

## APPENDICES

### RFID Tag Parameters for use on Precast

**Dimensions:** Must be 5.0"x .75"x .02".

**Material:** .003" thick Polyester for subsurface printing. Additional polyester layers total .2"  
Tag must be slotted on either end and contain a textured base layer.

**Label Copy:** The label copy will include block type lettering, company name & state plant ID and your company logo. All copy, block type lettering, company name & state plant ID, your company logo and bar code must be subsurface printed. This unique process provides excellent resistance to solvents, caustics, acids and moderate abrasion.

**Colors:** Color of ink must be black on white background. This is due to the required contrast needed for the bar code scanner to properly read the tags information.

**Serialization:** Bar code and human-readable equivalent shall be subsurface printed. Code 128 in 24-character hexadecimal format shall be utilized. A QR Code linking to the NCDOT vendor apps web lookup shall be subsurface printed on the label.

**Numbering Scheme:** 24 character numbering scheme will be utilized as follows.  
AE00xx000000002000000000 The first six digits identify the material and state assigned plant id (insert plant id here xx) AE will identify precast. Numbering will start with a 2 in the billions position to prevent duplication of numbers across products. The numbering scheme assigned by Idencia in the following format of 1C0xxx is also acceptable.

**RFID inlay:** The inlay shall be Alien Higgs 3 Squiggle or comparable UHF passive inlay, optional Smartrac Short Dipole R6.

**Frequency Range:** 860-960 MHz

**Adhesion:** Adhesives shall be non-proprietary and have a minimum of a 2 year above ground life span while being subjected to the various natural elements. Including but not limited to UV exposure, wind, rain, snow, heat.

**Read Range:** Tag shall have a minimum read range of 18-36ft. with a reader at 30 dbm.

**Tag Proof:** (M&T) must approve the tag design and type prior to producer placing an order for the tags from any vendor. This will include an image of the tag and a copy of the tag specifications.

**Tag Example:**

