NDDOT Contract No. 50130102

North Dakota Department of Transportation
INVITATION TO BID

Bid Number: 550-72-13-050	Bid Opening Date & Time: 02/12/2013 02:00 PM
Items: Tape, Pavement Marking -Preformed Patterned & Wet Retroreflective	Buyer: Vanessa Brosten
Bid Mailing Address: 608 East Boulevard Avenue, Rm 222	Telephone Number: 701-328-2571
City, State, Zip: Bismarck, ND, 58505	Email: vbrosten@nd.gov
Contract Period: 03/01/2013 TO 02/28/2014	Date Prepared: 01/29/2013

BID RESPONSE

Please submit your bid response on the attached forms in conformance with the instructions and specifications in the NDAC 04-12-01 – 04-12-16. One copy of your bid response must be returned to the North Dakota Department of Transportation (NDOT) prior to the time and date specified for the bid opening. Bid responses received after the time and day specified for the bid opening will be rejected. Mark envelope with word "BID" and the opening time and date. **If your bid response is accepted by NDDOT, then your bid response will constitute a binding contract.**

CONTRACT

This contract is made and entered into by and between NDDOT for the state of North Dakota (hereinafter state) and

Vendor Name	Vendor Address
3M Company	3M Center Bldg 235-3A-09 St. Paul, MN. 55144

(hereinafter vendor). In consideration of and for the acceptance by the state of the offer made by the vendor pursuant to the bid response, the vendor agrees and promises to sell, furnish, and deliver to the state, at the time, places, and prices specified in the bid response, all goods, merchandise, supplies, commodities, equipment, or other items contained in the bid response and for which the vendor has been awarded this contract by the state. The vendor shall fully perform this contract in accordance with the terms and conditions contained in the bid response including all specifications, rules, or regulations mentioned therein, and shall comply with all applicable provisions of the NDAC 04-12-01 – 04-12-16 promulgated by the State Purchasing Division; such manual being made a part of this contract by reference. The Risk Management Appendix and Civil Rights Appendix, both attached, are hereby incorporated into and made a part of this agreement.

The following must be completed by the vendor; failure to do so may result in the rejection of the vendors bid proposal.

Vendor Name 3M Company		
Mailing Address 3M Center Bldg 235-3A-09 St. Paul, MN. 55144-1000		
Telephone Number 800-553-1380	Fax Number 800-591-9293	E-mail Address tbidgroup@mmm.com

John N. Morris Contract Administrator

Name & Title (Type or Print)

Signature

February 8th, 2013

Date

To be signed by **Owner; Partner; Corp. Pres., Vice Pres., or other authorized Corp. Officer** or bid may be rejected. (if signed by other authorized Corp. Officer, please attach copy of Power of Attorney or other documentation showing authority to sign.)

FOR ND DEPARTMENT OF TRANSPORTATION USE ONLY Accepted by the state according to provisions of award.

Authorized Signature Grant Levi		Date 2/28/13
Recommended for approval Mike Kise	Date 2-25-13	Approximate contract amount $ unknown

NDDOT North Dakota Department of Transportation

APPROVED as to execution this 28th day of February 2013
ATTORNEY GENERAL
By
SPECIAL ASST. ATTORNEY GENERAL

CLA 7480 (Div. 50)

MAILING INSTRUCTIONS

Mail only one completed and signed request for bid document per envelope, unless instructed otherwise. Request for bid documents not signed or received after the date and time specified in the request for bid will be rejected.

BID IS: ☒ SEALED ☐ NOT SEALED

Address the envelope containing your response in the following manner:

BID NUMBER - 550-72-13-050
BID OPENING DATE/TIME - February 12, 2013; 2:00 PM Central
N. D. DEPT. OF TRANSPORTATION
PROCUREMENT, RM 222
608 E BOULEVARD AVE
BISMARCK ND 58505-0700

BIDDERS INSTRUCTIONS

1. **Acceptance/Rejection/Waiver.** The state of North Dakota reserves the right to accept or reject any or all bids and to waive minor irregularities or technicalities, provided such waiver does not substantially change the offer or provide a competitive advantage to any vendor, in the judgment of the state.

2. **Affirmative Action.** The contractor will take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of handicapped, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin, or disability/ handicap.

3. **Assistance to Bidders with a Disability.** Bidders with a disability that need an accommodation must contact the Procurement Officer prior to the deadline for receipt of bids so that reasonable accommodations can be made.

4. **Alterations and/or Corrections.** The person signing the bid response must initial any or all manual alterations and/or corrections to the bid response. Those bid responses with alterations and/or corrections that are not initialed may be rejected.

5. **Award.** Award will be made to a responsive, responsible bidder with the lowest price considering conformity with specifications, terms of delivery, quality, and serviceability. NDDOT reserves the right to consider bids varying in minor respects from any specific requirements herein, but judged to meet the intent of this request.

Contracts are not awarded at the bid opening. Bid responses will be firm for 30 days, unless stated otherwise.

6. **Awards, Splitting of.** The state reserves the right to make awards by item, groups of items, or on the total low bid for all the items specified as indicated in the detailed specifications. Bidders interested only in the total low bid for all items are to state 'all or nothing' on their bid response.

7. **Bidder Checklist.** HAVE YOU REMEMBERED TO:
   - Bid F.O.B. Destination (Ship To: Address) Freight Prepaid.
   - Mark envelope as indicated.
   - Review Standard Terms and Conditions contained in this solicitation.
   - Sign your bid on the cover sheet.
   - Initial all bid/pricing changes you made.
   - Bid responses must be submitted in ink or type written.
   - Review and complete all requirements contained in this solicitation to ensure compliance.

8. **Bidder's Responsibility and Late Bids.** It is the bidder's responsibility to ensure that a bid response is physically deposited with the NDDOT Procurement Office prior to the date and time specified for the opening. Late bid responses will not be opened and will be rejected and returned regardless of the degree of lateness or the reasons. It is the bidder's responsibility to comply with the State of North Dakota's laws and regulations.

9. **Bid Summary.** Bid summaries are available when the bid has been awarded. When bids are issued using the State's electronic bidding system, the bid summary will be posted and available for download from: http://www.nd.gov/spo/

Bid summaries will be mailed to those bidders who supply a self-addressed, stamped envelope with their bid response. A copy of the bid summary may also be obtained by visiting the NDDOT Procurement Office during normal working hours.

10. **Bid Bond.** Waived in this instance: however, bidder(s) failing to enter into a contract with this office, upon notification of award, may be subject to removal from the bidder's list.

11. **Clarifications, Bid Changes and Questions Deadline.** The Procurement Officer is the point of contact. Any irregularities, lack of clarity, requested bid changes and all questions regarding this bid and the procurement process must be addressed to the Procurement Officer referenced on the first page of this document **not later than end of business February 4, 2013.** (Contact information is indicated on cover page). If a bid amendment is required, it will generally be issued after this date.

The bidder is cautioned that the requirement of this solicitation can be altered only by written amendments and that verbal communications from whatever source are of no effect.

12. **Definitions.**
- Bidder - any person or firm submitting a competitive bid in response to a solicitation.
- Bid summary - a summary of all bid responses received by the NDDOT Procurement Office.
- Bid response - the executed document submitted by a bidder in response to a solicitation.
- Contract - a deliberate written agreement between two or more competent persons to perform specific act or acts.
- Contractor - any person or firm having a contract with a governmental body.
- Solicitation - the process of notifying prospective bidders that the state wishes to receive bids for furnishing goods or services.

13. **Deviation from Specifications Supplied by NDDOT.** Unless otherwise indicated by the bidder, it will be assumed that specifications will be met in all respects. Any deviation from the minimum specifications indicated herein must be clearly pointed out PRIOR TO THE DEADLINE FOR RECEIPT OF QUESTIONS; otherwise, it will be considered that the items offered are in strict compliance with these specifications, and the bidder will be held responsible.

14. **Electronic & Facsimile Bids.** Bid responses are not to be email attached or faxed to the NDDOT unless this transmittal method has been authorized by the Procurement Officer or bid document. (Contact the Procurement officer regarding additional requirements and exceptions.) Bid responses electronically submitted or faxed may be rejected as non-responsive.

15. **Freight/F.O.B. Destination.** Freight and transportation charges are to be included in the price of the products, unless otherwise specified in the solicitation. (F.O.B. - Free On Board).

16. **Indemnification.** The attached Risk Management will be incorporated into the contract. The successful Bidder may be required to furnish proof of insurance, as detailed in the Risk Management Appendix.

17. **Multiple Bid(s).** Bidders may submit more than one bid response(s) for the item(s) specified in the solicitation. Each bid submitted must comply in all aspects with the bid requirements and these instructions.

18. **Negotiation.** NDDOT reserves the right to negotiate with the successful bidder to ensure the best possible consideration is afforded to all concerned.

19. **Open Records.** After award, bid documents will be subject to the North Dakota open records law. Records are closed or confidential only if specifically stated in law. If a request for public information is received, the procurement officer will determine whether the information is an exception to the North Dakota open records law, and the information will be processed appropriately. Those interested in reviewing the bid file, are to make arrangements, with the NDDOT Procurement Office. The NDDOT Procurement Office hours are 8:00 a.m. - 12:00 p.m. and 1:00 p.m. - 5:00 p.m. Monday through Friday.

20. **Packaging.** All shipments are to be packaged according to accepted commercial practices to avoid damage in shipment.

21. **Performance Bond.** Successful bidders will not be required to furnish a performance bond; however, failure to perform satisfactorily will result in the immediate termination of the contract(s) and bidders may be subject to removal from the bidder's list.

22. **Preparation of Bid.** Bids will be accepted on NDDOT forms only. If the document is located on the State Procurement Office website, then bidder is to download the document and type or write their responses as indicated by the bid document. Alteration of the bid document may be cause for bid rejection. Bidders are cautioned to examine specifications and all instructions. Failure to do so will be at the bidder's risk.

23. **Pricing.** Unit prices are to be stated in United States currency and based on the unit of measurement specified in the solicitation, F.O.B. Destination, to the NDDOT delivery locations specified herein.

In the event of mathematical differences between the unit price and extended total, the unit price will prevail.

24. **Protest of Award.** An interested party may protest the award within seven days after receiving notice in accordance with N.D.C.C. 54-44.4-12 and N.D.A.C. 4-12-14.

25. **Receipt of Bids.** All sealed bids received by the NDDOT Procurement Office will be opened and read in Room 222, 608 East Boulevard Avenue, Bismarck, North Dakota, at the time specified in the solicitation.

26. **Rejection.** Bid responses may be rejected if:

- The bid response is not legible.
- The bid response is not submitted on the form supplied.
- The bid response is not completed as requested.
- The bid response is completed and/or signed in pencil.
- The bid response is faxed to the procurement office.
- The bid response is not signed by an authorized company representative.
- The bid response is not responsive to the specifications or other requirements of the solicitation.
- Changes to the bid response are not initialed.
- The bid response is received after the time and date specified.
- The bidder has not met Vendor Registration requirements or is suspended or debarred.
- The bid document has been altered by the bidder.
- The bidder is determined to be not responsible (N.D.A.C. 4-12-11-04).
- The price is not fair and reasonable
- Or a combination of above.

27. **Signature.** The bid must be signed manually in ink. The name and title of the person signing the bid response must be typed or printed above the signature. The bid must be signed by **Owner, Partner, Corp. Pres., Vice Pres., or other authorized Corp. Officer** or the bid may be rejected. If signed by other authorized Corp. Officer or representative, please attach a letter signed by the Owner, Partner, Corp. Pres., or Vice Pres. indicating the individual has authority to enter into a contract on behalf of the company (or a Power of Attorney).

28. **Supplemental Terms and Conditions.** Bids including supplemental terms and conditions will be accepted, but supplemental conditions that conflict with any conditions contained in this ITB or that diminish the State's rights will be considered null and void. The State is not responsible for identifying conflicting supplemental terms and conditions before issuing a contract award.

After award of contract:

a) If a conflict arises between a supplemental term or condition included in the bid and a term or condition of the ITB, the term or condition of the ITB will prevail, and,

b) If the State's rights would be diminished as a result of application of a supplemental term or condition included in the bid, the supplemental term or condition will be considered null and void.

Changes, modifications, additions, or alterations to the bid document could be cause for rejection of the submitted bid at the sole discretion of the NDDOT. Contact the Procurement Officer in writing prior to the deadline for clarifications.

29. **Taxes.** The State does not pay sales tax or federal excise tax. The state sales tax exemption number is E-2001. The federal tax-free transaction number is 45-0309764.

30. **Vendor Registration.** Bids will be accepted from bidders who are not currently Approved Bidders for the State of North Dakota; however, the successful bidder may be required to become approved prior to award, in accordance with N.D.C.C. 54-44.4-09. To become an Approved Bidder, you must: 1) register with the North Dakota Secretary of State (fees apply), and 2) submit a completed Bidder List Application to the ND State Procurement Office. Registration instructions and forms are available on-line at: www.nd.gov/spo/vendor. Contact the ND State Procurement Office at 701-328-2683 or infospo@nd.gov for assistance.

31. **Withdrawal or changes to a bid response prior to the bid opening date and time.** A bidder may withdraw or make a change to his bid response prior to the bid opening date and time. The request to make a change or withdraw must be in writing by a representative of the firm. The request to withdraw or change must be signed by the bidder or his designated representatives.

32. **Withdrawals after the bid opening date and time.** Withdrawals after the bid opening will be allowed only upon written approval from the NDDOT Procurement Office. Vendors continually withdrawing bids after the bid opening may be removed from the Vendor Database.

GENERAL CONTRACT TERMS AND CONDITIONS

1. **Applicable Law and Venue.** Any dispute arising out of this agreement will be resolved under the laws of the State of North Dakota.

2. **Binding Contract.** The acceptance of a bid response in writing by the purchasing agency constitutes a contract between the bidder and the State. Written acceptance from the purchasing agency will be in the form of a purchase order, notification of award, or contract. Any oral agreement or arrangement by a bidder with a State employee or purchasing agency will have no force or effect unless reduced to writing.

3. **Compliance with Laws, Nondiscrimination and Affirmative Action.** The contractor must, in performance of work under this contract, fully comply with all applicable federal, state or local laws, rules, regulations and policies, including those relating to nondiscrimination, affirmative action, accessibility and civil rights including Title VI of the Civil Rights Act of 1964. The contractor agrees to file all required reports on time, to make required payroll deductions, and to pay all taxes and premiums owed on time, including sales and use taxes and unemployment compensation and workers' compensation premiums. The contractor shall have and keep current at all times during the term of this contract all licenses and permits required by law.

4. **Contract Amendments, Waivers.** After a binding contract has been entered into, no changes (i.e. additions, substitutions, subcontracting or a price adjustment) may be made, unless prior approval has been obtained from the purchasing agency and Procurement Officer.

The terms of this contract shall not be waived, altered, modified, supplemented, or amended, in any manner whatsoever, except by written instrument signed by the parties. No waiver consent, modification or change of terms of this agreement shall bind either party unless in writing and signed by both parties .Such waiver, consent, modification, or change, if made shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this agreement.

5. **Contract Term and Renewal Option.** The NDDOT will enter into a contract with an effective date **beginning March 1, 2013 and ending February 28, 2014**, inclusive. This contract may be renewed upon satisfactory completion of the initial contract term. The NDDOT reserves the right to execute up to two options to renew this contract for a period of twelve (12) months each, not to exceed thirty-six (36) months total. Renewals will be documented by amendment.

The NDDOT reserves the right to renegotiate price and terms provided that such negotiated price and terms fall within the original scope of work for this bid. Negotiations may be conducted annually or at such times that additional and unexpected services falling within the scope of the contract may occur. Such changes will be documented by amendment to the contract.

6. **Contract Termination.**

a. **Termination without Cause.** This contract may be terminated by mutual consent of both parties, or by either party upon 30 days' written notice.

b. **Termination for Lack of Funding or Authority.** The State may terminate this contract effective upon delivery of written notice to the contractor, or on any later date stated in the notice, under any of the following conditions:
   i. If funding from federal, state, or other sources is not obtained and continued at levels sufficient to allow for purchase of the services or supplies in the indicated quantities or term. The contract may be modified by agreement of the parties in writing to accommodate a reduction in funds.
   ii. If federal or state regulations or guidelines are modified, changed or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this contract or are no longer eligible for the funding proposed for payments authorized by this contract.
   iii. If any license or certificate required by law or regulation to be held by the contractor to provide the services required by the contract is for any reason denied, revoked or not renewed.

   Any such termination of this contract under (i), (ii), or (iii), above, shall be without prejudice to any obligations or liabilities of either party already accrued prior to such termination.

c. **Termination for Cause.** The State by written notice of default to the contractor may terminate the whole or any part of this contract:
   i. If the contractor fails to provide services required by this contract within the time specified herein or any extension thereof; or
   ii. If the contractor fails to perform any of the other provisions of this contract, or so fails to pursue the work as to endanger performance of this contract in accordance with its terms and after receipt of written notice from the State, fails to correct such failures within ten days or such longer period as NDDOT may authorize.
   iii. The rights and remedies of the State provided in the above clause related to defaults by the contractor are not exclusive and are in addition to any other rights and remedies provided by law or under this contract.

d. **Termination, Deliveries.** If the contract is terminated for any reason, the contractor is responsible for delivery of all commodities and services ordered prior to the termination, unless those orders had been canceled by the Purchasing Agency or Entity.

7. **Contract Price Adjustment**: The Contract Unit Prices shall be firm for the twelve (12) months of the contract period. On an annual basis, all unit prices may be subject to price adjustment (increase / decrease). The request for a price adjustment shall be submitted to the Procurement Office at least forty five (45) days before the scheduled contract expiration date and must include justification for the proposed change. The Procurement Officer will respond as follows:

1) The request may be granted,
2) The contract may be cancelled and solicitation may be re-advertised, or
3) The contract may be continued without change.

If a price increase is approved by the NDDOT, the date the increase will be effective along with the new unit prices will be included in an amendment document. Approval of any price increase renews the twelve month firm price period.

The State shall also be advised of and receive the benefit of any price decrease. The same notification and review process will apply to a decrease in cost.

8. **Materials and Workmanship.** All material and workmanship shall be subject to inspection and testing at the discretion of the purchasing agency.

9. **Inspection and Investigations.** The State reserves the right to conduct inspections and investigations related to the bidder and offered commodities or services to make determinations regarding compliance with the bid requirements and responsibility of the bidder.

10. **Billing and Payment Procedures** Orders will be placed by the individual NDDOT district locations Invoices are to be submitted as indicated on the purchase orders unless otherwise instructed. Failure to submit correct invoices to the appropriate NDDOT office may delay contractor payment.

Payment will normally be made within thirty days after delivery and acceptance of commodities or services under this contract and receipt of a correct invoice. All invoice and payment inquiries must be directed to the purchasing agency.

11. **Subcontracts, Assignment**: The contractor shall not subcontract, assign or transfer the contractor's interests or duties under this contract without express written consent of the purchasing agency.

12. **Successors in Interest**: The provisions of this agreement shall be binding upon and shall inure to the benefit of the parties hereto, and their respective successors and assigns.

13. **Receiving:** Deliveries must arrive at the designated destination(s) during normal business hours unless other shipping/receiving instructions are issued by NDDOT personnel. The contractor shall contact the NDDOT to schedule delivery dates and times at least 24 hours in advance of delivery.

All NDDOT offices will be closed in recognition of State holidays. Any day declared a holiday by the President or Governor will also be recognized by office closure.

14. **Service Representative.** The contractor must provide a dedicated customer service representative to provide support for this contract. The contractor shall notify the Procurement Officer in the event the representative is changed.

NAME: Amy Schoenecker
(Name of person servicing this contract)

BUSINESS NAME: 3M Company - Traffic Safety and Security Division Customer Service Dept.

MAILING ADDRESS: 3M Center Bldg 235-3A-09

CITY & STATE: St. Paul, MN. ZIP CODE: 55144-1000

PHONE NUMBER: 800-553-1380 TOLL FREE: 800-553-1380

FAX NUMBER: 800-591-9293 E-MAIL: tbidgroup@mmm.com

SPECIFIC TERMS AND CONDITIONS FOR PAVEMENT MARKING TAPE

Scope:
This solicitation is intended to establish pricing agreements for pavement marking tape for highway maintenance.

NDDOT will not be obligated to purchase any minimum quantity from any contract(s) resulting from this solicitation.

Purpose:
The resulting contract(s) will allow NDDOT to order replacement pavement marking tape for highway maintenance.

Award Criteria:
NDDOT reserves the right to award multiple contracts, by specification, for the pavement marking tape. Award will be made to the responsive bidder(s) considering price, specifications, terms of delivery and ability to provide service.

Specifications:
Pavement marking tape is required to meet the specifications indicated herein.

Specifications: **Bidders must furnish specifications for each item bid. Sales literature generally does not contain sufficient data to determine whether the materials comply with specifications. Bids received without proper documentation or required certifications will be deemed unresponsive and may be rejected as such. Bidders must also furnish information on applicable warranties and/or guarantees, including the terms and conditions.**

880.05 PREFORMED PATTERNED PAVEMENT MARKING FILM.

A. **General.** The preformed patterned markings shall consist of white or yellow films with ceramic beads incorporated to provide immediate and continuing retroreflection and shall meet the following requirements:

The markings shall be manufactured and packaged to permit storage at the manufacturer's recommended shelf temperature for a period of not less than one year from the date of purchase.

Legends and symbols shall meet the applicable shapes and sizes.

B. **Composition.** The retroreflective pliant polymer pavement markings shall consist of a mixture of high quality polymeric materials, pigments, and glass beads distributed throughout its base cross-sectional area, with a reflective layer of glass beads bonded to a durable polyurethane topcoat surface. The patterned surface shall have approximately 50% + or - 15% of the surface area raised and presenting a near vertical face to traffic from any direction. The channels between the raised areas shall be substantially free of exposed beads or particles.

The preformed markings shall conform to pavement contours by the action of traffic. The pavement markings shall be capable of application on new, dense, and open graded asphalt wearing courses during the paving operation according to the manufacturer's instructions. After application, the marking shall be immediately ready for traffic.

C. **Skid Resistance.** The surface of the tape shall provide an initial minimum skid resistance value of 45 BPN when tested according to ASTM E-303 except values shall be taken at down web and at 45 degree angle from down web. These two values will then be averaged to find the skid resistance of the patterned surface.

D. **Thickness.** The patterned material without adhesive shall have a minimum caliper of 0.065 inches at the thickest portion of the patterned cross section and minimum caliper of 0.02 inches at the thinnest portion of the cross section.

E. **Beads.** The glass beads on the surface of the material shall have a minimum index of refraction of 1.7 when tested using the liquid oil immersion method. The glass beads mixed into the pliant polymer shall have a minimum index of 1.5 when tested by oil immersion method.

F. **Patchability.** The pavement marking material shall be capable of use for patching worn areas of the same type according to the manufacturer's instructions.

G. **Reflectance.** The white and yellow markings shall have the following initial expected retroreflectance values as measured according to the testing procedures of ASTM D-4061. The photometric quantity to be measured shall be specific luminance (SL), and shall be expressed as millicandelas per square foot per foot candle. The test distance shall be 50 feet and the sample size shall be a 2.0 foot by 2.5 foot rectangle.

	White	**Yellow**
Entrance Angle	86.5^0	86.5^0
Observation Angle	1^0	1^0
SL	700*	500*

*All reflectance measurements shall be made using an "Ecolux" brand retroreflectometer or equivalent.

Type R-WR – Wet-Retroreflective Pavement Striping Tape.

A. **General.** The wet retroreflective system shall consist of white or yellow retroreflective tape on a conformable backing with deformable highly retroreflective markers adhered transversely to the top surface with a pressure sensitive adhesive. The tape and the wet retroreflective marker sheeting element, white or yellow, shall meet standard highway colors.

The size, quality, and refractive index of the glass beads shall be such that the performance requirements for the marking shall be met. The bead adhesion shall be such that the beads are not easily removed when the material surface is scratched with the thumbnail.

The preformed tape shall be pre-coated with a pressure-sensitive adhesive and shall adhere to asphalt concrete or Portland cement concrete, according to the manufacturer's instruction, without the use of heat, solvents or other additional adhesive means and shall be immediately ready for traffic after application.

Preformed words and symbols shall meet the applicable shapes and sizes.

The removable striping tape must be designed and constructed in such a manner that it can be readily removed when the markings are no longer applicable. The tape shall be capable of performing for the duration of a normal construction season and then be capable of being removed intact or in large pieces manually.

B. **Composition.** The removable preformed retroreflective pavement markings shall consist of glass beads embedded in white or yellow film with a thin flexible conformable backing which is precoated with a pressure-sensitive adhesive. A structured interlaced medium shall be incorporated to facilitate removal.

C. **Reflectance.** The white and yellow films shall have the initial minimum reflectance values at an observation angle of 1.05 degrees and an entrance angle of 88.76 degrees under wet conditions, as measured in accordance with ASTM E 2176. The photometric quantity to be measured shall be specific luminance (SL) and shall be expressed as millicandelas per square foot per foot candle [(mcd/ft^2)/fc]. The angular aperture of both the photoreceptor and light projector shall be 6 minutes of arc. The reference center shall be the geometric center of the sample, and the reference axis shall be taken perpendicular to the test sample.

	White	Yellow
Entrance Angle	88.76°	88.76°
Observation Angle	1.05°	1.05°
Specific Luminance	250	200

D. **Skid Resistance.** The surface of the marking shall provide an initial minimum skid resistance value of 45 BPN when tested according to ASTM E 303-74.

E. **Application/Adhesion.** Short-Term Type R-WR pavement markings shall be installed where air and pavement temperatures are 50°F and rising. The manufacturer shall demonstrate that the properly-applied pavement marking adheres to the roadway pavement under climatic and traffic conditions normally encountered in construction work where proposed for use.

F. **Removability.** The marking film shall be removable from asphalt concrete and portland cement intact or in large pieces, either manually or with a roll-up device at temperatures above 40°F without use of heat, solvents, grinding, or blasting.

BID RESPONSE

BIDDERS MUST ATTACH COMPLETE PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION.

1. PREFORMED PATTERNED PAVEMENT MARKING FILM. Preformed patterned markings as per specification 880.05. Product shall be available in rolled goods of various widths and prefabricated legends and symbols. Submit separate price lists for available legends and symbols not identified below.

Brand 3M Company **Warranty** Please see product bulletin

DESCRIPTION	Brand and Product Number/Package Size		Bid Price
a. Rolled Goods (Indicate available width/length per roll)	Yellow: # A381IES Yellow		$ 4.54 SF
	White: # A380IES White		$ 4.54 SF
	Roll sizes: 4", 6", 8", 10", 12", 16", 18", & 24" standard widths		
b. Curved	# SMS-L380IES-RA or SMS-L380IES-LA	Qty/Pkg 4/PKG	$ 700.00/PKG
c. Only	# SMS-L380IES-ON	Qty/Pkg 2/PKG	$ 560.00/PKG
d. Railroad crossing	# SMS-L380IES-RX	Qty/Pkg 1/PKG	$ 555.00/PKG
e. Disabled symbol	# SMS-L380IES-HC	Qty/Pkg 1/PKG	$ 205.00/PKG
e. Adhesive	# P50 or SPA60 Prep Adhesive (5 gallon containers)		$ 164.38/ctn

2. WET REFLECTIVE MARKING, Permanent Type R-WR. Wet Retroreflective pavement Striping Tape. Product shall be available in rolled goods of various widths and prefabricated legends and symbols. Submit separate price lists for available legends and symbols not identified below.

Brand 3M Company **Warranty** Please see product bulletin for product performance.

DESCRIPTION	Brand and Product Number/Package Size		Bid Price
a. Rolled Goods (Indicate available width/length per roll)	Yellow: # A711 Yellow		$ 3.00 SF
	White: # A710 White		$ 3.00 SF
	Roll sizes: 4", 5", 6", 8", 24" & 48" standard widths.		
b. Curved	# SMS-L710-LA or SMS-L710-RA	Qty/Pkg 4/PKG	$ 360.00/PKG
c. Only	# SMS-L710-ON	Qty/Pkg 2/PKG	$ 280.00/PKG
d. Railroad crossing	# SMS-L710-RX	Qty/Pkg 1/PKG	$ 350.00/PKG
e. Disabled symbol	# SMS-L710-HC	Qty/Pkg 1/PKG	$ 100.00/PKG
e. Adhesive	# P50 Prep Adhesive (5 gallon containers)		$ 164.38/ctn

Estimated delivery: 10-20 days ARO.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
CIVIL RIGHTS APPENDIX

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor), agrees as follows:

1. Compliance with Regulations: The Contractor shall comply with the regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

2. Nondiscrimination: The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, national origin, sex, age, disability/handicap, or income status**, in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate, either directly or indirectly, in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding or negotiation, made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, national origin, sex, age, disability/handicap, or income status.**

4. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the North Dakota Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the North Dakota Department of Transportation, or the Federal Highway Administration, as appropriate, and shall set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, the North Dakota Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including but not limited to:

   a. withholding of payments to the Contractor under the contract until the Contractor complies, and/or
   b. cancellation, termination, or suspension of the contract, in whole or in part.

6. Incorporation of Provisions: The Contractor shall include the provisions of paragraphs 1 through 6 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto.

The Contractor shall take such action with respect to any subcontract or procurement as the North Dakota Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions, including sanctions for noncompliance provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation by a subcontractor or supplier as a result of such direction, the Contractor may request the North Dakota Department of Transportation to enter into such litigation to protect the interests of the State; and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**The Act governs race, color, and national origin. Related Nondiscrimination Authorities govern sex, 23 U.S.C. 324; age, 42 U.S.C. 6101; disability/handicap, 29 U.S.C. 790; and low income, E.O. 12898.

Risk Management Appendix

Supply Contracts with Private Individuals, Companies, Corporations, Etc.:

Each party agrees to assume its own liability for any and all claims of any nature including all costs, expenses and attorney's fees which may in any manner result from or arise out of this agreement.

Contractor, or Contractor's delivery agent, shall secure and keep in force during the term of this agreement, from insurance companies, government self-insurance pools or government self-retention funds authorized to do business in North Dakota, the following insurance coverages:

1) **Commercial general liability** and **automobile liability** insurance.
2) **Workers compensation** insurance.

Contractor shall produce certificates of insurance or copies of insurance policies upon request by the State.

When a portion of a Contract is sublet, the Contractor shall obtain insurance protection (as outlined above) to provide liability coverage to protect the Contractor and the State as a result of work undertaken by the Subcontractor. In addition, the Contractor shall ensure that any and all parties performing work under the Contract are covered by public liability insurance as outlined above. All Subcontractors performing work under the Contract are required to maintain the same scope of insurance required of the Contractor. The Contractor shall be held responsible for ensuring compliance with those requirements by all Subcontractors.

RM Consulted 2007
Revised 6-07

NDDOT
North Dakota
Department of Transportation

3M
Stamark™
Wet Reflective Removable Tape
Series 710

Product Bulletin 710 **April 2009**

Description

3M™ Stamark™ Wet Reflective Removable Tape Series 710 is highly reflective under both wet and dry conditions. Series 710 tape is a conformable marking tape intended for longitudinal line applications in highway work zones where removability is required. The tape is designed to perform for the duration of the normal construction season.[1] After the pavement markings are no longer required, the tape can be manually removed intact or in large pieces. Series 710 is also supplied as pre-cut symbols and legends for work zone applications.

Series 710 tape utilizes specially designed optics to provide dry and wet reflective performance. It is comprised of white or yellow film supported by a flexible, conformable backing. The tape is reinforced by a structured medium and pre-coated with a pressure sensitive adhesive (PSA) for easy, rapid application in temperatures above 50°F (10°C).

1. A normal construction season is defined as the time after the last snow plowing in the spring and before the first snow plowing in the fall/winter. In locations where snow removal is not performed Series 710 tape is intended for use up to one year. Series 710 tape is a temporary removable product not intended for multi-year applications.

Properties

A. Product Features and Advantages

- Highly reflective, wet or dry.
- Durable during normal work zone season as defined above.
- Skid resistant.
- Coated with pressure sensitive adhesive (PSA).
- Tape available in white and yellow.
- Symbols and legends available in white only.
- Provides continuous delineation, day or night.
- Easy to apply by hand or by machine.
- Easy to remove intact or in large pieces.
- Leaves no lasting marks.
- Roadway may be opened to traffic immediately.

B. Reflectance

Stamark Series 710 has the following initial minimum retroreflectance values under wet and dry conditions. Values are measured under dry conditions in accordance with the testing procedures of ASTM D4061. Retroreflectance values are measured under wet conditions in accordance with ASTM E2176 or ASTM E2177 using a portable reflectometer.

Wet retroreflectance values measured under a "condition of continuous wetting" (simulated rain) will be in accordance with the testing procedure of ASTM E2176. To reduce variability between measurements, test method is to be performed in a controlled laboratory environment while the marking is positioned with a 3 to 5 degree lateral slope. A wetting agent is used to improve wetting of the pavement marking by the water. It is recommended that a 0.1% by volume liquid soap solution be used. Measurements are reported as an average for each roll tested, in a minimum of three locations.

Wet reflective values measured under a "condition of wetness" (simulated rain) will be in accordance with the testing procedure of ASTM E2177. The photometric quality to be measured is coefficient of retroreflected luminance (R_L). The test may be performed with the marking installed on the road. New markings are tested using a wetting agent, as previously described. Laboratory measurements are performed using a 3 to 5 degree lateral slope. Measurements are reported as an average for each roll tested, in a minimum of three locations.

Table 1.
710 Minimum Retroreflectivity Values

White	DRY	WET & RAINY
Entrance Angle	88.76°	88.76°
Observation Angle	1.05°	1.05°
Retroreflected Luminance R_L [(mcd • m^{-2}) • lx^{-1}]	500	250

Table 2.
711 Minimum Retroreflectivity Values

Yellow	DRY	WET & RAINY
Entrance Angle	88.76°	88.76°
Observation Angle	1.05°	1.05°
Retroreflected Luminance R_L [(mcd • m^{-2}) • lx^{-1}]	300	200

Note: 710 wet retroreflectance values when measured under a "condition of wetness" will be higher than when measured under a "condition of continuous wetting." Stated minimum values shall be met using either test method.

English R_L: Millicandelas per square foot per foot-candle [(mcd • ft^{-2}) • fc^{-1}]

Metric R_L: Millicandelas per square meter per lux [(mcd • m^{-2}) • lx^{-1}]

Note: Entrance Angle 88.76° and Observation Angle 1.05° represent a simulated driver viewing geometry at a 30 meter distance.

C. Color

The preformed markings consist of white or yellow.

D. Skid Resistance

The surface of the Series 710 tape provides a minimum initial average skid resistance value of 45 BPN when tested according to ASTM E 303.

E. Application

All applications of Series 710 tapes should be installed using the instructions in this Product Bulletin and the appropriate section of 3M Information Folder 3.2 and the 3M Road Surface Guide for suitability of application. The newly marked area can be opened to traffic immediately following application.

Surface Preparation Adhesive is not needed when applying the tape under normal conditions as outlined under the General Application Conditions section of this bulletin. Under marginal weather conditions, 3M™ Stamark™ Surface Preparation Adhesive P-50 can be used to improve initial and long term adhesion. For long line applications, the P-50 Surface Preparation Adhesive should be applied with a 3M™ Adhesive Spray Applicator PS-14. For symbols and legends, the Surface Preparation Adhesive should be applied using a 3/8" nap paint roller.

General Application Conditions:

- Air and pavement temperature minimums for Series 710 tape are 50°F (10°C) and rising.
- Pavement surface must be clean and dry.
- Butt splices must be used. Do not overlap tape ends.
- Do not apply tape on longitudinal seams or joints.
- In areas of high traffic encroachment or on rough, exposed aggregate surfaces, service life may be limited, for example: tined Portland cement or open graded ACC. In this situation it is recommended that the tape be inspected for replacement on a two-month cycle.
- Stamark P-50 surface preparation adhesive is used to improve initial and long term adhesion when applying Stamark removable pavement marking tapes during marginal weather conditions or to poor substrates that may not allow Stamark tapes to adhere well to the road surface. P-50 can be applied to existing asphalt or portland cement concrete surfaces. The air and pavement temperature must continue to be 50° F (10° C) and rising at the time of application. Marginal weather conditions can include circumstances where:
  - The air and pavement temperatures will not exceed the minimum application temperature for the next 24 to 48 hours after installation.
  - Prolonged or heavy rainfall following tape application is predicted.
  - Application is to occur in early spring or late fall beyond typical road construction season.

F. Removability

The tape is removable from asphalt and smooth Portland cement concrete surfaces intact or in large pieces at temperatures above 32°F (0°C) without the use of heat, solvents, grinding, or sandblasting. Use the following procedure:

1. Wear gloves and use a chisel-like tool to pry up the edge of the tape.
2. Pull straight up at a 90° angle to the pavement.
3. A small amount of heat may be used to help soften the adhesive when removing Stamark tape during cold weather conditions.

Note: Burning or grinding is not recommended.

Removal and replacement during the normal construction season as defined in the Description section may be required in areas of high encroachment

or on rough exposed aggregate surfaces using mechanical methods such as high pressure water blasting. User is responsible for determining suitability of product.

Storage

Stamark tapes should be stored in a cool, dry indoor area and used within one year of receipt.

Health and Safety Information

Read all health hazard, precautionary, and first aid statements found in the Material Safety Data Sheet (MSDS), and/or product label of chemicals prior to handling or use. When using a pavement preparation adhesive with this product, refer to the appropriate MSDS for information about the volatile organic compound (VOC) content of the adhesive. Consult local regulations and authorities for possible restrictions on product VOC content and/or VOC emissions. Electronically, visit us at www.3M.com/us and select MSDS search.

General Performance Considerations

3M™ Stamark™ Wet Reflective Removable Tape Series 710 is designed to provide excellent reflectivity under both wet and dry conditions. Actual performance will be dependent on pavement and atmospheric conditions at the time of application, application method, traffic and exposure conditions.

The user should test for conformance to their requirements before making large scale applications.

3M makes no generalized effective performance claims or material replacement provisions. Abrasion or heavy wear may significantly reduce expected effective performance. Our experience has shown that properly installed Series 710 tape is a highly effective traffic control device.

Literature Reference

IF 3.2 Pavement Surface Preparation and Application Procedures for 3M™ Stamark™ Temporary Pavement Marking Tapes.

IF 5.2 3M™ Highway Tape Applicator (HTA).

IF 5.17 Instructions for Using 3M™ Stamark™ Surface Preparation Adhesive P-50.

3M Road Surface Gude.

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Internet:
www.3M.com/tss

3M assumes no responsibility for any injury, loss or damage arising out of the use of a product that is not of our manufacture. Where reference is made in literature to a commercially available product, made by another manufacturer, it shall be the user's responsibility to ascertain the precautionary measures for its use outlined by the manufacturer.

Important Notice

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, 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, 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.

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3M
Stamark™ High Performance Tape
Series 380I ES

Product Bulletin 380I ES **November 2008**

Replaces 380I ES dated October 2006

Description

3M™ Stamark™ High Performance Tape Series 380I ES 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 380I ES tape offers "Extended Season" applications due to an improved pressure sensitive adhesive (PSA) package on the bottom surface. Series 380I ES does not require 3M™ Stamark™ Surface Preparation Adhesive P-50 prior to application, if applied during the application season as outlined in the 3M Climate Guide for 3M™ Stamark™ Pavement Marking Tapes.

Series A380I ES: Used for long lines, edge lines, channelizing lines, gore markings, stop bars and crosswalks.

Series L380I ES: Linered. Used to cut symbols and legends.

Series SMS-L380I ES: Linered. 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 as defined by the 3M Climate Guide
- Series 380I ES tape can be applied early and late season, down to 40°F (4°C) with use of 3M™ Stamark™ Surface Preparation Adhesive P-50
- Long-term reflectivity design
- Abrasion-resistant microcrystalline ceramic beads bonded in a highly durable polyurethane topcoat
- Yellow microcrystalline ceramic beads incorporated in Series 381I ES tape to improve nighttime yellow color
- Manufactured without the use of heavy metals, lead chromate pigments or other similar, lead-containing chemicals
- Patterned design presents a near vertical surface to traffic to maximize retroreflectance
- Nominal thickness of 0.065 in. (1.6 mm) at pattern heights
- White: 380I ES
- Yellow: 381I ES

B. Reflectance

Series 380I ES tape has the following initial minimum retroreflectance values when measured in accordance with ASTM-D4061. The photometric quality to be measured is coefficient of retroreflected luminance (R_L) and shall be expressed as:

English R_L: millicandelas per square foot per foot-candle [(mcd • ft^{-2}) • fc^{-1}] or equivalently as:

Metric R_L: 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 Luminance*	500	300

R_L [(mcd • ft^{-2}) • fc^{-1}]

*The quantity of retroreflected luminance (R_L) "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 average 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. Application
All applications should be installed using the instructions in the appropriate section of 3M Information Folder 380I 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 ambient temperature outside the dates outlined in the Climate Guide for Stamark pavement marking tapes with the use of 3M™ Stamark™ Surface Preparation Adhesive P-50. For long line applications, the P-50 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 3/8" nap paint roller.

F. Patchability
Heavy traffic and snow plowing may cause wear and damage. New materials can be installed in these areas with minimal surface preparation by following the manufacturer's recommendations. Remove the damaged material and replace the damaged area by following the instructions in "Overlay Applications" of 3M Information Folder 380I ES.

General Performance Considerations

Stamark pavement marking tapes are weather resistant and provide excellent reflectivity and color retention. Experience has shown that these materials are highly effective traffic control devices and will show no appreciable fading, lifting, shrinkage or chipping when applied according to 3M's recommendations contained in product literature.

The durability of Stamark pavement markings will depend on traffic conditions, snow removal practices, application techniques used, and pavement and atmospheric conditions at the time of application. It is recommended that the customer thoroughly evaluate Stamark tapes under the conditions in the specified location before making large-scale applications.

Warranty

3M warrants that 3M™ Stamark™ High Performance Tape Series 380I ES sold by 3M for longitudinal and symbol and legend pavement marking applications in the United States and Canada will remain effective for its intended use under normal traffic conditions and meet the minimum retained coefficient of retroreflection value of 100 millicandelas per foot squared per foot-candle (measured at 1.05° observation and 88.76° entrance angles) subject to the following provisions:

Table 1

Application*	Warranty Period
Longitudinal markings	4 years
Symbols and legends	2 years

*Applications in mountainous, heavy snowfall areas above 5,000 ft. (1,500m) are not covered by this warranty.

3M also warrants that 3M™ Stamark™ High Performance Tape Series 380I ES sold by 3M for transverse (stopbars and crosswalks) and channelizing marking applications in the United States and Canada will maintain road presence subject to the following provisions:

Table 2

APPLICATION	WARRANTY PERIOD: Snow Removal Areas — Road presence and non wear-through	WARRANTY PERIOD: Non-Snow Removal Areas — Road presence and non wear-through
CHANNELIZING MARKINGS		
New Asphalt Inlay	2 years	2 years
Asphalt Grooved/Recessed	2 years	2 years
Asphalt Overlay	1 year	2 years
New Concrete Overlay	1 year	2 years
Concrete Grooved/Recessed	2 years	2 years
STOP BARS, CROSSWALKS WITH ADT/LANE OF 6,000 OR LESS		
New Asphalt Inlay	1 year	2 years
Asphalt Grooved/Recessed	1 year	2 years
Asphalt Overlay	—	1 year
New Concrete Overlay	—	1 year
Concrete Grooved/Recessed	1 year	2 years

If Series 380I ES tape is applied in accordance with all 3M application procedures provided in 3M's product bulletins, information folders and technical memos; and fails to retain the minimum reflectance value (for longitudinal and symbol and legend markings) or fails to adhere to the roadway or fails due to complete wear-through (for transverse and channelizing markings) during the warranty period shown in Table 2 (from the date of installation), 3M's sole responsibility and purchaser's and user's exclusive remedy shall be:

3M will provide the replacement materials that will restore the pavement marking retroreflectivity values to warranty levels or greater.

Conditions

Such failure must be solely the result of design or manufacturing defects in the Stamark high performance tape and not of outside causes such as improper installation or substrate failure. Failure to follow recommended application procedures will void this warranty.

Damage to pavement markings caused by snow removal equipment is not covered under this warranty.

A visual night inspection must be made with a 3M representative and a customer representative present to identify areas of the installation which appear to be below the minimum retained reflectance values specified in Table 1. Areas which appear to be below the minimum retained reflectance value shall be identified as "zones of measurement." To qualify for material replacement, a "zone" must be at least 360 feet in road length and consist of either edge lines, center lines or lane lines, but not in combination, or a single word or symbol marking.

3M reserves the right to determine the type of replacement marking and method of installation.

Replacement markings will carry the unexpired warranty of the marking it replaces.

Claims made under this warranty will be honored only if the customer has maintained an accurate record of the dates of material installation, which constitutes the start of the warranty period.

Claims under this warranty will be honored only if 3M is notified of a failure within a reasonable time, reasonable information requested by 3M is provided, and 3M is permitted to verify the cause of the failure.

Limitation of Liability

3M's liability under this warranty is limited to replacement as stated herein, and 3M assumes no liability for any incidental or consequential damages, such as lost profits, business or revenues in any way related to the product regardless of the legal theory on which the claim is based. THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MECHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING OR OF PERFORMANCE, CUSTOM OR USAGE OF TRADE.

Reflectance Measurement Procedures for Warranty

Step 1: A visual night inspection must be made with a 3M representative and a customer representative present to identify areas of installation which appear to be below the specified minimum retained reflectance values in the Table 1.

Areas which appear to be below the minimum retained reflectance value shall be identified as zones of measurement. To qualify for materials replacement, a zone must be at least 360 feet (108 meters) in road length and shall consist of either edge lines, center lines or lane lines, but not in combination.

Step 2: Within each zone, reflectance measurements must be taken at specified checkpoint areas.

a. Zones Measuring 360 Feet (108 m) to 1,080 Feet (324 m) in Length

No separate checkpoints are required. For continuous lines, reflectance measurements must be made at approximately 20 ft. (6 m) intervals throughout the zone. For skip lines, two measurements must be taken at two random locations on each skip.

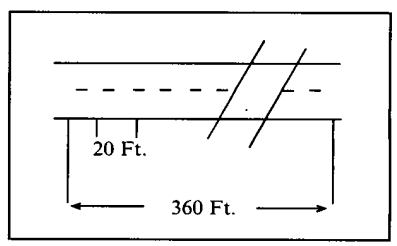

Figure 1

b. Zones Measuring 1,080 Feet (324 m) to 6 Miles (9.6 km) in Road Length

A total of 18 measurements must be made at each of three checkpoints within the zone, including the start point, the mid point and the end point. For continuous lines, reflectance measurements must be made at 20-foot (6 m) intervals throughout each checkpoint. For skip lines, two measurements must be taken at two random locations on each skip.

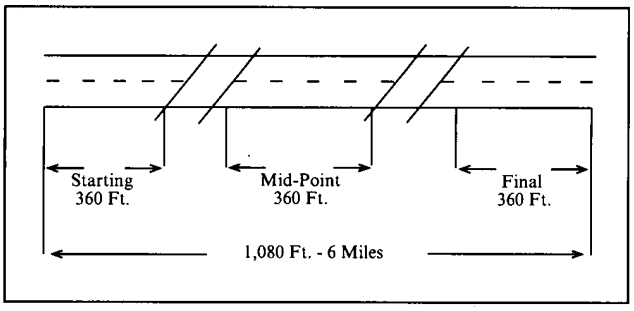

Figure 2: Measure every 20 ft. on continuous lines or 2 measurements per skip for each checkpoint.

c. Zone Greater than 6 Miles in Road Length

A total of 18 measurements must be made in each checkpoint within the zone, including the start point, the end point and at approximately 3-mile (4.8 kilometers) intervals throughout the zone. For measurement intervals on continuous lines, center lines or lane line skips, refer to Section b above.

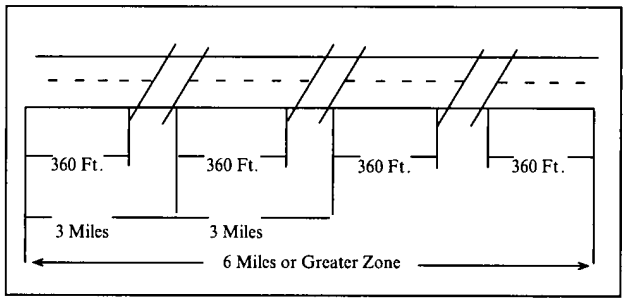

Figure 3: Measure every 20 ft. on continuous lines or 2 measurements per skip for each checkpoint.

Step 3: All reflectance measurements made at the checkpoints shall be made on a clean, dry surface at a minimum temperature of 40° F (4° C). The test instrument shall use an Entrance Angle of 88.76° and an Observation Angle 1.05° which represent a simulated driver viewing geometry at a 30 meter distance.

Step 4: All reflectance measurements within the zone must be averaged to determine if the minimum retained reflectance values have been met.

Materials Replacement Condition

Markings must be applied according to the instructions in 3M Information Folder 380I ES to qualify for any applicable materials replacement provisions.

Storage

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

Health and Safety Information

Read all health hazard, precautionary and first-aid statements found in the Material Safety Data Sheet (MSDS) and/or product label of chemicals prior to handling or use. Also refer to the MSDS for information about the volatile organic compound (VOC) content of chemical products. Consult local regulations and authorities for possible restrictions on product VOC content and/or VOC emissions. Electronically, visit us at www.3M.com/us and select MSDS search.

Literature Reference

For additional information on Stamark tapes, application instructions or application equipment, refer to the following publications:

IF 380I ES	Application Guidelines for 3M™ Stamark™ High Performance Tape Series 380I ES
IF 5.2	Information Folder for 3M Highway Tape Applicator - HTA
IF 5.7	Pavement Surface Preparation and Application Procedures for Stamark Pavement Marking Tapes
IF 5.8	Application of 3M Stamark Precut Symbols and Legends

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3M assumes no responsibility for any injury, loss or damage arising out of the use of a product that is not of our manufacture. Where reference is made in literature to a commercially available product, made by another manufacturer, it shall be the user's responsibility to ascertain the precautionary measures for its use outlined by the manufacturer.

Important Notice

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, 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, 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.

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NDDOT Contract No. 50130102A

North Dakota Department of Transportation

AMENDMENT TO CONTRACT NO. 50130102

Project No.

THIS AMENDMENT to the above-referenced contract is entered into by and between the State of North Dakota, acting through its Director of Transportation, hereinafter known as NDDOT, whose address is 608 East Boulevard Avenue, Bismarck, North Dakota 58505-0700, and 3M Company, hereinafter known as the Contractor, whose address is 3M Center Bldg 235-3A-09, St. Paul, MN 55144-1000.

WHEREAS, the parties entered into a contract on March 1, 2013; and

WHEREAS, the contract was competitively bid and awarded to the Contractor; and

WHEREAS, the Contractor has performed satisfactorily under the terms of the contract; and

WHEREAS, the Contractor has expressed a willingness to extend the term of the above-referenced contract for an additional twelve (12) months; and

NOW THEREFORE, the Contractor and NDDOT agree that the term of the contract is extended through February 28, 2015.

NDDOT North Dakota Department of Transportation

CLA 52494 (Div. 06)

All other terms and conditions of the above-referenced contract are incorporated herein by reference and remain in full force and effect.

EXECUTED the date last below signed.

WITNESS:

Matthew Leibel
NAME (TYPE OR PRINT)

SIGNATURE

To be signed by **Owner**; **Partner**; **Corp. Pres.**, **Vice Pres.**, or **other authorized Corp. Officer**. (If signed by other authorized Corp. Officer, please attach copy of Power of Attorney or other documentation showing authority to sign.)

CONTRACTOR:

3M COMPANY
COMPANY NAME

JOHN N. MORRIS
OFFICER'S NAME (TYPE OR PRINT)

SIGNATURE

CONTRACT ADMINISTRATOR
TITLE

2-7-14
DATE

WITNESS:

Sandra Goebel
NAME (TYPE OR PRINT)

SIGNATURE

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

Grant Levi
DIRECTOR (TYPE OR PRINT)

SIGNATURE

2/18/14
DATE

APPROVED as to substance by:

Brad Darr
DIVISION DIRECTOR (TYPE OR PRINT)

SIGNATURE

2-13-14
DATE

CLA 52494 (Div. 06)
L.D. Approved 5-19-00; 5-03

APPROVED as to execution this 13th day of February 2014
ATTORNEY GENERAL
By
SPECIAL ASST. ATTORNEY GENERAL

NDDOT
North Dakota Department of Transportation

POWER OF ATTORNEY

By the authority granted the undersigned by the Deputy General Counsel and Secretary, the individuals listed below are appointed as 3M's, or its designated subsidiaries', true and lawful attorneys-in-fact for it, and in its name, for commercially-available products and services and government-unique products and services (except research and development services[1]) for which 3M or its designated subsidiaries will be a prime contractor or subcontractor to any federal, state or municipal governmental agency in the United States, or to a federal, state or municipal prime contractor or higher tier subcontractor in the United States, to do acts specified on behalf of this Corporation.

(a) To submit or execute proposals, bids, binding purchase orders, contracts and subcontracts, and documents related thereto, excluding certifications, representations and warranties to comply with certain laws or regulations[2] (hereafter referred to as "certifications"), the following attorneys-in-fact are hereby appointed. Authority may not be sub-delegated.

Authority for the below individuals applies to the specific Business Unit or staff function indicated, subject to the limitations imposed by their respective General Manager/Vice President or equivalent.

- **3M Purification Inc.**
  Richard P. Couture
- **3M Unitek Corp.**
  Daniel C. Mitchell
- **Aearo Technologies LLC**
  Perry M. Cannilf
- **Aerospace and Aircraft Maintenance Department**
  Perry M. Cannilf
- **Abrasives Systems Division**
  Perry M. Cannilf
- **Electrical Markets Division**
  Timothy A. Koenig
- **Energy and Advanced Materials Division**
  Scott R. Hanson
- **Electronics Markets Materials Division**
  Joseph F. Koch
- **3M ESPE**
  Todd M. Scott
- **Food Safety Division**
  Melissa A. Mallak
- **Government R&D Contracts Department**
  Steven L. Kaye
  Ruth P. Charles
  Vivien L. Smith
- **GTA-MHT, Inc**
  Perry M. Cannilf
- **Health Information Systems Div.**
  Andee S. Andriole
  Jan C. Cline
  Garri L. Garrison
  Gerald R. Jennings
  Myung H. Kim
  John C. Mathison
  Terri G. McCubbin
  James R. McDonough
  Lisa M. Black
  Ray J. Terrill Jr.
  Deborah A. Mason
  Gail V. Kirkpatrick
- **Industrial and Adhesive Tapes Division**
  Authority for the below individual(s) applies to Federal Supply Schedule contracts only.
  Perry M. Cannilf
- **Infection Prevention Division**
  Melanie J. Zahler
  Health Care Service Support
  Bill J. Biebesheimer
- **Occupational Health & Environmental Safety Division**
  John E. Flanagan
  Thomas L. Ketterman
- **Office Supplies Division**
  Malcolm P. West
- **Mobile Interactive Solutions Division**
  Micki A. Summers
- **Quest Technologies**
  James D. Barnoch
- **Security Systems Division**
  Ella M. Schirall
  Nicole A. Christopherson
  Catherine J. LeClair
  John V. Lehman
  David A. Pointon
  John F. Sebastian
  Mary K. Zilles
- **Skin and Wound Care Division**
  Melanie J. Zahler
- **Traffic Safety Systems Division**
  John P. Benz
  Matthew J. Bignell
  Richard J. LaClair
  Daniel F. Moran
  John N. Morris
  Matthew R. Leibel
  Robert L. Storeggard
- **Venture Tape Corporation**
  Perry M. Cannilf

Authority for the below individuals applies to the specific Business Unit or staff function indicated.

- **Global Channel Services**
  Paul H. Sander
  Derrick E. Hilfer
- **Government Contract Compliance**
  Richard J. Bordas
  Elizabeth A. Grimes
  Karin Stein O'Boyle
- **Government Markets**
  Karen A. Kindern
  Laurie A. Patrick
- **Office of General Counsel**
  Richard N. Kuyath

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[1] Authority to submit proposals and sign contracts for research and development services is managed by the Executive Vice President & Chief Technology Officer for Research & Development.

[2] Product or performance warranties are to be reviewed and accepted by any 3M individual granted authority or responsibility to do so by the applicable business unit or staff group.

(b) To make certifications, except Country of Origin certifications, the following attorneys-in-fact are hereby appointed. Authority may not be sub-delegated, except certifications made by other attorneys-in-fact listed in paragraph (a) may be authorized in writing by one of the individuals listed in paragraph (b) after a determination by one of the individuals in paragraph (b) that such certification is valid. Unfamiliar certifications must be cleared with the Government Contract Compliance department prior to execution.

Authority for the below individuals applies to any Business Unit or staff function indicated.

- **3M Purification Inc.**
  Richard P. Couture
- **3M Unitek Corp.**
  Daniel C. Mitchell
- **Aearo Technologies LLC**
  Perry M. Cannill
- **Abrasives Systems Division**
  Perry M. Cannill
- **Aerospace and Aircraft Maintenance Department**
  Perry M. Cannill
- **Energy and Advanced Materials Division**
  Scott R. Hanson
- **Electronics Markets Materials Division**
  Joseph F. Koch
- **3M ESPE**
  Todd M. Scott
- **Food Safety Division**
  Melissa A. Mallak
- **Government R&D Contracts Department**
  Steven L. Kays
  Ruth P. Charles
  Vivien L. Smith
- **GTA-NHT, Inc**
  Perry M. Cannill
- **Health Information Systems Div.**
  Andee S. Andriole
  Lisa M. Black
  Jan C. Cline
  Garri L. Garrison
  Gerald R. Jennings
  Myung H. Kim
  John C. Mathison
  Terri G. McCubbin
  James R. McDonough
  Ray J. Terrill Jr.
  Deborah A. Mason
  Gayl W. Kirkpatrick
- **Infection Prevention Division**
  Melanie J. Zahler
- **Industrial and Adhesive Tapes Division**
  Authority for the below individual(s) applies to Federal Supply Schedule contracts only:
  Perry M. Cannill
- **Occupational Health & Environmental Safety Division**
  John E. Flanagan
  Thomas L. Ketteman
- **Quest Technologies**
  James D. Banach
- **Skin and Wound Care Division**
  Melanie J. Zahler
- **Security Systems Division**
  Mary K. Zilles
- **Traffic Safety Systems Division**
  John P. Benz
  Matthew J. Bignell
  Richard J. LaClair
  Daniel F. Moran
  John N. Morris
  Matthew R. Leibel
  Robert L. Storeggard
- **Venture Tape Corporation**
  Perry M. Cannill

Authority for the below individuals applies to the specific Business Unit or staff function.

- **Global Channel Services**
  Derrick E. Hilfer
- **Government Contract Compliance**
  Richard J. Bordas
  Elizabeth A. Grimes
  Karin Stein O'Boyle
- **Government Markets**
  Karen A. Kindern
  Laurie A. Patrick
- **Office of General Counsel**
  Richard N. Kuyath

(c) To make Country of Origin certifications, the following attorney(s)-in-fact are hereby appointed:

- **Office of General Counsel**
  Richard N. Kuyath
- **Trade Compliance Department**
  Authority may be sub-delegated in writing:
  Doug G. Whitman

For all appointments, authority ceases or may be subsequently modified upon the individual's change in business unit, staff group or responsibilities, or when employment is terminated. Authority may be withdrawn or modified at any time.

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. The undersigned has signed this Power of Attorney on this 8th day of August, 2012.

3M Company

By_____
James S. Anderson
Director, Government Contract Compliance

North Dakota Department of Transportation

AMENDMENT TO CONTRACT NO. 50130102

Project No.

THIS AMENDMENT to the above-referenced contract is entered into by and between the State of North Dakota, acting through its Director of Transportation, hereinafter known as NDDOT, whose address is 608 East Boulevard Avenue, Bismarck, North Dakota 58505-0700, and 3M Company, hereinafter known as the Contractor, whose address is 3M Center Bldg 235-3A-09, St. Paul, MN 55144-1000.

WHEREAS, the parties entered into a contract on March 1, 2013; and

WHEREAS, the contract was competitively bid and awarded to the Contractor; and

WHEREAS, the Contractor has performed satisfactorily under the terms of the contract; and

WHEREAS, the Contractor has expressed a willingness to extend the term of the above-referenced contract for an additional twelve (12) months; and

NOW THEREFORE, the Contractor and NDDOT agree that the term of the contract is extended through February 29, 2016.

All other terms and conditions of the above-referenced contract are incorporated herein by reference and remain in full force and effect.

EXECUTED the date last below signed.

WITNESS:

Matthew Leibel
NAME (TYPE OR PRINT)

SIGNATURE

To be signed by **Owner**; **Partner**; **Corp. Pres.**, **Vice Pres.**, or **other authorized Corp. Officer**. (If signed by other authorized Corp. Officer, please attach copy of Power of Attorney or other documentation showing authority to sign.)

CONTRACTOR:

3M Company
COMPANY NAME

John N. Morris
OFFICER'S NAME (TYPE OR PRINT)

SIGNATURE

Contract Analyst
TITLE

02-19-15
DATE

WITNESS:

Sondra Goebel
NAME (TYPE OR PRINT)

SIGNATURE

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

Grant Levi
DIRECTOR (TYPE OR PRINT)

SIGNATURE

2/26/15
DATE

APPROVED as to substance by:

DIVISION DIRECTOR (TYPE OR PRINT)

SIGNATURE

2-25
DATE

CLA 52494 (Div. 06)
L.D. Approved 5-19-00; 5-03

APPROVED as to execution this 26 day of February 20 15
ATTORNEY GENERAL
By
SPECIAL ASST. ATTORNEY GENERAL

NDDOT
North Dakota Department of Transportation