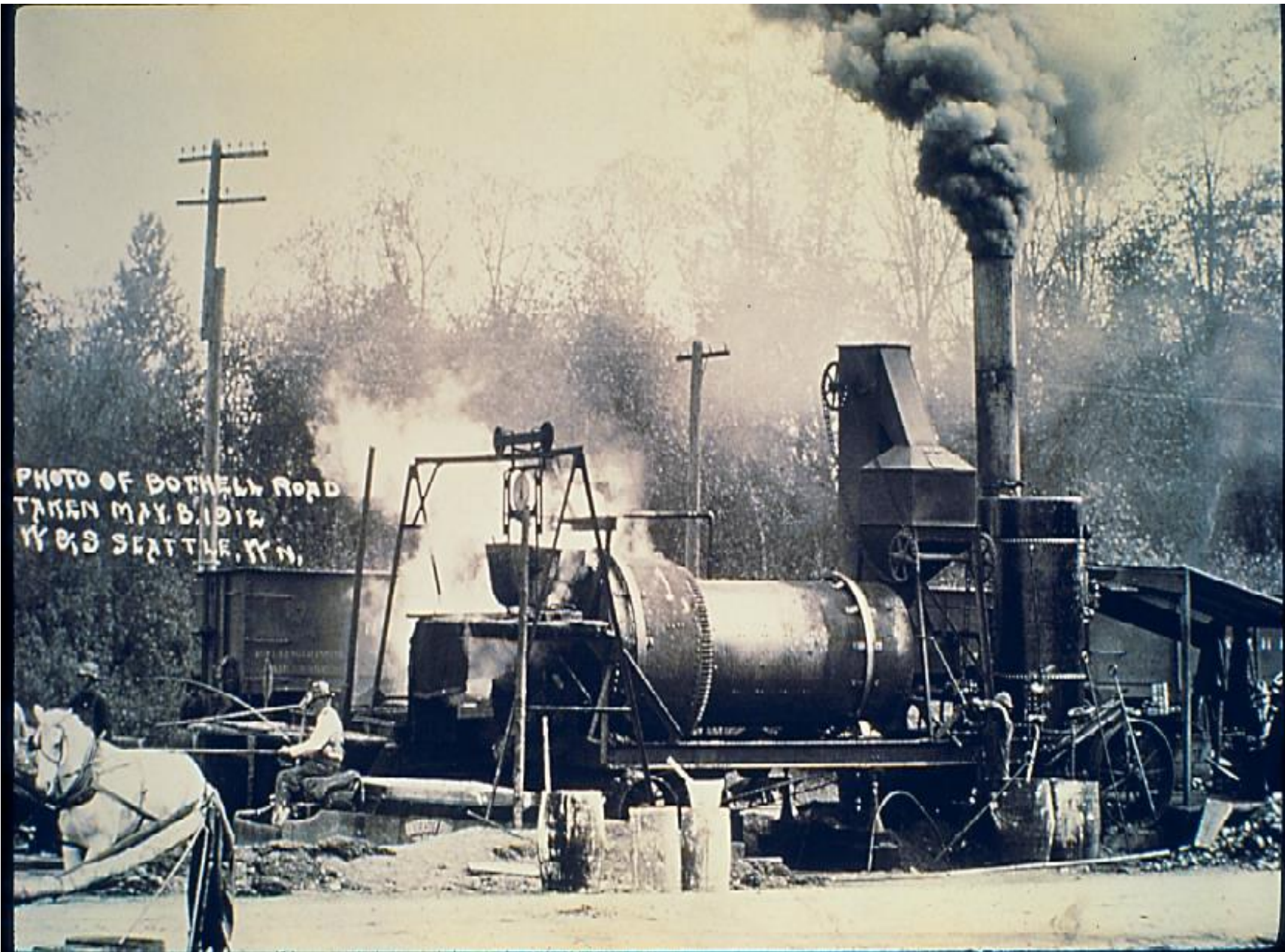




**Missouri Asphalt Pavement Association
Annual Conference
January 14, 2015**

**Future of Equipment
and Asphalt Plants**

Jeff L. Richmond, Sr.
President, Roadtec, Inc.



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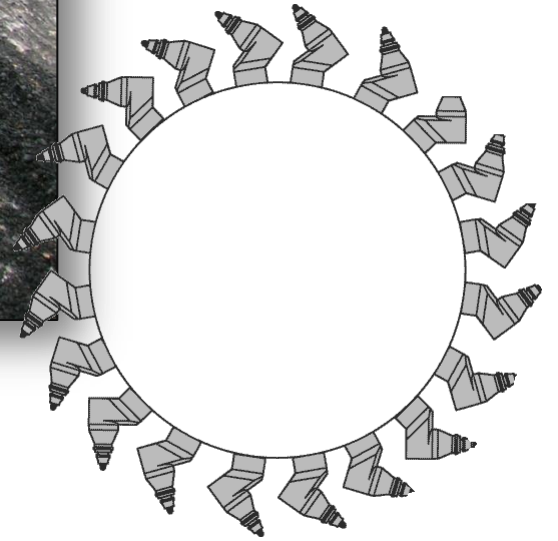
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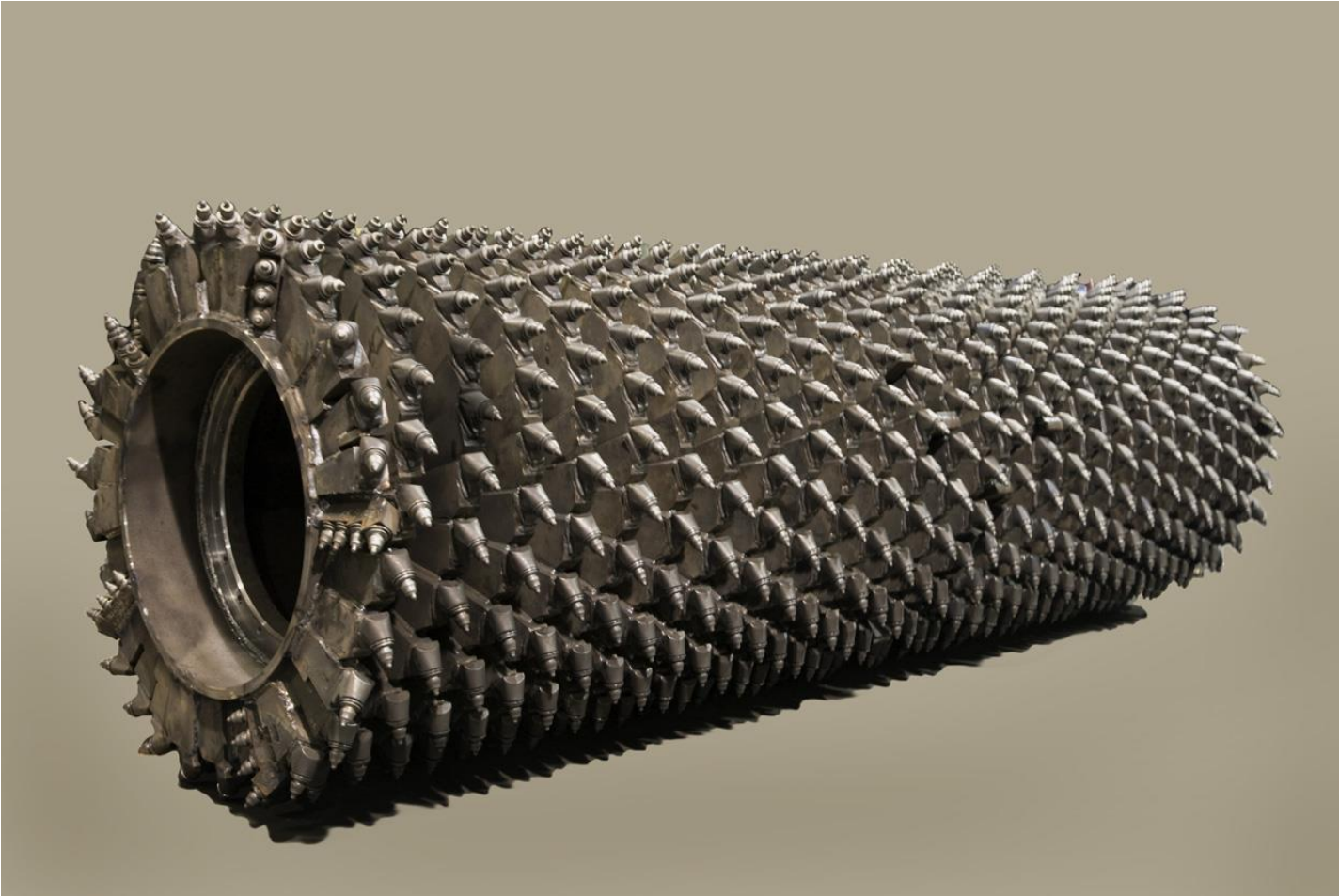




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Silica Milling Machine Partnership

Partnership Background

- NIOSH, realizing the success of the NAPA asphalt paver fumes partnership and the NAPA drive for worker health and safety, presented the industry with a new challenge as it pertains to silica emissions around milling machines.
- NAPA accepted the challenge to address silica/dust generated by milling machines.
- In 2003 the NAPA Silica Milling Machine Partnership was formed.
- The Partnership members were selected and the goals were established.





Partnership Team

Contractors

- Payne & Dolan, Inc.
- E & B Paving, Inc.

Manufacturers

- Roadtec, Inc.
- Wirtgen America
- Caterpillar
- Volvo
- Bomag
- Terex
- Dynapac





Partnership Team

Associations

- NAPA
- AEM

Labor

- IUOE – International Union of Operating Engineers
- LIUNA – Laborers International Union of North America



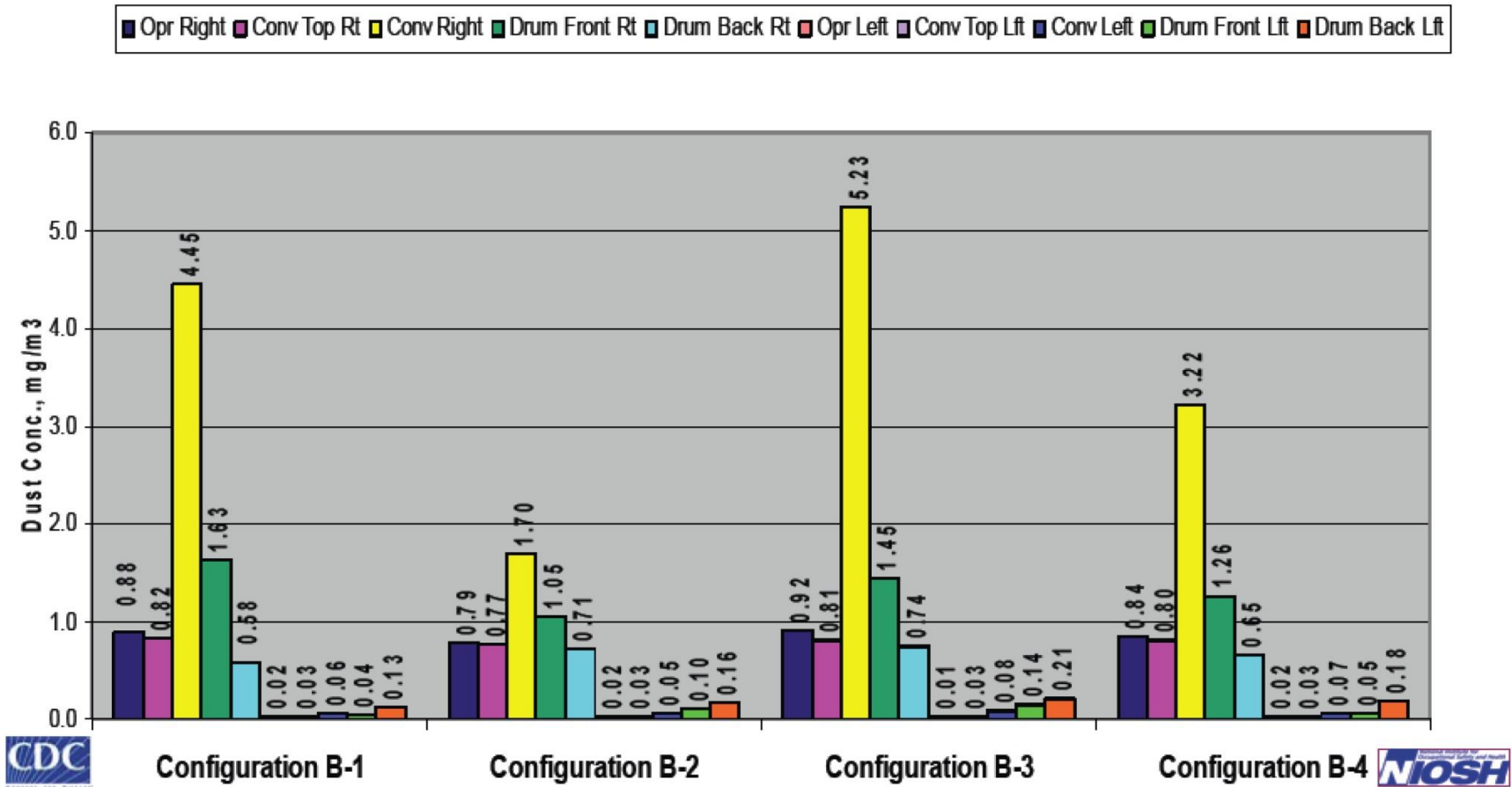


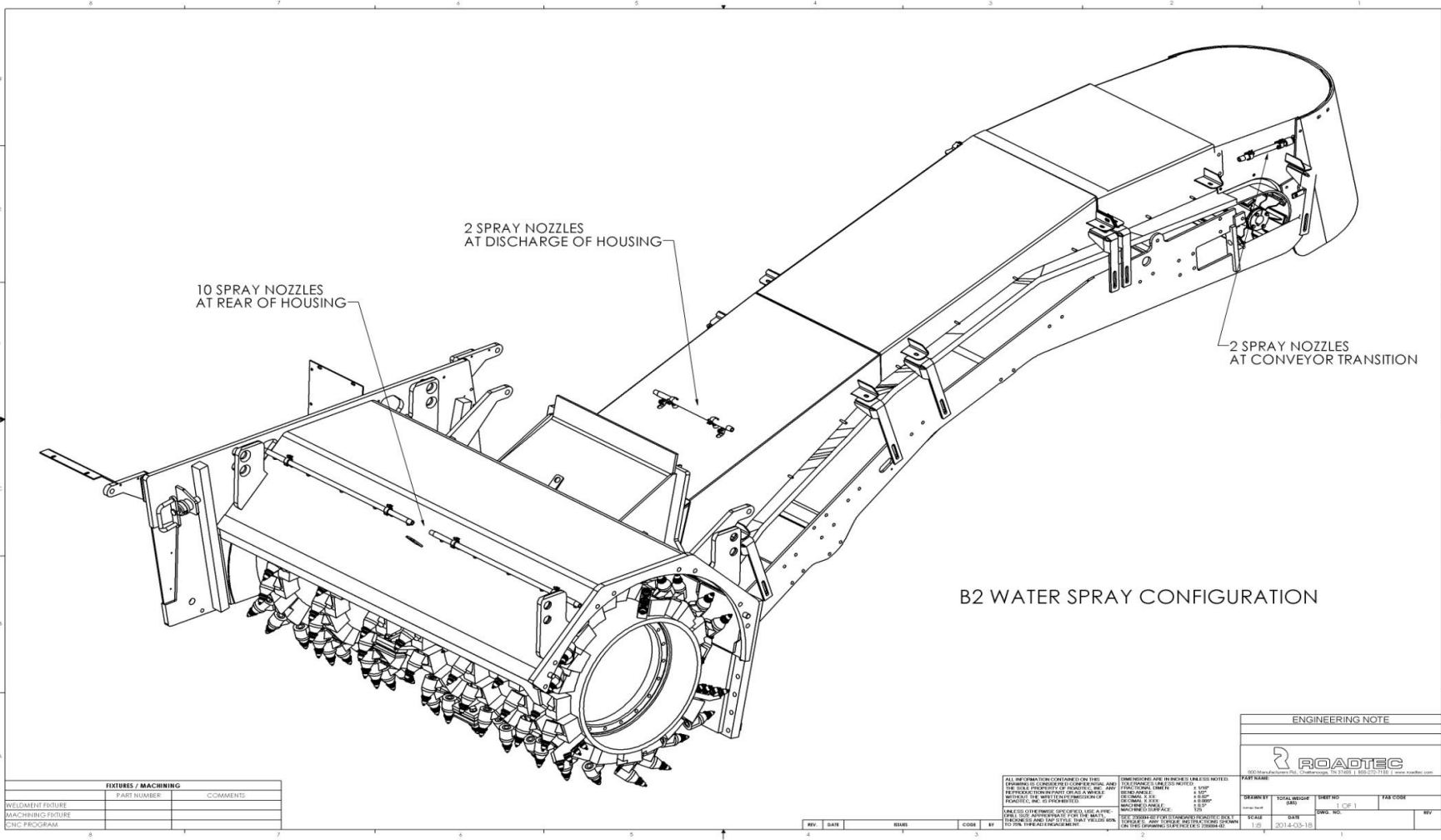
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Comparison of Respirable Dust Concentrations for Three Water Spray Systems Tested on Monday, June 23, 2008 -- *DRAFT*

Road Mill Locations, June 23, 2008






B2 WATER SPRAY CONFIGURATION

FIXTURES / MACHINING		
	PART NUMBER	COMMENTS
WELDMENT FEATURE		
MACHINING FEATURE		
CNC PROGRAM		

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ENGINEERING NOTE				
 2014-05-15				
REV	DATE	BY	CODE	DESCRIPTION
1.05	2014-05-15			

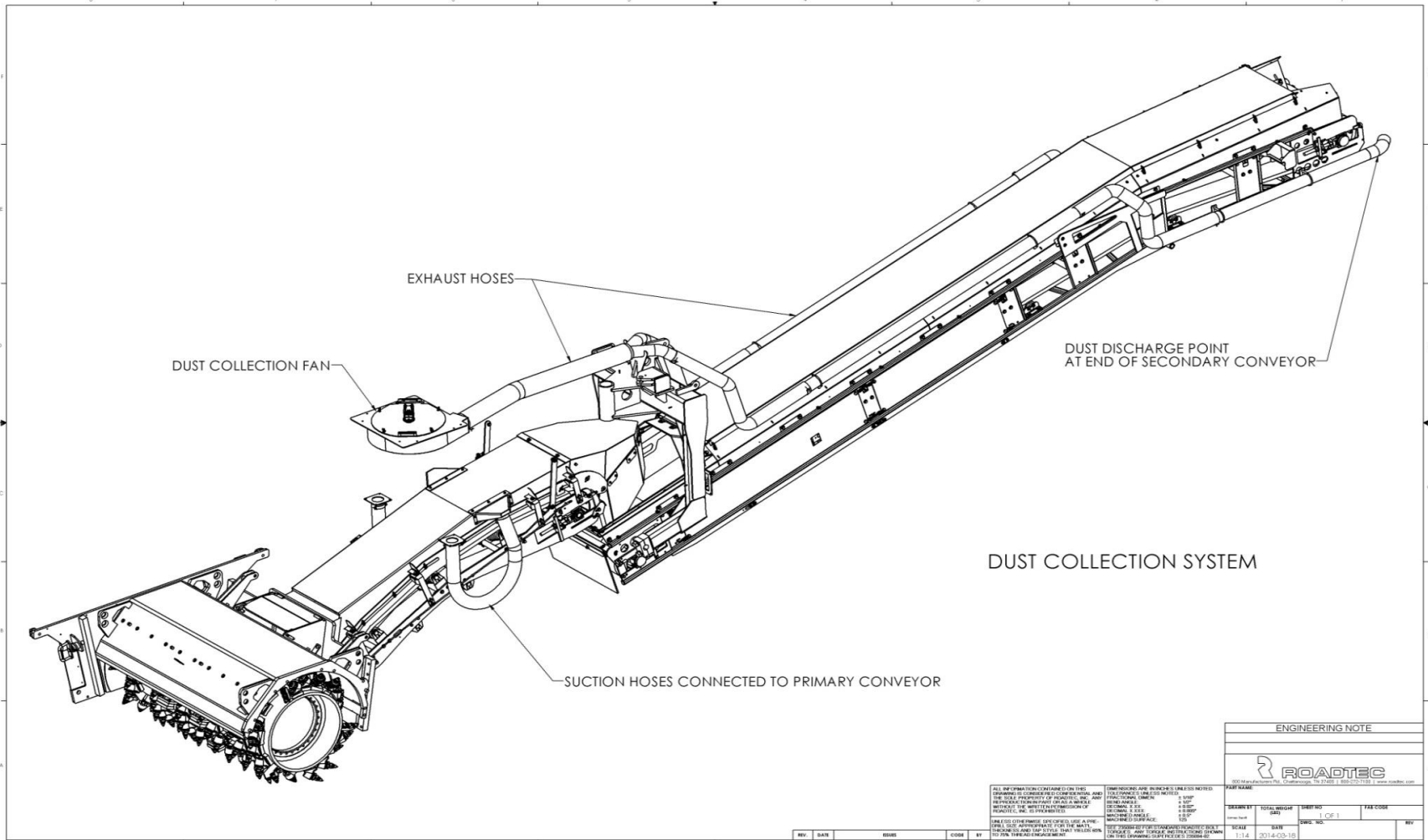


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ENGINEERING NOTE



ALL DIMENSIONS SHOWN ON THIS DRAWING TO CENTER UNLESS NOTED OTHERWISE TO CORNER OR DIMENSIONED TO THE FACE. DIMENSIONS TO FACE ARE SHOWN WITH A DIMENSION LINE TO THE FACE. DIMENSIONS TO CORNER ARE SHOWN WITH A DIMENSION LINE TO THE CORNER. DIMENSIONS TO CENTER ARE SHOWN WITH A DIMENSION LINE TO THE CENTER. DIMENSIONS TO FACE ARE SHOWN WITH A DIMENSION LINE TO THE FACE. DIMENSIONS TO CORNER ARE SHOWN WITH A DIMENSION LINE TO THE CORNER. DIMENSIONS TO CENTER ARE SHOWN WITH A DIMENSION LINE TO THE CENTER.

DATE	REV	BY	CHKD	APP'D	SCALE	DATE	REV
1-14	1				1:1	2014-05-18	



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End of Load Segregation



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Autotracking System



- System sensor
- Mounting bracket hangs off of the C3 conveyor
- Sensor points towards either the back wall of the paver's hopper or smooth surface on hopper insert



Autotracking System



- Pendant stays with paver operator
- Swings C3 to the right or left
- E-stop turns the Autotracking off/on





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Autotracking System



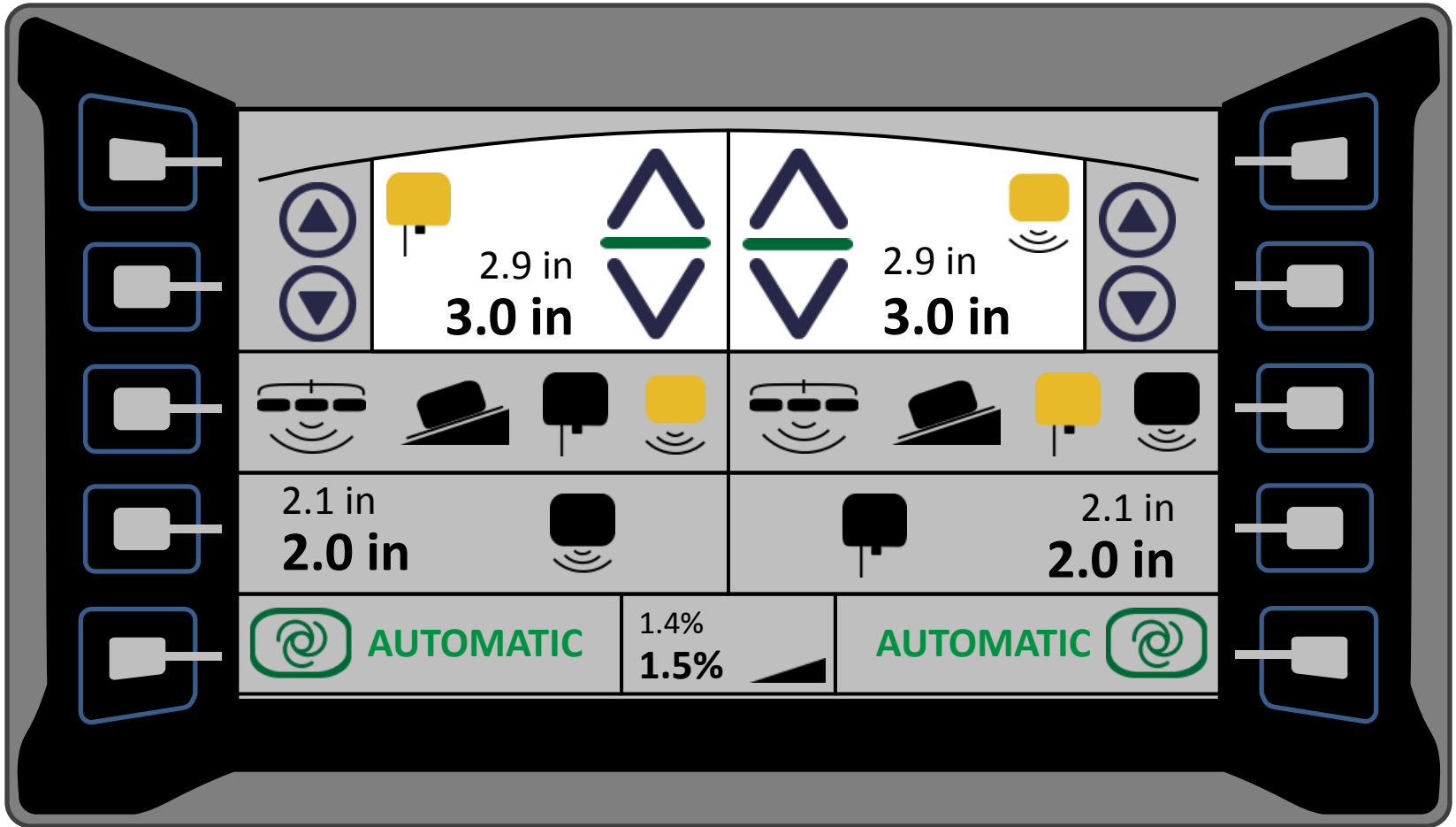
- Two light towers
- Color indicators
- Green = good distance
- Top amber & red = SB in process of stopping
- Lower amber & red = SB will be speeding up





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Guardian Remote Telematics System

Guardian™ Telematics



ROADTEC
BY PUBLIC INFRASTRUCTURE CHAMPION



GUARDIAN
Remote Telematics System

TELEMATICS SYSTEM



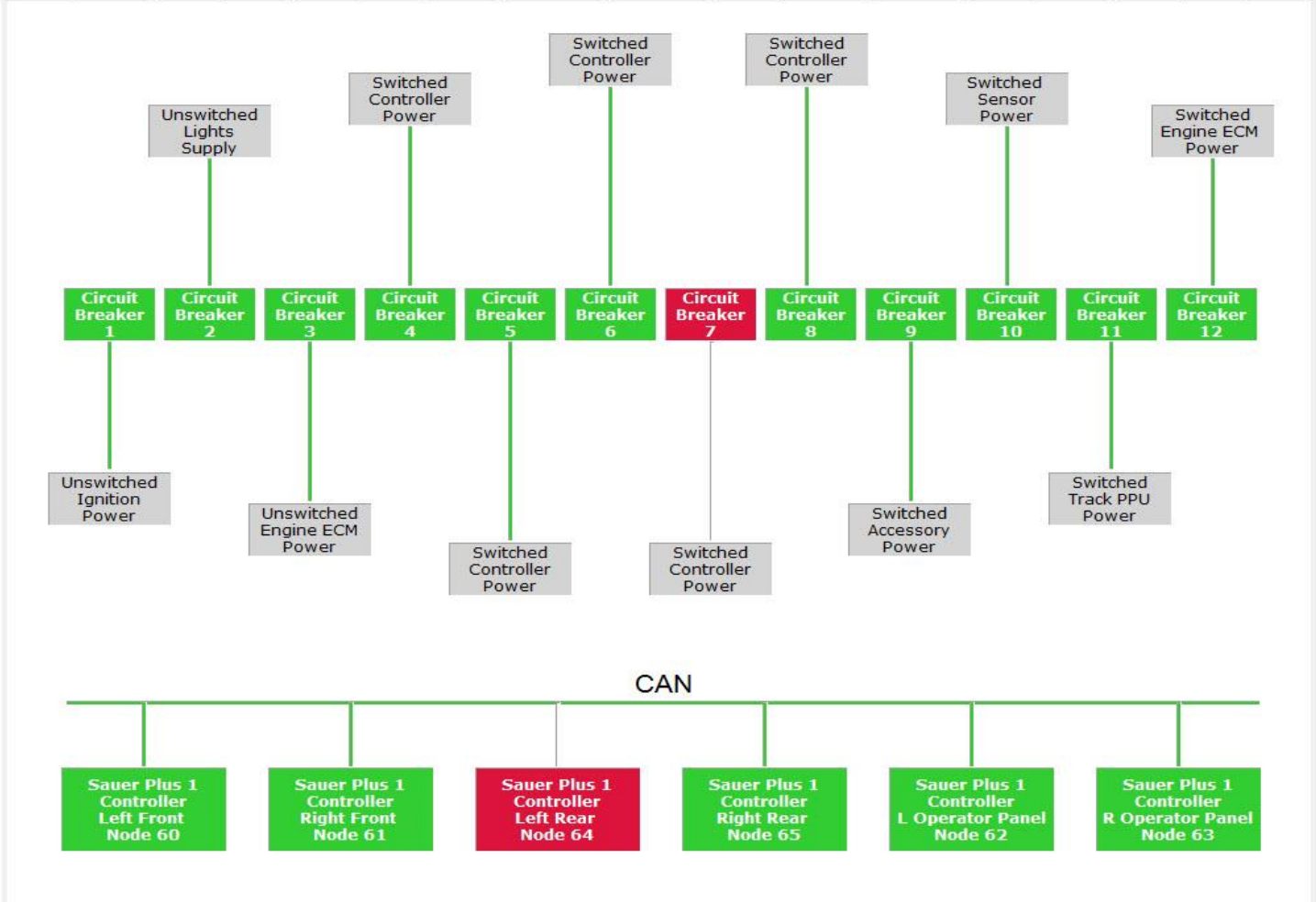


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an Astec Industries Company

Diagnostics

CONNECTED TO
MAILSERVER
CONNECTED TO DEVICE
WITH DATA
RX-600e

- Power
- Alarms
- Start
- Cutter
- Water
- Conv
- Propel
- Tract Cont
- Load Cont
- Steer
- Housing
- Elevation
- Hyd
- Engine
- Moba
- GPS
- PID





Water Conv Propel Tract Cont Load Cont Steer Housing Elevation Hyd Engine Moba Moba II GPS PID Production

Production Data

Material Discharge Display	19.52
Time Elapsed Loading Truck	00:00
Width of Milling Cut	6.58
Depth Of Cut	Left: -2.3 Right: -1.5
	Inches Inches
Depth Measurement Mode	Automatic
Select Full Pass Width	<input type="button" value="Full Pass"/>
Reset Discharge Display	<input type="button" value="Reset Zero"/>

Daily Totals

Total Tons	37.7
Total Square Yards	119.9
Total Cubic Yards	18.8
Total Trucks Loaded	2
Total Linear Feet	492
Total Fuel Burn	3.8
Total Work Time HH : MM	00:08
Average Truck Loading Time	04:11
Estimated Time Of Completion	0
Teeth Changed	0

Setup And Calibration

Calibration Tons/Cubic Yard	2.00
Change Width of Milling Cut	6.58
Set Fixed Depth of Cut	12.60
Select Depth Measurement Mode	Automatic
Select Operation Mode	Automatic
Enter No. Teeth Changed	0

Machine Totals

Total Tons	38.7
Total Square Yards	120.9
Total Cubic Yards	19.8
Total Trucks Loaded	3
Total Linear Feet	493
Total Fuel Burn	4408.2
Total Work Time HH : MM	00:09
Average Truck Loading Time	02:47
Total Teeth Used	0





GUARDIAN

Roadtec Telematics System

CONNECTED TO DEVICE WITH DATA

RX-700e Machine Serial No. 2004

- Water
- Conv
- Propel
- Tract Cont
- Load Cont
- Steer
- Housing
- Elevation
- Hyd
- Engine
- Moba
- Moba II
- GPS
- PID
- Production

Production Data

Material Discharge Display	0.0	
Time Elapsed Loading Truck	00:00	
Width of Milling Cut	6.58	
	Left	Right
Depth Of Cut	-2.3	-1.5
	Inches	Inches
Depth Measurement Mode	Automatic	
Select Full Pass Width	Full Pass	
Reset Discharge Display	Reset Zero	

Daily Totals

Total Tons	192.9
Total Square Yards	609.7
Total Cubic Yards	96.4
Total Trucks Loaded	10
Total Linear Feet	2502
Total Fuel Burn	15.6
Total Work Time HH : MM	00:34
Average Truck Loading Time	03:08
Estimated Time Of Completion	0
Teeth Changed	0

Setup And Calibration

Calibration Tons/Cubic Yard	2.00
Change Width of Milling Cut	6.58
Set Fixed Depth of Cut	12.60
Select Depth Measurement Mode	Automatic
Select Operation Mode	Automatic
Enter No. Teeth Changed	0

Machine Totals

Total Tons	193.9
Total Square Yards	610.7
Total Cubic Yards	97.4
Total Trucks Loaded	11
Total Linear Feet	2503
Total Fuel Burn	4420.0
Total Work Time HH : MM	00:35
Average Truck Loading Time	02:51
Total Teeth Used	0





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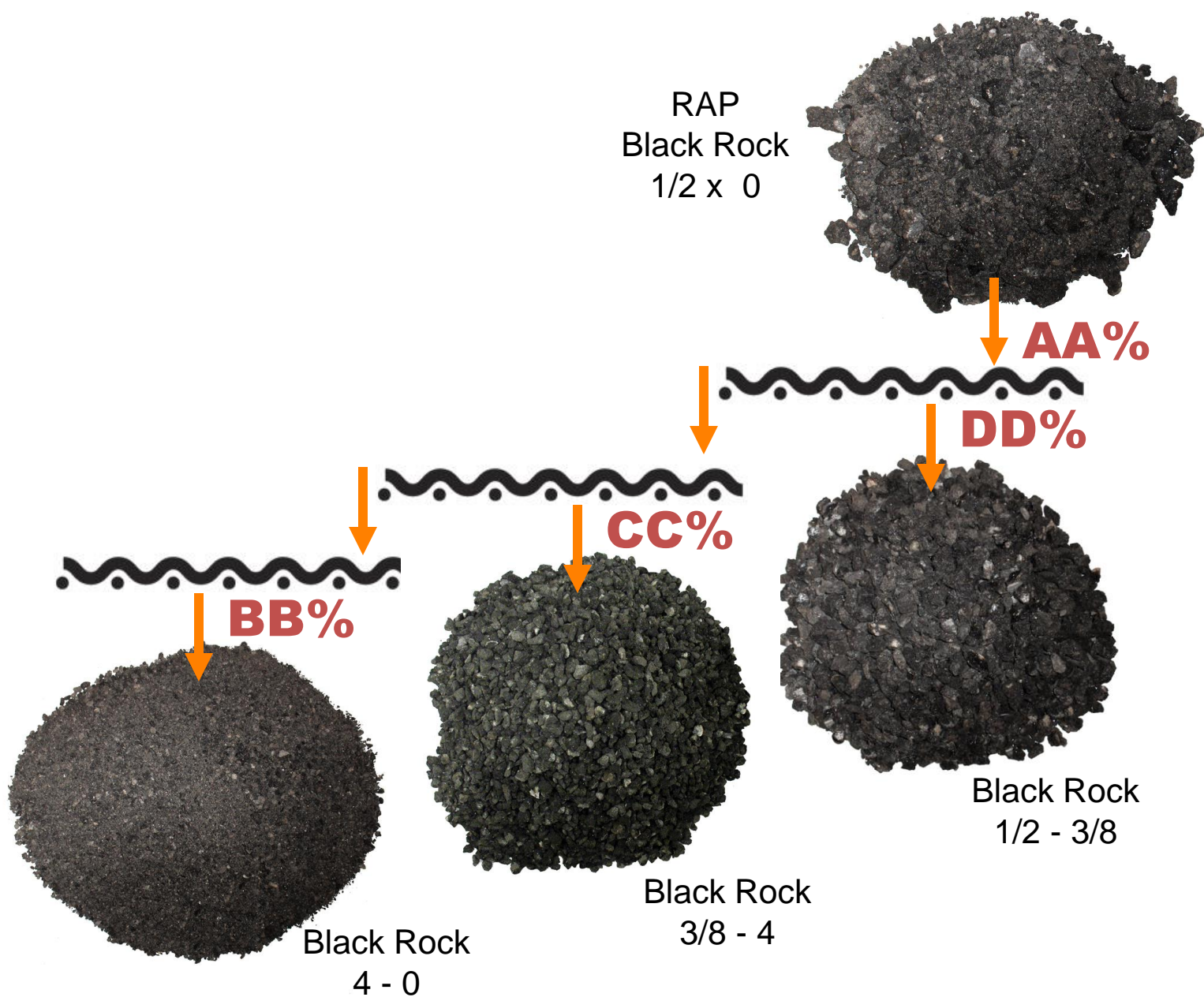




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PROCESSED RAP SCREENED TO ORIGINAL INGREDIENTS



ASTEC

PROSIZER 3100

802 424

802 424

802 424

White Rock
4-0

White Rock
3/8 - 4

White Rock
1/2 - 3/8

Black Rock
4-0

Black Rock
3/8 - 4

B%

C%

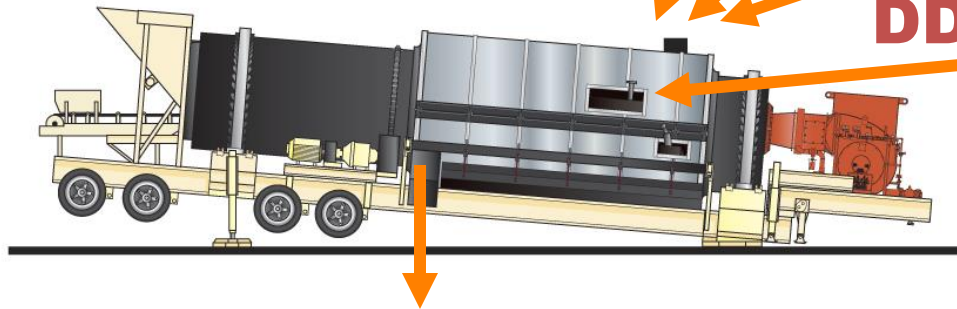
BB%

CC%

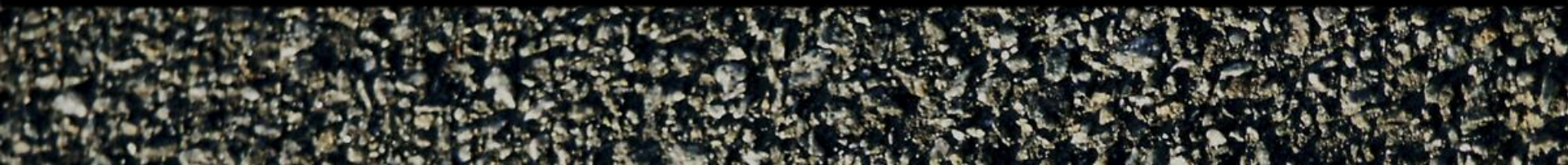
Black Rock
1/2 - 3/8

DD%

X%



SUPERPAVE MIX WITH PROCESSED RAP - CHOICE #2



Dillman Unified Drum



THE UNIDRUM®

Counterflow Dryer/Drum Asphalt Mixer

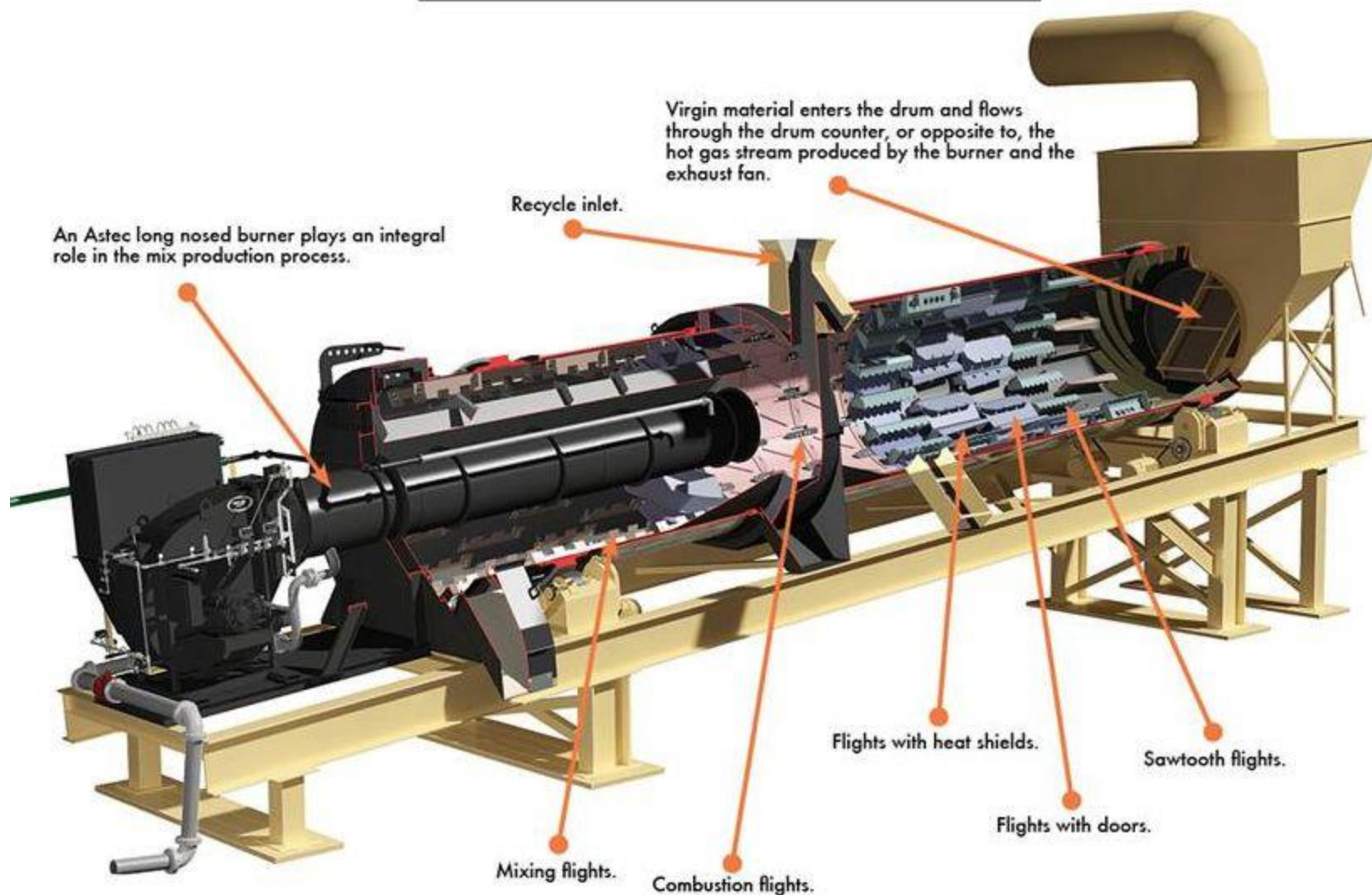


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UNIDRUM® DRYER/DRUM MIXER

INSIDE DRUM

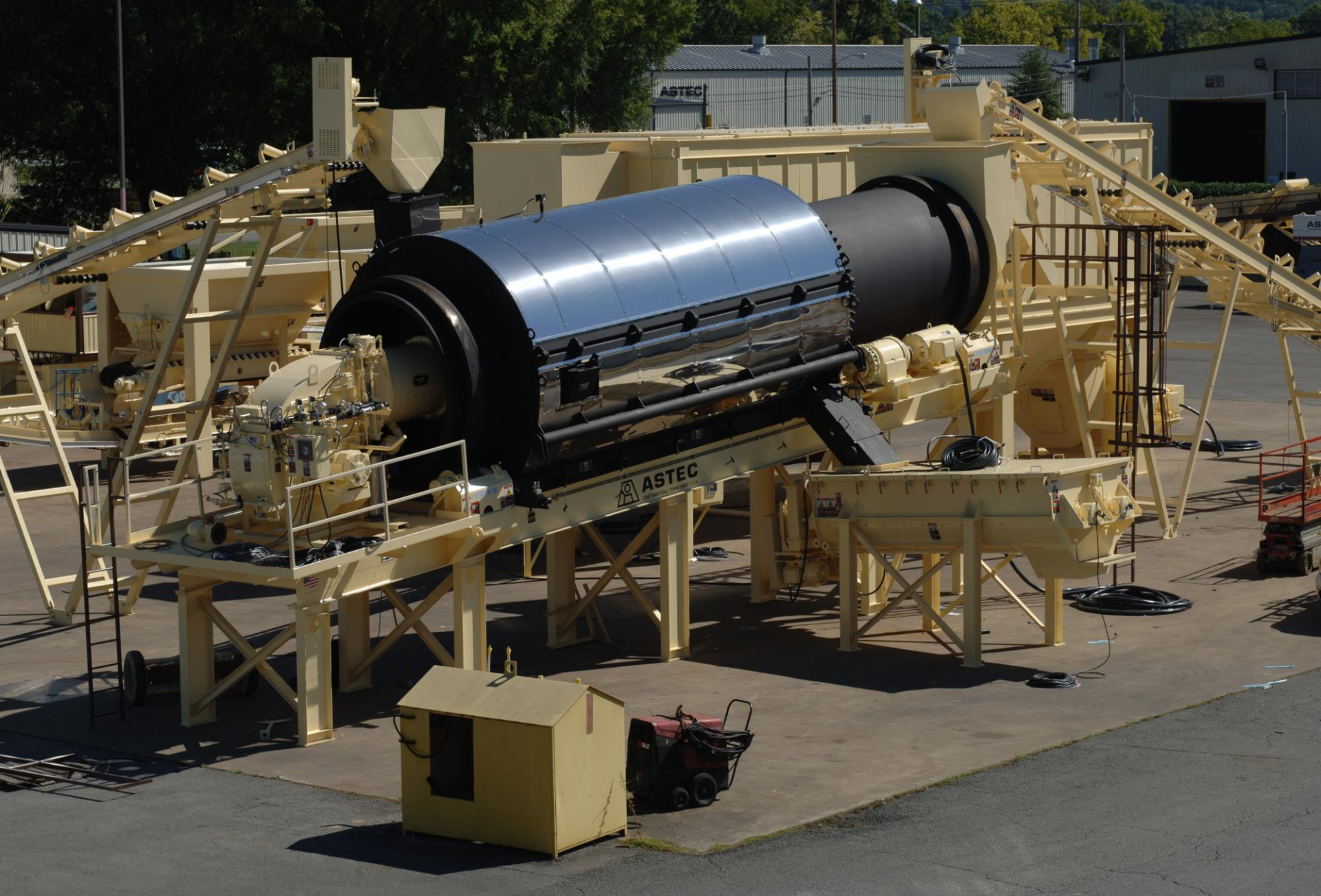




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Thank You!



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