



FEBRUARY 28, 2025

# House Resources Committee

Department of Transportation & Public Facilities (DOT&PF)

## Managing Mining Projects using State Highways Dalton Highway Update

Jason Sakalaskas, Chief, Maintenance & Operations, Northern Region

Leslie Daugherty, P.E., Chief Bridge Engineer, Bridge Design

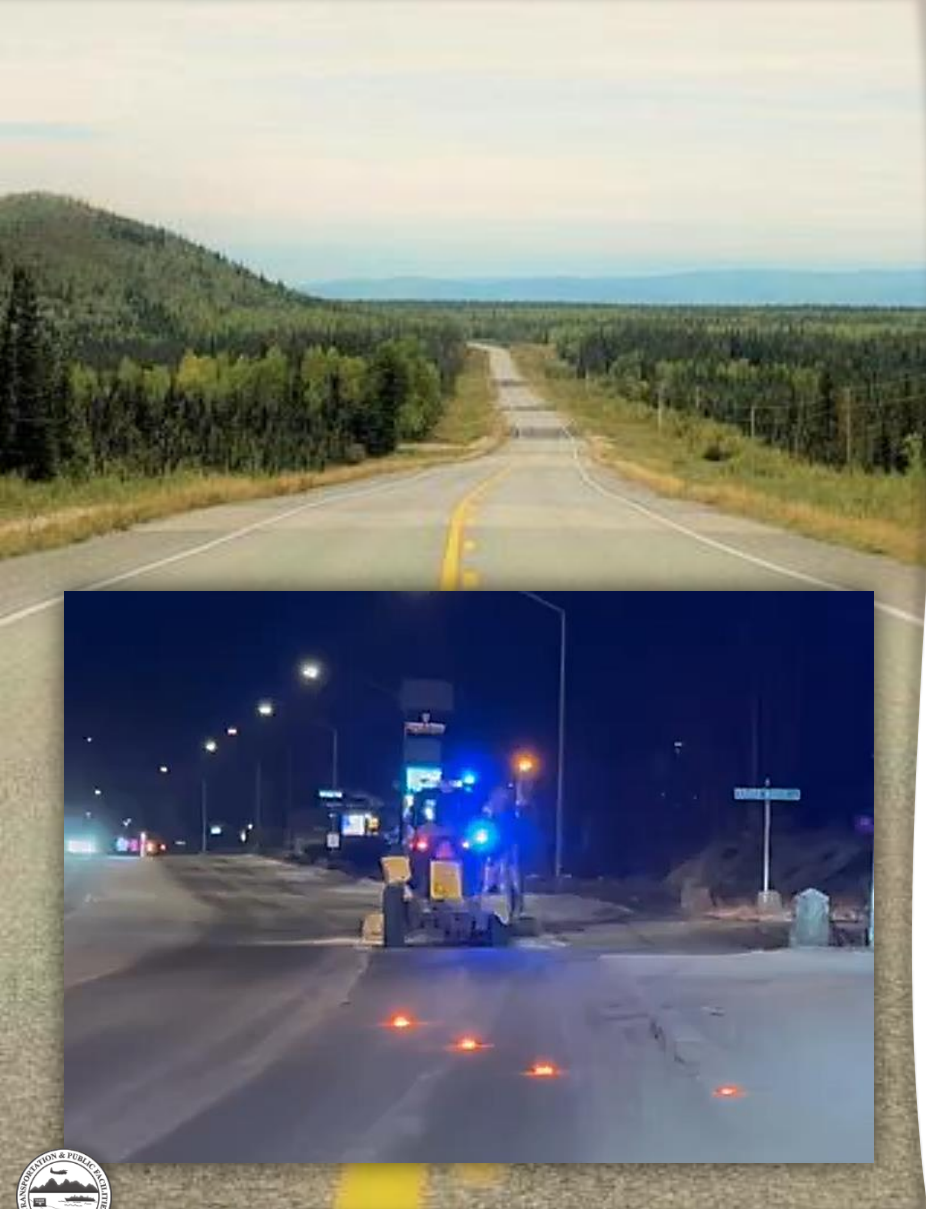
Lauren Little, P.E., Chief Engineer, Statewide Design & Engineering Services

Dan Smith, Director, Measurement Standards & Commercial Vehicle Compliance

Andy Mills, Special Assistant to the Commissioner

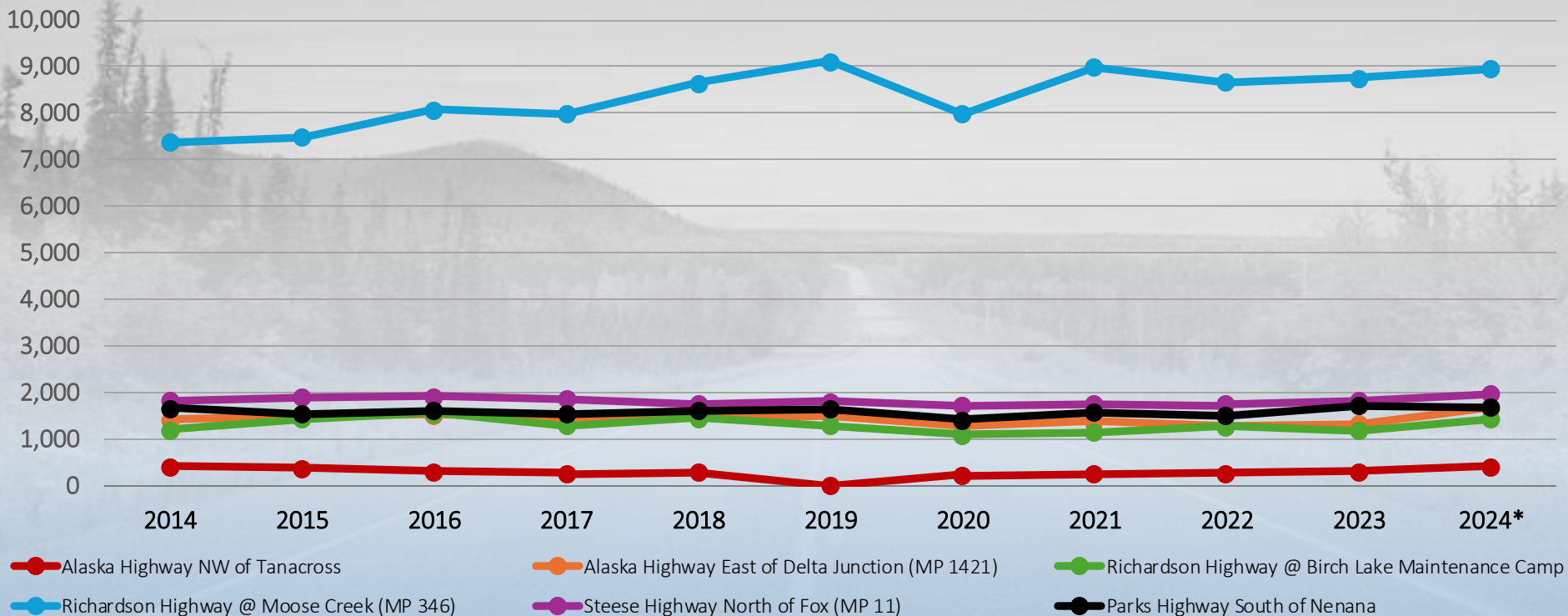


# SAFE SYSTEMS APPROACH: TETLIN TO FT. KNOX



- Established Technical Advisory Committee (TAC) to inform the research
- Commissioned Corridor Study – Kinney Report
- \$1M brush cutting in advance of haul to increase sight distance
- Maintenance Bridge Monitoring Plan
- Winter Maintenance Memorandum of Agreement (MOA)
- Emergency Medical Services (EMS) coordination
  - Jaws of life
  - PiLits (pronounced “Pie lights”)
- 511 upgrades
  - Audible bus & plow alerting
  - Bridge heights
  - Winter Operations dashboard

# ANNUAL AVERAGE DAILY TRAFFIC (AADT)

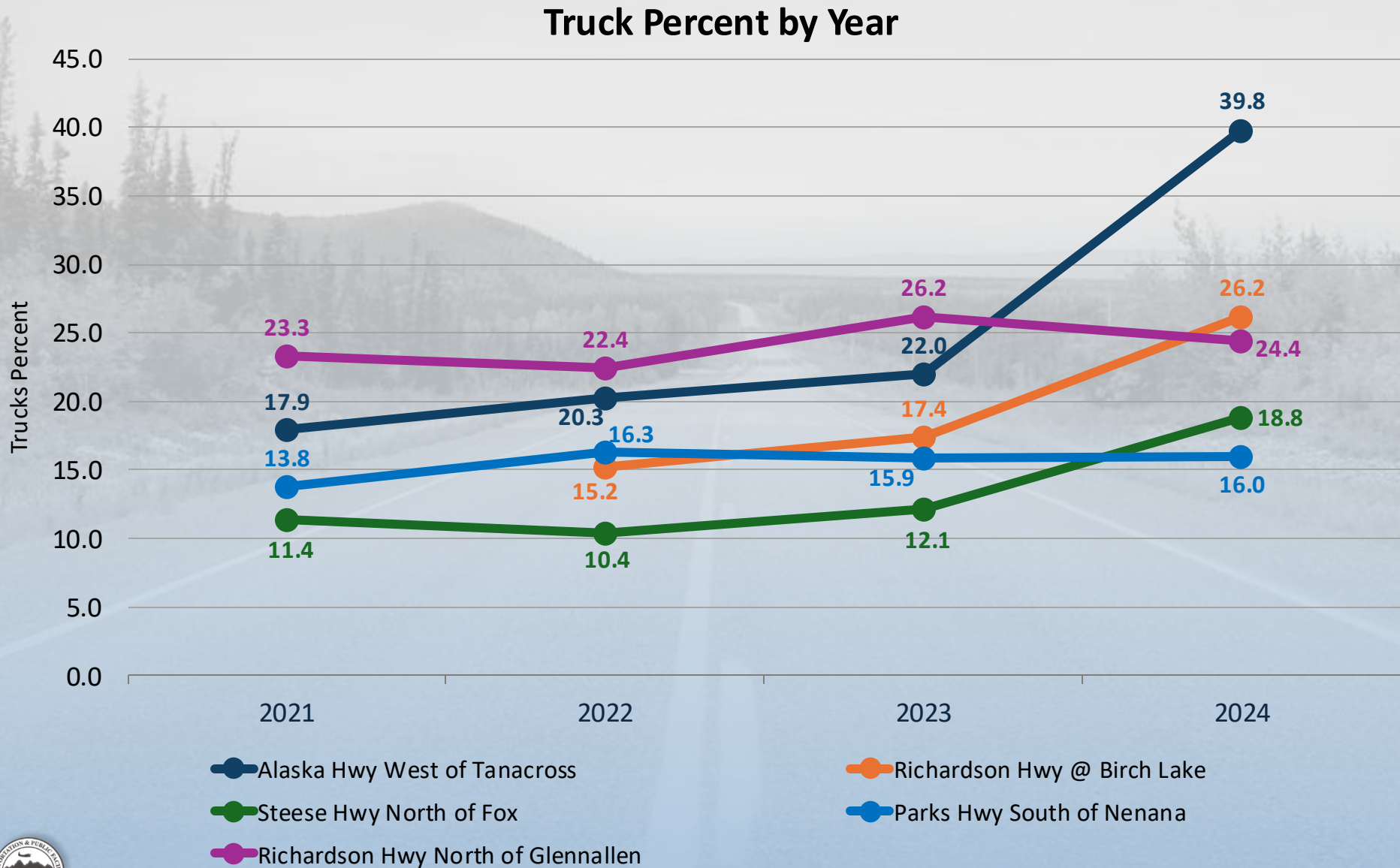


LOCATION	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024*
Alaska Highway NW of Tanacross	400	371	300	258	278	-	230	250	260	300	411
Alaska Highway East of Delta Junction (MP 1421)	1,413	1,483	1,514	1,440	1,487	1,502	1,280	1,370	1,290	1,330	1,668
Richardson Highway @ Birch Lake Maintenance Camp	1,198	1,430	1,554	1,283	1,452	1,289	1,090	1,150	1,260	1,180	1,438
Richardson Highway @ Moose Creek (MP 346)	7,373	7,480	8,078	7,977	8,640	9,107	7,980	8,980	8,670	8,760	8,956
Steese Highway North of Fox (MP 11)	1,817	1,893	1,910	1,854	1,760	1,798	1,710	1,760	1,750	1,830	1,966
Parks Highway South of Nenana	1,657	1,546	1,617	1,545	1,610	1,638	1,410	1,580	1,510	1,720	1,685*

\*2024 projected numbers (not certified as final) MP - Milepost

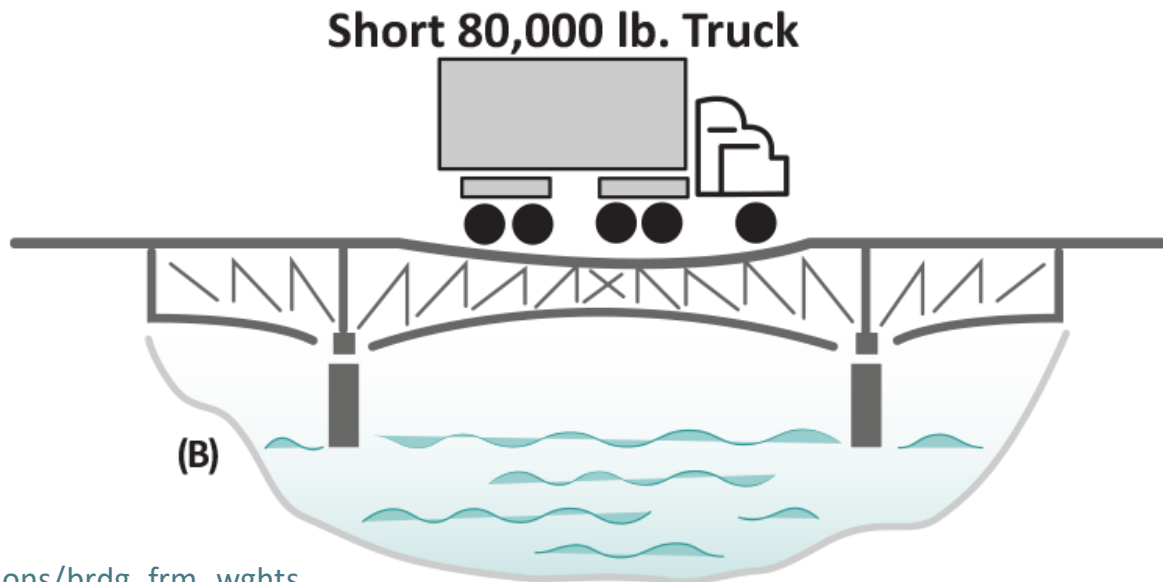
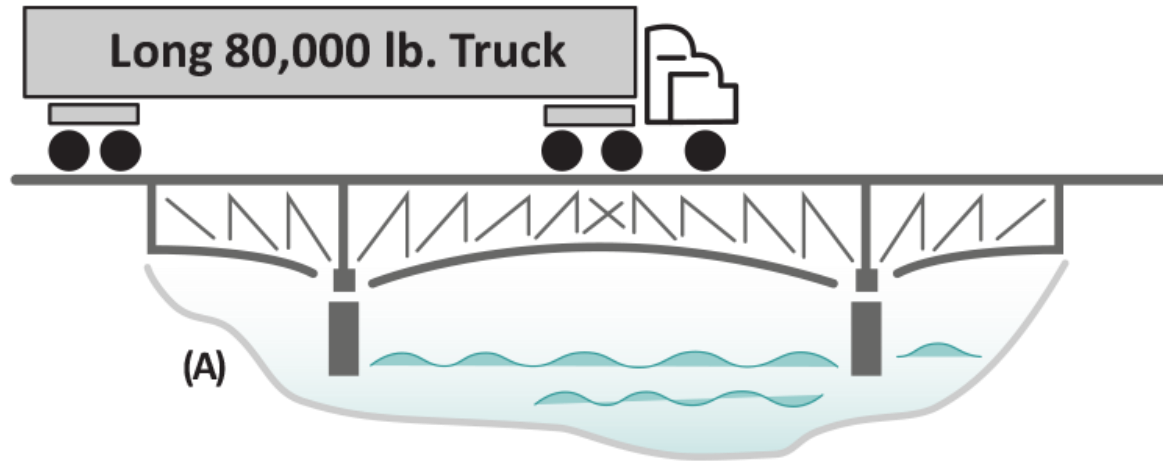


# PERCENTAGE OF TRUCK TRAFFIC BY HIGHWAY SEGMENT



# BRIDGE AXLE LOADING

- Bridge Loading is related to axle weights and spacings, not Gross Vehicle Weight (GVW)
- Bridges are not designed or analyzed for GVW
- Short bridges may not see all of truck load if it is spread out
- Long span bridges see more of truck weight



Source: [ops.fhwa.dot.gov/freight/publications/brdg\\_frm\\_wghts](https://ops.fhwa.dot.gov/freight/publications/brdg_frm_wghts)

# BRIDGE LOADING EXAMPLE

Bridge Loading is comparable to airplane loading where distribution of loads is what keeps airplanes stable.

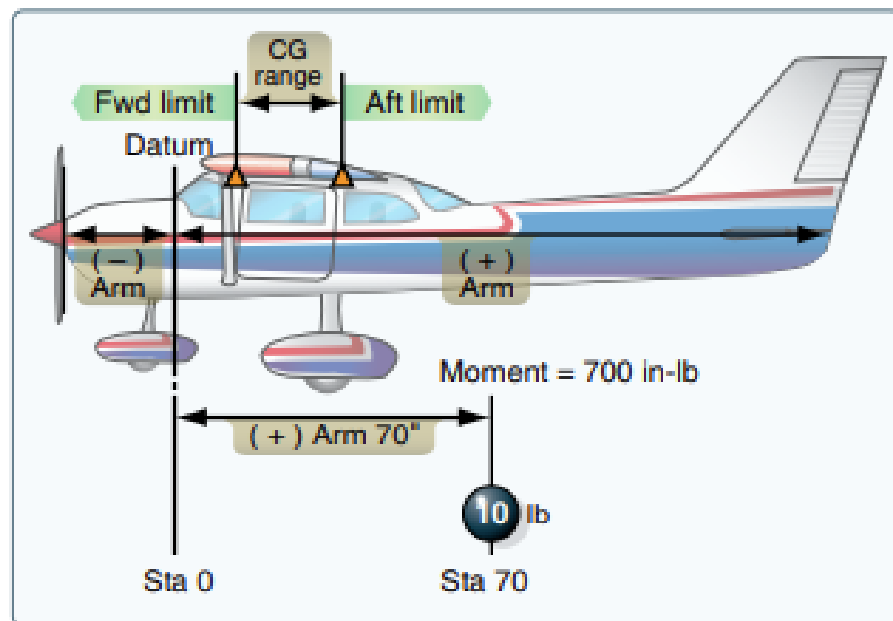


Figure 10-2. Weight and balance.

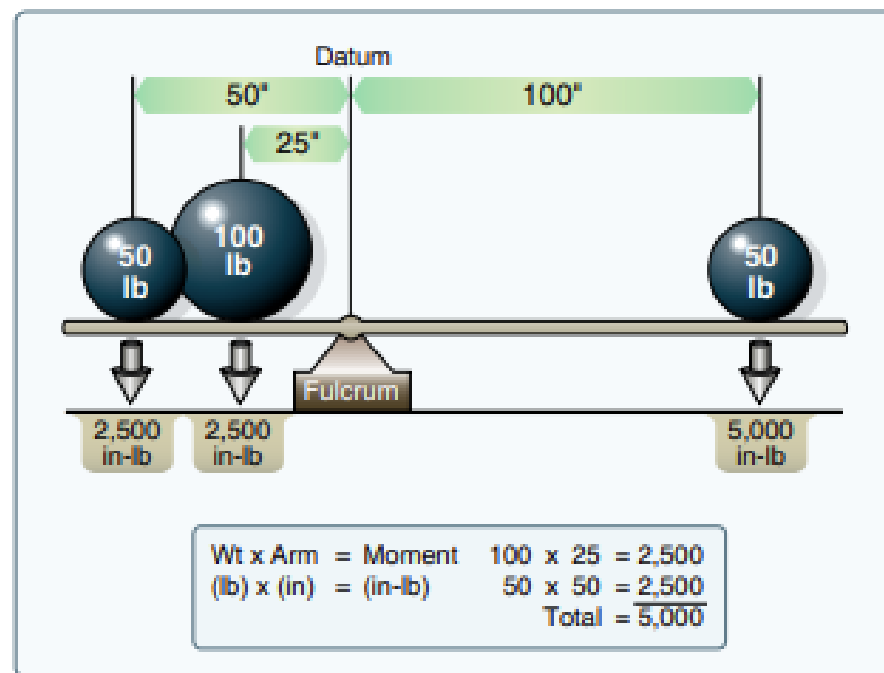


Figure 10-4. Establishing a balance.

# LOAD DISTRIBUTION

- Legal loads are route dependent and configuration dependent
- Historically, permitted loads have exceeded 400,000 lbs. GVW



- Based on axle weight and spacing, by federal law, we must restrict any loads over "operating limit" - maximum safe load (23 CFR 650.305)
- Permits are granted based on operating limit because loads are known and analyzed



# ORE HAULS

- DOT&PF does not discriminate between types of commercial traffic
- FHWA asked us to develop a new method of load rating and posting for Long Combination Vehicles (LCV), study expected 2025
- Chena Flood/Richardson Highway MP 346 was load posted after operating trucks exceeded 80 tons
- Given aging infrastructure, the department is likely to load post more bridges
- About 65% of Alaska's bridges predate federal exemption from 80,000 lb. GVW
- Bridge inspections have increased to ensure safety

MP - Milepost





# DALTON HIGHWAY ACTIVITY

## Capital Project Investment Dalton Highway 2025

- Elliott Highway MP 51-63  
expected completion summer 2025
- Dalton Highway Yukon River Bridge  
Redecking
- Dalton Highway MP 245-274 Resurfacing
- Dalton Highway MP 247-289 and 305-362  
Delineator Replacement
- Dalton Highway MP 76-89 Resurfacing within current proposed FY2026 Gov.  
Budget (Future)
- Deadhorse Airport Improvements



MP - Milepost

## Highway Use Agreement – DOT&PF and AGDC (Alaska Gasline Development Corporation)

- Ensure readiness for an upcoming pipeline project while maintaining highway infrastructure, including Right-of-Way, Pipeline Crossings, Construction Load Impacts, Material Sites, Driveways, and other related factors



# WINTER OPERATIONS STAFFING

Maintenance District	Total Equipment Operator Positions	Vacancy Rate (as of Jan. 29, 2024)	Vacancy Rate (as of February 3, 2025)
Anchorage	48	19%	4%
Matanuska-Susitna	37	14%	3%
Kenai Peninsula	53	25%	9%
Southwest	19	16%	5%
Dalton	70	26%	22%
Denali	26	27%	17%
Fairbanks	57	33%	11%
Tazlina	42	33%	3%
Tok	34	32%	32%
Valdez	24	29%	38%
Western	29	21%	20%
Kodiak/Aleutian	32	4%	9%
Southeast	56	11%	7%
<b>Total/Average</b>	<b>527</b>	<b>22%</b>	<b>14%</b>



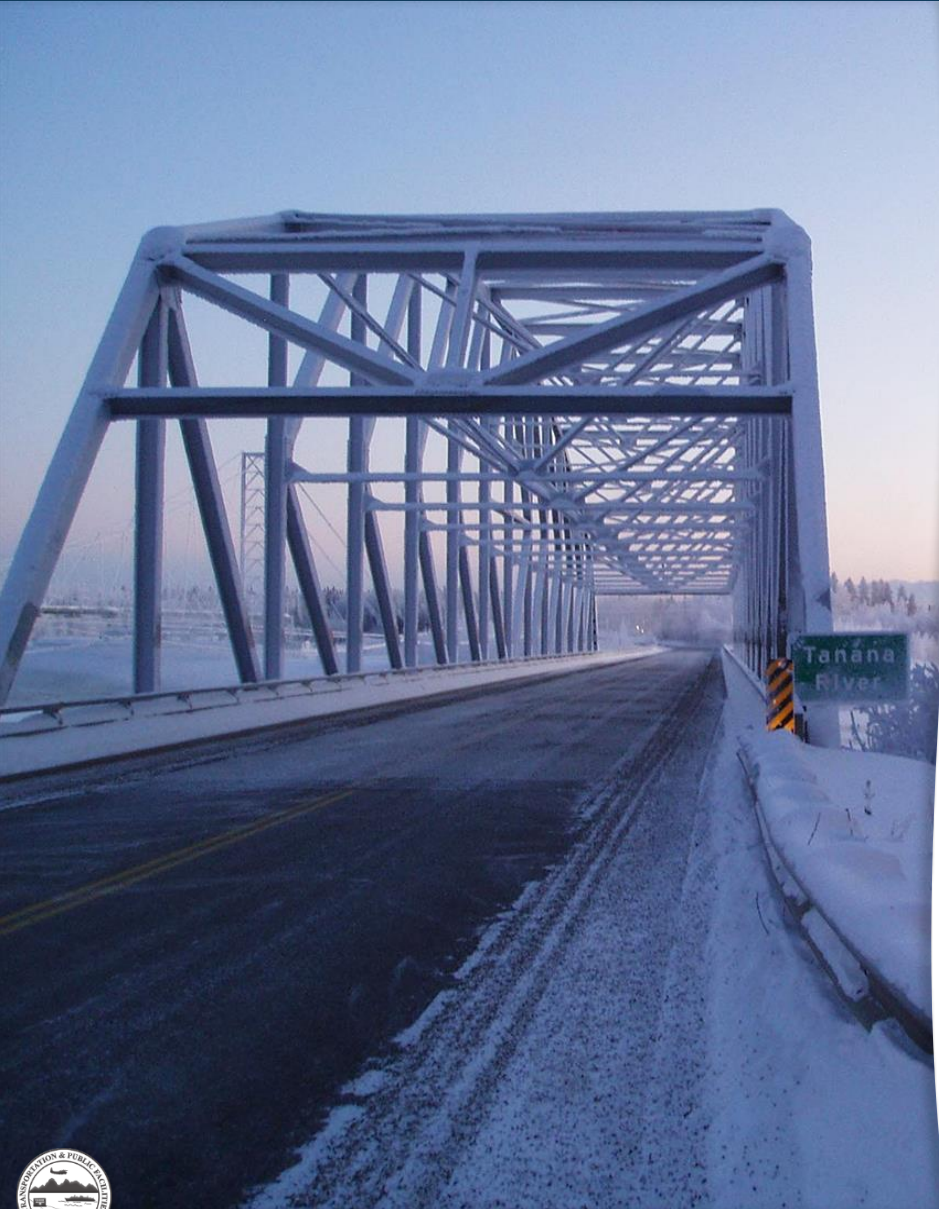
# EQUIPMENT MECHANIC STAFFING

Maintenance District	Heavy Equipment Mechanic Positions	Vacancy Rate (as of Jan. 29, 2024)	Vacancy Rate (as of February 3, 2025)
Anchorage	10	33%	50%
Matanuska-Susitna	7	28%	0%
Kenai Peninsula	9	11%	22%
Southwest	5	40%	40%
Dalton	13	0%	23%
Denali	4	50%	25%
Fairbanks	11	36%	55%
Tazlina	6	33%	50%
Tok	8	13%	0%
Valdez	5	60%	40%
Western	8	50%	50%
Kodiak/Aleutian	5	40%	20%
Southeast	12	25%	50%
<b>Total/Average</b>	<b>103</b>	<b>25%</b>	<b>33%</b>





# RESOURCE SHARING & CONTRACTOR SUPPORT



## Resource Sharing

- **Dept. of Natural Resources Support** – Snow removal
- **Regional Equipment Operator Sharing** – Staffing from other districts

## Contract Support for Maintenance & Operations

- Routine summer maintenance
  - Capitalize on capital project resources
  - Material hauling contracts
- Routine winter maintenance activities
- Emergency event response



# PROGRAMS: MEASUREMENT STANDARDS AND COMMERCIAL VEHICLE COMPLIANCE (CVC)

*Ensuring Accurate Trade, Measurements, and Enforcing Commercial Vehicle Regulations*

## Weights and Measures Inspectors

- 8 filled PCNs (10 total)

## Nine Weigh Stations (31 CVC total)

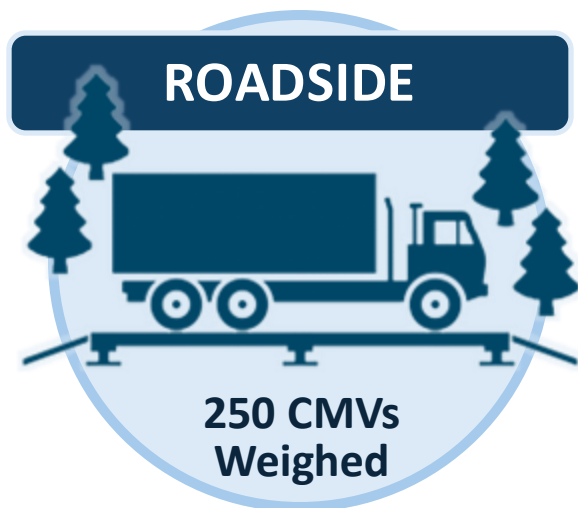
- Fairbanks (4 stations) – 6 filled PCNs
- Anchorage (3 stations) – 10 filled PCNs
- Tok (1 station) – 4 filled PCNs
- Sterling (1 station) – 3 filled PCNs



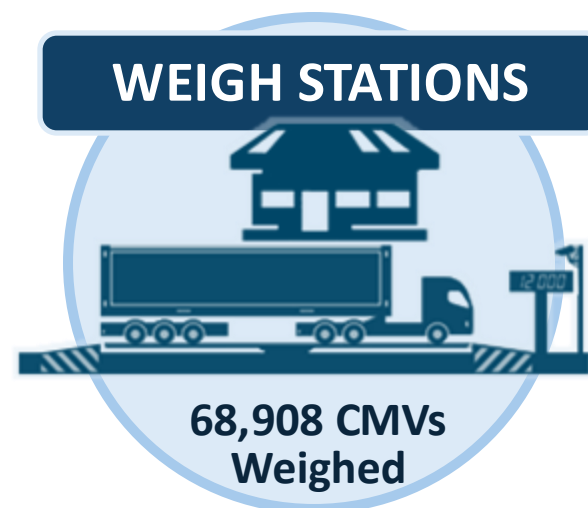
# MEASUREMENT STANDARDS AND COMMERCIAL VEHICLE COMPLIANCE

## FFY2024 – SAFETY EFFORTS

CMV – Commercial Motor Vehicles



Weight Compliance  
Rate = 97.3%



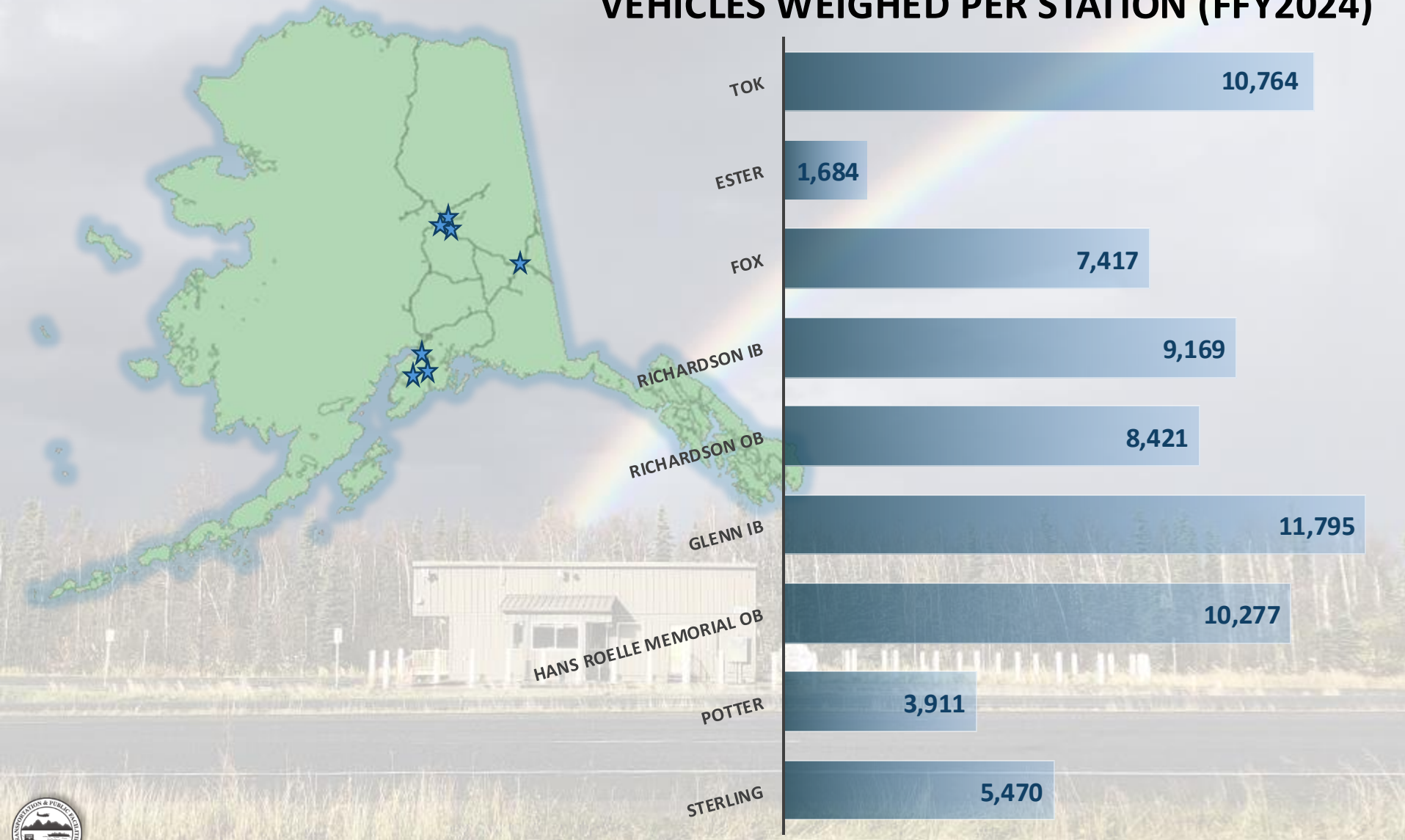
Of the **8,310** Driver/Vehicle Safety Inspections, **82%** of the vehicles and **98%** of the drivers inspected did not have any out-of-service violation.





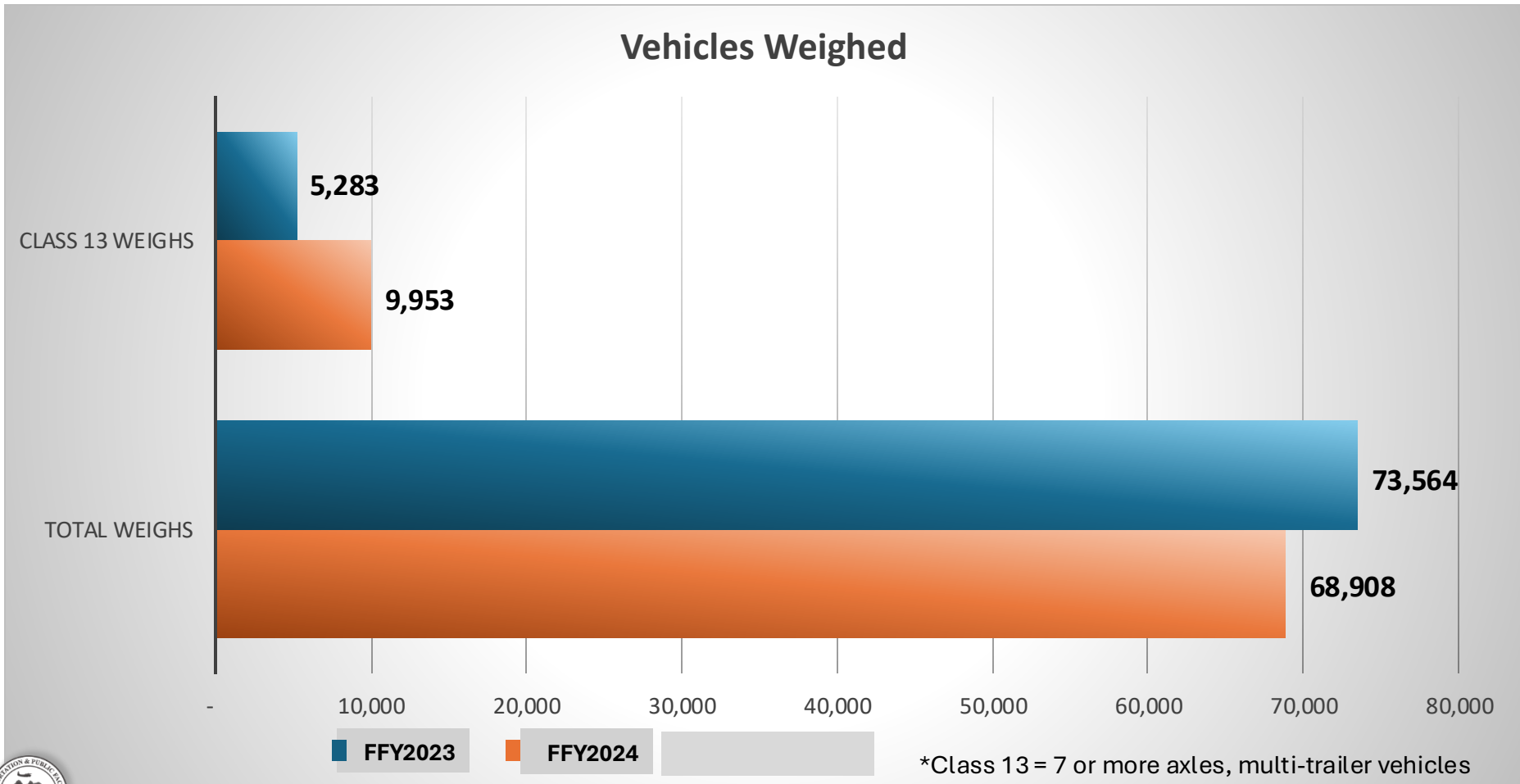
# MEASUREMENT STANDARDS AND COMMERCIAL VEHICLE COMPLIANCE

## VEHICLES WEIGHED PER STATION (FFY2024)



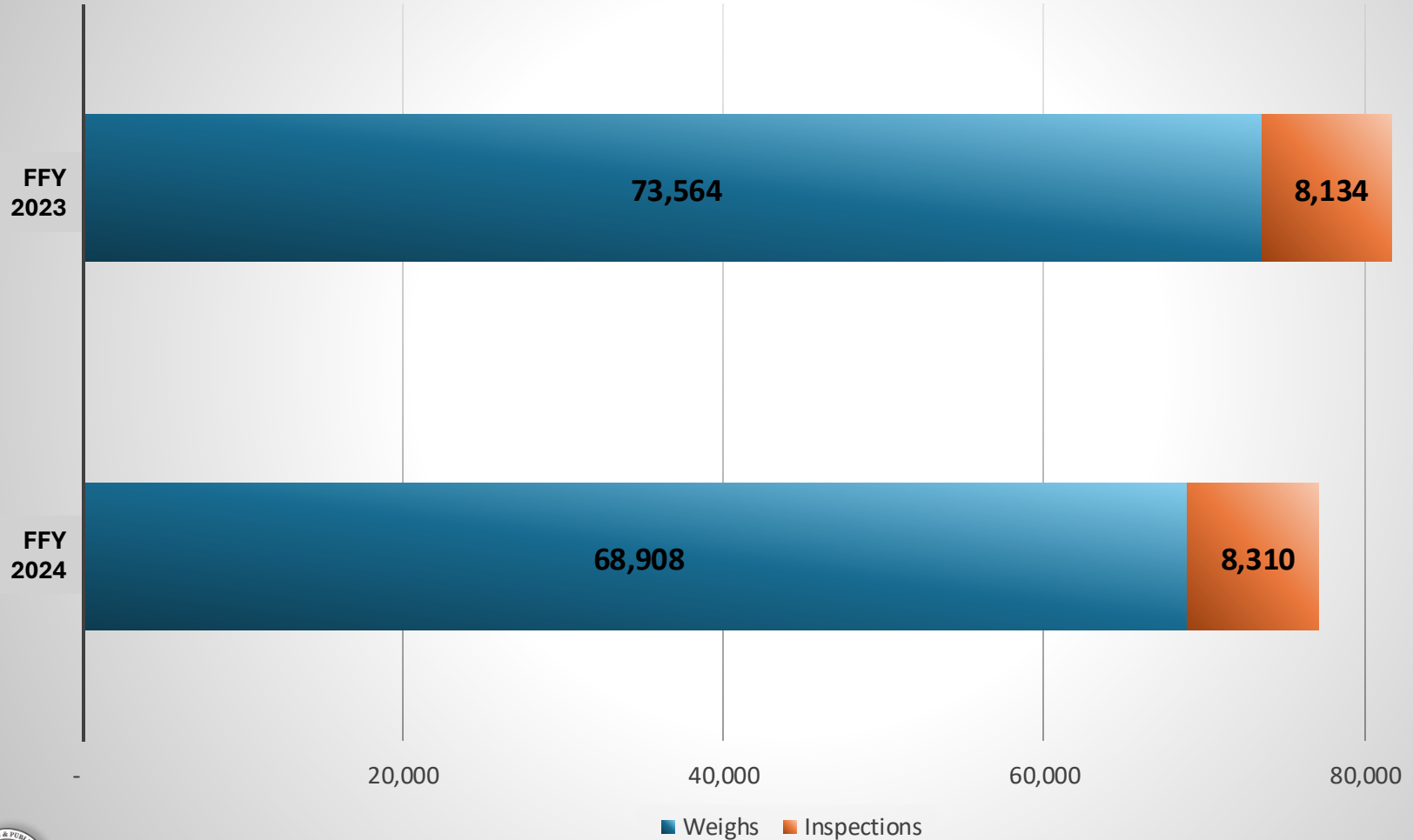
# MEASUREMENT STANDARDS AND COMMERCIAL VEHICLE COMPLIANCE

- FFY2023, Class 13\* vehicles accounted for 7% of all vehicles weighed
- FFY2024, Class 13\* vehicles accounted for 14% of all vehicles weighed



# MEASUREMENT STANDARDS AND COMMERCIAL VEHICLE COMPLIANCE

## Enforcement Activity (Weighs and Inspections)





# MEASUREMENT STANDARDS AND COMMERCIAL VEHICLE COMPLIANCE



## Dalton Highway Inspection Activity

- FFY2022 – FFY2024
- 6 deployments
- 158 driver/vehicle safety inspections
- 215 driver contacts
- Partnership with Department of Public Safety (DPS)



# THANK YOU

**Jason Sakalaskas, Chief  
Maintenance & Operations, Northern Region**

**Leslie Daugherty, P.E., Chief Bridge Engineer  
Bridge Design**

**Lauren Little, P.E., Chief Engineer  
Statewide Design & Engineering Services**

**Dan Smith, Director  
Measurement Standards & Commercial Vehicle Compliance**

**Alaska Department of Transportation & Public Facilities  
[DOT.Commissioner@alaska.gov](mailto:DOT.Commissioner@alaska.gov)**

