MTV Best Practices

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Why Use MTV

» Eliminate Physical Segregation
» Re-Mix HMA
» Provide Site Storage
» Stop Truck Delays
» Eliminate Paver Stops/Start
» Smoother Roads Last Longer
» Require Less Maintenance
» Compaction
Delivery vehicle to paver direct method of paving. Causes segregation both of aggregate and temperature of paving material.

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Non-Contact Paving

» Remove trucks from paver
» Trucks are not bumping paver causing it to change speed and put marks in mat
Constant Speed Paving

» Changing speeds while paving changes the forces on the screed
» Shuttle Buggy allows paver to keep moving
» Stores mix on site
» Paver doesn’t slow down to accept truck
Non-Contact Paving

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» Trucks are not bumping paver causing it to change speed and put marks in mat
Both Loose Heat

- Thermal Segregation is one of the reasons that asphalt pavement prematurely fails.
- Aggregate Size Segregation is caused by the same movement of the delivery vehicle as Thermal.
Physical Segregation
End of Load Segregation
End of Load Segregation
Compacting a cold spot is not good practice

Differing temperatures at compaction means differing density – differing service life
Nomenclature

- C1 Conveyor
- C2 Conveyor
- C3 Conveyor
- Platform
- Dump Hopper
- C2 Conveyor
- C3 Conveyor
Safety First

» Heavy equipment is dangerous!
» Improper use or maintenance of this machine can result in personnel injury
» Reduce the potential for injury by complying with instructions and warning symbols

**ENTANGLEMENT HAZARD**

**DANGER**

KEEP CLEAR WHILE MACHINE IS IN OPERATION. DO NOT OPERATE THIS MACHINE WHILE WEARING LOOSE CLOTHING, JEWELRY OR LONG HAIR.

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[Image of heavy equipment and warning sign]
Danger Zones
Safe Visibility

» Properly set mirrors are critical to safety
» It is your job to see the crew on the ground

Keep eye contact with **dump person and paver operator**
Proper Unloading / Loading
C3 Swing Lock
Main Operator

» Check Machine all over, **leaks-levels of oil, fuel, hydraulic, etc.** Start machine and **let warm up** watching gauges. After it is warmed up **turn on C-1, C-2, C-3 at idle** to let warm up for a little while.

» After warm up turn off conveyors and **move into position to pave.**

» Be sure **C-3 is lowered into position** and turn on all conveyors.

» **Close baffles. Communicate** with dump person and operator to start.

» Slowly move travel lever forward to **match paver speed**, may have to also **use speed pot** to help with this.

» **Watch insert** to let dump person know ahead of time to lower the truck bed down in time to **not hold any material in buggy yet.**

» When ready to pave communicate again with dump person to start dumping.

» Help dump person to not hold any material in C-2 until 2 loads have been run thru buggy to warm everything up to **prevent it from clogging up.**

» **Continue after 2 loads to fill buggy and communicate** with operator of paver and dump person to keep moving without running out of material.

» **Use the speed pot to regulate C-2** the amount of HMA delivered to the paver.
Dump Operator
Dump Operator

» Move truck into position to dump.
» **Lower baffle** down all the way.
» **Check with operator** that he is ready to start.
» Raise bed slow to get flow moving, **not to overload hopper**.
» Raise baffle slowly to **not overload conveyor**.
» Only dump enough material to **fill insert in paver** with enough to start paver. Lower bed on truck.
» When you start paving raise bed back up to **keep paver moving without filling C-2**.
» Do this with the **first 2 loads**.
» With the 3rd truck you can start filling the C-2 full, keeping it **2/3s to 1/3 full at all times**.
» **Communicate with operator** to do this. You might have to lower the bed on the truck if the C-2 is getting full so the **operator will not have to turn off the C-1**.
» Repeat these steps the **rest of the day**.
1st Load of Material

- Best Practice: Always run first truck load or two straight through the machine.
» Remember, make sure that the C2 has at least 1/3\textsuperscript{rd} to 2/3\textsuperscript{rd} capacity at all times.
Hopper Inserts

» Always use a hopper insert with a Material Transfer Machine

» If the insert is always out or low, the same problem with Material Segregation will persist
Correct Hopper Use

» Always have the C3 as low as possible to prevent material segregation within the hopper.

» Keep the conveyor deck covered with a minimum of 12 to 24 inches of material. (152-254mm)

» Stop the paver before the material drops below flow gate.
Why keep C3 low?

» Think of how sand would come out of a glass at different heights.
Just keep moving!

» Our goal is to never turn off the conveyors.
» If C1,2 or 3 are turning on and off while loaded, there is much more strain on everything.
Cleanout

» If there is asphalt left in the machine it is going to create excess wear (and a harder job for you tomorrow)
Questions?