



# Alaska Department of Transportation & Public Facilities

## Winter Maintenance: By Design

(AKA- Mr. and Mrs. Smith)

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# Today's Plan

Discuss some competing interests of capital improvement projects and winter maintenance considerations

Project design constraints

What to look for and ask for to ensure you get the benefits of a project without the winter maintenance headaches

# Consequences of Failed Communication



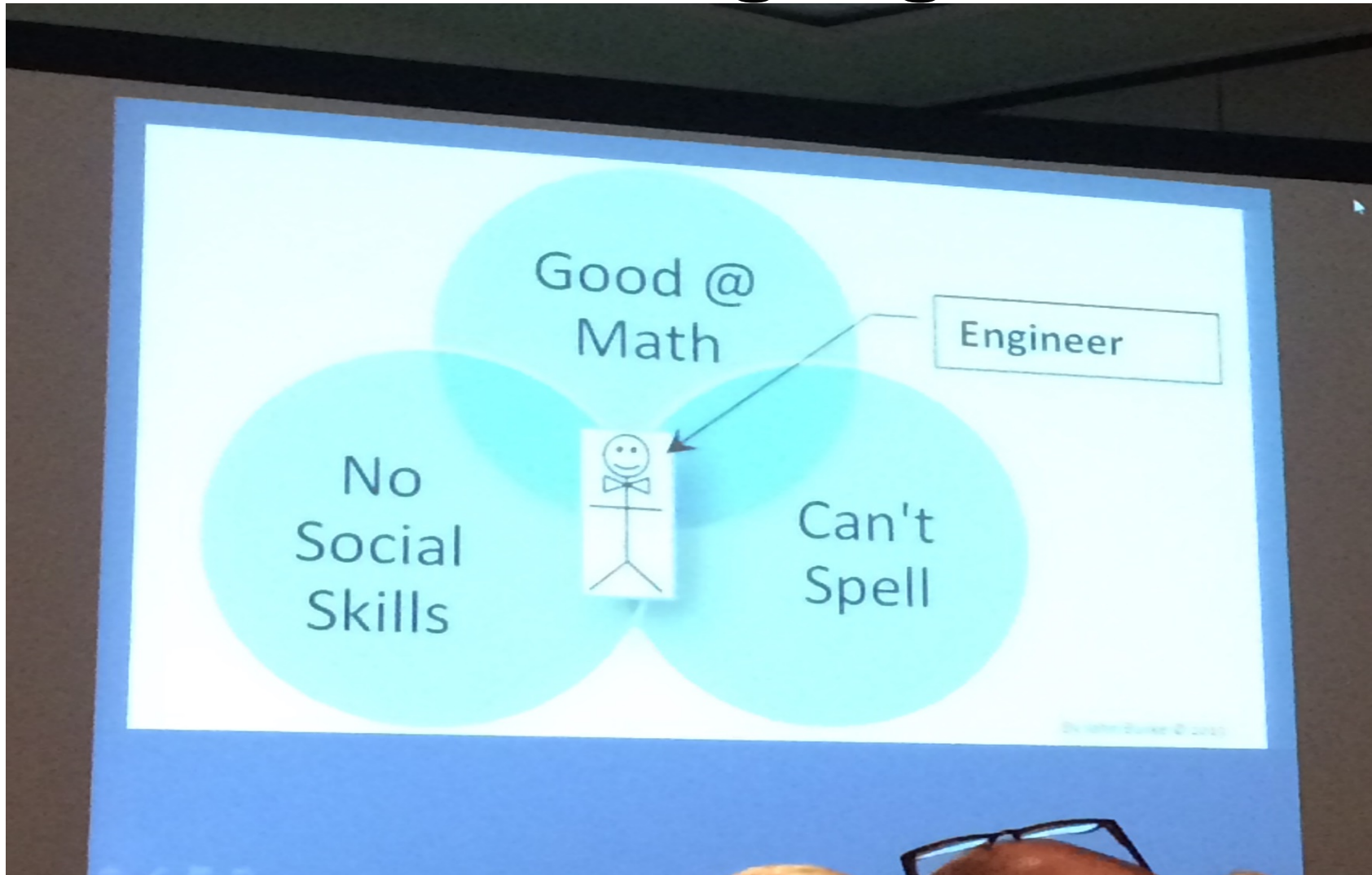


# M&O vs. Design!!



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# We Don't Speak the Same Language...





# Alaska DOT&PF's Mission

*Keep Alaska moving through service and infrastructure*

- Provide for the safe and efficient movement of people and goods
- Provide access to state services
- Provide access to resources

To accomplish our mission, we modernize, preserve and operate Transportation Infrastructure (Assets)

# Objectives of a Capital Improvement Project

- **Extend & preserve service life**
- Modernize facilities
- Improve safety
- Improve mobility
- **Reduce maintenance costs**



# You can probably expect:



- Additional Lane Miles
- New Technology/New Hardware
- More:
  - Signs & Striping
  - Lighting
  - Fence
  - Guardrail
  - Right of Way

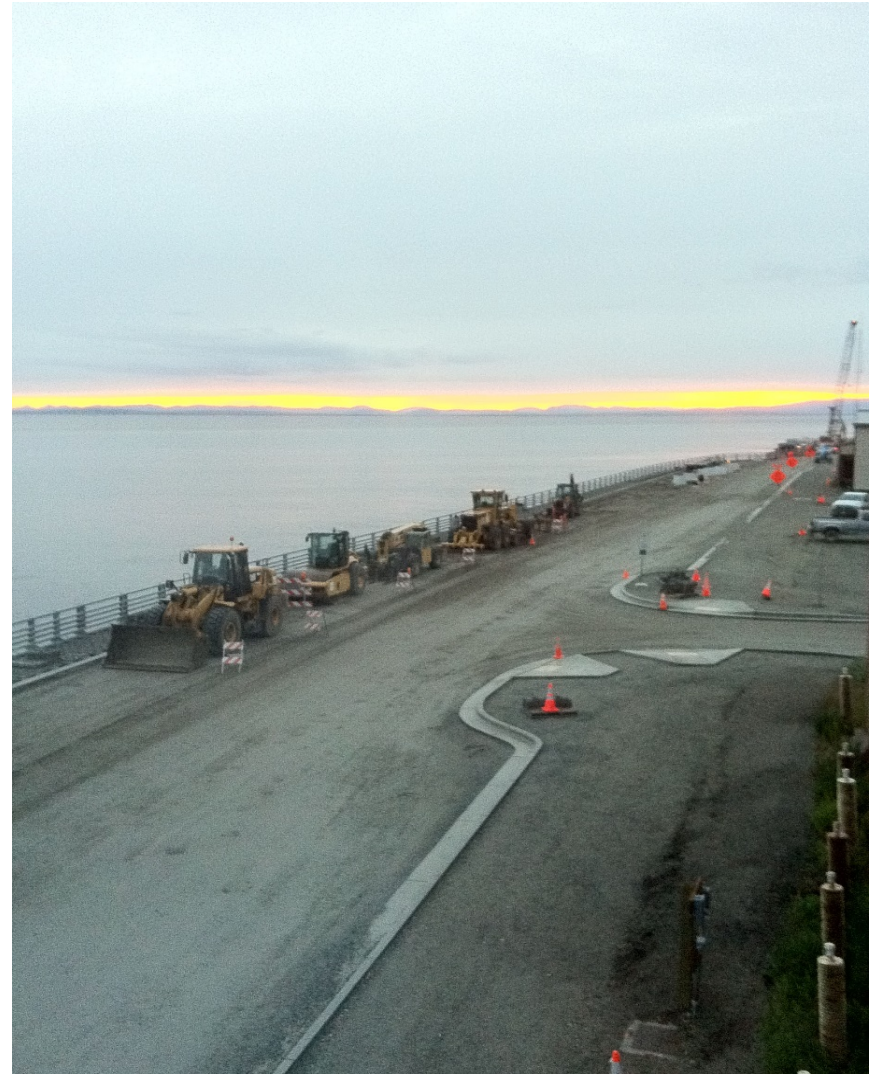


# Americans with Disabilities Act (ADA)

No Exceptions

Strict design criteria

**28 CFR § 35.133 - A public entity shall maintain in operable working condition those features of facilities and equipment that are required to be readily accessible to and usable by persons with disabilities**



# ADA Compliant: Snow Removal Nightmares



# ADA Compliant: Snow Removal Friendly



# Green Streets

## Anatomy of a Green Street

Pedestrian friendly

1000 cf soil volume for street tree tree boxes

Landscape areas

Permeable sidewalks

Transit oriented

Shielded,  
Energy efficient street fixtures

Recycled materials used

Mature Street Trees

Compost amended soils

Permeable pavement in parking lane

Bike Rack

Bike Lane

Permeable pavement  
in transitway

Bioretention

Interpretative signs

# Green Streets Solutions

Communication

Drainage, drainage,  
drainage!

Low maintenance  
plants & shrubs



# Complete Streets



- Consider space needs of all users and modes
- Improve local economy and community livability
- Less primary focus on passenger vehicle focused designs

# Desirable and Appealing



# Lookin' Good!







**...Until Now**



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**\$%@#!**



# Watch During Construction Too...



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# How to Deal:

## Communication & Relationships

Planners

Engineers/Consultants

Council/Budget Authority

Education to all on maintenance processes and considerations

Participate in reviews and field trips at every opportunity

# Use Data to Make Your Case



- Productivity rates and historic costs
- Priorities
- System Condition



# **Reductions – FY16,17 & 18**

- M&O Northern Region 31% budget reduction
- Closed 5 maintenance stations- reduced 6<sup>th</sup> to Winter operation only.
- No overtime budgeted
- No increased funding to help maintain new Capital Projects

# Road Priority Assessment

## Winter Road Maintenance Priority Map

Winter Conditions Vary. Response times depend on the severity and length of each winter storm.

### PRIORITY LEVEL 1

high-volume, high-speed highways, expressways, minor highways, all safety corridors and other major urban and community routes. May take up to 24 hours to clear after a winter storm.

### PRIORITY LEVEL 2

routes of lesser priority based on traffic volume, speeds and uses. Typically, these are major highways and arterials connecting communities. May take up to 36 hours to clear after a winter storm.

### PRIORITY LEVEL 3

major local roads or collector roads located in larger urban communities. May take up to 48 hours to clear after a winter storm.

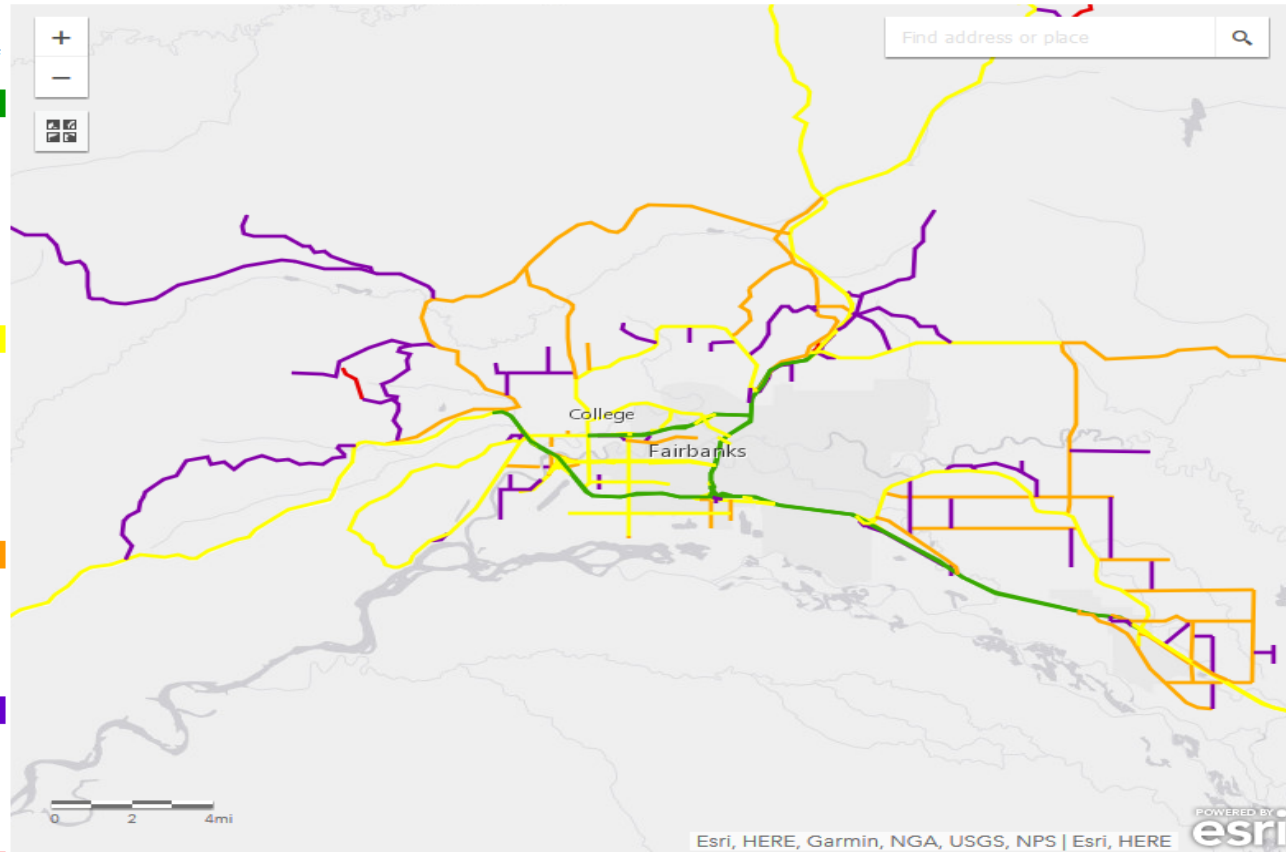
### PRIORITY LEVEL 4

minor local roads that provide residential or recreational access. May take up to 96 hours to clear after a winter storm.

### PRIORITY LEVEL 5

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

Use your mouse to zoom and drag to your preferred location on the map. Click on a roadway for more information.



If you experience difficulty with this page, please contact [Ask DOT&PF](#)

**PLEASE NOTE:** Sidewalks are assigned the same priority as the adjacent road.

#### Contact DOT&PF Maintenance & Operations:

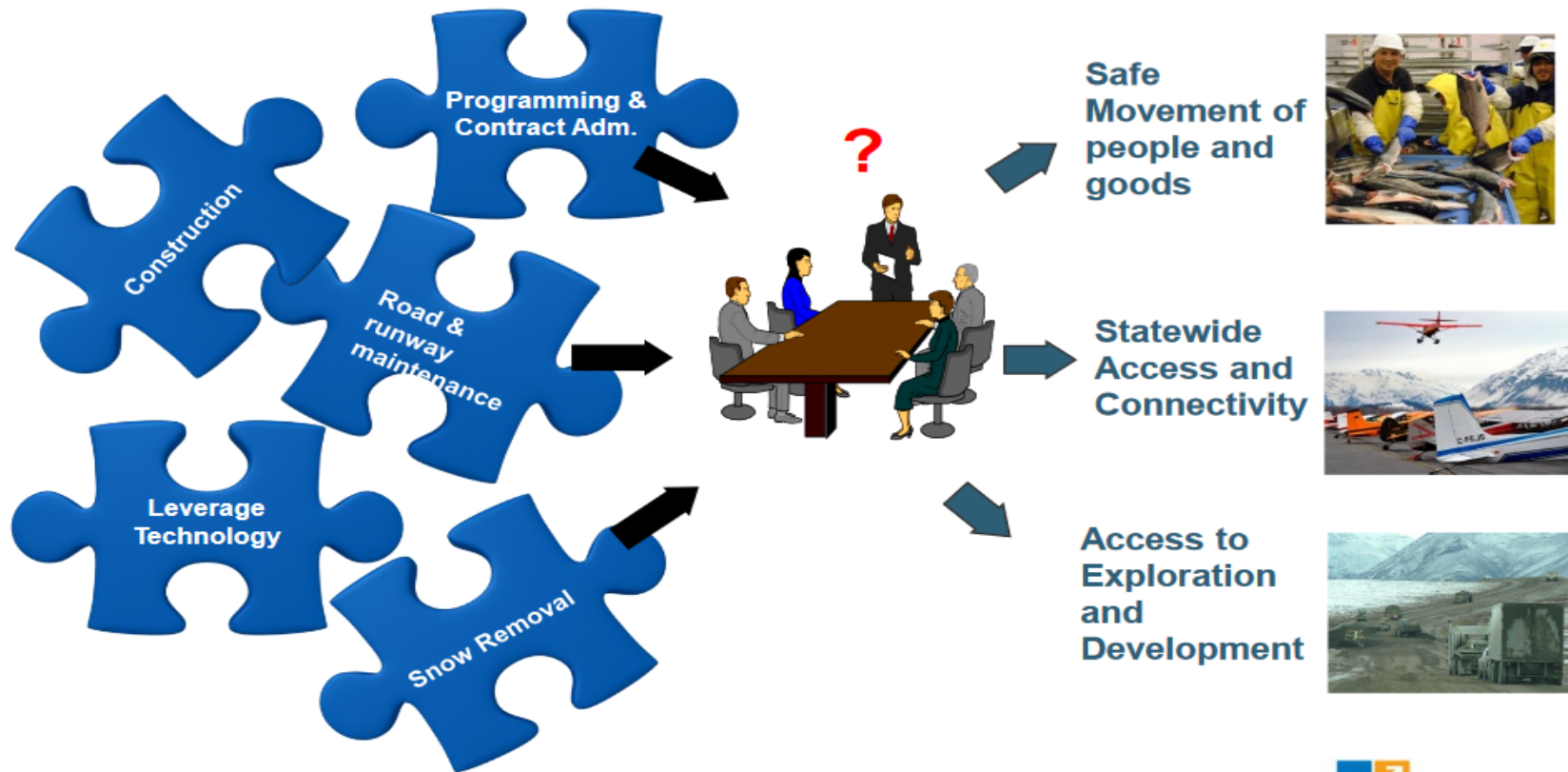
- [Central Region Maintenance & Operations](#)
- [Northern Region Maintenance & Operations](#)
- [Southcoast Region Maintenance & Operations](#)

#### Resources

- Road Conditions: [511.alaska.gov](http://511.alaska.gov)
- Winter Travel Resources: [dot.alaska.gov/winter](http://dot.alaska.gov/winter)
- Winter Driving Tips: [dot.alaska.gov/winter\\_driving\\_tips.shtml](http://dot.alaska.gov/winter_driving_tips.shtml)

# Telling our Story

## Investing in RESULTS, not Activities





# Diverse System Users



# Alaska is Unique...



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# Birch Hill Rd





# **Case Example: Birch Hill Bike Path Project**

**Proposed separated bicycle path on semi-rural residential road on permafrost**

How did we get here?

**Contentious ROW issues**

Concerns with loss of trees in path construction

**Safety rail/fence required due to side slopes → How will we move snow and sweep sand/gravel?**



# M&O Requested This:



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# Designer Proposed This:



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# Do You Want it to Last?



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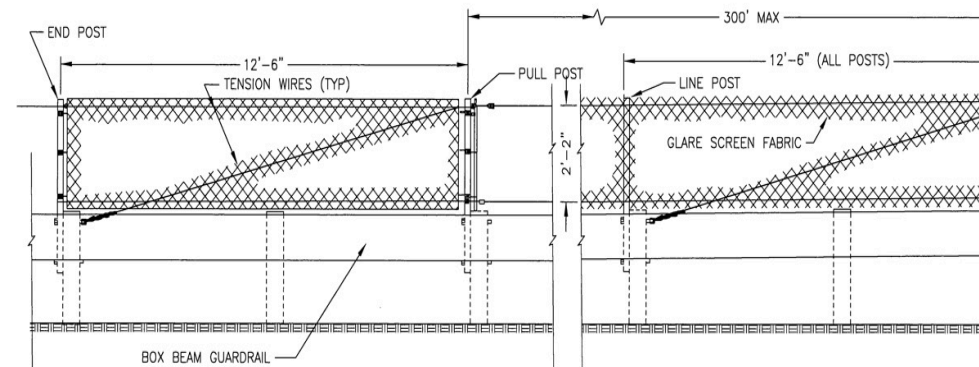
**But We're on the Same Team!**



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# Compromise: Privacy and Snow Removal Accommodated





# Wrap Up

Know your capital project staff and develop relationships  
Be on the watch for problem features common to  
projects and get involved in reviews and site visits  
Use data to educate and advocate  
Work to compromise and adapt

**Share Your Story!**



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# Questions?



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