

## **Article 8. Road Code Standard Specifications and Details**

### Section 6-801. Road Code

The Town of North East hereby adopts as The Town of North East Road Code the existing County law known as Cecil County Department of Public Works Road Code and Standard Specifications, adopted on August 19, 2008, and subsequent amendments, to the extent that it is not modified as set forth below. The Cecil County Department of Public Works Road Code and Standard Specifications is hereby incorporated herein by reference as fully as if set forth verbatim herein to the extent that is not modified as set forth below. All standards and specifications as set forth therein shall be applicable within the corporate boundaries of the Town of North East except as specifically set forth:

#### Part 1

**GENERAL PROVISIONS** is applicable as amended herein, unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

#### 1.01 DEFINITIONS

In general, the following terms shall be revised wherever they appear:

1. "Commissioners", "County Commissioners", "The Board of County Commissioners (of Cecil County)", "County Commissioners of Cecil County", shall be construed in the non-generic sense to mean "The Mayor and Commissioners of the Town of North East" or "The Town of North East".
2. "Cecil County Department of Public Works", "Department of Public Works", "Department", and "Director" shall be construed to mean "The Town of North East" or "Consulting Engineer for the Town of North East" and/or "Town Engineer". "Supervisor of Town of North East Maintenance Department or his designee".
3. "Cecil County", "County" or "Cecil County, Maryland" shall be construed in the non-generic sense to mean "Town of North East" or "Town of North East, Maryland".
4. "Engineer" shall be construed to mean "Consulting Engineer for the Town of North East" and/or "Town Engineer".
5. "Cecil County Subdivision Regulations" shall be construed to mean "Town of North East Subdivision Regulations".

6. The applicability of the above original and redefined terminology in the various contexts used throughout the Cecil County Department of Public Works Road Code and Standard Specifications will be determined by the Town of North East, and such determination shall be final.

## CONFLICT

Any conflict between the Cecil County Department of Public Works Road Code and Standard Specifications, August 19, 2008, and subsequent amendments or as amended and adopted by the Mayor and Commissioner of the Town of North East, and between the Town of North East Zoning Ordinance and/or Subdivision Regulations as amended shall be resolved in favor of the Town of North East Zoning Ordinance and/or Subdivision Regulations.

### Part 2

**RIGHT-OF-WAY** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

### Part 3

**GEOMETRICS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

### Part 4

**PAVEMENTS, CURBS, SIDE PATHS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

### Part 5

**DRAINAGE AND EROSION & SEDIMENT CONTROL** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

### Part 6

**UTILITIES** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

### Part 7

**SIGNS AND PAVEMENT MARKINGS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 8

**MAINTENANCE OF TRAFFIC** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 9

**TECHNICAL SPECIFICATIONS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 10

**CONSTRUCTION PLANS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 11

**IMPROVEMENTS GUARANTEE** is hereby deleted and the provisions of the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 12

**CONSTRUCTION PERMITS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 13

**CONDITIONS OF PERMITS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 14

**CONSTRUCTION IN EASEMENTS AND RIGHT-OF-WAYS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 15

**CONTROL OF WORK AND MATERIALS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 16

**SURVEY CONTROLS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 17

**CONSTRUCTION INSPECTIONS** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 18

**ACCEPTANCE BY COUNTY** is applicable unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## Part 19

**STANDARD DETAILS** are applicable as amended herein:

1. **Standard Detail R-2:** Total right-of-way width shall be 30-ft. and shall run along the back of curbs. "Permanent maintenance easement" shall be construed to mean "Permanent utility and sidewalk maintenance easement" and its width shall be 19-ft. including 4-ft. sidewalk and 2-ft. grass strip behind the curb.
2. **Standard Detail R-3:** Total right-of-way width shall be 30-ft. and shall run along the back of roadway curbs. "Permanent maintenance easement" shall be construed to mean "Permanent access, utility and sidewalk maintenance easement" and its width shall be 36-ft. including 18-ft. parking easement and 18-ft. utility and sidewalk easement.
3. **Standard Detail R-4:** Total right-of-way width shall be 34-ft. and shall run along the back of curbs. "Permanent maintenance easement" shall be construed to mean "Permanent utility and sidewalk maintenance easement" and its width shall be 19-ft. including 4-ft. sidewalk and 2-ft. grass strip behind the curb.
4. **Standard Detail R-5:** Total right-of-way width shall be 34-ft. and shall run along the back of roadway curbs. "Permanent maintenance easement" shall be construed to mean "Permanent access, utility and sidewalk maintenance easement" and its width shall be 36-ft. including 18-ft. parking easement and 18-ft. utility and sidewalk easement.
5. **Standard Detail R-14:** Notation "OPTIONAL – CAN BE PAVED" shall be removed.
6. **Standard Detail R-22** to be superseded by SHA details MD 630.01 and MD 630.02.
7. **Standard Detail R-25** to be superseded by SHA details MD 655.11, MD 655.12, MD 655.13 and MD 655.40.

8. **Standard Detail R-29:** Telephone and cable lines shall not be installed under the sidewalk.

## Appendix A

**RULES AND REGULATIONS FOR UTILITY CONSTRUCTION PERMITS** is applicable as amended herein, unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

### 1.00 DEFINITIONS

In general, the following terms shall be revised wherever they appear:

1. "Division Chief", "Chief of the Cecil County Department of Public Works Road Division", "Division", "Department", "The Department of Public Works Road Division", "Cecil County Department of Public Works", "Department of Public Works", and "Director" shall be construed to mean "The Town of North East" or "Consulting Engineer for the Town of North East" and/or "Town Engineer".
2. "Cecil County", "Harford County" or "County" shall be construed in the non-generic sense to mean "Town of North East" or "Town of North East, Maryland".
3. "Cecil County Commissioner(s)", shall be construed to mean "The Mayor and Commissioners of the Town of North East" or "The Town of North East".
4. "Department of Inspections, Licenses and Permits", shall be construed to mean "Town of North East Department of Planning and Zoning".
5. "Code of Cecil County" shall be construed to mean "Town of North East Code of Ordinances".
6. "Access permit" shall be construed to mean "Utility construction permit".

## Appendix B

**RULES AND REGULATIONS FOR ROAD ACCESS PERMITS** is applicable as amended herein, unless there is a conflict with the Town of North East Zoning Ordinance and/or Subdivision Regulations; in the case of conflict, the Town of North East Zoning Ordinance and Subdivision Regulations shall apply.

## 1.00 DEFINITIONS

In general, the following terms shall be revised wherever they appear:

1. "Cecil County Department of Public Works", "Department of Public Works", "Department of Public Works Development Services Division", "Department", "Director of Public Works" and "Director" shall be construed to mean "The Town of North East" or "Consulting Engineer for the Town of North East" and/or "Town Engineer".
2. "Cecil County", "Harford County" or "County" shall be construed in the non-generic sense to mean "Town of North East" or "Town of North East, Maryland".
3. "Cecil County Government", shall be construed to mean "The Mayor and Commissioners of the Town of North East" or "The Town of North East".
4. "Department of Planning and Zoning", shall be construed to mean "Town of North East Department of Planning and Zoning".
5. "Code of Cecil County" shall be construed to mean "Town of North East Road Code".
6. "Cecil County Department of Public Works Development Services Division ("Department") telephone number 410-996-5265" shall be construed to mean "The Town of North East, telephone number 410-287-5801".

### **Appendix C**

#### **ADDITIONAL ROADWAY STANDARDS**

##### **Standard Roadway Details**

RD-1	Bike Trail Detail
RD-2	Road Speed Hump Detail (2 pages)
RD-3	Paving Repair Criteria

##### **Standard Roadway Specifications**

##### **Category 600 - Shoulders**

##### **SPECIAL PROVISIONS - COLORED STAMPED CONCRETE**

**DESCRIPTION:** This work shall consist of all labor, materials, equipment and incidentals for construction and installation of Colored Stamped Concrete as specified in the contract documents and as directed by the Engineer. Work includes providing pre-mixed, ready-to-use surface hardener; proportioned, mixed, packaged at the manufacturing factory and delivered to the jobsite ready to apply; placing, stamping/imprinting and curing as specified.

#### Quality Assurance

**Manufacturer Qualifications:** Company specializing in manufacturing the products specified in this section shall have a minimum of 15 years documented experience in the manufacture of dry-shake colored floor hardeners.

**Contractor Qualifications:** Concrete work shall be performed by a firm with a minimum of five years experience with work of similar scope and quality and at least three projects of similar scope and size available for review.

Obtain each specified material from same source and maintain high degree of consistence in workmanship throughout Project.

A notification of the manufacturer's authorized representative must be given at least 4 weeks before the start of work.

Cast mockup of full-size panels of stamped cement concrete pavement to demonstrate typical pattern, texture, surface finish, color and standard of workmanship.

- Build mockups in the location and of the size indicated or, if not indicated, as directed by Engineer.
- Notify Engineer seven days in advance of dates and times when mockups will be constructed.
- Obtain Engineer's and Town of North East approval of mockups before starting construction.
- Maintain mockups during construction in an undisturbed condition as a standard for judging the completed work.
- Demolish and remove when directed.

#### References

Perform work in accordance with ACI 301 "Specification for Structural Concrete".

Conform to ACI 305 during hot weather.

Conform to ACI 306 during cold weather.

#### Submittals

Contractor shall submit manufacturer's complete technical data sheets for the following:

- Dry-shake colored hardener
- Imprinting tools
- Powder Antiquing Release agent
- Curing compound or Sealer.

#### Delivery, Storage and Handling

Deliver product in original factory unopened, undamaged packaging bearing identification of product, manufacturer, batch number, and expiration data as applicable.

Store the product in a location protected from damage, construction activity, and precipitation in strict accordance with the manufacturer's recommendations.

#### Project Conditions

Do not use specified product under conditions of precipitation or freezing conditions. Use appropriate measures for protection and supplementary heating/cooling or to ensure proper drying and curing conditions in accordance with the manufacturer's recommendations.

Floor hardener manufacturer shall provide Material Safety Data Sheets. The applicator shall be responsible to post these sheets during the application of the floor hardener.

Professional practices as described in ACI 305R *Hot Weather Concreting* and 306R *Cold Weather Concreting* should be followed.

### **MATERIALS:**

#### Manufacturers

Available manufacturers: Subject to compliance with requirements, manufacturers offering stamped cement concrete pavement systems that may be incorporated into the work include, but are not limited to, the following:

- Bomanite Corporation.
- Bon Tool Company.
- Cobblecrete International, Inc.
- Coloration Systems, Inc.
- Increte Systems, Inc.
- Patterned Concrete Industries, Inc.
- Perma Building Products, Inc.
- Rafco Products.
- Scofield: L.M. Scofield Company.

- Stampcrete International, Ltd.
- Super Stone, Inc.
- Symons Corporation.

### Forms

Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, true and smooth exposed surfaces.

Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

### Concrete Materials

Portland Cement: Concrete shall be Mix 6.

Aggregate: ASTM C 33, uniformly graded with coarse aggregate as follows:  
Class: 4S, 4M, or IN.  
Nominal Maximum Aggregate Size:  $\frac{3}{4}$  inch (19 mm).

Water: Potable and complying with ASTM C94

### Admixtures

General: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cement and to be compatible with other admixtures. Do not use admixtures containing calcium chloride.

### Color Materials (as per L.M. Scofield Color Chart A-112)

Colored Dry-Shake Hardener: Factory-packaged dry combination of Portland cement, graded quartz aggregate, coloring pigments and plasticizing admixture. Use coloring pigments that are finely ground, nonfading mineral oxides interground with cement.

Color: Muted Green, or approved equal.

Colored-Powder Release Agent: Factory-packaged dry combination of surface conditioning and dispersing agents interground with coloring pigments that facilitates release of stamp mats. Use coloring pigments that are finely ground, nonfading mineral oxides interground with cement.

Color: Classic Gray, or approved equal.

### Imprinting Tools (as per Hunt Valley Contractors pattern sheet)

Stamp Mats: Semi-rigid polyurethane mats with projecting textured and ridged underside capable of imprinting texture and joint patterns on plastic concrete.

Crosswalk and Driveways: 6" x 6" Granite  
Sidewalk: Ashlar Slate

### Curing and Sealing Materials

Evaporation Retarders: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

Clear Acrylic Sealer: Manufacturer's standard waterborne, membrane-forming, medium-gloss, acrylic copolymer emulsion solution containing not less than 15 percent solids by volume; nonyellowing and UV resistant.

### Related Materials

Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

### Concrete Mixes

Prepare design mixes, proportioned according to ACI 211.1 and ACI 301, for each type and strength of normal-weight concrete determined by either laboratory trial mix or field test data bases.

Use a qualified independent testing agency for preparing and reporting proposed mix designs for the laboratory trial mix basis.

Proportion mixes to provide concrete with the following properties:

Compressive Strength (28 Days): 3500 psi (24.1 MPa).  
Maximum Water-Cementitious Materials Ratio: 0.50.  
Maximum Slump: 4 inches (100 mm).

Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content not exceeding 3.0 percent.

### Concrete Mixing

Ready-Mixed Concrete: Comply with ASTM C 94.

When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

**CONSTRUCTION:** Prior to beginning any work, the Contractor shall provide a sample panel showing the size, color, texture and pattern of the imprinted concrete. The sample shall contain approximately 10 square feet of area and must be approved by the Engineer and Town of North East. The sample panel shall remain on the site to be used by the Engineer as a basis for comparison for the elements to be construction on this Contract.

The Contractor shall limit the number of sections to be poured at one time so as to adequately imprint the concrete while still in the plastic stage of set.

The construction scheduling and the time period required from start to finish of a given cross walk site is critical due to the necessity to maintain vehicular and pedestrian traffic. In order to maintain 2 way traffic on an existing 2 way street in at least 1 travel lane, it is necessary to construct only one half of the cross walk length at a time. The closure period for one travel lane for the work at a given location must be minimized. Accordingly, the construction at a given cross walk site must be performed as a continuous operation from the time that the travel lane is closed and the removal of the existing paving commences to the time that the concrete cross walk is in place and ready for commencement of the 12 hour curing period.

At the conclusion of the curing period with the approval of the Engineer, the travel lane shall be reopened for vehicular use. It is anticipated that the completion of the existing pavement removal, new concrete construction and curing period for a given cross walk site will not require more than 24 to 30 hours. The construction schedule for each cross walk location must be submitted to the Engineer at least 48 hours prior to the time that the construction activity is to be commenced.

The removal of existing paving shall be performed in a careful manner so as not to damage the paving adjacent to the proposed cross walk location which is to remain in place. Any damage to the paved areas to remain, which is caused by the Contractor shall be repaired by the Contractor at no cost to the Town.

The existing paving is Portland Cement Concrete, which has approximately 3 inches of overlay over it. The existing paving shall be saw cut for the full depth of the overlay and Portland Cement Concrete to provide a straight vertical face suitable for use as an expansion joint with the proposed cross walk concrete. The removed pavement shall be disposed of off-site in accordance with all State and local codes.

The subgrade shall be prepared for the placement of the proposed Portland Cement reinforced concrete paving and approved by the Engineer before the concrete pouring operation commences.

The concrete shall be placed and screeded to the finished grade and floated to a uniform surface in conformance with Article 33.09.

Color hardener shall be applied evenly to the concrete surface while in the plastic stage of set, by the dry-shake method using a minimum of 60 pounds per 100 square feet. It shall be applied in two or more shakes, floated after each and troweled only after the final floating.

While the concrete is still in the plastic stage of set, imprinting tools shall be applied to make the desired impression to the surface. The imprinted surface shall be cured in conformance with Article 33.09 using a liquid membrane-forming compound to match the color hardener. The curing period for the Modified Mix No. 6 concrete shall be a minimum of 12 hours. Sealing of the surface is to be done after the curing period.

The Contractor will have the option of furnishing and placing steel plates over the finished concrete during the curing period thus reducing the need for a longer period when one travel lane is closed. The surface of the plate must not be able to come into contact with the surface of the new concrete. The Engineer's approval of the use of the steel plates must be obtained prior to their use.

### Preparation

Proof-roll prepared subbase surface to check for unstable areas and to verify need for additional compaction. Proceed with pavement work only after noncomplying conditions have been corrected and subgrade is ready to receive pavement.

Remove loose material from compacted subbase surface immediately before placing concrete.

Protect adjacent construction from discoloration and spillage during application of color hardeners, release agents, curing compounds and sealers.

### Edge Forms and Screed Construction

Set, brace and secure edge forms, bulkheads and intermediate screed guides for pavement to required lines, grades and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after placing concrete.

Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

### Joints

General: Construct joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated. Arrangement of joints shall be carefully coordinated with stamping pattern and approved by Engineer.

Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than on-half hour, unless pavement terminates at isolation joints.

Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of strip pavement, unless otherwise indicated.

Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects and where indicated.

Locate expansion joints at intervals of 50 feet (15.25 m), unless otherwise indicated.

Extend joint fillers full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.

Furnish joint fillers in one-piece lengths for full width being placed where possible. Where more than one length is required, lace or clip joint-filler sections together.

Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary performed cap. Remove protective cap after concrete has been placed on both sides of joint.

**Contraction Joints:** Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:

**Grooved Joints:** Form contraction joints after initial floating by grooving and finishing each edge of joint with groover tool to the following radius. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.

Radius:  $\frac{1}{4}$  inch (6 mm).

**Edging:** Tool edges of pavement and joints in concrete after initial floating with an edging tool to the following radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.

Radius:  $\frac{1}{4}$  inch (6 mm).

### Concrete Placement

Remove snow, ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.

Moisten subbase to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until they are at the required finish elevation and alignment.

Comply with recommendations in ACI 304R for measuring, mixing, transporting and placing concrete.

Do not add water to concrete during delivery, at Project site or during placement.

Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.

Consolidate concrete with mechanical vibrating equipment. Use equipment and procedures to consolidate concrete according to recommendations in ACI 309R.

Screed paved surfaces with a straightedge and strike off. Start initial floating using bull floats or derbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on the surface.

Do not further disturb concrete surfaces before starting finishing operations or spreading dry-shake surface treatments.

Cold-Weather Placement: Comply with ACI 306.1. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

Do not use calcium chloride, salt or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix designs.

Hot-Weather Placement: Place concrete according to recommendations in ACI 305R and as follows when a hot-weather condition exists:

Cool ingredients before mixing to maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Mixing water may be chilled or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is contractor's option.

Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete. Fog-spray forms, steel reinforcement and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

### Initial Concrete Finishing

General: Wetting concrete surfaces during screeding, initial floating or finishing operations is prohibited.

Float Finish: Begin the second floating operation when bleedwater sheen has disappeared and the concrete surface has stiffened sufficiently to permit operations. Finish surfaces to true planes. Cut down high spots and fill low spots. Immediately refloat surface to uniform granular texture.

Colored Dry-Shake Hardener Finish: After initial floating, apply colored dry-shake material to plastic concrete surfaces according to manufacturer's written instructions and as follows:

Apply the first two thirds (2/3) of the specified application rate to the freshly-floated concrete surface. Bleed water shall not be present during or following the application of the first and second shake.

Do not throw the shake but distribute it evenly by hand or mechanical spreader designed to apply floor hardeners. Consult L.M. Scofield for recommended manufacturers of mechanical spreaders.

As soon as the material has absorbed moisture, indicated by uniform darkening of the surface, mechanically float the concrete surface a second time, just enough to bring moisture from the base slab through the shake.

Immediately following the second floating, apply the remaining one third (1/3) of the specified application rate. If applied by hand, broadcast in the opposite direction of the first for a more uniform coverage. If a mechanical spreader is used, apply the same manner as previously described.

As soon as this material has absorbed moisture, mechanically float the concrete surface a third time.

At no time shall water be added to the surface.

Immediately after applying dry-shake colored hardener, begin imprinting operations in strict accordance with manufacturer's written tech-data bulletin, including application of the powder antiquing release agent.

### Stamping

Mat Stamping: While initially finished concrete is plastic, accurately align and place stamp mats in sequence. Uniformly load mats and press into concrete to produce required imprint pattern and depth of imprint on concrete surface. Remove stamp mats immediately. Hand stamp edges and surfaces unable to be imprinted by stamp mats.

Remove unembedded release agent no fewer than three days after stamping concrete. High pressure wash surface and joint patterns, taking care not to damage stamped concrete. Control, collect and legally dispose of runoff.

### Curing and Sealing

Imprinted concrete shall be cured with the specified liquid membrane curing compound as recommended by the manufacturer. if a Liquid Release Agent is used: if not, curing should be done with a clean, non-staining curing paper.

As soon as possible after the antiquing release has been removed and after the moisture content of the concrete is low enough so that the alkali and other salts do not become trapped beneath the sealer, normally a minimum of 14-28 days after placement, two (2) coats of the specified sealer should be applied according to manufacturer's written instructions.

There should be no free water on the surface at the time of the application.

Concrete Protection, Curing and Sealing

General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection, and follow recommendations in ACI 305R for hot-weather protection during curing.

Remove and replace pavement that does not comply with requirements in this Section.

Maintain pavement free stains, discoloration, dirt and other foreign material. Sweep pavement not more than two days before date scheduled for Substantial Completion inspections.

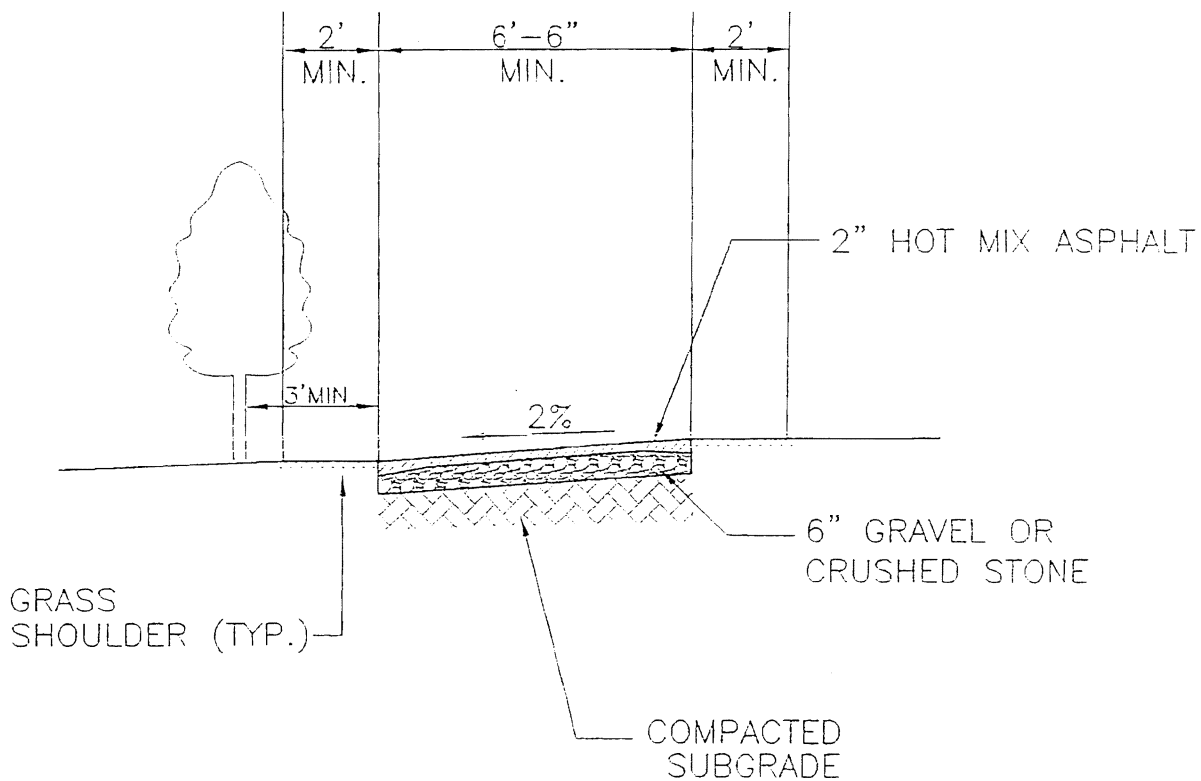
At the termination of the project, the Contractor shall supply the Town of North East with a new or like new stamp mat.

**MEASUREMENT AND PAYMENT:** Color Stamped Concrete shall be measured and paid for using the following items:

- Square Feet of Colored Stamped Concrete Sidewalk
- Square Feet of Colored Stamped Concrete Driveway and Crosswalk.

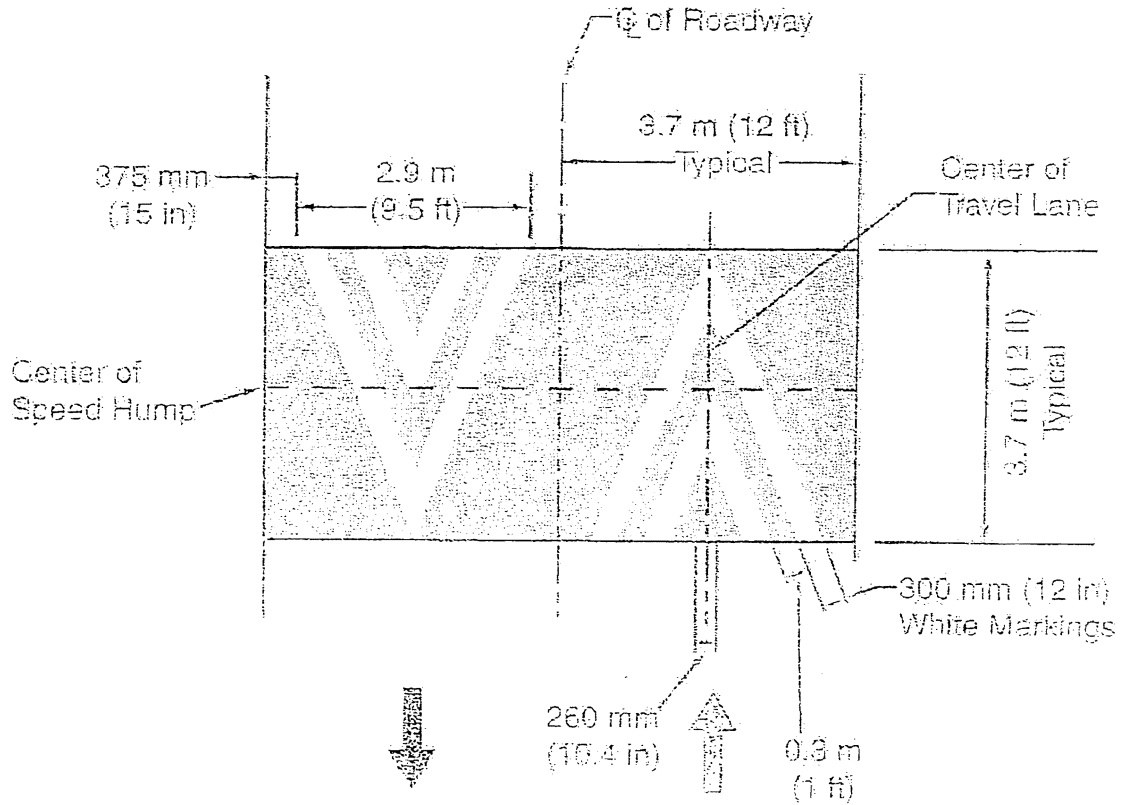
These items will be paid for on the basis of the Contract unit price bid per unit of measure for each item. Price and payment shall be full compensation for all labor, materials, tools, equipment and incidentals necessary to complete the items in a manner satisfactory to the Engineer.

Repealed and Replaced 07/14/09 by Ordinance 2009-06-02.



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TOWN OF NORTH EAST MARYLAND	APPROVED: JUNE 24, 2009	STANDARD ROADWAY DETAILS  BIKE TRAIL DETAIL	
	DATE		
	MAYOR AND COMMISSIONERS		RD-1



PLAN

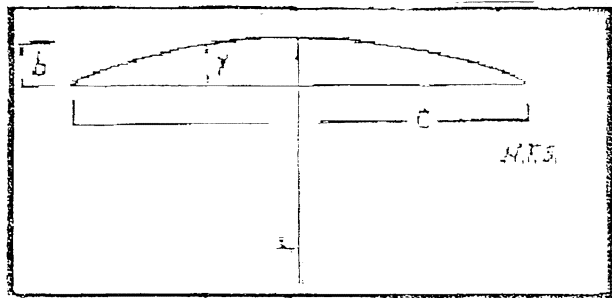
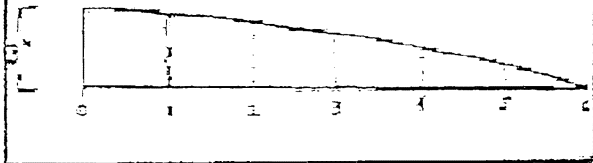
CONSTRUCTION TECHNIQUES

1. Mill the outside edges of the proposed hump to accommodate a "key-in" for the taper.
2. Use 4x4s as templates to define the height of the ten (10') foot wide flat top center section.
3. After placing the flat top portion, place a six foot long taper to the existing pavement.
4. Place the pavement markings as shown on the plan.
5. Use a sled tamper and some water until the bituminous cools (≈1/2 hour).
6. Follow with a finish roller.

RD - 253 (11-10-09)

TOWN OF NORTH EAST MARYLAND	APPROVED: JUNE 24, 2009	STANDARD ROADWAY DETAILS	
	DATE	ROAD SPEED HUMP DETAIL	
			RD - 2

### Design Data



X=1

$$0.25 - 72.125 + \sqrt{72.125^2 - 1^2}$$

$$= -71.875 + 72.12$$

$$Y = 0.243' = 2.92''$$

X=2

$$-71.875 + 72.10$$

$$Y = 0.222' = 2.67''$$

X=3

$$-71.875 + 72.104$$

$$Y = 0.188' = 2.25''$$

X=4

$$-71.875 + 72.0139$$

$$Y = 0.139' = 1.67''$$

X=5

$$-71.875 + 71.95$$

$$Y = 0.0765' = 0.92''$$

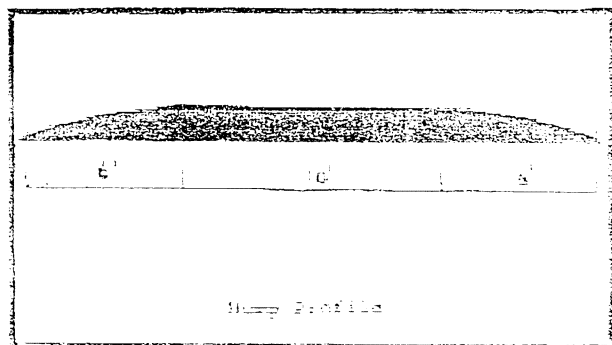
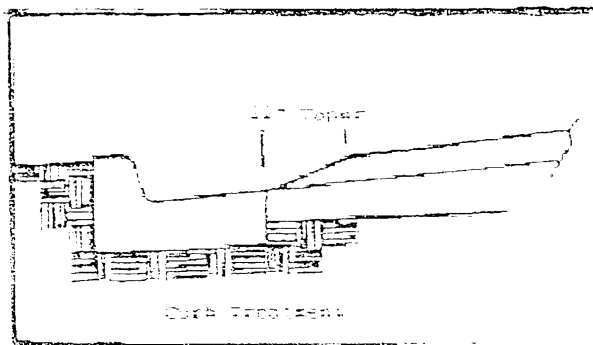
$$r = \frac{4b^2 + c^2}{8b} = 72.125$$

b = height = (0.25')

c = cord distance = (12')

$$y = b - r + \sqrt{r^2 - x^2}$$

x(ft)	y(ft)	=	Inches
0	0.25	=	3.0
1	0.243	=	2.92
2	0.222	=	2.67
3	0.188	=	2.25
4	0.139	=	1.67
5	0.077	=	0.92
6	0	=	0



X:\DDES\1809-25\110 RD (E) E.RD-2

TOWN OF NORTH EAST MARYLAND	APPROVED: JUNE 24, 2009	STANDARD ROADWAY DETAILS	
	DATE		
	MAYOR AND COMMISSIONERS		RD - 2
		ROAD SPEED HUMP DETAIL	2 OF 2

PAVING REPAIR CRITERIA

A. EXCAVATIONS FOR UTILITY REPAIR:

1. IF FINISHED PATCH DOES NOT CROSS ROAD CENTERLINE AND TOTAL WIDTH IS LESS THAN 50% OF ROAD WIDTH, ONLY DISTURBED PART OF THE ROAD SHALL BE REPAIRED.
2. IF FINISHED PATCH COMES TO THE ROAD CENTERLINE OR IS WIDER THAN 50% OF THE ROAD WIDTH, REPAIR SHALL EXTEND ACROSS THE ENTIRE ROADWAY WIDTH.

B. EXCAVATIONS FOR NEW UTILITIES:

TRENCH REPAIR SHALL BE IN ACCORDANCE WITH THE SECTION SHOWN ABOVE. IN ADDITION, THE ENTIRE ROADWAY SHALL BE MILLED TO A DEPTH OF 1 1/2" AND BROUGHT BACK TO EXISTING GRADE WITH HMA SUPERPAVE 12.5mm, PG-64-22 FOR SURFACE.

4003-35 STD RD

4003-35 STD RD

TOWN OF NORTH EAST	APPROVED: JUNE 24, 2009 DATE	STANDARD ROADWAY DETAILS PAVING REPAIR CRITERIA	RD-3
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## **Article 9. Use of Town Streets and Highways**

### Section 6-901. Obstructing Free Passage

It shall be unlawful for any person to use the streets, alleys, highways, parking areas or sidewalks which are owned or dedicated to the Town for any purpose which may: 1) obstruct the free passage of vehicular or pedestrian traffic; or, 2) cause damage, or create a risk of damage, to public or private property.

### Section 6-902. Exclusions

This Article is not intended to prohibit jogging, hiking or running upon the streets, alleys, highways, parking areas or sidewalks which are owned or dedicated to the Town. The provisions of this Article are also not applicable to the property known as the Town Park.

### Section 6-903. Penalties

1. Adults. Violation of the provisions of this Article shall constitute a municipal infraction. The fine for such violation shall be \$25.00 for an initial offense and \$50.00 for each subsequent offense.

2. Juveniles. Any Police Officer observing a juvenile violation of any provisions of this Article shall obtain such juvenile's name, address, age and the name and address of such juvenile's parent (s) or guardian. This information and the nature of the violation shall be reported to the Police Department which shall cause a written notice to be mailed to the parent (s) or guardians advising of the violation (s) of this Article. In addition the Police Officer may refer such violation to the Department of Juvenile Services.

3. The penalties provided herein are not intended to be exclusive and any such person or juvenile charged may also be subject to the criminal or motor vehicle charges or citations.

Effective 07/06/93 by Emergency Ordinance 93-7-1.