subsection 109-5(B).

SECTION 109 - MEASUREMENT AND PAYMENT

109-2 SCOPE OF PAYMENT the last two paragraphs of the Standard Specifications are hereby deleted.

109-5 EXTRA AND FORCE ACCOUNT WORK

(A) **Extra Work.** the 2nd paragraph of the Standard Specifications is revised to read:

Upon receipt of an approved supplemental agreement, the contractor shall proceed with the ordered work.

(B) **Force Account Work.**

(3) **Equipment.**

(a) **Rental Rates (Without Operators)** is modified to add

F = 0.933

(C) **Force Account Work by Subcontractor.** of the Standard Specifications is revised to read:

When force account work is determined by the Engineer to require specialized labor or equipment not normally utilized by the contractor, and such force account work is performed by subcontractors, the contractor will be allowed an additional markup based on the following:

For Force Account work performed by subcontractors or any combination of subcontractors, the prime contractor will be allowed a ten percent supplemental markup on the first \$10,000 of the work performed (less markups for overhead and profit).

For all subsequent Force Account work performed by subcontractors, the prime contractor will be allowed a five percent supplemental markup (less markups for overhead and profit).

The contractor shall submit payrolls or other cost data documents for all force account work performed by subcontractors. There shall be no payments made for force account work until receipt of proper and correct documentation.

109-13 COMPENSATION FOR FUEL AND MARKET ADJUSTMENTS is hereby added to the Standard Specifications

109-13.01 Fuel Adjustment.

(A) **General.** The Agency will adjust monthly progress payments up or down as appropriate for cost fluctuations in diesel fuel as determined in accordance with these Special Provisions.

A fuel cost adjustment will be made when fluctuations in the price of diesel fuel, in excess of 15 percent (15%), occur throughout this contract. The Agency will not provide such adjustments for fluctuations in the price of diesel fuel of 15 percent (15%) or less.

No adjustments will be made for fluctuations in the price of fuels other than diesel.

(B) **Determination of Compensation.** The base index price of fuel will be determined by the Agency from the selling prices of diesel fuel published by OPIS (Oil Price Information Service). The base index price to be used will be the price for Diesel fuel No. 2, Low Sulfur, PAD 5, City of Tucson. The reported average value for the Tucson area will be used.

The base index price for each month will be the arithmetic average of the selling price for diesel fuel, as specified above, shown in the last four reports received prior to the last Wednesday of the month.

This price will be made known by means of a memorandum issued on the last Wednesday of each month and mailed to those currently receiving copies of the Advertisements for Bids. This price may also be obtained from Denise Fair, Field Engineering, 1313 S. Mission Road at (520) 724-2340.

This price will be deemed to be the "initial cost" for diesel fuel on projects for which bids are opened during the following month.

The current index price for diesel fuel in subsequent months will be the base index price, determined as specified above, for the current month. The amount of adjustment per gallon will be the net difference between the "initial cost," adjusted by 15 percent (15%), and the current index price. The monthly adjustment will be determined by the Engineer and included in the payment estimate as a fuel adjustment. For fluctuations in excess of 15 percent (15%), fuel cost adjustments will only be made for current price index increases greater than 1.15 times the "initial cost" or for decreases less than 0.85 times

the "initial cost." No calculation will be made for fluctuations in the current index price of 15 percent (15%) or less when compared to the "initial cost."

The cost of diesel fuel will be considered to be equal to one percent of the total construction costs for the project. The dollar amount of diesel fuel used each month will be considered to equal one percent of the dollar amount of work reported by the contractor for that month. The quantity of diesel fuel in gallons will be determined using the dollar value calculated above and the price per gallon specified as the "initial cost." A monthly adjustment, if applicable, will be made on this quantity, as shown below:

$$S = \frac{0.01(Q)}{IC} \times (CP - AC)$$

Where;

- S = Monetary amount of the adjustment (plus or minus) in dollars
- CP = Current index price in dollars per gallon
- IC = "Initial cost" as determined above, dollars per gallon
- AC = Adjusted "initial cost" (1.15 or 0.85 times IC) in dollars per gallon
- Q = Dollar amount of work completed for the month

If adjustments are made in the contract quantities, the contractor shall accept any fuel adjustment as full compensation for increases or decreases in the price of fuel regardless of the amounts of overrun or under run.

No additional compensation will be made for any additional charges, costs, expenses, etc., which the contractor may have incurred since the time of bidding and which may be the result of any fluctuation in the base index price of diesel fuel.

No adjustments will be made for work performed beyond the contract time.

The need for application of the adjustments herein to extra work will be determined by the Engineer on an individual basis and, if appropriate, will be specified on the work order.

(C) Payment. Price adjustment will be shown on the monthly progress estimate, but will not be included in the total cost of work for determination of progress or for extension of contract time.

No fuel adjustments will be considered in this MA.

109-13.02 Market Adjustment.

(A) General. The Agency will adjust monthly progress payments up or down as appropriate for cost fluctuations in items on the Materials Schedule. Bituminous adjustments will, if applicable, will be adjusted according to the Arizona Department of Transportation (ADOT) index at the time the DO is issued. No fuel adjustments will be considered.

(B) Determination of Compensation. Material baseline price will be determined by the Agency from the Materials Schedule submitted at the time of receiving bids.

(C) Payment. Market adjustment will be shown on the monthly progress estimate, but will not be included in the total cost of work for determination of progress or for extension of contract time.

Bituminous adjustments will, if applicable, will be adjusted according to the Arizona Department of Transportation (ADOT) index at the time the DO is issued. No fuel adjustments will be considered.

SECTION 404 BITUMINOUS TREATMENTS

404-1 DESCRIPTION: Add the following to the Standard Specifications:

Crack Sealing and Filling

This work consists of furnishing and placing sealant or filler material in Contractor prepared cracks and joints of asphalt concrete or portland cement concrete pavements. All cracks and joints, including the space between asphalt concrete pavement and concrete curb and gutter, which have a clear opening of one-quarter inch (¼") or greater, shall be sealed for the length of the crack that equals or exceeds one-eighth inch (⅛") in width. The Contractor shall notify the Engineer when cracks are encountered that have an opening greater than one and one-half inches (1½"). The Engineer's

authorization is required prior to filling any cracks having an average clear opening greater than one and one-half inches (1½").

404-2.01 Bituminous Materials. Add the following to the Standard Specifications:

(B) Material for Category 1 Cracks: Cracks and joints which have a clear opening ranging from one-quarter inch (¼") to one and one-half inches (1½") shall be classified as category 1 cracks. Sealant materials for category 1 cracks shall be a premixed, single component mixture of asphalt cement, aromatic extender oils, polymers, and granulated rubber in a closely controlled manufacturing process. Materials shall conform to the following specifications when heated in accordance with ASTM D5078 and the manufacturer's maximum safe heating temperature.

TEST	REQUIREMENT
Cone Penetration (ASTM D5329)	20-40
Resilience (ASTM D5329)	30% Minimum
Softening Point (ASTM D113)	210°F (99°C) Minimum
Ductility, 77°F (25°C) (ASTM D113)	30 cm Minimum
Flexibility (ASTM D3111 *Modified)	Pass at 30°F (-1°C)
Flow 140°F (60°C) (ASTM D5329)	3 mm Maximum
Brookfield Viscosity 380°F (193°C) (ASTM D2669)	90 Poise Maximum
Asphalt Compatibility (ASTM D5329)	Pass
Bitumen Content (ASTM D4)	60% Minimum
Tensile Adhesion (ASTM D5329)	400% Minimum
Maximum Heating Temperature	400°F (204°C)
Minimum Heating Temperature	380°F (193°C)
Flash Point (ASTM D92)	450°F Minimum

*Specimen bent 90° over a 1-inch mandrel within 10 seconds.

(C) Material for Category 2 Cracks: Cracks and joints which have a clear opening ranging from one and one-half inches (1½") to three inches (3") shall be classified as category 2 cracks. Filler material for category 2 cracks shall be hot applied, pourable, high bonding mastic for application in unconfined areas and for vertical-side recessed configurations. Upon curing the material shall provide a flexible waterproof seal. The material shall be traffic ready in thirty minutes or less when installed in accordance with the manufacturer's instructions. Material for sealing category 2 cracks shall be Deery brand Level & Go Repair Mastic or approved equal.

(D) Material for Category 3 Cracks: Cracks and joints which have a clear opening greater than three inches (>3") shall be classified as category 3 cracks. Material for filling category 3 cracks shall be Deery brand Level & Go Repair Mastic or approved equal.

(E) Product Submittals: Prior to application of category 1 crack sealant and category 2 & 3 crack filler material, the Contractor shall submit the material manufacturer's product specifications together with installation recommendations which shall include surface preparation, product installation, and curing requirements. Certification of compliance for sealant material shall be submitted to the Engineer.

The Engineer may request material samples for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

404-2.02(C) Cover Materials: Add the following to the Standard Specifications:

Cover material shall meet the requirements for Class I grading or the Pima Association of Governments Standard Specifications for Public Improvements, 2015 Edition, Section 404-2.02(C) Cover Materials.

404-3.15 Chip Seal Coat. Revise the first sentence of the Standard Specifications to read:

The type of bituminous material shall be CRS-2P.

404-3.16 Fog Coat. Add the following to the Standard Specifications:

Bituminous material for Fog Coat shall be Grade PMCQS-1h as specified in the Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction, 2018 revision to the 2015 Edition, Section 713 Emulsified Asphalts Materials. The bituminous material shall be a 50:50 dilute and applied at a rate of 0.12 – 0.15 gal/SY.

404-3 CONSTRUCTION DETAILS. Add the following sections to the Standard Specifications.**404-3.17 CLEANING AND PREPARING CRACKS OR JOINTS:**

When deleterious materials are present in the cracks and joints, they shall be removed and those cracks and joints shall be treated with a herbicide that sterilizes the soil subject to the approval of the Engineer. Cost for treatment is incidental

(A) Routing: Is not required for this work.

(B) Vacuuming: Final cleaning shall thoroughly clean cracks and joints to a minimum depth of 1" for cracks that are $\frac{3}{4}$ " or narrower and to the full asphalt depth for cracks that are wider than $\frac{3}{4}$ ". Surfaces are to be inspected to assure adequate cleanliness and dryness.

High pressure 90 psi minimum, dry oil free compressed air shall be used for final cleaning and dust removal from cracks. The high pressure tool shall be integral with a vacuum unit to collect the dust and residue. Both sides of the crack or joint shall be cleaned.

404-3.18 APPLICATION OF CATEGORY 1 CRACK SEALANTS:

(A) Weather: In no case shall sealant be placed during damp roadway conditions such as wet roadway surfaces or damp material inside the cracks. Operations stopped by the Engineer, due to weather, shall be at no additional cost to the contracting Agency. If installing at night, ensure that dew is not forming on the pavement surface.

Sealant material shall only be applied when pavement temperature exceeds 40°F (4°C). If pavement temperature is lower than 40°F (4°C), it may be warmed using a heat lance that puts no direct flame on the pavement.

(B) Temperature: Sealant temperatures are to be maintained at the maximum heating temperature recommended by the manufacture.

(C) Equipment: The melter applicator unit shall be a self-contained double boiler device with the transmittal of heat through heat transfer oil. It shall be equipped with an on board automatic heat controlling device to permit the attainment of a predetermined temperature, and then maintain that temperature as long as required. The unit shall also have a means to vigorously and continuously agitate the sealant to meet the requirements of Appendix X1.1 of ASTM D6690. The sealant shall be applied to the pavement under pressure supplied by a gear pump with a hose and wand and direct connecting applicator tip. The pump shall have sufficient pressure to apply designated sealant at a rate of at least three (3) gallons (11.4 L) per minute. Melter applicators shall be approved for use by the sealant manufacturer.

(D) Placement of Sealant: The sealant shall be applied in cracks, joints, and sealant reservoirs uniformly from bottom to top and shall be filled without formation of entrapped air or voids.

Cracks and joints shall be slightly overfilled then leveled with a 3" sealing disk or v-shaped squeegee to create a neat band extending approximately 1" on each side of the crack or joint for surface waterproofing. The band shall be as neat and as thin as possible and shall not extend more than $\frac{1}{8}$ inch above the pavement surface.

During and after placement of the sealant, the Contractor shall protect against harm to persons or animals that may be exposed to the hot material.

(E) Opening to Traffic: Sealant material shall not be exposed to traffic until fully cured. If the sealed area must be opened to traffic, blotter material shall be applied to the surface of all uncured sealant material.

All sealed cracks that have a clear opening of 1½ inches or greater shall have blotter material applied prior to opening to traffic.

On two lane roads or where traffic may come in contact with the hot sealant before it cures, a blotter or specialized bond breaking material shall be used to prevent asphalt bleeding and/or pickup of sealant by vehicular traffic. Blotter material shall be compatible with the crack sealant.

404-3.19 APPLICATION OF FILLER MATERIAL FOR CATEGORIES 2 AND 3 CRACKS:

The Contractor shall comply with the material manufacturer's installation recommendations including, but not limited to, surface preparation, application equipment, and application procedures. No filler material shall be installed until all cracks to be filled have been inspected and approved by the Engineer. Filler material shall not be opened to traffic until fully cured.

404-3.20 UNACCEPTABLE WORK:

The Contractor, at no additional cost to the contracting Agency, shall correct unacceptable work.

Unacceptable work shall include, but not be limited to, unsealed or unfilled cracks, material wastage on the sides of the roadway, and excess quantities of material on the roadway that adversely affects driving.

The Contractor shall not progress to a new area until the unacceptable work is corrected to the satisfaction of the Engineer. Correction of unacceptable work shall be accomplished within five working days after notification from the Engineer of the unacceptable work.

404-4 METHOD OF MEASUREMENT: Add the following to the Standard Specifications:

The Contractor shall meet with the Engineer or the Engineer's designated representative on a daily basis and supply a signed daily report indicating the date and identifying for each road segment:

- The amount of category 1 crack sealant material applied in total pounds and the total square yards of pavement sealed.
- The amount in pounds of category 2 crack filler material installed.
- The amount in pounds of category 3 crack filler material installed.

Payment for crack sealing and crack filling shall be based on accepted quantities of Category 1 Crack Sealing, Category 2 Crack Filling, and Category 3 Crack Filling.

Accepted Category 1 Crack Sealing shall be measured by the pounds of sealant material placed.

Accepted Category 2 Crack Filling shall be measured by the pounds of filler material placed.

Accepted Category 3 Crack Filling shall be the measured by the pounds of filler material placed.

404-5 BASIS OF PAYMENT: Add the following to the Standard Specifications:

Payment for pavement crack sealing and crack filling will be at the contracted unit prices. Payment shall be full compensation for furnishing all labor, materials, equipment, tools, and incidentals used for surface preparation, placement of materials, and cleanup.

No payment will be made for crack sealing or crack filling that used unacceptable material.

SECTION 404 – BITUMINOUS TREATMENTS**Item 3 Fog Seal – (Emulsified Asphalt (Rejuvenator))****1. Description:**

The work under this item includes cleaning the surface adequate for application of the material and applying the seal coat using a rejuvenating emulsion and re-striping of pavement markings. Raised Pavement Markers (RPMs), imprinted colored markings, and other roadway appurtenances such as water and gas valves, manholes and survey monument shall be covered as directed by the Engineer.

The work shall consist of furnishing all necessary labor, materials, and equipment for the Fast Set Fog Seal with an Anti-Skid Material applied as a friction surface.

2. Standard Specifications and Standard Details:

The Work embraced herein shall be performed in accordance with the requirements of the following separate documents, unless otherwise noted, or as modified by the Special Provisions, Plans, Addendum, or other subsequent change:

- Pima County/City of Tucson, Standard Specifications for Public Improvements, 2015 Edition
- Pima County/City of Tucson, Standard Details for Public Improvements, 2015 Edition
- U.S. Department of Transportation, Federal Highway Administration, Manual on Uniform Traffic Control Devices for Streets and Highways, 2003, and Amendments.

3. Preparation:

Immediately prior to the application of the rejuvenating seal with sand operation, the Contractor shall sweep the entire surface with vacuum assisted power brooms. Flushing with water and/or fog seal may be required in some areas. Prior to the sealing application, pavement surfaces shall be cleaned of all oil, debris, grease spots and weeds.

Once areas have been cleaned all areas shall be flushed with a water truck before power brooming. Drain inlets shall be protected and no means which could allow materials into the storm drains will be permitted. The curing of the Fast Set Fog Seal shall be as recommended by the manufacturer and/or the Engineer such that a street may be open to traffic without damage to the surfacing (Contractor shall provide delineators for traffic safety until sealing at each respective location is complete).

The Fast Set Fog Seal with BSA-35 shall be applied to all asphalt surfaces unless otherwise specified. The Contractor shall protect all utilities, Raised Pavement Markers (RPMs), color imprinted asphalt at crosswalks and bike routes prior to applying the rejuvenator. Masking or other approved methods of protection may be used. The Contractor may elect to replace the RPMs and color imprinted asphalt at no additional cost to the agency.

Concrete bridge decks, concrete curbing and gutter pans and other surfaces not intended to be treated shall be shielded from the application of the fog seal. The Contractor shall be responsible for the removal of seal material that has been applied to any unintended surface. Clean up will be the responsibility of the contractor at no additional cost to the Agency.

Before the fog seal is applied in an area all manhole covers, flushing inlet covers, monument covers, and all other utility covers to remain shall be protected from the Contractor's sealing operations by applying a sheet of plastic, cut to fit, or placing a plastic bag over the exposed facilities or other methods approved by the Engineer. All traces of plastic shall be removed from all covers of facilities and other utility covers as quickly as possible after the application of the seal and definitely prior to final acceptance. Contractor shall replace or clean at his or her own expense any damaged or oil stained items within the construction limits.

4. Test Sections:

At least forty-eight (48) hours prior to full production, the CONTRACTOR shall "Ring Test" sections of the area to be treated. The location for each ring test site will be designated by the engineer. For each site section (3 application rates minimum) shall be required for each different asphalt surface. Additional application rates shall be provided as necessary to determine the optimum rate for each different pavement in the project.

5. Application:

The emulsion shall be applied at a rate ranging from 0.07 gal / SY - 0.14 gal / SY with BSA-35 applied simultaneously at a rate of 0.6 lbs - 0.75 lbs/ SY. The final rate of application of emulsion and sand will be jointly determined by the engineer, contractor, and the vendor. The fog seal shall be applied when ambient temperature is above forty degrees (60°F) Fahrenheit and the weather forecast should be for sun and highs in the near sixty degrees (60°F) and no rain forecast for the next twenty four (24) hours after the seal has been applied. The seal shall not be placed if the ambient temperature during the curing period twenty four (24) hours is expected to be below fifty degrees (50°F).

The emulsion shall be heated at a temperature above one hundred forty degrees (140°F) but not to exceed one hundred and sixty degrees (160°F) at application. For smaller areas the emulsion may be applied with a wand.

The surface temperature of the existing pavement shall be less than one hundred and twenty degrees (120°F) during the application. The Fast Set Fog Seal shall be allowed to cure for (45) min. prior to traffic release.

6. Material:

The asphalt emulsion shall be a polymer modified emulsion with a latex polymer manufactured and designed to become traffic ready within the specified time limits.

Product Specification:			
EMULSION SPECIFICATION			
Test on Emulsion	Test Method	Min	Max
Sieve, 20 mesh, % retained	AASHTO T-59	-	0.3
Particle Charge Test	AASHTO T-59	Positive	-
Residue, minimum % (diluted, ready to use)	AASHTO T-59	38	-
Test on Residue	Test Method	Min	Max
Solubility in TCE, %	AASHTO T-44	97.5	-
Ductility, mm, 25°C	AASHTO T-51	100+	-
Elastic Recovery, 25°C	AASHTO T-301	45	-
Softening Point (°C)	AASHTO T-53	45	-

duct Specification:

EXPECTED RETURN-TO-TRAFFIC TIMES Temp Range Time (Typical)

75 – 105 F
15 - 25 min.

59 – 74 F
25 - 40 min.

Anti Skid Material:

The Anti Skid Material shall be angular and black in color.

The Anti Skid Material shall **% Passing**

be BSA-35, a clean, dry,

and dust- free slag with

Mohs hardness of 7-8.5.

The Anti-Skid Material shall

meet the following gradation

analysis per ASTM D 451:

Sieve**Size**

No. 8	100
No. 10	100
No. 12	94.5
No. 16	79.57
No. 20	45.59
No. 30	17.72
No. 50	3.69
No. 70	1.62
Pan	0

Screenings shall also conform to the following quality requirements: Tests

Test Requirements

Specific Gravity (Min.) ASTM C-128

2.8

Cleanliness Value (min.) Cal-Trans 227

80

7. Material Certifications and Testing:

The emulsion manufacturer shall submit to the agency certification that the emulsion meets the specification. The manufacturer through the emulsion supplier shall submit to the agency test results from an accredited laboratory certification that the polymer modified emulsion meets the required specifications and that it is supplying the polymer specified for this contract. The agency will not accept test results dated more than 90 days from the date of bid opening.

Certifications and test results on the polymer shall be submitted and attached to the bid proposal. Certifications and test results on the emulsion must be submitted to the agency and approved by the agency 5 days to supplying the material.

Prior to and during the project the agency may require one quart samples of both the finished emulsion and the polymer used in the emulsion. The agency will be allowed to withdraw samples from the supplier's storage tanks and submit to the agency designated laboratory for testing. All testing shall be at the Agency's expense.

8. Equipment:

Pressure Emulsion Distributor / Texture Media Spreader:

The emulsion distributor and sand applicator shall be a singular unit capable of applying emulsion and Media Texture at the same time. It shall be designed, equipped, maintained, and operated so that bituminous material and media may be applied uniformly on variable widths of surface at the specified rate. The allowable variation from the specified rate shall not exceed 10 percent during application operations. Distributor equipment shall include a tachometer, pressure gages, volume-measuring devices or a calibrated tank, and a thermometer for measuring temperatures of tank contents. The distributor shall be self-powered and shall be equipped with a power unit for the pump and full circulation spray bars adjustable laterally and vertically. Spray nozzle tips shall be properly sized for the product being applied, in accordance with the rejuvenator seal manufacturer's recommendations.

9. Method of Measurement:

The polymer modified emulsion including the anti-skid material will be measured by the ton. Measurement for payment will be made for the quantity of polymer modified rejuvenating emulsion applied and anti-skid material

in accordance with the requirements of these specifications.

10. Basis of Payment:

The accepted quantities of polymer modified rejuvenating emulsion complete in place, including the anti-skid material, measured as provided above, will be paid for at the contract unit price.

Adjustments will not be made for fluctuations in the cost of bituminous material at the date of bid opening and the date that the material is used on the project.

No measurement or direct payment will be made for cleaning the surface or treating the surface prior to the application of polymer modified rejuvenating emulsion or the covering of utilities, RPMs, and other appurtenances within the roadway.

No measurement or payment shall be made for the anti-skid material used or the sweeping up of the material.

STANDARD SPECIFICATIONS MODIFIED TO ADD SPECIAL PROVISIONS FOR MICRO SEAL SURFACE TREATMENT:

1. DESCRIPTION

This specification covers the material, equipment and construction procedures for the resurfacing of existing paved surfaces. The seal shall be a mixture of polymer modified asphalt emulsion, mineral admixture, water, mineral aggregate and other additives, properly proportioned, mixed and spread on a properly prepared pavement surface in accordance with guidelines and as directed by the designated County Representative.

The completed seal shall leave a homogeneous mat, adhere firmly to the prepared surface and have a skid resistant surface texture.

2. APPLICABLE SPECIFICATIONS

The following specifications and test methods form a part of this specification.

AASHTO	American Association of State Highway and Transportation Officials
ASTM	American Society for Testing Materials
ISSA	International Slurry Surfacing Association
ADOT	Arizona Department of Transportation

3. BITUMINOUS TREATMENTS

Bituminous Materials

(A) Quick Traffic Solid Polymer Micro Seal surface treatment Material:

Bituminous materials for the micro seal surface treatment shall be a mixture of cationic polymer modified asphalt emulsion, mineral admixture, water, mineral aggregate and other additives, properly proportioned, mixed and spread on the pavement surface as specified herein and as directed by the Engineer. The completed surface shall have a uniform appearance and a skid-resistant surface.

Asphalt Emulsion:

The polymerized catatonic emulsion is herein classified as CSS-1H, quick-setting, cationic type emulsion of mixing applications and seal coat. A minimum of 4% of solid polymer shall be high sheared into the asphalt prior to the emulsification process. The amount of polymer shall be based on weight of polymer and asphalt (total weight) and be certified by the emulsion supplier. The polymerized emulsion shall meet the following requirements:

<u>Test on Emulsion</u>	<u>AASHTO Test Method</u>	<u>Specification Limits</u>
Viscosity, SSF, 77°F, Sec.	T-59	15-100
Storage Stability, 24 hours, %	T-59	0.1 max
Sieve Test, %	T-59	0.1 max
Evaporation Residue, %	Ariz 512	60 min.
Particle Charge	T-59	positive

SPECIAL PROVISIONS NO. S-99-01

TEST ON EVAPORATION RESIDUE

Kinematic Viscosity, 275°F, cst	T-201	650 min
Penetration @ 77°F, dmm, (100g/5sec)	T-49	40-90
Ductility @ 77°F, (5cm/min)	T-51	60 min
Softening Point, °F	T-53	150 min

TEST ON EVAPORATION RESIDUE AFTER RTFO

Kinematic Viscosity, 275°F, aging ratio, cst	T-201	2.5 max
Softening Point, °F	T-53	150 min

The emulsion, upon standing undisturbed for a period of twenty-four (24) hours, shall show no white or milky colored substance on its surface, and shall be a homogeneous brown color throughout.

4. Modifier Type and Content:

- a. The modifier shall be solid. The asphalt cement shall contain a minimum of 4% solid polymer by weight of asphalt residue, sheared into the asphalt prior to emulsification.

Aggregate Materials: of the Standard Specifications is modified to add:

b. **Micro seal surface treatment Aggregate**

The mineral aggregate shall consist of sound, durable crushed stone or crushed gravel and approved mineral admixture. The material shall be free from vegetable matter and other deleterious substances. Aggregates shall be 100% crushed with no round particles. No natural sand will be allowed. The percentage composition by weight of the aggregate shall conform to the following gradation per specified Type:

MICRO SEAL SURFACE TREATMENT AGGREGATE			
SIEVE SIZE	Type I % PASSING	Type II % PASSING	Type III % PASSING
3/8	100	100	100
No. 4	100	85/100	70/90
No. 8	90/100	65/90	45/70
No. 16	65/90	45/70	28/50
No. 30	40/60	30/50	19/34
No. 50	25/42	18/30	12/25
No. 100	15/30	10/21	7/18
No. 200	10/20	5/15	5/15
Emulsified Asphalt content as a % of Dry Wt. Of Aggregate (approx.) ASTM D3910 (W.T.A.T. TEST)	18	16	14
Residual Asphalt Range requirements % of Dry Wt. of Aggregate ASTM D3910 (W.T.A.T. TEST)	10-16	7.5-13	6.5-12
Pounds of Aggregate per Square Yard (approx.)	8-10	12-18	18-25

The mineral aggregate and mineral admixture shall have a sand equivalency value not less than 50 (ASTM D 2419) and be non-plastic.

If more than one kind of aggregate is used, the correct amount of each kind of aggregate to produce the required gradation shall be proportioned separately in a manner that will result in a uniform and homogeneous blend. The final blended aggregate shall meet requirements for grading, sand equivalency and plasticity per above.

Mineral admixture, required by the mix design, shall be any recognized brand of non-air entrained Type I normal Portland cement that is free of lumps and clods, with a minimum of 85% passing the #200 sieve added by weight of aggregate as specified by the mix design.

5. Micro Seal surface treatment Mix Design:

a. **Requirements:**

The Contractor shall provide a job mix formula from an approved laboratory and present certified test results for the Engineer's approval. Compatibility of the aggregate and polymer modified asphalt emulsion shall be certified by the emulsion manufacturer. All materials used in the job mix formula shall be representative of the materials proposed by the Contractor for use in the project.

All products used in the construction procedures shall have certifications from the suppliers and shall be given to the Engineer upon delivery to the project.

Mix design and proportioning shall be approved by the Engineer prior to the start of the project.

b. **Proportioning:**

The micro seal surface treatment mixture shall be proportioned in accordance with the mix design. Calibrated sign flow meters shall be provided to measure both the addition of water and additives to the pug mill emulsion and cement flow shall be tied directly to aggregate flow. All additive flows shall be calibrated.

The micro seal surface treatment mixture shall be proportioned per the mix design to ensure:

- (1) Trafficability – with a relative humidity at not more than 50% and ambient air temperatures of at least 77°F, the material will permit controlled traffic without damage to the surface
- (2) within twenty (20 +/- 10) minutes and uncontrolled traffic without damage within forty-five (45 +/- 15) minutes.
- (3) Prevent development of bleeding, raveling, separation or other distress for seven (7) days after placing the micro seal surface treatment.
- (4) The finish mixture will be warranted against material defects for one year; existing conditions excluded.

c. **Specifications:**

The Engineer shall approve the mix design prior to use. The specification limits are as follows:

Residual Asphalt	6.0%-11.5% by dry weight of agg.
Mineral admixture	0.1%-1.0% by dry weight of agg.
Polymer Content/Type	4% min/solid
Additive	as required for mix properties
Water	as required for mix properties
Aggregate Grading	Type II (Section 404-2.02 (E))
Traffic Time	(Sec 404-2.06 (B) (1))
Wet Stripping (ISSA TB-114)	Pass (90% min)
Loaded Wheel Sand Adhesion	(Sec 404-2.06 (C) (2))

- (1) Modified Cohesion Test (ISSA TB-139) – Furnish laboratory test data showing the mix design to be trafficable within twenty (20) minutes after application at 77°F, conforming to the following criteria in accordance with test methods described in the applicable specifications:

Set Time test: 30 minutes 12 kg-cm min

Early Rolling Traffic Time 60 minutes 20 kg-cm min

- (2) Loaded Wheel Sand Abrasion Test (ISSA TB-109) – Furnish laboratory test data showing the mix design conforming to the following criteria in accordance with test methods described in the applicable specifications: 50 g/sf max

The laboratory shall further report their quantitative effects of moisture content in the unit weight of the aggregate (bulking effect). The report must clearly show the theoretical recommended proportion of aggregate, mineral admixture (min & max), water (min & max), additive(s), and asphalt and how the proportions are based (dry aggregate weight, total mix, etc.).

6. Equipment:
Micro seal surface treatment Equipment

- (1) Mixing Machine: The mixing machine shall be an automatic sequenced, self-propelled mixing machine, which shall be a continuous flow mixing unit, able to accurately deliver and proportion the aggregate, mineral admixture, water, additive, and polymer modified asphalt emulsion to a revolving multi-blade double shafted mixer and discharge the product on a continuous flow basis.

The machine shall have sufficient storage capacity for aggregate, polymer modified asphalt emulsion, mineral admixture, water and additive to maintain an adequate supply to the proportioning controls.

Each mixing unit to be used in the performance of the work shall be calibrated prior to construction. The mixing unit shall contain the following components for material control:

1. Individual volume or weight controls for proportioning each material to be added to the mix shall be provided, and shall be accessible by the Engineer. Each material control device shall be calibrated prior to work and documented for inspection by the Engineer.
 2. Aggregate Feed – The aggregate feed to the mixer shall be equipped with a revolution counter or similar device so the amount of aggregate used may be determined at any time.
 3. Emulsion Pump – The emulsion pump shall be the positive displacement type with a jacketed housing for uniform heating. A revolution counter or similar device shall be fitted so that the amount of emulsion used may be determined at any time. The readout of this device shall be in gallons.
 4. Fines Feeder – The fines feeder shall provide a uniform, positive, accurately metered range of 0 to 1 percent by dry aggregate weight. The fines feeder must have a counter so that the amount of mineral admixture can be determined at any time.
 5. Liquid Additive – The mixing machine shall be equipped with a liquid additive system that provides a pre-determined amount of additive to the mixing chamber. This additive system must be equipped with a counter that can determine the amount at any time.
 6. Water System – The mixing machine shall be equipped with a water system that provides a pre-determined amount of water to the mixing chamber. This water system must be equipped with a counter that can determine the amount used at any time.
- (2) Spray Bars: The mixing machine shall be equipped with a water pressure system that provides a water spray immediately ahead of and outside the spreader box.
- (3) Spread Equipment: The mixture shall be agitated and spread uniformly in the surfacing box by means of twin shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off.

A secondary strike-off shall be provided to improve surface texture. The secondary strike-off shall have the same leveling adjustments as the spreader box.

Self-contained Micro Seal surface treatment machines shall be equipped with mechanical and electronic counters to accurately measure and calibrate the revolutions of the conveyor delivering aggregate to the pug mill. Each Micro Seal surface treatment machine shall also be equipped with a positive displacement pump and digital read-out counter to accurately measure and display, in gallons, the quantity of emulsified asphalt delivered to the pug mill.

The spreading equipment shall be maintained free from buildup of the mixture on the paddles or sidewalls. Any skips, lumps or tears in the finished product will not be allowed.

7.0 APPLICATION

7.1 GENERAL

The polymer modified micro seal surface treatment shall be of the desired consistency when deposited in the spreading box and nothing more shall be added to it. The mixing time shall be sufficient to produce a complete and uniform coating of the aggregate and the mixture shall be placed into the moving spreader box at a sufficient rate to maintain an ample supply across the full width of the strike-off squeegee at all times.

7.2 WEATHER

The mixture shall be placed when the temperature is at least 45 degrees F and rising, and is not raining. The surface temperature shall be 50 degrees F or higher when the mixture is applied. The micro seal surface treatment shall not be applied unless the pavement temperature is at least 45 degrees F and rising.

The mixture shall not be applied during unsuitable weather, no Micro Seal surface treatment shall be applied when there is danger that the finished product will freeze before 24 hours and the mixture shall not be applied when weather conditions prolong opening to traffic beyond a reasonable time.

7.3 PROTECTION OF EXISTING SERVICES

The contractor shall take all necessary precautions to prevent seal or other material used from entering or adhering to gratings, hydrants or valve boxes, manhole covers, bridge or culvert decks and other road fixtures. Immediately after resurfacing, the contractor shall clean off any such material and leave any such grating, manholes, etc., in a satisfactory condition.

7.4 PREPARATION OF THE SURFACE

Immediately before applying the bituminous material, the area to be resurfaced shall be cleared of all loose material, dirt, vegetation and other objectionable material. Manholes, valve boxes, drop inlets and other service entrances will be protected from the seal by a suitable method.

In urban areas, the surface shall be cleaned with a self-propelled pick-up broom sweeper. In rural areas, power brooms may be used. When necessary, cleaning shall be supplemented by hand brooms. This also includes the removal of grass and/or weeds that are growing in the joint between the street and gutter.

The bituminous material shall not be applied until the designated County representative has made an inspection of the surface and they have determined that it is acceptable.

7.5 FOGGING PAVEMENT

The surface shall be pre-wetted by fogging ahead of the spreader box. The rate should be adjusted as dictated by the pavement temperatures, surface temperatures, humidity and dryness of existing pavement.

7.6 MIX STABILITY

The modified mix shall process sufficient stability so that the premature breaking of material in the spreader box should not occur. The mixture shall be homogeneous during the following mixing and spreading; it shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate.

7.7 APPLICATION RATE

The application rates are average rates. The surface texture variations throughout the work will dictate the actual spreading rates. The strike-off squeegee shall be adjusted to provide a thickness that will completely fill the surface voids and provide an additional thickness not exceeding one and one half times the largest top-size stone.

7.8 JOINTS

No excessive buildup, uncovered areas or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable width spreading equipment to produce a minimum number of longitudinal joints throughout the work. (Half passes and odd width passes will be only in minimum amounts. If half passes are used, they cannot be the last pass of any paved area. Care shall be taken to ensure straight lines along curb and shoulders. No runoff on these areas will be permitted.) Transverse joints shall be squared off so that a uniform transition is obtained at all transverse joints. Excess material as a result of squaring the joint will be removed by the Contractor.

7.9 HAND WORK

Approved hand squeegees shall be used to spread the mixture in areas inaccessible to the spreader box and other areas where hand spreading may be required to provide complete and uniform micro seal surface treatment coverage. Care shall be exercised to leave no unsightly appearance from handwork. The same type finish as applied by the spreader box shall be required. Handwork shall be completed during the machine applying process.

7.10 LINES

Care shall be taken to insure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance.

7.11 TRAFFIC CONTROL

Suitable methods, such as an approved barricade operational plan, flagmen, pilot cars, etc., shall be used by the Contractor to protect the uncured seal surface from all types of vehicular traffic until the new surface will support the traffic without damage.

7.12 CLEAN-UP

The contractor shall remove any debris associated with the performance of the work on a daily basis.

8.0 MACHINE CALIBRATION AND VERIFICATION**8.1 CALIBRATION**

Each mixing unit to be used during the contract shall be calibrated prior to construction and proven to the designated County representative, or designee, during the test strips. All mixing units to be used on the job shall be approved prior to the start of construction. Any cost associated with calibration shall be incidental to the project. Documentation shall include an individual calibration of each material device(s). No machine will be allowed to work on the project unless the calibration has been completed and accepted. The method used to calibrate the machines shall be submitted to the designated County representative for approval prior to calibration. Verification is to be performed with test strips. This shall include pre and post weighing of the seal trucks. Re-calibration shall be required whenever counters or measuring devices are discovered to be in error. Any cost associated with recalibration shall be incidental to the project and no additional time will be granted. Calibration sheets will be furnished to the designated County representative.

8.2 VERIFICATION

Test strips will be made by each machine prior to construction. Samples of the seal will be taken and tested as to mix consistency, proportioning and application rate. Upon failure of any test, retest shall be made at the contractor's expense. Any unit failing to pass the test will not be permitted to work on the project.

9.0 EQUIPMENT REPLACEMENT

Any equipment, or piece of equipment, that fails to produce the desired surface results shall be repaired and/or replaced by the Contractor at no expense to the County. The designated County representative shall determine if the equipment and/or finished product are in compliance.

10.0 PROTECTION OF COVERS

All utility appurtenances and survey monuments, i.e., manholes, valves, etc. shall be covered prior to application of micro seal surface treatment. A squeegee method will not be permitted. The contractor shall submit the method to be used to the designated County representative for approval prior to work commencement. All utility appurtenances and survey monuments shall be marked outside the portion of the pavement with the offset and location prior to micro seal surface treatment coating.

11.0 SCHEDULE

The Contractor shall schedule and furnish all labor and equipment necessary to apply a minimum of 170 tons of micro seal surface treatment per day.

12.0 PAYMENT

The polymer micro seal surface treatment shall be measured and paid for by the weight of the aggregate and weight of emulsified asphalt, as shown on certified weight tickets from the supplies delivered to the project, less weigh backs. The contractor shall submit to the designated County representative the delivery tickets that show quantities of each material delivered to the job site and used on the project. No direct measurement or payment for water or admixtures. This will be full compensation for all work including labor, equipment materials, tools, design, and any other incidentals

13.0 WARRANTIES AND GUARANTEES

The Contractor shall warrant and guarantee all the work against defective workmanship or materials for a period of one year commencing on the date of final acceptance of the work under the contract, ordinary wear and tear and unusual abuse or neglect excepted.

In the case of the latent defect, the warranty shall commence on the date the defect is discovered, except that this warranty period shall not extend beyond the period allowed by law.

SECTION 406 - ASPHALTIC CONCRETE

406-5 BASIS OF PAYMENT the first paragraph of the Standard Specifications is revised to read:

The accepted quantities of asphaltic concrete, measured as provided above, will be paid for under the appropriate bid items at the contract unit price or adjusted unit price, complete-in-place.

Due to fluctuating asphalt cement prices the unit price for asphaltic concrete will be adjusted based on the criteria and formula below.

The price for bituminous material or asphalt cement used in the asphalt concrete mixture will be determined monthly by the Agency based on the selling prices of asphalt cement published by the Arizona Department of Transportation, Contracts and Specifications Section (ADOT memorandum). The established price for bituminous material used in the asphaltic concrete mixture will be made available by the Agency upon request. Bituminous adjustments will, if applicable, will be adjusted according to the ADOT index at the time the DO is issued.

The "initial cost" for asphalt cement of all types, grades, etc. on projects will be the established price based on the ADOT memorandum for the selling prices during the month the bids are opened.

An adjustment in compensation will be made for either an increase or decrease in the price of asphalt cement as shown in the latest memorandum, current as of the date of use, as compared to the "initial cost".

The tons of asphalt cement that are paid for on an invoice basis to which the adjustment will be applicable are the tons which have been delivered to the project and subsequently incorporated into the work. The adjustment will be applicable on the date of use.

No additional compensation will be made for any additional or increased charges, costs, expenses, taxes, etc., which the contractor may have incurred since the time of bidding and which may be the result of any increase in the "initial cost" of asphalt cement.

After the expiration of the specified completion time set forth in the contract or as may be extended in accordance with the provisions of Subsection 108-8 of the Standard Specifications any adjustment in compensation made for asphalt cement incorporated into the work will be on the basis of the price of asphalt cement shown in the latest memorandum on the date of the expiration of the specified completion time, as hereinbefore specified.

Adjustment Formula:

("Date of Use" cost of asphalt cement - "Initial" cost of asphalt cement) x % asphalt cement in mix design

EXAMPLE:	"Initial" cost at bid opening	=	\$100 per ton
	"Date of Use" cost	=	\$120 per ton
	% asphalt cement in mix design	=	5.2

Unit Price adjustment to Asphaltic Concrete	=	(120-100) x 0.052
	=	20 x 0.052
	=	\$1.04 increase in the contract unit price for asphaltic concrete.

SECTION 515 - MISCELLANEOUS UTILITY RELOCATIONS is hereby added to the Standard Specifications**515-1 DESCRIPTION**

The work under this Section is intended to cover work added to the contract by the Engineer for miscellaneous relocation of utilities that are encountered during the course of construction. Miscellaneous work shall be work that was not covered by other items included in the project and shall be performed at the direction of the Engineer.

515-2 MATERIALS (None Specified)**515-3 CONSTRUCTION DETAILS** (None Specified)**515-4 METHOD OF MEASUREMENT**

The work under this Section shall be completed on a force account basis as specified in Subsection 109-5.

515-5 BASIS OF PAYMENT

Payment for miscellaneous utility relocation will be made in accordance with the provisions of Subsection 109-5.

SECTION 701 - MAINTENANCE AND PROTECTION OF TRAFFIC of the Standard Specifications is modified to add the following predetermined reimbursement rates:

701- 4 METHOD OF MEASUREMENT

The Agency will reimburse the contractor for the work under this Section on the basis of bid prices or the predetermined reimbursement rates as specified in the Special Provisions.

701- 4.02 Construction Area Elements

(A) Elements of Work (Complete-in-Place): The elements of work listed under this subsection will be measured for payment upon satisfactory completion of the initial installation or obliteration. Except as hereinafter specified under Basis of Payment, no subsequent measurement will be made:

<u>Elements of Work</u>	<u>Unit</u>	<u>Rate</u>
Temporary Concrete Barrier (Installation & Removal)	L.F.	\$10.00
Temporary Impact Attenuation (Sand Barrel) (Installation & Removal)	Each	\$5.00
Specialty Sign	Each	Invoice
Preformed Pavement Marking (Type II)	L. Ft.	\$1.60
Preformed Pavement Marking (Type III)	L. Ft.	\$1.00
Temporary Pavement Marking (Painted Line)	L. Ft.	\$0.13
Obliterate Pavement Marking	L. Ft.	\$0.25
Obliterate Pavement Legends	Each	\$25.00
Obliterate Pavement Arrows (Single, Double or Merge)	Each	\$22.00
Delineator (ADOT Std. Dwg. 4-M-4.01)(Temporary)	Each	\$20.00
Reflective Raised Pavement Marker (Temporary)	Each	\$4.00
Reflective Raised Pavement Marker (Permanent) (Used as Temporary)	Each	\$4.50
Non-Reflective Raised Pavement Markers (Temporary)	Each	\$2.50
Remove Raised Pavement Markers	Each	\$1.00
Chip Seal Pavement Marker (Single Capped)	Each	\$2.00
Chip Seal Pavement Marker (Double Capped)	Each	\$3.00
Embedded Sign Post (Installation, Use & Removal)	Each	\$35.00

(B) Elements of Work (In Use) and Flagging: The elements of work listed under this subsection will be measured for payment from the time at which the element is put into active use on the project and accepted by the Engineer until such time that the Engineer determines that the element is no longer required. Individual flags and sandbags used in conjunction with the traffic elements of work shall be considered incidental items. No separate payment shall be made for flags or sandbags and their cost shall be included in their respective elements of work. The work shall also include all maintenance, cleaning, and repair of all elements. The Engineer must also approve the use of Flagging Services. Flagging Services will be paid as indicated in this subsection.

<u>Elements of Work</u>	<u>Unit</u>	<u>Rate</u>
Temporary Concrete Barrier (In Use)	L. Ft./Day	\$0.04
Temporary Impact Attenuation (Sand Barrel)(In-Use)	Each/ Day	\$0.25
Drum (18" x 36")	Each/ Day	\$0.25
Flashing Arrow Panel	Each/Day	\$30.00
Changeable Message Board	Each/Day	\$50.00
Pilot Truck and Driver	Hour	\$30.00
Tubular Marker	Each/Day	\$0.10
Traffic Cones (18 inch)	Each/Day	\$0.10
Traffic Cones (28 inch)	Each/Day	\$0.15
Vertical Panels	Each/Day	\$0.20
Barricade (Type II)	Each/Day	\$0.20
Barricade (Type III)	Each/Day	\$0.25
Flashing Warning Light (Type A)	Each/Day	\$0.15
Flashing Warning Light (Type B)	Each/Day	\$0.40
Steady-Burning Warning Light (Type C)	Each/Day	\$0.15
Standard Intensity Reflective Sheeting,		
Small Sign (Less than 10 square feet)	Each/Day	\$0.20
Medium Sign (10 square feet to 16 square feet)	Each/Day	\$0.25
Large Sign (Greater than 16 square feet)	Each/Day	\$0.35
Portable Sign Stand (Spring Type)	Each/Day	\$0.40
Portable Sign Stand (Small Sign, less than 10 square feet)	Each/Day	\$0.10
Portable Sign Stand (Medium Sign, 10-16 square feet)	Each/Day	\$0.10
Portable Sign Stand (Large Sign, Greater than 16 square feet)	Each/Day	\$0.15
High Level Flag Tree Sign Stand	Each/Day	\$0.30
Chain Link Fence	L.F./Day	\$0.04
Orange Safety Fence (4 ft. min. by 50 ft.)	Each/Day	\$1.50
Flagging Services (Civilian)	Hour	\$18.00
Flagging Services (Uniformed Officer)(Off Duty)	Hour	\$30.00
Official Police Vehicle (Off duty)	Hour	\$8.00



MASTER AGREEMENT

PIMA COUNTY, ARIZONA

THIS IS NOT AN ORDER - TRANSMISSION CONSTITUTES
CONTRACT EXECUTION

Master Agreement No: 2000000000000000074

MA Version: 1

Page: 1 of 4

Description: Pavement Preservation - Seal Coat

I S S U E R	Pima County Procurement Department	T E R M S	Initiation Date: 11-19-2019
	130 W. Congress St. 3rd Fl		Expiration Date: 11-18-2020
	Tucson AZ 85701		
	Issued By: MATTHEW SAGE		
	Phone: 5207248586		
	Email: matthew.sage@pima.gov		
		<div>NTE Amount: Used Amount: \$0.00</div>	

V E N D O R	SOUTHERN ARIZONA PAVING & CONS	Contact: NENA ASHTON
	4102 E ILLINOIS ST	Phone: 520-745-8181
	TUCSON AZ 85714	Email: nena@southernazpaving.com
		Terms: 0.00 %
		Days: 30

Shipping Method:

Delivery Type:

FOB:

Modification Reason

This Master Agreement is for an initial term of one-year in the annual shared amount of \$5,000,000.00 and includes four (4) one-year renewal options.

Attachment: Offer Agreement

This Master Agreement incorporates the attached documents, and by reference all instructions, Standard Terms and Conditions, Special Terms and Conditions, and requirements that are included in or referenced by the solicitation documents used to establish this agreement. All transactions and conduct are required to conform to these documents.



MASTER AGREEMENT DETAILS

Master Agreement No: 2000000000000000074

MA Version: 1

Page: 2 of 4

Line	Description					
1	Fog Seal (SS-1H) (Chip & Fog Seal)					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	TON	\$3,116.00			
2	Emulsion (CRS-2P) (Chip & Fog Seal)					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	TON	\$665.00			
3	Cover Material (Chip & Fog Seal)					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	TON	\$193.00			
4	Polymer Modified Asphalt Emulsion Fog Coat (BSA-35)					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	TON	\$3,215.00			
5	Polymer Modified Asphalt Emulsion Micro Seal (CSS-1H)					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	TON	\$404.00			
6	Micro Seal Surface Treatment Aggregate (Type 2)					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	TON	\$286.00			
7	Crack Seal - Category 1					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$2.00			
8	Asphaltic Concrete Patching & Prep for Surface Treatment					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	TON	\$665.00			
9	Flagging Services (Uniformed Officer) (Off Duty)					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	HOUR	\$45.00			

ATTACHMENT 2 TO AMENDMENT 1**OFFER AGREEMENT, Revised 10/10/19****1. INTENT:**

This document is intended to establish a Master Agreement ("MA") to provide Pima County ("County") with placing Crack Seal, Chip Seal with Fog Seal, Micro Seal Surface Treatment, or Rejuvenating Fog Seal, and other maintenance-related items as needed and as per specifications and requirements at various locations within Pima County on an "as required basis" by issue of a Delivery Order ("DO"). The projects may also include asphalt patching where necessary, pavement removal is incidental to that work. Pavement markings, symbols, and legends are considered incidental. Maintenance and protection of traffic is considered incidental.

All work and terms shall be governed by the Pima Association of Governments' (PAG) *Standard Specifications for Public Improvements* as modified by the Pima County Department of Transportation's Supplement to the PAG Standard Specifications for Public Improvements except as modified by this MA or special provisions. PAG Specification Section 102 (Bidding Requirements and Conditions) and PAG Specification Section 103 (Award and Execution of Contract) are not applicable to this MA.

The intent is to award a shared indefinite delivery/indefinite quantity MA in the annual amount of \$5,000,000.00 with up to five (5) qualified Contractors. County will select up to five (5) Contractors that submitted the lowest, responsive and responsible bidders based on the Total Bid to enter into the MA. The initial term of the MA will be one (1) year from the date of award by the Board of Supervisors.

As defined by the Pima County Standard Terms and Conditions included herein, this MA is non-exclusive and County may terminate it for any reason without penalty or cost.

All Goods and Services that Contractor offers or provides pursuant to the MA will conform to the requirements defined by or referred to by the solicitation documents including *Solicitation Amendment*, *Instructions to Offerors*, *Standard Terms and Conditions*, and this *Offer Agreement*, all of which are incorporated herein.

This document, including all attachments and documents incorporated by reference, constitutes the entire MA between the parties pertaining to the subject matter hereof, and merges all prior or contemporaneous agreements and understandings, oral or written, herein.

2. CONTRACT TERM, RENEWALS, EXTENSIONS & REVISIONS:

The initial term of the MA will be for a one (1) year period and include four (4) one-year renewal options that the parties may exercise upon written agreement as follows:

Contract extensions, renewals, or revisions will occur through the issuance by County to Contractor of a revised MA document setting forth the requested changes. Failure by Contractor to object in writing to the proposed revisions, terms, conditions, scope modifications and/or specifications within ten (10) calendar days of issuance by County will signify acceptance of all such changes by Contractor and the revision will be binding upon the parties.

3. CONTRACTOR MINIMUM QUALIFICATIONS:

The Contractor certifies that it is competent, willing and responsible for performing the services or providing the products in accordance with all requirements of the solicitation and this MA. Contractor certifies that it possesses all licenses required by applicable Agencies to satisfy the requirements of this MA.

Contractors performing work under this MA must hold the proper license issued by the State of Arizona Registrar of Contractors to perform these services.

4. PRODUCT OR SERVICE SPECIFICATIONS & SCOPE:

Contractor will provide for COUNTY all labor, materials and equipment necessary to complete the work identified in individual DOs awarded to CONTRACTOR under this Agreement. All work will be done per specifications called for in DOs, Exhibit "A" Special Provisions (1 page), Exhibit "B" Technical Specifications (1 page), and Exhibit "C" Supplemental Specifications (22 pages), and other documents incorporated into this Agreement, all made a part hereof.

5. OFFER ACCEPTANCE AND ORDER RELEASES:

County will accept offer(s) and execute this contract by issue of a MA (recurring requirements) to be effective on the document's date of issue without further action by either party. The MA will document the terms of the agreement.

Pursuant to the executed MA, departments requiring services defined herein will issue a DO to the Contractor via facsimile, e-mail or telephone.

For each DO, County will select the Bidding Contractor whose total bid, based on the quantities provided by the County in the Scope of Work and in accordance with the Item #, Task Name, and unit rates provided herein, is the lowest, responsive bidder.

The County will contact the apparent low Bidder and provide the Scope of Work and schedule for each DO and request confirmation via signature confirming the total bid and availability. Upon receipt, a Notice to Proceed will be issued by the County. If the apparent low Bidder is unable to confirm or meet the schedule requirements within two (2) working days, County will contact the next apparent low Bidder. This process will continue until the County has issued a Notice to Proceed. Bituminous adjustments will, if applicable, will be adjusted according to the Arizona Department of Transportation (ADOT) index at the time the DO is issued. No fuel adjustments will be considered.

Contractor must not supply materials or services that are not specified on the MA and are not documented or authorized by a DO at the time of provision. County accepts no responsibility for control of or payment for materials or services not documented by a County DO.

Contractor will establish, monitor, and manage an effective contract administration process that assures compliance with all requirements of this contract. In particular, Contractor will not provide goods or services in excess of the executed contract items, item quantity, item amount, or contract amount without prior written authorization by contract revision that County has properly executed and issued. Any items Contractor provides in excess of those stated in the contract are at Contractor's own risk. Contractor will decline verbal requests to deliver items in excess of the contract and will report all such requests in writing to the County Procurement Department within one (1) workday of the request. The report must include the name of the requesting individual and the nature of the request.

6. ACCEPTANCE OF GOODS AND SERVICES:

The County Department designated on the issued DO will accept goods and services only in accordance with this contract. Such acceptance is a prerequisite to the commencement of payment terms.

7. COMPENSATION & PAYMENT:

The MA issued to accept Contractor's offer will define the not-to-exceed amount of the contract.

Contractor's unit prices must include all incidentals and associated costs required to comply with and satisfy all requirements of this solicitation, which includes the *Instructions to Offerors*, *Standard Terms and Conditions*, and Offer Agreement. County will make no payments for items not in the contract.

Quantities in this solicitation are estimates only. County reserves the right to increase or decrease quantities and amounts. County makes no guarantee regarding actual orders for items or quantities during the term of the agreement. County is not responsible for Contractor inventory or order commitment.

UNIT PRICES (Net 30-day Payment Terms)

ITEM #	TASK NAME Items to include and satisfy all Solicitation & Offer Agreement requirements, General & Item Specifications	ESTIMATED ANNUAL USAGE QUANTITY	UOM	UNIT PRICE \$	EXTENDED AMOUNT \$
4040125	Fog Seal (SS-1H) (Chip & Fog Seal)	250	Tons	3,116-	779,000-
4040127	Emulsion (CRS-2P) (Chip & Fog Seal)	1,800	Tons	665-	1,197,000-
4040159	Cover Material (Chip & Fog Seal)	12,000	Tons	193-	2,316,000-
4040138	Polymer Modified Asphalt Emulsion Fog Coat (BSA-35)	500	Tons	3,215-	1,607,500-
4040153	Polymer Modified Asphalt Emulsion Micro Seal (CSS-1H, Per specification provided)	857	Tons	404-	346,228-
4040200	Micro Seal Surface Treatment Aggregate (Type 2)	6,000	Tons	286-	1,716,000-
4040301	Crack Seal – Category 1	500,000	LBs	2-	1,000,000-
4060002	Asphaltic Concrete Patching and Preparation for for Surface Treatment (PAG 2 or PAG 3)	1,000	Tons	665-	665,000
7010077	Flagging Services (Uniformed Officer) (Off Duty)	500	Hour	\$45.00	\$22,500.00
				TOTAL BID	9,649,228-

Price Escalation. All unit prices include compensation for Contractor to implement and actively conduct cost and price control activities. Pricing will remain firm during the initial year of the contract term after which the parties may consider price increases no more frequently than once per year. Contractor will submit a written request to County that includes supporting documents justifying requested increases at least ninety (90) days prior to the renewal date. Contractor will provide evidence, cite sources, demonstrate specific conditions and document how those conditions affect the cost of its performance, and identify specific efforts Contractor has taken to control and reduce those and other costs to avoid the need to increase prices. County will review proposed pricing and determine if it is allowable, fair and reasonable, and in the best interest of County to accept the proposal. County will automatically apply a bituminous adjustment during the renewal period based on the month of the renewal. County reserves the right to continue, accept or reject the price proposal, or terminate and re-solicit the contract.

The parties may negotiate and establish unit pricing in writing under the contract for items included in the scope of the contract that does not have previously defined unit pricing.

Standard payment terms are net thirty (30) days from the date of valid invoice document and do not commence until the later of 1) the receiving County Department receives goods or services into County's payment system or 2) County Financial Operations receives and verifies Contractor's invoice.

OPTIONAL EARLY PAYMENT DISCOUNT TERM: Pima County Administrative Procedure No. 22-35 Section 2.2.4 defines County's practice regarding discounts for early payment. Contractor offers the following discounts to those prices to be used for all orders issued pursuant to this contract. County will utilize the existing payment code that best matches that offered and does not exceed the offered discount percentage. Payment days cannot be less than ten (10) calendar days. Contractor will submit valid invoice document consistent with the associated DO to County Finance Department at least seven (7) calendar days prior to the date on which the discounted payment is due. If desired, for any order issued pursuant with this contract, Contractor may offer early payment discounts that exceed this Standard Early Payment Discount.

Standard Early Payment Discount Percent: 0 % if payment tendered within 0 Days as above.

Contractor will submit Request(s) for Payment or Invoices to the location and entity defined by County's DO document.

All Invoice documents will reference the County's DO number under which the services or products were ordered. **ALL** Invoice line items will utilize the item description, precise unit price and unit of measure defined by the County's order document. County may return invoices that include line items or unit prices that do not match those documented by the County's order to Contractor unprocessed for correction. **Contractor will not accept orders, or provide services or products that cumulatively exceed the contract amount.**

Contractor will provide detailed documentation in support of payment requests, which should be consistent with and not exceed County's DO. Contractor will bill County within one (1) month after the date on which Contractor's right to payment accrues ("Payment Accrual Date"), which, unless this contract specifically provides otherwise, is the date Contractor delivers goods, performs services or incurs costs. Invoices must assign each billed amount to an appropriate line item of County's DO and document each Payment Accrual Date. County may refuse to pay any amount that Contractor bills in which does not conform to County's DO. County will refuse to pay any amount that Contractor bills more than six (6) months after the Payment Accrual Date, pursuant to A.R.S. § 11-622(C).

8. DELIVERY:

"On-Time" delivery is an essential part of the consideration that Contractor is to provide to County under the contract. Contractor will make delivery in accordance with the Instructions to Offerors, Standard Terms and Conditions and to the location(s) on the DO.

9. TAXES, FEES, EXPENSES:

Pursuant to IRS Publication 510, County is exempt from federal excise taxes for goods. County is subject to State and City sales tax. County will pay no separate charges for delivery, drayage, express, parcel post, packing, insurance, license fees, permits, costs of bonds, surcharges, or bid preparation unless the contract expressly includes such charges and the solicitation documents itemize them.

10. OTHER DOCUMENTS:

Contractor and County in entering into this contract have relied upon information provided or referenced by Pima County Solicitation No. IFB-PO-2000019 including the Instructions to Offerors, Offer Agreement, Standard Terms and Conditions, Solicitation Amendments, Contractor's Bid Offer, documents submitted by Contractor or References to satisfy Minimum Qualifications and any other information and documents that Contractor has submitted in its response to County's Solicitation. The Contract incorporates these documents as though set forth in full herein, to the extent not inconsistent with the provisions of this contract.

11. INSURANCE:

The Insurance Requirements herein are minimum requirements for this Contract and in no way limit, the indemnity covenants contained in this Contract. Contractor's insurance shall be placed with companies licensed in the State of Arizona and the insureds shall have an "A.M. Best" rating of not less than A- VII. Pima County in no way warrants that the minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

Minimum Scope and Limits of Insurance:

Contractor shall procure and maintain, until all contractual obligations have been discharged, the insurance coverage with limits of liability not less than stated below. Pima County in no way warrants that the minimum insurance limits contained herein are sufficient to protect the Contractor from liabilities that arise out of the performance of the work under this Contract. The Contractor is free to purchase additional insurance that required by the County. If necessary, Contractor may obtain commercial umbrella or excess insurance to satisfy the County's Insurance Requirements.

Commercial General Liability (CGL) – Occurrence Form with limits of \$2,000,000 Each Occurrence and \$2,000,000 General Aggregate. Policy shall include bodily injury, property damage, personal/advertising injury and products – completed operations.

Business Automobile Liability – Bodily Injury and Property Damage for any owned, hired, and/or non-owned automobiles used in the performance of this Contract with a Combined Single Limit (CSL) of \$1,000,000 each accident.

Workers' Compensation (WC) and Employers' Liability – Arizona Statutory requirements and Employer's Liability coverage with policy limits of \$1,000,000 and each accident and each person - disease.

Professional Liability (Errors and Omissions) Insurance – This insurance is required by Pima County when Professional Liability or any other E&O coverage is excluded from the Contractor's CGL policy. The E&O policy limits shall be not less than \$2,000,000 Each Claim and \$2,000,000 Annual Aggregate. The insurance policy shall cover professional misconduct or negligent acts of anyone performing any services under this contract.

Network Security (Cyber)/Privacy Insurance: Coverage shall have minimum limits not less than \$2,000,000 Each Claim with a \$2,000,000 Annual Aggregate. The insurance shall include, but not be limited to, coverage for third party claims and losses with respect to network risks (such as data breaches, unauthorized access or use, ID theft, theft of data) and invasion of privacy regardless of the type of media involved in the loss of private information, crisis management and identity theft response costs. This should also include breach notification costs, credit remediation and credit monitoring, defense and claims expenses, regulatory defense costs plus fines and penalties, cyber extortion, computer program and electronic data restoration expenses coverage (data asset protection), network business interruption, computer fraud coverage, and funds transfer loss.

Claim-Made Insurance Coverage - If any part of the Required Insurance is written on a claims-made basis, any policy retroactive date must precede the effective date of this Contract, and Contractor must maintain such coverage for a period of not less than three (3) years following Contract expiration, termination or cancellation.

Additional Insurance Requirements:

The policies shall include, or be endorsed to include, as required by this written agreement, the following provisions:

Additional Insured: The General Liability and Business Automobile Liability Policies shall each be endorsed to include Pima County, its departments, districts, boards, commissions, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the Contractor.

Subrogation: The General Liability, Business Automobile Liability and Workers' Compensation policies shall each contain a waiver of subrogation endorsement in favor of Pima County, and its departments, districts, boards, commissions, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

Primary Insurance: The Contractor's policies shall stipulate that the insurance afforded the Contractor shall be primary and that any insurance carried by Pima County, its agents, officials, or employees shall be excess and not contributory insurance.

Insurance provided by the Contractor shall not limit the Contractor's liability assumed under the indemnification provisions of this Contract.

Notice of Cancellation:

Each Required Insurance policy must provide, and certificates specify, that County will receive not less than thirty (30) days advance written notice of any policy cancellation, except 10-days prior notice is sufficient when the cancellation is for non-payment of a premium.

Verification of Coverage:

Contractor shall furnish Pima County with certificates of insurance as required by this Contract. An authorized representative of the insurer shall sign the certificates.

All certificates and endorsements, as required by this written agreement, are to be received and approved by Pima County before work commences. Each insurance policy required by this Contract must be in effect at, or prior to, commencement of work under this Contract. Failure to maintain the insurance coverages or policies as required by this Contract, or to provide evidence of renewal, is a material breach of contract.

All certificates required by this Contract shall be sent directly to Pima County Procurement Department. The Certificate of Insurance shall include the Pima County project or contract number and project description on the certificate. Pima County reserves the right to require complete copies of all insurance policies required by this Contract at any time.

Neither the County's failure to obtain a required insurance certificate or endorsement, the County's failure to object to a non-complying insurance certificate or endorsement, or the County's receipt of any other information from the Contractor, its insurance broker(s) and/or insurer(s), constitutes a waiver of any of the Insurance Requirements.

Approval and Modifications:

The Pima County Risk Manager may approve a modification of the Insurance Requirements without the necessity of a formal Contract amendment, but the approval must be in writing.

12. PAYMENT AND PERFORMANCE BONDS:

Payment and Performance Bonds are required under this Master Agreement. Bonds may be submitted on an annual basis for the full value of all services reasonably anticipated during the Master Agreement year or may be provided on a delivery-order by delivery-order basis; in the latter case, Offeror may anticipate additional delivery orders and provide bonds in reasonable increments. At no time shall the cumulative value of the bonds be less than the total value of the services performed by Offeror under this Agreement, including delivery orders awarded to Offeror but not yet completed. If bonds are secured on a delivery-order by delivery-order basis, County will obtain the appropriate bonds from Offeror upon issuance and release of the Delivery Order.

13. ACKNOWLEDGEMENT of SOLICITATION AMENDMENT(S):

Contractor acknowledges that it incorporates the following solicitation amendments in its offer and this contract:

Amendment #	Date	Amendment #	Date	Amendment #	Date
1	10/10/19				
2	10/16/19				

14. SMALL BUSINESS ENTERPRISE (SBE) CERTIFICATION:

Is your firm SBE-certified as defined by the solicitation "Instruction to Offerors" section? Yes ☐ No ☒ (Select one)

If 'Yes', have you included your certification document? Yes ☐ No ☐ (Select one)

NOTE: If you do not submit the SBE Certification document with your bid, County will not apply the SBE Preference.

Remainder of page intentionally left blank

15. BID/OFFER CERTIFICATION:

CONTRACTOR LEGAL NAME: Southern Arizona Paving & Construction Co.

BUSINESS ALSO KNOWN AS: _____

MAILING ADDRESS: 4102 E. Illinois Street
Tucson, AZ 85714

CITY/STATE/ZIP: _____

REMIT TO ADDRESS: Same as above

CITY/STATE/ZIP: _____

CONTACT PERSON NAME/TITLE: Rocco W. Bene, Vice President

PHONE: 520-745-8181 FAX: 520-747-7564

CONTACT PERSON EMAIL ADDRESS: rbene@southernazpaving.com

EMAIL ADDRESS FOR ORDERS & CONTRACTS: rbene@southernazpaving.com

CORPORATE HEADQUARTERS ADDRESS: 4102 E Illinois St. Tucson, AZ 85714

WEBSITE: _____

By signing and submitting these Offer Agreement documents, the undersigned certifies that they are legally authorized to represent and bind Contractor to legal agreements, that all information submitted is accurate and complete, that Contractor has reviewed the Pima County Procurement website for solicitation amendments and has incorporated all such amendments to its offer, that Contractor is qualified and willing to provide the items requested, and that Contractor will comply with all requirements of the solicitation. The Unit Pricing includes all costs incidental to the provision of the items in compliance with the above documents; no additional payment will be made. Conditional offers that modify the solicitation requirements may be deemed not 'responsive' and County may not evaluate them. Contractor's submission of a signed Offer Agreement must constitute a firm offer and upon the issuance of a MA issued by the Pima County Board of Supervisors will form a binding contract that will require Contractor to provide the goods or services and materials described in this solicitation. The undersigned hereby offers to furnish the goods or services in compliance with all terms, conditions, specifications that the solicitation defines or references, which includes Pima County Standard Terms & Conditions, this Offer Agreement and other documents as listed in this Offer Agreement's "Other Documents" article.

SIGNATURE:  DATE: 10/17/19

Martene M. Ashton, President

PRINTED NAME & TITLE OF AUTHORIZED CONTRACTOR REPRESENTATIVE EXECUTING OFFER

PHONE AND E-MAIL: (520) 745-8181 mena@southernazpaving.com

Approved as to form:

 10/31/19
KELL OLSON Deputy County Attorney Date

PIMA COUNTY STANDARD TERMS AND CONDITIONS**1. OPENING:**

Pima County ("County") will publicly open responses on the date and at the location as stated in the *Invitation for Bid (IFB)*. The County will read each respondent's name, and for responses to an IFB will also read the total bid amount. County will open proposals so as to avoid disclosure of the contents of any proposal to competing Offerors during the **evaluation** process. County invites all interested parties to attend the bid opening.

2. EVALUATION:

County will evaluate responses to determine which are most advantageous to County considering conformity to the specifications stated in the IFB, and other factors, regardless of solicitation type.

If County makes an award, County will enter into an agreement with one or more Contractor(s) that submitted the lowest responsive bid(s) that County determined responsible for providing the required goods or services. Unless otherwise specified on the IFB document, County will determine the low or lowest bids considering all items listed in the Unit Price Schedule.

County, at its sole discretion, reserves the following rights: 1) to waive informalities in the bid or bid procedure; 2) to reject the response of any persons or corporations that have previously defaulted on any contract with County or who have engaged in conduct that constitutes a cause for debarment or suspension as set forth in County Code Section 11.32; 3) to reject any and all responses; 4) to re-advertise for bids previously rejected; 5) to otherwise provide for the purchase of such equipment, supplies materials and services as may be required herein; 6) to award on the basis of price and other factors, including but not limited to such factors as delivery time, quality, uniformity of product, suitability for the intended task, and bidder's ability to supply; 7) to increase or decrease the item quantity or eliminate any item of this solicitation prior to the award. Pricing evaluations will be based on pre-tax pricing proposed by Contractor.

3. AWARD NOTICE:

County will post a *Notice of Recommendation for Award* for IFB on the Procurement website available for review by interested parties. The Procurement Department will maintain a tabulation of the bids or ranking of proposals.

4. AWARD:

The Board of Supervisors will make the contract award in accordance with the Pima County Procurement Code. County reserves the right to reject any or all proposals, bids or to waive irregularities and informalities in the best interest of County. Unless County expressly agrees otherwise, resulting contracts are not exclusive, they are for the sole convenience of County, and County reserves the right to obtain like goods or services from other sources.

5. WAIVER:

Each Offeror, by submission of a proposal, bid or proposal waives any and all claims for damages against County or its officers or employees when County exercises any of its reserved rights.

6. ACKNOWLEDGEMENT AND ACCEPTANCE:

If Contractor's terms of sale are inconsistent with the terms of the resultant contract, the terms herein will govern, unless County accepts Contractor's terms in writing. No oral agreement or understanding will in any way modify this contract or the terms and conditions herein. Contractor's acceptance, delivery or performance called for herein will constitute unqualified acceptance of the terms and conditions of the resultant contract.

7. INTERPRETATION and APPLICABLE LAW:

The laws of the State of Arizona govern the interpretation and construction of this Contract. If any of Contractors' terms or conditions is not in agreement with County's terms and conditions as set forth herein, County's will govern. This contract incorporates the complete agreement of the parties with respect to the subject matter of this contract. No oral agreement or other understanding will in any way modify the terms and conditions of this contract.

8. WARRANTY:

Contractor warrants goods or services to be satisfactory and free from defects.

9. QUANTITY:

Contractor will not exceed or reduce the quantity of goods ordered without **written** permission from County in the form of a properly executed Master Agreement ("MA") or Delivery Order ("DO"), revision or amendment as the County's Procurement Code requires. All quantities are estimates and County provides no guarantee regarding actual usage.

10. RESERVED**11. DELIVERY:**

On-time delivery of goods and services is an essential part of the consideration that County will receive.

Contractor must provide a guaranteed delivery date, or interval period from order release date to delivery if the Price proposal document requires it. Upon receipt of notification of delivery delay, County at its sole option and at no cost to County may cancel the order or extend delivery times. Such extension of delivery times will not be valid unless an authorized representative of County extends it to Contractor in writing.

To mitigate or prevent damages from delayed delivery, County may require Contractor to deliver additional quantity utilizing express modes of transport, or overtime, all costs to be Contractor's responsibility. County reserves the right to cancel any delinquent order, procure from an alternate source, or refuse receipt of or return delayed deliveries, all at no cost to County. County reserves the right to cancel any order or refuse delivery upon default by Contractor concerning time, cost, or manner of delivery.

Contractor is not responsible for unforeseen delays caused by fires, strikes, acts of God, or other causes beyond Contractor's control, provided that Contractor provides County immediate notice of delay.

12. SPECIFICATION CHANGES:

County has the right to make changes in the specifications, services, or terms and conditions of an order. If such changes cause an increase or decrease in the amount due under an order or in time required for performance, County will make an acceptable adjustment and will modify the order in writing. No verbal agreement for adjustment is acceptable.

Nothing in this clause reduces Contractor's responsibility to proceed without delay in the delivery or performance of an order.

13. RESERVED**14. RESERVED****15. PAYMENT TERMS:**

Payment terms are net thirty (30) days, unless the contract specifies otherwise.

16. ACCEPTANCE OF MATERIALS AND SERVICES:

County will not execute an acceptance or authorize payment for any service, equipment or component prior to delivery and verification that the delivery meets all specification requirements.

17. RIGHTS AND REMEDIES OF COUNTY FOR DEFAULT:

In the event any item that Contractor furnishes in the performance of the contract should fail to conform to the specifications thereof, or to the sample that Contractor submitted, County may reject same, and it thereupon becomes the duty of Contractor to reclaim and remove the same, without expense to County, and immediately replace all such rejected items with others conforming to the specifications or samples. Should Contractor fail, neglect, or refuse immediately to do so, County has the right to purchase in the open market, in lieu thereof, a corresponding quantity of any such items and to deduct from any monies due or that may become due to Contractor the difference between the price named in the MA and the actual cost to County.

In the event Contractor fails to make prompt delivery as specified of any item, the same conditions as to the rights of County to purchase in the open market and invoke the reimbursement condition above apply, except when delivery is delayed by fire, strike, freight embargo, or acts of god or of the government. In the event of cancellation of the MA, or DO, either in whole or in part, by reason of the default or breach by Contractor, Contractor will bear and pay for any loss or damage sustained by County in procuring any items which the Contractor agreed to supply. The rights and remedies of County provided above are not exclusive and are in addition to any other rights and remedies provided by law or under the contract.

18. FRAUD AND COLLUSION:

Each Contractor, by submission of a bid, certifies that no officer or employee of County or of any subdivision thereof: 1) has aided or assisted Contractor in securing or attempting to secure a contract to furnish labor, materials or supplies at a higher price than that proposed by any other Contractor; 2) has favored one Contractor over another by giving or withholding information or by willfully misleading the bidder in regard to the character of the material or supplies called for

or the conditions under which the proposed work is to be done; 3) will knowingly accept materials or supplies of a quality inferior to those called for by any contract; 4) has any direct or indirect financial interest in the proposal or resulting contract. Additionally, during the conduct of business with County, Contractor will not knowingly certify, or induce others to certify, to a greater amount of labor performed than has been actually performed, or to the receipt of a greater amount or different kind of material or supplies that has been actually received. If County finds at any time that Contractor has in presenting any proposal(s) colluded with any other party or parties for the purpose of preventing any other proposal being made, then County will terminate any contract so awarded and that person or entity will be liable for all damages that County sustains.

19. COOPERATIVE USE OF RESULTING CONTRACT:

As allowed by law, County has entered into cooperative procurement agreements that enable other Public Agencies to utilize procurement agreements that County has developed. Participating agencies may contact Contractor with requests to provide services and products pursuant to the pricing, terms and conditions defined by the County MA. Minor adjustments are allowed subject to agreement by both Contractor and Requesting Party to accommodate additional cost or other factors not present in the County's agreement and required to satisfy particular Public Agency code or functional requirements and within the intended scope of the solicitation and resulting contract. The parties to the cooperative procurement will negotiate and transact any such usage in accordance with State, County and other Public Agency procurement rules, regulations and requirements. Contractor will hold harmless County, its officers, employees, and agents from and against all liability, including without limitation payment and performance associated with such use. Contractor may view a list of agencies that are authorized to use County contracts at the Procurement Department Internet home page: <http://www.pima.gov/procure> by selecting the link titled *Authorized Use of County Contracts*.

20. PATENT INDEMNITY:

Contractor will indemnify, defend and hold County, its officers, agents and employees, harmless from liability of any nature or kind, including costs and expenses, for infringement or use of any copyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in connection with the MA and DO. County may require Contractor to furnish a bond or other indemnification to County against any and all loss, damage, costs, expenses, claims and liability for patent or copyright infringement.

21. INDEMNIFICATION:

Contractor will indemnify, defend, and hold harmless County, its officers, employees and agents from and against any and all suits, actions, legal administrative proceedings, claims or demands and costs attendant thereto, arising out of any act, omission, fault or negligence by Contractor, its agents, employees or anyone under its direction or control or on its behalf in connection with performance of the MA, DO. Contractor warrants that all products and services provided under this contract are non-infringing. Contractor will indemnify, defend and hold County harmless from any claim of infringement arising from services provided under this contract or from the provision, license, transfer or use for their intended purpose of any products provided under this Contract.

22. UNFAIR COMPETITION AND OTHER LAWS:

Responses must comply with Arizona trade and commerce laws (Title 44 A.R.S.) and all other applicable County, State, and Federal laws and regulations.

23. COMPLIANCE WITH LAWS:

Contractor will comply with all federal, state, and local laws, rules, regulations, standards and Executive Orders, without limitation. In the event any services that Contractor provides under this contract require a license issued by the Arizona Registrar of Contractors (ROC), Contractor certifies that a Contractor licensed by ROC to perform those services in Arizona will provide such services. The laws and regulations of the State of Arizona govern the rights, performance and disputes of and between the parties. Any action relating to this Contract must be filed and maintained in a court of the State of Arizona in Pima County.

Any changes in the governing laws, rules, and regulations during an agreement apply, but do not require an amendment or revisions.

24. ASSIGNMENT:

Contractor may not assign its rights to the contract, in whole or in part, without prior written approval of County. County may withhold approval at its sole discretion, provided that County will not unreasonably withhold such approval.

25. CANCELLATION FOR CONFLICT OF INTEREST:

This contract is subject to cancellation pursuant to A.R.S. §§38-506 and 38-511, the pertinent provisions of which are incorporated into this Contract by reference.

26. NON-DISCRIMINATION:

CONTRACTOR agrees to comply with all provisions and requirements of Arizona Executive Order 2009-09 which is hereby incorporated into this contract as if set forth in full herein including flow down of all provisions and requirements to any subcontractors. During the performance of this contract, Contractor must not discriminate against any employee, client or any other individual in any way because of that person's age, race, creed, color, religion, sex, disability or national origin.

27. NON-APPROPRIATION OF FUNDS:

County may cancel this contract pursuant to A.R.S. § 11-251(42) if for any reason the County Board of Supervisors does not appropriate funds for the stated purpose of maintaining the contract. In the event of such cancellation, County has no further obligation, other than payment for services or goods that County has already received.

28. PUBLIC RECORDS:

Disclosure. Pursuant to A.R.S. § 39-121 et seq., and A.R.S. § 34-603(H) in the case of construction or Architectural and Engineering services procured under A.R.S. Title 34, Chapter 6, all documents submitted in response to the solicitation resulting in award of this Contract, including, but not limited to, pricing schedules, product specifications, work plans, and any supporting documents are public records. As such, those documents are subject to release and/or review by the general public upon request, including competitors.

Records Marked Confidential; Notice and Protective Order. If Contractor reasonably believes that some of those records contain proprietary, trade-secret or otherwise-confidential information, Contractor must prominently mark those records "CONFIDENTIAL." In the event a public-records request is submitted to County for records marked CONFIDENTIAL, County will notify Contractor of the request as soon as reasonably possible. County will release the records 10 business days after the date of that notice, unless Contractor has, within that period, secured an appropriate order from a court of competent jurisdiction, enjoining the release of the records. County will not, under any circumstances, be responsible for securing such an order, nor will County be in any way financially responsible for any costs associated with securing such an order.

The Contractor agrees to waive confidentiality of any price terms in the event of a contract award.

29. RESERVED**30. AMERICANS WITH DISABILITIES ACT:**

Contractor will comply with all applicable provisions of the Americans with Disabilities Act (public law 101-336, 42 USC 12101-12213) and all applicable federal regulations under the act, including 28 CFR parts 35 and 36.

31. NON-EXCLUSIVE:

Contracts resulting from this solicitation are non-exclusive and are for the sole convenience of County, which reserves the right to obtain like goods and services from other sources for any reason.

32. PROTESTS:

An interested party may file a protest regarding any aspect of a solicitation, evaluation, or recommendation for award. Protests must be in accordance with the Pima County Procurement Code, Section 11.20.010.

33. TERMINATION:

County reserves the right to terminate any MA, DO, or award, in whole or in part, at any time, without penalty or recourse, when in the best interests of County. Upon receipt of written notice, Contractor will immediately cease all work as directed by the notice, notify all subcontractors of the effective date of termination and take appropriate actions to minimize further costs to County. In the event of termination under this paragraph, all documents, data, and reports prepared by Contractor under the contract become the property of County and Contractor must promptly deliver them to County. Contractor is entitled to receive just and equitable compensation for work in progress, work completed and materials accepted before the effective date of the termination.

34. ORDER OF PRECEDENCE-CONFLICTING DOCUMENTS:

In the event of inconsistencies between contract documents, the following is the order of precedence, superior to subordinate, that will apply to resolve the inconsistency: MA or DO, Offer Agreement or contract attached to a MA or DO, or these standard terms and conditions; any other solicitation documents.

35. INDEPENDENT CONTRACTOR:

The status of Contractor is that of an independent Contractor. Contractor and Contractor officer's agents or employees are not considered employees of County and are not entitled to receive any employment-related fringe benefits under the County Merit System. Contractor is responsible for payment of all federal, state and local taxes associated with the compensation received pursuant to this Contract and will indemnify and hold County harmless from any and all liability which County may incur because of Contractor's failure to pay such taxes. Contractor is solely responsible for its program development and operation.

36. BOOKS AND RECORDS:

Contractor will keep and maintain proper and complete books, records and accounts, which will be open at all reasonable times for inspection and audit by duly authorized representatives of County. In addition, Contractor will retain all records relating to this contract at least five (5) years after its termination or cancellation or, if later, until any related pending proceeding or litigation has been closed.

37. COUNTERPARTS:

The parties may execute the MA that County awards pursuant to this solicitation in any number of counterparts, and each counterpart is considered an original, and together such counterparts constitute one and the same instrument.

For the purposes of the MA and DO, the signed proposal of Contractor and the signed acceptance of County are each an original and together constitute a binding MA, if all other requirements for execution are present.

38. AUTHORITY TO CONTRACT:

Contractor warrants its right and power to enter into the MA or DO. If any court or administrative agency determines that County does not have authority to enter into the MA or DO, County is not liable to Contractor or any third party by reason of such determination or by reason of the MA or DO.

39. FULL AND COMPLETE PERFORMANCE:

The failure of either party to insist on one or more instances upon the full and complete performance with any of the terms or conditions of the MA or DO to be performed on the part of the other, or to take any action permitted as a result thereof, is not a waiver or relinquishment of the right to insist upon full and complete performance of the same, or any other covenant or condition, either in the past or in the future.

The acceptance by either party of sums less than may be due and owing it at any time is not an accord and satisfaction.

40. SUBCONTRACTORS:

Contractor is fully responsible for all acts and omissions of any subcontractor and of persons directly or indirectly employed by any subcontractor, and of persons for whose acts Contractor may be liable to the same extent that Contractor is responsible for the acts and omissions of persons that it directly employs. Nothing in this contract creates any obligation on the part of County to pay or see to the payment of any money due any subcontractor, except as may be required by law.

41. SEVERABILITY:

Each provision of this Contract stands alone, and any provision of this Contract that a court finds to be prohibited by law is ineffective to the extent of such prohibition without invalidating the remainder of this Contract.

42. LEGAL ARIZONA WORKERS ACT COMPLIANCE:

For the procurement of services in the State of Arizona, Contractor hereby warrants that it will at all times during the term of this Contract comply with all federal immigration laws applicable to Contractor's employment of its employees, and with the requirements of A.R.S. § 23-214 (A) (together the "State and Federal Immigration Laws"). Contractor will further ensure that each subcontractor who performs any work for Contractor under this contract likewise complies with the State and Federal Immigration Laws.

County has the right at any time to inspect the books and records of Contractor and any subcontractor in order to verify such party's compliance with the State and Federal Immigration Laws.

Any breach of Contractor's or any subcontractor's warranty of compliance with the State and Federal Immigration Laws, or of any other provision of this section, is a material breach of this Contract subjecting Contractor to penalties up to and including suspension or termination of this Contract. If the breach is by a subcontractor, and the subcontract is suspended or terminated as a result, Contractor will take such steps as may be necessary to either self-perform the services that would have been provided under the subcontract or retain a replacement subcontractor as soon as possible so as not to delay project completion.

Contractor will advise each subcontractor of County's rights, and the subcontractor's obligations, under this Article by including a provision in each subcontract substantially in the following form:

"Subcontractor hereby warrants that it will at all times during the term of this contract comply with all federal immigration laws applicable to Subcontractor's employees, and with the requirements of A.R.S. § 23-214 (A). Subcontractor further agrees that County may inspect the Subcontractor's books and records to ensure that Subcontractor is in compliance with these requirements. Any breach of this paragraph by Subcontractor is a material breach of this contract subjecting Subcontractor to penalties up to and including suspension or termination of this contract."

Any additional costs attributable directly or indirectly to remedial action under this Article is the responsibility of Contractor. In the event that remedial action under this Article results in delay to one or more tasks on the critical path of Contractor's approved construction or critical milestones schedule, such period of delay will be excusable delay for which Contractor is entitled to an extension of time, but not costs.

43. CONTROL OF DATA PROVIDED BY COUNTY:

For those projects and contracts where County has provided data to enable the Contractor to provide contracted services or products, unless County otherwise specifies and agrees in writing, Contractor will treat, control and limit access to said information as confidential and will under no circumstances release any data provided by County during the term of this contract and thereafter, including but not limited to personal identifying information as defined by A.R.S. § 44-1373, and Contractor is further prohibited from selling such data directly or through a third party. Upon termination or completion of the contract, Contractor will either return all such data to County or will destroy such data and confirm destruction in writing in a timely manner not to exceed sixty (60) calendar days.

44. ISRAEL BOYCOTT CERTIFICATION:

Pursuant to A.R.S. § 35-393.01, if Contractor engages in for-profit activity and has 10 or more employees, and if this Contract has a value of \$100,000.00 or more, Contractor certifies it is not currently engaged in, and agrees for the duration of this Contract to not engage in, a boycott of goods or services from Israel. This certification does not apply to a boycott prohibited by 50 U.S.C. § 4842 or a regulation issued pursuant to 50 U.S.C. § 4842.

END OF PIMA COUNTY STANDARD TERMS AND CONDITIONS

EXHIBIT “A”

SPECIAL PROVISIONS (1 page)

GENERAL NOTES

1. Project Location

This project is located within Pima County at various locations within the metro Tucson area.

2. Scope of Work

The projects will consist of placing Crack Seal, Chip Seal with Fog Seal, Micro seal surface treatment, or Rejuvenating Fog Seal at various locations within Pima County. The projects may also include asphalt patching where necessary, pavement removal is incidental to that work. Pavement markings, symbols, and legends are considered incidental. Maintenance and protection of traffic is considered incidental.

3. Contract Time

The work specified for each project shall be given a specific contract time.

4. Specifications and Details

The work embraced herein shall be performed in accordance with the requirements of the following separate documents:

- Pima County/City of Tucson, Standard Specifications for Public Improvements, 2015 Edition.
- Pima County/City of Tucson, Standard Details for Public Improvement, 2015 Edition.
- Pima County/City of Tucson, Pavement Marking Design Manual, Second Edition August 2012.
- Pima County/City of Tucson Signing Manual, May 2012.
- Pima County Traffic Signal Design Manual, January 2012.
- U.S. Department of Transportation, Federal Highway Administration, Manual on Uniform Traffic Control Devices for Streets and Highways, 2003 Edition.
- State of Arizona, Department of Transportation Division of Highways, Part 1 – Construction Standard Drawings, October 2004.
- State of Arizona Department of Transportation Division of Highways, Part 2 – Structures Section Standard Drawings, June 1992, with current edition Structural Detail Drawings series.
- State of Arizona, Department of Transportation Division of Highways, Part 3 – Traffic Signals and Lighting Standard Drawings, March 2004 with updates thru December 2008.
- State of Arizona, Department of Transportation Division of Highways, Part 4 – Signing and Marking Standard Drawings, January 2002 with updates thru December 2008.

5. Project limits

The Contractor shall perform all work within the public right-of-way, legally obtained easements and property legally acquired by the Agency. The contractor shall assume all responsibility and liability for any encroachment upon private property. The use of private property for construction yards will be allowed only if zoning requirements allows its use for this purpose.

6. Work Hours/Noise Abatement Ordinance

Construction noise abatement and start/stop times shall be in accordance with Pima Ordinance No. 1999-61: Regulating the Excessive, Unnecessary and Annoying Noises in Pima County.

End of Exhibit “A”

EXHIBIT “B”

TECHNICAL SPECIFICATIONS (1 page)

Explanation of items:

Chip & Fog Seal: Work under this item shall be performed, measured and paid, as described in Section 404 of the Standard Specifications and the Supplemental Specifications with a Chip Seal treatment followed by a Fog Seal treatment.

Micro Seal Surface Treatment: Work under this item shall consist of providing, transporting, and placing micro seal surface treatment to the locations noted in the contract. The work shall be performed, measured and paid, as described in Revised Section 404 of the of the Standard Specifications and the Supplemental Specifications.

Fog Seal (Rejuvenating): Work under this item shall be performed, measured and paid, as described in Revised Section 404 of the Standard Specifications and the Supplemental Specifications.

Asphaltic: Work under this item shall be performed, measured and paid, as described in Revised Section 404 of the Standard Specifications and the Supplemental Specifications.

Crack Sealing: Work under this item shall consist of providing, transporting, and placing Crack Seal to the locations noted in the contract. The work shall be performed, measured and paid, as described in Revised Section 404 of the of the Standard Specifications and the Supplemental Specifications. Payment for this work will be by the lbs. of crack seal material directed for use by the Engineer, including all labor and materials and will be full compensation for the work performed.

Pavement markings, symbols, and legends: This work shall consist of documenting the existing pavement marking, raised pavement markers, symbols, legends, and detection loops configuration prior to construction and re-marking the pavement and placing raised pavement markers, symbols, legends, and detection loops upon the new traffic surface in accordance with the Section 700 of the Standard Specifications and Standard Drawings and the current details in the PCDOT Striping Manual. The materials shall be thermo plastic for the long line stripes and tape/ thermal plastic for crosswalks, stop bars, symbols, and legends. The contractor shall coordinated work with the county contractor at the existing Speed Zones. Payment for this work will be included in the unit price for each item.

Maintenance and protection of traffic: This work shall consist of providing flagging services, providing, installing, and maintaining temporary traffic control devices. The cost of providing devices, developing traffic control plans, resetting barricades, and providing vehicles shall be considered incidental to the work. The work shall be performed, as described in Section 701 of the Standard Specifications and Standard Drawings. Payment for this work will be included in the unit price for each item.

Misc. work: Work under this item shall consist of performing Misc. work not shown on the plans or described in the specifications. The work shall be paid as described in Section 109-5 of the Standard Specifications and Standard Drawings. Payment will be made at the specified rates and will be full compensation for the work performed.

EXHIBIT "C"

SUPPLEMENTAL SPECIFICATIONS (22 pages)

The following are modifications to the Standard Specifications:

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

107-8 PUBLIC CONVENIENCE AND SAFETY of the Standard Specifications is modified to add:

When requested by the Engineer, the contractor shall participate in any public or neighborhood meeting called by the Engineer or any other appropriate authority, for the purpose on informing the public concerning the nature, timing, status or scheduling of the work.

107-15.01 National Pollution Discharge Elimination System of the Standard Specifications is hereby deleted. See Section 810 of these Special Provisions.

107-18 INSURANCE of the Standard Specifications is superseded by Article 11 of the Offer Agreement.

107-21 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES of the Standard Specifications is modified to add:

The following utilities may have facilities in the project area:

<u>Owner</u>	<u>Contact</u>	<u>Phone Number</u>
AT&T Communications	Paul Diaz	(520) 629-8709
El Paso Natural Gas	Elwin O. Denmar	(520) 746-4225
Comcast Cable Communications	Mike Ginn	(520) 744-5477
Cox Communications	Ike Cruse	(520) 889-9062, Ext.104
Metropolitan Water	Tom Caito	(520) 575-8100
MCI – Verizon	Dean Boyers	(972) 729-6322
Pima County Department of Wastewater Management	Debbie Stratton	(520) 740-8224
Qwest Corporation	Larry Lewis	(520) 292-8255
Southwest Gas Corporation	Kevin Ballent	(520) 794-6054
Trico Electric Cooperative	Paul Newton	(520) 744-2944, Ext.1324
Tucson Electric Power	Cynthia Garcia	(520) 918-8246
Tucson Water	Tony Tineo	(520) 791-5080 Ext 131

It shall be the responsibility of the contractor to contact the utility companies in order for them to determine if there is a need for any bracing or shoring of power or telephone poles during the construction of this project. If bracing or shoring is necessary, the contractor shall accomplish this work to the satisfaction of the utility company.

No measurement or direct payment will be made for bracing or shoring.

The contractor shall take full responsibility of costs incurred due to damage to utilities as a result of grading or excavation operations. Utility locations shown on the Plans are approximate, and all utilities are not necessarily shown. The possibility of conflicts with existing utilities-in-service exists. If conflicting utilities interfere with the contractor's normal progress towards completion of this project, the Pima County Department of Transportation may, at its option, authorize the contractor to relocate said conflicting utilities by force account in accordance with the provisions of subsection 109-5(B).

SECTION 109 - MEASUREMENT AND PAYMENT

109-2 SCOPE OF PAYMENT the last two paragraphs of the Standard Specifications are hereby deleted.

109-5 EXTRA AND FORCE ACCOUNT WORK

(A) **Extra Work.** the 2nd paragraph of the Standard Specifications is revised to read:

Upon receipt of an approved supplemental agreement, the contractor shall proceed with the ordered work.

(B) **Force Account Work.**

(3) **Equipment.**

(a) **Rental Rates (Without Operators)** is modified to add

$$F = 0.933$$

(C) **Force Account Work by Subcontractor.** of the Standard Specifications is revised to read:

When force account work is determined by the Engineer to require specialized labor or equipment not normally utilized by the contractor, and such force account work is performed by subcontractors, the contractor will be allowed an additional markup based on the following:

For Force Account work performed by subcontractors or any combination of subcontractors, the prime contractor will be allowed a ten percent supplemental markup on the first \$10,000 of the work performed (less markups for overhead and profit).

For all subsequent Force Account work performed by subcontractors, the prime contractor will be allowed a five percent supplemental markup (less markups for overhead and profit).

The contractor shall submit payrolls or other cost data documents for all force account work performed by subcontractors. There shall be no payments made for force account work until receipt of proper and correct documentation.

109-13 COMPENSATION FOR FUEL AND MARKET ADJUSTMENTS is hereby added to the Standard Specifications

109-13.01 Fuel Adjustment.

(A) **General.** The Agency will adjust monthly progress payments up or down as appropriate for cost fluctuations in diesel fuel as determined in accordance with these Special Provisions.

A fuel cost adjustment will be made when fluctuations in the price of diesel fuel, in excess of 15 percent (15%), occur throughout this contract. The Agency will not provide such adjustments for fluctuations in the price of diesel fuel of 15 percent (15%) or less.

No adjustments will be made for fluctuations in the price of fuels other than diesel.

(B) **Determination of Compensation.** The base index price of fuel will be determined by the Agency from the selling prices of diesel fuel published by OPIS (Oil Price Information Service). The base index price to be used will be the price for Diesel fuel No. 2, Low Sulfur, PAD 5, City of Tucson. The reported average value for the Tucson area will be used.

The base index price for each month will be the arithmetic average of the selling price for diesel fuel, as specified above, shown in the last four reports received prior to the last Wednesday of the month.

This price will be made known by means of a memorandum issued on the last Wednesday of each month and mailed to those currently receiving copies of the Advertisements for Bids. This price may also be obtained from Denise Fair, Field Engineering, 1313 S. Mission Road at (520) 724-2340.

This price will be deemed to be the "initial cost" for diesel fuel on projects for which bids are opened during the following month.

The current index price for diesel fuel in subsequent months will be the base index price, determined as specified above, for the current month. The amount of adjustment per gallon will be the net difference between the "initial cost," adjusted by 15 percent (15%), and the current index price. The monthly adjustment will be determined by the Engineer and included in the payment estimate as a fuel adjustment. For fluctuations in excess of 15 percent (15%), fuel cost adjustments will only be made for current price index increases greater than 1.15 times the "initial cost" or for decreases less than 0.85 times

the "initial cost." No calculation will be made for fluctuations in the current index price of 15 percent (15%) or less when compared to the "initial cost."

The cost of diesel fuel will be considered to be equal to one percent of the total construction costs for the project. The dollar amount of diesel fuel used each month will be considered to equal one percent of the dollar amount of work reported by the contractor for that month. The quantity of diesel fuel in gallons will be determined using the dollar value calculated above and the price per gallon specified as the "initial cost." A monthly adjustment, if applicable, will be made on this quantity, as shown below:

$$S = \frac{0.01(Q)}{IC} \times (CP - AC)$$

Where;

- S = Monetary amount of the adjustment (plus or minus) in dollars
- CP = Current index price in dollars per gallon
- IC = "Initial cost" as determined above, dollars per gallon
- AC = Adjusted "initial cost" (1.15 or 0.85 times IC) in dollars per gallon
- Q = Dollar amount of work completed for the month

If adjustments are made in the contract quantities, the contractor shall accept any fuel adjustment as full compensation for increases or decreases in the price of fuel regardless of the amounts of overrun or under run.

No additional compensation will be made for any additional charges, costs, expenses, etc., which the contractor may have incurred since the time of bidding and which may be the result of any fluctuation in the base index price of diesel fuel.

No adjustments will be made for work performed beyond the contract time.

The need for application of the adjustments herein to extra work will be determined by the Engineer on an individual basis and, if appropriate, will be specified on the work order.

(C) Payment. Price adjustment will be shown on the monthly progress estimate, but will not be included in the total cost of work for determination of progress or for extension of contract time.

No fuel adjustments will be considered in this MA.

109-13.02 Market Adjustment.

(A) General. The Agency will adjust monthly progress payments up or down as appropriate for cost fluctuations in items on the Materials Schedule. Bituminous adjustments will, if applicable, will be adjusted according to the Arizona Department of Transportation (ADOT) index at the time the DO is issued. No fuel adjustments will be considered.

(B) Determination of Compensation. Material baseline price will be determined by the Agency from the Materials Schedule submitted at the time of receiving bids.

(C) Payment. Market adjustment will be shown on the monthly progress estimate, but will not be included in the total cost of work for determination of progress or for extension of contract time.

Bituminous adjustments will, if applicable, will be adjusted according to the Arizona Department of Transportation (ADOT) index at the time the DO is issued. No fuel adjustments will be considered.

SECTION 404 BITUMINOUS TREATMENTS

404-1 DESCRIPTION: Add the following to the Standard Specifications:

Crack Sealing and Filling

This work consists of furnishing and placing sealant or filler material in Contractor prepared cracks and joints of asphalt concrete or portland cement concrete pavements. All cracks and joints, including the space between asphalt concrete pavement and concrete curb and gutter, which have a clear opening of one-quarter inch (1/4") or greater, shall be sealed for the length of the crack that equals or exceeds one-eighth inch (1/8") in width. The Contractor shall notify the Engineer when cracks are encountered that have an opening greater than one and one-half inches (1 1/2"). The Engineer's

authorization is required prior to filling any cracks having an average clear opening greater than one and one-half inches (1½").

404-2.01 Bituminous Materials. Add the following to the Standard Specifications:

(B) Material for Category 1 Cracks: Cracks and joints which have a clear opening ranging from one-quarter inch (¼") to one and one-half inches (1½") shall be classified as category 1 cracks. Sealant materials for category 1 cracks shall be a premixed, single component mixture of asphalt cement, aromatic extender oils, polymers, and granulated rubber in a closely controlled manufacturing process. Materials shall conform to the following specifications when heated in accordance with ASTM D5078 and the manufacturer's maximum safe heating temperature.

TEST	REQUIREMENT
Cone Penetration (ASTM D5329)	20-40
Resilience (ASTM D5329)	30% Minimum
Softening Point (ASTM D113)	210°F (99°C) Minimum
Ductility, 77°F (25°C) (ASTM D113)	30 cm Minimum
Flexibility (ASTM D3111.*Modified)	Pass at 30°F (-1°C)
Flow 140°F (60°C) (ASTM D5329)	3 mm Maximum
Brookfield Viscosity 380°F (193°C) (ASTM D2669)	90 Poise Maximum
Asphalt Compatibility (ASTM D5329)	Pass
Bitumen Content (ASTM D4)	60% Minimum
Tensile Adhesion (ASTM D5329)	400% Minimum
Maximum Heating Temperature	400°F (204°C)
Minimum Heating Temperature	380°F (193°C)
Flash Point (ASTM D92)	450°F Minimum

*Specimen bent 90° over a 1-inch mandrel within 10 seconds.

(C) Material for Category 2 Cracks: Cracks and joints which have a clear opening ranging from one and one-half inches (1½") to three inches (3") shall be classified as category 2 cracks. Filler material for category 2 cracks shall be hot applied, pourable, high bonding mastic for application in unconfined areas and for vertical-side recessed configurations. Upon curing the material shall provide a flexible waterproof seal. The material shall be traffic ready in thirty minutes or less when installed in accordance with the manufacturer's instructions. Material for sealing category 2 cracks shall be Deery brand Level & Go Repair Mastic or approved equal.

(D) Material for Category 3 Cracks: Cracks and joints which have a clear opening greater than three inches (>3") shall be classified as category 3 cracks. Material for filling category 3 cracks shall be Deery brand Level & Go Repair Mastic or approved equal.

(E) Product Submittals: Prior to application of category 1 crack sealant and category 2 & 3 crack filler material, the Contractor shall submit the material manufacturer's product specifications together with installation recommendations which shall include surface preparation, product installation, and curing requirements. Certification of compliance for sealant material shall be submitted to the Engineer.

The Engineer may request material samples for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

404-2.02(C) Cover Materials: Add the following to the Standard Specifications:

Cover material shall meet the requirements for Class I grading or the Pima Association of Governments Standard Specifications for Public Improvements, 2015 Edition, Section 404-2.02(C) Cover Materials.

404-3.15 Chip Seal Coat. Revise the first sentence of the Standard Specifications to read:

The type of bituminous material shall be CRS-2P.

404-3.16 Fog Coat. Add the following to the Standard Specifications:

Bituminous material for Fog Coat shall be Grade PMCQS-1h as specified in the Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction, 2018 revision to the 2015 Edition, Section 713 Emulsified Asphalts Materials. The bituminous material shall be a 50:50 dilute and applied at a rate of 0.12 – 0.15 gal/SY.

404-3 CONSTRUCTION DETAILS. Add the following sections to the Standard Specifications.**404-3.17 CLEANING AND PREPARING CRACKS OR JOINTS:**

When deleterious materials are present in the cracks and joints, they shall be removed and those cracks and joints shall be treated with a herbicide that sterilizes the soil subject to the approval of the Engineer. Cost for treatment is incidental.

(A) Routing: Is not required for this work.

(B) Vacuuming: Final cleaning shall thoroughly clean cracks and joints to a minimum depth of 1" for cracks that are $\frac{3}{4}$ " or narrower and to the full asphalt depth for cracks that are wider than $\frac{3}{4}$ ". Surfaces are to be inspected to assure adequate cleanliness and dryness.

High pressure 90 psi minimum, dry oil free compressed air shall be used for final cleaning and dust removal from cracks. The high pressure tool shall be integral with a vacuum unit to collect the dust and residue. Both sides of the crack or joint shall be cleaned.

404-3.18 APPLICATION OF CATEGORY 1 CRACK SEALANTS:

(A) Weather: In no case shall sealant be placed during damp roadway conditions such as wet roadway surfaces or damp material inside the cracks. Operations stopped by the Engineer, due to weather, shall be at no additional cost to the contracting Agency. If installing at night, ensure that dew is not forming on the pavement surface.

Sealant material shall only be applied when pavement temperature exceeds 40°F (4°C). If pavement temperature is lower than 40°F (4°C), it may be warmed using a heat lance that puts no direct flame on the pavement.

(B) Temperature: Sealant temperatures are to be maintained at the maximum heating temperature recommended by the manufacture.

(C) Equipment: The melter applicator unit shall be a self-contained double boiler device with the transmittal of heat through heat transfer oil. It shall be equipped with an on board automatic heat controlling device to permit the attainment of a predetermined temperature, and then maintain that temperature as long as required. The unit shall also have a means to vigorously and continuously agitate the sealant to meet the requirements of Appendix X1.1 of ASTM D6690. The sealant shall be applied to the pavement under pressure supplied by a gear pump with a hose and wand and direct connecting applicator tip. The pump shall have sufficient pressure to apply designated sealant at a rate of at least three (3) gallons (11.4 L) per minute. Melter applicators shall be approved for use by the sealant manufacturer.

(D) Placement of Sealant: The sealant shall be applied in cracks, joints, and sealant reservoirs uniformly from bottom to top and shall be filled without formation of entrapped air or voids.

Cracks and joints shall be slightly overfilled then leveled with a 3" sealing disk or v-shaped squeegee to create a neat band extending approximately 1" on each side of the crack or joint for surface waterproofing. The band shall be as neat and as thin as possible and shall not extend more than $\frac{1}{8}$ inch above the pavement surface.

During and after placement of the sealant, the Contractor shall protect against harm to persons or animals that may be exposed to the hot material.

(E) Opening to Traffic: Sealant material shall not be exposed to traffic until fully cured. If the sealed area must be opened to traffic, blotter material shall be applied to the surface of all uncured sealant material.

All sealed cracks that have a clear opening of 1½ inches or greater shall have blotter material applied prior to opening to traffic.

On two lane roads or where traffic may come in contact with the hot sealant before it cures, a blotter or specialized bond breaking material shall be used to prevent asphalt bleeding and/or pickup of sealant by vehicular traffic. Blotter material shall be compatible with the crack sealant.

404-3.19 APPLICATION OF FILLER MATERIAL FOR CATEGORIES 2 AND 3 CRACKS:

The Contractor shall comply with the material manufacturer's installation recommendations including, but not limited to, surface preparation, application equipment, and application procedures. No filler material shall be installed until all cracks to be filled have been inspected and approved by the Engineer. Filler material shall not be opened to traffic until fully cured.

404-3.20 UNACCEPTABLE WORK:

The Contractor, at no additional cost to the contracting Agency, shall correct unacceptable work.

Unacceptable work shall include, but not be limited to, unsealed or unfilled cracks, material wastage on the sides of the roadway, and excess quantities of material on the roadway that adversely affects driving.

The Contractor shall not progress to a new area until the unacceptable work is corrected to the satisfaction of the Engineer. Correction of unacceptable work shall be accomplished within five working days after notification from the Engineer of the unacceptable work.

404-4 METHOD OF MEASUREMENT: Add the following to the Standard Specifications:

The Contractor shall meet with the Engineer or the Engineer's designated representative on a daily basis and supply a signed daily report indicating the date and identifying for each road segment:

- The amount of category 1 crack sealant material applied in total pounds and the total square yards of pavement sealed.
- The amount in pounds of category 2 crack filler material installed.
- The amount in pounds of category 3 crack filler material installed.

Payment for crack sealing and crack filling shall be based on accepted quantities of Category 1 Crack Sealing, Category 2 Crack Filling, and Category 3 Crack Filling.

Accepted Category 1 Crack Sealing shall be measured by the pounds of sealant material placed.

Accepted Category 2 Crack Filling shall be measured by the pounds of filler material placed.

Accepted Category 3 Crack Filling shall be the measured by the pounds of filler material placed.

404-5 BASIS OF PAYMENT: Add the following to the Standard Specifications:

Payment for pavement crack sealing and crack filling will be at the contracted unit prices. Payment shall be full compensation for furnishing all labor, materials, equipment, tools, and incidentals used for surface preparation, placement of materials, and cleanup.

No payment will be made for crack sealing or crack filling that used unacceptable material.

SECTION 404 – BITUMINOUS TREATMENTS**Item 3 Fog Seal – (Emulsified Asphalt (Rejuvenator))****1. Description:**

The work under this item includes cleaning the surface adequate for application of the material and applying the seal coat using a rejuvenating emulsion and re-striping of pavement markings. Raised Pavement Markers (RPMs), imprinted colored markings, and other roadway appurtenances such as water and gas valves, manholes and survey monument shall be covered as directed by the Engineer.

The work shall consist of furnishing all necessary labor, materials, and equipment for the Fast Set Fog Seal with an Anti-Skid Material applied as a friction surface.

2. Standard Specifications and Standard Details:

The Work embraced herein shall be performed in accordance with the requirements of the following separate documents, unless otherwise noted, or as modified by the Special Provisions, Plans, Addendum, or other subsequent change:

- Pima County/City of Tucson, Standard Specifications for Public Improvements, 2015 Edition
- Pima County/City of Tucson, Standard Details for Public Improvements, 2015 Edition
- U.S. Department of Transportation, Federal Highway Administration, Manual on Uniform Traffic Control Devices for Streets and Highways, 2003, and Amendments.

3. Preparation:

Immediately prior to the application of the rejuvenating seal with sand operation, the Contractor shall sweep the entire surface with vacuum assisted power brooms. Flushing with water and/or fog seal may be required in some areas. Prior to the sealing application, pavement surfaces shall be cleaned of all oil, debris, grease spots and weeds.

Once areas have been cleaned all areas shall be flushed with a water truck before power brooming. Drain inlets shall be protected and no means which could allow materials into the storm drains will be permitted. The curing of the Fast Set Fog Seal shall be as recommended by the manufacturer and/or the Engineer such that a street may be open to traffic without damage to the surfacing (Contractor shall provide delineators for traffic safety until sealing at each respective location is complete).

The Fast Set Fog Seal with BSA-35 shall be applied to all asphalt surfaces unless otherwise specified. The Contractor shall protect all utilities, Raised Pavement Markers (RPMs), color imprinted asphalt at crosswalks and bike routes prior to applying the rejuvenator. Masking or other approved methods of protection may be used. The Contractor may elect to replace the RPMs and color imprinted asphalt at no additional cost to the agency.

Concrete bridge decks, concrete curbing and gutter pans and other surfaces not intended to be treated shall be shielded from the application of the fog seal. The Contractor shall be responsible for the removal of seal material that has been applied to any unintended surface. Clean up will be the responsibility of the contractor at no additional cost to the Agency.

Before the fog seal is applied in an area all manhole covers, flushing inlet covers, monument covers, and all other utility covers to remain shall be protected from the Contractor's sealing operations by applying a sheet of plastic, cut to fit, or placing a plastic bag over the exposed facilities or other methods approved by the Engineer. All traces of plastic shall be removed from all covers of facilities and other utility covers as quickly as possible after the application of the seal and definitely prior to final acceptance. Contractor shall replace or clean at his or her own expense any damaged or oil stained items within the construction limits.

4. Test Sections:

At least forty-eight (48) hours prior to full production, the CONTRACTOR shall "Ring Test" sections of the area to be treated. The location for each ring test site will be designated by the engineer. For each site section (3 application rates minimum) shall be required for each different asphalt surface. Additional application rates shall be provided as necessary to determine the optimum rate for each different pavement in the project.

5. Application:

The emulsion shall be applied at a rate ranging from 0.07 gal / SY - 0.14 gal / SY with BSA-35 applied simultaneously at a rate of 0.6 lbs - 0.75 lbs/ SY. The final rate of application of emulsion and sand will be jointly determined by the engineer, contractor, and the vendor. The fog seal shall be applied when ambient temperature is above forty degrees (60°F) Fahrenheit and the weather forecast should be for sun and highs in the near sixty degrees (60°F) and no rain forecast for the next twenty four (24) hours after the seal has been applied. The seal shall not be placed if the ambient temperature during the curing period twenty four (24) hours is expected to be below fifty degrees (50°F).

The emulsion shall be heated at a temperature above one hundred forty degrees (140°F) but not to exceed one hundred and sixty degrees (160°F) at application. For smaller areas the emulsion may be applied with a wand.

The surface temperature of the existing pavement shall be less than one hundred and twenty degrees (120°F) during the application. The Fast Set Fog Seal shall be allowed to cure for (45) min. prior to traffic release.

6. Material:

The asphalt emulsion shall be a polymer modified emulsion with a latex polymer manufactured and designed to become traffic ready within the specified time limits.

Product Specification:			
EMULSION SPECIFICATION			
Test on Emulsion	Test Method	Min	Max
Sieve, 20 mesh, % retained	AASHTO T-59	-	0.3
Particle Charge Test	AASHTO T-59	Positive	-
Residue, minimum % (diluted, ready to use)	AASHTO T-59	38	-
Test on Residue	Test Method	Min	Max
Solubility in TCE, %	AASHTO T-44	97.5	-
Ductility, mm, 25°C	AASHTO T-51	100+	-
Elastic Recovery, 25°C	AASHTO T-301	45	-
Softening Point (°C)	AASHTO T-53	45	-

duct Specification:

EXPECTED RETURN-TO-TRAFFIC TIMES Temp Range Time (Typical)

75 – 105 F
15 - 25 min.

59 – 74 F
25 - 40 min.

Anti Skid Material:

The Anti Skid Material shall be angular and black in color.

The Anti Skid Material shall **% Passing**

be BSA-35, a clean, dry,

and dust-free slag with

Mohs hardness of 7-8.5.

The Anti-Skid Material shall

meet the following gradation

analysis per ASTM D 451:

Sieve**Size**

No. 8	100
No. 10	100
No. 12	94.5
No. 16	79.57
No. 20	45.59
No. 30	17.72
No. 50	3.69
No. 70	1.62
Pan	0

Screenings shall also conform to the following quality requirements: Tests

Test Requirements

Specific Gravity (Min.) ASTM C-128

2.8

Cleanliness Value (min.) Cal-Trans 227

80

7. Material Certifications and Testing:

The emulsion manufacturer shall submit to the agency certification that the emulsion meets the specification. The manufacturer through the emulsion supplier shall submit to the agency test results from an accredited laboratory certification that the polymer modified emulsion meets the required specifications and that it is supplying the polymer specified for this contract. The agency will not accept test results dated more than 90 days from the date of bid opening.

Certifications and test results on the polymer shall be submitted and attached to the bid proposal. Certifications and test results on the emulsion must be submitted to the agency and approved by the agency 5 days to supplying the material.

Prior to and during the project the agency may require one quart samples of both the finished emulsion and the polymer used in the emulsion. The agency will be allowed to withdraw samples from the supplier's storage tanks and submit to the agency designated laboratory for testing. All testing shall be at the Agency's expense.

8. Equipment:

Pressure Emulsion Distributor / Texture Media Spreader:

The emulsion distributor and sand applicator shall be a singular unit capable of applying emulsion and Media Texture at the same time. It shall be designed, equipped, maintained, and operated so that bituminous material and media may be applied uniformly on variable widths of surface at the specified rate. The allowable variation from the specified rate shall not exceed 10 percent during application operations. Distributor equipment shall include a tachometer, pressure gages, volume-measuring devices or a calibrated tank, and a thermometer for measuring temperatures of tank contents. The distributor shall be self-powered and shall be equipped with a power unit for the pump and full circulation spray bars adjustable laterally and vertically. Spray nozzle tips shall be properly sized for the product being applied, in accordance with the rejuvenator seal manufacturer's recommendations.

9. Method of Measurement:

The polymer modified emulsion including the anti-skid material will be measured by the ton. Measurement for payment will be made for the quantity of polymer modified rejuvenating emulsion applied and anti-skid material

in accordance with the requirements of these specifications.

10. Basis of Payment:

The accepted quantities of polymer modified rejuvenating emulsion complete in place, including the anti-skid material, measured as provided above, will be paid for at the contract unit price.

Adjustments will not be made for fluctuations in the cost of bituminous material at the date of bid opening and the date that the material is used on the project.

No measurement or direct payment will be made for cleaning the surface or treating the surface prior to the application of polymer modified rejuvenating emulsion or the covering of utilities, RPMs, and other appurtenances within the roadway.

No measurement or payment shall be made for the anti-skid material used or the sweeping up of the material.

STANDARD SPECIFICATIONS MODIFIED TO ADD SPECIAL PROVISIONS FOR MICRO SEAL SURFACE TREATMENT:

1. DESCRIPTION

This specification covers the material, equipment and construction procedures for the resurfacing of existing paved surfaces. The seal shall be a mixture of polymer modified asphalt emulsion, mineral admixture, water, mineral aggregate and other additives, properly proportioned, mixed and spread on a properly prepared pavement surface in accordance with guidelines and as directed by the designated County Representative.

The completed seal shall leave a homogeneous mat, adhere firmly to the prepared surface and have a skid resistant surface texture.

2. APPLICABLE SPECIFICATIONS

The following specifications and test methods form a part of this specification.

AASHTO	American Association of State Highway and Transportation Officials
ASTM	American Society for Testing Materials
ISSA	International Slurry Surfacing Association
ADOT	Arizona Department of Transportation

3. BITUMINOUS TREATMENTS

Bituminous Materials

(A) Quick Traffic Solid Polymer Micro Seal surface treatment Material:

Bituminous materials for the micro seal surface treatment shall be a mixture of cationic polymer modified asphalt emulsion, mineral admixture, water, mineral aggregate and other additives, properly proportioned, mixed and spread on the pavement surface as specified herein and as directed by the Engineer. The completed surface shall have a uniform appearance and a skid-resistant surface.

Asphalt Emulsion:

The polymerized catatonic emulsion is herein classified as CSS-1H, quick-setting, cationic type emulsion of mixing applications and seal coat. A minimum of 4% of solid polymer shall be high sheared into the asphalt prior to the emulsification process. The amount of polymer shall be based on weight of polymer and asphalt (total weight) and be certified by the emulsion supplier. The polymerized emulsion shall meet the following requirements:

<u>Test on Emulsion</u>	<u>AASHTO Test Method</u>	<u>Specification Limits</u>
Viscosity, SSF, 77°F, Sec.	T-59	15-100
Storage Stability, 24 hours, %	T-59	0.1 max
Sieve Test, %	T-59	0.1 max
Evaporation Residue, %	Ariz 512	60 min.
Particle Charge	T-59	positive

SPECIAL PROVISIONS NO. S-99-01

TEST ON EVAPORATION RESIDUE

Kinematic Viscosity, 275°F, cst	T-201	650 min
Penetration @ 77°F, dmm, (100g/5sec)	T-49	40-90
Ductility @ 77°F, (5cm/min)	T-51	60 min
Softening Point, °F	T-53	150 min

TEST ON EVAPORATION RESIDUE AFTER RTFO

Kinematic Viscosity, 275°F, aging ratio, cst	T-201	2.5 max
Softening Point, °F	T-53	150 min

The emulsion, upon standing undisturbed for a period of twenty-four (24) hours, shall show no white or milky colored substance on its surface, and shall be a homogeneous brown color throughout.

4. Modifier Type and Content:

- a. The modifier shall be solid. The asphalt cement shall contain a minimum of 4% solid polymer by weight of asphalt residue, sheared into the asphalt prior to emulsification.

Aggregate Materials: of the Standard Specifications is modified to add:

b. **Micro seal surface treatment Aggregate**

The mineral aggregate shall consist of sound, durable crushed stone or crushed gravel and approved mineral admixture. The material shall be free from vegetable matter and other deleterious substances. Aggregates shall be 100% crushed with no round particles. No natural sand will be allowed. The percentage composition by weight of the aggregate shall conform to the following gradation per specified Type:

MICRO SEAL SURFACE TREATMENT AGGREGATE			
SIEVE SIZE	Type I % PASSING	Type II % PASSING	Type III % PASSING
3/8	100	100	100
No. 4	100	85/100	70/90
No. 8	90/100	65/90	45/70
No. 16	65/90	45/70	28/50
No. 30	40/60	30/50	19/34
No. 50	25/42	18/30	12/25
No. 100	15/30	10/21	7/18
No. 200	10/20	5/15	5/15
Emulsified Asphalt content as a % of Dry Wt. Of Aggregate (approx.) ASTM D3910 (W.T.A.T. TEST)	18	16	14
Residual Asphalt Range requirements % of Dry Wt. of Aggregate ASTM D3910 (W.T.A.T. TEST)	10-16	7.5-13	6.5-12
Pounds of Aggregate per Square Yard (approx.)	8-10	12-18	18-25

The mineral aggregate and mineral admixture shall have a sand equivalency value not less than 50 (ASTM D 2419) and be non-plastic.

If more than one kind of aggregate is used, the correct amount of each kind of aggregate to produce the required gradation shall be proportioned separately in a manner that will result in a uniform and homogeneous blend. The final blended aggregate shall meet requirements for grading, sand equivalency and plasticity per above.

Mineral admixture, required by the mix design, shall be any recognized brand of non-air entrained Type I normal Portland cement that is free of lumps and clods, with a minimum of 85% passing the #200 sieve added by weight of aggregate as specified by the mix design.

5. Micro Seal surface treatment Mix Design:

a. **Requirements:**

The Contractor shall provide a job mix formula from an approved laboratory and present certified test results for the Engineer's approval. Compatibility of the aggregate and polymer modified asphalt emulsion shall be certified by the emulsion manufacturer. All materials used in the job mix formula shall be representative of the materials proposed by the Contractor for use in the project.

All products used in the construction procedures shall have certifications from the suppliers and shall be given to the Engineer upon delivery to the project.

Mix design and proportioning shall be approved by the Engineer prior to the start of the project.

b. **Proportioning:**

The micro seal surface treatment mixture shall be proportioned in accordance with the mix design. Calibrated sign flow meters shall be provided to measure both the addition of water and additives to the pug mill emulsion and cement flow shall be tied directly to aggregate flow. All additive flows shall be calibrated.

The micro seal surface treatment mixture shall be proportioned per the mix design to ensure:

- (1) Trafficability – with a relative humidity at not more than 50% and ambient air temperatures of at least 77°F, the material will permit controlled traffic without damage to the surface
- (2) within twenty (20 +/- 10) minutes and uncontrolled traffic without damage within forty-five (45 +/- 15) minutes.
- (3) Prevent development of bleeding, raveling, separation or other distress for seven (7) days after placing the micro seal surface treatment.
- (4) The finish mixture will be warranted against material defects for one year; existing conditions excluded.

c. **Specifications:**

The Engineer shall approve the mix design prior to use. The specification limits are as follows:

Residual Asphalt	6.0%-11.5% by dry weight of agg.
Mineral admixture	0.1%-1.0% by dry weight of agg.
Polymer Content/Type	4% min/solid
Additive	as required for mix properties
Water	as required for mix properties
Aggregate Grading	Type II (Section 404-2.02 (E))
Traffic Time	(Sec 404-2.06 (B)) (1)
Wet Stripping (ISSA TB-114)	Pass (90% min)
Loaded Wheel Sand Adhesion	(Sec 404-2.06 (C)) (2)

- (1) Modified Cohesion Test (ISSA TB-139) – Furnish laboratory test data showing the mix design to be trafficable within twenty (20) minutes after application at 77°F, conforming to the following criteria in accordance with test methods described in the applicable specifications:

Set Time test: 30 minutes 12 kg-cm min

Early Rolling Traffic Time 60 minutes 20 kg-cm min

- (2) Loaded Wheel Sand Abrasion Test (ISSA TB-109) – Furnish laboratory test data showing the mix design conforming to the following criteria in accordance with test methods described in the applicable specifications: 50 g/sf max

The laboratory shall further report their quantitative effects of moisture content in the unit weight of the aggregate (bulking effect). The report must clearly show the theoretical recommended proportion of aggregate, mineral admixture (min & max), water (min & max), additive(s), and asphalt and how the proportions are based (dry aggregate weight, total mix, etc.).

6. Equipment:
Micro seal surface treatment Equipment

- (1) Mixing Machine: The mixing machine shall be an automatic sequenced, self-propelled mixing machine, which shall be a continuous flow mixing unit, able to accurately deliver and proportion the aggregate, mineral admixture, water, additive, and polymer modified asphalt emulsion to a revolving multi-blade double shafted mixer and discharge the product on a continuous flow basis.

The machine shall have sufficient storage capacity for aggregate, polymer modified asphalt emulsion, mineral admixture, water and additive to maintain an adequate supply to the proportioning controls.

Each mixing unit to be used in the performance of the work shall be calibrated prior to construction. The mixing unit shall contain the following components for material control:

1. Individual volume or weight controls for proportioning each material to be added to the mix shall be provided, and shall be accessible by the Engineer. Each material control device shall be calibrated prior to work and documented for inspection by the Engineer.
 2. Aggregate Feed – The aggregate feed to the mixer shall be equipped with a revolution counter or similar device so the amount of aggregate used may be determined at any time.
 3. Emulsion Pump – The emulsion pump shall be the positive displacement type with a jacketed housing for uniform heating. A revolution counter or similar device shall be fitted so that the amount of emulsion used may be determined at any time. The readout of this device shall be in gallons.
 4. Fines Feeder – The fines feeder shall provide a uniform, positive, accurately metered range of 0 to 1 percent by dry aggregate weight. The fines feeder must have a counter so that the amount of mineral admixture can be determined at any time.
 5. Liquid Additive – The mixing machine shall be equipped with a liquid additive system that provides a pre-determined amount of additive to the mixing chamber. This additive system must be equipped with a counter that can determine the amount at any time.
 6. Water System – The mixing machine shall be equipped with a water system that provides a pre-determined amount of water to the mixing chamber. This water system must be equipped with a counter that can determine the amount used at any time.
- (2) Spray Bars: The mixing machine shall be equipped with a water pressure system that provides a water spray immediately ahead of and outside the spreader box.
- (3) Spread Equipment: The mixture shall be agitated and spread uniformly in the surfacing box by means of twin shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off.

A secondary strike-off shall be provided to improve surface texture. The secondary strike-off shall have the same leveling adjustments as the spreader box.

Self-contained Micro Seal surface treatment machines shall be equipped with mechanical and electronic counters to accurately measure and calibrate the revolutions of the conveyor delivering aggregate to the pug mill. Each Micro Seal surface treatment machine shall also be equipped with a positive displacement pump and digital read-out counter to accurately measure and display, in gallons, the quantity of emulsified asphalt delivered to the pug mill.

The spreading equipment shall be maintained free from buildup of the mixture on the paddles or sidewalls. Any skips, lumps or tears in the finished product will not be allowed.

7.0 APPLICATION

7.1 GENERAL

The polymer modified micro seal surface treatment shall be of the desired consistency when deposited in the spreading box and nothing more shall be added to it. The mixing time shall be sufficient to produce a complete and uniform coating of the aggregate and the mixture shall be placed into the moving spreader box at a sufficient rate to maintain an ample supply across the full width of the strike-off squeegee at all times.

7.2 WEATHER

The mixture shall be placed when the temperature is at least 45 degrees F and rising, and is not raining. The surface temperature shall be 50 degrees F or higher when the mixture is applied. The micro seal surface treatment shall not be applied unless the pavement temperature is at least 45 degrees F and rising.

The mixture shall not be applied during unsuitable weather, no Micro Seal surface treatment shall be applied when there is danger that the finished product will freeze before 24 hours and the mixture shall not be applied when weather conditions prolong opening to traffic beyond a reasonable time.

7.3 PROTECTION OF EXISTING SERVICES

The contractor shall take all necessary precautions to prevent seal or other material used from entering or adhering to gratings, hydrants or valve boxes, manhole covers, bridge or culvert decks and other road fixtures. Immediately after resurfacing, the contractor shall clean off any such material and leave any such grating, manholes, etc., in a satisfactory condition.

7.4 PREPARATION OF THE SURFACE

Immediately before applying the bituminous material, the area to be resurfaced shall be cleared of all loose material, dirt, vegetation and other objectionable material. Manholes, valve boxes, drop inlets and other service entrances will be protected from the seal by a suitable method.

In urban areas, the surface shall be cleaned with a self-propelled pick-up broom sweeper. In rural areas, power brooms may be used. When necessary, cleaning shall be supplemented by hand brooms. This also includes the removal of grass and/or weeds that are growing in the joint between the street and gutter.

The bituminous material shall not be applied until the designated County representative has made an inspection of the surface and they have determined that it is acceptable.

7.5 FOGGING PAVEMENT

The surface shall be pre-wetted by fogging ahead of the spreader box. The rate should be adjusted as dictated by the pavement temperatures, surface temperatures, humidity and dryness of existing pavement.

7.6 MIX STABILITY

The modified mix shall process sufficient stability so that the premature breaking of material in the spreader box should not occur. The mixture shall be homogeneous during the following mixing and spreading; it shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate.

7.7 APPLICATION RATE

The application rates are average rates. The surface texture variations throughout the work will dictate the actual spreading rates. The strike-off squeegee shall be adjusted to provide a thickness that will completely fill the surface voids and provide an additional thickness not exceeding one and one half times the largest top-size stone.

7.8 JOINTS

No excessive buildup, uncovered areas or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable width spreading equipment to produce a minimum number of longitudinal joints throughout the work. (Half passes and odd width passes will be only in minimum amounts. If half passes are used, they cannot be the last pass of any paved area. Care shall be taken to ensure straight lines along curb and shoulders. No runoff on these areas will be permitted.) Transverse joints shall be squared off so that a uniform transition is obtained at all transverse joints. Excess material as a result of squaring the joint will be removed by the Contractor.

7.9 HAND WORK

Approved hand squeegees shall be used to spread the mixture in areas inaccessible to the spreader box and other areas where hand spreading may be required to provide complete and uniform micro seal surface treatment coverage. Care shall be exercised to leave no unsightly appearance from handwork. The same type finish as applied by the spreader box shall be required. Handwork shall be completed during the machine applying process.

7.10 LINES

Care shall be taken to insure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance.

7.11 TRAFFIC CONTROL

Suitable methods, such as an approved barricade operational plan, flagmen, pilot cars, etc., shall be used by the Contractor to protect the uncured seal surface from all types of vehicular traffic until the new surface will support the traffic without damage.

7.12 CLEAN-UP

The contractor shall remove any debris associated with the performance of the work on a daily basis.

8.0 MACHINE CALIBRATION AND VERIFICATION**8.1 CALIBRATION**

Each mixing unit to be used during the contract shall be calibrated prior to construction and proven to the designated County representative, or designee, during the test strips. All mixing units to be used on the job shall be approved prior to the start of construction. Any cost associated with calibration shall be incidental to the project. Documentation shall include an individual calibration of each material device(s). No machine will be allowed to work on the project unless the calibration has been completed and accepted. The method used to calibrate the machines shall be submitted to the designated County representative for approval prior to calibration. Verification is to be performed with test strips. This shall include pre and post weighing of the seal trucks. Re-calibration shall be required whenever counters or measuring devices are discovered to be in error. Any cost associated with recalibration shall be incidental to the project and no additional time will be granted. Calibration sheets will be furnished to the designated County representative.

8.2 VERIFICATION

Test strips will be made by each machine prior to construction. Samples of the seal will be taken and tested as to mix consistency, proportioning and application rate. Upon failure of any test, retest shall be made at the contractor's expense. Any unit failing to pass the test will not be permitted to work on the project.

9.0 EQUIPMENT REPLACEMENT

Any equipment, or piece of equipment, that fails to produce the desired surface results shall be repaired and/or replaced by the Contractor at no expense to the County. The designated County representative shall determine if the equipment and/or finished product are in compliance.

10.0 PROTECTION OF COVERS

All utility appurtenances and survey monuments, i.e., manholes, valves, etc. shall be covered prior to application of micro seal surface treatment. A squeegee method will not be permitted. The contractor shall submit the method to be used to the designated County representative for approval prior to work commencement. All utility appurtenances and survey monuments shall be marked outside the portion of the pavement with the offset and location prior to micro seal surface treatment coating.

11.0 SCHEDULE

The Contractor shall schedule and furnish all labor and equipment necessary to apply a minimum of 170 tons of micro seal surface treatment per day.

12.0 PAYMENT

The polymer micro seal surface treatment shall be measured and paid for by the weight of the aggregate and weight of emulsified asphalt, as shown on certified weight tickets from the supplies delivered to the project, less weigh backs. The contractor shall submit to the designated County representative the delivery tickets that show quantities of each material delivered to the job site and used on the project. No direct measurement or payment for water or admixtures. This will be full compensation for all work including labor, equipment materials, tools, design, and any other incidentals

13.0 WARRANTIES AND GUARANTEES

The Contractor shall warrant and guarantee all the work against defective workmanship or materials for a period of one year commencing on the date of final acceptance of the work under the contract, ordinary wear and tear and unusual abuse or neglect excepted.

In the case of the latent defect, the warranty shall commence on the date the defect is discovered, except that this warranty period shall not extend beyond the period allowed by law.

SECTION 406 - ASPHALTIC CONCRETE

406-5 BASIS OF PAYMENT the first paragraph of the Standard Specifications is revised to read:

The accepted quantities of asphaltic concrete, measured as provided above, will be paid for under the appropriate bid items at the contract unit price or adjusted unit price, complete-in-place.

Due to fluctuating asphalt cement prices the unit price for asphaltic concrete will be adjusted based on the criteria and formula below.

The price for bituminous material or asphalt cement used in the asphalt concrete mixture will be determined monthly by the Agency based on the selling prices of asphalt cement published by the Arizona Department of Transportation, Contracts and Specifications Section (ADOT memorandum). The established price for bituminous material used in the asphaltic concrete mixture will be made available by the Agency upon request. Bituminous adjustments will, if applicable, will be adjusted according to the ADOT index at the time the DO is issued.

The "initial cost" for asphalt cement of all types, grades, etc. on projects will be the established price based on the ADOT memorandum for the selling prices during the month the bids are opened.

An adjustment in compensation will be made for either an increase or decrease in the price of asphalt cement as shown in the latest memorandum, current as of the date of use, as compared to the "initial cost".

The tons of asphalt cement that are paid for on an invoice basis to which the adjustment will be applicable are the tons which have been delivered to the project and subsequently incorporated into the work. The adjustment will be applicable on the date of use.

No additional compensation will be made for any additional or increased charges, costs, expenses, taxes, etc., which the contractor may have incurred since the time of bidding and which may be the result of any increase in the "initial cost" of asphalt cement.

After the expiration of the specified completion time set forth in the contract or as may be extended in accordance with the provisions of Subsection 108-8 of the Standard Specifications any adjustment in compensation made for asphalt cement incorporated into the work will be on the basis of the price of asphalt cement shown in the latest memorandum on the date of the expiration of the specified completion time, as hereinbefore specified.

Adjustment Formula:

("Date of Use" cost of asphalt cement - "Initial" cost of asphalt cement) x % asphalt cement in mix design

EXAMPLE:	"Initial" cost at bid opening	=	\$100 per ton
	"Date of Use" cost	=	\$120 per ton
	% asphalt cement in mix design	=	5.2

Unit Price adjustment to Asphaltic Concrete	=	(120-100) x 0.052
	=	20 x 0.052
	=	\$1.04 increase in the contract unit price for asphaltic concrete.

SECTION 515 - MISCELLANEOUS UTILITY RELOCATIONS is hereby added to the Standard Specifications**515-1 DESCRIPTION**

The work under this Section is intended to cover work added to the contract by the Engineer for miscellaneous relocation of utilities that are encountered during the course of construction. Miscellaneous work shall be work that was not covered by other items included in the project and shall be performed at the direction of the Engineer.

515-2 MATERIALS (None Specified)**515-3 CONSTRUCTION DETAILS** (None Specified)**515-4 METHOD OF MEASUREMENT**

The work under this Section shall be completed on a force account basis as specified in Subsection 109-5.

515-5 BASIS OF PAYMENT

Payment for miscellaneous utility relocation will be made in accordance with the provisions of Subsection 109-5.

SECTION 701 - MAINTENANCE AND PROTECTION OF TRAFFIC of the Standard Specifications is modified to add the following predetermined reimbursement rates:

701- 4 METHOD OF MEASUREMENT

The Agency will reimburse the contractor for the work under this Section on the basis of bid prices or the predetermined reimbursement rates as specified in the Special Provisions.

701- 4.02 Construction Area Elements

(A) Elements of Work (Complete-in-Place): The elements of work listed under this subsection will be measured for payment upon satisfactory completion of the initial installation or obliteration. Except as hereinafter specified under Basis of Payment, no subsequent measurement will be made:

<u>Elements of Work</u>	<u>Unit</u>	<u>Rate</u>
Temporary Concrete Barrier (Installation & Removal)	L.F.	\$10.00
Temporary Impact Attenuation (Sand Barrel) (Installation & Removal)	Each	\$5.00
Specialty Sign	Each	Invoice
Preformed Pavement Marking (Type II)	L. Ft.	\$1.60
Preformed Pavement Marking (Type III)	L. Ft.	\$1.00
Temporary Pavement Marking (Painted Line)	L. Ft.	\$0.13
Obliterate Pavement Marking	L. Ft.	\$0.25
Obliterate Pavement Legends	Each	\$25.00
Obliterate Pavement Arrows (Single, Double or Merge)	Each	\$22.00
Delineator (ADOT Std. Dwg. 4-M-4.01)(Temporary)	Each	\$20.00
Reflective Raised Pavement Marker (Temporary)	Each	\$4.00
Reflective Raised Pavement Marker (Permanent) (Used as Temporary)	Each	\$4.50
Non-Reflective Raised Pavement Markers (Temporary)	Each	\$2.50
Remove Raised Pavement Markers	Each	\$1.00
Chip Seal Pavement Marker (Single Capped)	Each	\$2.00
Chip Seal Pavement Marker (Double Capped)	Each	\$3.00
Embedded Sign Post (Installation, Use & Removal)	Each	\$35.00

(B) Elements of Work (In Use) and Flagging: The elements of work listed under this subsection will be measured for payment from the time at which the element is put into active use on the project and accepted by the Engineer until such time that the Engineer determines that the element is no longer required. Individual flags and sandbags used in conjunction with the traffic elements of work shall be considered incidental items. No separate payment shall be made for flags or sandbags and their cost shall be included in their respective elements of work. The work shall also include all maintenance, cleaning, and repair of all elements. The Engineer must also approve the use of Flagging Services. Flagging Services will be paid as indicated in this subsection.

<u>Elements of Work</u>	<u>Unit</u>	<u>Rate</u>
Temporary Concrete Barrier (In Use)	L. Ft./Day	\$0.04
Temporary Impact Attenuation (Sand Barrel)(In-Use)	Each/Day	\$0.25
Drum (18" x 36")	Each/Day	\$0.25
Flashing Arrow Panel	Each/Day	\$30.00
Changeable Message Board	Each/Day	\$50.00
Pilot Truck and Driver	Hour	\$30.00
Tubular Marker	Each/Day	\$0.10
Traffic Cones (18 inch)	Each/Day	\$0.10
Traffic Cones (28 inch)	Each/Day	\$0.15
Vertical Panels	Each/Day	\$0.20
Barricade (Type II)	Each/Day	\$0.20
Barricade (Type III)	Each/Day	\$0.25
Flashing Warning Light (Type A)	Each/Day	\$0.15
Flashing Warning Light (Type B)	Each/Day	\$0.40
Steady-Burning Warning Light (Type C)	Each/Day	\$0.15
Standard Intensity Reflective Sheeting,		
Small Sign (Less than 10 square feet)	Each/Day	\$0.20
Medium Sign (10 square feet to 16 square feet)	Each/Day	\$0.25
Large Sign (Greater than 16 square feet)	Each/Day	\$0.35
Portable Sign Stand (Spring Type)	Each/Day	\$0.40
Portable Sign Stand (Small Sign, less than 10 square feet)	Each/Day	\$0.10
Portable Sign Stand (Medium Sign, 10-16 square feet)	Each/Day	\$0.10
Portable Sign Stand (Large Sign, Greater than 16 square feet)	Each/Day	\$0.15
High Level Flag Tree Sign Stand	Each/Day	\$0.30
Chain Link Fence	L.F./Day	\$0.04
Orange Safety Fence (4 ft. min. by 50 ft.)	Each/Day	\$1.50
Flagging Services (Civilian)	Hour	\$18.00
Flagging Services (Uniformed Officer)(Off Duty)	Hour	\$30.00
Official Police Vehicle (Off duty)	Hour	\$8.00