| Form 312U |
|-----------|
| |

| Producer's Mix ID | | | | | | | | |
|-------------------|--|--|--|--|--|--|--|--|
|-------------------|--|--|--|--|--|--|--|--|

North Carolina Department of Transportation, Division of Highways, Materials and Tests Unit **Statement of Concrete Mix Design and Source of Materials**

| Class of Concrete | Concrete Producer Name | |
|------------------------------------|------------------------------|--|
| Vibrated (Yes or No) | NCDOT Plant No. | |
| Air Entrained (Yes or No) | Date Requested | |
| Reference Identical Mix Design No. | 7&28 Day Break Results (psi) | |

Mix Design Proportions Based on SSD Mass of Aggregates

| Material | Producer | Source | Qty. per Cu. Yd. | |
|---------------------------|----------|-----------------|------------------|--|
| Cement | | | lbs. | |
| Pozzolan | | | lbs. | |
| Other Pozzolan | | | lbs. | |
| Fine Aggregate | | | lbs. | |
| Other Fine Aggregate | | | lbs. | |
| Coarse Aggregate | | | lbs. | |
| Other Coarse Aggregate | | | lbs. | |
| Total Design Water | | | gals. | |
| Material | Producer | Admixture Brand | Qty. per Cu. Yd. | |
| Air Entraining Agent | | | As Recomm. | |
| Retarding Agent | | | As Recomm. | |
| Water Reducing Agent | | | As Recomm. | |
| Superplasticizer | | | As Recomm. | |
| Corrosion Inhibitor | | | gals. | |
| Latex Modifier | | | gals. | |
| Non-Chloride Accelerator* | | | As Recomm. | |
| Other* | | | As Recomm. | |

^{*}Non-Chloride Accelerator and Other admixtures are only permited on a case by case basis when required by the contract

Mix Properties and Specifications

| Slump (inches) | Mortar Content (ft ³) | |
|-------------------|-----------------------------------|----|
| Max. W/C Ratio | Air Content (%) | |
| Max. Water (gals) | Design Volume (ft ³) | 27 |

Aggregate and Cementitious Data

| Material | Type / Size | Coarse Agg. Shape | Specific Gravity | % Absorption | Unit Mass | Fineness Modulus |
|------------------------|-------------|-------------------|-------------------------|--------------|------------------|------------------|
| Fine Aggregate | | n/a | | | n/a | |
| Other Fine Aggregate | | n/a | | | n/a | |
| Coarse Aggregate | | | | | | n/a |
| Other Coarse Aggregate | | | | | | n/a |
| Pozzolan | | n/a | | n/a | n/a | n/a |
| Other Pozzolan | | n/a | | n/a | n/a | n/a |
| Cement | | n/a | 3.15 | n/a | n/a | n/a |

Cast-in-place concrete shall conform to Section 1000, precast concrete to Section 1077, and prestressed concrete to Section 1078 of the applicable edition of the Standard Specifications for Roads and Structures plus all applicable Special Provisions.

| Special Use Criteria: Is mix design governed If Yes submit copy of Sp | by Special Provision/Plan Note? YES or NO pecial Provision or Plan Note with this Form. | YES or NO | | |
|---|---|-----------|--|--|
| Name, Title, and Signature of Mix Designer: | | | | |
| NCDOT Mix Design Certification No. | Or North Carolina PE No. | | | |
| Comments: | | | | |

01-20