NCAT TEST TRACK
AERIAL VIEW

- 1.7 Mile Oval Test Track on 309 acres
- 46 Cooperatively Sponsored 200 ft Test Sections
- 4700 sq ft Testing Laboratory
- 2600 sq ft Truck Maintenance Facility
The primary overall objective is to verify/develop tests to improve performance prediction.
INSTRUMENTATION

- MOISTURE GUAGES
- TEMPERATURE GUAGES
- WEATHER STATION
CONSTRUCTION (April – July, 2000)
SCOPE OF WORK

- 69 Stockpiles in 46 Total Sections
- 29 Mix Designs by NCAT
- 25 Mix Designs by Sponsors
- JMF’s Adjusted via Plant Trial Runs
- Approximately 900 QC Pills
- Approximately 4000 Research Pills
- Approximately 900 Beams (AVC)
- Up to 7 Plant Runs in a Day
- 500 to 750 tons of Aggregate per Section
QUALITY CONTROL SAMPLING
FULLY LOADED TRUCKS USED TO APPLY TRAFFIC
• Trucks Currently Run 17 Hours a Day (5:00 AM to 10:00 PM)
• Truck ESAL’s Logged Continuously via VIS, Mileage Log, & Tube
• No Trucking on Monday for Data Collection & Vehicle Maintenance
• On Target to Apply 10 Million ESAL’s by November 11th, 2002
TRUCKING OPERATIONS
SAFETY IS PRIMARY ISSUE

STOPPING DISTANCE
DISTANCE FOR
ACCELERATION
ANIMALS
• Coarse Superpave Mix
• Stone Matrix Asphalt Mix
• Open Graded Friction Course
SURFACE FRICTION vs MIX TYPE

- Fine Slag/Lms
- Dense Slag/Lms
- Coarse Slag/Lms
- SMA Slag/Lms

Coefficient of Friction vs Millions of ESALs
OBSERVATIONS TO DATE

• OVER 8.0 MILLION ESALS APPLIED
• 1,300,000 MILES DRIVEN BY TRUCKERS
• NO SIGNIFICANT ACCIDENTS
• TIRE WEAR HAS BEEN A PROBLEM
• MAXIMUM RUT DEPTH---0.3 INCHES
• COARSE GRADED MIXES PERFORMING SLIGHTLY BETTER THAN FINE GRADED
• NO CRACKING
• NO RAVELING
• SECTION OVERLAID DUE TO FRICTION
EAST CURVE GRANITE STUDY

Total Rutting (inches)

- 67-22
- 76-22(SBR)
- 76-22(SBS)

BRZ
TRZ
ARZ
SLAG/LIMESTONE STUDY

![Bar chart](chart.png)
NORTH TANGENT SLAG/LMS STUDY

Total Rutting (inches)

- 67-22 @ OPT
- 67-22 @ OPT+
- SBS @ OPT
- SBS @ OPT+
- SBR @ OPT
- SBR @ OPT+

BRZ, ARZ
SOUTH TANGENT LIMESTONE

Total Rutting (inches)

<table>
<thead>
<tr>
<th></th>
<th>BRZ</th>
<th>ARZ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.04</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>0.06</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>0.08</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>0.1</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>0.12</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>0.14</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>0.16</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>0.18</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>0.02</td>
<td>0.00</td>
</tr>
</tbody>
</table>
SOUTH TANGENT GRANITE

![Bar Chart](chart.png)

- **Total Rutting (inches)**
  - **BRZ**
  - **ARZ**
SOUTH TANGENT NMA

![Bar chart showing Total Rutting (inches) for 9.5 mm and 12.5 mm.]
CURVE GRAVEL STUDY

Total Rutting (inches)

- BRZ 67-22
- BRZ 76-22 (SBR)
- ARZ 67-22
AVG RUTTING OVER TIME

Average Track Rutting (mm)

Equivalent Single Axle Loadings

7 Day Avg. High Air Temp (°C)
TRAFFIC SHOULD BE COMPLETED IN NOVEMBER 2002 AND REPORTS COMPLETED ABOUT 6 MONTHS LATER
NEXT CYCLE OF TESTS
SHOULD BEGIN IN 2003---
WE ARE NOW TALKING TO
POTENTIAL SPONSORS
WEB PAGE
pavetrack.com