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NEW YORK STATE DEPARTMENT OF TRANSPORTATION

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SUBJECT: POLICY FOR CONSTRUCTION ZONE
PAVEMENT MARKINGS

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APPROVED:

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Supersedes:

In order to comply with the revised National MUTCD, our current provisions for applying Pavement Delineation must be revised. The attached Policy for Construction Zone Pavement Markings was recently approved and adopted by the Executive Capital Program Committee (ECPC).

The policy presents an entirely new procedure for applying pavement markings on construction projects. Pavement delineation, as detailed in Section 291.3 of the MUTCD, will no longer be used on construction contracts.

Effective immediately, the provisions set forth in the attached policy and its Guidelines For Implementation, and the attached revisions to Section 619 of the Standard Specifications necessitated by this new policy, should be adopted on all ongoing projects under contract regardless of funding source or letting date. However, to allow Contractor's to transition to the new policy, the current Pavement Delineation practices may be used through June 18, 1989. As of June 19, 1989, the new policy must be implemented on all contracts. As required, Orders on Contract may be processed to provide for increased quantities or new items. The new policy will also be incorporated in all projects currently in design.

The provision in the policy which allows the use of No-Passing signs as a substitute for pavement markings is in conflict with the current NY Vehicle and Traffic Law. Motorists could not be cited for passing in locations marked only with No-Passing signs. Legislation is currently pending in the State Legislature which will amend the law to make this use of No-Passing signs enforceable. Therefore, until

this legislation is adopted, the use of No-Passing signs as a substitute for pavement markings should be confined to only those situations where there is no other possible alternative for placing a pavement marking.

To mitigate the impact on Maintenance, for the remainder of 1989 work completed by Department Maintenance crews will be exempted from the policy. Maintenance will be allowed to continue using short "delineation skip marks" placed at the time of paving. Beginning next year, after Maintenance has budgeted for and obtained the required portable machines and materials, Maintenance will be required to come into compliance with the policy.

If there are any questions on the implementation of this policy, please contact John Grady of the Construction Division at 518-457-6475.

Policy
for
Construction Zone Pavement Markings

Policy Statement

Before any interim or final course of pavement on any State highway under construction is opened to traffic, or by nightfall on resurfacing projects, Short-Term Pavement Markings complying with the requirements of National MUTCD Section 6D-3 must be in place. For the remainder of 1989, work completed by Department Maintenance crews will be exempted from this Policy. Beginning January 1, 1990, this Policy will apply to all Department work.

Background

In order to comply with the revised National MUTCD, our current provisions for applying pavement markings in construction zones, i.e., pavement delineation, must be modified. The Federal guidelines require construction zone pavement markings to be of the same color and style, and convey the same message as permanent markings, except that broken lines may be shortened to 4 feet long and no edge lines are required. This policy presents an entirely new procedure for applying pavement markings on new or reconstructed pavements, and is in full compliance with the Federal guidelines.

Policy Summation

The policy establishes three construction zone pavement marking items; 1) Short-Term Pavement Markings --similar to the current pavement delineation item, 2) Final Pavement Markings --the markings placed in accordance with the project's final marking pattern using Section 640 type reflectorized paint, and 3) Temporary Pavement Markings --similar to the current Section 619 interim pavement markings.

Short-Term center line pavement markings must be in place prior to opening the roadway to traffic, or by nightfall on resurfacing projects. Should the contractor fail to place a subsequent course of pavement, or the project's permanent pavement markings within the 14 day limit for Short-Term Pavement Markings, the Contractor will be responsible for applying Temporary Pavement Markings.

The Short-Term Pavement Markings do not have to reflect the project's final pavement marking pattern for passing and no-passing zones. In general, most construction zones should be considered no-passing zones and therefore, will be marked with full barrier lines. However, in order to discourage indiscriminate passing within long no-passing zones, in those locations where passing would be appropriate the Engineer should consider establishing passing zones through the use of the proper broken line marking.

To prevent the damage and scarring imposed on final pavement courses when attempting to remove fresh paint or unremovable tape, only removable tape or raised pavement markers will be allowed for Short-Term Pavement Markings on final courses. Paint may be used on final courses only as the material for Final Pavement Markings, and only if it is placed in conformance with the project's final pavement marking pattern.

Because of the great diversity of projects which will be affected by this policy, the policy allows for various project cases dependent on whether the final contract markings will be a paint or durable material, and whether the final pavement marking pattern can be determined prior to placement of the final course of pavement. If the final pavement marking pattern can be detailed on the contract plans, as in the case of an Interstate resurfacing, or will be easily determined prior to the paving of the final course, as in the case of the reconstruction of a severely curved rural road to be marked entirely as no-passing, the Contractor may be required to place the center and lane line portion of the Final Pavement Markings by nightfall of the day the final course is paved. This procedure eliminates one application, and any associated removal of Short-Term Pavement Markings. For projects where the reconstruction may effect passing site distance, thereby changing the location of passing zones, the policy provides for the application of Short-term Markings by nightfall, followed by the placement of the final markings after the Region codes the final marking pattern.

This policy does not change any of the provisions set forth in the Department's "Pavement Marking Policy" concerning the requirements for use of either durable or painted markings.

Policy
for
Construction Zone Pavement Markings

GUIDELINES FOR IMPLEMENTATION

Definitions

1. The phrase "Short-Term Pavement Markings" will replace the phrase "Pavement Delineation" currently provided for under Section 619, and will apply to longitudinal pavement markings placed for short periods, not to exceed 14 days. Short-Term Pavement Markings will be a pay item, similar to the current Item 619.15, Pavement Delineation, with reimbursement made for each application on a linear foot basis.
2. The phrase "Final Pavement Markings" will refer to the final longitudinal pavement markings placed on most projects, except those limited projects which receive Durable Markings as a contract item. Final Pavement Markings will be placed in accordance with the project's final pavement marking pattern. Final Pavement Markings will be paid for as an item under the current specification Section 640, Reflectorized Pavement Marking Paints. The Final Pavement Markings will be the last pavement markings placed on a project by the contractor, intended to endure until either the project receives Durable Markings under a Region-wide Durable Marking contract, or until subsequent re-striping under the Region's annual Maintenance marking program.
3. The phrase "Temporary Pavement Markings" will be similar to but replace the phrase "Interim Markings" currently provided for under Pavement Delineation in Section 619. It will refer to the pavement markings that a Contractor is required to place, at no cost to the State, should the Contractor fail to progress the work and place a subsequent course of pavement, or place the Final Pavement Markings, within the 14 day limit for Short-Term Pavement Markings. Temporary Pavement Markings must be similar to the project's final and complete pavement marking pattern, including edge lines and certain transverse and special purpose markings as specified. Temporary Pavement Markings will not be a pay item.
4. The phrase "Durable Markings" will continue to refer to longitudinal epoxy or thermoplastic pavement markings detailed in the Department's "Pavement Marking Policy."

5. The phrases "Durable Transverse Markings" and "Durable Special Purpose Markings" will continue to refer to stop lines, letters, symbols and other transverse or special purpose durable markings. These markings are typically placed using preformed tape and included in contracts as needed, regardless of the type of longitudinal markings in the contract.

Specific Provisions

1. Applicability

- a. In consideration of continuity and liability, this policy shall apply to all Department work completed under contract regardless of funding source. For the remainder of 1989, work completed by Department Maintenance crews will be exempted from this policy. Beginning January 1, 1990, this policy will apply to all Department work. While this policy is primarily worded for projects constructed by contract, its provisions could be applied to Maintenance work with few, if any modifications.
- b. These provisions will be included in all upcoming contracts, and added to all ongoing contracts.

2. Coding for Construction Zone Pavement Markings

- a. In general, on all highways under construction with opposing traffic, the pavement marking separating opposing traffic should be a yellow full barrier marking indicating a no-passing zone.
- b. In general, on all highways under construction with two or more lanes of traffic in the same direction of travel, broken white lines should be used between adjacent lanes of same direction travel.
- c. When a motorist travelling at less than the posted speed is confined by a no-passing marking in a location where the motorist judges that passing would be safe and appropriate, the motorist is likely to ignore the no-passing marking and attempt a passing maneuver. In order to discourage indiscriminate passing, the Engineer should

consider establishing passing zones through the use of the appropriate broken line marking. Since the locations of such passing zones may change with the progress of a project, subsequent applications of Short-Term Markings may be required to establish or eradicate these passing zones.

- d. For Temporary Pavement Markings which may be in place for longer periods of time, rather than as cited above, the Engineer may opt to require such markings to reflect the project's final marking pattern or the marking pattern that existed when the project began.

3. Short-Term Pavement Markings

Short-Term Pavement Markings will comply with the requirements of the National MUTCD Section 6D-3, Short-Term Markings as revised January 23, 1989, with the following specific provisions:

- a. Short-Term Pavement Markings are those longitudinal markings that may be in place up to 14 days.
- b. Short-Term Markings will be yellow in color for broken lines, partial barrier lines, and full barrier lines used to separate opposing traffic flows on two-way roadways, and white in color for broken lines used to indicate lanes for traffic flows in the same direction on multilane highways.
- c. All Short-Term broken line pavement markings shall be a minimum of 4 feet long in a 40 foot cycle (maximum 36' gap), except that half cycle lengths with 2 foot segments may be used for roadways with severe curvature. For broken lines, reflectorized pavement marking paints, unremovable tape, or removable tape may be used. For solid lines, reflectorized pavement marking paints or removable tape may be used, but unremovable tape will not be allowed due to the possibility of poor bond or delamination of the subsequent pavement course over a long, unremovable solid tape line. When removeable tape is used, it must be removed prior to placement of the subsequent course of pavement.

- d. Short-term edge lines are not required under this policy.
- e. The short-term use of stop lines, letters, symbols and other transverse or special purpose markings will not be required under Short-Term Markings.
- f. Raised pavement markers may be used as supplements to, or as substitutes for Short-Term Pavement Markings. All raised pavement markers when used as a substitute for pavement markings in construction zones shall be retroreflective, shall be the same color as and placed in the same location as the pavement markings for which they are substituted, and shall be visible during the daytime. Three raised pavement markers, evenly spaced 24 inches apart, may be used as a substitute for a 4 foot broken line, and a raised pavement marker spaced every 5 feet may be used as a substitute for a solid line. For substitution of a yellow full barrier marking, pairs of raised markers shall be placed side-by-side at the same 5 foot spacing to simulate a double line. Raised pavement markers must be removed prior to the placement of the subsequent course of pavement.
- g. The use of No-Passing signs in lieu of Short-Term Pavement Markings as allowed by the National MUTCD on 2 or 3-lane, two-way highways is not considered as an equal to pavement markings. The use of No-Passing signs as a substitute for Short-Term Pavement Markings will only be allowed for 3 calendar days or less on 2 or 3-lane, two-way highways either at the option of the State, or in an unanticipated situation which prevents Short-Term Markings from being placed (i.e., foul weather, equipment failure, etc.). On low volume highways (AADT less than 500), No-Passing signs may be used as a substitute for up to 14 days. When No-Passing signs are used in lieu of Short-Term Pavement Markings, Delineators meeting the requirements of Section 291.2, Roadside delineation of the NYSDOT MUTCD must be placed at the pavement edge every 200 feet or less in order to provide directional guidance to the motorist. As noted in Section 619-3.01G of the Standard Specifications, plastic drums may be used as delineators, provided they are of the proper size and reflectorized as indicated in the NYSDOT MUTCD. On contract projects, such placements

of No-Passing signs and delineators necessitated by the Contractor's failure to place Short-Term Pavement Markings, for whatever reason, shall be at no cost to the State.

3. Interim Pavement Courses

- a. Before any interim course of pavement (i.e., base, binder, truing and leveling, or shim) on a highway or portion of a highway under construction, any surfaced detour, or any temporary roadway intended to be travelled for 14 days or less is opened to traffic, all Short-Term Pavement Markings will be in place. For surfacing operations, Short-Term Pavement Markings will be installed on temporary courses of pavement before nightfall.
- b. Should the Contractor fail to place a subsequent course of pavement within the 14 day limit for Short-Term Pavement Markings, for whatever reason, the Contractor will be responsible for the application of Temporary Pavement Markings which replicate the project's final pavement markings, including edge lines, transverse markings, and certain special purpose pavement markings as specified, all at no cost to the State. The Contractor will also be responsible for maintaining these Temporary Pavement Markings, including their reapplication as ordered by the Engineer, at no cost to the State.
- c. If any temporary course of pavement on a highway or portion of a highway under construction, any surfaced detour, or any temporary roadway is intended as designed to carry traffic for more than 14 days (i.e., interim courses or detours upon which traffic is to be maintained for long periods, such as over a winter season), Final Pavement Markings should be provided for and in place prior to opening to traffic.

2. Final Pavement Courses

- a. On all permanent pavement surfaces or final pavement courses, the final and complete pavement markings should be installed as soon as practicable. However, since the coding of the final pavement markings may not be known or established until after placement of the final pavement

course, and because a limited number of projects receive Durable Pavement Markings as a contract item, it may not be possible or necessary to install the Final Pavement Markings prior to opening to traffic. In these situations, Short-Term Pavement Markings must be installed on final pavement courses. Depending on the situation and contract provisions, one of the following cases and subsequent procedures will be followed:

i) Case I. For construction projects which include durable longitudinal markings as a contract requirement (contracts on qualifying highways with striping quantities greater than 100,000 linear feet):

- 1) By nightfall, the contractor will be required to apply Short-Term Pavement Markings meeting the requirements previously cited, except that only removable tape, or raised pavement markers as substitutes for pavement marking lines will be allowed, and either should be off-set from the position of the subsequently to be placed Durable Markings. The off-set is required because both removable tape and raised pavement markers leave a residue when removed which may interfere with the bond of the Durable Markings. The use of pavement marking paint is prohibited in order to prevent the damage to the final pavement surface which results from the grinding or sand-blasting needed to remove the fresh paint when the Durable Markings are placed.
- 2) Within 14 days, the contractor must install the durable longitudinal markings.
- 3) Should the contractor fail to install the Durable Markings within the 14 day limit allowed for Short-Term Pavement Markings, the Contractor will be responsible for the installation of Temporary Pavement Markings, at no cost to the State. However, only removable tape or raised pavement markers as a substitute for pavement markings will be allowed, including edge lines, and all markings should be offset.

4) Within 14 days, all durable transverse markings must be installed.

5) Within 28 days, all durable letters, symbols and other special purpose markings must be installed.

ii) Case II. For construction projects which include painted Final Pavement Markings as a contract requirement, where the final permanent marking pattern (i.e., passing zones vs. no-passing zones) is indicated on the contract plans, or can be designated by the Engineer prior to placement of the final course of pavement:

1) By nightfall, the Contractor will be required to apply Final Pavement Markings, excluding edge lines, using reflectorized pavement marking paint as indicated or designated for the centerlines and lane lines. The Contractor may at his option, install the edge lines at any time within 14 days.

2) Should the Contractor be unable to install the Final Pavement Markings, excluding edge lines, by nightfall, for whatever reason, the Contractor will be responsible for installing at no cost to the State, Short-Term Pavement Markings meeting the requirements previously cited, except that only removable tape, or raised pavement markers as substitutes for pavement markings, will be allowed, and either should be off-set from the position of the subsequently to be placed painted pavement markings.

3) Within 14 days, the contractor must install the Final Pavement Markings. Should the contractor fail to install the Final Pavement Markings within the 14 day limit allowed for Short-Term Pavement Markings, the Contractor will be responsible for the installation of Temporary Pavement Markings, at no cost to the State. However, only removable tape or raised pavement markers as a substitute for pavement markings will be allowed, including edge lines, and all markings should be offset.

- 4) Within 14 days, all durable transverse markings must be installed.
- 5) Within 28 days, all durable special purpose markings must be installed.
- 6) Should the painted Final Pavement Markings deteriorate to a condition that, in the Engineer's judgement, within the first 90 days after the initial placement requires additional applications of paint, the contractor will be responsible for such reapplication at no cost to the State. The contractor will be reimbursed for additional applications of Final Pavement Markings required at any time after 90 days.
- 7) The State reserves the right to delete from the contract all, or any portion of the work associated with applying Final Pavement Markings, and may elect to have such markings placed by others.

iii) Case III. For construction projects which include painted Final Pavement Markings as a contract requirement, where the final permanent marking pattern is not indicated on the contract plans or can not be designated by the Engineer prior to placement of the final course of pavement:

- 1) By nightfall, the contractor will be required to apply Short-Term Pavement Markings meeting the requirements previously cited, except that only removable tape, or raised pavement markers as substitutes for pavement markings lines will be allowed, and either should be off-set from the position of the subsequently to be placed Durable Markings. The Contractor will be paid for this application of Short-term Pavement Markings.
- 2) The Engineer will be required to designate the final marking pattern within 7 days. After a minimum of 7 days, but prior to the 14 day limit, the Contractor must install the Final Pavement Markings using reflectorized pavement marking paints.

- 3) Should the contractor fail to install the Final Pavement Markings within the 14 day limit allowed for Short-Term Pavement Markings, the Contractor will be responsible for the installation of Temporary Pavement Markings, at no cost to the State. However, only removable tape or raised pavement markers as a substitute for pavement markings will be allowed, including edge lines, and all markings should be offset.
- 4) Within 14 days, all durable transverse markings must be installed.
- 5) Within 28 days, all durable letters, symbols and other special purpose markings must be installed.
- 6) Should the painted Final Pavement Markings deteriorate to a condition that, in the Engineer's judgement, within the first 120 days after the initial placement requires additional applications of paint, the contractor will be responsible for such reapplication at no cost to the State. The contractor will be reimbursed for additional applications of Final Pavement Markings required at any time after 120 days.
- 7) The State reserves the right to delete from the contract all, or any portion of the work associated with applying Final Pavement Markings, and may elect to have such markings placed by others.
- iv) Case IV. For Region-wide Durable Marking contracts, which may require the removal of existing markings prior to application of the Durable Marking material:
 - 1) The highway will be considered to be under construction, and the the provisions for Construction Zone Pavement Markings will apply.
 - 2) Since the provisions for Short-Term Pavement Markings allow a highway to be without edge lines

for up to 14 days, the contractor may remove any or all edge lines, with the provision that the new durable edge line markings will be in place within 14 days at any location where such lines were removed.

- 3) The contractor may remove any or all center lines and lane lines, with the provision that the new durable center line and lane line markings will be in place by nightfall at any location where such lines were removed.
- 4) Should the Contractor be unable to install the new durable center line and lane line markings by nightfall, for whatever reason, the Contractor will be responsible for installing at no cost to the State, Short-Term Pavement Markings meeting the requirements previously cited, except that only removable tape, or raised pavement markers as substitutes for pavement markings, will be allowed, and either should be off-set from the position of the subsequently to be placed Durable Markings
- 5) Within 14 days after the removal of an exiting line at a location, the contractor must install the new Durable Markings. Should the contractor fail to install the new durable edge, center or lane line markings within the 14 day limit allowed for Short-Term Pavement Markings, the Contractor will be responsible for the installation of Temporary Pavement Markings meeting the requirements previously cited, at no cost to the State. However, only removable tape or raised pavement markers as a substitute for pavement markings will be allowed, including edge lines, and all markings should be offset.

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SHORT-TERM PAVEMENT MARKINGS

Subsection 291.3 of the New York State MUTCD, Pavement Delineation, shall no longer be used on State construction contracts. Pavement delineation has been replaced by Short-Term Pavement Markings.

Make the following changes to the Standard Specification of January 2, 1985.

Page 37 of Addendum No. 2

Under §619-1.06 Pavement Delineation delete the subsection entirely and replace with the following:

"619-1.06 Short-Term Pavement Markings. The Contractor shall furnish, apply and when so ordered, remove short-term pavement markings where shown on the plans, or directed by the Engineer, in accordance with these specifications."

Page 39 of Addendum No. 2

Under §619-2.03 Delineators, Temporary Box Beam Barrier, Temporary Concrete Barrier, Construction Barricades, Lighting for Construction Barricades and Pavement Delineation. delete the title and the first paragraph and replace with the following:

"619-2.03 Delineators, Temporary Box Beam Barrier, Temporary Concrete Barrier, Construction Barricades, Lighting for Construction Barricades and Short-Term Pavement Markings. Delineators, barricades, lighting for construction barricades, short-term pavement markings, tubular markers and similar materials shall meet the requirements of these specifications and shall be in accordance with the plans, applicable standard sheets and the M.U.T.C.D. No materials or methods which will cause damage to any pavement or paving course that will be retained shall be employed in the removal of pavement markings."

Delete the tenth paragraph of this subsection and replace with the following:

"Short-term pavement markings shall consist of reflectorized pavement marking paints, removable reflectorized pavement marking tape, non-removable reflectorized pavement marking tape, or removable raised reflectorized pavement markers. Removable reflectorized pavement marking tape and raised reflectorized pavement markers shall be selected from the Department's Approved List of 'Removable Reflectorized Pavement Markings' and 'Raised Reflectorized Pavement Markings', respectively. Pavement marking paints shall meet the material requirements of Section 640-Reflectorized Pavement Marking Paints. Non-removable

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pavement marking tape shall be specifically designed for use as a pavement marking and shall be approved by the Engineer prior to application. All line segments shall not be less than four nor greater than six inches in width and the colors shall be as specified in the M.U.T.C.D.

Page 45 of Addendum No. 2

Under §619-3.06 Pavement Delineation delete entire Subsection and replace with the following:

"619-3.06 Short Term Pavement Markings. The Contractor shall furnish, apply, maintain, and when so ordered, remove short-term pavement markings, where shown in the contract documents or where directed by the Engineer. Any pavement upon which traffic will be maintained shall be properly marked before nightfall or the end of the working day, whichever comes sooner, in accordance with this subsection.

Short-term pavement markings shall be installed and maintained in accordance with the patterns and colors indicated for pavement marking, Parts 260 to 263 of the M.U.T.C.D., or as directed by the Engineer. The following pavement marking patterns shall be installed as short-term pavement markings:

1. Yellow broken lines, partial barrier lines and full barrier lines used to separate opposing traffic flows on two-way roadways.
2. White broken lane lines to separate traffic flows in the same direction on multi-lane highways.

Stop bars, hatch lines and edge lines will not normally be required under short-term pavement markings but may be ordered by the Engineer. Broken lines may be as short as four (4) feet. Short-term pavement markings as described above, will be considered acceptable as the only pavement markings in place for periods not longer than fourteen (14) days.

Within 14 days after paving, if the Contractor fails to install either the succeeding pavement course, or the permanent pavement markings on contracts with pay items for such, the short-term pavement markings shall be supplemented (at no additional expense to the State) with edge lines, ten foot broken lines, stop bars, cross walks and arrows. In the event the project is to remain uncompleted over the winter, other than for staged construction when indicated, the short-term pavement markings shall be supplemented (at no additional expense to the State) by full pavement markings in accordance with the pattern indicated in the plans. If no full pavement marking pattern is given in the plans, the short-term pavement markings shall be supplemented as directed by the Engineer. The pavement markings used to supplement the minimum short-term pavement markings shall be designated as "Temporary Pavement Markings" and use the materials as described below.

SHORT-TERM PAVEMENT MARKINGS

Removable tape and raised markers may be used as short-term pavement markings for solid and broken lines on any pavement course. However, on the final pavement surface, these shall be offset, if possible, from the location of the final permanent mark in order to prevent interference with the adhesion of the final mark.

Pavement marking paint may be used as short-term pavement markings for solid and broken lines on all underlying pavement courses (ie base, binder, leveling and shim). On top course, or final pavement surface, paint may only be used if the final marking pattern is known prior to paving, and the contract does not contain durable markings (ie thermoplastic or epoxy marks). Where paint is used on the final pavement surface, it shall be applied in the final location and the broken lines shall be ten (10) feet long.

Non-removable tape may be used as short-term pavement markings only for broken lines on underlying pavement courses. Non-removable tape will not be allowed to mark barrier lines on any pavement course.

If paint is used for short-term pavement markings, it shall be applied in accordance with the requirements of Section 640, Reflectorized Pavement Marking Paints. If tape is used, it shall be applied to a clean, dry pavement in accordance with the manufacturer's recommendations. Tape shall conform to the shape of, and adhere to the surface upon which it is applied. If raised marker units are used, they shall be of a color in accordance with the M.U.T.C.D. A raised marker unit spaced every five feet may be used as a substitute for a solid line. Three raised marker units, evenly spaced 24 inches apart, may be used as a substitute for a four foot long broken line. Four raised marker units, evenly spaced 40 inches apart, may be used as a substitute for a ten foot long broken line.

Any markings, including raised markers, that fail to adhere to the pavement, become abraded, dislodged by snowplowing, or in the opinion of the Engineer become ineffective in any manner during the "period of use" shall be replaced by the Contractor at no additional expense to the State. The "period of use" shall be defined as the time from when the short-term pavement markings are first applied to the time when the markings are either paved over, the project's permanent markings are applied, or contract acceptance, whichever is first. After their period of use, short-term pavement markings, and temporary markings added to supplement short-term pavement markings shall be removed from the pavement by the Contractor, if ordered by the Engineer, as described in Section 635 Cleaning and Preparation of Pavement Surfaces.

In the event of sudden, unforeseen precipitation or other extraordinary situation, No-Passing signs may be used in lieu of short-term pavement markings for up to three consecutive calendar days on two or three lane, two-way, roadways under the following conditions:

1. The signs meet the requirements of Section 233.10 of the NYSDOT MUTCD and spaced not more than 200 feet apart.

SHORT-TERM PAVEMENT MARKINGS

2. The signs shall be supplemented with delineators and/or plastic drums spaced as directed by the Engineer, but not more than 200 feet apart and meeting the requirements of Section 291.2 of the NYSDOT MUTCD and Section 619-3.01G of the Standard Specifications, respectively.
3. No payment will be made for the installation of No-Passing signs, delineators and plastic drums when necessitated by the Contractor's failure to place short-term pavement markings.

Page 48 of Addendum No. 2

Under \$619-4.08 Pavement Delineation delete the subsection and replace with the following:

"619-4.08 Short-Term Pavement Markings. Short-term pavement markings will be measured in linear feet along the center line of the pavement stripe and shall be based on a 4 inch wide stripe. Measurement for striping with a plan width greater than the basic 4 inches, as shown on the plans or as directed by the Engineer, will be made by the following method:

$$\frac{\text{Plan Width of Striping (inches)} \times \text{Linear Feet}}{4 \text{ (inches)}}$$

No payment will be made for the number of linear feet of skips in the dashed line."

If raised marker units are used, reimbursement will be made as if the substituted line were in place. For example, for 3 raised marker units substituted for a 4 foot long broken line, reimbursement will be made for 4 linear feet.

Page 49 of Addendum No. 2

Under 619-5 Basis of Payment, General delete the phrase "pavement delineation" in the first and fourth paragraphs and replace with "short-term pavement markings".

Page 51 of Addendum No. 2

Under 619-5.08 Pavement Delineation. Delete the subsection and replace with the following:

"619-5.08 Short-Term Pavement Markings. The unit price bid shall include the cost of furnishing all labor, material and equipment necessary to apply, maintain and remove short-term pavement markings when so ordered. A separate payment will be made each time short-term pavement markings is first applied on a pavement course in accordance with the contract requirements. No payment will be made for the application, maintenance and removal of "temporary pavement markings" required after 14 days or the remainder of the winter."

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SHORT-TERM PAVEMENT MARKINGS

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Under §619-5.12 Other Work. In the second paragraph delete the second sentence.

Under Payment will be made under: delete

"619.15 Pavment Delineation Linear Foot" and replace with

"619.1501 Short-term Pavement Markings Linear Foot"