



Alaska Department of Transportation & Public Facilities

FY2024 Operating Budget: Highways

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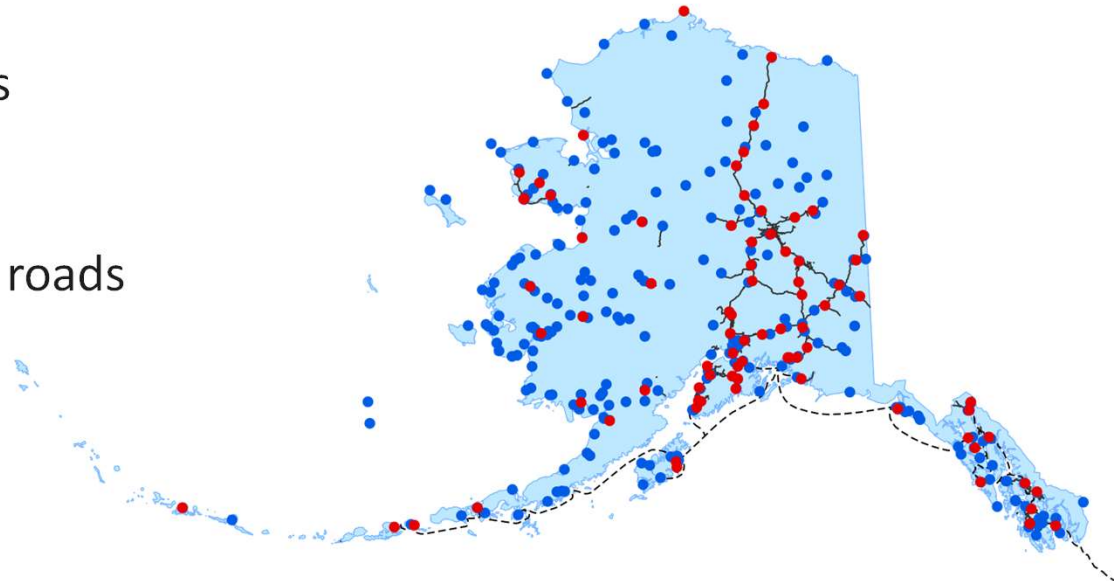
February 16, 2023

Our mission is to **Keep Alaska Moving** through service and infrastructure.

MAINTENANCE AND OPERATIONS

5,682 center line miles of roads/highways

- 3,785 paved
- 1,897 unpaved
- 2,207 center line miles of DOT&PF NHS roads



80 DOT&PF staffed Maintenance Stations:

- 20 Southcoast Region
- 22 Central Region
- 38 Northern Region

REGIONAL AREAS OF RESPONSIBILITY

Northern Region

	FY2024 Gov. Amend	Chg. Frm. FY2023
Northern Highways & Aviation	\$ 72,050.8	\$ 1,612.0
UGF	\$ 36,752.3	\$ 5,291.3
DGF	\$ 18,707.7	\$ 299.5
Fed	\$ 4,073.3	\$ (4,249.7)
Other	\$ 12,517.5	\$ 270.9

Central Region

	FY2024 Gov. Amend	Chg. Frm. FY2023
Central Highways and Aviation	\$ 45,303.9	\$ 766.2
UGF	\$ 18,555.7	\$ 2,213.5
DGF	\$ 15,761.1	\$ 2.9
Fed	\$ 2,978.3	\$ (1,679.6)
Other	\$ 8,008.8	\$ 229.4

Southcoast Region

	FY2024 Gov. Amend	Chg. Frm. FY2023
Southcoast Highways & Aviation	\$ 25,325.9	\$ (271.9)
UGF	\$ 8,538.6	\$ 1,882.8
DGF	\$ 7,743.8	\$ 150.9
Fed	\$ 3,944.8	\$ (2,405.5)
Other	\$ 5,098.7	\$ 99.9

\$ in thousands



BUDGETARY REQUESTS

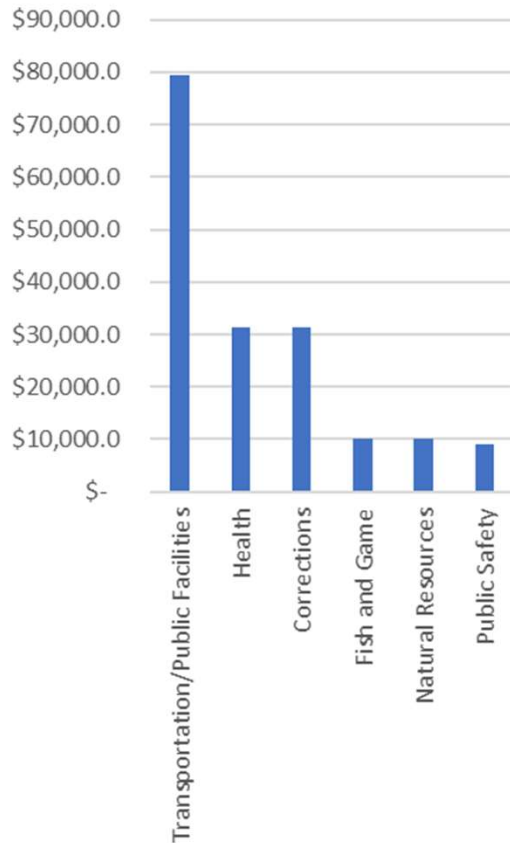


- Birch Lake and Chitna (January 2021) - \$794.6
- Silvertip (December 2020) - \$620.0
- Ice Roads - \$200.0
- Commodities Increases - \$1,334.9
- Dalton 2x2 - \$1,298.6 (Gov. Amend)
- Wayside Improvements - \$385.0 (Gov. Amend)

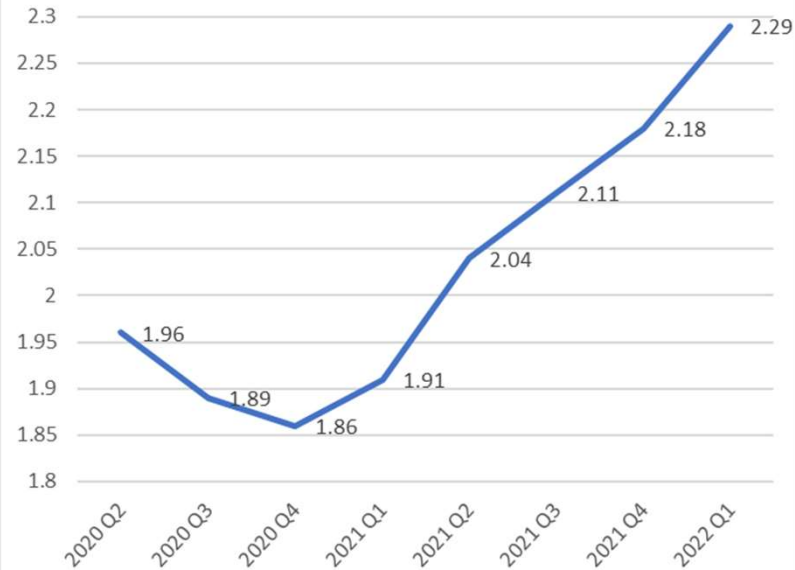
\$ in thousands

COMMODITIES

Commodities Line
FY2023 Management
Plan



National Highway Construction Cost Index



Since the pandemic, highway construction costs have increased **16.8%**. The components of this index align and closely with elements of highway maintenance & operations.

FY2022 saw fuel increases of \$2/gallon on average, creating a \$1.4M increase fuel costs for facilities and \$3.9M in fuel for equipment.

Grading and Excavation
Bridge
Asphalt
Concrete Pavement
Concrete-Miscellaneous
Concrete-Culverts
Base Stone
Drainage-Pipe
Drainage-Inlets/Catch Basins
Underdrain
Traffic Control
Guard Rail
Fencing
Signs-Permanent
Striping/Pavement Marking
Signalization
Lighting
Roadway Lighting/Electrical
Grassing
Erosion Control
Retaining Wall
Miscellaneous Stone/Riprap
Clearing
Painting Structures
Buildings/ Miscellaneous Structures
Utility-Water
Utility-Gas
Utility-Sewer
Equipment/Labor

NHCCI COMPONENTS

COMMODITIES INCREASES



INCREASES	COMMODITY AND FISCAL YEAR TOTAL COST
33%	Sodium Acetate-Formate (per ton):
	Bethel FY20 \$2,049.89 FY21 \$2,249.83 FY22 \$2,744.77
28%	Sodium Formate (per ton):
	AIA FY20 \$1,782.45 FY21 \$1,957.00 FY22 \$2,295.00
86%	Highway Sand (per ton):
	Statewide FY20 \$24.78 FY21 \$37.90 FY22 \$46.26
54%	Water Based Traffic Marking Paint (per gallon):
	Statewide FY20 \$20.01 FY21 \$21.50 FY22 \$31.01
42%	Blades (regular curved per edge):
	Statewide FY20 \$107.55 FY21 \$106.53 FY22 \$153.57

EXTREME WEATHER FUNDS

FY2021 Supplemental Reappropriation - \$1M

FY2022 Supplemental Reappropriation - \$4.6M

FY2023 Supplemental Reappropriation - \$2.6M



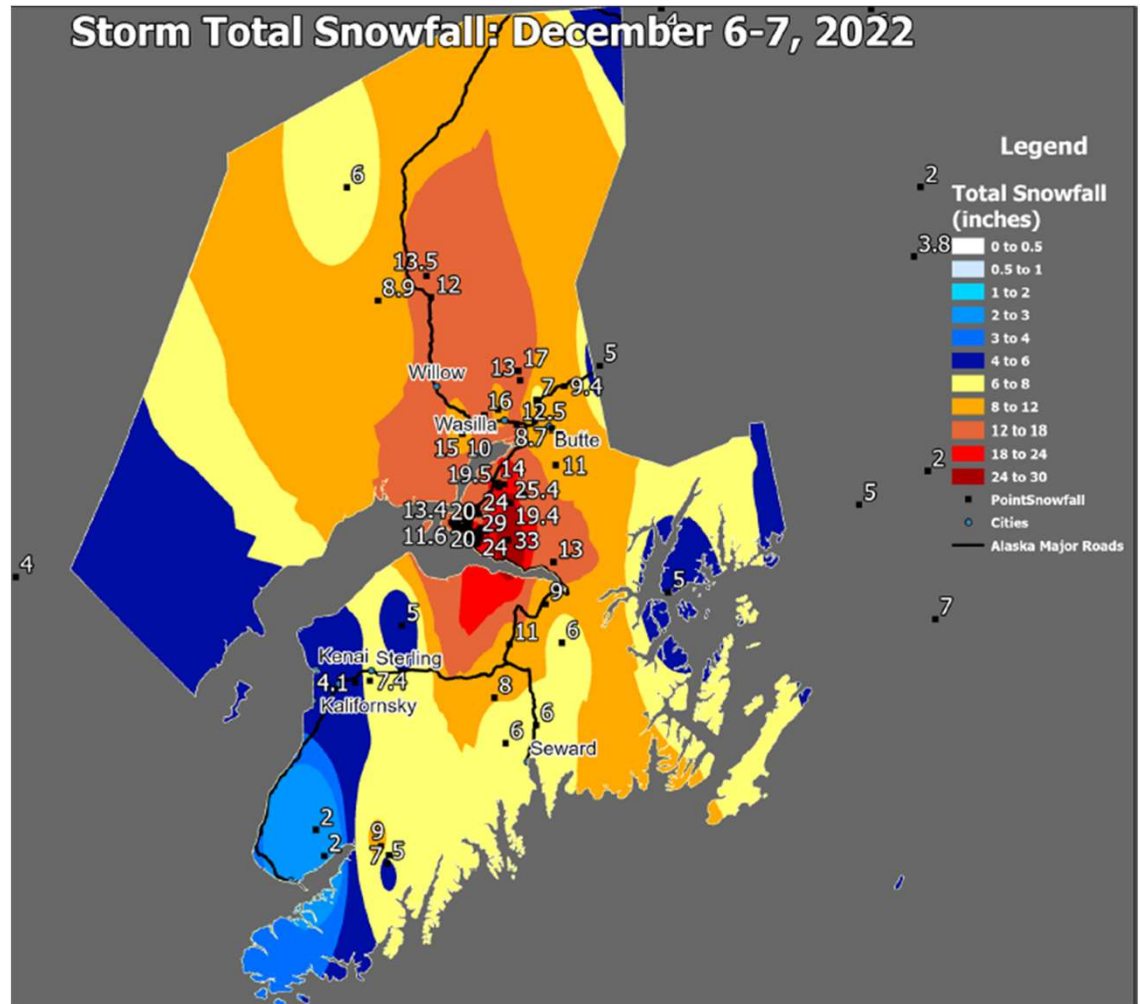
EXTREME WEATHER EVENTS

“The three events occurred December 6-7, 2022, December 11-12, 2022, and December 14-15, 2022, resulting in 3 to 5 feet of snow total over the course 11-day period. **It is uncommon to see three storms in a row with such similar characteristics.**”

“Anchorage hit the 14th highest snowfall amount for a 2-day period December 11-12, 2022 with 16.2 inches of snow.”

“More notably, the only other 11-day period to see higher amounts on record was in 1996 with 44.6 inches, while this 11-day period measures 41.1 inches of snow.”

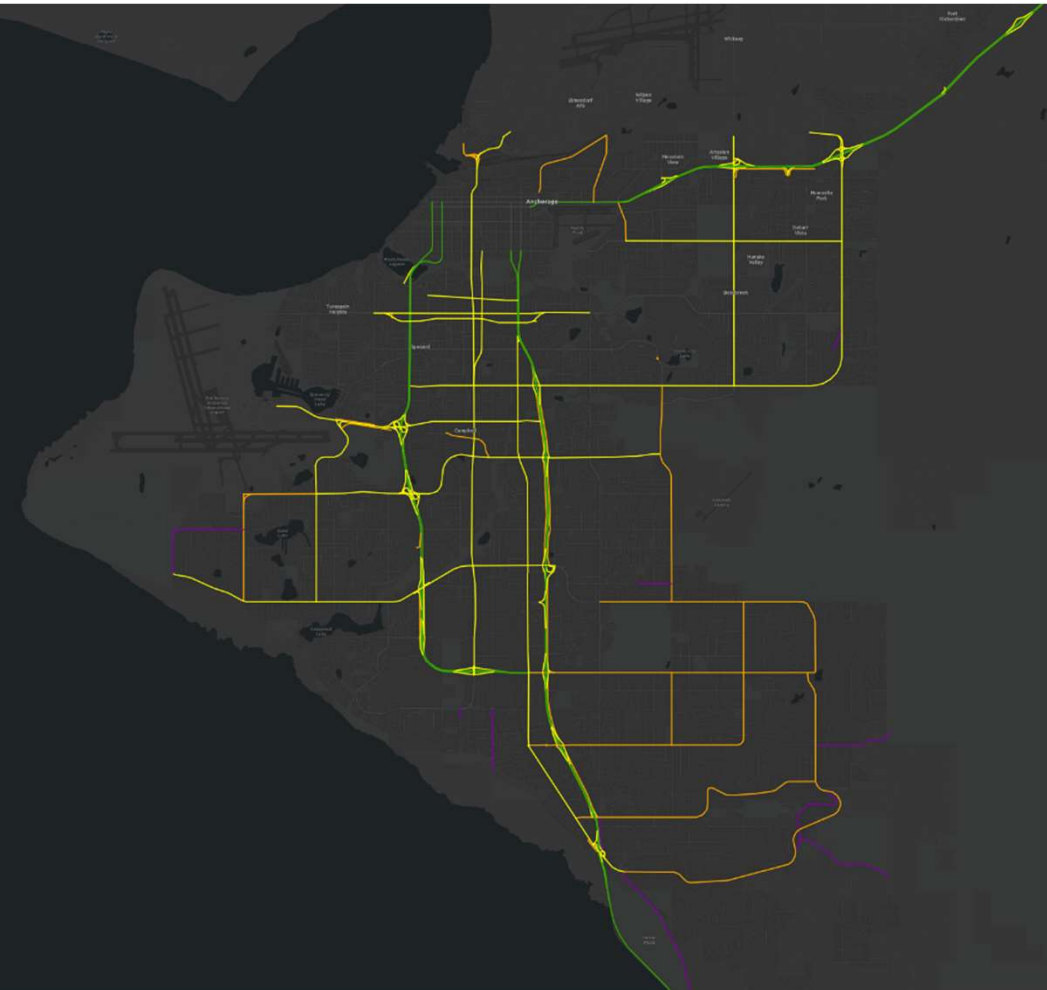
“To put this event in perspective, this is the third snowiest snow-year to date and within six tenths of an inch of being the snowiest December on record.”



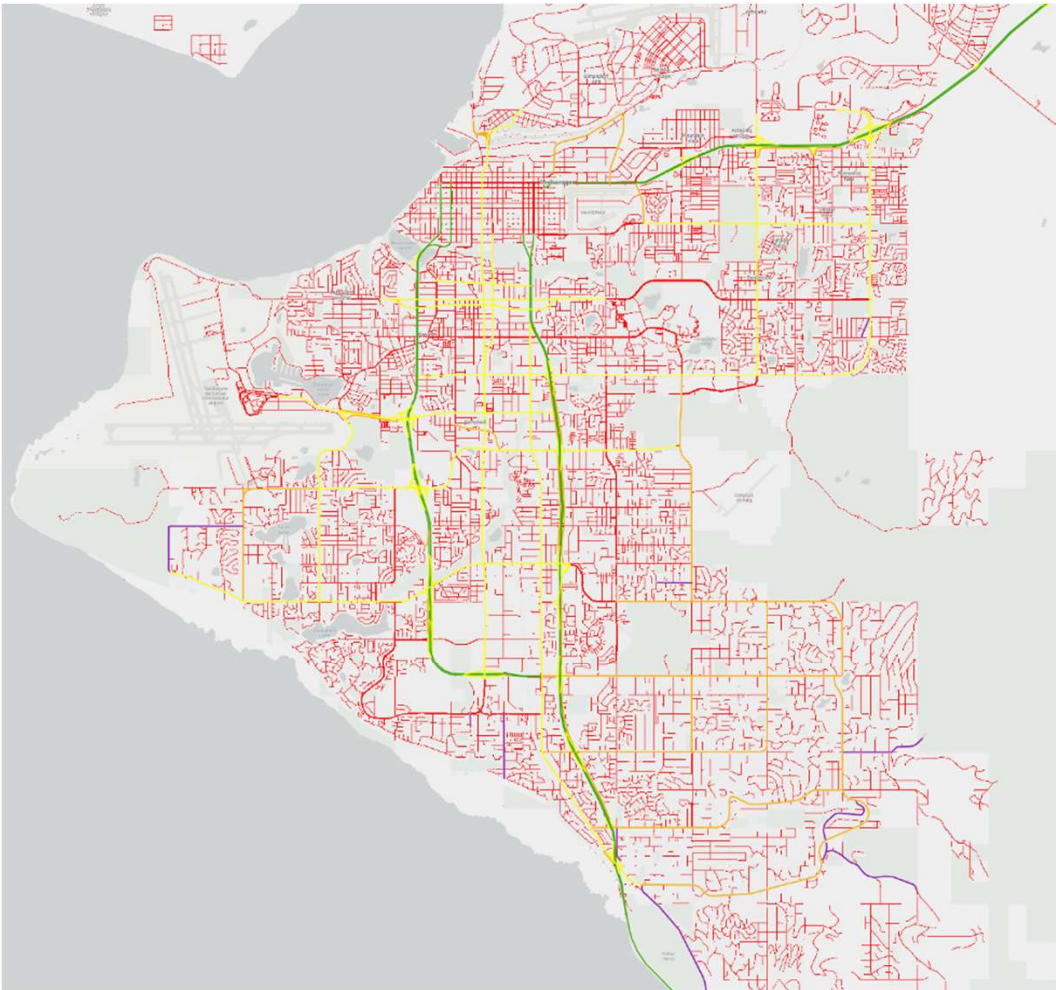
Data, quotes and weather mapping provided by the NOAA National Weather Service, Anchorage Office.

ROAD JURISDICTION AND PRIORITY

DOT&PF Maintained



All Roads



Anchorage, Alaska



WINTER ROAD MAINTENANCE

Established by DOT&PF in 2017 to better communicate winter maintenance to public, with small tweaks in the last 5 years



Criteria to establish priorities includes:

- Annual average daily traffic (AADT)
- Weather events
- Major shipping lanes and freight/cargo transport
- Access to other modes of transportation
- Safety corridors
- Public transit systems
- Emergency responders and hospitals route and segment access
- School bus routing
- Population density of surrounding/connected area
- Alternative emergency routes, types of roads, bridges and rivers
- Existing DOT&PF resources
- Distance from M&O station
- Pedestrian facilities*
- Trails and waysides*

** survey results asked for additional consideration*

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4	PRIORITY 5
<p><i>May take up to 12 hours to clear after a winter storm.</i></p> <p>high-volume, high-speed highways, expressways, minor highways, all safety corridors and other major urban and community routes.</p>	<p><i>May take up to 18 hours to clear after a winter storm.</i></p> <p>routes of lesser priority based on traffic volume, speeds and uses. Typically, these are major highways and arterials connecting communities.</p>	<p><i>May take up to 24 hours to clear after a winter storm.</i></p> <p>major local roads or collector roads located in larger urban communities.</p>	<p><i>May take up to 30 hours to clear after a winter storm.</i></p> <p>minor local roads that provide residential or recreational access.</p>	<p>roadways that are designated as "No Winter Maintenance" routes, e.g. Denali Highway or Taylor Highway. Generally cleared only in spring to open road for summer traffic.</p>

LEGISLATIVE INTENT: ROAD PRIORITIES SURVEY

FY2023 INTENT LANGUAGE

It is the intent of the legislature that DOT&PF create and implement a method to solicit input from and consult with local municipalities, community organizations, Metropolitan Planning Organizations, Regional Transportation Planning Organizations and service areas on the creation and revision of the prioritized list of state-maintained roads and highways for snow plowing, and to coordinate these efforts, where appropriate, with local governments and service areas. This plan shall be developed and submitted to the Finance Committee Co-Chairs and Legislative Finance Division by December 20th, 2022.

CY2022 STIP List (Survey #1)

1,100 contacts reached municipal (mayors and city managers), village and city council members.
616 total submissions received.

CY2022 MPO Member (Survey #2)

distributed to Municipal Planning Organization members directly. 31 total submissions received from MPO members.

CY2022 Community Council (Survey #3)

distributed to community council members directly from lists compiled by DOT&PF communications staff.
42 total submissions received.

Survey Results

2022 Winter Road Priority Maint. Criteria Ranking (Survey Summary)	STIP List	MPO	Community Council
	<i>(survey #1)</i>	<i>(survey #2)</i>	<i>(survey #3)</i>
Road Criteria to Rank (Importance)			
Public transit systems	6.7	7.9	5.5
Safety corridors	7.8	7.9	7.4
Speed limit of road	7.2	7.7	7.8
Road characteristics	8.4	6.9	4.8
Existing DOT&PF resources	8.1	7.2	7.6
Bridges and Rivers	8.6	6.2	7.7
Type of road	8.5	7.9	8.0
Annual average daily traffic	8.0	7.9	7.5
Weather events	10.0	8.4	9.9
Alternative emergency routes	8.3	7.2	8.3
Population density	7.4	7.9	7.1
School bus routing	7.8	7.9	7.7
Distance from M&O station	5.6	4.3	5.9
Route and segment access	6.7	6.6	6.4
Reliable access for emergency responders and hospitals	9.9	10.0	10.0
Major shipping lanes and freight/cargo transport	6.7	7.9	5.5
Access to other modes of transportation	7.8	7.9	7.4
Presence of non-motorized facilities		6.9	4.8

(Green weighted scores are over 8 and ranked as higher importance, Red weighted scores are lower than 6 indicating criteria is less important. See detailed survey summary in Appendix B of this report).



ROAD PRIORITIES: BEYOND THE SURVEYS

What we've learned:

- Review of road priorities in CY2023 across all regions, potential priority shifts
- Pedestrian-specific focus
- Look at additional local road swaps (efficiency)
- Contractor support, supplemental service
- Reviewing "Track-a-plow" technology for increased transparency to public

1	SNOW EVENT TRACKING WORKSHEET		Event #	
2	Date/Time Event Start	# of Inches	Date time end	X=Completed
3	Priority 1-12 hours after event			
4	Glenn Hwy	Airport Heights	To Palmer Alternate	
5	Minnesota	Old Seward	To 15th Ave	
6	Seward Hwy	15th Ave	To Indian	
7	5th Ave	Airport Heights	To Karluk	
8	Eagle River Loop	Glenn Hwy.	To Eagle River Rd	
9	Date & Time Priority 1 complete			
10				
11	Priority 2-18 hours after event			
12	SOUTH TEAM			
13	Ramps	Seward Highway		
14	Ramps	Minnesota		
15	Humphry (Minn. Frontage)	100th	To Dimond	
16	Dimond Blvd.	Sandlewood	To Sandlake Road	
17	Old Seward	Rabbit Creek	To 33rd Ave	
18	International Airport Road	Homer Drive	To S. Aircraft Drive	
19	C street	Minnesota	To 15th	
20	A street	40th	To 15th	
21	Dowling Road	Elmore Road	To Raspberry Rd.	
22	Raspberry	Dowling Rd.	To Sandlake Road	
23	Jewel Lake	Dimond	To International Airport	
24				
25	NORTH TEAM			
26	Ramps	Glenn Highway		
27	Muldoon Road	Regal Mountain Dr.	To JBER gate	
28	Tudor Road	Minnesota	To Regal Mountain Dr.	
29	Boniface Parkway	Tudor Road	To JBER gate	
30	Debarr Road	Muldoon Road	To Airport Heights	
31	Northern Lights Blvd.	Lake Otis	To Forest Park Dr.	
32	Benson Blvd.	Forest Park Dr.	To Lake Otis	
33	Fireweed Lane	Seward Hwy.	To Spenard Road	
34	Old Glenn Hwy.	Artillery	To W. Lake Ridge Dr.	
35	North Eagle River Access Rd.	Old Glenn	To New Glenn	
36	Eagle River Loop	Old Glenn	To Eagle River Road	
37	Date & Time Priority 2 complete			
38				

EXAMPLE ROUTING SHEET USED TO PLAN STORM RESPONSE



VACANCY RATES

Vacancy Rates* for Highways & Aviation LTC Positions

Annual rate, sampled monthly for calendar year 2022

Constantly changing

Only one part of the staffing challenges

Doesn't capture turnover, other absences, experience

Southcoast Region	88	13%
ADAK	2	0%
AKUTAN	3	6%
COLD BAY	4	21%
GUSTAVUS	2	0%
HAINES	5	8%
HOONAH	2	29%
ILIAMNA	3	8%
JUNEAU	14	21%
KALSIN BAY	2	13%
KETCHIKAN	4	2%
KING SALMON	6	28%
KLAWOCK	5	22%
KODIAK	8	2%
PETERSBURG	4	0%
SAND POINT	1	0%
SITKA	8	10%
SKAGWAY	4	21%
UNALASKA	3	14%
WRANGELL	3	8%
YAKUTAT	5	10%

Central Region	159	16%
ANCHORAGE	45	14%
ANIAK	2	29%
BETHEL	8	14%
CASCADE	4	42%
CHULITNA	5	12%
CROWN POINT	5	22%
DILLINGHAM	7	8%
GIRDWOOD	6	33%
HOMER	11	13%
MCGRATH	1	0%
NINILCHIK	4	0%
NORTH KENAI CAMP	4	10%
PALMER	22	23%
QUARTZ CREEK	4	0%
SELDOVIA	1	0%
SILVERTIP	5	0%
SOLDOTNA	18	20%
TALKEETNA	2	0%
WILLOW	5	8%

Northern Region	287	22%
BIRCH LAKE	3	0%
CANTWELL	9	21%
CHANDALAR CAMP	8	5%
CHITINA	4	15%
COLDFOOT CAMP	5	5%
CORDOVA	6	40%
DEADHORSE	12	4%
DELTA JUNCTION	8	15%
EAGLE	3	22%
ERNESTINE	4	17%
FAIRBANKS	53	23%
GALENA	2	0%
HEALY	5	45%
JIM RIVER	4	10%
KOTZEBUE	7	31%
LIVENGOOD	7	12%
MANLEY HOT SPRINGS	6	7%
MONTANA CREEK	5	15%
NELCHINA	4	0%
NENANA	6	17%
NOME	17	43%
NORTHWAY	5	15%
PAXSON	5	15%
SAG RIVER	6	6%
SAINT MARYS	3	6%
SEVEN MILE CAMP	4	2%
SLANA	6	10%
SOUTH FORK	4	17%
TAZLINA	19	34%
THOMPSON PASS	8	38%
TOK	10	20%
TRIMMS CAMP	4	40%
UNALAKLEET	3	11%
UTQIAGVIK	5	0%
VALDEZ	11	31%

*As provided to the Legislature by OMB

Table Columns: Region | Total PCNs | CY2022 Vacancy Rate

VACANCY RATES: TRACKING

DISTRICT	% VACANT	SAMPLE DATE
ANC INT	14%	1/27/2023
ANC INT FAC	15%	2/3/2023
CR ANCHORAGE	17%	2/3/2023
CR MATSU	23%	2/3/2023
CR PENNINSULA	23%	2/3/2023
CR SOUTHWEST	6%	2/3/2023
DFS	19%	2/3/2023
FAI AIRPORT	6%	2/3/2023
NR DALTON	21%	2/3/2023
NR DENALI	26%	2/3/2023
NR FAIRBANKS	21%	2/3/2023
NR TAZLINA	24%	2/3/2023
NR TOK	26%	2/3/2023
NR VALDEZ	42%	2/3/2023
NR WESTERN	32%	1/27/2023
SEF	21%	2/3/2023
SR KODIAK	16%	2/3/2023
SR SOUTHEAST	13%	2/3/2023

LTC Positions





OTHER WORKFORCE TOOLS

Mission Critical Incentive Pay (MCIP)

Electrician MCIP – This covers 3 Electrician positions in Fairbanks which manage our Traffic Signal and Lighting Systems.

Nome Duty Station MCIP – This covers 21 positions including Equipment Operators, Mechanics, and Stock and Parts Personnel. The MCIP applies ONLY to those who reside in Nome.

Bethel Airport MCIP – This covers 15 positions including Equipment Operators and Mechanics.

Alternate Schedules

Week on Week off is an active work schedule in several areas within Northern Region (Trims, Thompson Pass, etc).

2 weeks on 2 weeks off schedule is being worked throughout the entirety of the Dalton district, Fairbanks Station (Winter season only), and Montana Creek (Winter Season only).

CONTRACTING



Allows department to focus its resources and staff on higher-priority routes which is critical for maintaining the safety and well-being of residents during winter weather events.

Northern Region: Winter maintenance contract for approx. 120 lane mile of priority 3-4 roadways in the Fairbanks area.

Southcoast Region: Agreement with the City and Borough of Juneau provides a flexible and effective solution for addressing winter operation and maintenance needs on certain roads.

Contact Details

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