

**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
CONTROL STRIP DENSITY**

M&T - 514QA/QC
Rev. 02/11

Date: _____

Contract/Project No. _____ County _____ Control Strip No. _____

From Sta. _____ to Sta. _____ Lane _____

Layer _____ Depth _____ Width _____ Route _____ Job Mix Formula _____

Gauge Serial No. _____ Material _____ Crew No. _____

| <u>STANDARD COUNTS</u> | <u>ASPHALT CORE SAMPLES</u> |
|---|--|
| Density | <u>Core No.</u> <u>Sta.</u> <u>%Compaction</u> |
| _____ System 1 | _____ _____ _____% |
| _____ System 2 | _____ _____ _____% |
| Allowable Standard Count Range | _____ _____ _____% |
| _____ +1.0% System 1 - 1.0% _____ | _____ _____ _____% |
| _____ +1.2% System 2 - 1.2% _____ | _____ _____ _____% |
| | Avg. % Compaction _____% (A) |

| Test | <u>Station</u> | ASPHALT (<u>Wet Density</u>) |
|------|----------------|--------------------------------|
| 1 | _____ | _____ |
| 2 | _____ | _____ |
| 3 | _____ | _____ |
| 4 | _____ | _____ |
| 5 | _____ | _____ |
| 6 | _____ | _____ |
| 7 | _____ | _____ |
| 8 | _____ | _____ |
| 9 | _____ | _____ |
| 10 | _____ | _____ |

AVG. (PCF) _____ (B)

ASPHALT TARGET DENSITY

Average of Control Strip (PCF) + Average of Cores (B+A) 100 = _____ (C) Target Density (PCF)

A = Core Sample Average

B = Average PCF of Control Strip

C = Correlated Target Density

cc: *Resident Engineer [White] *QA Copy Only
QA/QC Technician [Gold]

Print Name Legibly w/ HiCAMS #: _____

QA/QC Technician Signature: _____

NOTE: By providing this data under my signature and/or HiCAMS certification number, I attest to the accuracy and validity of the data contained on this form and certify that no deliberate misrepresentation of test results, in any manner, has occurred.

**North Carolina Department of Transportation
Division of Highways
Density Gauge Test Section**

M&T – 516 QC
Rev. 11/11

Contract/Project No. _____ Date _____ Division _____ Crew No. _____ Control Strip No. _____

Map/Route No. _____ Contractor _____ J.M.F. _____ - _____ - _____ Type Material _____

Layer _____ Gauge Serial No. _____ Standard Counts (nuclear gauge only) Sys1 _____ Sys2 _____

Core Sample Avg. _____ % Avg. of gauge readings _____ PCF Correlated Target Density _____ PCF

Interim Density Calculated Target: 62.4 PCF x _____ = _____ Calculated Target PCF
Gmm

| Test Sect. No. | | Begin Sta. | | End Sta. | | Length: /5 = | | | Increments | |
|----------------|-------|------------|-------|----------------|---------|--------------------|--------|----------------------|------------------|-------|
| Random No. | | Increments | | Random (calc.) | | Test Site Location | | | Density Readings | |
| Length | Width | Length | Width | Length | Width | Station | Offset | Lane | PCF | % |
| A | B | C | D | A x C = | B x D = | ----- | ----- | ----- | ----- | ----- |
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| | | | | | | | | | | |
| Comments: | | | | | | | | Test Section Average | | |
| | | | | | | | | | Pass | Fail |

| Test Sect. No. | | Begin Sta. | | End Sta. | | Length: /5 = | | | Increments | |
|----------------|-------|------------|-------|----------------|---------|--------------------|--------|----------------------|------------------|-------|
| Random No. | | Increments | | Random (calc.) | | Test Site Location | | | Density Readings | |
| Length | Width | Length | Width | Length | Width | Station | Offset | Lane | PCF | % |
| A | B | C | D | A x C = | B x D = | ----- | ----- | ----- | ----- | ----- |
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| | | | | | | | | | | |
| Comments: | | | | | | | | Test Section Average | | |
| | | | | | | | | | Pass | Fail |

| Test Sect. No. | | Begin Sta. | | End Sta. | | Length: /5 = | | | Increments | |
|----------------|-------|------------|-------|----------------|---------|--------------------|--------|----------------------|------------------|-------|
| Random No. | | Increments | | Random (calc.) | | Test Site Location | | | Density Readings | |
| Length | Width | Length | Width | Length | Width | Station | Offset | Lane | PCF | % |
| A | B | C | D | A x C = | B x D = | ----- | ----- | ----- | ----- | ----- |
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| | | | | | | | | | | |
| Comments: | | | | | | | | Test Section Average | | |
| | | | | | | | | | Pass | Fail |

At end of production for the day, calculate lot average by averaging test section results: **Daily Lot Average** _____ % Pass / Fail

*Print Name Legibly w/HiCAMs No. _____

*QC Technician Signature: _____

Note: (1) All failing lots must be documented by Resident Engineer on the QA-2B form.
Contractor must be notified by letter of any pay adjustment or pavement removal.

*By providing this data under my signature and/or HiCAMs certification number, I attest to the accuracy and validity of the data contained on this form and certify that no deliberate misrepresentation of test results, in any manner, has occurred.

cc: Resident Engineer [White]
QC Technician [Gold]

**North Carolina Department of Transportation
Division of Highways
Density Gauge Test Section**

M&T – 515 QA
Rev. 11/11

Contract/Project No. _____ Date _____ Division _____ Crew No. _____ Control Strip No. _____
 Map/Route No. _____ Contractor _____ J.M.F. _____ - _____ - _____ Type Material _____
 Layer _____ Gauge Serial No. _____ Standard Counts (nuclear gauge only) Sys1 _____ Sys2 _____
 Core Sample Avg. _____ % Avg. of gauge readings _____ PCF Correlated Target Density _____ PCF

Interim Density Calculated Target: 62.4 PCF x _____ = _____ Calculated Target PCF
 Gmm

| Test Sect. No. | | Begin Sta. | | End Sta. | | Length: /5 = | | | Increments | |
|----------------|-------|------------|-------|----------------|---------|--------------------|--------|--------------------------|----------------------------|-------|
| Random No. | | Increments | | Random (calc.) | | Test Site Location | | | Density Readings | |
| Length | Width | Length | Width | Length | Width | Station | Offset | Lane | PCF | % |
| A | B | C | D | A x C = | B x D = | ----- | ----- | ----- | ----- | ----- |
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| | | | | | | | | | | |
| Comments: | | | | | | | | Test Section Average (%) | | |
| | | | | | | | | | Pass | Fail |
| | | | | | | | | QC Test Average (%) | Within Limits of Precision | |
| | | | | | | | | | Yes | No |

| Test Sect. No. | | Begin Sta. | | End Sta. | | Length: /5 = | | | Increments | |
|----------------|-------|------------|-------|----------------|---------|--------------------|--------|--------------------------|----------------------------|-------|
| Random No. | | Increments | | Random (calc.) | | Test Site Location | | | Density Readings | |
| Length | Width | Length | Width | Length | Width | Station | Offset | Lane | PCF | % |
| A | B | C | D | A x C = | B x D = | ----- | ----- | ----- | ----- | ----- |
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| | | | | | | | | | | |
| Comments: | | | | | | | | Test Section Average (%) | | |
| | | | | | | | | | Pass | Fail |
| | | | | | | | | QC Test Average (%) | Within Limits of Precision | |
| | | | | | | | | | Yes | No |

*Print Name Legibly w/HiCAMs No. _____

*QA Technician Signature: _____

*By providing this data under my signature and/or HiCAMs certification number, I attest to the accuracy and validity of the data contained on this form and certify that no deliberate misrepresentation of test results, in any manner, has occurred.

cc: Resident Engineer [White]
QA Technician [Gold]