



## **PIMA COUNTY NOTICE OF INVITATION FOR BIDS (IFB)**

**Solicitation Number: 162217**

**Title: Thermoplastic Pavement Marking Material**

**DUE IN AND OPENS: JANUARY 8, 2015 AT OR BEFORE 1:00 PM LOCAL AZ TIME (M.S.T.)**

**Submit Bid to:**

Pima County Procurement Department  
130 West Congress, 3rd Floor, Receptionist  
Tucson, Arizona 85701

**SOLICITATION:** Pima County is soliciting bids from Respondents qualified, responsible and willing to provide the following Goods and/or Services in compliance with all solicitation specifications and requirements contained or referenced herein.

**GENERAL DESCRIPTION:** Thermoplastic Pavement Marking Material, per specifications and requirements defined herein.

You may download a full copy of this solicitation at [www.pima.gov/procure/ifbrfp.htm](http://www.pima.gov/procure/ifbrfp.htm) by selecting the solicitation number. Respondents are required to check this website for addenda prior to the Due In and Opens date to assure that the bid incorporates all addenda. Prospective Respondents may also pick up a copy, Monday through Friday excluding legal holidays, 8 am to 5 pm LOCAL ARIZONA TIME (MST), at the address listed above.

Bids shall be submitted as defined in the Instructions to Bidders, in accordance with the Standard Terms and Conditions, and all solicitation documents either referenced or included herein. Failure to do so may be cause for rejection as *non-responsive*.

Bidders must complete and return those documents identified in the Instruction to Bidders Submission of Bids instruction.

Bids may not be withdrawn for 60 days after opening except as allowed by Pima County Procurement Code.

Bonds are not required

RESPONDENTS ARE REQUIRED TO READ THE ENTIRE SOLICITATION, INCLUDING ALL REFERENCED DOCUMENTS, TO ASSURE THAT THEY CAN AND ARE WILLING TO COMPLY, AND TO INCORPORATE ALL ASSOCIATED COSTS IN THEIR BID.

Questions and Deviation requests shall be submitted in writing to Procurement Department,  
Attention: Walter Lewandowski

All submittals shall reference the Solicitation Number and Title; Questions or Deviation Requests submitted within 8 days of the solicitation *Due in and Opens Date* may not be answered.

Fax: (520) 791-6506    email: [Walter.Lewandowski@pima.gov](mailto:Walter.Lewandowski@pima.gov)

USPO Mail to the following address:

Pima County Procurement Department, 130 W. Congress, 3rd Floor, Mailstop # DT-AB3-126; Tucson, AZ 85701

**VERBAL REQUESTS FOR CLARIFICATIONS OR INTERPRETATIONS WILL NOT BE ACCEPTED.**

Walter Lewandowski  
Commodity/Contracts Officer

**Publish:** The Territorial: December 8, 9, 10 & 11, 2014

**INSTRUCTIONS TO BIDDERS**

FAILURE TO COMPLY MAY CAUSE THE BID TO BE IMPROPERLY EVALUATED OR DEEMED NON-RESPONSIVE

**1. PREPARATION OF RESPONSES**

All bids shall be made using the forms provided in this package. All prices and notations must be printed in ink or typewritten. **No erasures are permitted.** Errors may be crossed out and corrections printed in ink or typewritten adjacent to error and shall be initialed in ink by person signing the bid. Typewritten responses are **preferred**.

All bids shall as appropriate indicate the registered trade name, stock number, and packaging of the items included in the bid. Surety, if required by this solicitation, may be in the form of a bond, cashier's check or certificate of deposit made payable to *Pima County*. Personal or company checks are not acceptable.

**2. OFFER AGREEMENT (Contract) Form Thermoplastic Pavement Marking Material, (22 pages)**

The attached or referenced Offer Agreement when completed, signed and submitted by the Offeror is a binding offer that results in a legal contract when accepted and executed by Pima County as defined by this solicitation. The Offer Agreement document must be completed and signed by an authorized representative certifying that the firm can and is willing to meet all requirements of the solicitation.

**Supplier Minimum Qualifications:**

Supplier Minimum Qualifications are intended to establish the respondent's capacity and responsibility for providing the services or products solicited. To be evaluated and considered for award of contract the Offeror shall submit with the Offer Agreement all documents specified in article 3. *Supplier Minimum Qualifications* of the Offer Agreement.

**Unit Prices & Bid Certification:**

Respondents shall fully complete and sign article 7. *Compensation & Payment* and article 15. *Bid/Offer Certification* sections of the Offer Agreement utilizing the forms provided by this solicitation.

Unless otherwise stated, a Unit Price shall be given for all items defined by the Offer Agreement Unit Prices schedule. Requested information and data shall be provided in the precise manner requested. Product descriptions shall provide sufficient information to precisely document the product being offered. All unit prices shall remain firm for the initial term of the executed agreement, with the exception that should seller during the term of the agreement offer to another buyer pricing for like or similar quantity, products or services at price more favorable than those given to Pima County ("COUNTY"), that seller shall offer same pricing to County effective on the date offered to other buyer. Unit prices given by respondent shall include all costs required to implement and actively conduct and document cost control and reduction activities. Taxes applied to the unit price and legally applicable to Pima County purchase transactions shall be separately invoiced and not included in the item unit price. Unit Prices shall include all costs incidental to the provision of the requirements defined by the solicitation and Offer Agreement and unless otherwise specified by the Delivery Article shall be F.O.B. Destination & Freight Prepaid Not Billed ("F.O.B. Destination"), no additional payments will be invoiced or paid. Unit prices shall prevail in the event of an extension error. Price each item separately. Delivery time if stated as a number of days shall mean "calendar" days.

COUNTY reserves the right to question, clarify and correct obvious errors.

**3. SPECIFICATIONS & DEVIATIONS**

The specifications included in this solicitation are intended to identify the kind and quality of goods and/or services to be provided without being unnecessarily restrictive, and as required to provide the information needed for the development of consistent and comprehensive bids, evaluation of bids and to efficiently support the subsequent ordering, invoicing and payment processes.

Items included in the bid shall satisfy all specifications and requirements set forth by the County's Offer Agreement. Equipment brand names, models and numbers, when given are intended to identify a level of quality, equivalent performance and dimensional specifications, and are for reference only, unless otherwise specified by the County's Offer Agreement. Failure to perform appropriate research, discovery, examine any drawings, specifications, and instructions will be at the respondent's sole risk.

Deviation requests shall specifically document and clearly illustrate the deviation to the specification, or the requirement, set forth by this solicitation and fully explain the requested deviation's impact on the end performance of the item.

**INSTRUCTIONS TO BIDDERS** (continued)

Deviation requests shall be submitted prior to the initial solicitation due date. Requests shall be submitted as soon as is possible and not less than 8 days prior to the solicitation due date else they may not be answered or addressed

Acceptance or rejection of any deviation request shall be at the sole discretion of the County and will be made in writing by the County via specific addendum of the solicitation and Offer Agreement as applicable. Respondents shall complete article 13. *Acknowledgement of Solicitation Addenda* of the Offer Agreement prior to submission.

Bidders are advised that conditional offers or notations on the documents submitted that do not conform to or that request exceptions to the published solicitation and addenda may be considered non-responsive and not evaluated.

All equipment shall be models of current production, latest design and technology, new and unused unless otherwise specified.

Manufacturer and supplier documentation, including and not limited to the following shall be provided by the successful respondent not later than 14 days after request by the County and at no additional cost; warranty; caution-informational warnings; recommended maintenance schedule and process; recommended spare parts list; operating, technical and maintenance manuals including drawings, if appropriate; product brochures; and material safety data sheets (MSDS).

**4. SUBMISSION OF BIDS**

Submissions are binding offers and will result in a binding contract upon acceptance by Pima County by issue of a properly executed contract document referencing said offer.

The submittal shall include all information requested by the solicitation, and utilize without modification the forms provided by the solicitation. Respondents are to complete, execute and **submit one original and one copy** of the following bid documents:

1. **SIGNED OFFER AGREEMENT with completed Item Unit Prices and documents or media defining other items within the scope of the agreement with Unit Prices offered; Provide Addenda acknowledgement, tax, & contact information**
2. **References:**  
**Supplier will provide (2) satisfactory references for whom extruded hydrocarbon thermoplastic pavement material were provided and delivered within the past 24 months (June. 01, 2012 to June. 31, 2014).**  
**References shall be from other government agencies or large businesses with similar volume use.**

Bids must be received and time stamped at the specified location at or before the Bid Due Date/Time as defined by the *Invitation for Bid*. The "time-stamp" provided by the County shall be the official time used to determine the timeliness of the submittal. Bids and modifications received after the Bid Due Date/Time will not be accepted, or will be returned unopened. Timely submittals will be opened and recorded promptly after the Bid Due Date/Time.

Bids must be signed by an authorized agent of the respondent and submitted in a sealed envelope marked or labeled with the respondent firm name, solicitation number, title, solicitation due date and time, to the location and not later than the Bid Due Date/Time specified by the *Invitation for Bid*.

Bids and modifications received after the *Due In & Opens* date and time will not be accepted. Facsimiles of bids will not be accepted.

Failure to comply with the solicitation requirements, including submittals that modify the solicitation requirements, may cause for the respondent's bid to be rejected as *non-responsive* and not evaluated.

**5. COMPLIANCE WITH AGREEMENT**

County will execute an agreement with the successful respondent by issue of a Master Agreement (MA) or Purchase Order or contract. The respondent agrees to establish, monitor, and manage an effective administration process that assures compliance with all requirements of the agreement. In particular, the respondent agrees that they shall not provide goods or services in excess of the executed agreement items, item quantity, item amount, or agreement amount without prior written authorization by amendment or change order properly executed by the County.

**INSTRUCTIONS TO BIDDERS (continued)**

Any items provided in excess of the quantity stated in the agreement shall be at the Respondent's own risk. Respondents shall decline verbal requests to deliver items in excess of the agreement and shall report all such requests in writing to the Pima County Procurement Department within 1 workday of the request. The report shall include the name of the requesting individual and the nature of the request.

**6. INQUIRIES & NOTICE OF RECOMMENDATION FOR AWARD (NORFA)**

Results of this procurement will not be given in response to telephone inquiries. Interested parties are invited to attend the public opening at the time and date stated in this solicitation. A tabulation of submittals will be on file at the Procurement Department. No oral interpretations or clarifications made to any respondent as to the meaning of any of the solicitation documents will be binding on Pima County. If a prospective respondent believes a requirement of the solicitation documents to be needlessly restrictive, unfair, or unclear, the respondent shall notify the Pima County Procurement department in writing identifying the solicitation number, page and paragraph number and clearly stating the issue and suggested solution prior to the *Due In and Opens* date set for receipt of the bid or proposal. Responses from COUNTY will be made by written addendum and sent to all known potential respondents. Issues identified less than 8 days prior to the *Due In and Opens* date may not be answered.

Interested parties are invited to attend the public opening of submissions at the time and date stated in this solicitation.

Pima County protest procedures are defined by Chapter 11.20 of the Pima County Procurement Code, available through <http://www.pima.gov/cob/code/>. The five-day period to file a protest of the award will be measured from the date the Notice of Recommendation for Award is posted on the Pima County Procurement website at <http://www.pima.gov/procure/awards/> **without regard to whether individual notices were issued**. It is the responsibility of bidders, proposers and offerors to check the website.

**7. ORDER OF PRECEDENCE-CONFLICTING DOCUMENTS**

In the event there are variations or conflicts between these instructions and the standard terms and conditions or the offer agreement document, the standard terms & conditions and offer agreement shall govern.

**8. VENDOR RECORD MAINTENANCE**

By submitting a response to this solicitation, the submitter agrees to establish and maintain a complete Pima County Vendor record, including the provision of a properly completed and executed "Request for Taxpayer Identification Number and Certification" document (Form W-9), within ten calendar days of the solicitation due date. The Vendor also agrees to update the information within ten calendar days of any change in that information and prior to the submission of any invoice or request for payment. The preferred method for creating or updating this record is via the Internet utilizing the Pima County Vendor Self Service (VSS). The registration requires that the Vendor establish and maintain email functionality. In addition to providing the means for a Vendor to create and maintain their Vendor record, VSS also provides for email notice to the vendor regarding solicitations published by Pima County for commodities of interest as defined by the Vendor record. Internet links for Vendor Registration are located at the Procurement Internet page: <http://www.pima.gov/procure/venreg.htm>.

**9. SMALL BUSINESS ENTERPRISE (SBE) PREFERENCE**

Any contract funded in any amount with federal funds is not eligible for this preference.

For those bids that do not exceed \$500,000 per contract year, a 5% bid preference will be given to firms submitting SBE Certificates issued by the City of Tucson WITH THEIR BID; said certification is subject to verification and acceptance by Pima County. If the certification is accepted by Pima County, the bid will be evaluated at 95% of the bid amount to determine the low and responsive bid. If an award of contract is made, the contract will be formed utilizing the Unit Prices, or Lump Sum, as bid.

**To be eligible for the price preference, SBE firms must include with their bid documents a copy of their current certification certificate** which may be acquired from the City of Tucson; Office of Equal Opportunity Programs, (520) 791-4593 (520) 791-2639 TTY, 201 N. Stone Ave., 3rd Floor North, Tucson, AZ 85701. Their SBE website, which typically includes an SBE Application Form and a Directory listing firms holding SBE Certification, is located at: <http://cms3.tucsonaz.gov/office-equal-opportunity-programs-small-business-enterprise-program>

The process of acquiring SBE Certification may take several weeks. Please contact the Pima County Vendor Relations Division at **(520) 724-3021 or (520) 724-8465** for assistance or further information.

**END OF INSTRUCTIONS TO BIDDERS**

**(Revised April 23, 2014)**

## OFFER AGREEMENT

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### **1. INTENT:**

This document is intended to establish a "As Required" indefinite delivery/indefinite quantity "Master" agreement contract to provide Pima County ("County") with such quantities of Thermoplastic Pavement Marking Material as the County may order from time to time by issue of Delivery Order (DO) or Delivery Order Maximo (DOM) pursuant to a resulting executed and effective agreement. As defined by the attached Pima County Standard terms and Conditions (STC) this agreement is non-exclusive and may be terminated for any reason without penalty or cost to Pima County.

All Goods and Services offered or provided pursuant to the resulting executed and effective agreement shall conform to the requirements defined by or referred to by the solicitation documents including *Solicitation Addenda, Instructions to Bidders, Standard Terms and Conditions* and this *Offer Agreement* all of which are incorporated herein.

It is the intent of all parties to this agreement that this document, including all attachments and documents incorporated by reference, constitutes the entire agreement between the parties pertaining to the subject matter hereof, and all prior or contemporaneous agreements and understandings, oral or written, are hereby superseded and merged herein. This Contract may be modified, amended, altered or extended only by a written amendment signed by the parties.

### **2. AGREEMENT TERM EXTENSIONS-RENEWALS & REVISIONS:**

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

Proposed extension or renewals of the contract if included in the contract and revisions to the contract shall be made through the issuance by County to Contractor of a revised Master Agreement (MA) document setting forth the requested changes. Failure by Contractor to object in writing to the proposed revisions, terms, conditions and/or specifications within ten (10) calendar days of issuance by County shall signify acceptance by Contractor and the amendment shall be binding upon the parties, effective on the date of issuance.

### **3. SUPPLIER MINIMUM QUALIFICATIONS:**

The Supplier certifies that they are competent, willing and responsible for performing the services or providing the products in accordance with all requirements of the solicitation and this Offer Agreement. The Supplier further stipulates that they possess all licenses required by applicable Agencies to satisfy the requirements of this agreement.

Supplier also confirms that:

1. Supplier certifies that they have been in the business of providing extruded hydrocarbon thermoplastic pavement material per the bid specifications for a minimum of three (3) consecutive years, including the current year.
2. Supplier will provide (2) satisfactory references for whom extruded hydrocarbon thermoplastic pavement material were provided and delivered within the past 24 months (June. 01, 2012 to June. 31, 2014). References shall be from other government agencies or large businesses with similar volume use.
3. Supplier must be able to provide certification of material specifications upon request by authorized Pima County representatives.
4. Supplier must be able to provide application and use training to Pima County for any new product that may replace original products in bid schedule list.

### **4. PRODUCT OR SERVICE SPECIFICATIONS & SCOPE:**

Supplier shall provide the Pima County Department of Transportation thermoplastic traffic marking material as identified in **(Exhibit A – Specifications)** and **(Exhibit C – Standard Specifications)** that is suitable for producing durable traffic stripes and pavement markings on Portland cement concrete or asphalt concrete pavements.

This material is heated and applied to road surfaces in a molten state using a mechanical applicator. While still hot, reflectorizing glass beads are applied to the surface of the applied thermoplastic striping material. Upon cooling to normal pavement temperatures this material shall produce durable, adherent, retro-reflective traffic stripes and pavement markings that are capable of resisting deformation by traffic. The thermoplastic material shall be composed of 100% solids.

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- All Materials shall conform to or exceed specifications set out in (**Exhibit A and Exhibit C**) Section 704-2 of the 2003 edition of, City of Tucson/Pima County standard specifications for Public Improvements). Material and vendor shall be on ADOT approved products list.
- The thermoplastic material shall be supplied as identified in (**Exhibit B – Packaging**) in either block or granular form as requested in the purchase order.
- Upon application to the pavement, the thermoplastic material shall be sufficiently tack-free to carry traffic; in not more than 2 minutes when the pavement surface temperature is 60°F, and in not more than 10 minutes when the pavement surface temperature is 130°F.

### **5. OFFER ACCEPTANCE AND ORDER RELEASES:**

Offer(s) will be accepted and executed by the County by issue of a Master Agreement (MA) and effective on the document's date of issue without further action by either party. Master Agreement (MA) and Contract documents will document the term of the agreement.

*Order(s)* for products or services pursuant to an executed Master Agreement will be made by COUNTY by issue of Delivery Order (DO) or Delivery Order Maximo (DOM) documents. Order documents will be furnished to Supplier via facsimile, e-mail or telephone. **If the order is given verbally, the County Department that issued the order will transmit a confirming order document to the Supplier within five workdays of the date the verbal order is given.**

**Supplier is prohibited from supplying materials or services pursuant to the resulting agreement that are not documented or authorized by a Delivery Order (DO) or Delivery Order Maximo (DOM) at the time of provision. The Supplier agrees that the County accepts no responsibility regarding this agreement for control or payment for materials or services not documented by a COUNTY Delivery Order (DO) or Delivery Order Maximo (DOM).**

The Supplier agrees to establish, monitor, and manage an effective agreement administration process that assures compliance with all requirements of the agreement. In particular, the respondent agrees that they shall not provide goods or services in excess of the executed agreement items, item quantity, item amount, or agreement amount without prior written authorization by agreement revision properly executed and issued by the County. Any items provided in excess of that stated in the agreement shall be at the Respondent's own risk. Respondents shall decline verbal requests to deliver items in excess of the agreement and shall report all such requests in writing to the COUNTY Procurement Department within one (1) workday of the request. The report shall include the name of the requesting individual and the nature of the request.

### **6. ACCEPTANCE OF SERVICES AND PRODUCTS:**

Acceptance of the goods and services shall be made by the County Department designated on the issued Order in accordance with this agreement. Acceptance is required prior to commencement of Payment terms.

### **7. COMPENSATION & PAYMENT:**

All pricing shall satisfy and conform to Pima County's Living Wage ordinance if applicable including required annual adjustments of the wage.

Supplier shall submit Request(s) for Payment/Invoices to the location and entity defined by the County's Order document.

All Invoice documents shall reference the County's Purchase Order (PO) Delivery Order (DO) or Delivery Order Maximo (DOM) or Contract number under which the services or products were ordered. **ALL** Invoice line items shall utilize the item description, precise unit price and unit of measure defined by the County's Order or Contract document. Invoices that include line items or unit prices that do not match those documented by the County's order or contract may be returned to the Supplier unprocessed for correction. **Supplier shall not accept orders, or provide services or products that cumulatively exceed the amount.**

Standard payment terms are net 30 from the date of valid invoice document and shall not commence until receipt of goods into payment system by the receiving Department and Supplier's Invoice is received and verified by County Financial Operations.

**OPTIONAL EARLY PAYMENT DISCOUNT TERM:** Pima County Administrative Procedure No. 22-35 section II.B.4 defines the County's practice regarding discounts for early payment. Supplier hereby offers the following discounts to those prices to be used for all orders issued pursuant to this agreement. 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 calendar days. Supplier shall submit valid invoice document consistent with the associated Purchase Order (PO), Delivery Order (DO) or Delivery Order Maximo (DOM) to County Finance Department at least seven (7) calendar days prior to the

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date on which the discounted payment is due. If desired, for any order issued pursuant with this agreement, the Supplier may offer early payment discounts that exceed this Standard Early Payment Discount.

Standard Early Payment Discount Percent: \_\_\_\_\_% if payment tendered within \_\_\_\_\_ Days as above

The Master Agreement (MA) or Purchase Order (PO) issued to accept Supplier offer will define the not to exceed amount of the agreement.

Unit Pricing may be negotiated and established as per all requirements of the agreement for items included in the scope of the agreement and for which unit pricing has not been previously defined provided that the item and unit price are offered in writing by the Supplier.

Unless otherwise stipulated by this agreement or the County's order, all pricing shall be *F.O.B. Destination & Freight Prepaid Not Billed ("F.O.B. Destination")*, delivered to and unloaded at the destination(s) defined by the delivery article of this agreement or accepted *Order* for services or products and all freight cost shall be included in the offered Unit Price.

Although State and City sales tax may not be fully or accurately defined on an order, they will be paid when they are DIRECTLY applicable to Pima County and invoiced as a separate line item; those taxes should not be included in the item unit price.

Price Warranty. Seller shall give Pima County benefit of any price reduction before actual time of shipment. Sellers agree that all pricing given includes all costs required to conduct aggressive and active cost control and reduction activities.

Price Escalation. It is agreed that all Unit Prices include compensation for the Seller to implement and actively conduct cost and price control activities. It is the intention of both parties that pricing shall remain firm during the initial year of the agreement after which the parties intend to consider price increases no more frequently than once per year. Seller shall submit a written request to COUNTY that includes supporting documents justifying requested increases at least 90 days prior to the desired implementation date; Seller shall provide evidence, cite sources, specific conditions and document how those conditions affect the cost of its performance, and specific efforts Seller 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 reserves the right to continue, accept or reject the price proposal, or terminate and re-solicit the contract.

Quantities referred to are estimated quantities. Pima County reserves the right to increase or decrease the quantities and amounts. No guarantee is made regarding actual orders issued for items or quantities during the term of the agreement. Pima County shall not be responsible for Supplier inventory or order commitment.

Unit Prices offered shall include all incidentals and associated costs required to comply with and satisfy all requirements referred to or included in this solicitation which includes the *Instructions to Bidders, Standard Terms and Conditions* and Offer Agreement. No payments will be made for items not included in the agreement.

Supplier will provide detailed documentation in support of payment requests which shall document, be consistent with and not exceed the COUNTY's order. Supplier shall bill COUNTY within one month after the date on which Supplier's right to payment accrues ("Payment Accrual Date"), which, unless this agreement specifically provides otherwise, is the date goods are delivered, services are performed, or costs are incurred. Invoices must assign each amount billed to an appropriate line item of the COUNTY's order and document each Payment Accrual Date. COUNTY may refuse to pay any amount billed in an untimely manner or which is not conforming to the COUNTY's order. County will refuse to pay any amount billed more than six months after the Payment Accrual Date, pursuant to A.R.S. § 11-622(C).

**UNIT PRICES (Net 30 day Payment Terms)**

<b>ITEM #</b>	<b>ITEM NAME</b>	<b>ESTIMATED ANNUAL QUANTITY</b>	<b>UOM</b>	<b>UNIT PRICE \$</b>	<b>EXTENDED AMOUNT \$</b>
	Items to include and satisfy all Solicitation & Offer Agreement requirements,				
1	Thermoplastic material, yellow, 50 LB. bag	650	Bag		
2	Thermoplastic material, white, 50 LB. bag	2,500	Bag		
	<b>FOB Destination/Unloaded; Cost of freight should be included in unit price.</b>			<b>TOTAL BID</b>	

Although taxes will be paid IF applicable do NOT include sales tax in unit price.

**OFFER AGREEMENT**

For those items not specifically listed and priced above that may be provided within the defined scope of this agreement the Seller shall provide the additional items at a similar discount off List Prices as given for those items specifically defined above.

**8. DELIVERY:**

As defined by the Standard Terms "On-Time" delivery is an essential part of the consideration to be given to the COUNTY under the agreement. Delivery will be made in accordance with the Instructions to Bidders, Standard Terms and Conditions and to the location referenced on the Delivery Order (DO) or Delivery Order Maximo (DOM).

**Delivery location:**

Pima County Department of Transportation (DOT), Bldg. 14 located at 1313 S. Mission Road, Tucson, AZ. 85713.

Delivery of products shall be made within 10 working days after receipt of order. All deliveries shall be between 6:00 AM and 3:00 PM Monday through Thursday, excluding holidays (No Friday Deliveries). All deliveries shall be FOB to

**9. TAXES, FEES, EXPENSES:**

Articles sold to Pima County are exempt from federal excise taxes. The County is subject to State and City sales tax. No separate charges for delivery, drayage, express, parcel post, packing, insurance, license fees, permits, costs of bonds, surcharges, or bid preparation, will be paid by Pima County, unless expressly included and itemized by the solicitation documents.

**10. OTHER DOCUMENTS**

Supplier and County in entering into this agreement have relied upon information provided or referenced by Pima County Solicitation No.162217 including the Invitation For Bids, Instructions to Bidders, Standard Terms and Conditions, Solicitation Addenda, Suppliers Bid Offer, documents submitted by Supplier or References to satisfy Supplier Minimum Qualifications and on other information and documents submitted by the Supplier in its' response to the County's Solicitation. These documents are hereby incorporated into and made a part of this Contract as if set forth in full herein, to the extent not inconsistent with the provisions of this contract.

**11. INSURANCE:**

The SUPPLIER'S insurance shall be primary insurance and non-contributory with respect to all other available sources. Supplier shall obtain and maintain at its own expense, during the entire term of this Contract the following type(s) and amounts of insurance:

- a) Commercial General Liability in the amount of \$1,000,000.00 combined single limit Bodily Injury and Property Damage. COUNTY is to be named as an additional insured for all operations performed within the scope of the Contract between COUNTY and SUPPLIER;
- b) Commercial or Business automobile liability coverage for owned, non-owned and hired vehicles used in the performance of this Contract with limits in the amount of \$1,000,000.00 combined single limit or \$1,000,000.00 Bodily Injury, \$1,000,000.00 Property Damage;
- c) If required by law, workers' compensation coverage including employees' liability coverage.

Supplier shall provide COUNTY with current executed certificates of insurance within two weeks from when the Notice of Award is issued by the County. All certificates of insurance shall guarantee the provision of thirty (30) days prior written notice to the COUNTY of cancellation, non-renewal or material change.

**12. PERFORMANCE BOND: NOT APPLICABLE**

**13. ACKNOWLEDGEMENT of SOLICITATION ADDENDA:**

Supplier acknowledges that the following solicitation addenda have been incorporated in their offer and this agreement:

Addendum #	Date	Addendum #	Date	Addendum #	Date

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**14. SMALL BUSINESS ENTERPRISE (SBE) CERTIFICATION:**

Is your firm SBE certified as defined by the solicitations 'Instruction To Bidders'? Yes  No  (Select one)  
If 'Yes', have you included your certification document? Yes  No  (Select one) NOTE: If the SBE Certification document is not submitted with your bid the SBE Preference cannot be applied

**15. BID/OFFER CERTIFICATION:**

**SUPPLIER LEGAL NAME:** \_\_\_\_\_

**BUSINESS ALSO KNOWN AS:** \_\_\_\_\_

**MAILING ADDRESS:** \_\_\_\_\_

**CITY/STATE/ZIP:** \_\_\_\_\_

**REMIT TO ADDRESS:** \_\_\_\_\_

**CITY/STATE/ZIP:** \_\_\_\_\_

**CONTACT PERSON NAME/TITLE:** \_\_\_\_\_

**PHONE:** \_\_\_\_\_ **FAX:** \_\_\_\_\_

**CONTACT PERSON EMAIL ADDRESS:** \_\_\_\_\_

**EMAIL ADDRESS TO WHICH ORDERS & CONTRACTS SHALL BE TRANSMITTED:**

\_\_\_\_\_

**CORPORATE HEADQUARTERS LOCATION:**

**STREET ADDRESS CITY, STATE, ZIP:** \_\_\_\_\_

By signing and submitting these Offer Agreement documents, the undersigned certifies that they are legally authorized to represent and bind the "Supplier" to legal agreements, that all information submitted is accurate and complete, that the firm has reviewed the Procurement website for solicitation addenda and incorporated to their offer, that the firm is qualified and willing to provide the items requested, and that the firm 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 may not be evaluated. Offeror's submission of a signed offer agreement shall constitute a firm offer and upon the issuance of a Master Agreement (MA) or Purchase Order (PO) document signed by the Pima County Procurement Director or authorized designate a binding contract is formed that shall require the Offeror to provide the services and materials described in this solicitation. The undersigned hereby offers to furnish the material or service in compliance with all terms, conditions, specifications, defined or referenced by the solicitation, which includes Pima County Standard Terms & Conditions, this Offer Agreement and other documents listed in this Offer Agreement's Other Documents article.

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

\_\_\_\_\_  
**PRINTED NAME & TITLE OF AUTHORIZED SUPPLIER REPRESENTATIVE EXECUTING OFFER**

**PHONE AND E-MAIL:** \_\_\_\_\_

**County Attorney Contract Approval "As to Form":**

## OFFER AGREEMENT

Solicitation #: 162217 Title: Thermoplastic Pavement Marking Material Page 6 of 21

### PIMA COUNTY STANDARD TERMS AND CONDITIONS (06/26/14)

#### **1. OPENING:**

Responses will be publicly opened and respondent's name, and if a Bid the amount, will be read on the date and at the location defined in the *Invitation for Bid (IFB)* or *Request For Proposals (RFP)*. Proposals shall be opened so as to avoid disclosure of the contents of any proposal to competing Offerors during the process of negotiation. All interested parties are invited to attend.

#### **2. EVALUATION:**

Responses shall be evaluated to determine which are most advantageous to Pima County (County) considering evaluation criteria, conformity to the specifications and other factors.

If an award is made, the County will enter into an agreement with the one or multiple respondent(s) that submitted the lowest responsive bid(s) that were determined responsible for supplying the required goods or services. Unless otherwise specified on the Bid/Offer document determination of the low/lowest bids will be made considering the total bid amount.

The 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 offered by vendor.

#### **3. AWARD NOTICE:**

A *Notice of Recommendation for Award* for IFB or RFP will be posted on the Procurement website and available for review by interested parties. A tabulation of responses will be maintained at the Procurement Department.

#### **4. AWARD:**

Awards shall be made by either the Procurement Director or the Board of Supervisors in accordance with the Pima County Procurement Code. COUNTY reserves the right to reject any or all offers, bids or proposals or to waive irregularities and informalities if it is deemed in the best interest of the COUNTY. Unless expressly agreed otherwise, resulting agreements are not exclusive, are for the sole convenience of COUNTY, and COUNTY reserves the right to obtain like goods or services from other sources.

#### **5. WAIVER:**

Each respondent, by submission of an offer, bid or proposal proclaims and agrees and does waive any and all claims for damages against COUNTY or its officers or employees when any of the rights reserved by COUNTY may be exercised.

#### **6. ACKNOWLEDGEMENT AND ACCEPTANCE:**

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

#### **7. INTERPRETATION and APPLICABLE LAW:**

The contract shall be interpreted, construed and given effect in all respects according to the laws of the State of Arizona. If any of Contractors' terms or conditions is not in agreement with County's terms and conditions as set forth herein, COUNTY's shall govern. This Agreement incorporates the complete agreement of the parties with respect to the subject matter of this Agreement. No oral agreement or other understanding shall in any way modify these terms and conditions.

#### **8. WARRANTY:**

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

#### **9. QUANTITY:**

The quantity of goods ordered shall not be exceeded or reduced without **written** permission in the form of a properly executed Master Agreement (MA), Purchase Order (PO) Delivery Order (DO) or Delivery Order Maximo (DOM) revision or amendment as required by COUNTY Procurement Code. All quantities are estimates and no guarantee regarding actual usage is provided.

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### **10. PACKING:**

No extra charges shall be made for packaging or packing material. Contractor shall be responsible for safe packaging conforming to carrier's requirements.

### **11. DELIVERY:**

On-time delivery of goods and services is an essential part of the consideration to be received by COUNTY.

A guaranteed delivery date, or interval period from order release date to delivery, must be given if requested by the Price offer document. Upon receipt of notification of delivery delay, COUNTY at its sole option and at no cost to the COUNTY may cancel the order or extend delivery times. Such extension of delivery times will not be valid unless extended in writing by an authorized representative of the COUNTY.

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

Contractor will not be held responsible for unforeseen delays caused by fires, strikes, acts of God, or other causes beyond Contractor's control, provided that Contractor provide immediate notice of delay.

### **12. SPECIFICATION CHANGES:**

COUNTY shall have 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, an acceptable adjustment shall be made and the order shall be modified in writing. Any agreement for adjustment must be made in writing. Nothing in this clause shall reduce Contractor's responsibility to proceed without delay in the delivery or performance of an order.

### **13. INSPECTION:**

All goods and services are subject to inspection and testing at place of manufacture, the destination, or both, by COUNTY. Goods failing to meet specifications of the order or contract shall be held at Contractor's risk and may be returned to Contractor with costs for transportation, unpacking, inspection, repacking, reshipping, restocking or other like expenses to be the responsibility of Contractor. In lieu of return of nonconforming supplies, COUNTY, at its sole discretion and without prejudice to COUNTY's rights, may waive any nonconformity, receive the delivery, and treat the defect(s) as a warranty item, but waiver of any condition shall not be considered a waiver of that condition for subsequent shipments or deliveries.

### **14. SHIPPING TERMS:**

Unless stated otherwise by the agreement documents, delivery terms are to be F.O.B. Destination & Freight Prepaid Not Billed ("F.O.B. Destination") are to be included in the Unit Price offered by Contractor and accepted by the COUNTY.

### **15. PAYMENT TERMS:**

Payment terms are net 30, unless otherwise specified by the agreement documents.

### **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 all specification requirements have been met.

### **17. RIGHTS AND REMEDIES OF PIMA COUNTY FOR DEFAULT:**

In the event any item furnished by the Contractor in the performance of the agreement should fail to conform to the specifications thereof, or to the sample submitted by the Contractor, COUNTY may reject same, and it shall thereupon become the duty of the 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 the Contractor fail, neglect, or refuse immediately to do so, COUNTY, shall have 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 the Contractor the difference between the price named in the Master Agreement or Purchase Order and actual cost to COUNTY.

In the event the Contractor shall fail 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 shall 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 Master Agreement, Purchase Order or associated orders, either in whole or in part, by reason of the default or breach by

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the Contractor, any loss or damage sustained by COUNTY in procuring any items which the Contractor agreed to supply shall be borne and paid for by the Contractor. The rights and remedies of COUNTY provided above shall not be 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, proclaims and agrees that no officer or employee of COUNTY or of any subdivision thereof has: 1) aided or assisted the 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) 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) any direct or indirect financial interest in the offer or resulting agreement. Additionally, during the conduct of business with COUNTY, the 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 at any time it shall be found that the awardee(s) has in presenting any offer(s) colluded with any other party or parties for the purpose of preventing any other offer being made, then the agreement so awarded shall be terminated and that person or entity shall be liable for all damages sustained by COUNTY.

### **19. COOPERATIVE USE OF RESULTING AGREEMENT:**

As allowed by law, the COUNTY has entered into cooperative procurement agreements that enable other Public Agencies to utilize procurement agreements developed by the COUNTY. The Contractor may be contacted by participating agencies and requested to provide services and products pursuant to the pricing, terms and conditions defined by the COUNTY Master Agreement, or Purchase Order. 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 agreement and required to satisfy particular Public Agency code or functional requirements and are within the intended scope of the solicitation and resulting agreement. Any such usage shall be in accordance with State, COUNTY and other Public Agency procurement rules, regulations and requirements and shall be transacted between the requesting party and Contractor. Contractor shall hold harmless COUNTY, its officers, employees, and agents from and against all liability, including without limitation payment and performance associated with such use. A list of agencies that are authorized to use COUNTY agreements can be viewed at the Procurement Department Internet home page: <http://www.pima.gov/procure> by selecting the link titled *Authorized Use of COUNTY Agreements*.

### **20. PATENT INDEMNITY:**

Contractor shall 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 Master Agreement, Purchase Order, and associated orders. Contractor may be required 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 shall 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 the Contractor, its agents, employees or anyone under its direction or control or on its behalf in connection with performance of the Master Agreement, Purchase Order or associated orders. 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 shall be in accordance 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 shall comply with all federal, state, and local laws, rules, regulations, standards and Executive Orders, without limitation. In the event any services provided under this contract require a license issued by the Arizona Registrar of Contractors (ROC), Contractor certifies that those services will be provided by a contractor licensed by ROC to perform those services in Arizona. The laws and regulations of the State of Arizona shall govern the rights, performance and disputes of and between the parties. Any action relating to this Contract shall be brought in a court of the State of Arizona in Pima County.

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

### **24. ASSIGNMENT:**

Contractor shall not assign its rights to the resultant agreement, in whole or in part, without prior written approval of the COUNTY. Approval may be withheld at the sole discretion of COUNTY, provided that such approval shall not be unreasonably withheld.

### **25. CONFLICT OF INTEREST:**

All agreements are subject to the provisions of A.R.S. § 38-511, the pertinent provisions of which are incorporated into and made part of all resultant Master Agreement or Purchase Orders as if set forth in full herein.

### **26. NON-DISCRIMINATION:**

CONTRACTOR agrees to comply with all provisions and requirements of Arizona Executive Order 2009-09 **including flow down of all provisions and requirements to any subcontractors**. Executive Order 2009-09 supersedes Executive order 99-4 and amends Executive order 75-5 and may be viewed and downloaded at the Governor of the State of Arizona's website [http://www.azgovernor.gov/dms/upload/EO\\_2009\\_09.pdf](http://www.azgovernor.gov/dms/upload/EO_2009_09.pdf) which is hereby incorporated into this contract as if set forth in full herein. During the performance of this contract, CONTRACTOR shall 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:**

Pursuant to the provisions of A.R.S. § 11-251, sub-section 42, this agreement may be canceled if for any reason the COUNTY Board of Supervisors does not appropriate funds for the stated purpose of maintaining any agreement. In the event of such cancellation, COUNTY shall have no further obligation, other than for services or goods that have already been received.

### **28. PUBLIC INFORMATION:**

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 information submitted in response to this solicitation, including, but not limited to, pricing, product specifications, work plans, and any supporting data becomes public information and upon request, is subject to release and/or review by the general public including competitors.

Any records submitted in response to this solicitation that Contractor reasonably believes constitute proprietary, trade secret or otherwise confidential information must be appropriately and prominently marked as CONFIDENTIAL by Contractor **prior** to the close of the solicitation.

Notwithstanding the above provisions, in the event records marked CONFIDENTIAL are requested for public release pursuant to A.R.S. § 39-121 et seq., COUNTY shall release records marked CONFIDENTIAL ten (10) business days after the date of notice to the Contractor of the request for release, unless Contractor has, within the ten day period, secured a protective order, injunctive relief or other appropriate order from a court of competent jurisdiction, enjoining the release of the records. For the purposes of this paragraph, the day of the request for release shall not be counted in the time calculation. Contractor shall be notified of any request for such release on the same day of the request for public release or as soon thereafter as practicable.

COUNTY shall not, under any circumstances, be responsible for securing a protective order or other relief enjoining the release of records marked CONFIDENTIAL, nor shall COUNTY be in any way financially responsible for any costs associated with securing such an order.

### **29. CUSTOM TOOLING, DOCUMENTATION AND TRANSITIONAL SUPPORT:**

Costs to develop all tooling and documentation, such as and not limited to dies, molds, jigs, fixtures, artwork, film, patterns, digital files, work instructions, drawings, etc. necessary to provide the contracted services or products and are unique to the services or products supplied to COUNTY are included in the agreed upon Unit Price unless specifically stated otherwise in the agreement. It is agreed that such tools and documentation are the property of COUNTY and shall be marked, as is practical, as the "Property of Pima County" and if requested by COUNTY a copy of the tooling and documentation shall be delivered to COUNTY within twenty days of acceptance by the COUNTY of the first article sample, or not later than ten days of termination of the agreement associated with their development, without additional cost to COUNTY. The Contractor also agrees to act in good faith to facilitate the transition of work to a subsequent Contractor if and as reasonably requested by COUNTY at no additional cost. Should exceptional circumstances be present that may justify an additional charge, the Contractor may submit said justification and proposed cost and negotiate an agreement acceptable to both Contractor and COUNTY, but Contractor may not withhold any requested

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tooling, document or support as defined above that would delay the orderly, efficient and prompt transition of work. Should conduct by the Contractor result in additional costs to the COUNTY the Contractor agrees to reimburse the COUNTY for said actual and incremental costs provided that the COUNTY had given the Contractor reasonable time to respond to the COUNTY's requests for support.

### **30. AMERICANS WITH DISABILITIES ACT:**

Contractor shall 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:**

Agreements resulting from this solicitation are non-exclusive and are for the sole convenience of Pima 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 filed in accordance with the Pima County Procurement Code, Section 11.20.010.

### **33. TERMINATION:**

COUNTY reserves the right to terminate any Master Agreement, Purchase Order, Delivery Order, Delivery Order Maximo or award, in whole or in part, at anytime, without penalty or recourse when in the best interests of the COUNTY, Upon receipt of written notice, Contractor shall immediately cease all work as directed by the notice, notify all sub-Contractor of the effective date of termination and take appropriate actions to minimize further costs to the COUNTY. In the event of termination under this paragraph, all documents, data, and reports prepared by the Contractor under the contract shall become the property of and be promptly delivered to the COUNTY. The Contractor shall be entitled to receive just and equitable compensation for work in progress, work completed and materials accepted before the effective date of the termination. The cost principles and procedures defined by A.A.C. R2-7-701 shall apply.

### **34. ORDER OF PRECEDENCE-CONFLICTING DOCUMENTS:**

In the event that there are inconsistencies between agreement documents, following is the order of precedence, superior to subordinate, that shall be applied to resolve the inconsistency: Master Agreement, Delivery Order or Delivery Order Maximo, Purchase Order, offer agreement or contract attached to a Master Agreement, Purchase Order, Delivery Order or Delivery Order Maximo ; standard terms and conditions; other solicitation documents.

### **35. INDEPENDENT CONTRACTOR:**

The status of the Contractor shall be that of an independent Contractor. Neither Contractor nor Contractor officer's agents or employees shall be considered an employee of COUNTY or be entitled to receive any employment-related fringe benefits under the COUNTY Merit System. Contractor shall be responsible for payment of all federal, state and local taxes associated with the compensation received pursuant to this Contract and shall indemnify and hold COUNTY harmless from any and all liability which COUNTY may incur because of Contractor's failure to pay such taxes. Contractor shall be solely responsible for program development and operation.

### **36. BOOKS AND RECORDS:**

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

### **37. COUNTERPARTS:**

The Master Agreement or Purchase Order awarded pursuant to this solicitation may be executed in any number of counterparts and each counterpart shall be deemed an original, and together such counterparts shall constitute one and the same instrument. For the purposes of the Master Agreement and Purchase Order, the signed offer of Respondent and the signed acceptance of COUNTY shall each be deemed an original and together shall constitute a binding Master Agreement, if all other requirements for execution have been met.

### **38. AUTHORITY TO CONTRACT:**

Contractor warrants its right and power to enter into the Master Agreement or Purchase Order. If any court or administrative agency determines that COUNTY does not have authority to enter into the Master Agreement or Purchase Order, COUNTY shall not be liable to Contractor or any third party by reason of such determination or by reason of the Master Agreement or Purchase order.

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### **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 Master Agreement, Purchase Order, Delivery Order or Delivery Order Maximo to be performed on the part of the other, or to take any action permitted as a result thereof, shall not be construed as 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 shall not be construed as an accord and satisfaction.

### **40. SUBCONTRACTOR:**

CONTRACTOR shall be 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 the CONTRACTOR is responsible for the acts and omissions of persons directly employed by it. Nothing in this contract shall create 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 found to be prohibited by law shall be ineffective to the extent of such prohibition without invalidating the remainder of this Contract.

### **42. LEGAL ARIZONA WORKERS ACT COMPLIANCE:**

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 shall further ensure that each subcontractor who performs any work for CONTRACTOR under this contract likewise complies with the State and Federal Immigration Laws.

COUNTY shall have 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, shall be deemed to be 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 shall be required to 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 shall 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 insure that SUBCONTRACTOR is in compliance with these requirements. Any breach of this paragraph by SUBCONTRACTOR will be deemed to be 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 shall be 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 shall be deemed excusable delay for which CONTRACTOR shall be entitled to an extension of time, but not costs.

### **43. CONTROL OF DATA PROVIDED BY PIMA COUNTY:**

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

**END OF PIMA COUNTY STANDARD TERMS AND CONDITIONS**

**Exhibit 'A'**

**Specifications**

SECTION 704

THERMOPLASTIC STRIPES AND MARKINGS

**704-1 DESCRIPTION**

**Description.** This Specification governs for the materials, composition, quality, sampling, and testing of thermoplastic and materials utilized in its application to the roadway surface.

**704-2 MATERIALS**

**704-2.01 General Requirements.**

- The thermoplastic reflectorized material shall consist of a mixture of binder, white or yellow pigment, glass spheres, filler, and other materials in granular form specifically compounded for pavement stripes and markings that is applied to the pavement in a molten state. Upon cooling to normal pavement temperature, this material shall produce an adherent reflectorized stripe or marking of specified thickness capable of resisting deformation. Certificates of Compliance conforming to the requirements found in Subsection 106-5 shall be submitted. Upon application to the pavement, the thermoplastic material shall be sufficiently tack-free to carry traffic; in not more than 2 minutes when the pavement surface temperature is 60°F, and in not more than 10 minutes when the pavement surface temperature is 130°F.

**704-2.02 Composition.** All thermoplastic material shall be free from; lead, chromium, cadmium, barium and other toxic metals.

The thermoplastic composition shall conform to the following requirements:

	<u>Percent by Weight</u>	
	<u>White</u>	<u>Yellow</u>
Binder	18-26	18-26
Titanium dioxide (Rutile)	10-15	-----
Reflective glass spheres	30-40	30-40
Calcium carbonate or equivalent filler	20-40	25-45
Yellow pigment	----	1.5 Min

The ingredients of the thermoplastic composition shall be thoroughly mixed and in a free flowing granular form. The material shall readily melt into a uniform mixture and be free from all skins, dirt, foreign objects or any other ingredient which would cause bleeding, staining or discoloration when applied to the bituminous and Portland cement concrete pavement. The thermoplastic shall be one of the following two types of binder composition: Hydrocarbon, consisting mainly of synthetic petroleum hydrocarbon resins with appropriate fillers and pigments. Alkyd, consisting mainly of maleic modified glycerol ester of tall oil resin for the binder.

**(A) Reflective Glass Beads.** In addition to incorporating glass beads in the thermoplastic mix, glass beads shall be applied to the surface of the molten material at a uniform rate of at least 7-1/2 pounds of glass beads per 100 square feet of line (0.5 kilogram per square meter) (300 feet (10 meters) of 4 inch (100 millimeter) stripe).

**(B) Filler.** The filler shall be a white calcium carbonate or equivalent filler with a compressive strength of at least 5,000 pounds per square inch (34 megapixals).

**(C) Titanium Dioxides.** Titanium dioxide shall conform to the requirements of ASTM D 476 for Type II (Rutile) The titanium dioxide content will be determined using ASTM Designations; D 5380 and E 1621. White thermoplastic must meet the Retroreflectivity requirement when applied with drop-on glass beads.

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**(D) Yellow Pigment.** Lead-Free (L/F) yellow thermoplastic Pigment shall contain proper amounts of yellow pigment and other materials to produce a yellow material that has a weather fast and heat stable yellow color which meets the; Yellow Color, Reflectance, Color Stability (Accelerated Weathering) and Retroreflectivity requirements as stated in the Manual of Uniform Traffic Control Devices. Other pigments may be added to achieve these color requirements. The L/F yellow thermoplastic material shall appear yellow during both daytime and nighttime conditions.

### 704-2.03 Physical Characteristics of the Composition.

**(A) General Requirements.** The thermoplastic material shall not exude fumes which are toxic or injurious when heated to the temperature range specified by the manufacturer for application. The material shall remain stable when held for 4 hours at this temperature, or when subjected to 4 re-heatings, not exceeding a total of 4 hours, after cooling to ambient temperature. The temperature viscosity characteristics of the plastic material shall remain constant throughout the re-heatings and shall show like characteristics from batch to batch. There shall be no obvious change in color of the thermoplastic material as a result of reheating, and the color of the material shall not vary from batch to batch.

**(B) Color.** The thermoplastic material, after heating for four hours  $\pm$  five minutes at  $218 \pm 2$  °C and cooled to  $25 \pm 2$  °C, shall meet the following:

- White: Daylight reflectance at 45 degrees – 0 degrees shall be 75 percent minimum.
  - The color shall match Federal Test Standard Number 595, Color Chip No. 17925.
- Yellow: Daylight reflectance at 45 degrees – 0 degrees shall be 45 percent minimum.
  - The color shall match Federal Test Standard Number 595, Color Chip No. 13538.

**(C) Retroreflectance.** The white and yellow thermoplastic materials shall have the following minimum retroreflectance values at 86.5 degrees illumination angle and 1.5 degrees observation angle as measured by a MiroLux 212 portable retroreflectometer 30 days after application to the roadway surface:

- Product Retroreflectance (Millicandelas)

White	Yellow
200	150

**(D) Water Absorption and Specific Gravity.** The thermoplastic material shall not exceed 0.5 percent by weight of retained water when tested in accordance with the requirements of ASTM D 570. The specific gravity of the material, as determined by Section 11 of AASHTO T 250, shall be between 1.85 and 2.3.

**(E) Bond Strength.** After heating the thermoplastic material for four hours  $\pm$  five minutes at  $218 \pm 2$  °C, the bond strength to Portland cement concrete shall be not less than 173 psi (1.2 megapascals). The bond strength shall be determined in accordance with the procedures specified in Section 7 of AASHTO T 250 (F) Cracking Resistance at Low Temperature. After heating the thermoplastic material for four hours  $\pm$  five minutes at  $218 \pm 2$  °C, applying to concrete blocks, and cooling to  $-9 \pm 2$  °C, the material shall show no cracks when observed from a distance exceeding 1 foot (300 millimeters). Testing for low temperature crack resistance shall be in accordance with the procedures specified in Section 8 of AASHTO T 250.

**(G) Impact Resistance.** After heating the thermoplastic material for four hours  $\pm$  five minutes at  $218 \pm 2$  °C, and forming test specimens, the impact resistance shall be not less than 1.13 joules when tested in accordance with Section 9 of AASHTO T 250

**(H) Softening Point.** After heating the thermoplastic material for four hours  $\pm$  five minutes at  $218 \pm 2$  °C and testing in accordance with ASTM D 36, the thermoplastic materials shall have a softening point of  $102 \pm 8$  °C.

**(I) Flowability.** After heating the thermoplastic material for four hours  $\pm$  five minutes at  $218 \pm 2$  °C and testing for flowability in accordance with Section 6 of AASHTO T 250, the white thermoplastic shall have a maximum percent residue of 18 and the yellow thermoplastic shall have maximum percent residue of 12.

**(J) Yellowness Index.** The white thermoplastic material shall not exceed a yellowness index 0.12 when tested in accordance with Section 4 of AASHTO T 250.

**(K) Flowability (Extended Heating).** After heating the thermoplastic material for eight hours  $\pm$  1/2 hours at  $218 \pm 2$  °C, with stirring the last six hours, and testing for flowability in accordance with Section 12 of AASHTO T 250, the thermoplastic shall have a maximum percent residue of 28.

**(L) Abrasion Resistance.** The abrasion resistance of the thermoplastic material shall be determined by forming a representative lot of the materials at a thickness of 1/8 inch (3 millimeters) on a 4 inch by 4 inch (100 by 100 millimeter) square monel panel 0.050 inch  $\pm$  0.0001 inch in thickness ( $1.27 \pm 0.02$  millimeters), on which a suitable primer has been previously applied, and subjecting it to 200 revolutions on a Taber Abraser at 25 °C, using H-22 calibrated wheels weighted to 1/2 pound (250 grams). The wearing surface shall be kept wet with distilled water throughout the test. The maximum loss thermoplastic material shall be 0.5 grams.

**(M) Flash Point.** The thermoplastic material shall have a flash point not less than 246 °C when tested in accordance with the requirements of ASTM D 92.

**(N) Storage Life.** The materials shall meet the requirements of this specification for a period of one year from the date of manufacture. The thermoplastic must also melt uniformly with no evidence of skeins or unmelted particles for this one year period. Any material which does not meet the above requirements, or which is no longer within this one year period at the time of application, shall be replaced by the contractor at no additional cost to the Department.

**(O) Primer Sealer.** Primer Sealers for use on Portland cement concrete or hot mix asphaltic concrete surfaces prior to application of the thermoplastic material shall be either as recommended by the thermoplastic material manufacturer or especially compounded for use with the specified thermoplastic material.

#### **704-2.04 Physical Requirements for Glass Beads.**

The term "glass bead" shall be synonymous with the term "glass sphere" as used herein. Inter-mix and drop on reflective glass beads shall conform to the requirements of Subsection 708-2.02, except as noted herein. The inter-mix beads shall conform to AASHTO M 247-81 (1986), type 1, and may be coated or uncoated as recommended by the manufacturer. If uncoated beads are used, the thermoplastic formulation shall be configured to minimize settling of the intermix beads when the material is heated and applied.

If recommended by the manufacturer, the drop-on beads shall have an adherence coating.

### **704-3 CONSTRUCTION REQUIREMENTS**

**704-3.01 Control of Alignment and Layout.** Traffic stripes shall be placed to the line established by the Engineer, which will consist of existing stripes or control points spaced at 200 feet (60 meters) on tangents and 50 feet (15 meters) on curves. All additional work necessary to establish satisfactory lines for stripes and all layout work required for pavement markings shall be performed by the contractor at his expense. Lines shall be established by the application of cat tracks or dribble lines, the use of laser guidance devices, or by a combination of these techniques. Cat tracking shall consist of stretching a rope on a straight line between control points on tangent alignment and on a true arc through control points on curved alignment and placing spots of paint along the rope. The spots shall be not more than 2 inches (50 millimeters) in width and not more than 5 feet (1.5 meters) apart on curves nor more than 10 feet (3 meters) apart on tangents. Dribble lines shall consist of marking the pavement with a thin line of paint using a striping machine or other suitable device. Dribble lines shall be on a straight line between control points on tangent alignment and on a true arc through control points on curved alignment. Paint for cat tracks and dribble lines shall be the same color as the traffic stripe for which they are placed. Laser guidance equipment shall be capable of maintaining the alignment of traffic stripes with an accuracy equivalent to, or better than, that obtainable through use of cat tracking or dribble lines, as determined by the Engineer.

#### **704-3.02 Equipment.**

The equipment used to install hot applied thermoplastic material shall be constructed to provide continuous uniform heating to temperatures exceeding 400° F (204 °C) while mixing and agitating the material. The conveying portion of the equipment, between the main material reservoir and the line dispensing device, shall be configured to prevent accumulation and clogging. All parts of the equipment which will come in contact with the material shall be constructed for easy accessibility for cleaning and maintenance. The equipment shall operate so that all mixing and conveying parts including the line dispensing device, will maintain the material at the plastic temperature. The use of pans, aprons or similar appliances which the dispenser overruns will not be permitted. The equipment shall provide for varying traffic marking applications widths. The applying equipment to be used on roadway installations shall consist of either truck-mounted units, motorized ride-on equipment, or manually pushed equipment, depending on the type of marking required. The truck-mounted or motorized ride-on units for center lines, lane lines, and edge lines shall consist of a mobile self-contained unit carrying its own material capable of operating at a minimum speed of five miles per hour (8 kilometers per hour) while applying striping. The hand applicator equipment shall be sufficiently maneuverable to install curved and

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straight lines, both longitudinally and transversely. The applying equipment shall be so constructed as to assure continuous uniformity in the dimensions of the stripe. The applicator shall provide a means for cleanly cutting off square stripe ends and shall provide a method of applying skip lines.

The equipment shall be constructed so as to provide varying widths of traffic markings. The application equipment shall be mobile and maneuverable to the extent that straight lines can be followed and normal curves can be made in a true arc. The equipment operator shall be located in such a position as to enable full visibility of the striping apparatus. A glass bead top dressing shall be applied to the completed thermoplastic stripe by an automatic glass bead dispenser attached to the striping machine in such a manner that the beads are applied to the molten thermoplastic material immediately after it has been applied. The bead dispenser shall utilize pressure type spray guns which will embed the beads into the stripe surface to at least 1/2 the bead diameter. The bead dispenser shall be equipped with an automatic cut-off synchronized with the cut-off of the thermoplastic material. A special kettle shall be provided for uniformly melting and heating the thermoplastic material. The kettle must be equipped with an automatic thermostat control device and material thermometer for positive temperature control to prevent overheating or under heating of the material. The heating kettle and application equipment shall meet the requirements of the National Fire Underwriters and the National Fire Protection Association and the state and local authorities. If screed or extrusion application or thermoplastic is allowed by the Engineer for short applications, the screed/extrusion application method shall be utilized wherein one side of the shaping die is the pavement and the other three sides are contained by equipment suitable for heating or controlling the flow of material. The equipment utilized shall form an extruded line which shall be uniform in shape having clear and sharp dimensions. For handliner applications, a gravity bead dispenser may be allowed by the engineer if it properly gauges and dispenses the correct amount of glass spheres.

### **704-3.03 Application.**

The contractor shall remove all dirt, dust, grease, oil or other detrimental material from the road surface prior to application of the thermoplastic material. The method of surface cleaning is subject to approval by the Engineer and shall include sandblasting, sweeping, and the use of high-pressured abrasive air spray.

When thermoplastic striping, symbols or legends are to be applied to new Portland cement concrete pavement, any curing compound present shall be removed by means of a high-pressured water jet. On both old and new Portland cement concrete pavement a primer-sealer, as recommended by the thermoplastic manufacturer, shall be applied prior to placing the thermoplastic material to ensure a satisfactory bond. The primer shall be free of solvent and water prior to the thermoplastic application. This work shall be considered incidental to the application of the thermoplastic stripes and symbols.

Thermoplastic shall not be applied if moisture is present on the road surface. The following tests may be conducted to determine if moisture is present. Method 1 or 2 can be used to test for moisture in pavement prior to installing thermoplastic; however, Method 2 is specific for thermoplastic.

Method 1: Tape an 18-inch square sheet of thin plastic to the road surface, being careful to seal all the edges. After 20 minutes, examine the bottom of the sheet and the road surface. If moisture is present, do not apply thermoplastic. Wait from 30 minutes to an hour and repeat the test until there is no moisture on the road surface or on the underside of the plastic.

Method 2: Securely tape tar paper to the road surface. Apply marking material to the tar paper.

After 1 minute, carefully remove tar paper from road surface wearing work gloves. Examine the underside of the tar paper. If moisture is present do not apply thermoplastic. Retest after sufficient drying time.

New thermoplastic applications should successfully bond to worn existing thermoplastic lines or preform thermoplastic markings. Do not apply thermoplastic over existing tape markings.

When thermoplastic striping, symbols or legends are to be applied the air and road surface temperature at the time of application shall not be less than 50° F (10 °C) and the pavement surface shall be absolutely dry.

To insure optimum adhesion, the thermoplastic material shall be installed in a molded state at a temperature range of 400° F to 440° F (204 °C to 227 °C). The thermoplastic striping and markings shall be a minimum of 0.060 inches (1.5 millimeter) thick in all applications. Random spot checks of the thermoplastic thickness will be made by the Engineer to ensure conformance with the above criteria. A suggested spot check procedure is to place a small strip of metal with a known thickness immediately ahead of the striping apparatus. After striping, remove the sample and using a suitable measuring device, i.e., micrometer, determine the thickness of the marking. Longitudinal lines shall be offset at least 1 foot (300 millimeters) clear from construction joints unless directed otherwise by the Engineer. It shall be the responsibility of the contractor to provide for adequate disposal of all empty material containers. The finished thermoplastic line shall have well-defined edges and be free of waviness. Lateral deviation of the thermoplastic stripe shall not exceed 1 inch (25 millimeters) in 100 feet (30 meter). The longitudinal deviation of a painted segment and gap shall not vary more than 6

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inches (150 millimeters) in a 40 foot (12 meters) cycle. The actual width of stripe shall be within the limits specified in the following table, according to the width of stripe called for on the plans:

<u>Plan Width</u>	<u>Actual Width</u>
4 inches (100 mm)	4 to 4 1/2 inches (100 to 115 mm)
8 inches (200 mm)	8 to 9 inches (200 to 225 mm)
Over 8 inches (200 mm)	± 1 inch (± 25 mm)

After application and sufficient drying time, the thermoplastic marking shall show no appreciable deformation or discoloration under local traffic conditions in an air and/or road temperature ranging from -10 degrees to +180 degrees F (-23 to +82 °C). The drying time shall be defined as the minimum elapsed time, after application, when the thermoplastic pavement markings shall have and shall retain the characteristics required herein and after which normal traffic will leave no impression or imprint on the newly applied marking. The thermoplastic material shall set to bear traffic in not more than 2 minutes when the road surface temperature is approximately 50° F (10 °C), and not more than 10 minutes at a road temperature of 90° F (32 °C).

### 704-5 BASIS OF PAYMENT

The accepted quantities of thermoplastic pavement markings of the type specified in the bidding schedule, measured as provided above, will be paid for at the contract unit price, complete in place, including pavement surface preparation and glass beads. Each pavement symbol and each legend, as shown on the plans, will be considered a unit.

The cost for cleaning the surface shall be considered part of the cost for applying thermoplastic striping and no separate measurement or payment will be made for this work.

No measurement shall be made for removal of curing compound from new Portland cement concrete pavement

### 704-4 METHOD OF MEASUREMENT

Thermoplastic pavement stripes will be measured by the linear foot (meter) along the center line of the pavement stripe and will be based on a 4 inch (100 millimeter) wide stripe. Measurement for striping with a plan width greater or less than the basic 4 inches (100 millimeters) as shown on the plans or directed by the Engineer will be made by the following method: Plan Width of Striping (Inches) (millimeters) x Linear Feet (meters) 4 Inches (100 millimeters) Thermoplastic pavement symbols and legends will be measured by each unit applied.

Exhibit 'B'

Packaging

**Description.** This Specification governs for the materials of thermoplastic and materials utilized in its application to the roadway surface.

**Block Form:**

The thermoplastic material shall be packaged in suitable containers to which it will not adhere nor interact during shipment and storage. The blocks of cast thermoplastic material shall be approximately 900 by 300 by 50 mm and shall weigh approximately 22.7 kg. The containers shall be palletized as specified in the contract or purchase order.

**Granular Form:**

The thermoplastic material shall be packaged in melt able bags which are compatible with the thermoplastic and which weigh approximately 50 Lbs. when filled. The containers must have sufficient strength and be properly sealed to prevent breakage and leakage during normal handling. The bags shall be shrink-wrapped to reduce shifting of the bags on the pallet and shall be palletized as specified in the contract or purchase order.

**Palletizing:**

Each pallet shall be loaded with forty (40) bags - (one ton). Bags shall be stacked on the pallets to a nominally flat top surface to facilitate handling and storage. An appropriately sized pallet pad made of chipboard (minimum thickness = 0.022 inch) shall be placed on the pallet before stacking of bags of thermoplastic onto the pallet.

**Broken bags:**

F.O.B. destination shall be returned to the supplier at the supplier's expense. If the supplier does not elect to have the broken bags of thermoplastic returned, it may elect to arrange other disposal at the supplier's expense. In any case, no payment shall be made to the supplier for any material arriving F.O.B. destination in broken bags. In addition, the supplier is required to replace the quantity of order arriving F.O.B. destination in broken bags within fourteen (14) days of notification.

**Markings:** Each individual unit/container of product shall be labeled. This label shall include: color, type of binder, manufacturer's name and address, date of manufacture and batch number. Additionally, each bag shall be labeled with the production lot, bag weight, safety information, temperature to be heated and recommended shelf life. Lead-free yellow materials shall be marked "Lead-Free". All markings on containers shall be legible and permanent. Markings shall not smear or rub-off container. Containers failing to meet marking requirements will not be accepted. The containers and labeling shall meet all applicable US Department of Transportation and Interstate Commerce Commission regulations. Concerning the content, each container shall be labeled with such warnings or precautions as are required by; Local, State and Federal laws and requirements.

**NOTES**

**Certificates of Compliance:** The manufacturer of thermoplastic materials shall furnish the Engineer with a Certificate of Compliance. The Certificate shall also include a list, by title and section; of all applicable State and Federal packaging and labeling laws and a statement that all requirements have been met. Certificates of Compliance shall be sent along with each delivery of thermoplastic and also with samples sent to the Transportation Laboratory for testing.

**Material Safety Data Sheets:** The manufacturer shall provide Material Safety Data Sheets (MSDS's) with each delivery of thermoplastic. These MSDS's shall include health hazard information on the material when it is heated to application temperature (425°F).

# Exhibit 'C'

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## Standard Specification for

# White and Yellow Reflective Thermoplastic Striping Material (Solid Form)



AASHTO Designation: M 249-08

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### 1. SCOPE

- 1.1. This specification covers a reflectorized thermoplastic pavement striping material that is applied to the road surface in a molten state by mechanical means with surface application of glass beads at a rate specified by the purchaser. Upon cooling to normal pavement temperature, it produces an adherent reflectorized stripe of specified thickness and width capable of resisting deformation by traffic.
- 1.2. The values stated in SI units are to be regarded as the standard.

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### 2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
- M 247, Glass Beads Used in Traffic Paints
  - T 250, Thermoplastic Traffic Line Material
- 2.2. *ASTM Standard:*
- D 36, Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)
- 2.3. *Federal Standards:*
- Fed. Std. No. 141, Paint, Varnish, Lacquer, and Related Materials: Methods of Inspection, Sampling and Testing
  - Fed. Std. No. 595b, Colors

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### 3. MATERIALS

- 3.1. The thermoplastic material shall be homogeneously composed of pigment, filler, resins, and glass reflectorizing spheres.
- 3.1.1. The thermoplastic material shall be available in both white and yellow.
- 3.1.2. The resin shall be alkyd or hydrocarbon as specified by the purchaser.
- 3.1.3. The vendor shall have the option of formulating the material according to his own specifications. However, the physical and chemical properties contained in this specification shall apply regardless of the type of formulation used. The material, upon heating to application temperature, shall not exude fumes that are toxic, or injurious to persons or property. The pigment

beads and filler shall be well dispersed in the resin. The material shall be free from all skins, dirt, and foreign objects.

3.1.4. *Glass Beads (Pre-Mix)*—The beads shall be uncoated and conform to AASHTO M 247, Type I.

3.1.5. Yellow pigment shall be lead-free.

**4. REQUIREMENTS**

4.1. *Specific Gravity*—The specific gravity of the white and yellow thermoplastic traffic line material shall not exceed 2.15.

4.2. *Composition*—The pigment, beads, and filler shall be uniformly dispersed in the resin. The material shall be free from all skins, dirt, and foreign objects and shall comply with requirements according to Table 1.

**Table 1**—Composition

Component	White	Yellow
Binder	18.0 min	18.0 min
Glass beads	30–40	30–40
Titanium dioxide	10.0 min	—
Calcium carbonate and inert fillers	42.0 max	See Note 1.
Yellow pigments	—	—

**Note 1**—Amount of yellow pigment, calcium carbonate, and inert fillers shall be at the option of the manufacturer, providing all other requirements of this specification are met.

4.2.1. The material shall be provided in either granular or block form as specified by the purchaser.

4.3. *Physical Characteristics:*

4.3.1. *Color*—The thermoplastic material after heating for  $240 \pm 5$  minutes at  $218 \pm 2^\circ\text{C}$  ( $425 \pm 3^\circ\text{F}$ ) and cooled to  $25 \pm 2^\circ\text{C}$  ( $77 \pm 3^\circ\text{F}$ ) shall meet the following:

*White:* Daylight reflectance at 45 degrees–0 degrees—75 percent minimum. For highway use the color shall match Federal Test Standard Number 595b, Color 17886.

*Yellow:* Daylight reflectance at 45 degrees–0 degrees—45 percent minimum.

(a) For highway use, the color shall match Federal Test Standard Number 595b—Color 13538.

(b) For airport use, the color shall comply with the requirements established by the FAA. The chromaticity and luminance factors shall be within the limits in Table 2 when determined under standard conditions:

- (a) angle of illumination, 45 degrees;
- (b) direction of view, perpendicular to surface; and
- (c) illuminant, CIE standard illuminant D65.

**Note 2**—The chromaticity and luminance factors of ordinary colors and colors of retro-reflecting materials shall be determined under the following standard conditions:

- (a) angle of illumination: 45 degrees;
- (b) direction of view: perpendicular to surface; and
- (c) illuminant: CIE standard illuminant D65.

**Table 2**—CIE Equations

Yellow	
Orange boundary	$y = 0.130 + 0.636x$
White boundary	$y = 0.910 - x$
Green boundary	$y = 1.35x - 0.093$
Luminance factor	$\beta = 0.27$ (mm)
White	
Purple boundary	$y = x$
Blue boundary	$y = 0.610 - x$
Green boundary	$y = 0.040 + x$
Yellow boundary	$y = 0.710 - x$
Luminance factor	$\beta = 0.35$ (mm)

- 4.3.2. *Drying Time*—When applied at a temperature range of  $211 \pm 7^\circ\text{C}$  ( $412.5 \pm 12.5^\circ\text{F}$ ) and thickness of 3.2 to 4.8 mm ( $1/8$  to  $3/16$  in.), the material shall set to bear traffic in not more than two minutes when the air temperature is  $10 \pm 2^\circ\text{C}$  ( $50 \pm 3^\circ\text{F}$ ) and not more than 10 minutes when the air temperature is  $32 \pm 2^\circ\text{C}$  ( $90 \pm 3^\circ\text{F}$ ).
- 4.3.3. *Cracking Resistance at Low Temperature*—After heating the thermoplastic material for  $240 \pm 5$  minutes at  $218 \pm 2^\circ\text{C}$  ( $425 \pm 3^\circ\text{F}$ ), applying to concrete blocks, and cooling  $-9.4 \pm 1.7^\circ\text{C}$  ( $15 \pm 3^\circ\text{F}$ ), the material shall show no cracks.
- 4.3.4. *Impact Resistance*—After heating the thermoplastic material for  $240 \pm 5$  minutes at  $218 \pm 2^\circ\text{C}$  ( $425 \pm 3^\circ\text{F}$ ) and forming test specimens, the impact resistance shall be a minimum of 1.13J (10 in.-lb).
- 4.3.5. *Softening Point*—After heating the thermoplastic material for  $240 \pm 5$  minutes at  $218 \pm 2^\circ\text{C}$  ( $425 \pm 3^\circ\text{F}$ ) and testing in accordance with ASTM D 36 the materials shall have a softening point of  $102.5 \pm 9.5^\circ\text{C}$  ( $215 \pm 15^\circ\text{F}$ ).
- 4.3.6. *Flowability*—After heating the thermoplastic material for  $240 \pm 5$  minutes at  $218 \pm 2^\circ\text{C}$  ( $425 \pm 3^\circ\text{F}$ ) and testing for flowability, the white thermoplastic shall have a maximum percent residue of 18 and the yellow thermoplastic shall have a maximum percent residue of 21.
- 4.3.7. *Yellowness Index*—The white thermoplastic material shall not exceed a yellowness index of 0.12.
- 4.3.8. *Flowability—Extended Heating*—After heating the thermoplastic material  $8.0 \pm 0.5$  hours at  $218 \pm 2^\circ\text{C}$  ( $425 \pm 3^\circ\text{F}$ ), with stirring the last six hours, and tested for flowability, the thermoplastic shall have a maximum percent residue of 28.
- 4.4. *Storage Life*—The material shall meet the requirements of this specification for a period of one year. The thermoplastic must also melt uniformly with no evidence of skins or unmelted particles for this one year time period. Any material not meeting the above requirements shall be replaced by the manufacturer.

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**5. APPLICATION PROPERTIES**

- 5.1. The thermoplastic material shall be capable of being applied by spraying, screed extrusion, or ribbon extrusion, as specified by the purchaser, at temperatures of  $211 \pm 7^\circ\text{C}$  ( $412 \pm 12.5^\circ\text{F}$ ) from approved equipment to produce a line 3.2 to 4.8 mm ( $\frac{1}{8}$  to  $\frac{3}{16}$  in.) thick which shall be continuous and uniform in shape having clear and sharp dimensions, particularly when extruded.
- 5.2. The material shall not exude fumes that are toxic, obnoxious, or injurious to persons or property when it is heated during applications.
- 5.3. The application of additional surface dressing glass beads shall be by means of a pressurized bead dispenser or by drop-on methods at a rate specified by the purchaser and agreed upon by the applicator.

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**6. PACKAGING AND MARKING**

- 6.1. The thermoplastic material shall be packaged in suitable containers to which it will not adhere during shipment and storage.
- 6.1.1. In granular form, it shall be in white or yellow plastic bags of a suitable size to contain approximately 23 kg (50 lb) and shall be made of a material that when introduced into the mix hopper of the application equipment, it will become a part of the mix without any adverse effect to the performance of the thermoplastic material.
- 6.1.2. In block form, blocks of cast thermoplastic material shall be approximately 300 by 915 by 51 mm (12 by 36 by 2 in.) and shall have a mass of approximately 23 kg (50 lb).
- 6.1.3. Each container label shall designate the color, manufacturer's name, batch number, and date of manufacture. Each batch manufactured shall have its own separate number. The label shall specify that the material shall be heated to  $211 \pm 7^\circ\text{C}$  ( $412 \pm 12.5^\circ\text{F}$ ) during application.
- 6.2. The contractor shall assume all cost resulting from the use of patented materials, equipment, devices, or processes used on or incorporated in the work, agrees to indemnify and save harmless the purchaser and his duly authorized representatives from all suits at law, or action of every nature for or on account of the use of any patented materials, equipment, devices, or processes.

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**7. SAMPLING**

- 7.1. The minimum size batch of thermoplastic traffic striping material sampled and tested shall not be less than 1360 kg (3000 lb) unless the total order is less than this amount. Any manufacturer not familiar with the technique of making this material should consult the purchaser. A small trial batch should be made prior to making the thermoplastic traffic striping material in large quantities to make certain the finished product will comply with all the requirements of this specification.

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**8. TESTING**

- 8.1. The material shall be tested in accordance with T 250 or with the appropriate method in Federal Standard No. 141 or ASTM designation.