## WORKSHEET FOR SUPERPAVE ASPHALT CONCRETE MIX DESIGN AASHTO R 35



10. Specific gravity of binder $\left(\mathrm{G}_{\mathrm{b}}\right)$
11. Recommended plant mixing temperature, (Attach Temperature Viscosity Curve)
12. Percent compaction at $\mathrm{N}_{\text {max }}$
13. Hveem stabilometer value (If specified)
14. Moisture Susceptibility:
a. Dry strength,
b. Wet strength,
c. Index of Retained Strength, \%
$\qquad$
$\qquad$
$\qquad$

AASHTO T 283

| GRADATION TARGET VALUES AND ALLOWABLE DEVIATIONS |  |  | SPECIFIC GRAVITY AND ABSORPTION |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sieve Sizes | Job Mix Formula Target Value ${ }^{2}$ | Allowable <br> Deviation ${ }^{3}$ \% |  | Fine Aggregate (AASHTO T 84) | Coarse Aggregate (AASHTO T 85) | Combined Aggregate |
|  |  |  | Bulk SG (Gst) | - | - |  |
|  |  |  | Bulk SSD SG |  |  |  |
|  |  |  | ApparentSG( $\mathrm{G}_{\text {st }}$ ) |  | - |  |
|  |  |  | Absorption | - \% | - \% | \% |
|  |  |  |  |  |  |  |

[^0]| Material Stockpile | Stockpile Description | Blend Ratio |
| :---: | :---: | :---: |
| A |  | \% |
| B |  | \% |
| C |  | \% |
| D | [ | \% |
| E |  | \% |
|  | Total | 0 \% |

## Stockpile Gradation

| Sieve <br> Size | Stockpile <br> A <br> \% | Stockpile <br> B <br> \% | Stockpile <br> C <br> \% | Stockpile <br> D <br> \% | Stockpile <br> E <br> \% | Blended Stockpile Gradation | Job Mix <br> Formula <br> Target Values | Specification Limits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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Aggregate Properties

| Property | Result | Specification | Property | Result | Specification |
| :--- | :--- | :--- | :--- | :--- | :--- |
| LA Abrasion, \% - Grading __ <br> AASHTO T 96 |  | Fine aggregate angularity, <br> AASHTO T 304 - method A |  |  |  |
| Sodium Sulfate Soundness, \% <br> AASHTO T 104 |  | Flat and elongated particles, <br> ASTM D 4791 - 1: ratio |  |  |  |
| Durability index (Coarse) <br> AASHTO T 210 |  | Sand Equivalent <br> AASHTO T 176, Alt method <br> \#2, reference method |  |  |  |
| Durability index (Fine) <br> AASHTO T 210 |  | Other: |  |  |  |
| Fractured Faces, \%-Select <br> ASTM D 5821 |  | Other: |  |  |  |

## WORKSHEET FOR A SUPERPAVE MIX DESIGN (Continued)

| Trial Number | 1 | AVG | 2 | AVG | 3 | AVG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \% Asphalt by mass of total mix ( $\mathrm{P}_{\mathrm{b}}$ ) |  |  |  |  |  |  |
| Specimen height, |  |  |  |  |  |  |
| Effective Binder Content ( $\mathrm{P}_{\mathrm{be}}$ ) |  |  |  |  |  |  |
| Bulk specific gravity at $\mathrm{N}_{\text {des }}\left(\mathrm{G}_{\mathrm{mb}}\right)$ |  |  |  |  |  |  |
| \% compaction at $\mathrm{N}_{\text {int }}$ |  |  |  |  |  |  |
| \% Air voids at $\mathrm{N}_{\text {des }}\left(\mathrm{V}_{\mathrm{A}}\right)$ |  |  |  |  |  |  |
| Max. unit mass $\mathrm{G}_{\mathrm{mm}}$ |  |  |  |  |  |  |
| Voids in mineral aggregate (VMA) at $\mathrm{N}_{\text {des }}$ |  |  |  |  |  |  |
| Voids filled with asphalt (VFA) at $\mathrm{N}_{\text {des }}$ |  |  |  |  |  |  |
| Dust-to-Binder Ratio, (DP) |  |  |  |  |  |  |
| Hveem Stabilometer value |  |  |  |  |  |  |
| Trial Number | 4 | AVG | 5 | AVG | 6 | AVG |
| \% Asphalt by mass of total mix ( $\mathrm{P}_{\mathrm{b}}$ ) |  |  |  |  |  |  |
| Specimen height, |  |  |  |  |  |  |
| Effective Binder Content ( $\mathrm{P}_{\mathrm{be}}$ ) |  |  |  |  |  |  |
| Bulk specific gravity at $\mathrm{N}_{\text {des }}\left(\mathrm{G}_{\mathrm{mb}}\right)$ |  |  |  |  |  |  |
| \% compaction at $\mathrm{N}_{\text {int }}$ |  |  |  |  |  |  |
| \% Air voids at $\mathrm{N}_{\text {des }}\left(\mathrm{V}_{\mathrm{A}}\right)$ |  |  |  |  |  |  |
| Max. unit mass $\mathrm{G}_{\mathrm{mm}}$ |  |  |  |  |  |  |
| Voids in mineral aggregate (VMA) at $\mathrm{N}_{\text {des }}$ |  |  |  |  |  |  |
| Voids filled with asphalt (VFA) at $\mathrm{N}_{\text {des }}$ |  |  |  |  |  |  |
| Dust-to-Binder ratio, (DP) |  |  |  |  |  |  |
| Hveem Stabilometer value |  |  |  |  |  |  |

Test Results for Each of the Individual Moisture Susceptibility Test Specimens

Percent asphalt binder: $\qquad$
Antistrip, type, amount: $\qquad$ _

| Sample I.D. |  |  |
| :---: | :--- | :--- |
| Height | Dry |  |
|  | Wet |  |
| Bulk Specific <br> Gravity | Dry |  |
|  | Wet |  |
| Voids | Dry |  |
|  | Wet |  |
|  | Dry |  |
|  | Wet |  |

## Retained Strength, \%

## AIR VOIDS ( $\mathbf{V}_{\mathrm{a}}$ )


\% Asphalt binder $\left(\mathrm{P}_{\mathrm{b}}\right)$

VFA

Voids filled with asphalt

UNIT MASS

\% Asphalt binder ( $\mathrm{P}_{\mathrm{b}}$ )

VMA


## RECLAIMED ASPHALT PAVEMENT (RAP) DATA SHEET

Location: $\qquad$ Sampled by: $\qquad$
Tested by: $\qquad$ Date: $\qquad$

|  | RAP 1 |  | RAP 2 |  |
| :---: | :---: | :---: | :---: | :---: |
| \% of RAP in Mixture |  |  |  |  |
| Sieve Size | Dry <br> Gradation | T 308 <br> Burned <br> Gradation | Dry <br> Gradation | T 308 <br> Burned <br> Gradation |
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| AC by \% mix, Pb |  |  |
| :---: | :---: | :---: |
|  | Specific Gravity | Specific Gravity |
| Gmm |  |  |
| Gse $=(100-\mathrm{Pb}) /(10 / \mathrm{Gmm}-\mathrm{Pb} / \mathrm{Gb})$ |  |  |
| Gsb <br> $\mathrm{Gsb}=\mathrm{Gse} /((\mathrm{Pba} * \mathrm{Gse}) /(100 * \mathrm{~Gb}))+1)$ |  | 1.00 |
| $\mathrm{Pba}=($ assumed $)$ | 1.00 | 1.010 |
| $\mathrm{~Gb}=($ assumed $)$ |  |  |

## Remarks:

$\square$


[^0]:    ${ }^{1}$ Establish asphalt cement content (percent by mass of mix) to the nearest 0.01 percent.
    ${ }^{2}$ Establish target values to the nearest 0.1 percent as a part of the job mix formula.
    ${ }^{3}$ Allowable deviations plus or minus from established target values.

