Troubleshooting Checklist

The following are some issues that you may encounter during slipform paving.

Note that some specifications described in the following content may not be the same as the specifications followed by your agency. Always check with your State agency's standards and specifications when using these guidelines.

Sections

Poor Placement Practice

- ❑ **Poor placement practices must be avoided because they result in either too much or too little Portland cement concrete (PCC) available at the paver**
- ❑ **Pavement roughness is likely a result of these practices:**
  - — Excess PCC head
  - — Station dumping is difficult to control
  - — PCC has very low slump and appears to be slightly segregated

Tearing of the Mix

- **Tearing of the pavement edge can be the result of numerous problems**
- **Be sure to check the following:**
  - Speed of paver
  - Square of paving kit to stringline
  - Vibration frequency
  - Draft of the pan
  - Mix proportions
  - Air content
  - Water/cement (w/c) ratio

Excessive Grout on Surface

- **Excessive grout on the surface is often caused by the following:**
  - Too much water applied to surface or burlap drag
  - Over-vibration (vibration speed too high)
  - Machine moving too slow for vibration
  - Rain
- **Excessive grout on the surface can be a very serious problem**
  - It may be caused by production or paving operations and must be corrected prior to continuing paving operations

Trackline and Stringline

- **A clean trackline helps in constructing a smooth pavement**
- **Protect the stringline from displacement and avoid knots in the stringline**
- **Keep the spreader/paver trackline clean**

- **When the tracks encounter debris or irregular grade, they will raise or lower with a corresponding roughness in the pavement**
- **Any movement in the stringline will be transmitted through the sensors to the paver**
- **Avoid knots in the stringline**

Equipment Maintenance

- **Cleaned, well-maintained equipment is the trademark of a good operation**
  - All hydraulic components must be checked and maintained to avoid leaks
  - Controls, if broken, should be repaired with proper parts or replacements
    - Improper repairs may help to finish the day, but are an indicator of poor maintenance when they become permanent
  - End-of-day wash up is essential and is usually done with high-pressure water
  - Don't allow this necessary maintenance procedure to create a soft spot in the subgrade
- **Breakdowns and late start-ups can usually be avoided if equipment is maintained**

Vibrator Streaking

- **Vibrator streaking is a serious problem and is generally the result of differential vibration**
- **Check:**
  - Head above vibrators
  - Materials and mixtures
  - Frequency

- Paver speed
- Vibrator positions and spacing
- Blown vibrator

Edge Slump

- **Edge slump can be caused by a number of problems, some more serious than others**
- **Verify consistency of PCC**
  - Slump
  - Air
  - Gradation
- **Watch for segregation during placement**
  - Caused by belt placer
- **Pavers are equipped to overbuild the edge area and to allow a certain amount of sag to occur as the slab leaves the traveling form**
- **Out-of-tolerance edge slump, for whatever reason, will have to be corrected by the finishers by placing a bulkhead against the slab, adding PCC, and floating the surface**

Variation in Texturing

- **Variations in texturing can indicate a serious problem in the production or paving operations, and therefore should be resolved in a timely manner**
  - Review mixing and batching operations
  - Check placing and finishing process
  - Observe operation of tining equipment
  - Check tining equipment trackline

— Check vibrator positioning and operation

Thickness

- **A planned routine of checks will help the contractor avoid penalties and ensure that the agency is obtaining the specified product**
- **To verify thickness, you can:**
  - — Probe the concrete for thickness
  - — Core the concrete for thickness
  - — Check the surface for specified profile
  - — Use the MIT-SCAN-T2