



MEMORANDUM

TO: Rob Comstock
FROM: Anna Ferntheil, E.I. through Brad Melocik, P.E.
DATE: November 5, 2018
PROJECT: City of Valdez Pavement Management Plan 2018

Attachments: Valdez Area Map, Figures 1 through 3, Table 1

Scope of Work

DOWL submitted a proposal to perform a pavement survey for the City of Valdez on July 25, 2018. The proposal was accepted and the Notice to Proceed was issued August 6, 2018. The pavement survey included all city-owned paved roads, see the attached overview sheet, Valdez Area Road Map. The list of roads to be rated for the survey was submitted to the Public Works Director and approved prior to fieldwork.

The field work was performed between September 10 and 13, 2018. An engineer from DOWL and a representative from the City of Valdez Field Maintenance Department performed the pavement survey by walking the selected road and assigning each road segment a rating based off the PASER rating system. Most roads were short enough to be assigned one rating. Roads that were longer or had distinct differences were divided into sections that were rated separately.

The results of the survey are presented both graphically and in table format. The maps, attached as overview and figures 1 through 3, provide a quick visual reference for identifying general road ratings. Table 1 is attached and provides each assigned rating as well as detailed information regarding the specific distresses contributing to the rating and any drainage issues noted during the survey.

A GIS model of each road segment and its associated rating was created. It can be submitted to the Valdez GIS section upon request.

PASER Rating System

The PASER system includes recommended actions based off the rating system, summarized below:

PASER Rating	Recommended Treatment
10-8	No treatment required
7	Seal Cracks
6	Seal Cracks and/or consider sealcoat
5-4	Sealcoat or overlay
3	Mill and Repave
2-1	Reconstruct

Roads are only rated a 10 when they are brand new or recently fully reconstructed. Roads that are a few years old that show no distress or roads that have been recently overlaid will be rated a 9. Roads rated an 8 may have very small cracks starting to form but are in overall great condition. These roads do not require any immediate action.

It is recommended that roads rated 7 that have not been crack sealed in the last 2 years be sealed as soon as possible to prevent further deterioration. Sealing cracks before they ravel will keep water from permeating into the subgrade which tends to accelerate the rate at which a road deteriorates. Maintaining the crack seals on a road rated a 7 can significantly increase the service life of the road.

Roads rated 6 through 4 typically require a sealcoat or thin overlay. Typically, these roads are cracked to the point that crack sealing is no longer practical. The life of these roads can typically be prolonged with a surface treatment that will seal the entirety of these cracks. Roads rated a 4 may have mild rutting in addition to cracking-these roads will require a thin overlay to repair. Your preferred emulsion provider can provide guidance on the appropriate products for your specific roads.

Roads rated 3 should be considered for a mill and overlay. The pavement of these roads has reached the end of its useable life; however, the base course and subgrade may still be sound. These roads can typically be milled and overlaid, avoiding the costs and time required for a full reconstruction.

Roads rated 2 or 1 should be scheduled for a full reconstruction as soon as possible. Typically, the pavement of these roads is extremely cracked and may be missing all together in some cases. These roads tend to have extensive patching. Roads rated a 2 tend to require some work to the base course and possible subgrade during the reconstruction. Roads rated a 1 tend to require a full depth reconstruction. The extent of the reconstruction will depend on the condition of the subgrade.

In general, this report identifies distresses as minor, moderate, or severe which are defined below:

- Distresses noted as “minor” are occur occasionally on a road section. This may include one or two isolated areas of cracking or raveling not seen on the rest of the road section. Cracks are typically sealed or less than ½ inch open and widely spaced. Raveling is just beginning and not easily discernable.
- Distresses noted as “moderate” are noted throughout the road section but not at a high frequency. This may include surface raveling and cracking spaced throughout the road section. Cracks may or may not be sealed and may be open ½ inch or more. Cracks may be beginning to ravel. Small patches of alligator or block cracking may be forming in isolated areas. Surface raveling is easily noticed.
- Distresses noted as “severe” are typically prevalent throughout the road section. Cracks are typically open more than 1 inch and are not sealed. Many cracks are raveling. Cracks are spaced close together. Alligator and block cracking may be present over 50% of the surface or more. Raveling is noticeable and covers over 50% of the surface.

Discussion

The PASER data provided in the attached table only assigns a rating and briefly lists the distresses associated with the rating. This section will address areas that may have additional factors contributing to the pavement distresses that may not be fully described by the ratings.

Robe River Subdivision (Figure 3; Table 1, Page 10 & 11)

In general, the pavement in this subdivision is in poor condition. While the ratings reflect this, a significant cause of the damage appears to be due to unsuitable drainage and subgrade failure. Common issues in this area include settling utility trenches, failing shoulders, extensive patching, and severe alligator cracking.

In many areas, the ditches that were constructed when the subdivision was put in have been filled in with soil. Additionally, many culvert inlets and outlets appeared to be buried or blocked. The standing water in this area caused by this inadequate drainage can contribute to pavement distress as it seeps into the road subgrade causing frost damage as the temperatures change. The standing water may also be weakening the subgrade and contributing to the shoulder failures.

Utility trenches were cut into the road after construction. Material and methods used to backfill the trenches likely varied from the original subgrade and may be due to compaction issues, a difference in material, or something else. Regardless of the cause, a long-term solution involves replacing the subgrade with material of uniform properties and compaction.

Some of these roads are rated in the 4 to 6 range. However, for satisfactory long-term service, the drainage and subgrade issues need to be addressed.

Hanagita (Figure 1; Table 1, Page 1)

While the new section of Hanagita outside the high school is a new road surface, the pavement matrix is highly segregated. Segregated pavement allows water to enter the pavement and subgrade and can lead to a shortened service life of the road. A seal coat or similar surface treatment is recommended in this section. An emulsion provider should be consulted to determine what product best meets the needs of this road section

Intersections & Isolated Distresses

In some cases, the roads are in overall good condition with isolated areas of severely distressed pavement at intersections or at specific locations. In these cases, the PASER number assigned to the road looks at the road as a whole and may not reflect the severely damaged area. In these cases, ride quality and road longevity can be improved by a smaller scale project to fix the affected area while maintaining less intensive measures to preserve the rest of the road. The following list calls attention to some severely damaged areas but may not include all locations that would benefit from a small-scale project to patch the area.

- Intersection of Clark Street and West Pioneer Drive (Figure 1)
- The end of the Shoup Lane cul-de-sac (Figure 1)
- Intersection of W. Lowe Street and Pacific Avenue (Figure 1)
- Intersection of Mineral Creek Road and Mineral Creek Drive (Figure 1)
- Intersection of Fairbanks Drive and Tatitlek Ave (Figure 1)
- Intersection of Fairbanks Drive and Chenega Ave (Figure 1)

- Intersection of Chitna Ave and Kobuk Drive (Figure 1)
- Intersection of Airport Road and Salcha Way (Figure 2)
- Intersection of Salcha Way and Atigun Dr (Figure 2)
- Intersection of Robe Lane and Raven Drive (Figure 3)

Rutting

Several roads were rated a 4 despite showing minor cracking. The PASER system rates roads that have ruts up to ½ inch as a 4. Rutting is a complex distress that can have many underlying causes making the long-term solution unique to each situation. Rutting on a higher speed road can be a public safety issue. Ruts themselves can catch unsuspecting drivers off-guard, leading to accidents. They can also hold water during rain events that can lead to hydroplaning. From a pavement preservation standpoint, rutting and any cracking on these roads can be addressed with a thin overlay if addressed within the next few years.

Some roads that were in otherwise good condition but showed rutting include the Campground Road and sections of Meals Ave.

Drainage and Concrete

While drainage considerations are not part of the PASER rating system, adequate drainage is essential to the longevity of a road. This survey also includes notes on specific drainage issues that have either been noted by maintenance crews or were noted during the field survey. Poor drainage can quickly lead to distress in pavement and subgrade problems.

Overall, the formed curb and gutter through the city is functionally adequate. However, the years of damage from plows and wear and tear has begun to show. Streets in the Mineral Creek Subdivision show an exceptional amount of plow damage. Additionally, some of the curb and gutter storm drains are not sealed well at the surface. Water is able to flow under the pavement and concrete and into the soil. This can eventually undermine the entire pavement structure.

It is recommended that concrete curb and gutter be replaced as roads are reconstructed or milled and overlaid.

Additionally, maintenance personnel mentioned specific problem areas as listed below:

- The storm drain on Lowe from Hazlet to Mendeltna is shallow and freezes during the winter. (Figure 1)
- There is a French drain installed on Mineral Creek that does not connect to the storm drain system. The size of the French drain is inadequate to hold the amount of water it collects. (Figure 1)
- Water pools on the north end of Shoup. This pooling has caused significant pavement damage. (Figure 1)

The freezing and thawing of water can lead to significant problems for pavement. It is recommended that drainage is improved in these problem areas.

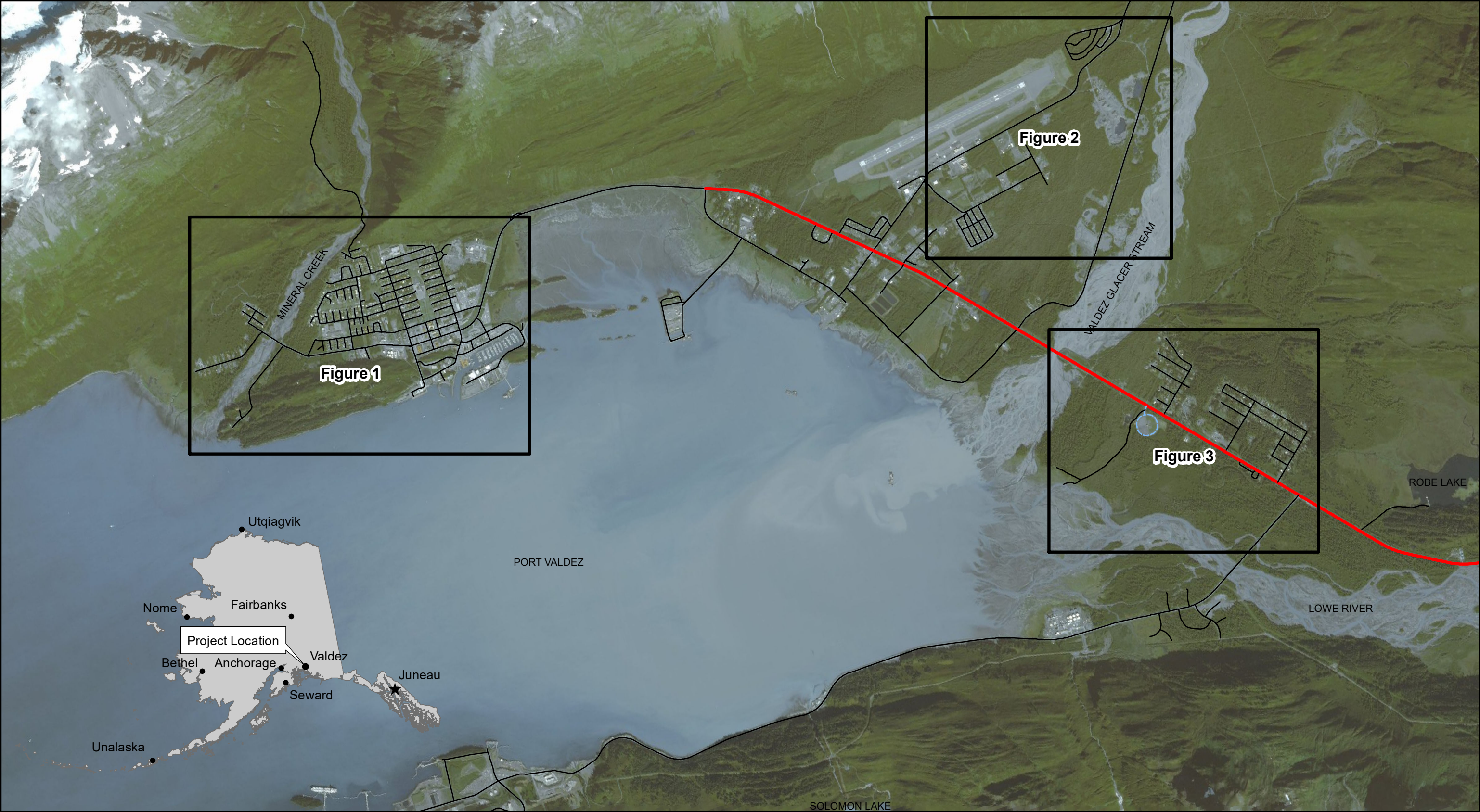
Limitations

While the PASER rating system is the industry standard, there are some limitations to its application. The ratings are subject to human bias which can be reduced through training, a strict adherence to the rating scale, and cross-checking ratings with other personnel performing the survey. Additionally, pavement failures can present in a complex way; they do not always follow a typical progression that the PASER system assumes. This can cause difficulty in determining the proper rating for a road based off the criteria. For example, if two roads are rated the same, they may not appear to have the same amount of damage; one road rated a 4 may have minimal cracking and deep rutting while another road rated the same may have significant cracking and not rutting.

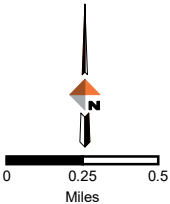
Additionally, the PASER system only addresses pavement failures, not ride quality. These ratings do not reflect ride quality or identify locations prone to seasonal movement due to poor subgrade conditions. Typically, the public will become aware of problems with the road when it starts to affect the ride quality.

While road sections were divided into small units, the rating assigned to a road may be an average of the overall conditions. A road with widely spaced transverse cracks with several sections of severe alligator cracking does not fall into any PASER category well. Specific and isolated failures and distresses may not be indicated in the rating.

The limitations listed above were minimized during this survey by having two people rate each road and compare their ratings, taking notes to support each rating, dividing each road into appropriate sections, and providing additional information not covered by PASER ratings in this memorandum. Additional information includes drainage notes, maintenance notes, and any rideability concerns not covered by the ratings.



- Paved Road
- Highway
- - - Unpaved Road



Valdez Area Road Map

Valdez Pavement Management Plan



Date: October 12, 2018

Overview







Street Name	Segment	Rating	Notes	Drainage Notes
Mineral Creek Subdivision				
Alatna	Meals to End	5	Minor ravelling and transverse cracking on east end. Cracks open >5" with no seal, moderate to severe ravelling on west end	Curb and Gutter. South storm drain undermined- needs repair
Bremner	Meals to End	5	Isolated alligator cracking on east side. Unsealed ravelling transverse cracks open to 6"; longitudinal cracking visible in areas	Curb and Gutter. Concrete is jacking around storm drains and needs regraded.
Chena	Meals to End	6	Transverse and longitudinal cracking ravelling in places. Minor surface ravelling	Curb and Gutter. Concrete is jacking around storm drains and needs regraded.
Dadina	Meals to End	5	Severe surface ravelling and repaired ravelling transverse cracks on west end. Transverse cracking spaced >40'	Curb and Gutter
Eklutna	Meals to End	6	Transverse cracks spaced >40' spacing; isolated sealed longitudinal cracks. Some cracks ravelling. Slight surface ravelling	Curb and Gutter
Foraker	Meals to End	7	Sealed transverse cracking; ravelling in some areas (some ravelled areas patched). Isolated minor surface ravelling	Curb and Gutter
Gulkana	Meals to End	6	Sealed transverse and longitudinal cracking. Moderate ravelling. West end in worse condition.	Curb and Gutter
Hanagita Street (1/4)	Meals to Hazlet	8	Isolated sealed transverse cracks. One patched area. New in 2006	Curb and Gutter
Iditarod	Hazlet to End	8	Sealed transverse cracks. Minor surface ravelling	Curb and Gutter. Concrete jacking around east drain.
Jago	Hazlet to End	8	Sealed transverse cracks. Minor surface ravelling	Curb and Gutter
Klutina	Hazlet to End	8	Sealed transverse cracks. Minor surface ravelling	Curb and Gutter
Lowe	Hazlet to Mendeltna	6	West end-sealed transverse and longitudinal cracks. East end- severely ravelling cracks	Curb and Gutter

Street Name	Segment	Rating	Notes	Drainage Notes
Mendeltna	Hazlet to Lowe	8	Sealed transverse cracks. Minor surface ravelling	Curb and Gutter
Lowe to Mendeltna Connector	Lowe to Mendeltna	8	Isolated transverse cracking open < 1/4". No surface ravelling	Curb and Gutter east side. No ditch on west.
Nabesna	Hazlet to End	8	Sealed transverse cracks. Minor surface ravelling	Curb and Gutter
Oumalik	Hazlet to End	8	Sealed transverse cracks. Minor surface ravelling	Curb and Gutter
Robe River	Meals to High School	5	Extensive patching, extensive surface ravelling, beginning of block and alligator cracking in some locations. Sealed transverse cracks.	Curb and Gutter
Robe River	High School to Hazlet	8	Minor surface ravelling and cracking. New in 2014.	Curb and Gutter. Storm drains in front of school need to be repaired. Asphalt is peeling away
Pioneer (1/2)	Meals to Hazlet	6	Some sealed longitudinal and transverse cracks. Isolated patched areas	Curb and Gutter
East Pioneer	Egan to Meals	9	No Cracks. Fully reconstructed in 2016.	Curb and Gutter
Fairbanks (1/3)	Hazlet to Tatitlek	6	Patched longitudinal and transverse cracking. Transverse cracking spaced >40'. Isolated severe surface ravelling and potholes.	Curb and Gutter
Fairbanks (2/3)	Tatitlek to Chenega	6	Patched longitudinal and transverse cracking. Transverse cracking spaced >40'. Isolated severe ravelling and potholes.	Curb and Gutter
Fairbanks (3/3)	Chenega to Meals	7	Patched transverse cracks. Isolated patched longitudinal cracks. Minor surface ravelling	Curb and Gutter
Chenega	Pioneer to Egan Dr	6	Moderate surface ravelling in many locations. Transverse cracks sealed, spaced >40'	Curb and Gutter

Street Name	Segment	Rating	Notes	Drainage Notes
Tatitlek	Pioneer to Galena	7	Sealed transverse cracking. Isolated severe surface ravelling	Curb and Gutter
Galena	Hazlet to Meals	6	Isolated ravelling longitudinal and transverse cracking. Cracks sealed. Some patched areas.	Curb and Gutter
Wyatt Way	Fidalgo to End	7	Isolated sealed longitudinal and transverse cracking. Isolated patched areas	No curb and gutter or ditches. Slopes to the west.
Clifton	Hazlet to Meals	4	Alligator cracking and severe surface ravelling. Ravelling sealed transverse cracks.	Curb and Gutter
Fidalgo	Meals to End	8	Isolated sealed transverse and longitudinal cracks.	Curb and Gutter. Low spots that hold water along gutter
Meals (1/4)	Robe River to Dadina	4	1/2" Ruts. Isolated ravelled longitudinal and transverse cracks. >40' spacing for transverse cracks.	Curb and Gutter
Meals (2/4)	Dadina to Pioneer	4	1/2" ruts. Isolated ravelled transverse cracks. Longitudinal cracks patched, some with potholes emerging through patch	Curb and Gutter
Meals (3/4)	Pioneer to Egan	3	Alligator cracking over approx. 25% of surface. Many patched areas. Ruts.	Curb and Gutter. Low spots that hold water along gutter
Meals (4/4)	Egan to Fidalgo	5	North end- severe surface ravelling with sealed transverse and longitudinal cracking. South end shows minor longitudinal and transverse cracking	Curb and Gutter
Porcupine	Robe to End	7	Isolated longitudinal and transverse cracking. Isolated patches	No curb and gutter or ditch
East Bremner	Meals to End	7	Isolated transverse cracking. One severely ravelled area on east end	No curb and gutter. Drainage overall adequate.
East Chena	Meals to End	6	Minor ravelling. Some longitudinal and transverse cracking	No curb and gutter or ditch

Street Name	Segment	Rating	Notes	Drainage Notes
East Dadina	Meals to End	4	Block cracking over approximately 50% of surface. Isolated alligator cracking.	Curb and Gutter on north side. South side could be improved
East Hanagita Street	Meals to Hospital Entrance	2	Severe alligator cracking, patched potholes, large patches, severe ravelling	Drainage drains water to road. No ditches.
Hospital Drive	Meals to End	7	Some distress on north end. Several patches. Minor cracking.	No curb and gutter or ditches.

Harbor Subdivision				
Kobuk	Meals to Chitina	8	Sealed transverse cracks spaced >40'. Isolated sealed longitudinal cracks.	Curb and Gutter
East Kobuk	Chitina to S Harbor	2	Extensive alligator cracking, patched longitudinal cracking, many repaired potholes, extensive patching	Ditch on south side of road; adequate drainage
Chitina (1/2)	Egan to Kobuk	5	Transverse cracks >3" wide and isolated longitudinal cracks; no seal on cracks. Patched areas, isolated areas of severe surface ravelling.	Curb and Gutter
Chitina (2/2)	Kobuk to N Harbor	4	1/2" ruts, longitudinal cracks in wheel path. Excessive patching, mild surface raveling.	Curb and Gutter
Wrangell	Kobuk to N Harbor	8	Unsealed isolated longitudinal and transverse cracks <1/4" open.	Curb and Gutter
N Harbor (1/2)	Meals to Chitna	7	Isolated transverse and longitudinal cracks up to 2" wide-no seal; isolated surface ravelling.	Curb and Gutter
N Harbor (2/2)	Chitna to End	8	Isolated transverse cracks- no seal.	No curb and gutter-adequate ditching and drainage
S Harbor	Kobuk to End	3	Extensive alligator cracking, ravelling longitudinal and transverse cracks up to 3" wide, no seal.	Curb and gutter on north side of road, ditch on south side; adequate drainage

Street Name	Segment	Rating	Notes	Drainage Notes
Black Gold Subdivision #1				
Copper (1/2)	W Klutina to Woodside	8	Sealed transverse cracks, spaced >40'	Curb and Gutter
Copper 2/2	Woodside to Hangita	8	Sealed transverse cracks, spaced >40' , isolated patches	Curb and Gutter
W Klutina (3/4)	Copper to Clark	10	New 2018	Curb and Gutter
W Klutina (4/4)	Clark to Cottonwood	10	New 2018	Curb and Gutter
S Moraine	Klutina to End	8	Sealed transverse cracks, spaced >40'	Curb and Gutter
S Snowtree	Klutina to End	8	Sealed transverse cracks, spaced >40'	Curb and Gutter
S Waterfall	Klutina to End	8	Sealed transverse cracks, spaced >40'	Curb and Gutter
S Glacier	Klutina to End	8	Sealed transverse cracks, spaced >40'	Curb and Gutter
S Whirlway	Klutina to End	8	Sealed transverse cracks, spaced >40'	Curb and Gutter
Coho	Cottonwood to End	6	Transverse and longitudinal cracks open up to 1/4"; No seal. Isolated block cracking. Patches failing	Curb and Gutter; some low spots need regrading
Cottonwood (1/2)	W Klutina to N Glacier	8	Transverse cracking; no seal; isolated minor surface ravelling	Curb and Gutter
Cottonwood (2/2)	N Glacier to Copper	5	Minor overlay delamination in many places; longitudinal and transverse cracking; isolated minor ravelling; patches	Curb and Gutter-some areas show excessive heaving in winter

Street Name	Segment	Rating	Notes	Drainage Notes
N Glacier	Cottonwood to End	5	Ravelling transverse crack, failing longitudinal cracking, block cracking, isolated alligator cracking, patches	Curb and Gutter
N Waterfall	Cottonwood to End	5	Excessive longitudinal and transverse cracking, block cracking, isolated alligator cracking	Curb and Gutter
N Snowtree	Cottonwood to End	2	Extensive alligator cracking, block cracking, isolated minor surface ravelling, patches	Curb and Gutter
N Moraine	Cottonwood to End	3	Isolated alligator cracking, extensive block cracking, Ravelling longitudinal and transverse cracks; patches	Curb and Gutter
Hanagita (2/4)	Copper to End	2	Extensive alligator cracking; failed longitudinal joint, ravelling transverse joints.	Curb and Gutter

Black Gold Subdivision #2				
W Klutina (1/4)	Hazlet to Pacific	10	New 2018	Curb and Gutter
W Klutina (2/4)	Pacific to Copper	10	New 2018	Curb and Gutter
Pacific	Klutina to End	5	Moderate surface ravelling, longitudinal joints-no seal, isolated block cracking, isolated alligator cracking; patching	Curb and Gutter
W Lowe	Hazlet to End	4	Transverse cracks, longitudinal cracks-no seal. Alligator cracking, some potholes, patching	Curb and Gutter
W Mendeltna	Hazlet to Pacific	5	Longitudinal and transverse cracks to 3" wide-not sealed. Isolated lock and alligator cracking, occasional patch, mild surface ravelling	Curb and Gutter
W Nabesna	Hazlet to End	5	Ravelling transverse and longitudinal cracking, patched areas, mild ravelling. No seal	Curb and Gutter
W Oumalik	Hazlet to End	4	Severe surface ravelling, transverse cracks, longitudinal cracks, block cracking, isolated alligator cracking. No seal	Curb and Gutter

Street Name	Segment	Rating	Notes	Drainage Notes
Hanagita (3/4)	Hazlet to Mineral Creek	4	Isolated alligator cracking, ravelling transverse cracks-no seal; moderate surface ravelling, extensive patching.	Curb and Gutter
Hanagita (4/4)	Mineral Creek to Copper	4	Isolated alligator cracking, ravelling transverse cracking, patched ravelled cracks, isolated longitudinal cracks. No seal	Curb and Gutter
Woodside	Copper to End	7	Sealed transverse cracks; isolated moderate surface ravelling	Curb and Gutter

Mineral Creek Heights Subdivision				
Mineral Creek (1/2)	N of Hangita to End	7	Isolated severe surface ravelling and transverse cracking.	Curb and Gutter
Mineral Creek Pl	Mineral Creek to End	5	Block cracking 4 to 10' in size. Cracks 1/2" and sealed.	Curb and Gutter/French drain
Cliffside Ct	Mineral Creek to End	8	Isolated transverse cracks open <1/4"	Curb and Gutter
Ptarmigan	Hangita to End	5	Block cracking. Patches with new potholes forming. No seal.	Curb and Gutter

Tazlina Subdivision				
Valhalla	W Klultina to End	8	Good condition	Curb and Gutter
Chistochina	W Klultina to End	8	Isolated sealed longitudinal and transverse cracks	Curb and Gutter
Winter Park Subdivision				
W Pioneer (1/2)	Clark to Whalen	6	Sealed transverse and longitudinal cracks. Extensive patching and patched potholes	Curb and Gutter

Street Name	Segment	Rating	Notes	Drainage Notes
Birch	W Pioneer to End	8	Isolated transverse cracking <1/2"; not sealed	Curb and Gutter
Aspen	W Pioneer to End	5	Ravelling longitudinal cracking; transverse cracking; isolated alligator cracking. Minor surface ravelling	Curb and Gutter
Winter Park	W Pioneer to End	7	Transverse cracking, isolated longitudinal cracking-not sealed. One location with alligator cracking. Minor ravelling	Curb and Gutter
Harris	Egan to End	5	Block cracking, isolated alligator cracking, longitudinal cracking-no seal	Curb and Gutter
W Egan (1/4)	Hazlet to Clark	3	Ravelling transverse and longitudinal cracking, mild to moderate surface ravelling, extensive patching, 1/2" rutting	Curb and Gutter
W Egan (2/4)	Clark to Whalen	2	Alligator cracking, extensive patching, block cracking, ravelling transverse and failed longitudinal joints.	Curb and Gutter
Clark (1/2)	Pioneer to Klutina	9	Resurfaced in 2017	Curb and Gutter
Clark (2/2)	Pioneer to Egan	6	Sealed transverse and longitudinal cracks. Isolated severe alligator cracking and potholes on north end.	Curb and Gutter
Chilkat	West Pioneer to End	9	New construction 2017	Curb and Gutter
Keno	Chilkat to End	9	New construction 2017	Curb and Gutter

Mt Logan Subdivision				
Shoup	Pioneer to End	7	Sealed transverse cracking. Last 20 feet of road at end of cul-de-sac failed and needs replaced	Curb and Gutter
Wortmanns	Pioneer to End	8	Good condition	Curb and Gutter

Street Name	Segment	Rating	Notes	Drainage Notes
Tonsina	Pioneer to End	8	Isolated sealed transverse cracking. One heaved location on north end	Curb and Gutter
Resurrection Loop	Pioneer to Pioneer	8	Isolated sealed transverse and longitudinal cracks	Curb and Gutter
Pioneer (2/2)	Hazlet to Clark	4	Alligator cracking along south edge of road. Sealed longitudinal and transverse cracks. Many patched areas.	Curb and Gutter-drainage along south of road appears inadequate.

Cottonwood Subdivision				
Dewey Ct	Front to End	7	Longitudinal and transverse cracking-sealed	Curb and Gutter
Alaska Ct	Front to End	6	Longitudinal and transverse cracking, minor surface ravelling, block cracking beginning to show on south end of road	Curb and Gutter
Broadway Ct	Front to End	6	Longitudinal and transverse cracking, minor surface ravelling, block cracking beginning to show	Curb and Gutter
Kotsina Ct	Front to End	8	Good condition	Curb and Gutter
Front St	W Egan to Kotsina	6	Longitudinal and transverse cracking; north end is extensively patched and potholed with failed longitudinal joint.	Curb and Gutter
W Egan (3/4)	Whalen to Mineral Creek bridge	3	Alligator cracking, block cracking, extensive patching, ravelling longitudinal and transverse cracking	Curb and Gutter
W Egan (4/4)	Mineral Creek bridge to Front St	6	sealed longitudinal and transverse cracks; first signs of block cracking; minor ravelling	Curb and Gutter
Homestead Road	Egan to End	8	Isolated sealed longitudinal and transverse cracking. Isolated unsealed cracks <1/4" wide	Ditches-adequate; culverts need to be cleared
Blueberry Hill	Egan to hill	7	Sealed longitudinal and transverse cracking. Isolated ravelling transverse cracks.	Ditches-inadequate in isolated places possibly contributing to heaving

Street Name	Segment	Rating	Notes	Drainage Notes
Blueberry Hill	hill to end	8	Isolated sealed transverse cracks.	Ditches

Robe River Subdivision				
Dylan (1/2)	Richardson to Aurora	2	Extensive patching, ravelling longitudinal and transverse cracks, moderate to severe surface ravelling, longitudinal cracking in wheel path.	Ditches
Dylan (2/2)	Aurora to Falcon	3	Moderate to severe ravelling, extensive patching, longitudinal cracking in wheel path, block cracking	Ditches
Eagle (1/2)	Derk to Dylen	4	Minor surface ravelling, block cracking, longitudinal cracking in wheel path, isolated alligator cracking, isolated transverse cracking- no seal, utility crossing patches	Ditches-some filled & need regrading- some culverts blocked
Eagle (2/2)	Dylen to River	4	Isolated alligator and block cracking, longitudinal cracking in wheel path, longitudinal and transverse patching, isolated patches, utility crossing patches	Ditches-some filled & need regrading- some culverts blocked
Derk	Eagle to Falcon	6	Minor surface ravelling, longitudinal and transverse joints open <1/2", utility crossing patches, no seal on cracks	Ditches-some filled & need regrading- some culverts blocked
Falcon (1/2)	Derk to Dylen	4	Potholes forming, isolated alligator cracking, sinking utility crossing patches, ravelling longitudinal joint	Ditches-some filled & need regrading- some culverts blocked
Falcon (2/2)	Dylen to River	4	Longitudinal cracking at joint, isolated alligator cracking, shoulders cracking/failing, ravelling transverse cracks, isolated block cracking, isolated potholes, utility crossing patches	Ditches-some filled & need regrading- some culverts blocked
Raven	Robe to Eagle	5	Isolated alligator cracking, sealed longitudinal joints, isolated shoulders cracking, block cracking beginning to form	Ditches-some filled & need regrading- some culverts blocked
Corbin	Raven to River	5	Isolated block cracking, isolated alligator cracking, isolated shoulder cracking, longitudinal joint cracking	Ditches-some filled & need regrading- some culverts blocked
Robe	Raven to River	4	East shoulder cracking/failing, longitudinal and transverse cracking, isolated alligator cracking	Ditches-some filled & need regrading- some culverts blocked

Street Name	Segment	Rating	Notes	Drainage Notes
River (1/2)	Richardson to Corbin	1	Moderate to severe ravelling, unsealed longitudinal cracking, alligator cracking, patching, severe delamination of overlay	Ditches-some filled & need regrading- some culverts blocked
River (2/2)	Corbin to Falcon	8	Minor surface ravelling	Ditches-some filled & need regrading- some culverts blocked

Airport Subdivision				
Salcha	Airport to Atigun	7	Transverse cracks to 3". Patches and isolated alligator cracking on north end.	Ditches
Atigun Dr	Atigun to End of Pavement	5	Moderate surface ravelling, block cracking, longitudinal joints open, isolated potholes, transverse cracks to 1/2" open	Ditches
Glacier Campground Rd	Glacier Campground to End of Pvmt	4	Minimal cracking, Ruts over 1" deep	Ditches