

SECTION S691 – BIKEWAY PAVEMENT MARKINGS

S691-1 DESCRIPTION

Work consists of coating bikeway pavement, installing bikeway arrows, symbols and words, as required in Contract Documents and as directed by Project Manager.

References to NYSDOT specifications are to be in accordance with latest edition of *NYSDOT Standard Specifications (US Customary Units)*.

S691-2 MATERIALS

S691-2.01 General

Pattern, colors and materials to be used for patterning pavement will be as required in Contract Documents.

Individual components used to form completed system are to be congruous, supplied by same manufacturer, and designed to withstand AASHTO HS-20-44 Wheel Loading.

Color must be homogeneous throughout thickness of material, and must be such that end result of finished product visually provides surface which is uniform in color over entire surface area and which is an approximate match to specified color.

S691-2.02 Green Bikeway Pavement - MMA Liquid

MMA liquid for coating of bikeway pavement is to be bike lane green methyl methacrylate (MMA) based resin system that provides durable skid-resistant surface, has long-lasting color retention, specifically designed to adhere to pavement surfaces, and is for use in low to high vehicular traffic areas.

MMA liquid is to be CycleGrip MMAX as manufactured by Ennis-Flint, Color-Safe as manufactured by Transpo Industries, Inc., Pathway Perceptions as manufactured by ANGCO Striping, or approved equivalent.

Typical physical properties:

Characteristic	Unit of Measure	Test Specification
Neat Resin		
Tensile Strength	500-1000 psi (3.4-6.9 MPa)	ASTM D638 Type 1
Elongation	70%	ASTM D638 Type 1
Hardness	55-60 Shore D	ASTM 2240
Water Absorption	< 0.25%	ASTM D570
Pot Life @ 72°F	15 Minutes	AASHTO T237
Flash Point	50°F	ASTM D1310
Solids Content	100%	ASTM D1634
Aggregate		
Hardness	7.0	Mohs Scale

Manufacturer is to demonstrate in writing, and by providing references, that MMA liquid material has been satisfactorily used for minimum period of 2 years in areas where weather conditions are similar to those experienced in Rochester, New York area.

S691-2.03 Green Bikeway Pavement - Preformed Thermoplastic

Preformed thermoplastic for coating of bikeway pavement is to be bike lane green preformed thermoplastic material provided in solid sheets of uniform size and standard thickness of 125 mils.

Preformed thermoplastic material is to be aggregate reinforced, retro-reflective, specifically designed to adhere to pavement surfaces, and is for use in low to high vehicular traffic areas. Preformed thermoplastic material is to be highly durable, crack, fade, skid and slip resistant, and have long-lasting color retention.

Preformed thermoplastic is to be PreMark with ViziGrip as manufactured by Ennis-Flint, Inc.; as manufactured by RAE Products and Chemicals Corp.; as manufactured by Swarco Industries, LLC; or approved equivalent.

S691-2.04 Bikeway Arrows, Symbols and Words – Preformed Thermoplastic

Bikeway arrows, symbols and words are to be white preformed thermoplastic with or without contrasting background panel, with standard thickness of 180 mils.

Preformed thermoplastic material is to be aggregate reinforced, retro-reflective, specifically designed to adhere to pavement surfaces, and is for use in low to high vehicular traffic areas. Preformed thermoplastic material is to be highly durable, crack, fade, skid and slip resistant, and have long-lasting color retention.

S691-3 CONSTRUCTION DETAILS

Preparation of pavement surface, equipment, materials, and method of application and replacement of damaged materials, will be as required by manufacturer.

Area of existing MMA liquid coating material that is damaged is to be squared off 2 feet from outer extent of each end of damaged area, and full width of MMA material completely removed and replaced.

Area of existing preformed thermoplastic coating material that is damaged is to be replaced in full solid sheets only.

Existing arrows, symbols or words, including contrasting background panel if present, that are damaged are to be replaced in full.

S691-4 METHOD OF MEASUREMENT

S691-4.01 Green Bikeway Pavement

Quantity to be measured for payment will be number of square feet of pavement area coated.

S691-4.02 Bikeway Arrows, Symbols and Words

Quantity to be measured for payment will be number of each bikeway arrow, symbol or complete word installed.

Measurement for words will be based on whole word as one complete unit, not for each individual letter.

S691-5 BASIS OF PAYMENT

S691-5.01 General All Items

Unit price bid for all items includes cost of: preparation of pavement surface; layout; replacing damaged or improperly installed material; protecting completed work from traffic; site cleanup; and furnishing all labor, material and equipment necessary to complete work.

Restoration of adjacent areas, and adjustment of all existing or new appurtenances will be paid for under separate bid items.

S691-5.02 Green Bikeway Pavement

Unit price bid also includes cost of: furnishing and applying coating material.

S691-5.03 Bikeway Arrows, Symbols and Words

Unit price bid also includes cost of: furnishing and applying bikeway arrow, symbols and words, with or without contrasting background panel.

S691-5.04 Replace Existing Bikeway Pavement markings

Unit price bid also includes cost of: removing damaged materials; furnishing and applying new replacement material.

Payment will be made under:

ITEM NO.	ITEM	PAY UNIT
S691.0102	Green Bikeway Pavement – MMA Liquid	Square Foot
S691.0103	Replace Existing Green Bikeway Pavement – MMA Liquid	Square Foot
S691.0202	Green Bikeway Pavement – Preformed Thermoplastic	Square Foot
S691.0203	Replace Existing Green Bikeway Pavement – Preformed Thermoplastic	Square Foot
S691.0301	Bikeway Arrow	Each
S691.0302	Bikeway Arrow (Including Contrasting Background Panel)	Each
S691.0303	Replace Existing Bikeway Arrow	Each
S691.0304	Replace Existing Bikeway Arrow (Including Contrasting Background Panel)	Each
S691.0401	Bikeway Symbol	Each
S691.0402	Bikeway Symbol (Including Contrasting Background Panel)	Each
S691.0403	Replace Existing Bikeway Symbol	Each
S691.0404	Replace Existing Bikeway Symbol (Including Contrasting Background Panel)	Each
S691.0501	Bikeway Word	Each
S691.0502	Bikeway Word (Including Contrasting Background Panel)	Each
S691.0503	Replace Existing Bikeway Word	Each
S691.0504	Replace Existing Bikeway Word (Including Contrasting Background Panel)	Each

REVISED June 11, 2019