2024 – Pavement Services Update

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Annual ODOT Inspector Workshop

22 February 2024

2023 ACP Production

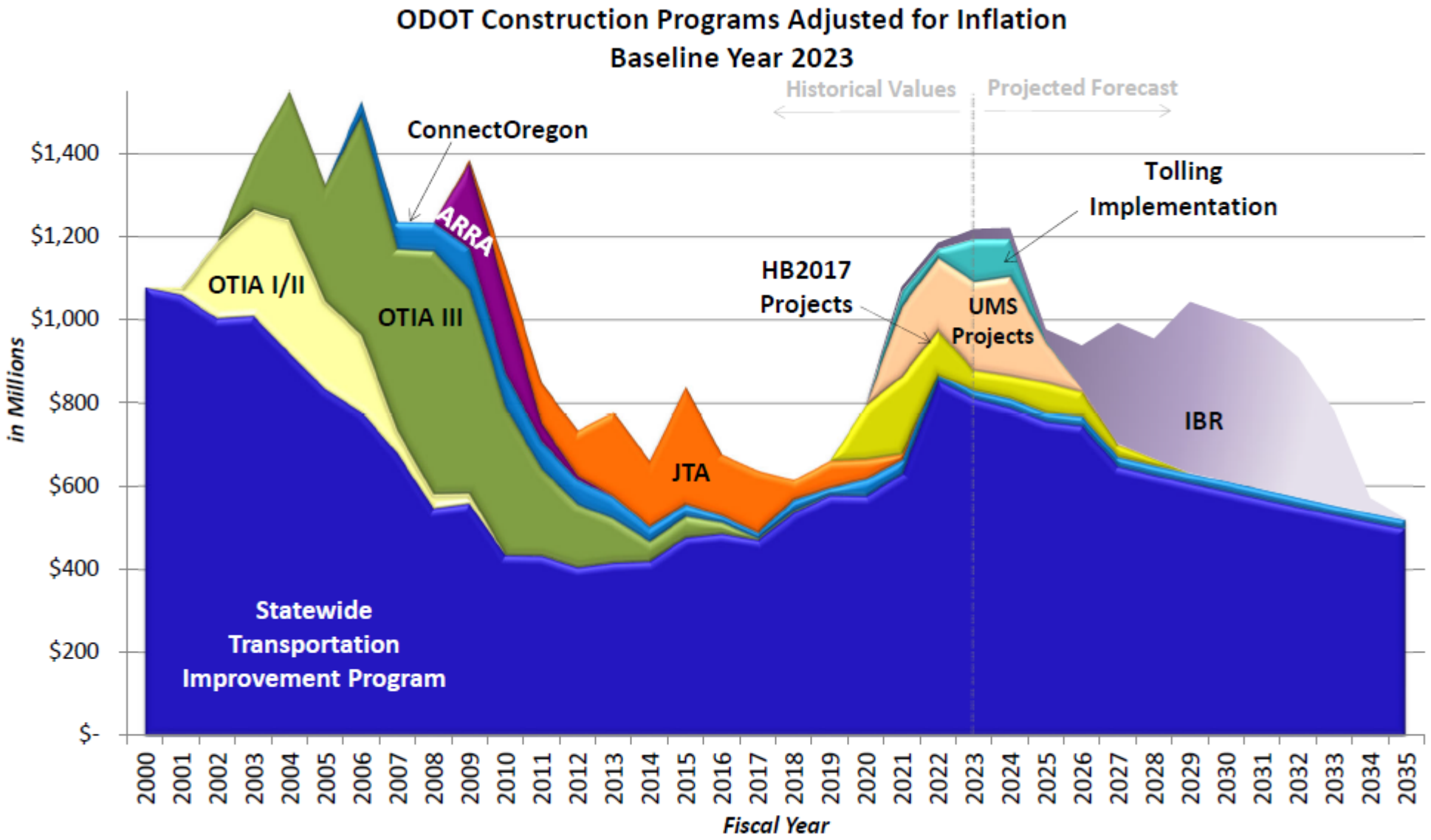
- Carryover from 2022 145,000 tons
- ACP Projection for 2023 561,000 tons
- Produced 531,000 tons

2024 ODOT STIP Paving Program

- Mix left on contracts 138,000 tons
- Mix to bid <u>722,000 tons</u>
- Total 860,000 tons

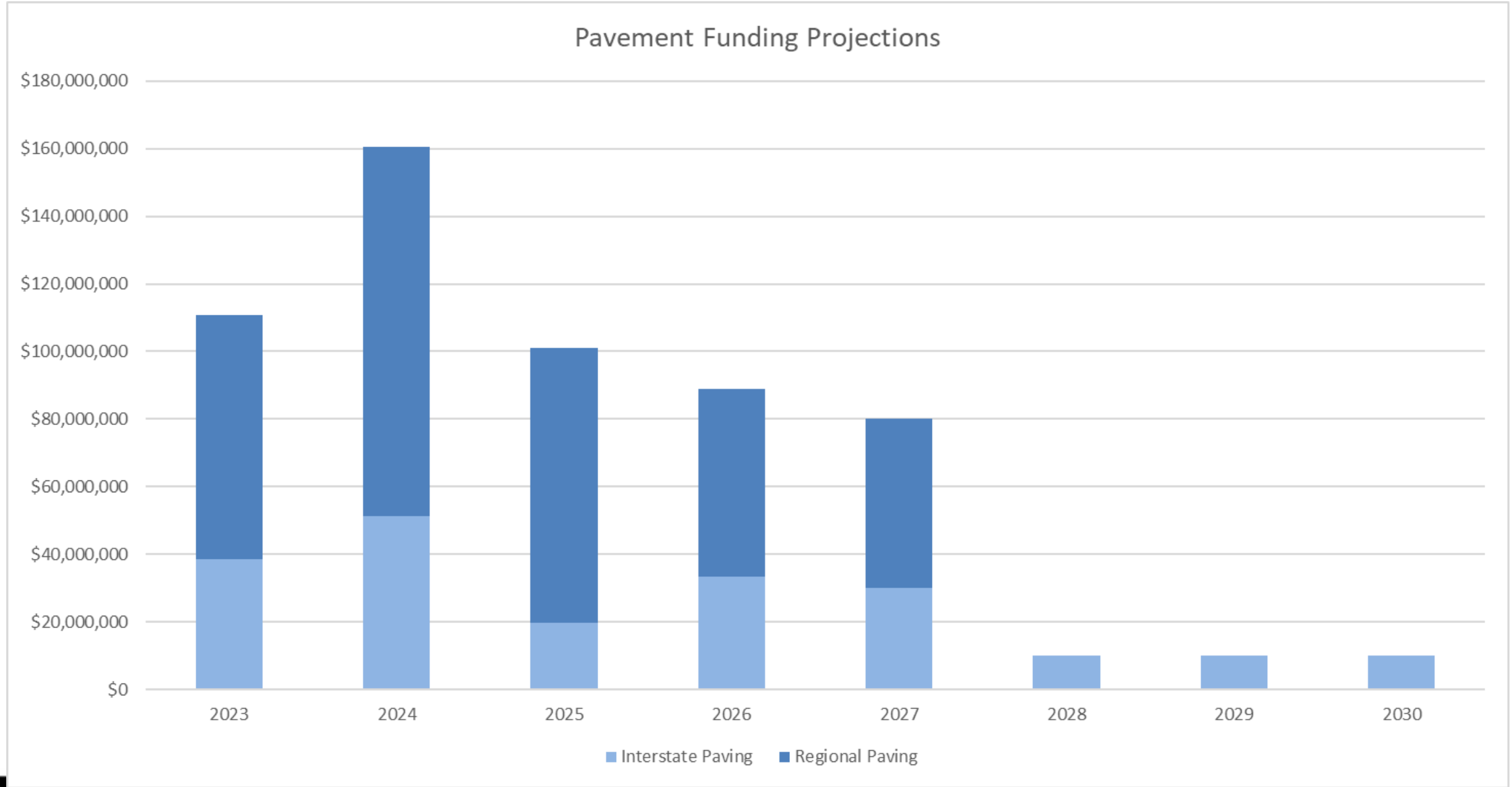
Challenging Reality of 2027-30 STIP

- IIJA expiration and federal funding risk
- State Highway Fund revenues are flat
- Transfer of funds to operations and maintenance
- ADA program costs
- Sharp increase in construction costs



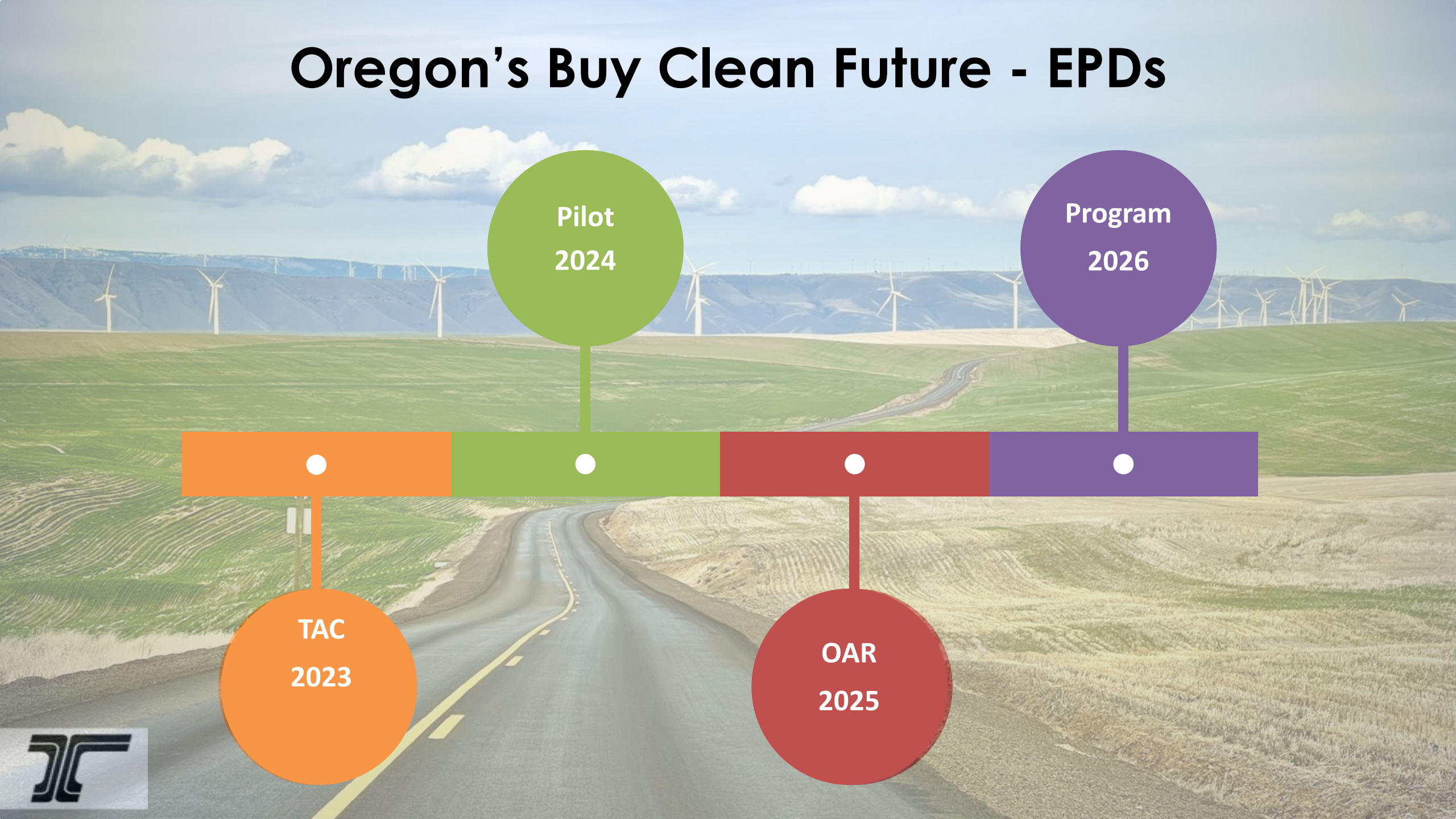
Delivery & Operations Budget Office - Revised 08/24/23 (actuals through June 30, 2023)

Department of Transportation

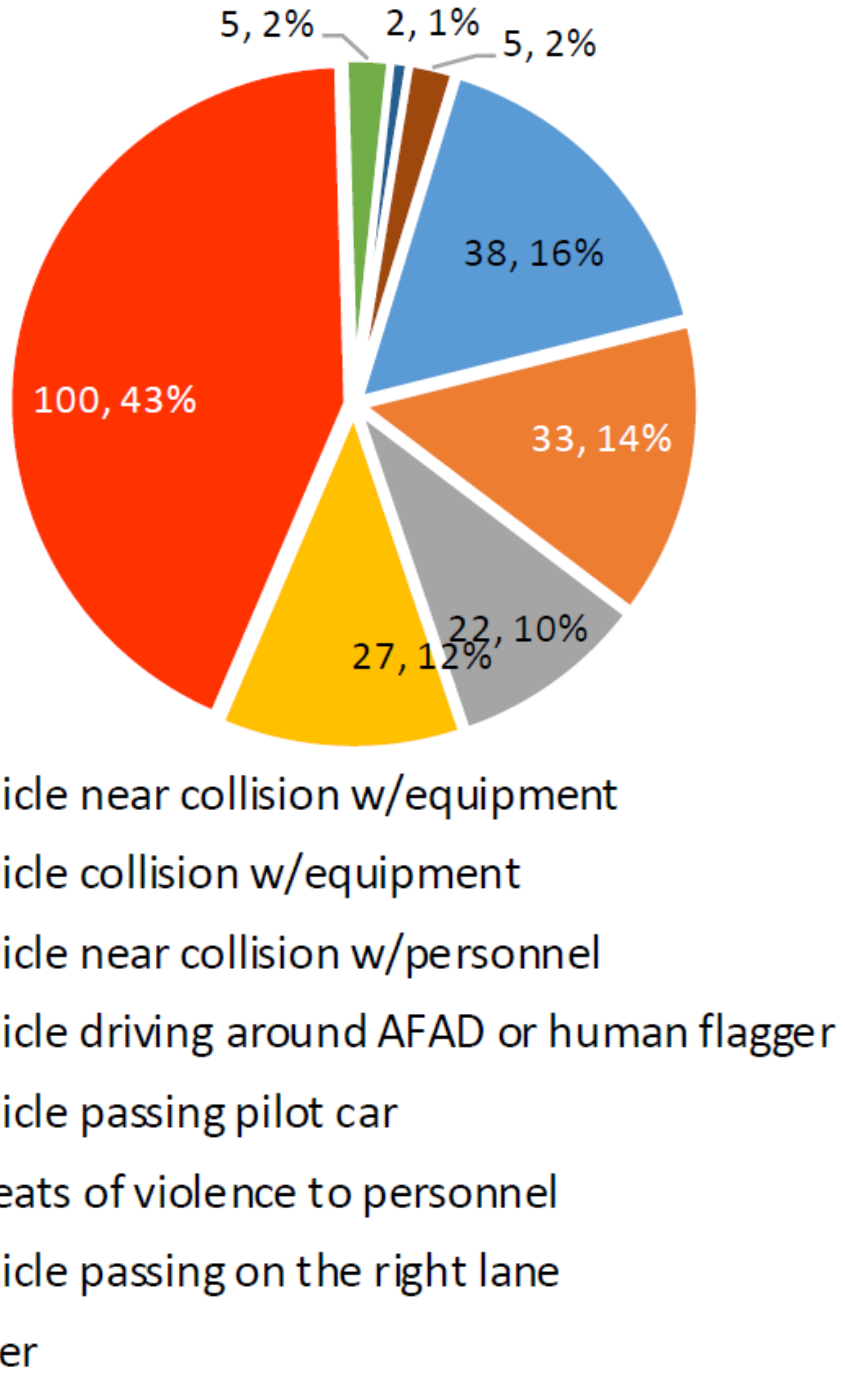

Pavement Funding Projections
$180,000,000
$160,000,000
$140,000,000
$120,000,000
$100,000,000
$80,000,000
$60,000,000
$40,000,000
$20,000,000
$0
2023
2024
2025
2026
2027
2028
2029
2030
Interstate Paving
Regional Paving

ODOT Pavement Initiatives / Points of Focus

Oregon's Buy Clean Future - EPDs



Categories of Safety Incidents in Work Zones - 2023



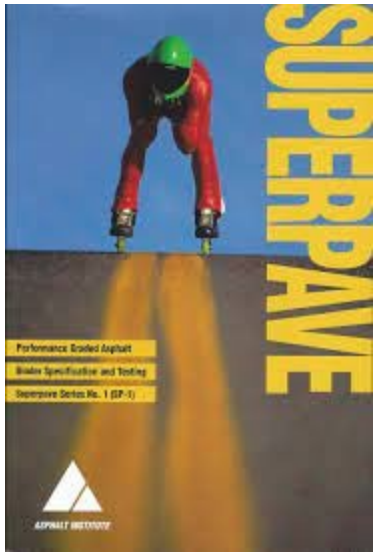
Grade Sampling

- Continued Pilots in 2023, will do more in 2024
- Plan to select project size threshold going beyond 2024 and stop calling “pilot”
- ODOT still believes that production should be blind to Quality Control/ Quality Assurance
- Less inspection team impact than BRD

Balanced Mix Design – What and Why

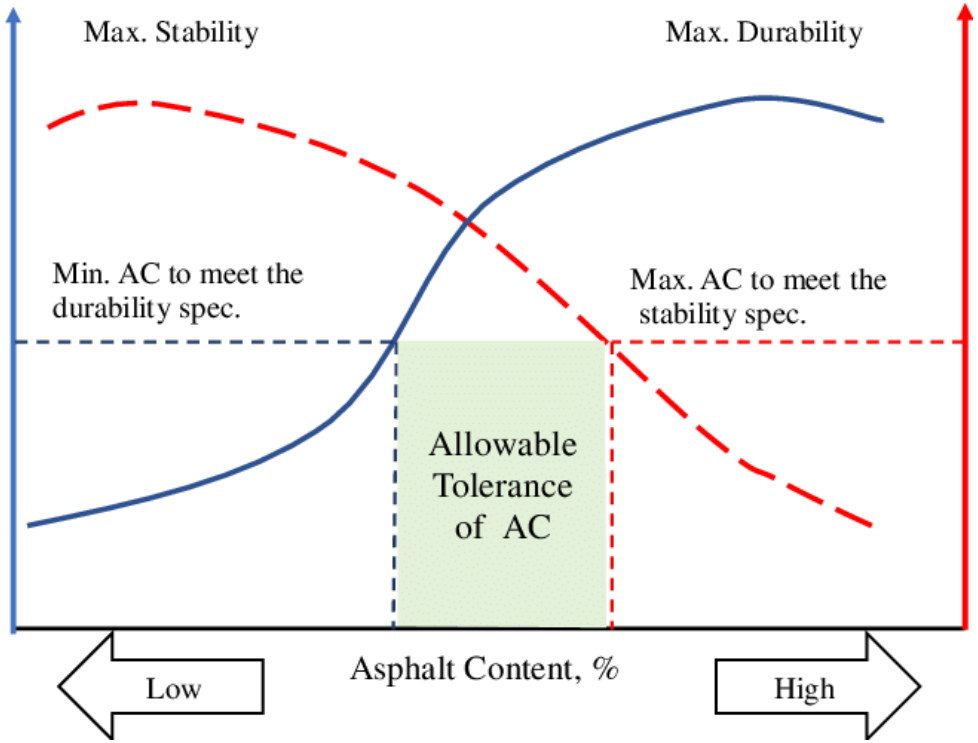
"Asphalt mix design using performance tests on appropriately conditioned specimens that address multiple modes of distress taking into consideration mix aging, traffic, climate and location within the pavement structure." – FHWA BMD Task Force

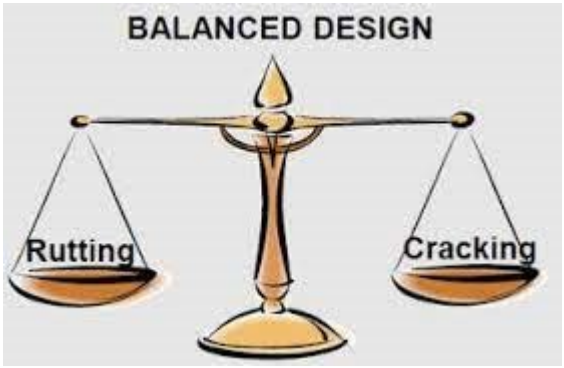
- Hveem Method (1920s – 1930s)
  - Generally drier mixes = cracking
- Marshall Method (1930s – 1940s)
  - Too much asphalt = rutting
- Superpave (1993)
  - Less asphalt = less rutting, more top-down cracking
  - Volumetrically, mixes are stable/otherwise well-performing



Need system that produces stable mixes which mitigate both rutting and cracking (i.e. optimization)

Balanced Mix Design – Where we are going





- Created 5 JMFs/ test sections in 2023 season as part of ODOT/OSU research
  - 3 of those were similar to volumetric design(within 0.1-0.2% asphalt)
  - 2 required more asphalt - 0.3 and 0.4% more asphalt
- **More ODOT benchmarking, official shadow projects, Contractor-designed test sections planned going forward**
- Hope to use as tool to increase RAP contents
- Ultimately would result in relaxed (or eliminated!) volumetric specifications
- Need to figure out testing and specification criteria

Simple Pave Program

Program simple paving projects through a more efficient and agile process.

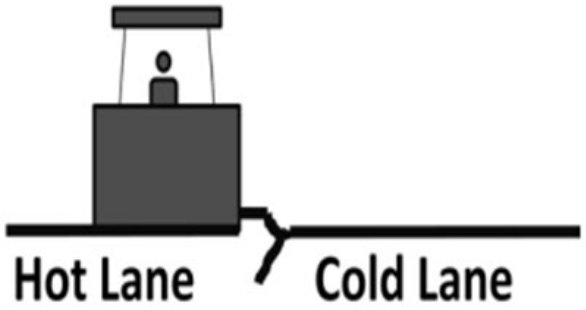
- State-only funds (similar to MBM and MIM programs)
- Save money by skipping the field scoping phase of project delivery
- Reduce the time lag between project identification and delivery to allow for changing priorities to program the right project at the right time
- Contracted projects are procured through Region procurement.
- Contracted projects are inspected and managed by a Resident Engineer office
- **00745 Paving Specifications are NOT relaxed**

Criteria for eligibility (pilot phase)

- *No stoplights*
- *No curb and gutter*
- *No ADA ramps*
- *No ROW impacts*
- *No marked bike lanes*
- *No work beyond rail stop bars unless agreement with RR is already in place.*
- *Not in an MPO*
- *No pavement reconstruction other than localized ACPR.*

Reg	KN	Name	Hwy	BMP	EMP	Programmed Const. Year	Scoped CN
4	22883	US97: SCL Crescent - Willamette Hwy Jct	004	185.66	194.65	2024	$6,000,000.00
2	22883	US30: Jones Rd - E. 6th Street	092	37.25	46.65	2024	$8,900,000.00
3	22883	OR38: Hancock Mountain - Drain	045	38.14	50.2	2024	$6,400,000.00
4	22883	US97: Shady Pine Rd - N. K. Falls Intch	004	267.08	272.58	2025	$3,300,000.00
2	22883	OR22: Stout Lane - North Santiam River	162	19.5	23.3	2025	$1,100,000.00

Longitudinal Joint Construction



- Ongoing concern in joint quality – we see open joints soon after construction (or during!)
- 2023 ODOT/OSU research project
- Had some evaluation of VRAM (an expensive bottom up joint product placed under wearing course) and top-down sprayed clear emulsions
- Looked at joint construction strategy of staying 6” on hot side of joint and pinching on return pass
- Also looked at effect of applying extra tack at joint – could be a big ROI if effective due to low cost

- If your project is experiencing problems with open joints –
- Stop work until changes are approved!

If needed, reach out to your RE/ Pavements!

Tack Application / Measurement

Asphalt Additives at the Plant

- WMA optional vs required LASA/WMA
  - If allowed, must be added prior to asphalt cement sampling location!

Asphalt Additives at the Plant

High Density (96%+) & response

- Spec requires CDT/CATII to trigger investigation – to determine if there is a problem with the mix
- Removing compaction effort hides the problem – it doesn't solve it
- 92.0 LSL means 93.5-94% density AVERAGE to get 1.05 density PF
  - There will be 96's & 97's – most concern at project startup

ACP Yield

- Similar to tack
  - Issue that won’t go away
- Constant checks / communication
- Extra vigilant when paving first panel
  - If “B” lane is high, options for adjacent panels are limited


Thank you for your time!
SLOW FOR
WORKERS