



CENTRALBIDDING
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**5000145596 TWO (2) YEAR CONTRACT FOR A SUPPLY OF 3M
PAVEMENT MARKING TAPE FOR THE JEFFERSON PARISH
DEPARTMENT OF TRAFFIC ENGINEERING**
Jefferson Parish Government

Project documents obtained from www.CentralBidding.com

14-Jun-2024 09:53:04 AM



Bid Number 50-00145596

**TWO (2) YEAR CONTRACT FOR A SUPPLY OF 3M PAVEMENT MARKING
TAPE FOR THE JEFFERSON PARISH DEPARTMENT OF ENGINEERING**

BID DUE: July 9, 2024 AT 2:00 PM

ATTENTION VENDORS!!!

Please review all pages and respond accordingly, complying with all provisions in the technical specifications and Jefferson Parish Instructions for Bidders and General Terms and Conditions. All bids must be received on the Purchasing Department's eProcurement site, www.jeffparishbids.net, by the bid due date and time. Late bids will not be accepted.

**Jefferson Parish Purchasing Department
200 Derbigny Street
General Government Building, Suite 4400
Gretna, LA 70053
Purchasing Specialist: Ruby Tran
Email: ruby.tran@jeffparish.net
Phone: 504-364-2687**

**JEFFERSON PARISH DEPARTMENT OF ENGINEERING
TRAFFIC ENGINEERING DIVISION**

**Specifications for Pavement Marking Tape - Patterned Pavement Marking Tape for Intersections and
Durable, Abrasion-Resistant, Retroreflective Raised Pavement Markers**

MATERIAL ONLY

Potential vendors may be required to provide contact information for municipalities where their material has been used successfully on roadways in similar environmental conditions prior to acceptance of low bid.

PAVEMENT MARKING TAPE – PATTERNED PAVEMENT MARKING TAPE FOR INTERSECTIONS

Description: This specification describes Pavement Marking Tape Series 270 ES retroreflective patterned polymer pavement marking that can be used as an inlay marking on new asphalt or as an overlay marking on asphalt and concrete pavement surfaces in good condition. Series 270 ES tape shall offer “Extended Season” applications with pressure sensitive adhesive (PSA) package on the bottom surface. Series 270 ES shall not require surface preparation adhesive prior to application.

Materials:

Series A270 ES: Unlined. Used for long lines, edge lines, channelizing lines, gore markings, stop bars and crosswalks.

Series L270 ES: Lined. Used to cut symbols and legends.

Series SMS-L270 ES: Lined. Precut symbols and legends.

Properties:

A. Product Features:

- Durable, conformable to pavement and retroreflective
- Embedded net provides increased tear resistance
- Pressure sensitive adhesive (PSA) on bottom surface
- No surface preparation adhesive required when applied within standard tape application season
- Retroreflective layer of glass beads bonded in a highly durable polyurethane topcoat
- Manufactured without the use of heavy metals, lead chromate pigments or other similar, lead containing chemicals
- Nominal thickness of 0.065 in. (1.6 mm) at pattern heights
- White: 270 ES
- Yellow: 271 ES

B. Reflectance

Series 270 ES tape shall have the following initial minimum retroreflectance values when measured in accordance with ASTM-D4061 and ASTM 4505. The photometric quality to be measured is coefficient of retroreflected luminance (RL) and shall be expressed as:

Bid # 50-00145596 - Specifications

English RL: millicandelas per square foot per footcandle [(mcd • ft-2) • fc-1] or equivalently as:

Metric RL: millicandelas per square meter per lux [(mcd • m-2) • lx-1]

White Yellow

Entrance Angle 88.76° 88.76°

Observation Angle 1.05° 1.05°

Retroreflected 300 250

Luminance*

RL [(mcd • ft-2) • fc-1]

*The quantity of retroreflected luminance (RL) “relates to the way the effective retroreflective surface is focused on the retina of the human eye and to the visual effect thereby produced. It is recommended for describing the performance of highway signs and striping, or large vehicular markings which are commonly viewed as discernible surface areas.” Federal Test Method Standard 370, 3.1.2, Note 6, March 1, 1977.

C. Color

The preformed markings consist of white or yellow films with pigments selected and blended to conform to standard highway colors.

D. Skid Resistance

The patterned surface of the retroreflective pliant polymer shall provide an initial minimum skid resistance value of 45 BPN when tested according to ASTM E 303 except values will be taken in one direction and at 45° angle from that direction. These two values will then be averaged to find the skid resistance of the patterned surface.

E. Patchability

Heavy traffic may cause wear and damage. New materials shall be easily installed in these areas with minimal surface preparation by following the manufacturer’s recommendations.

PAYMENT: Reflectorized thermoplastic pavement striping material will be paid for at the contract unit price, under:

ITEM NO. PAY ITEM PAY UNIT

0010 Four Inch White 270 ES Package

0020 Eight Inch White 270 ES Package

0030 Twelve Inch White 270 ES Package

0040 Four Inch Yellow 271 ES Package

0050 Twelve Inch Yellow 271 ES Package

DURABLE, ABRASION-RESISTANT, RETROREFLECTIVE RAISED PAVEMENT MARKERS

DESCRIPTION: This specification describes durable, abrasion-resistant, retroreflective raised pavement markers designed for installation on asphalt and portland cement concrete road surfaces. The markers shall be designed to provide highly effective, long-life nighttime visibility.

MATERIALS: The marker shall be produced from an engineering polymer selected for superior impact resistance and weatherability. The color of the marker body shall be either neutral white or as specified. The marker shall incorporate an abrasion-resistant, retroreflective element designed to provide long-lasting nighttime visibility. These markers are intended for application directly onto asphalt or Portland concrete pavement surfaces and shall be compatible with commercially available bitumen or epoxy resin adhesives designed for use with raised pavement markers and as recommended by the marker manufacturer. All other adhesives must be tested by the user to determine suitability. The markers shall be durable, impact and abrasion-resistant, retroreflective raised pavement markers designed for use with longitudinal and gore markings on new and existing roads in non-snow plow regions.

The marker shall be installed by use of a non-toxic, zero V.O.C., preformed thermoplastic adhesive Bundy pad designed to adhere raised pavement markers to the road surface when heated with a torch. (5" x 5", 125-mil thick squares)

The marker shall meet the following specified requirements:

The marker body shall be produced in neutral white or as specified. The color of the retroreflective element shall be white, yellow, red, green or blue as specified.

Dimensions: The typical dimensions of the marker shall be:

Height: 0.625 ± 0.050 in. (15.88 ± 1.27 mm)

Width: 4.00 ± 0.50 in. (101.6 ± 12.7 mm)

Length: 3.50 ± 0.50 in. (89.2 ± 12.7 mm)

The white/red, and yellow/amber markers shall have initial minimum retroreflectance values specified as the product of the values in Table 1 when measured in accordance with ASTM E809. The photometric quantity to be measured is the coefficient of retroreflected luminous intensity (RI), expressed as millicandelas per lux (mcd/lx). One candela per lux equals 10.76 candelas per foot-candle.

Table 1: Minimum RI Values

Entrance angle β_1 ($\beta_1 = 0^\circ$)	0°		$\pm 20^\circ$	
Observation angle	$.2^\circ$		$.2^\circ$	
Color	Minimum R_1 (mcd/lx)	Minimum R_1 (cd/ftcd)	Minimum R_1 (mcd/lx)	Minimum R_1 (cd/ftcd)
White	279	3.00	112	1.20
Yellow/Amber	167	1.80	67	0.72
Red	70	0.75	28	0.30
Blue	26	0.28	10	0.11
Green	93	1.00	37	0.40

The markers shall have initial minimum retroreflectance values specified as the product of the values in **Table 2 and Table 3** when measured in accordance with ASTM E809. In **Table 2**, the angles referenced correspond to the entrance, rotation and observation geometry for a driver in a standard vehicle with pavement markers placed on a lane line to the left of the vehicle. The measured value at each simulated distance is the sum of the marker retroreflection from the incident illumination of the left and right headlights. Test set up and measurement geometry is illustrated in **Figure 1**.

Table 2: R_1 "Driver Geometry"

Simulated Distance			Observation Angle (α)	Rotation Angle (ϵ)	Entrance Angle (β)		Minimum R_1 (mcd/lux)	Typical R_1 (mcd/lux)
Feet	Meters	Headlight	(degrees)	(degrees)	β_1	β_2	left + right	left + right
100	30	Left	0.95	19	-2.0	-1.6	40	80
		Right	2.91	-72	4.6	-2.9		
300	91	Left	0.35	24	-0.7	-0.5	350	500
		Right	0.90	-69	1.4	-1.0		
500	152	Left	0.22	24	-0.4	-0.3	600	1000
		Right	0.53	-68	0.8	-0.6		

Note: In laboratory testing Entrance Angles β_1 and β_2 are set to equal 0° and Left/Right Rotation Angles ϵ are set to $20^\circ/-70^\circ$ as an approximation with little loss of accuracy.

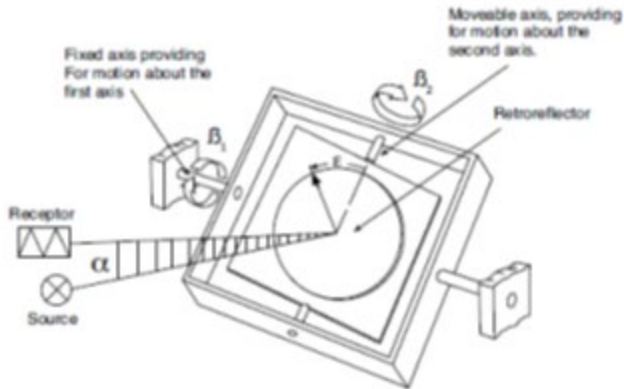


Figure 1: Driver Geometry (CIE Notation)

Table 3:
Color Multiplying Factors

Color	Multiplying Factor
White	1
Yellow/Amber	0.6
Red	0.25
Blue	0.1
Green	0.33

The retroreflected color of the markers shall lie within the respective retroreflected color gamut coordinates, plotted on the 1931 CIE Chromaticity (x,y) diagram, described in Table 4 and Figure 2 when tested in accordance with ASTM E811 using CIE Illuminant Source A and viewing conditions of 0.2° observation angle, 0° entrance angle. The source and receptor angular apertures are each 6 minutes of arc.

Table 4: Retroreflected Color Gamut Coordinates

Point Number	White		Yellow		Red		Blue		Green	
	x	y	x	y	x	y	x	y	x	y
1	0.310	0.348	0.545	0.424	0.650	0.330	0.039	0.320	0.009	0.733
2	0.453	0.440	0.599	0.439	0.668	0.330	0.160	0.320	0.288	0.520
3	0.500	0.440	0.609	0.390	0.734	0.265	0.160	0.240	0.209	0.395
4	0.500	0.380	0.597	0.390	0.721	0.259	0.183	0.218	0.012	0.494
5	0.440	0.380	—	—	—	—	0.088	0.142	—	—
6	0.310	0.283	—	—	—	—	—	—	—	—

If two points lie on the spectrum locus line, they must not be connected by a straight line but rather should, in this case, be joined by the boundary of the spectrum locus.

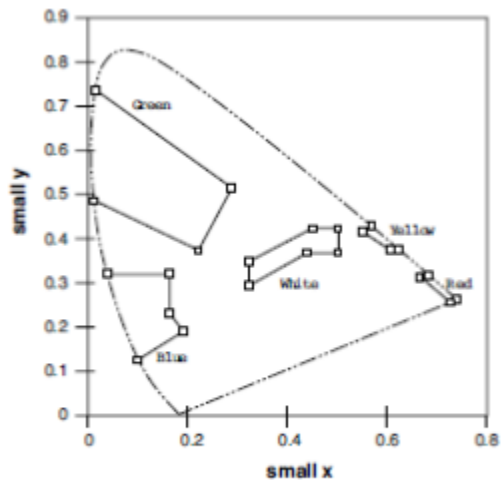


Figure 2: CIE 1931 Chromaticity Chart

The coefficient of retroreflected luminous intensity of the markers is measured after subjecting the entire lens surface to the test described in ASTM D 4280 section 9.5 using a sand drop apparatus. After the exposure described above, retroreflected values shall not be less than 0.5 times the values listed in Table #1.

The marker shall comply with the initial minimum brightness requirements as specified in **Table 1** and the product of the values in **Tables 2 and 3** after conditioning for 12 hours at $145^{\circ}\text{F} \pm 5^{\circ}\text{F}$ ($62.7^{\circ}\text{C} \pm 2.5^{\circ}\text{C}$).

The marker body shall display no cracking or breakage when tested according to ASTM D2444 Tup A, using a 1000 gm weight from a height of 1 meter. The marker shall be positioned in such a way that the Tup strikes the top of the marker. The marker lens shall display no cracking outside the impact area when tested according to ASTM D2444 Tup A, using a 1000 gm weight from a height of 1 meter. The marker shall be placed in a steel fixture designed to hold the marker lens horizontal and positioned such that the Tup strikes the center of the lens.

The markers shall be conditioned for 10 minutes at $145^{\circ}\text{F} \pm 5^{\circ}\text{F}$ ($62.7^{\circ}\text{C} \pm 2.5^{\circ}\text{C}$) and then immediately submerged in a water bath at $70^{\circ}\text{F} \pm 5^{\circ}\text{C}$ ($21^{\circ}\text{F} \pm 2.5^{\circ}\text{C}$) for 10 minutes. The markers should then be removed from the water bath, wiped dry with a soft cloth, visually inspected for penetration of water behind the lens, and measured for reflectivity in accordance with ASTM E809. The markers shall meet the initial minimum retroreflectance specified values in **Table 1** and the product of the values in **Tables 2 and 3**.

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The markers shall meet the performance requirements contained in the current ASTM D 4280 for Raised Retro-reflective Pavement Markers. This warranty excludes (without limitation) damage from improper installation, exposure to chemicals or mishandling. Should the marker fail to conform to this warranty, the manufacturer shall, at its expense for materials ONLY, furnish replacement markers for those non-conforming markers. Jefferson Parish Traffic Engineering Division will maintain and track all installation information.

PAYMENT: Raised pavement markers shall be paid for at the contract unit price. Payment will be made under:

ITEM NO. PAY ITEM PAY UNIT

0060 White / Red Raised Pavement Marker Each

0070 Yellow Raised Pavement Marker Each

DATE: 6/12/2024
BID NO.: 50-00145596

INVITATION TO BID
THIS IS NOT AN ORDER

Page: 1

JEFFERSON PARISH

PURCHASING DEPARTMENT
P.O. BOX 9
GRETNA, LA. 70054-0009
504-364-2678

PURCHASING SPECIALIST:
RUBY.TRAN@jeffparish.net

BIDS WILL BE RECEIVED ONLINE VIA WWW.JEFFPARISHBIDS.NET UNTIL 2:00 PM, 7/09/2024 AND PUBLICLY OPENED THEREAFTER IN THE WEST BANK PURCHASING DEPT, SUITE 4400, JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETNA, LA 70053. At no charge, bidders are to submit via Jefferson Parish's electronic procurement page by visiting www.jeffparishbids.net to register for this free site. Additional instructions are included in the text box highlighting electronic procurement.

LATE BIDS WILL NOT BE ACCEPTED

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN, AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL AND/OR PHOTOSTATIC FIGURES OR SIGNATURES SHALL RESULT IN BID REJECTION. HOWEVER, ELECTRONIC SIGNATURES AS DEFINED IN LSA - R.S. 9:2620(8) ARE ACCEPTABLE. SIGNATURE MUST BE A SECURED DIGITAL SIGNATURE.

**INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS
THE FOLLOWING INSTRUCTIONS APPLY TO ALL BIDS**

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 136353 and/or Resolution No. 141125 as amended.

Jefferson Parish adheres to the Louisiana Code of Governmental Ethics, contained in Louisiana Revised Statutes Annotated, R.S. 42:1101, et seq. Vendor/Proposer by this submission, warrants that there are no "conflicts of interest" related to this procurement that would violate applicable Louisiana Law. Violation of the Louisiana Code of Governmental Ethics may result in rescission of contract, permit or licenses, and the imposition of fines and/or penalties, without contractual liability to the public in accordance with applicable law.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from <http://purchasing.jeffparish.net> and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Vendors may experience a delay in payment if your company is not a registered vendor with Jefferson Parish.

All quotations shall be based on F.O.B. Agency warehouse or job site, anywhere within the Parish as designated by the Purchasing Department. This provision does not apply to public works projects

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alterations from the specifications must be indicated and/or supporting documentation supplied with bid submission.

Bidders should submit all questions in writing via email to the Purchasing Specialist's email address as indicated above, no later than Five (5) working days prior to the bid opening. Bid numbers should be mentioned in all requests. If submitting online, vendors may send questions via the E-Procurement site no later than Five (5) working days prior to the bid opening.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum. Please note that all official communication will be expressed in the form of an addendum.

Visit our website at [HTTP://PURCHASING.JEFFPARISH.NET](http://PURCHASING.JEFFPARISH.NET)

All formal Addenda require written acknowledgement on the bid form by the bidder. Failure to acknowledge any Addendum on the bid form shall cause the bid to be rejected. JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. Vendors must not alter the bid forms. Doing so will cause the bid to be rejected.

A corporate resolution or written evidence of the individual signing the bid having such authority must be submitted with the bid. Failure to comply will cause bid to be rejected. For corporate entities, such written evidence may be a printout of the Louisiana Secretary of State's website listing the signatory as an officer. Such printout shall be included with the bid submission. Bids submitted by Owners or Sole Proprietorships must include certification that he or she owns the entity for which the bid is signed. This documentation must be submitted with the bid. Failure to do so will result in bid rejection.

NOTE: A sample corporate resolution can be downloaded from our website <http://purchasing.jeffparish.net> or you may provide your own document. A sample certification of sole proprietorship can also be downloaded from our website <http://purchasing.jeffparish.net> or you may provide your own document.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

A. AWARD OF CONTRACT: JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE. SPLIT AWARDS MADE TO SEVERAL VENDORS WILL ONLY BE GRANTED TO THOSE DEEMED RESPONSIVE AND RESPONSIBLE.

All bid prices shall remain valid for 45 days. Jefferson Parish and the lowest responsive and responsible bidder(s) by mutual written consent may mutually agree to extend the deadline for award by one (1) or more extensions of thirty (30) calendar days.

PROTESTS: Only those vendors that submit bids in response to this solicitation may protest any element of the procurement, in writing to the Director of the Purchasing Department. Written protest must be received within 48 hours of the release of the bid tabulation by the Purchasing Department. After consultation, the Parish Attorney's Office will then respond to protests in writing. (For more information, please see Chapter 2, Article VII, Division 2, Sec. 2-914.1 of the Jefferson Parish Code of Ordinances.)

PREFERENCE: Unless federal funding is directly spent by Jefferson Parish for this purchase, preference is hereby given to materials, supplies, and provisions produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitors outside the state. "LSA – R.S. 38:2251-2261"

B. USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

C. CANCELLATION OF CONTRACT: JEFFERSON PARISH reserves the right to cancel all or any part if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel any contract at anytime and for any reason by issuing a THIRTY (30) day written notice to the contractor.

For good cause and as consideration for executing a contract with Jefferson Parish, vendor conveys, sells, assigns and transfers to Jefferson Parish or its assigns all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Louisiana, relating to the particular good or services purchased or acquired by Jefferson Parish.

D. PRICES: Jefferson Parish is exempt from paying sales tax under LSA-R.S. 47:301 (8)(c). All prices for purchases by Jefferson Parish of supplies and materials shall be quoted in the unit of measure specified and unless otherwise specified, shall be exclusive of state and local taxes. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit price shall prevail.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A17.1-1961).

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

The purpose and intention of this invitation to bid is to afford all suppliers an equal opportunity to bid on all construction, maintenance, repair, operating supplies and/or equipment listed in this bid proposal. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications.

Advertised bids will be tabulated and a copy of the tabulation will be forwarded to each responding bidder.

IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online.

This is a secure site and authorized personnel have limited read access only. Bidders are to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at www.jeffparishbids.net to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at <http://purchasing.jeffparish.net>.

The general specifications for construction projects and the purchase of materials, services and/or supplies are those adopted by the JEFFERSON PARISH Council by Resolution No. 136353 or 141125 as amended. The general conditions adopted by this resolution shall be considered as much a part of this document as if they were written wholly herein. A copy may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at <http://purchasing.jeffparish.net> and clicking on Online Forms.

ADDITIONAL REQUIREMENTS FOR THIS BID

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

10, 12, 13, 15

1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.
2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.
3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid electronic envelope. Failure to comply will cause the bid to be rejected. When submitting the bid electronically, the license number must be entered in the appropriate field in the electronic procurement system. Failure to comply will cause the bid to be rejected.
5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.
6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precaution must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.
7. PUBLIC WORKS BIDS: All awards for public works in excess of \$5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.
8. NON-PUBLIC WORKS BIDS: A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.
9. NON-PUBLIC WORKS BIDS: A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.
10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Failure to comply with this instruction will result in bid rejection.
11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. All sureties must be in original format (no copies) When submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.
12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.
13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.
14. PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required; This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

15. NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted as per the appendix instructions. Failure to submit applicable certifications per the appendix instructions will result in bid rejection.

17. For this project, the Contractor shall not pay any state or local sales or use taxes on materials and equipment which are affixed and made part of the immovable property of the project or which is permanently incorporated in the project (hereinafter referred to as "applicable materials and equipment."). All purchases of applicable materials or equipment shall be made by the contractor on behalf of and as the agent of Jefferson Parish (Owner), a political subdivision of the State of Louisiana. No state and local sales and use taxes are owed on applicable materials and equipment under the provisions of Act 1029 of the 1991 Regular Session - Louisiana Revised Statute 47:301(8)(c). Owner will furnish to contractor a certificate form which certifies that Owner is not required to pay such state or local sales and use taxes, and contractor shall furnish a copy of such certificate to all vendors or suppliers of the applicable materials and equipment, and report to Owner the amount of taxes not incurred.

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission: and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to JPCO 2-155.10(19). By signing this document, every corporation, partnership, or person contracting with PARISH, whether by cooperative endeavor, intergovernmental agreement, bid, proposal, application or solicitation for a parish contract, and every application for certification of eligibility for a parish contract or program, attests that it understands and will abide by all provisions of JPCO 2-155.10.

All Public Work Projects are required to use the Louisiana Uniform Public Work Bid Form

All prices must be held firm unless an escalation provision is requested in this bid. Jefferson Parish will allow one escalation during the term of the contract, which may not exceed the U.S. Bureau of Labor Statistics National Index for all Urban Consumers, unadjusted 12 month figure. The most recently published figure issued at the time an adjustment is requested will be used. A request must be made in writing by the vendor, and the escalation will only be applied to purchases made after the request is made.

Are you requesting an escalation provision?

YES X NO MAXIMUM ESCALATION PERCENTAGE REQUESTED 3 %INITIAL BID PRICES WILL REMAIN FIRM THROUGH THE DATE OF expiration of the first year of the contract.

For the purposes of comparison of bids when an escalation provision is requested, Jefferson Parish will apply the maximum escalation percentage quoted by the bidder to the period to which it is applied in the bid. The initial price and the escalation will be used to calculate the total bid price. It will be assumed, for comparison of prices only, that an equal amount of material or labor is purchased each month throughout the entire contract.

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES

17 - 120 days ARO for standard sizes

**see 3M's Qualifications document

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable)

Not applicable**THIS SECTION MUST BE COMPLETED BY BIDDER:**FIRM NAME: 3M CompanyADDRESS: 3M Center - CB&TD, Bldg 223-3S-33CITY, STATE: St. Paul, Minnesota ZIP: 55144-1000TELEPHONE: (800) 553-1380 FAX: (800) 591-9293EMAIL ADDRESS: apthao@mmm.com

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form by placing the addendum number as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: NUMBER: NUMBER: NUMBER: TOTAL PRICE OF ALL BID ITEMS: \$ \$57,816.00AUTHORIZED
SIGNATURE: Maria Paraschou

Printed Name

TITLE: Sr. Proposal & Contract Manager

SIGNING INDICATES YOU HAVE READ AND COMPLY WITH THE INSTRUCTIONS AND CONDITIONS.

NOTE: All bids should be returned with the BID NUMBER and BID OPENING DATE indicated on the outside of the envelope submitted to the Purchasing Department.

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00145596

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
			TWO (2) YEAR CONTRACT FOR A SUPPLY OF 3M PAVEMENT MARKING TAPE FOR THE JEFFERSON PARISH DEPARTMENT OF TRAFFIC ENGINEERING		
1	150.00	PKG	0010 PAVEMENT MARKING TAPE FOUR INCH WHITE THIRTY YARDS PER PACK 3M A270 ES	\$ 106.80	\$ 16,020.00
2	100.00	PKG	0020 PAVEMENT MARKING TAPE EIGHT INCH WHITE THIRTY YARDS PER PACK 3M A270 ES	\$ No-Bid	\$ No-Bid
3	40.00	PKG	0030 PAVEMENT MARKING TAPE TWELVE INCH WHITE THIRTY YARDS PER PACK 3M A270 ES	\$ 320.40	\$ 12,800.00
4	150.00	PKG	0040 PAVEMENT MARKING TAPE FOUR INCH YELLOW THIRTY YARDS PER PACK 3M A271 ES	\$ 106.80	\$ 16,020.00
5	40.00	PKG	0050 PAVEMENT MARKING TAPE TWELVE INCH YELLOW THIRTY YARDS PER PACK 3M A271 ES	\$ 320.40	\$ 12,800.00
6	50.00	BX	0060 WHITE/RED RAISED PAVEMENT MARKERS FIFTY (50) PER BOX 100 per Box RAY-O-LITE WHITE/RED RAISED PAVEMENT MARKERS	\$ 0.88/each	\$ 88.00 / box
7	50.00	BX	0070 YELLOW RAISED PAVEMENT MARKERS FIFTY (50) PER BOX 100 per Box RAY-O-LITE YELLOW RAISED PAVEMENT MARKERS	\$ 0.88/each	\$ 88.00 / box

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF

INCORPORATED.

AT THE MEETING OF DIRECTORS OF _____
INCORPORATED, DULY NOTICED AND HELD ON _____,
A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT
WAS:

RESOLVED THAT _____, BE AND IS HEREBY
APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-
FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON
BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS
AND TRANSACTIONS WITH THE PARISH OF JEFFERSON OR ANY OF ITS AGENCIES,
DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE
EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES,
CONTRACTS AND ACTS AND TO RECEIVE ALL PURCHASE ORDERS AND NOTICES
ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS
CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING, AND ACCEPTING
EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-
FACT.

I HEREBY CERTIFY THE FOREGOING TO BE
A TRUE AND CORRECT COPY OF AN
EXCERPT OF THE MINUTES OF THE ABOVE
DATED MEETING OF THE BOARD OF
DIRECTORS OF SAID CORPORATION, AND
THE SAME HAS NOT BEEN REVOKED OR
RESCINDED.

SECRETARY-TREASURER

DATE

Non-Public Works Bid Affidavit Instructions

- **Affidavit is supplied as a courtesy to Affiants, but it is the responsibility of the affiant to insure the affidavit they submit to Jefferson Parish complies, in both form and content, with federal, state and parish laws.**
- **Affidavit must be signed by an authorized representative of the entity or the affidavit will not be accepted.**
- **Affidavit must be notarized or the affidavit will not be accepted.**
- **Notary must sign name, print name, and include bar/notary number, or the affidavit will not be accepted.**
- **Affiant MUST select either A or B when required or the affidavit will not be accepted.**
- **Affiants who select choice A must include an attachment or the affidavit will not be accepted.**
- **If both choice A and B are selected, the affidavit will not be accepted.**
- **Affidavit marked N/A will not be accepted.**
- **It is the responsibility of the Affiant to submit a new affidavit if any additional campaign contributions are made after the affidavit is executed but prior to the time the council acts on the matter.**

Instruction sheet may be omitted when submitting the affidavit

Non-Public Works Bid

AFFIDAVIT

STATE OF MINNESOTA

PARISH/COUNTY OF RAMSEY

BEFORE ME, the undersigned authority, personally came and appeared: Maria Paraschou
_____, (Affiant) who after being by me duly sworn, deposed and said that
he/she is the fully authorized representative of 3M Company (Entity),
the party who submitted a bid in response to Bid Number 50-00145596, to the Parish of
Jefferson.

Affiant further said:

Campaign Contribution Disclosures

**(Choose A or B, if option A is indicated please include the required
attachment):**

Choice A _____ Attached hereto is a list of all campaign contributions, including
the date and amount of each contribution, made to current or
former elected officials of the Parish of Jefferson by Entity,
Affiant, and/or officers, directors and owners, including
employees, owning 25% or more of the Entity during the two-year
period immediately preceding the date of this affidavit or the
current term of the elected official, whichever is greater. Further,
Entity, Affiant, and/or Entity Owners have not made any
contributions to or in support of current or former members of the
Jefferson Parish Council or the Jefferson Parish President through
or in the name of another person or legal entity, either directly or
indirectly.

Choice B X there are **NO** campaign contributions made which would require
disclosure under Choice A of this section.

Debt Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all debts owed by the affiant to any elected or appointed official of the Parish of Jefferson, and any and all debts owed by any elected or appointed official of the Parish to the Affiant.

Choice B X There are **NO** debts which would require disclosure under Choice A of this section.

Affiant further said:

That Affiant has employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for Affiant; and

[The remainder of this page is intentionally left blank.]

That no part of the contract price received by Affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for Affiant.



Signature of Affiant

Maria Paraschou, Sr. Proposal & Contract Manager
Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME

ON THE 1st DAY OF July, 2024.



Notary Public

Juanita E. Stipe

Printed Name of Notary

6162388

Notary/Bar Roll Number



My commission expires January 31, 2025

STANDARD INSURANCE REQUIREMENTS FOR BIDDING PURPOSES

All required insurance under this bid shall conform to Jefferson Parish Resolution No. 113646 or No. 113647, as applicable. Contractors may not commence any work under any ensuing contract unless and until all required insurance and associated evidentiary requirements thereto have been met, along with any additional specifications contained in the **Invitation to Bid**. Except as where otherwise precluded by law, the Parish Attorney or his designee, with the concurrence of the Director of Risk Management or his designee, may agree on a case-by-case basis, to deviate from Jefferson Parish's standard insurance requirements, as provided in this Section. Vendors requesting deviation therefrom shall submit such requests in writing, along with compelling substantiation, to the Purchasing Department prior to the bid's due date. Any changes to the insurance requirements will be reflected in the bid specifications and addenda. Prior to contract execution and at all times thereafter during the term of such contract, contractors must provide and continuously maintain all coverages as required by the foregoing Resolutions, and the contract documents. Failure to do so shall be grounds for suspension, discontinuation or termination of the contract.

For bidding purposes, bidders must submit with bid submission a current (valid) insurance certificate evidencing the required coverages. Failure to comply will cause bid to be rejected. The current insurance certificate will be used for proof of insurance at time of evaluation. Thereafter, and prior to contract execution, the low bidder will be required to provide final insurance certificates to the Parish which shall name **the Jefferson Parish, its Districts Departments and Agencies under the direction of the Parish President and the Parish Council** as additional insureds regarding negligence by the contractor for the Commercial General Liability and the Comprehensive Automobile Liability policies. Additionally, said certificates should reflect the name of the Parish Department receiving goods and services and reference the respective Jefferson Parish bid number.

JEFFERSON PARISH REQUIRED STANDARD INSURANCE

☒ **WORKER'S COMPENSATION INSURANCE**

As required by Louisiana State Statute, exception; Employer's Liability, Section B shall be \$1,000,000 per occurrence when Work is to be over water and involves maritime exposures to cover all employees not covered under the State Worker's Compensation Act, otherwise this limit shall be no less than \$500,000 per occurrence.

Note: If your company is not required by law to carry workmen's compensation insurance, i.e. not a Louisiana company, sole employee of the company, then bidders must request a workmen's compensation insurance declaration affidavit prior to the bid opening date. This insurance declaration affidavit must be fully completed, signed, properly notarized and submitted with the bid. A scanned copy may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being

rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

☒ **COMMERCIAL GENERAL LIABILITY**

Shall provide limits not less than the following: \$1,000,000.00 Combined Single Limit per Occurrence for bodily injury and property damage.

☒ **COMPREHENSIVE AUTOMOBILE LIABILITY**

Bodily injury liability \$1,000,000.00 each person; \$1,000,000.00 each occurrence.
Property Damage Liability \$1,000,000.00 each occurrence.

Note: This category may be omitted if bidders do not/will not utilize company vehicles for the project or do not possess company vehicles. Bidder must request an automobile insurance declaration affidavit prior to the bid opening date. This insurance declaration affidavit must be fully completed, signed, properly notarized and submitted with the bid. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

DEDUCTIBLES - The Parish Attorney with concurrence of the Director of Risk Management have waived the deductible section of the Terms and Conditions for all Invitations to Bid, until further notice.

UMBRELLA LIABILITY COVERAGE

An umbrella policy or excess may be used to meet minimum requirements.

FOR CONSTRUCTION AND RENOVATION PROJECTS:

The following are required if selected below. Such insurance is due upon contract execution.

☐ **OWNER'S PROTECTIVE LIABILITY**

To be for the same limits of liability for bodily injury and property damage liability established for commercial general liability.

☐ **BUILDER'S RISK INSURANCE**

The contractor shall maintain Builder's Risk Insurance at his own expense to insure both the owner (Parish of Jefferson) and contractor as their interest may appear.

Item	Document Description	Section Description	Page Number	3M's Explanations/Exceptions/Qualifications
1	Bid # 50-00145596 - Specifications	Warranty	7 of 7	3M provides its standard product warranty in accordance with the attached product bulletins. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND ARISING OUT OF A COURSE OF DEALING, PERFORMANCE, CUSTOM, OR USAGE OF TRADE.
2	Corporate Resolution			As permitted under LSA-R.S/ 38:2212(B)(5)(b), attached please find 3M Company's Government Contract Compliance Power of Attorney which authorizes Maria Paraschou to sign this bid document and accompanying affidavits.
3	Non-Public Works Bid - AFFIDAVIT			3M Company is a global, publicly traded Fortune 500 Company with annual sales in 2023 of approximately \$32.7B and over 65,000 employees worldwide. Due to the size of our global enterprise operations, 3M provides this certification for 3M Company only limited to the past three years. Additionally, no individual shareholder has a significant financial interest in 3M Company nor does any individual or entity have a financial interest in 3M Company that exceeds 25%.
4	STANDARD INSURANCE REQUIREMENTS FOR BIDDING PURPOSES			With 3M's financial resources, 3M is able to provide the requisite insurance coverage needed by the Parish. The scope of this procurement is for the provision of pavement marking tape, and no 3M employees will be on-site. Therefore, we regard the Worker's Compensation & Comprehensive Automobile Liability Insurance requirement as N/A. 3M generally does not provide additional insured coverage for material only procurements.
5		Limitation of Liability		3M'S LIABILITY FOR CONTRACT DAMAGES IS LIMITED TO DIRECT DAMAGES. NEITHER PARTY WILL, UNDER ANY CIRCUMSTANCES, BE LIABLE TO THE OTHER PARTY FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOST PROFITS, BUSINESS OR REVENUE, IN ANY WAY RELATED TO THE PRODUCTS PROVIDED UNDER THIS CONTRACT.

Item	Document Description	Section Description	Page Number	3M's Explanations/Exceptions/Qualifications
6		Per- and polyfluoroalkyl substances (PFAS)		<p>The Parties acknowledge [3M/Supplier] has announced it will exit per- and polyfluoroalkyl substance (PFAS) manufacturing by the end of 2025 and work to discontinue the use of PFAS across its product portfolio by the end of 2025. The Parties further acknowledge that one or more [Product / Good] sold under this Agreement utilizes PFAS ("PFAS-Related Product"). As this Agreement's underlying Term extends beyond December 31, 2025, and/or any renewal or extension option of the Agreement has the potential to extend the Agreement beyond December 31, 2025, the Parties acknowledge and agree 3M shall have the unilateral right to either:</p> <p>(a) substitute the PFAS-Related Product(s) with a product that is not a PFAS-Related Product (alternate product), with the timing of such alternate product at 3M's election, or</p> <p>(b) terminate the Agreement as to the PFAS-Related Product(s).</p> <p>In no event shall 3M be held liable for costs, fees, or damages, however arising, due to its non-provision of PFAS-Related Product(s) after December 31, 2025.</p>

3M Company Government Contracts Power of Attorney

By the authority granted the undersigned by the 3M General Counsely, the individuals listed below are hereby appointed as 3M's or its designated subsidiaries, true and lawful attorneys-in-fact for it, and its name, for commercially available products and services and government unique products and services for which 3M or its designated subsidiaries will be a prime contractor, subcontractor or higher tier subcontractor to any federal, state or municipal governmental agency in the United States ("Government Contracts"), to perform acts specified on behalf of this Corporation.

Except as provided below, authority is granted to submit or execute proposals, bids, binding purchase orders, contracts and subcontracts, certifications, representations and warranties, and documents related thereto for Government Contracts; however, this authority does not include (a) research and development services²; (b) executing country of origin certifications⁵; or (c) any other authority that is not expressly granted in this document. 3M executives (President, General Manager, etc.)¹, have authority to sign on behalf of their respective Business Unit/staff function, through 3M's Vice President of Government Contract Compliance sub delegation authority. Authority for the individuals below is limited to the specific Business Unit or staff function indicated and such authority may not be subdelegated.

<div><u>3M Healthcare US Opco LLC</u> Dickson, Diana Hong-Larsen, Sally Husnick, Nick Lovejoy, Matt McCloskey, Molly McDonald, Michael</div> <div><u>3M Unitek Corporation</u> McCloskey, Molly</div> <div><u>Advanced Materials Division</u> Davis, Scott Hanson, Scott Jensen, Avery Lockhart, Bruce Marshall, Peter (Technical Ceramics only) Morin, Eric Utley, Elizabeth Ward, Charles</div> <div><u>Aearo Technologies LLC.</u> Hinko, David</div> <div><u>Automotive and Aerospace Solutions Division</u> see Government Marketing-Sales</div>	<div><u>Commercial Branding & Transportation Division</u> Batchelor, Brent⁷ Do, Thanh-Huong⁴ Macklin, John⁷ Paraschou, Maria Poss, Steven Schray, Katrina⁶ Seputis, Julie⁴ Trac, Phu⁴</div> <div><u>Electrical Markets Division</u> Blair, Jeremiah Irwin, Mike</div> <div><u>Electronics Materials Solutions Division</u> Anderson, Kevin</div> <div><u>Global Occupational Medicine</u> Lenick, Karyn</div> <div><u>Government R&D Contracts Department</u>² Kays, Steven³ Martinez, Rita Hong-Larsen, Sally</div>	<div><u>3M Health Information Systems</u> Aiello, Kimberlee Carr, Megan Garrison, Garri Hong-Larsen, Sally Mathison, John Peddicord, Kyle Stanley, Michael Weidall, Quinn</div> <div><u>Industrial Adhesives & Tapes Division</u> see Government Marketing-Sales (FSS Contracts Only)</div> <div><u>Industrial Mineral Products Division</u> Erickson, Scott</div> <div><u>Medical Solutions Division</u> McDonald, Michael Dickson, Diana Husnick, Nick</div> <div><u>Oral Care Solutions Division</u> Lovejoy, Matt McCloskey, Molly</div> <div><u>Personal Safety Division</u> see Government Marketing-Sales</div> <div><u>Separation & Purification</u> Towne, Richard</div> <div><u>Stationery & Office Supplies Division</u> see Government Marketing-Sales (FSS Contracts Only)</div>
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Authority Applies to any Business Unit or Staff Function		
<u>Global Channel Services</u> Constantine, Lauri	<u>Government Marketing-Sales</u> Audette-Williams, Michelle Borja, Ralph Hang, Yee Williams, Tabatha	<u>Government Contract Compliance</u> Bordas, Rich Horwitz, Charles Robinette, Thomas
<u>U.S. Pacific Branches</u> Mathers, Stephanie Kawasaki, Heidi		

Authority to Make Country of Origin Certifications ⁵		
<u>Trade Compliance Department</u> Bottoms, Paul ⁵ Goebel, Kathleen ⁵ Jansen, Lindsay ⁵ O'Rourke, Elizabeth ⁵ Radtke Nord, Jodi ⁵ Schmitz, Jamie ⁵		

For all appointments, authority may be withdrawn or modified at any time, including upon an individual’s change in responsibility.

This Power of Attorney revokes all prior Powers of Attorney with respect to the same matters and shall remain in effect until terminated by the undersigned or any other person authorized to grant powers of attorney on behalf of 3M.

DocuSigned by:

Charles Horwitz

By: _____

9952E2154E4B4B7...

Charles Horwitz
Vice President, Government Contract Compliance
3M Company

Date 4/1/2024

¹3M executives may assign attorney-in-fact authority to their respective business personnel, upon successful completion of Government Contract Compliance Power of Attorney training.

²Authority is delegated by 3M's Executive VP R&D and Chief Technology Officer, to the Senior Vice President, Research and Development, for their respective 3M Business Groups, and to certain specified employees in Government Research & Development Contracts, to execute proposals, contracts, subcontracts, and modifications (including certifications, representations, and warranties to comply with certain laws and regulations) for government R&D services.

³Authority includes AFRL TIA and Phase 2 activities for N95 lines for contract modifications.

⁴Authority expressly limited to executing Certificates of Conformance.

⁵Authority limited to include only Country of Origin Certifications.

⁶Authority limited to include only Vouchers and Invoices.

⁷Authority limited to include only Premium Warranties



CERTIFICATE OF LIABILITY INSURANCE

Page 1 of 1

DATE (MM/DD/YYYY)
02/26/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Willis Towers Watson Midwest, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	CONTACT NAME: Willis Towers Watson Certificate Center PHONE (A/C, No. Ext): 1-877-945-7378 FAX (A/C, No): 1-888-467-2378 E-MAIL ADDRESS: certificates@willis.com														
INSURED 3M Company Insurance Department 3M Center, 223-2W-32 St. Paul, MN 55144	<table><tr><th>INSURER(S) AFFORDING COVERAGE</th><th>NAIC #</th></tr><tr><td>INSURER A: Old Republic Insurance Company</td><td>24147</td></tr><tr><td>INSURER B:</td><td></td></tr><tr><td>INSURER C:</td><td></td></tr><tr><td>INSURER D:</td><td></td></tr><tr><td>INSURER E:</td><td></td></tr><tr><td>INSURER F:</td><td></td></tr></table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Old Republic Insurance Company	24147	INSURER B:		INSURER C:		INSURER D:		INSURER E:		INSURER F:	
INSURER(S) AFFORDING COVERAGE	NAIC #														
INSURER A: Old Republic Insurance Company	24147														
INSURER B:															
INSURER C:															
INSURER D:															
INSURER E:															
INSURER F:															

COVERAGES**CERTIFICATE NUMBER:** W32711802**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			MWZY 317359	03/01/2023	03/01/2026	EACH OCCURRENCE \$ 10,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ 10,000,000 GENERAL AGGREGATE \$ 10,000,000 PRODUCTS - COMP/OP AGG \$ 10,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			MWTB 317357	03/01/2023	03/01/2026	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> No	N/A	MWC309963-24	03/01/2024	03/01/2025	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 2,000,000 E.L. DISEASE - EA EMPLOYEE \$ 2,000,000 E.L. DISEASE - POLICY LIMIT \$ 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER**CANCELLATION**

Evidence of Coverage	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

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ACORD 25 (2016/03)

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SR ID: 25473859

BATCH: 3349089

Request for Taxpayer Identification Number and Certification

Give Form to the
requester. Do not
send to the IRS.

► Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. 3M Company	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes. <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input checked="" type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) ►	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) 5 Exemption from FATCA reporting code (if any) D <small>(Applies to accounts maintained outside the U.S.)</small>
	5 Address (number, street, and apt. or suite no.) See instructions. P.O. Box 844127	Requester's name and address (optional)
	6 City, state, and ZIP code Dallas, TX 75284-4127	
	7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number									
			-			-			
or									
Employer identification number									
4	1		-	0	4	1	7	7	5

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ► <i>Kim Pekarski</i>	Date ► January 2, 2024
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

Commercial Branding and Transportation Division

3M™ Raised Pavement Marker Series 290

Product Bulletin Series 290
September 2023

Replaces Product Bulletin Series 290 Dated December 2021

1 Description

3M™ Raised Pavement Markers Series (“**Markers**”) are designed for application on asphalt and Portland cement concrete road surfaces. The Markers have been designed to provide highly effective, long-term nighttime visibility in non-snow plow regions. Except as noted in Table 6, the Markers meet the requirements of ASTM D4280.

The Marker bodies are made from an engineered thermoplastic that provides impact resistance and weatherability. The Markers include retroreflective elements that provide wet retroreflectance, dry retroreflectance, long-term nighttime visibility and are available in white, yellow, red, blue, or green.

The Markers have been designed to be applied directly to pavement surfaces and are compatible with commercially available bitumen and epoxy adhesives. The use of any other type of adhesive should be thoroughly evaluated prior to any large-scale application.

3M also manufactures Markers fitted with pressure sensitive adhesive (PSA) pads. To use Markers with PSA pads, a liner is removed from the adhesive pad on the bottom of the Marker before it is placed onto the road surface. For more information on Markers with PSA pads, see [3M Information Folder 290 PSA](#).

Markers are available in the types and colors listed in Table 1.

Table 1. Product types and colors by product code^a.

Color	Product Code	
	Marker	PSA Markers
One-way yellow, white body	RPM-290-Y	PSA-290-Y
One-way yellow, yellow body	RPM-291-Y	PSA-291-Y
Two-way yellow, yellow body	RPM-291-2Y	PSA-291-2Y
Two-way yellow and red, yellow body	RPM-291-YR	PSA-291-YR
One-way white, white body	RPM-290-W	PSA-290-W
Two-way white, white body	RPM-290-2W	PSA-290-2W
Two-way white and red, white body	RPM-290-WR	PSA-290-WR
Two-way white and red, white body	RPM-290-WY	PSA-290-WY
Two-way red, white body	RPM-290-2R	PSA-290-2R
Two-way blue, blue body	RPM-295-2B	PSA-295-2B
Two-way green, green body	RPM-297-2G	PSA-297-2G
Two-way red, red body	RPM-292-2R	PSA-292-2R

a. Other combinations of body color, retroreflector color, one-way/two-way, PSA available. Talk to your customer service representative.

For application information, refer to [3M Information Folder 290](#), [3M Information Folder 290 PSA](#), and [3M Information Folder 290 Groove](#).

For applications not covered by the above mentioned documents, it is the responsibility of the installer to contact the appropriate 3M representative or application engineer for guidance at 1-800-553-1380.

2 Product Features

- Durable
- Wet and dry retroreflective
- Impact resistant
- Abrasion resistant
- Molded-in body colors
- Rumble effect
- Lightweight
- Application finger grips
- Compatible with standard bitumen and epoxy adhesives

3 Specifications

3.1 Product Dimensions

The dimensions of the Marker body without adhesive conform to the values presented in Table 2.

Table 2. Marker dimensions.

Dimension	Value
Height	0.625 ± 0.050 in. (15.88 ± 1.27 mm)
Width	4.00 ± 0.50 in. (101.6 ± 12.7 mm)
Length	3.50 ± 0.50 in. (88.9 ± 12.7 mm)

3.2 Type Retroreflectance

Type retroreflectance refers to marker luminance measurements made using simplified viewing geometries that provide a convenient means of measurement for quality control purposes when specifying a unique marker type. White, yellow, red, blue, and green Markers conform to the initial minimum retroreflectance values specified in Table 3 when measured in accordance with ASTM E809. The photometric quantity presented in Table 3 is the coefficient of retroreflected luminous intensity (R_I), expressed as millicandelas per lux (mcd/lx) and candelas per foot-candela (cd/ft cd). One candela per lux equals 10.76 candelas per foot-candle.

Table 3. Minimum R_I Values.

Entrance angle β_2 ($\beta_1 = 0^\circ$)	0°		$\pm 20^\circ$	
Observation angle	0.2°		0.2°	
Color	Minimum R_I (mcd/lx)	Minimum R_I (cd/ft cd)	Minimum R_I (mcd/lx)	Minimum R_I (cd/ft cd)
White	279	3.00	112	1.20
Yellow	167	1.80	67	0.72
Red	70	0.75	28	0.30
Blue	26	0.28	10	0.11
Green	93	1.00	37	0.40

3.3 Performance Retroreflectance

Performance retroreflectance refers to marker luminance as viewed by the driver under standardized road and vehicle conditions. This property is often called “Driver Geometry Retroreflection.” Measurement under simulated use conditions are performed using the measurement geometry illustrated in Figure 1. This ensures that all geometric viewing angles are taken into account during testing, including the retroreflector orientation, which is an important consideration when evaluating markers with prismatic retroreflective lenses.

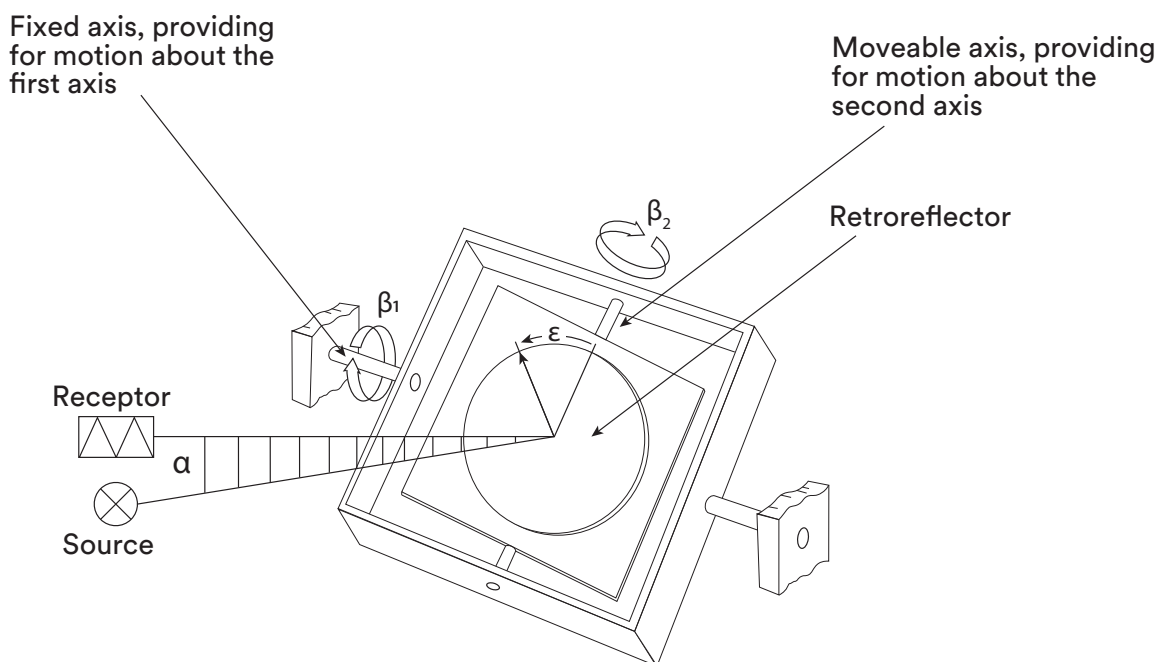


Figure 1. Driver Geometry (CIE Notation).

The Markers meet or exceed the initial minimum retroreflectance values specified by the product of the R_1 values in Table 4 and the color-dependent multiplying factors in Table 5, when measured in accordance with ASTM E809. The angles referenced in Table 4 correspond to the entrance (β), rotation (ϵ), and observation (α) angles relative to a standard driver in a standard vehicle with Markers placed on a lane line to the left of the vehicle. Driver geometry R_1 values are the sum of Marker retroreflection from incident illumination from both the left and right headlights.

Table 4. Minimum initial “Driver Geometry” R_1 values.

Simulated Distance		Headlight	Observation Angle (α)	Rotation Angle (ϵ)	Entrance Angles (β)		Minimum R_1 (mcd/lx)	Typical R_1 (mcd/lx)
Feet	Meters		(degrees)	(degrees)	β_1	β_2	left + right	left + right
100	30	Left	0.95	19	-2.0	-1.6	40	80
		Right	2.91	-72	4.6	-2.9		
300	91	Left	0.35	24	-0.7	-0.5	350	500
		Right	0.90	-69	1.4	-1.0		
500	152	Left	0.22	24	-0.4	-0.3	600	1000
		Right	0.53	-68	0.8	-0.6		

Note: In laboratory testing, Entrance Angles β_1 and β_2 are set to equal 0° and Left/Right Rotation Angles are set to approximated as $20^\circ/-70^\circ$ with little loss of accuracy.

Table 5. Color Multiplying Factors

Color	Multiplying Factor
White	1
Red	0.25
Yellow	0.6
Blue	0.1
Green	0.33

3.4 Retroreflected Color

The retroreflected colors of the Markers lie within the respective retroreflected color gamut coordinates, plotted on the 1931 CIE Chromaticity (x, y) diagram, described in Table 6 and Figure 2, when tested in accordance with ASTM E811 using CIE Illuminant Source A under viewing conditions of 0.2° observation angle, 0° entrance angle. The source and receptor angular apertures are each 6 minutes of arc. All retroreflected colors meet the requirements of ASTM D4280, with the exception of green, which meets the requirements of EN1463.

Table 6. Retroreflected Color Gamut Coordinates.

Point Number	White		Yellow		Red		Blue		Green ^a	
	x	y	x	y	x	y	x	y	x	y
1	0.310	0.348	0.545	0.424	0.650	0.330	0.039	0.320	0.030	0.385
2	0.453	0.440	0.559	0.439	0.668	0.330	0.160	0.320	0.228	0.351
3	0.500	0.440	0.609	0.390	0.734	0.265	0.160	0.240	0.321	0.493
4	0.500	0.380	0.597	0.390	0.721	0.259	0.183	0.218	0.302	0.692
5	0.440	0.380	–	–	–	–	0.088	0.142	–	–
6	0.310	0.283	–	–	–	–	–	–	–	–

a. **Note** - the retroreflected color of green Markers conforms to the specification of EN1463, but not ASTM D4280

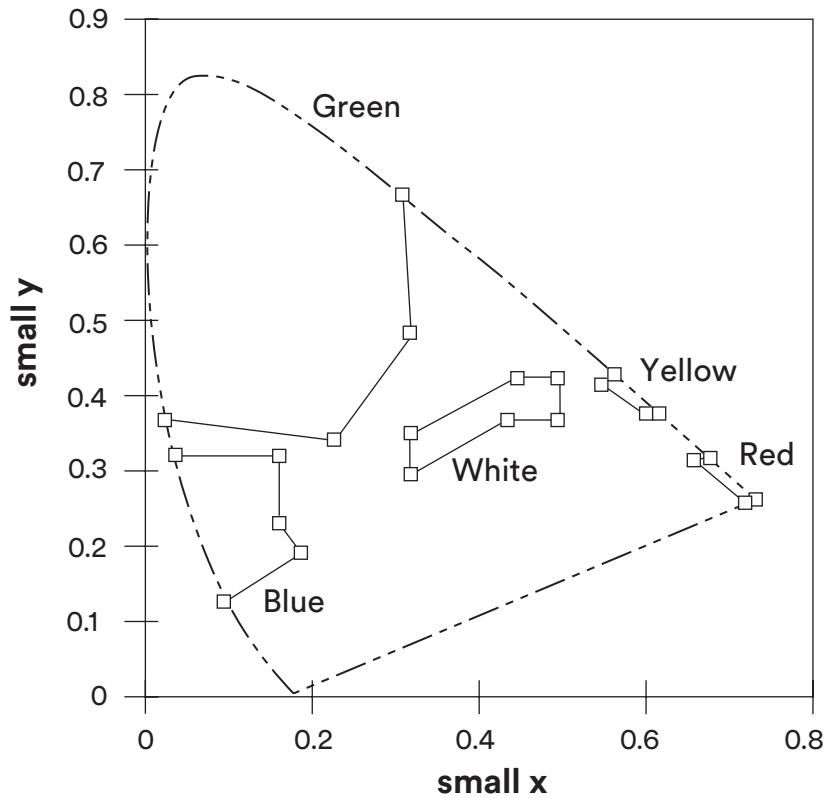


Figure 2. Marker colors plotted on CIE 1931 Chromaticity Chart. If two points lie on the spectrum locus line, they are not connected by a straight line but, rather, by the boundary of the spectrum locus.

3.5 Abrasion Resistance

The coefficient of retroreflected luminous intensity of the Markers shall be measured after subjecting the entire lens surface to the test described in ASTM D4280, section 9.5, using a sand drop apparatus. After the exposure described above, retroreflection values shall not be less than 0.5 times the values listed in Table 3.

3.6 Temperature Resistance

Test Markers shall comply with the initial minimum brightness requirements specified in Table 3 and the product of the values in Tables 4 and 5 after being conditioned for 12 hours at 145 ± 5 °F (62.7 ± 2.5 °C).

3.7 Impact Resistance

Test Marker bodies shall display no cracking or breakage when tested according to ASTM D2444 Tup A, using a 1000 gm weight at a height of 1 meter. The Markers shall be positioned in such a way that the Tup strikes the top of the Markers. The Marker lenses shall display no cracking outside the impact area when tested according to ASTM D2444 Tup A, using a 1000 gm weight at a height of 1 meter. The Marker shall be placed in a steel fixture designed to hold the Marker lens horizontal while being positioned such that the Tup strikes the center of the lens.

3.8 Resistance to Water Penetration

The Markers shall be conditioned for 10 minutes at 145 ± 5 °F (62.7 ± 2.5 °C) and then immediately submerged in a 70 ± 5 °F (21 ± 2.5 °C) water bath for 10 minutes. The Markers shall then be removed from the water bath, wiped dry with a soft cloth, visually inspected for water penetration behind the lenses, and measured for retroreflectance according to ASTM E809. The Markers shall meet the initial minimum retroreflectance values specified in Table 3 and those specified by the products of the values in Tables 4 and 5.

4 Health and Safety Information

Read all health hazard, precautionary, and first aid statements found in the Safety Data Sheets (SDS), Article Information Sheets, and products labels of any materials for important health, safety, and environmental information prior to handling or use. To obtain SDSs and Article Information Sheets for 3M products, go to 3M.com/SDS, contact 3M by mail, or for urgent requests call 1-800-364-3577.

5 Durability

Maximum Marker durability is achieved when Markers are properly applied according to all applicable recommendations provided in product bulletins and information folders listed in Section 9. Because reflective performance is reduced by wear, the lens of the raised pavement marker is coated with an abrasion-resistant material which helps maintain retroreflective performance under normal traffic wear conditions. Minimal marker loss may occur under normal traffic conditions when applied according to 3M recommendations using standard bitumen or epoxy adhesives designed for use with raised pavement markers.

6 Storage

Store indoors in a cool dry area.

7 Warranty Information

7.1 3M Standard Warranty

The Markers are warranted (“**3M Standard Warranty**”) to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in this product bulletin. If Markers are proven not to have met the 3M Standard Warranty on their shipment date, then a buyer's exclusive remedy, and 3M's sole obligation, at 3M's option, will be refund or replacement of the Markers.

7.2 Exclusive Limited Remedy

If Markers are proven not to have met the 3M Standard Warranty or 3M Warranty, then a user's exclusive remedy, and 3M's sole obligation, at 3M's option, will be refund or replacement of the non-conforming Markers.

7.3 Disclaimer

THE 3M WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING OR OF PERFORMANCE, CUSTOM, OR USAGE OF TRADE.

7.4 Limitation of Liability

Except for the limited remedy stated above, and except where prohibited by law, 3M will not be liable for any loss or damage arising from the Markers or any 3M product, whether direct, indirect, special, incidental, or consequential damages (including but not limited to lost profits, business, or revenue in any way), regardless of the legal theory asserted including warranty, contract, negligence, or strict liability.

8 Other Product Information

Always confirm that you have the most current version of the applicable product bulletin, information folder, or other product information from 3M's Website at <http://www.3M.com/roadsafety>.

9 Literature References

[3M IF 290](#)

[3M IF 290 Groove](#)

[3M IF 290 PSA](#)

3M™ Markers Series 290 Pavement Surface Preparation and Application Procedures

Application Procedure for 3M™ Markers Series 290 in Grooved Pavement Surfaces

3M™ Raised Pavement Marker Series 290 With Pressure Sensitive Adhesive Surface
Preparation and Application Procedures

ASTM Test Methods are available from ASTM International, West Conshohocken, PA.

For Information or Assistance

Call: 1-800-553-1380

In Canada Call:

1-800-3M HELPS (1-800-364-3577)

Internet:

<http://www.3M.com/roadsafety>

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Important Notice

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable at the time of this publication, but the accuracy or completeness thereof is not guaranteed, and the following is made in lieu of all warranties, or conditions express or implied. Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct, indirect, special, or consequential, arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for his/her intended use, and user assumes all risk and liability whatsoever in connection therewith. Statements or recommendations not contained herein shall have no force or effect unless in an agreement signed by officers of seller and manufacturer.



Commercial Branding and Transportation

3M Center, Building 223-3N-30
St. Paul, MN 55144-1000

Phone 1-800-553-1380

Web [3M.com/roadsafety](http://www.3M.com/roadsafety)

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Transportation Safety Division

3M™ Stamark™ Pavement Marking Tape Series 270 ES

Product Bulletin 270 ES
June 2020

Replaces Product Bulletin 270 ES Dated May 2011

1 Description

3M™ Stamark™ Pavement Marking Tape Series 270 ES (“Tape”) is a retroreflective patterned polymer pavement marking that can be used as an inlay marking on new asphalt or as an overlay marking on asphalt and concrete pavement surfaces in good condition.

The Tape offers “Extended Season” applications due to an improved pressure sensitive adhesive (PSA) package on the bottom surface.

The Tape does not require 3M Stamark Surface Preparation Adhesive P-50 (“P-50”) or 3M Stamark Low VOC Surface Preparation Adhesive SPA60 (“SPA60”) prior to application, if applied during the application season as outlined in the [3M Climate Guide for 3M Stamark Pavement Marking Tapes](#).

Series A270 ES: No liner. Used for lane lines, edge lines, channelizing lines, gore markings, stop bars, and crosswalks.

Series L270 ES: With liner. Used to cut symbols and legends.

Series SMS-L270 ES: With liner. Precut symbols and legends.

1.1 Product Features

- o Durable, conformable to pavement and retroreflective
- o Embedded net provides increased tear resistance
- o Pressure sensitive adhesive (PSA) on bottom surface
- o No surface preparation adhesive required when applied within standard tape application season as by the 3M Climate Guide
- o Can be applied early and late season, down to 40 °F (4 °C) with use of 3M Stamark Surface Preparation Adhesive P-50 or 3MTM Stamark Low VOC Surface Preparation Adhesive SPA60
- o Retroreflective layer of glass beads bonded in a highly durable polyurethane topcoat
- o Manufactured without the use of heavy metals, lead chromate pigments or other similar, lead containing chemicals
- o Nominal total thickness of 0.090 in. (2.3 mm)
- o White: 270 ES
- o Yellow: 271 ES

2 Specifications

2.1 Retroreflectivity

Table 1 presents minimum initial coefficient of retroreflected luminance (R_L) values for tape when measured in accordance with ASTM D4061 and ASTM 4505. R_L values are expressed in millicandelas per square foot per footcandle $[(\text{mcd} \bullet \text{ft}^{-2}) \bullet \text{fc}^{-1}]$.

Table 1. Minimum R_L values for white and yellow Tape.

	White (270 ES)	Yellow (271 ES)
Entrance Angle ^a	88.76°	88.76°
Observation Angle ^a	1.05°	1.05°
Coefficient of Retroreflected Luminance $[\text{mcd}/\text{m}^2/\text{lux}]$	300	250

a. An Entrance Angle of 88.76° and an Observation Angle of 1.05° are used to simulate the viewing geometry of a driver at a distance of 30 meters.

2.2 Color

The daytime and nighttime colors of Tape conform to ASTM D6628, the Standard Specification for Color of Pavement Marking Materials.

2.3 Skid Resistance

The patterned, retroreflective, pliant polymer surfaces of Tape shall provide average initial skid resistance values of 45 BPN or more when tested according to ASTM E303, subject to the following modification:

- o Skid resistance is calculated as the average of two measurements taken at an angle of 45° from one another.

2.4 Patchability

Snow removal equipment and heavy traffic may cause wear and damage to Tape. Such damaged areas can be repaired using patches made of Tape. Remove damaged Tape and replace it according to the instructions presented in the “Overlay Applications” section of [3M Information Folder 5.7](#).

3 Application

Install Tape according to the instructions presented in [3M Information Folder 5.7](#).

All applications should be installed using the instructions in the appropriate section of 3M Information Folder 270 ES. Surface preparation adhesive is not needed when applying the tape during the application season outlined in the 3M Climate Guide for 3M Stamark Pavement Marking Tapes. The tape can be applied down to 40 °F (4 °C)

ambient temperature outside the dates outlined in the Climate Guide for Stamark pavement marking tapes with the use of P-50 or SPA60. For long line applications, the P-50 or SPA60 surface preparation adhesive should be applied with a 3M Adhesive Spray Applicator PS-14. For transverse markings, the surface preparation adhesive should be applied using a solvent resistant 3/8 inch nap paint roller.

Road lanes are typically exposed to different levels of traffic shear exposure. Road lanes that are exposed to a high frequency of high shear turning, especially by trucks and other large vehicles, require use of SPA60 or P50 for application of Stamark pavement marking tapes. The following table summarized the product and surface preparation adhesive application recommendations by shear condition:

Contact 3M Technical Service at 1800-553-1380 for questions.

Table 2.

Shear Level	Product and Adhesive Recommendation
Very High Shear	Stamark Tape Use SPA60
High Shear	Stamark Tape "A" and "L" Series Use SPA60
Pounds per 100 sq ft	Stamark Tape "A" and "L" Series Use P50 or SPA60
Low Shear	Stamark Tape "A" and "L" Series
Within the Climate Guide Recommendations	

4 Durability

The Tape is weather resistant and provides excellent retroreflectivity and color retention. The Tape is a highly effective lane marking material and will show no appreciable fading, lifting, shrinkage, or chipping for the duration of the warranty period, when applied according to the 3M requirements described in the 3M product literature.

The Tape's durability depends on several environmental and traffic conditions, including, but not limited to, snow removal practices, method of application, and pavement and atmospheric conditions at the time of application. Damage will be caused by heavy trucks, excessive encroachment (crossover) on high ADT roadways, narrow lane width, unpaved shoulders, snow removal and ice control techniques. It is recommended that the customer thoroughly evaluate Tape under the conditions present at the installation location prior to large-scale implementation. While experience has shown that, properly applied, these materials are highly effective traffic control devices, 3M makes no generalized performance claims.

5 Storage

Store indoors, in a cool, dry area. Use within one year of receipt.

6 Health and Safety Information

Read all health hazard, precautionary, and first aid statements found in the Safety Data Sheets (SDS) and Article Information Sheets for important health, safety, and environmental information. To obtain SDSs and Article Information Sheets for 3M products, go to 3M.com/SDS, contact 3M by mail, or for urgent requests call 1-800-364-3577.

7 Basic Product Warranty

3M warrants to the purchaser that the Tape will be free of defects in materials and manufacture at the time of shipment and meet the specifications stated in this product bulletin ("Basic Warranty"). If Tape is proven not to have met the Basic Warranty on its shipment date, then a buyer's exclusive remedy, and 3M's sole obligation, at 3M's option, will be refund or replacement of the Tape.

8 Other Product Information

Always confirm that you have the most current version of the applicable product bulletin, information folder, or other product information from 3M's Website at <http://www.3M.com/roadsafety>.

9 Literature References

3M IF 5.2	Highway Tape Applicator (HTA)
3M IF 5.7	3M™ Stamark™ Tapes Pavement Surface Preparation and Application Techniques
3M IF 5.8	3M™ Stamark™ Pre-Cut Symbols and Legends Application
3M IF 5.17	3M™ Stamark™ Surface Preparation Adhesive P-50 Instructions for use with 3M™ Stamark™ Pavement Marking Tapes
3M IF 5.18	Application Guidelines for Pavement Markings in Grooved Pavement Surfaces
3M IF 5.21	3M™ Stamark™ Low VOC Surface Preparation Adhesive SPA60 Spray Application Instructions for Bulk Liquid for Longitudinal Pavement Marking Tapes

ASTM Test Methods are available from ASTM International, West Conshohocken, PA.

For Information or Assistance

Call: 1-800-553-1380

In Canada Call:

1-800-3M HELPS (1-800-364-3577)

Internet:

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