# VISION 2020/













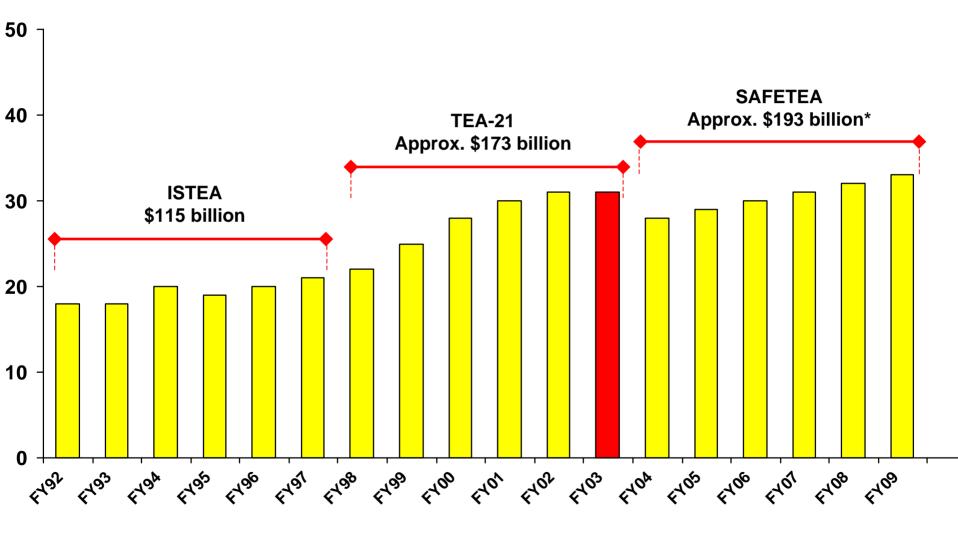


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## **U.S. FEDERAL HIGHWAY FUNDING**

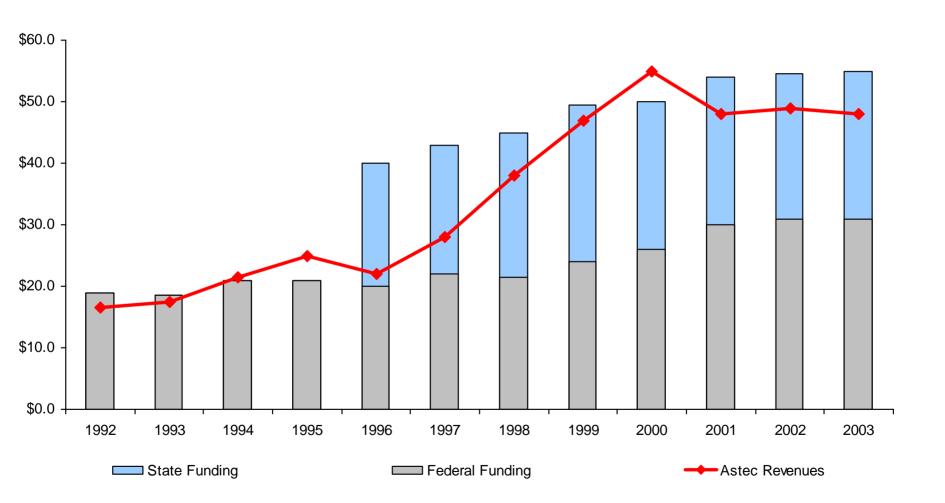
President's proposed reauthorization provides starting point for Congress.



Includes RABA adjustment

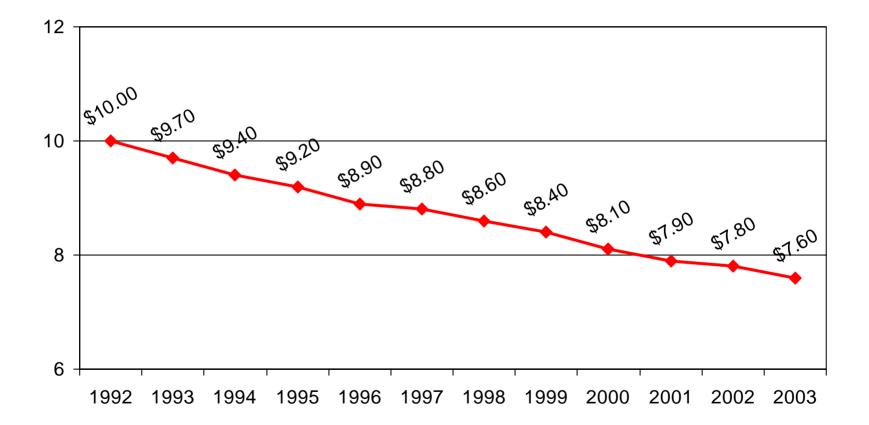
Source: Administration's reauthorization proposal released May 15, 2003

# Historical State and Federal Highway Funding vs. Astec Industries Revenues

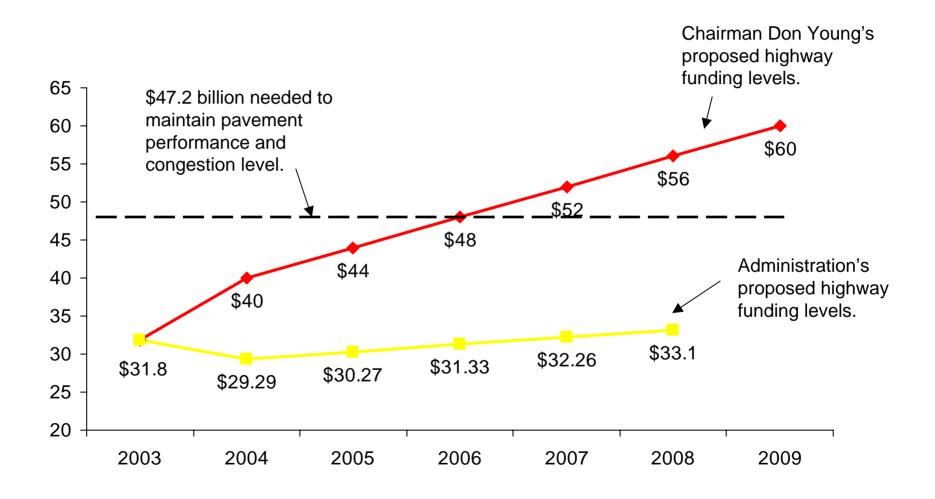


Source: American Road & Transportation Builders Association and Company Estimates

#### **Buying Power of \$10 in 1992**

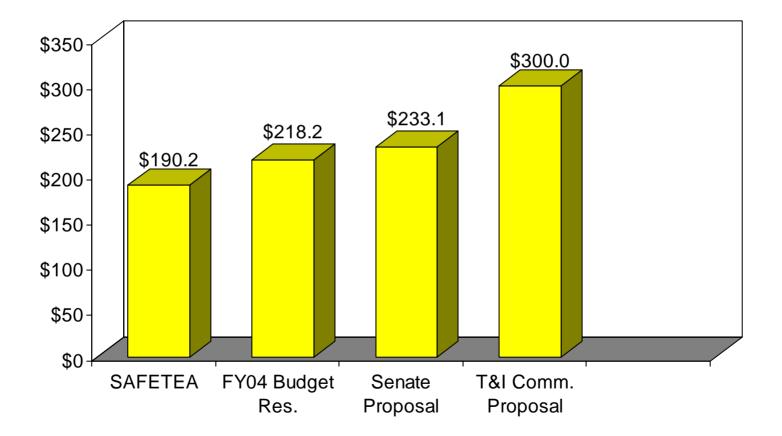


#### **TEA-21 Funding Proposals Compared**



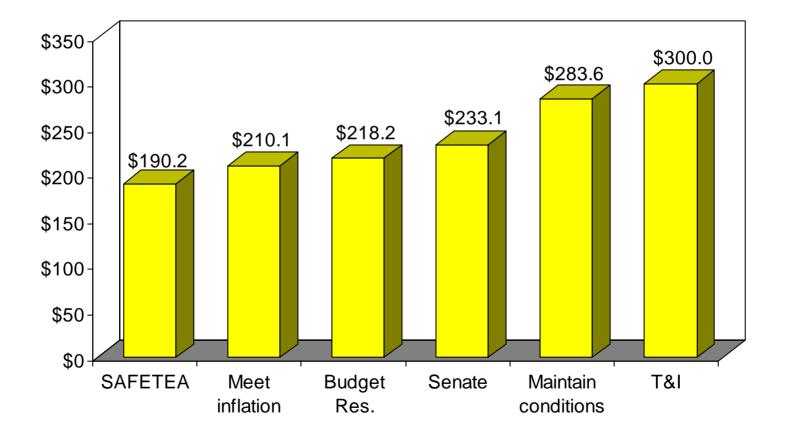
Source: HMA Federal Market Forecast

#### Current Federal Highway Funding Proposals for FY2004-09



Source: American Road & Transportation Builders Association

#### How Funding Proposal Match up to Highway Funding Benchmarks



Source: American Road & Transportation Builders Association



Travel on the Interstate system increased by 38% from 1991 to 2001, while additional lane mileage on the system increased by 5%.

Thus, vehicle travel grew at a rate <u>seven times</u> higher than additional capacity was added.

Source: The Interstate Highway System: Saving Lives, Time and Money, but Increasing Congestion Threatens Benefits, The Road Information Program, January 2003

Two out of five urban Interstate miles are considered congested because they carry traffic volumes that result in significant delays.

The miles of urban Interstates that are considered severely congested increased by 31% from 1996 to 2001, from 2,342 miles to 3,059 miles.

Source: The Interstate Highway System: Saving Lives, Time and Money, but Increasing Congestion Threatens Benefits, The Road Information Program, January 2003

There were 168 million Americans in 1956 when the Interstate system was created. Today the nation's population has reached 290 million, a 73% increase and 122 million more people than at the beginning of the Interstate era.

The nation's population is expected to grow by 40 million people by the year 2020, a 16% increase; and all vehicle travel is expected to increase by another 42% and large truck travel by another 54%.

Source: The Interstate Highway System: Saving Lives, Time and Money, but Increasing Congestion Threatens Benefits, The Road Information Program, January 2003

## CONGESTION

"It's not distance that drives commuters bonkers; it's mostly Congestion."

"The more congested the road and the longer heavy traffic lasted, the more depressed, anxious, and frustrated people got."

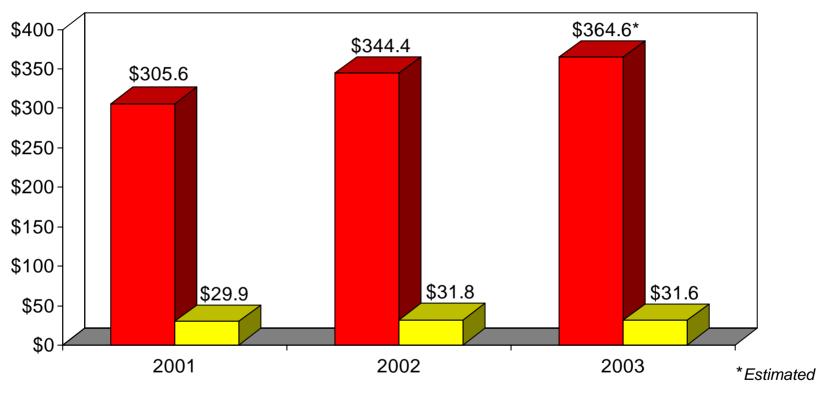
"Gridlock is also cited as an obstacle to cities that want to attract business."

The average travel time to work has increased 12% from a decade earlier.

# SECURITY

- Immediately after 9/11 everything moved on roads.
- When National emergencies such as hurricanes occur, the roads are the only means of escape and become gridlocked.
- Within the continental United States, approximately 75% of all defense movement is by truck.
- 45% of agricultural products move by truck.
- The strength of our Nation's defense is directly related to the vitality of our economy.
- A modern, efficient and interconnected transportation system fosters economic security and the national defense.

#### **Department of Defense**



Department of Defense Budget

Source: U.S. DOT, Budget of the U.S. Government, FY 2004 American Road & Transportation Builders Association

# ECONOMY

- A strong, vibrant economy is dependent upon an efficient intermodal transportation system.
- 3.4 million trucks traveling 186 billion miles annually carry 72% of America's freight traffic on the nation's highways.
- Just-In-Time Inventory is impossible without trucks and roads.
- Since 1973, the vehicle miles traveled by trucks have increased 225%, but highway capacity has increased only 6%.
- Freight traffic will double by 2020, 82% of that freight will move by highways.
- In peak traffic hours more roads are in gridlock.

# ECONOMY

- For every \$1 billion dollars of Federal Appropriations, approximately 48,000 jobs are created.
- The U.S. highway and bridge infrastructure has an asset value of almost \$1.4 trillion dollars – about 10 times the asset value of all the computers used in the United States.
- Every \$1 billion dollars invested in transportation infrastructure generates an additional \$2 billion dollars in U.S. economic activity.
- Every \$1 billion dollars of crushed stone produced generates an additional \$1.62 billion dollars in the national economy.
- Every \$1 billion dollars spent on defense only generates \$750 million dollars.

Source: American Road & Transportation Builders Association National Stone, Sand and Gravel Association BusinessWeek, August 18-25, 2003

# SAFETY

- 115 People are killed each day (42,000 yearly).
- 6,850 People are injured each day (2,500,000 yearly).

Each \$1 billion dollars invested in building and upgrading the nation's highways since 1950 has also reduced highway fatalities by 1400 over 40 years and saved American society over \$2 billion dollars in health care, insurance and lost wage and productivity costs.

### The road system plays a vital role for the

# **AMERICAN PUBLIC**

Results from June 10, 2003 Zogby International poll:

How important do you think the nation's highway and mass transit network is to America's economy?

Extremely Important	58%
Very Important	33%
Somewhat Important	8%
Not Important	0%
Not Sure	1%

## The road system plays a vital role for the

# **AMERICAN PUBLIC**

Experts say the average motorist would have to pay about 9¢ more per day to finance the work necessary just to make sure road conditions do not get worse.

Would you be willing to make that additional investment?

Yes	77%
No	19%
Not Sure	4%

By keeping our highways in good repair, with smoother roads, vehicles will not only be safer but will...

- Consume less fuel
- Less maintenance costs
- Less tire wear
- Less driver fatigue



# Smooth Roads

# last longer

LONG TERM ROUGHNESS in./mi. (mm/km)	IMPROVEMENT (%)
26 (410)	0
17 (268)	35
9.5 (150)	63
4 (63)	85
1 (16)	96
0	100
	in./mi. (mm/km) 26 (410) 17 (268) 9.5 (150) 4 (63) 1 (16)

#### **INITIAL SMOOTHNESS vs. LONG TERM CRACKING**

# Smooth Roads

# costs less

to maintain

LONG TERM ROUGHNESS in./mi. (mm/km)	IMPROVEMENT (%)
949 (590)	0
670 (416)	280 (174)
440 (273)	509 (316)
261 (162)	689 (428)
131 (81)	818 (508)
52 (32)	898 (558)
	in./mi. (mm/km) 949 (590) 670 (416) 440 (273) 261 (162) 131 (81)

#### INITIAL SMOOTHNESS vs. Average Annual Maintenance Costs

# How do we eliminate congestion?

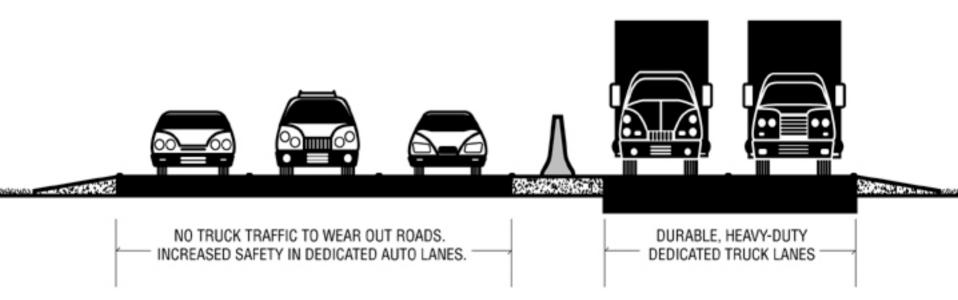
# How do we make roads safer?...Reduce accidents?

How do we keep roads smoother?

# **VISION 2020**

#### THE NEXT GENERATION OF HIGHWAYS

#### Dedicated Truck Lanes



- One truck does as much damage as 9,600 automobiles .....consider 80,000 pounds vs. 3,500 pounds.
- Truck lanes could be designed specifically to support heavier loads.
- Lanes for automobiles will last three times as long.
- Accidents would be reduced at least 20% with even less fatalities.
- Vehicles would consume less fuel.
- Our environment would be cleaner.
- Products will arrive just in time, increasing the productivity and growing our economy.
- Part and Assembly Plants could be sited adjacent to truck lanes, adding growth in rural areas.

# How do we pay for it?

Present User Fee is 18.3¢ / gallon

#### The average person drives an average of 15,000 miles per year.

@ 20 miles/gallon – 750 gallons of fuel is used per year.

@ 18.3¢/gallon – the User Fee is \$137.00 yearly or \$2.63 weekly or 37¢ daily

#### Present User Fee is 18.3¢ / gallon

#### An increase of 10¢ per gallon would cost

\$75.00 yearly or

\$1.44 weekly or

20¢ daily

#### Present User Fee is 18.3¢ / gallon

#### An increase of 10¢ per gallon would generate

\$18 billion dollars and

864,000 jobs

## A 10¢ increase in User Fees would build a new system that....

- Would eliminate gridlock
- Return our economy to growth
- Save lives
- Allow roads to last 300% longer
- Result in less operating costs for autos and trucks
- Create 864,000 jobs

# By reducing accidents 20% per year.....

Direct Cost of Accidents.....\$230 Billion Dollars per year Disruption (Delay) Costs....<u>\$70 Billion Dollars per year</u> TOTAL COSTS: \$300 Billion Dollars per year

.....\$60 billion dollars would be saved .....8,400 lives would be saved .....500,000 injuries would be eliminated

= 37.5¢ per gallon of motor vehicle fuel

## How do we pay for dedicated truck lanes?

• By smoother roads......7.5¢/gallon

• By less maintenance cost......<u>3.0¢/gallon</u>

TOTAL SAVINGS: 48¢/gallon

# By spending 10¢ We will save

48¢

## Fix America

## Fix The Roads



















Close up of TeleStacker windrow pile, United Materials, Great Falls, Montana



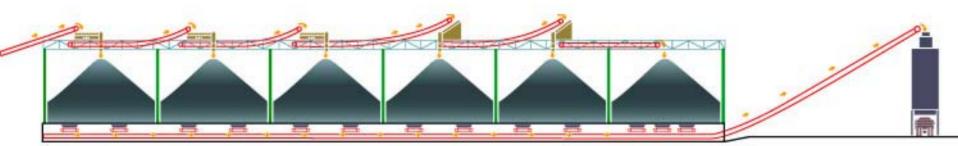


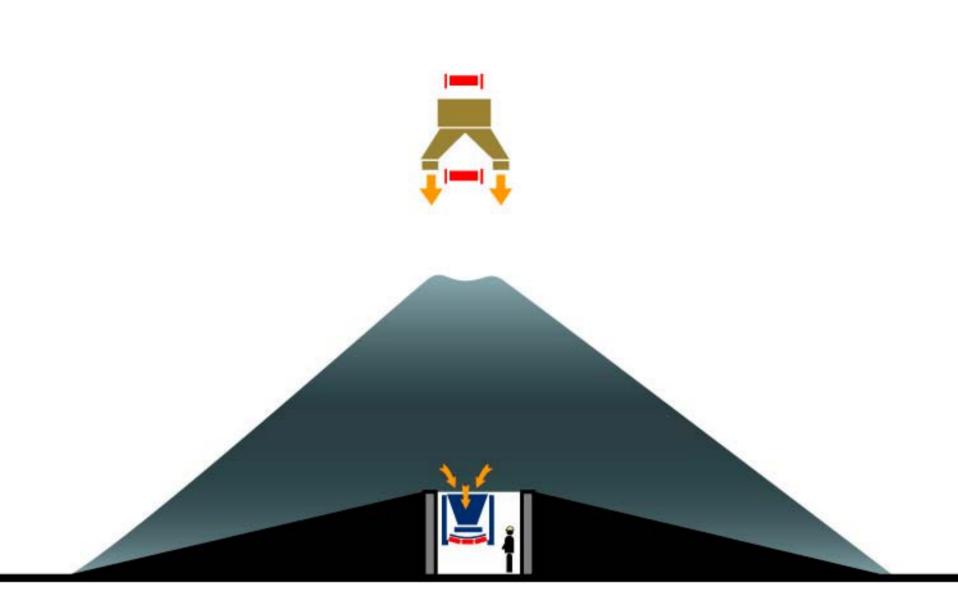


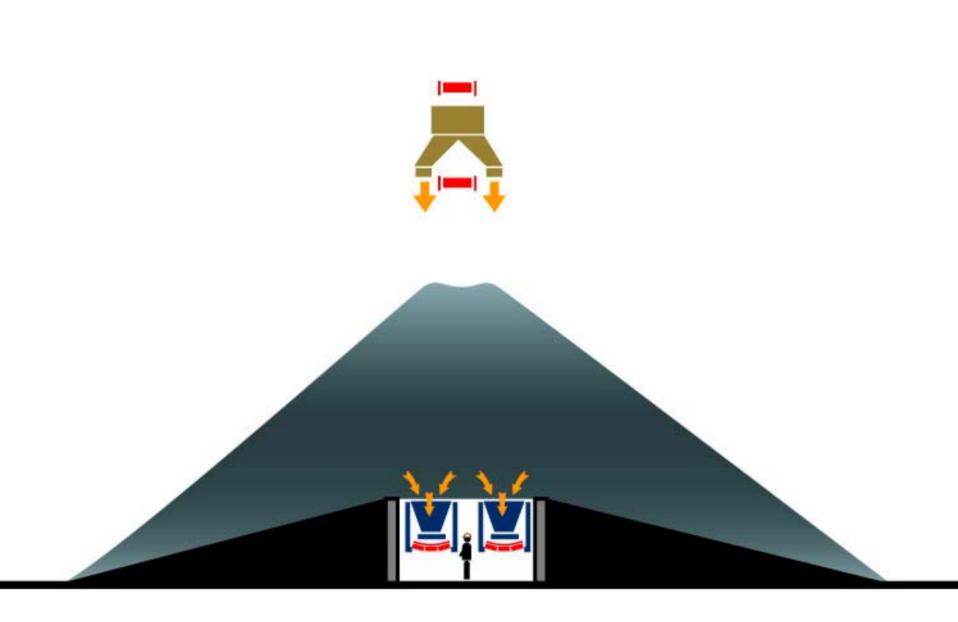


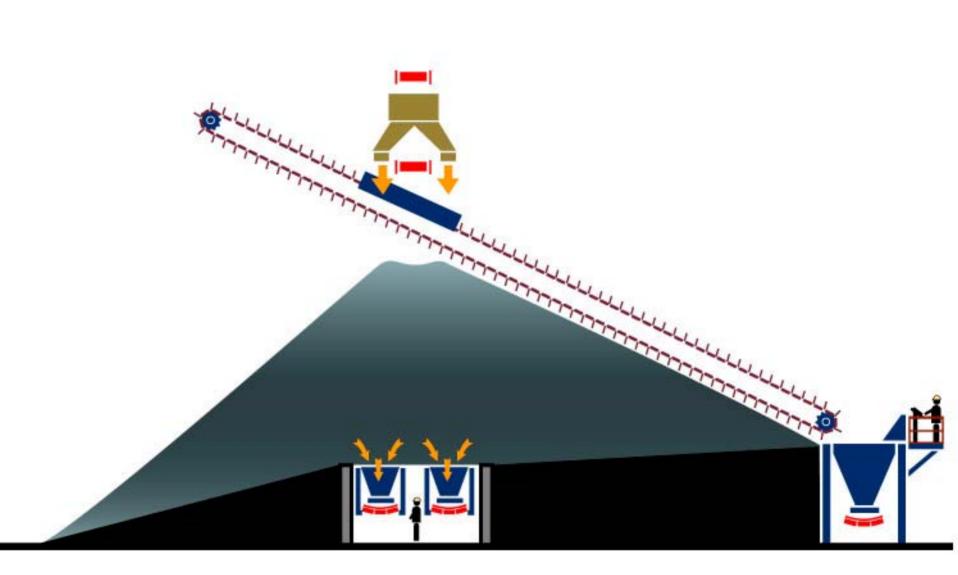
























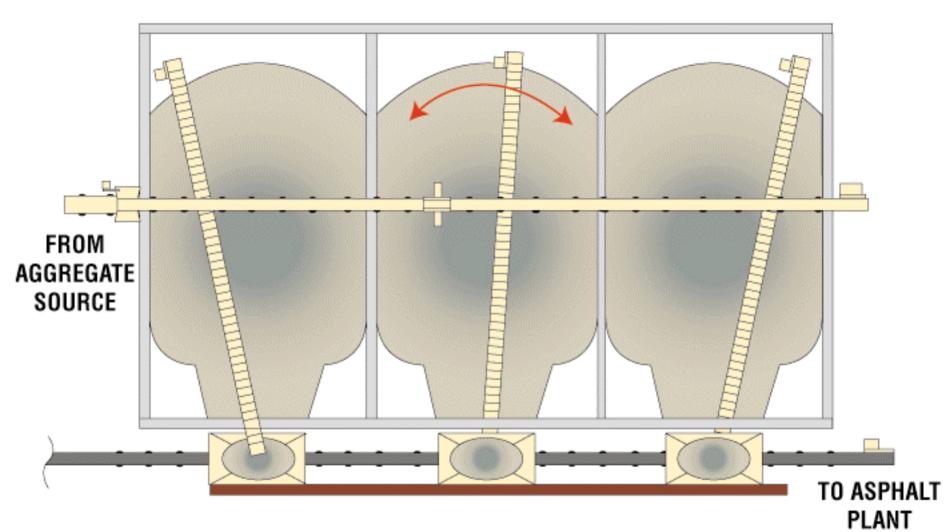








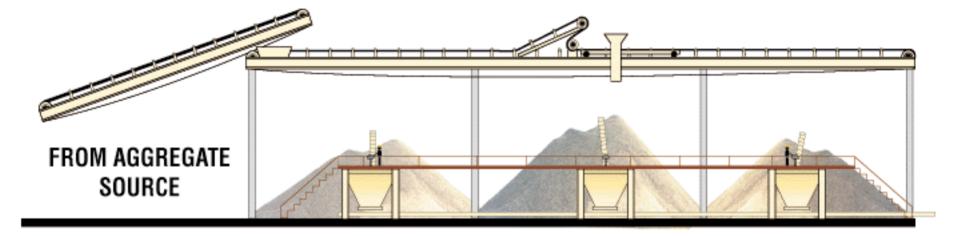




# **TOP VIEW**

# -100 THE

### **SIDE VIEW**

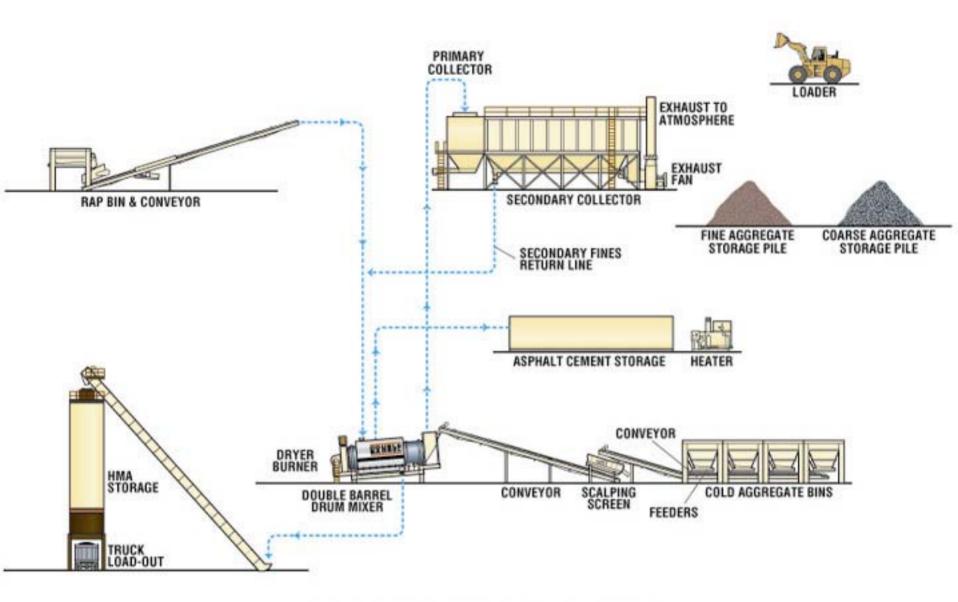


# **FRONT VIEW**

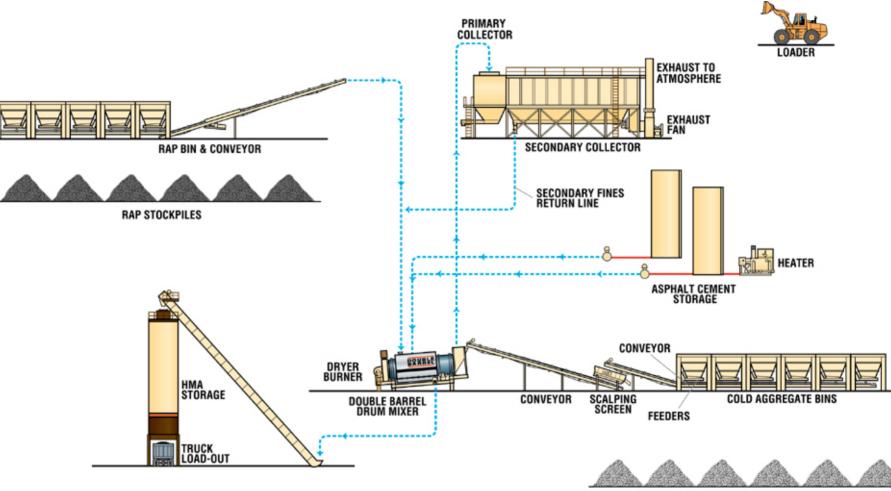




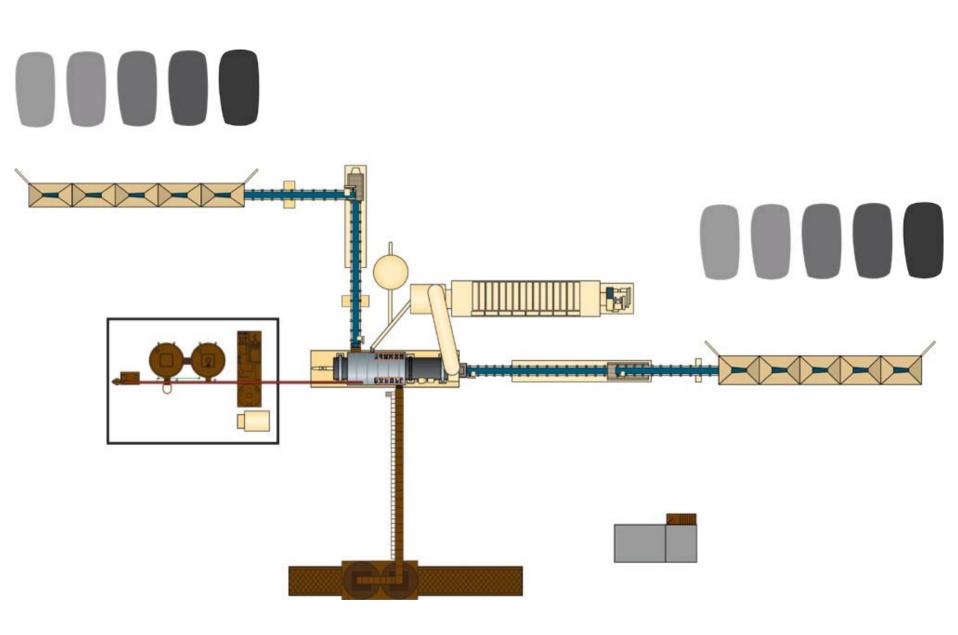
#### PROCESS FLOW DIAGRAM FOR DOUBLE BARREL DRUM MIX ASPHALT PAVING PLANTS



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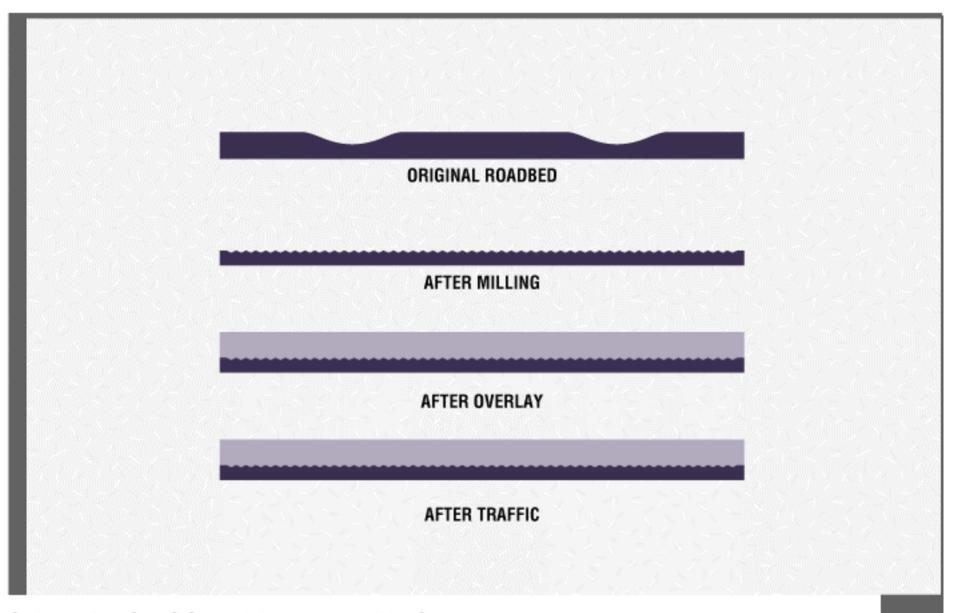
VIRGIN AGGREGATE STOCKPILES



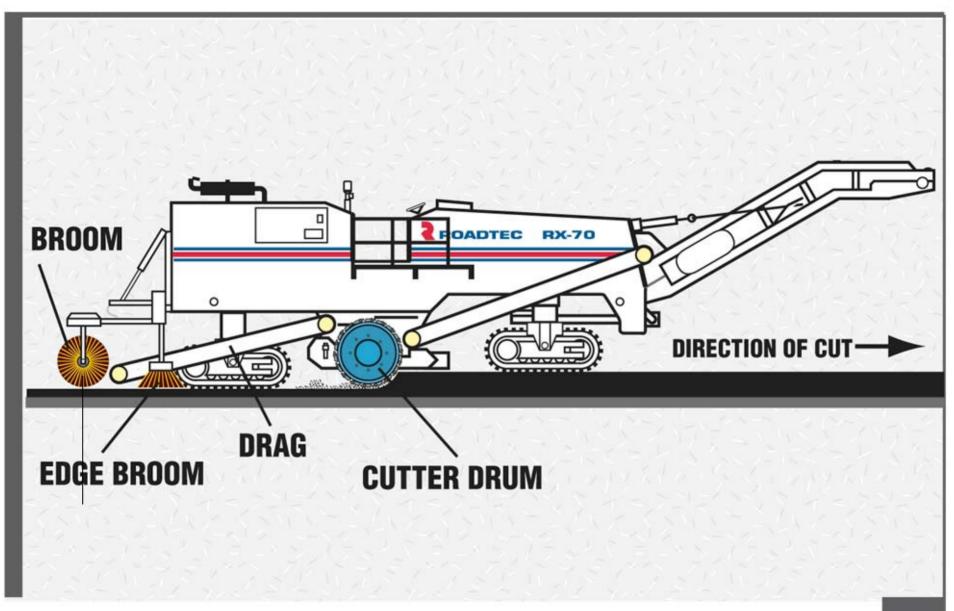




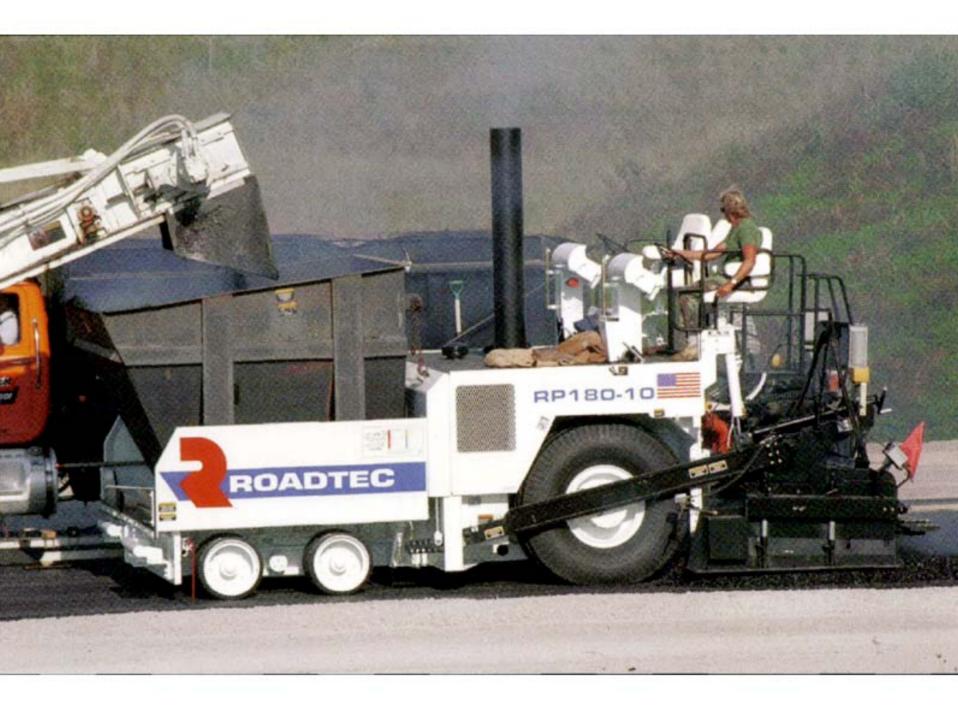


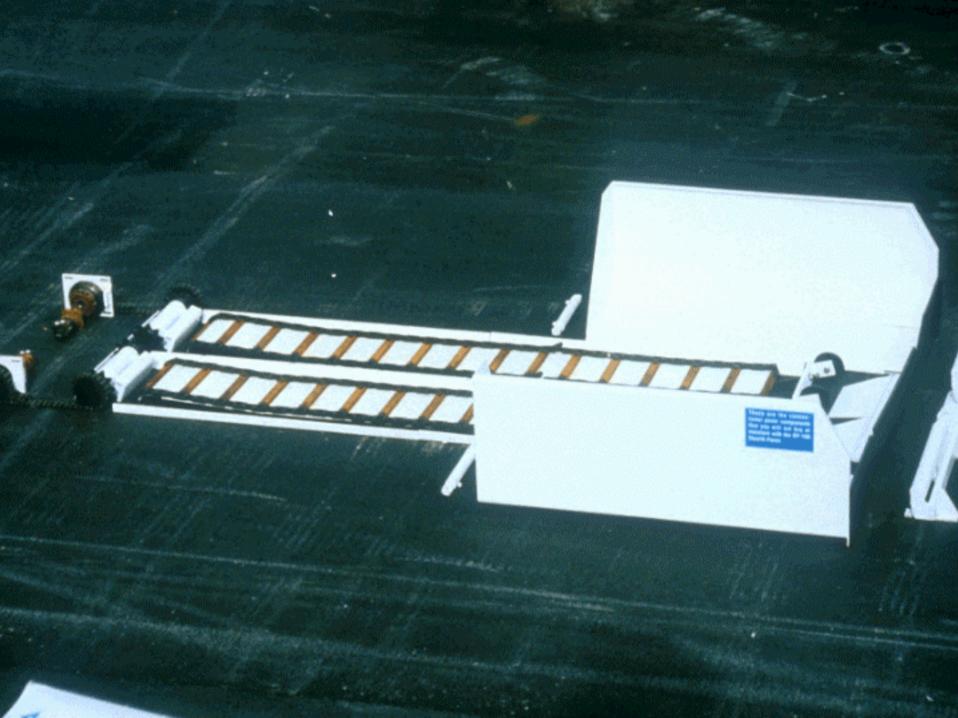


#### **OVERLAY SMOOTH AFTER MILLING**

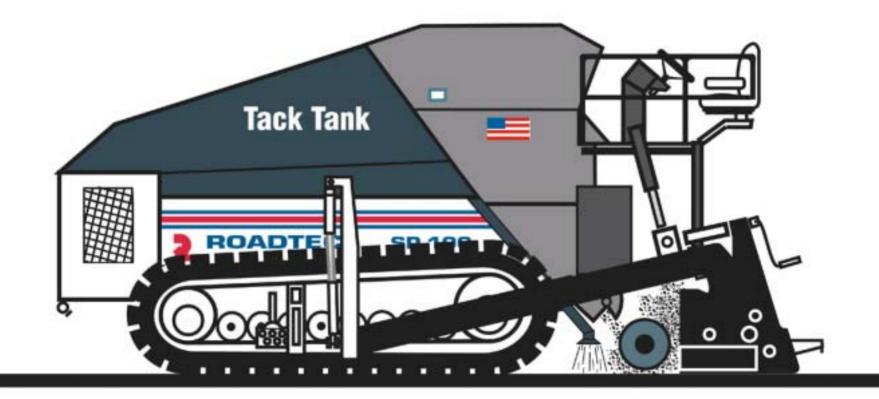


#### **INLAID PAVING WITH BROOM & PAVER**

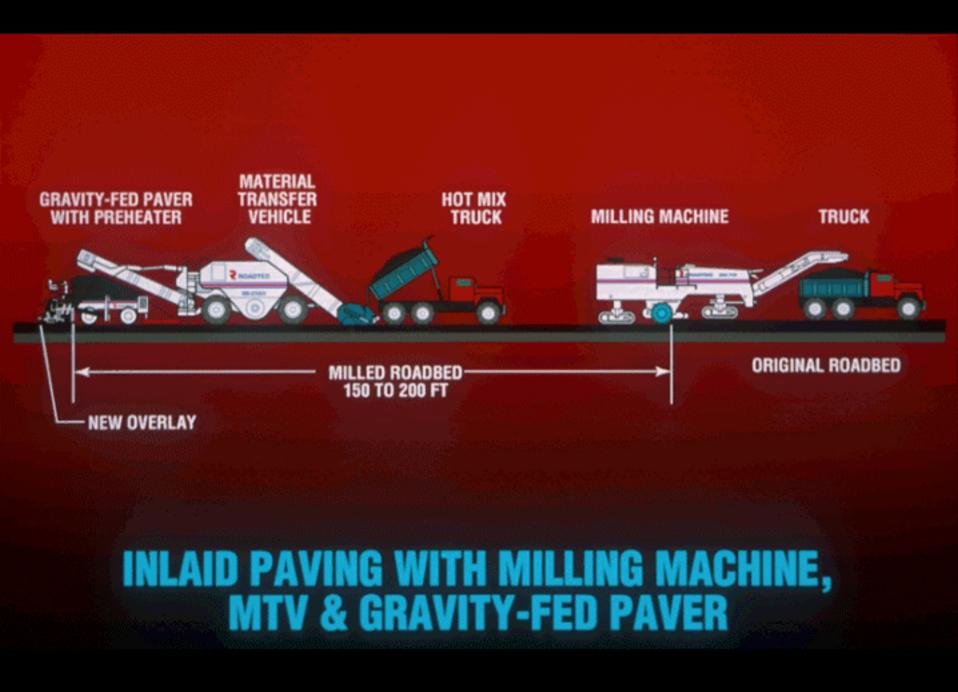






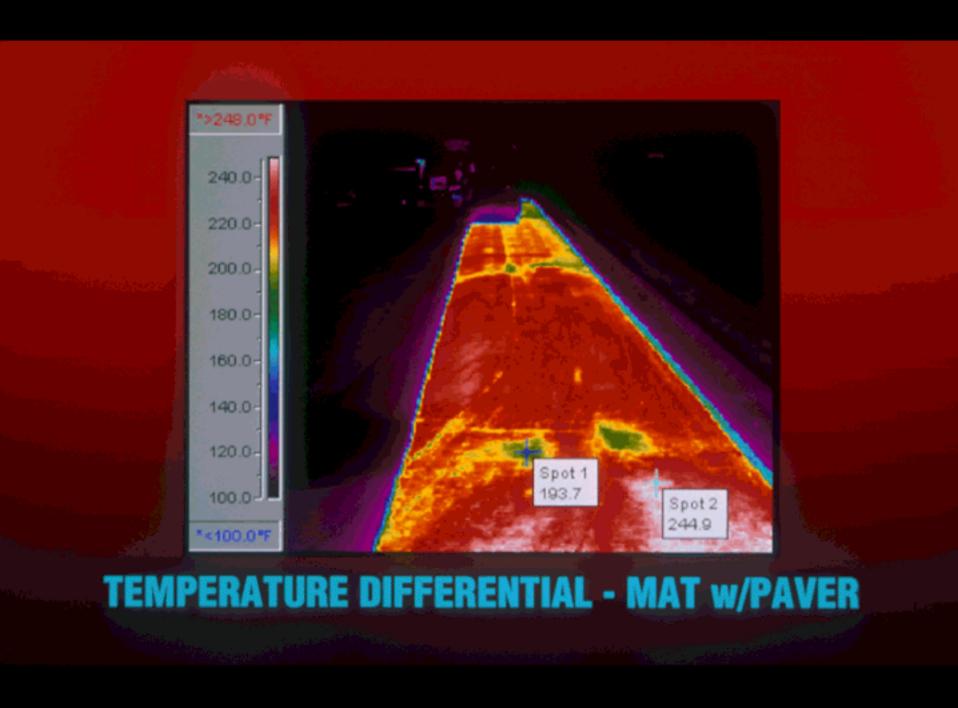


#### **ROADTEC STEALTH PAVER WITH TACK TANK**

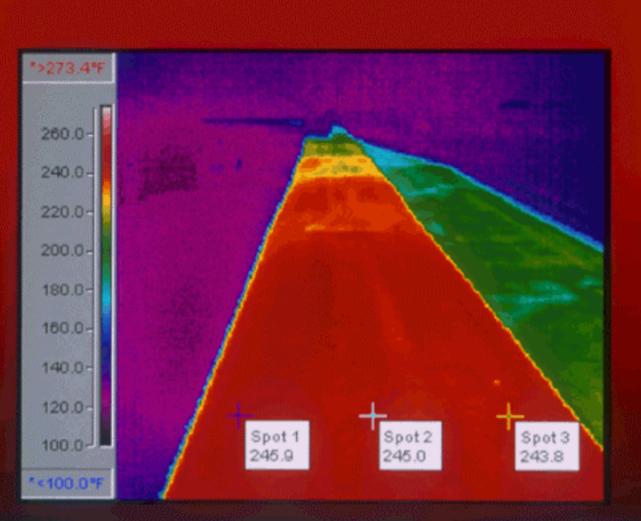


# **HEAT LOSS FROM TRUCK BED**

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# **TEMPERATURE DIFFERENTIAL - MAT w/BUGGY**