#### **HIR Observations from China**

This presentation includes observations and images from five HIR projects Pat Wiley visited during a four-month trip to China in 2023











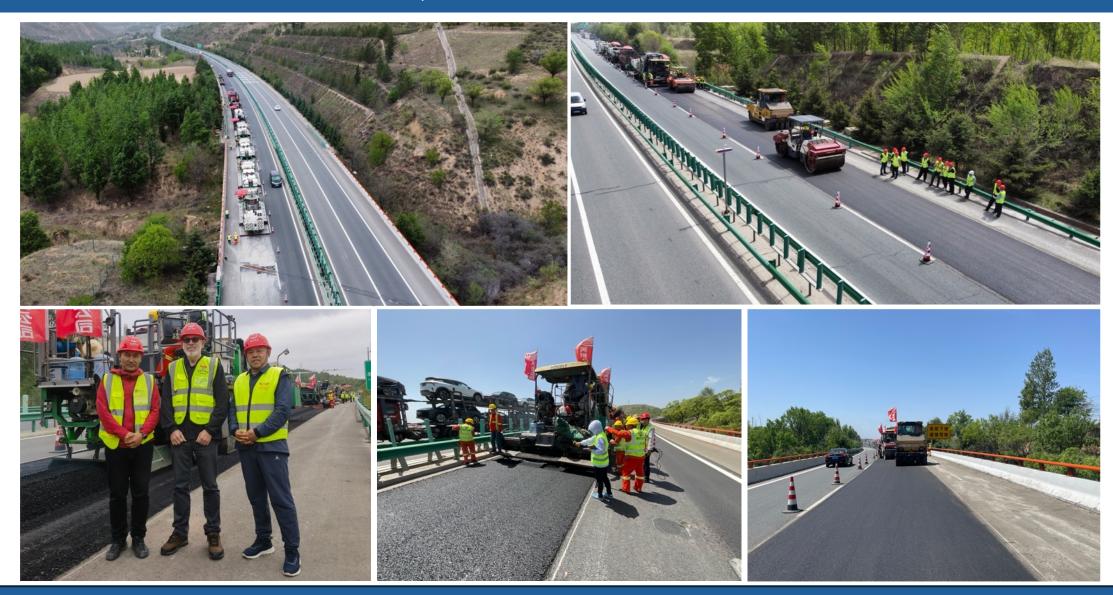
# HIR Projects in China

#### Typical Projects

- 4 Lane Expressways
- 100,000 to 300,000 m2
- Polymer Modified Binders
- Some Projects SMA
- 50 mm depth
- 20% Admix
- 0.3% to 0.6% Rejuvenator



### Shanxi Province - 225,000 m2



### Xinjiang Province – 260,000 m2









### Henan Province – 175,000 m2









#### **Consistent Test Results**



Test		Measured Data	Design Data	Result
Asphalt Content	Asphalt using (%)	4.52	4.43	pass
Marshall	stability (kN)	16.14	≥8	pass
	flow value(mm)	2.2	2.0-4.0	pass
	Air void (%)	4.6	4 - 6	pass
Onsite Tests	compaction%	94.3	93%	pass
	friction coefficient	82	>55mm	pass
	thickness (mm)	55mm	50mm	pass

Test Method	Unit of Measure	Specification	Before HIR	0.3% Rejuvenator	0.4% Rejuvenator	0.5% Rejuvenator
Penetration 100g, 5s, 25°C	0.1mm	40-60	24	47	60	68
Ductility 5cm/min, 15°C	cm	Measured	5.7	19.1	24	28.2
Softening Point	°C	≥47	63.0	55.5	52.5	49.5





## Looks and Performs Like a Newly Paved Surface

