IPC INTEGRATED PAVING CONCEPTS™

RIDE-A-WAY

SECTION 02760 PAVEMENT FINISHING – BIKE LANES

PART 1 – GENERAL

1.1 DESCRIPTION

A. **RIDE-A-WAY** bike lane coating is a highly specialized coating specifically designed for application onto HMA pavement to demarcate bike lanes.

B. **RIDE-A-WAY** bike lane coating has been scientifically formulated to provide the optimal balance of performance properties for a durable, long lasting color and texture to HMA pavement surfaces. Some of these key properties include wear and crack resistance, color retention, adhesion, minimal water absorption and increased friction properties.

C. **RIDE-A-WAY** bike lane coating performance has been tested and verified by an independent recognized testing laboratory. A Certificate of Analysis confirming these test results is available through either an accredited applicator or directly from Integrated Paving Concepts, Inc. (Tel. 800-688-5652). Please refer to the certified performance properties of **RIDE-A-WAY** bike lane coating outlined in Section 2.1 of this specification.

D. **RIDE-A-WAY** bike lane coating is only available from Integrated Paving Concepts, Inc.

E. A variety of colors are available including blue, green, red and yellow. Please refer to www.integratedpaving.com to view these. Custom colors are available upon request.

F. To ensure a quality installation, it is recommended to obtain confirmation of applicator accreditation or qualification from Integrated Paving Concepts Inc before proceeding with this work.

1.2 REFERENCES

A. ASTM D-4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Tester.

B. ASTM D-4060 Test Method for Abrasion Resistance of Organic Coatings by the Taber Abrasion.

C. ASTM D522-93A Standard Test Method for Mandrel Bend Test of Attached Organic Coatings.

D. ASTM G-155 QUV Accelerated Weathering Environment. Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.

E. ASTM D-2486 MEK rub test for chemical resistance.

F. ASTM D-570 Standard Test Method for water absorption of plastics.

G. ASTM E-303 British Pendulum test for friction.

H. EPA 24 ASTM D3960-05 Volatile Organic Compounds.

1.3 DEFINITIONS

A. **"Accredited Applicator"** is a licensed applicator who holds a Level 1 or higher certificate of accreditation as offered by Integrated Paving Concepts, Inc. (Tel. 800-688-5652). **Accredited Applicators** are reviewed on an annual basis and certificates are valid only for the calendar year. All **Accredited Applicators** have a foreman, supervisor or lead-hand that has successfully completed a StreetPrint Level I or Level II Training Program.

- **Level 1** accreditation indicates that the **Accredited Applicator** has completed Level 1 training and typically completes a minimum of 20,000 SF of HMA pavement coating application per year.
- **Level 2** accreditation indicates that the **Accredited Applicator** has completed both Level 1 and Level 2 training and typically completes a minimum of 30,000 SF of HMA pavement coating application per year.
- **Level 3** accreditation indicates that the **Accredited Applicator** has completed both Level 1 and Level 2 training and typically completes a minimum of 80,000 SF of HMA pavement coating application per year. Level 3 applicators typically employ a crew leader and crew who are committed full time to HMA coating installations.

B. **"HMA pavement"** is Hot Mix Asphalt pavement.

C. **"Owner"** means the Owner and refers to the representative person who has decision making authority for the Work.

1.4 REQUIRED BID SUBMITTAL DOCUMENTS

As part of the documents required at bid submission:

A. A copy of the current year Level 1, 2 or 3 accreditation certificate available from the **Accredited Applicator(s**) or written verification from Integrated Paving Concepts that the bid applicator is qualified to perform this Work.

B. Confirmation of coating color(s).

C. Proof of coating performance through a Certificate of Analysis provided by the **Accredited Applicator** or Integrated Paving Concepts Inc.

D. For projects where pre-existing pavement will receive coating, a separate price for the application of primer is to be provided.

PART 2 – PRODUCTS

2.1 MATERIALS – RIDE-A-WAY COATING

Materials used for the coating of the HMA pavement shall consist of the following:

A. **RIDE-A-WAY** bike lane coating is an epoxy-modified, acrylic, waterborne coating specifically designed for application on HMA pavements and is specially formulated by Integrated Paving Concepts, Inc. (Tel. 800-688-5652) to provide a safe, durable, long lasting color and texture to the HMA pavement surface.

B. **RIDE-A-WAY** bike lane coating is environmentally safe and meets EPA requirements for Volatile Organic Compounds (VOC).

C. **StreetBond** colorant is a highly concentrated, high quality, UV stable pigment blend designed to be added to **RIDE-A-WAY** coating to provide color to the coating. One pint of colorant shall be used with one pail of **RIDE-A-WAY** coating.

D. **StreetBond** primer is formulated to enhance the adhesion of **RIDE-A-WAY** coating to pre-existing HMA pavement and/or previously coated HMA pavements.

2.2 PERFORMANCE PROPERTIES OF RIDE-A-WAY COATING

The following table outlines performance properties of **RIDE-A-WAY** bike lane coating which are backed up by Certificates of Analysis produced by an independent qualified testing facility. Integrated Paving Concepts, Inc. (1-800-688-5652) or the Accredited Applicator can provide a copy upon request.

TABLE 1: Typical Performance Properties of RIDE-A-WAY coating

Characteristic	Test Specification	Measured result
Durability: Taber Abrasion resistance	ASTM D-4060 1 day cure, H-10 wheel: cycles (dry)	<1.5 g/1000
Water sensitivity	ASTM D570 Water absorption after 9 days:	<10%
	Remaining absorption after 1 hour of recovery:	< 1.0%
Color stability	ASTM G-155 QUV 2,000 hours (CIE units)	Brick color ΔE < 1.5
Flexibility: Mandrel Bend	ASTM D522-93A Flexibility as measured by Mandrel bend 0.5mm thick sample passes 10 mm at 21˚C 0.5mm thick sample passes 125mm at -18˚C	
Chemical resistance	ASTM D-2486 Modified MEK scrubs 16 dry mils, number of scrubs until 50% substrate exposed	>5000
Adhesion to Asphalt	ASTM D-4541	Substrate Failure
Friction Wet	ASTM E-303 British Pendulum Tester	>55
Environmental Sensitivity	EPA 24 ASTM D3960-05 Volatile Organic Compounds	VOC < 150

2.3 EQUIPMENT

The following equipment is proprietary and is an integral part of the proper application of **RIDE-A-WAY** bike lane coating**.** This equipment is available only from Integrated Paving Concepts Inc. and can only be used by **Accredited Applicators** or an applicator designated by Integrated Paving Concepts Inc.

A. The **Rapid Sprayer II** is a proprietary coating sprayer supplied by Integrated Paving Concepts Inc. and is capable of applying the coating material to the HMA pavement surface in a thin, controlled film which will optimize the drying and curing time of the coating.

B. The **StreetBond Coatings mixer** is a motorized mixing device designed exclusively for use with coatings supplied by Integrated Paving Concepts.

PART 3 – EXECUTION

3.1 GENERAL

Ride-A-Way bike lane coating shall be supplied and applied by an **Accredited Applicator** or an applicator designated by Integrated Paving Concepts in accordance with the plans and specifications or as directed by the Owner. Do not begin installation without confirmation of Applicator qualification.

3.2 PRE-CONDITIONS

3.2.1 Pavement.

HMA pavement must be stable, well compacted and generally in excellent condition for the application of **RIDE-A-WAY** bike lane coating to be successful. The Owner shall make the final determination as to the suitability of the existing HMA pavement.

3.2.2 HMA Pavement Marking Removal

Pavement markings may be removed by sandblasting, water-blasting, grinding, or other approved mechanical methods. The removal methods should, to the fullest extent possible, cause no significant damage to the pavement surface.
The Owner shall determine if the removal of the markings is satisfactory for the application of **RIDE-A-WAY** bike lane coating. Work shall not proceed until this approval is granted.

3.3 APPLICATION OF RIDE-A-WAY BIKE LANE COATING

3.3.1 Surface Preparation

A. The HMA pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.

B. Either the **Accredited Applicator** or Integrated Paving Concepts technical services department can advise if **StreetBond primer** is required on pre-existing HMA pavement or not**.** An application rate of 3000 sq. ft per unit will be used.

C. Note that **StreetBond** primer is not required for new HMA pavement.

3.3.2 Application of coating

A. The applicator shall apply **RIDE-A-WAY** bike lane coating only when the air temperature is at least 50° F and rising, and will not drop below 50° F within 8 hours of application of the coating material. There should be no precipitation expected within 2 hours after the final layer of **RIDE-A-WAY** bike lane coating is dry to touch.

B. Each application of **RIDE-A-WAY** bike lane coating material shall be the same color and shall be allowed to dry completely before applying the next layer.

C. The coating application shall be spray applied using the **Rapid Sprayer II** and broomed to work the material into the asphalt surface. Subsequent applications shall be sprayed and rolled, using a 1" to 1½" nap roller or sprayed and broomed.

D. **Coating coverage**. One pail of **RIDE-A-WAY** bike lane coating will cover approximately 700 square feet. Actual coverage may be affected by the texture of the HMA pavement substrate. There will be less coverage with the first layer and higher coverage with subsequent layers.

E. The number of passes or layers of **RIDE-A-WAY** bike lane coating is dependent upon the application. Three layers will generally be sufficient, depending upon HMA pavement texture and traffic. For areas that will be subjected to vehicle traffic, an additional layer is recommended.

3.4. COATING THICKNESS

Approximate coating thickness is as outlined in **TABLE 2** below.

TABLE 2: COATING THICKNESS

	THICKNESS (approx.)			
SPRAY PASSES	WET		DRY	
	mm	mil	mm	mil
3	0.65	25.7	0.36	14.1
4	0.87	34.3	0.48	18.9

3.5 OPENING TO TRAFFIC

Minimally, the **RIDE-A-WAY** bike lane coating must be 100% dry before traffic is permitted. **TABLE 3** is a guide:

TABLE 3: COATING DRY TIMES (TYPICAL)

Air Temperature	Relative Humidity	Time to dry (approx.)
60°F (15°C)	80%	8 hours
81°F (27°C)	57%	4 hours
120°F (49°C)	5%	2 hours

Substrate temperature, wind and humidity can also affect dry times. Generally, warm and dry conditions decrease the time required for the coatings to dry.

3.6 EDGE STRIPING

Once **RIDE-A-WAY** bike lane coating has dried, a hot, spray applied white strip may be installed along the edge of bike path in accordance with the drawings and specifications, if required.

PART 4 – MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

The measured area is the actual area of HMA pavement that has received the **RIDE-A-WAY** coating**,** measured in place. No deduction will be made for the area(s) occupied by manholes, inlets, drainage structures, bollards or by any public utility appurtenances within the area.

4.2 PAYMENT

Payment will be full compensation for all work completed as per conditions set out in the contract. For unit price contracts, the payment shall be calculated using the measured area as determined above.