



City of Homer

www.cityofhomer-ak.gov

491 East Pioneer Avenue
Homer, Alaska 99603

(p) 907-235-8121

(f) 907-235-3140

Memorandum

TO: Mayor Castner and Homer City Council
FROM: Rick Abboud, Interim City Manager
DATE: July 24, 2020
SUBJECT: City Manager's Report for July 27 City Council Meeting

SBERG Update

Enclosed please find a memo containing information provided by SBERG Program Manager Mastey regarding the program, applications, and grantees. In the interest of spending down the first distribution of Cares Act dollars to fund other City/community needs in response to COVID-19, there has been the suggestion (as incorporated in legislation before the body) to give administrative flexibility to apply other program and municipal expenses to the first distribution. Finance Director Walton has contacted the auditors at BDO to explore this possibility. Depending on their response, the City may have to pass another ordinance reappropriating the unspent funds of the first disbursement so that they may be used for other needs.

Cares Act Program Administrator Hired

Through Emergency Ordinance 20-41, Council authorized the use of Cares Act funding to hire a Cares Act Program Coordinator. I am pleased to welcome Sara Perman to the City to assist us in this effort. Sara has a background in resource development and public policy. She focuses on program development and administration, and applies her legislative background to her research. She has served as a grants administrator/community liaison for the Atwood Foundation and a legislative aide to representatives in the Alaska State Legislature. Among other duties, her main responsibilities for the City include: prepare grant applications and supporting documentation for grant programs by City Council; work with Finance to track and analyze grant programs and project budgets; and perform research, analysis, and prepares reports on City's CARES Act Program. All new grant programs established by Council will be under her purview and as these programs go online, additional staff support may be necessary to ensure efficient, timely response to the public and administrative management of paperwork and expense tracking.

FEMA Public Assistance Notice, Updated US Treasury CARES Act Documents

The City received notice that its Request for Public Assistance submitted for the COVID-19 Response federal disaster has been put on hold for 90 days. This is a result of Condition 2 outlined in the enclosed notice. As of now, the City has not claimed costs for reimbursement under FEMA. I have reattached the May 21, 2020 memo provided by Special Projects and Communications Coordinator Carroll, which discusses the FEMA Public Assistance opportunity and compares it to CARES. One suggestion for reimbursement under FEMA could be overtime expenditures from regular employees incurred as a result of the pandemic. I look forward to working with Council in discussing the use of both FEMA and CARES Act funding opportunities. As an aside, the US Treasury released an updated guidance document dated June 30, 2020 and updated FAQ document dated July 8, 2020 to provide more clarification in the usability of CARES Act dollars, which are enclosed for reference.

RAVN Update

According to the Los Angeles Business Journal, Float Shuttle, an LA-based air commuter service, was the successful bidder of most of RavnAir Alaska and Pen Air assets. The company intends to focus its efforts on freight and cargo in light of COVID-19 and will shift to commuter services once the pandemic eases. Their bid included “six planes, some terminal leases and two Federal Aviation Administration certificates” however the Homer Terminal lease was not picked up. Attorney Sleeper is following this issue closely and has advised staff to look out for a notice of rejection that would trigger some sort of claim which we can file for lost revenues.

Raising a Glass in Recognition of Excellent Performance for City’s Water System, PW Water Usage/Campground Stats

Our team at Public Works has done it again, this time taking the positive recognition received last year for the City’s Water System (Ursa Minor status) and upping it to the highest tier. I am pleased to announce the State Department of Environmental Conservation has awarded the City with Ursa Major status in Water System Excellence for 2019. As mentioned in the attached June 18th memo addressed to Superintendent Cook, “Your demonstrated expertise and dedication to safety and health is an excellent benefit to your community. Thank you for your ongoing efforts to provide safe drinking water to those served by your water system.” This recognition is definitely something to raise a glass of Homer tap water to.

Public Works has also provided water usage and campground stats for the month of June:

June Water Usage per Year (in million gallons)

2020	21.052
2019	23.378
2018	19.495
2017	19.633
2016	20.922

June Campground Statistics

	<u>2019</u>	<u>2020</u>	<u>Delta</u>
Visitors	4227	3425	-19%
Camping Events	2290	1746	-24%
Revenue	\$45,867	\$34,987	-24%

The above information is being presented in an effort to assess some of the different ways COVID may be impacting City operations.

Seawall Armor Rock Project on State Fiscal Year (SFY) 2021 Project Priority List, Corps Application for Permit

The City received noticed (enclosed) that the Seawall Armor Rock project has been included on the State Fiscal Year (SFY) 2021 Project Priority List for financing through the Alaska Drinking Water Fund. The State Revolving Fund Program is initiating the review process for the loan application submitted on June 15, 2020. This financing opportunity was authorized by Resolution 20-058, *Authorizing the Application for a ADEC/DWF Loan*. The loan would cover “placing armor rock in front of the existing deteriorating seawall to protect existing water and sewer mains from erosion” and the City has requested \$1,644,000 to complete this work on behalf of the property owners. Prior to public comment, ADEC ranked Homer’s project as number 9 out of 17 for second quarter funding on the state’s FY21 project priority list. If the City is approved for the loan, staff will review the terms and come back before Council for approval to enter into an agreement with the State if it’s in the best interest of the City. In conjunction with applying for the loan, the City has also submitted a permit application to the Army Corps of Engineers as their approval is necessary in order to complete this capital improvement project to “protect the toe of the existing Seawall from erosion, which would eliminate the potential for catastrophic failure, significantly reduce maintenance costs, and extend wall life.”

PFD Garnishments for Minor Offenses

Per IT Manager Poolos, the Department of Revenue, Permanent Fund Dividend Division (PFD) collected \$11,893 on the July 1st payments out of \$17,665 the City submitted for garnishment. It is unclear if the amount received on July 1st was a direct deposit with the potential for paper checks to be issued a couple weeks later. PFD has 4 more payments on the amended schedule, but there is no distinction about direct deposits vs paper checks.

All About Roads

The Public Works Department has produced the *City of Homer Road Assessment Report – Summer 2020 (enclosed)* in-house, modeled after something the City of Soldotna hired out for about \$200,000 in consultant services. Information from this report will guide work completed through the Small Works Road Repair Program. Public Works will be looking at poorly-rated roads to see what staff can do to improve them. When a particular road's rating has gone up, that will be an indication that progress has been made. Staff are now working on a trails version of this report.

Also enclosed is a creative, informational billing insert regarding rights-of-way clearing that was included in the Homer News, water/sewer billings, and is on the Public Works webpage as part of a public outreach effort to educate and inform the community of maintenance activities associated with the removal of vegetation located in rights-of-way. Notice for this work was published the beginning of June and staff developed this more illustrative insert to compliment that initial announcement. These outreach efforts align with the newly adopted code *HCC 11.36.040 Public Notice* adopted through Ord. 20-26.

City of Homer Wins Again: Homer Steps Up! 2020

For the 4th year in a row, the City of Homer team has won the large-team division of the Homer Steps Up! community walking competition. This annual event encourages us to work together with the common goal to literally keep moving forward. I'd like to thank HR Director Browning, South Peninsula Hospital, and all partnering organizations that organize this event.

Enclosures:

1. July Employee Anniversaries
2. July 24, 2020 Small Business Economic Relief Program (SBERG) Program Update -7/20/20 memo
3. June 18, 2020 State Public Assistance COVID-19 Response Follow-Up Memo
4. May 21, 2020 FEMA memo from Special Projects and Communications Coordinator Carroll
5. June 30, 2020 US Treasury Updated Guidance Document
6. July 8, 2020 US Treasury Updated FAQ Document
7. ADEC Ursa Major 2020 Recognition
8. July 22, 2020 State DEC memo concerning Alaska Drinking Water Fund
9. City of Homer Road Assessment Report – Summer 2020
10. ROW Billing Insert
11. Special Covid-19 Edition: Small Business Relief Information provided by Rep. Vance



City of Homer

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Office of the City Manager

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Memorandum

TO: MAYOR CASTNER AND CITY COUNCIL
FROM: Andrea Browning
DATE: July 27, 2020
SUBJECT: July Employee Anniversaries

I would like to take the time to thank the following employees for the dedication, commitment and service they have provided the City and taxpayers of Homer over the years.

John Wythe,	Public Works	29	Years
Lori Sorrows,	Finance	21	Years
Dan Olsen,	Public Works	19	Years
Julie Engebretsen,	Planning	18	Years
Rick Abboud,	Planning	12	Years
Dave Welty,	Public Works	12	Years
David Bernard,	Library	9	Years
Jason Hoffman,	Public Works	5	Years
Clinton Scritchfield,	Police	2	Years
Jason Hanenberger	Public Works	1	Year
Mark Kirko	Fire	1	Year



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Memorandum

TO: Mayor Castner and Homer City Council
FROM: Rick Abboud, Interim City Manager
DATE: July 24, 2020
SUBJECT: Small Business Economic Relief Program (SBERG) Program Update -7/20/20

Information provided by Jody Mastey, CARES Act Local Implementation Manager.

As of July 20, 2020:

211 TOTAL APPLICATIONS

161 online

50 paper

126 TOTAL APPROVED APPLICATIONS - \$378,000 TOTAL GRANTS AWARDED

07.06.20 68 applications have been approved and turned into the Finance Department

07.13.20 58 applications have been approved and turned into the Finance Department

07.20.20 38 applications have been approved and turned into the Finance Department

17 APPLICATIONS PENDING

Reasons pending: Not on KPB list of registered businesses (3); Charter Boat Business - Claims slip for Physical address on Application and Business License records business outside City Limits (2); W9's need current date, signed or provided with application (3); General Questions on Application (3); Not on KPB list of registered businesses but provided filing with "Request to pre-file No Sales tax" box checked (2); Business License records business outside City Limits (4)

17 APPLICATIONS DENIED

Reasons denied: Reports non-taxable sales to KPB (5); Not on KPB registered business lists (3); New business (1); Business part of larger organization outside City limits (1); Outside City limits (7)

11 APPLICATIONS VOIDED

Voids due to duplicate application or incorrect information on application

CHALLENGES

- 1) Business who physically have a businesses in Homer but are part of an LLC or Corporation who records their physical address outside of city limits and the Homer businesses are not licensed independently.
- 2) Charter boat businesses who list their slip number as their physical address in Homer but business license records physical address outside city limits. If I approve applications for this industry, how do I apply this same model to adventure tourism. I have had conversions with business owners who use the

harbor as a spring board for their client's and adventure in the bay, collect city sales but are licensed outside of city limits.

COMPLAINTS

- 1) Medical Industry - Business are not eligible. They do not collect sales tax
- 2) Sub contractors - Business are not eligible. They do not collect sales tax
- 3) Fishing charter businesses who use a larger charter company to collect and record sales tax. Businesses do record taxable sales.

BUSINESS WHO ARE NOT ON THE KENAI PENINSULA BOROUGH PROVIDED LIST

It is Ms. Mastey's understanding that businesses who are actively working with the Borough regarding sales tax collection should be eligible for the SBERG Grant. She currently does not have a method of verifying this information. It would be helpful to have a contact person with the KPB sales tax division to verify provided sales tax reports from businesses or authorization to accept and approve any business who provides documentation.



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

**Department of Military and
Veterans Affairs**

Division of Homeland Security and
Emergency Management

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June 18, 2020

Elizabeth Walton, Finance Director
City of Homer
491 East Pioneer Avenue
Homer, AK 99603

Re: Public Assistance COVID-19 Response Follow up
Disaster: DR-4533-AK, COVID-19 Response
Applicant Name: City of Homer

Certified Mail: 9171 9690 0935 0248 4418 91

Ms. Walton:

The Division of Homeland Security and Emergency Management (DHS&EM) is sending you this certified letter because either:

- 1) We have made several unsuccessful attempts to contact the City of Homer in order to follow up on the Request for Public Assistance (RPA) submitted for the COVID-19 Response federal disaster;

OR

- 2) We have been in contact with you but the City of Homer **to date** has no known costs to claim under the Federal Emergency Management Agency (FEMA) Public Assistance program

In order to reduce unnecessary contact efforts on our part and yours, we will set aside your RPA for 90 days. It will be the responsibility of the City of Homer to contact DHS&EM to request any further assistance under the FEMA Public Assistance program. If you have expenses for the COVID-19 disaster within the 90-day period, contact me at the number below for further instructions.

Ms. Walton
June 18, 2020
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If you have any questions, please contact Jonathan Zeppa your assigned Division Representative, at (907) 428-7052 or by email at jonathan.zeppa@alaska.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jonathan Zeppa', with a large loop at the start and a long horizontal stroke extending to the right.

Jonathan Zeppa
State Public Assistance Branch Chief



City of Homer

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Administration

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Memorandum

TO: Mayor Castner and Homer City Council
THROUGH: Marvin Yoder, Interim City Manager
FROM: Jenny Carroll, Special Projects and Communications Coordinator
DATE: May 21, 2020
SUBJECT: FEMA DR-4533 Public Assistance Grant Training Information

The City of Homer registered and is eligible for a Public Assistance (PA) DR-4533 grant. Since March, the City has completed FEMA documentation in anticipation of this grant opportunity. For example, FEMA ICS 213 forms have been filled out to purchase needed resources while FEMA ICS 214 Activity Log forms have been filled out by staff documenting COVID-19 related hours. I attended a teleconference training on FEMA Public Assistance grants under the COVID-19 Presidential Disaster Declaration DR-4533 on May 15, 2020. The training was led by State Public Assistance Officer Duane Ruch and gave an overview of how to apply for funding.

Below is a brief summary of the PA program to help you as you develop a funding strategy to recoup COVID-19 costs. "Applicant" is synonymous with "City of Homer."

FEMA PA Grant:

Reimburses Emergency Protective Measures costs incurred from January 20, 2020 to end of declared disaster. FEMA covers 75% of reimbursable costs; State covers 25% of reimbursable costs for eligible activities under Category B and Z; donated resources count toward 25% State cost share. This means municipalities will be reimbursed 100% for all FEMA **approved/eligible** expenses and do not have to provide a match.

Activities Eligible Under Category B (Emergency Protective Measures (EMP)) eliminate or lessen immediate threats to lives, public health, or safety. Required as a result of COVID-19, located within the designated area and the legal responsibility of an eligible Applicant.

Examples: EOC-related costs, Medical care and transport, Supplies and commodities, including medical supplies, PPE, and other equipment, Dissemination of information to the public, Security, law enforcement, barricades and fencing, Temporary facilities and Evacuation and sheltering. FEMA can cover non-Congregate Sheltering costs (for first responders, health care workers, homeless families with 1 member who tested positive, and at risk homeless individuals who require isolation) under the Statewide approval from April 17-May 17. Jurisdictions must inform DHS&EM if sheltering needs will extend past May 17th for additional FEMA approval.

Activities Eligible Under Category Z (PA Management): Up to 5% of applicant's total award is available for reimbursing applicant's personnel costs resulting from administering the PA grant, including programmatic meetings, creating PA claims, preparing correspondence, reviewing PWs, collecting copying, filing, or submitting documents to support a claim, and training.

Ineligible Costs: Costs associated with setting up for remote telework, loss of revenue, increased operating costs of a facility or providing a service due to or after a disaster, regular staff time associated with COVID-19 unless that position was reassigned to a different position to address COVID-19, and surveys for damage.

FEMA will also evaluate how materials and services were procured and can deny or not fully cover an expense if proper procurement procedures were not followed.

Application process:

- Applicant identifies EMPs, develops project worksheets, manages projects and provides documentation to justify costs.
- State manages the program, provides technical assistance, approves application and audits project worksheets prior to payment receipt.
- FEMA determines eligibility for applicant, work, costs and ensures guidelines are met.

Two levels of Projects:

Small Projects: \$3,300 - \$131,000. Small project funding is based on estimated costs, if actual costs are not yet available. Payment is final, made on the basis of the initial approved amount, whether estimated or actual. No overrun adjustment. I believe Federal cost share is paid when the project worksheet is written and approved.

Large Projects: Over \$131,000. Final amount based on actual eligible costs. Can do over or under run adjustment.

Streamline method for large projects allows applicant to apply directly through FEMA grants portal. State reviews application to limit Federal requests for more information, which can cause time delays.

- Create project worksheets, base projected costs on costs incurred to date.
- Build out Category B projects that will be paid out over long period of time.

After an initial grant has been awarded and obligated, FEMA and the State will work with the Applicant to ensure state/federal laws are followed with all documentation and process requirements, and update project information as needed before the grant is closed. Applicants must retain records for three years after grant closeout in the event FEMA wants to audit the project. Below details close out process:

- Document the who, what, where, when, why and cost documentation (invoices, timesheets, billings, activity/equipment logs, etc.) State has developed Summary Forms to document costs. Applicant will have to get final costs and documentation in by 60 days after the end date of the emergency.
- Track progress of open projects on quarterly basis until Disaster is ended.
- Close out Category B projects.
- Audit of Category B projects, then close out Category Z.

FEMA rep does not know a lot about CARES Act, but gave the following comparison for helping develop a strategy for funding COVID-19 expenses:

CARES Act

Not sure of eligible activities or documentation requirements but likely simpler, more flexible than FEMA

Funding given up front

Funds not expended by Dec 30 deadline recouped by Feds

Covers Payroll costs associated with COVID-19

FEMA Public Assistance

In-depth documentation required
Better the documentation=maximum reimbursement

FEMA PA funding reimburses costs from Jan 20, 2020
Funding of Small grants is quickest method; Large grants more detailed and extend to end of COVID-19 disaster declaration

Reimbursables accrue over course of disaster event; payment takes a while

For regular employees, covers only Overtime with COVID-19 EPM, not regular time unless employee is reassigned (like PIOs who were reassigned to EOC from their regular positions).

I am available to answer questions, or find answers to questions you may have about whether to or how to move forward with FEMA PA funding as part of your strategy. I also have the various grant guidance forms and documentation forms in the event the City decides to move forward with the FEMA PA funding source.

Coronavirus Relief Fund
Guidance for State, Territorial, Local, and Tribal Governments
Updated June 30, 2020¹

The purpose of this document is to provide guidance to recipients of the funding available under section 601(a) of the Social Security Act, as added by section 5001 of the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”). The CARES Act established the Coronavirus Relief Fund (the “Fund”) and appropriated \$150 billion to the Fund. Under the CARES Act, the Fund is to be used to make payments for specified uses to States and certain local governments; the District of Columbia and U.S. Territories (consisting of the Commonwealth of Puerto Rico, the United States Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands); and Tribal governments.

The CARES Act provides that payments from the Fund may only be used to cover costs that—

1. are necessary expenditures incurred due to the public health emergency with respect to the Coronavirus Disease 2019 (COVID-19);
2. were not accounted for in the budget most recently approved as of March 27, 2020 (the date of enactment of the CARES Act) for the State or government; and
3. were incurred during the period that begins on March 1, 2020, and ends on December 30, 2020.²

The guidance that follows sets forth the Department of the Treasury’s interpretation of these limitations on the permissible use of Fund payments.

Necessary expenditures incurred due to the public health emergency

The requirement that expenditures be incurred “due to” the public health emergency means that expenditures must be used for actions taken to respond to the public health emergency. These may include expenditures incurred to allow the State, territorial, local, or Tribal government to respond directly to the emergency, such as by addressing medical or public health needs, as well as expenditures incurred to respond to second-order effects of the emergency, such as by providing economic support to those suffering from employment or business interruptions due to COVID-19-related business closures.

Funds may not be used to fill shortfalls in government revenue to cover expenditures that would not otherwise qualify under the statute. Although a broad range of uses is allowed, revenue replacement is not a permissible use of Fund payments.

The statute also specifies that expenditures using Fund payments must be “necessary.” The Department of the Treasury understands this term broadly to mean that the expenditure is reasonably necessary for its intended use in the reasonable judgment of the government officials responsible for spending Fund payments.

Costs not accounted for in the budget most recently approved as of March 27, 2020

The CARES Act also requires that payments be used only to cover costs that were not accounted for in the budget most recently approved as of March 27, 2020. A cost meets this requirement if either (a) the

¹ This version updates the guidance provided under “Costs incurred during the period that begins on March 1, 2020, and ends on December 30, 2020”.

² See Section 601(d) of the Social Security Act, as added by section 5001 of the CARES Act.

cost cannot lawfully be funded using a line item, allotment, or allocation within that budget *or* (b) the cost is for a substantially different use from any expected use of funds in such a line item, allotment, or allocation.

The “most recently approved” budget refers to the enacted budget for the relevant fiscal period for the particular government, without taking into account subsequent supplemental appropriations enacted or other budgetary adjustments made by that government in response to the COVID-19 public health emergency. A cost is not considered to have been accounted for in a budget merely because it could be met using a budgetary stabilization fund, rainy day fund, or similar reserve account.

Costs incurred during the period that begins on March 1, 2020, and ends on December 30, 2020

Finally, the CARES Act provides that payments from the Fund may only be used to cover costs that were incurred during the period that begins on March 1, 2020, and ends on December 30, 2020 (the “covered period”). Putting this requirement together with the other provisions discussed above, section 601(d) may be summarized as providing that a State, local, or tribal government may use payments from the Fund only to cover previously unbudgeted costs of necessary expenditures incurred due to the COVID-19 public health emergency during the covered period.

Initial guidance released on April 22, 2020, provided that the cost of an expenditure is incurred when the recipient has expended funds to cover the cost. Upon further consideration and informed by an understanding of State, local, and tribal government practices, Treasury is clarifying that for a cost to be considered to have been incurred, performance or delivery must occur during the covered period but payment of funds need not be made during that time (though it is generally expected that this will take place within 90 days of a cost being incurred). For instance, in the case of a lease of equipment or other property, irrespective of when payment occurs, the cost of a lease payment shall be considered to have been incurred for the period of the lease that is within the covered period, but not otherwise. Furthermore, in all cases it must be necessary that performance or delivery take place during the covered period. Thus the cost of a good or service received during the covered period will not be considered eligible under section 601(d) if there is no need for receipt until after the covered period has expired.

Goods delivered in the covered period need not be used during the covered period in all cases. For example, the cost of a good that must be delivered in December in order to be available for use in January could be covered using payments from the Fund. Additionally, the cost of goods purchased in bulk and delivered during the covered period may be covered using payments from the Fund if a portion of the goods is ordered for use in the covered period, the bulk purchase is consistent with the recipient’s usual procurement policies and practices, and it is impractical to track and record when the items were used. A recipient may use payments from the Fund to purchase a durable good that is to be used during the current period and in subsequent periods if the acquisition in the covered period was necessary due to the public health emergency.

Given that it is not always possible to estimate with precision when a good or service will be needed, the touchstone in assessing the determination of need for a good or service during the covered period will be reasonableness at the time delivery or performance was sought, *e.g.*, the time of entry into a procurement contract specifying a time for delivery. Similarly, in recognition of the likelihood of supply chain disruptions and increased demand for certain goods and services during the COVID-19 public health emergency, if a recipient enters into a contract requiring the delivery of goods or performance of services by December 30, 2020, the failure of a vendor to complete delivery or services by December 30, 2020, will not affect the ability of the recipient to use payments from the Fund to cover the cost of such goods or services if the delay is due to circumstances beyond the recipient’s control.

This guidance applies in a like manner to costs of subrecipients. Thus, a grant or loan, for example, provided by a recipient using payments from the Fund must be used by the subrecipient only to purchase (or reimburse a purchase of) goods or services for which receipt both is needed within the covered period and occurs within the covered period. The direct recipient of payments from the Fund is ultimately responsible for compliance with this limitation on use of payments from the Fund.

Nonexclusive examples of eligible expenditures

Eligible expenditures include, but are not limited to, payment for:

1. Medical expenses such as:
 - COVID-19-related expenses of public hospitals, clinics, and similar facilities.
 - Expenses of establishing temporary public medical facilities and other measures to increase COVID-19 treatment capacity, including related construction costs.
 - Costs of providing COVID-19 testing, including serological testing.
 - Emergency medical response expenses, including emergency medical transportation, related to COVID-19.
 - Expenses for establishing and operating public telemedicine capabilities for COVID-19-related treatment.
2. Public health expenses such as:
 - Expenses for communication and enforcement by State, territorial, local, and Tribal governments of public health orders related to COVID-19.
 - Expenses for acquisition and distribution of medical and protective supplies, including sanitizing products and personal protective equipment, for medical personnel, police officers, social workers, child protection services, and child welfare officers, direct service providers for older adults and individuals with disabilities in community settings, and other public health or safety workers in connection with the COVID-19 public health emergency.
 - Expenses for disinfection of public areas and other facilities, *e.g.*, nursing homes, in response to the COVID-19 public health emergency.
 - Expenses for technical assistance to local authorities or other entities on mitigation of COVID-19-related threats to public health and safety.
 - Expenses for public safety measures undertaken in response to COVID-19.
 - Expenses for quarantining individuals.
3. Payroll expenses for public safety, public health, health care, human services, and similar employees whose services are substantially dedicated to mitigating or responding to the COVID-19 public health emergency.
4. Expenses of actions to facilitate compliance with COVID-19-related public health measures, such as:
 - Expenses for food delivery to residents, including, for example, senior citizens and other vulnerable populations, to enable compliance with COVID-19 public health precautions.
 - Expenses to facilitate distance learning, including technological improvements, in connection with school closings to enable compliance with COVID-19 precautions.
 - Expenses to improve telework capabilities for public employees to enable compliance with COVID-19 public health precautions.

- Expenses of providing paid sick and paid family and medical leave to public employees to enable compliance with COVID-19 public health precautions.
 - COVID-19-related expenses of maintaining state prisons and county jails, including as relates to sanitation and improvement of social distancing measures, to enable compliance with COVID-19 public health precautions.
 - Expenses for care for homeless populations provided to mitigate COVID-19 effects and enable compliance with COVID-19 public health precautions.
5. Expenses associated with the provision of economic support in connection with the COVID-19 public health emergency, such as:
 - Expenditures related to the provision of grants to small businesses to reimburse the costs of business interruption caused by required closures.
 - Expenditures related to a State, territorial, local, or Tribal government payroll support program.
 - Unemployment insurance costs related to the COVID-19 public health emergency if such costs will not be reimbursed by the federal government pursuant to the CARES Act or otherwise.
 6. Any other COVID-19-related expenses reasonably necessary to the function of government that satisfy the Fund’s eligibility criteria.

Nonexclusive examples of ineligible expenditures³

The following is a list of examples of costs that would *not* be eligible expenditures of payments from the Fund.

1. Expenses for the State share of Medicaid.⁴
2. Damages covered by insurance.
3. Payroll or benefits expenses for employees whose work duties are not substantially dedicated to mitigating or responding to the COVID-19 public health emergency.
4. Expenses that have been or will be reimbursed under any federal program, such as the reimbursement by the federal government pursuant to the CARES Act of contributions by States to State unemployment funds.
5. Reimbursement to donors for donated items or services.
6. Workforce bonuses other than hazard pay or overtime.
7. Severance pay.
8. Legal settlements.

³ In addition, pursuant to section 5001(b) of the CARES Act, payments from the Fund may not be expended for an elective abortion or on research in which a human embryo is destroyed, discarded, or knowingly subjected to risk of injury or death. The prohibition on payment for abortions does not apply to an abortion if the pregnancy is the result of an act of rape or incest; or in the case where a woman suffers from a physical disorder, physical injury, or physical illness, including a life-endangering physical condition caused by or arising from the pregnancy itself, that would, as certified by a physician, place the woman in danger of death unless an abortion is performed. Furthermore, no government which receives payments from the Fund may discriminate against a health care entity on the basis that the entity does not provide, pay for, provide coverage of, or refer for abortions.

⁴ See 42 C.F.R. § 433.51 and 45 C.F.R. § 75.306.

**Coronavirus Relief Fund
Frequently Asked Questions
Updated as of July 8, 2020**

The following answers to frequently asked questions supplement Treasury’s Coronavirus Relief Fund (“Fund”) Guidance for State, Territorial, Local, and Tribal Governments, dated April 22, 2020, (“Guidance”).¹ Amounts paid from the Fund are subject to the restrictions outlined in the Guidance and set forth in section 601(d) of the Social Security Act, as added by section 5001 of the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”).

Eligible Expenditures

Are governments required to submit proposed expenditures to Treasury for approval?

No. Governments are responsible for making determinations as to what expenditures are necessary due to the public health emergency with respect to COVID-19 and do not need to submit any proposed expenditures to Treasury.

The Guidance says that funding can be used to meet payroll expenses for public safety, public health, health care, human services, and similar employees whose services are substantially dedicated to mitigating or responding to the COVID-19 public health emergency. How does a government determine whether payroll expenses for a given employee satisfy the “substantially dedicated” condition?

The Fund is designed to provide ready funding to address unforeseen financial needs and risks created by the COVID-19 public health emergency. For this reason, and as a matter of administrative convenience in light of the emergency nature of this program, a State, territorial, local, or Tribal government may presume that payroll costs for public health and public safety employees are payments for services substantially dedicated to mitigating or responding to the COVID-19 public health emergency, unless the chief executive (or equivalent) of the relevant government determines that specific circumstances indicate otherwise.

The Guidance says that a cost was not accounted for in the most recently approved budget if the cost is for a substantially different use from any expected use of funds in such a line item, allotment, or allocation. What would qualify as a “substantially different use” for purposes of the Fund eligibility?

Costs incurred for a “substantially different use” include, but are not necessarily limited to, costs of personnel and services that were budgeted for in the most recently approved budget but which, due entirely to the COVID-19 public health emergency, have been diverted to substantially different functions. This would include, for example, the costs of redeploying corrections facility staff to enable compliance with COVID-19 public health precautions through work such as enhanced sanitation or enforcing social distancing measures; the costs of redeploying police to support management and enforcement of stay-at-home orders; or the costs of diverting educational support staff or faculty to develop online learning capabilities, such as through providing information technology support that is not part of the staff or faculty’s ordinary responsibilities.

Note that a public function does not become a “substantially different use” merely because it is provided from a different location or through a different manner. For example, although developing online instruction capabilities may be a substantially different use of funds, online instruction itself is not a substantially different use of public funds than classroom instruction.

¹ The Guidance is available at <https://home.treasury.gov/system/files/136/Coronavirus-Relief-Fund-Guidance-for-State-Territorial-Local-and-Tribal-Governments.pdf>.

May a State receiving a payment transfer funds to a local government?

Yes, provided that the transfer qualifies as a necessary expenditure incurred due to the public health emergency and meets the other criteria of section 601(d) of the Social Security Act. Such funds would be subject to recoupment by the Treasury Department if they have not been used in a manner consistent with section 601(d) of the Social Security Act.

May a unit of local government receiving a Fund payment transfer funds to another unit of government?

Yes. For example, a county may transfer funds to a city, town, or school district within the county and a county or city may transfer funds to its State, provided that the transfer qualifies as a necessary expenditure incurred due to the public health emergency and meets the other criteria of section 601(d) of the Social Security Act outlined in the Guidance. For example, a transfer from a county to a constituent city would not be permissible if the funds were intended to be used simply to fill shortfalls in government revenue to cover expenditures that would not otherwise qualify as an eligible expenditure.

Is a Fund payment recipient required to transfer funds to a smaller, constituent unit of government within its borders?

No. For example, a county recipient is not required to transfer funds to smaller cities within the county's borders.

Are recipients required to use other federal funds or seek reimbursement under other federal programs before using Fund payments to satisfy eligible expenses?

No. Recipients may use Fund payments for any expenses eligible under section 601(d) of the Social Security Act outlined in the Guidance. Fund payments are not required to be used as the source of funding of last resort. However, as noted below, recipients may not use payments from the Fund to cover expenditures for which they will receive reimbursement.

Are there prohibitions on combining a transaction supported with Fund payments with other CARES Act funding or COVID-19 relief Federal funding?

Recipients will need to consider the applicable restrictions and limitations of such other sources of funding. In addition, expenses that have been or will be reimbursed under any federal program, such as the reimbursement by the federal government pursuant to the CARES Act of contributions by States to State unemployment funds, are not eligible uses of Fund payments.

Are States permitted to use Fund payments to support state unemployment insurance funds generally?

To the extent that the costs incurred by a state unemployment insurance fund are incurred due to the COVID-19 public health emergency, a State may use Fund payments to make payments to its respective state unemployment insurance fund, separate and apart from such State's obligation to the unemployment insurance fund as an employer. This will permit States to use Fund payments to prevent expenses related to the public health emergency from causing their state unemployment insurance funds to become insolvent.

Are recipients permitted to use Fund payments to pay for unemployment insurance costs incurred by the recipient as an employer?

Yes, Fund payments may be used for unemployment insurance costs incurred by the recipient as an employer (for example, as a reimbursing employer) related to the COVID-19 public health emergency if such costs will not be reimbursed by the federal government pursuant to the CARES Act or otherwise.

The Guidance states that the Fund may support a “broad range of uses” including payroll expenses for several classes of employees whose services are “substantially dedicated to mitigating or responding to the COVID-19 public health emergency.” What are some examples of types of covered employees?

The Guidance provides examples of broad classes of employees whose payroll expenses would be eligible expenses under the Fund. These classes of employees include public safety, public health, health care, human services, and similar employees whose services are substantially dedicated to mitigating or responding to the COVID-19 public health emergency. Payroll and benefit costs associated with public employees who could have been furloughed or otherwise laid off but who were instead repurposed to perform previously unbudgeted functions substantially dedicated to mitigating or responding to the COVID-19 public health emergency are also covered. Other eligible expenditures include payroll and benefit costs of educational support staff or faculty responsible for developing online learning capabilities necessary to continue educational instruction in response to COVID-19-related school closures. Please see the Guidance for a discussion of what is meant by an expense that was not accounted for in the budget most recently approved as of March 27, 2020.

In some cases, first responders and critical health care workers that contract COVID-19 are eligible for workers’ compensation coverage. Is the cost of this expanded workers compensation coverage eligible?

Increased workers compensation cost to the government due to the COVID-19 public health emergency incurred during the period beginning March 1, 2020, and ending December 30, 2020, is an eligible expense.

If a recipient would have decommissioned equipment or not renewed a lease on particular office space or equipment but decides to continue to use the equipment or to renew the lease in order to respond to the public health emergency, are the costs associated with continuing to operate the equipment or the ongoing lease payments eligible expenses?

Yes. To the extent the expenses were previously unbudgeted and are otherwise consistent with section 601(d) of the Social Security Act outlined in the Guidance, such expenses would be eligible.

May recipients provide stipends to employees for eligible expenses (for example, a stipend to employees to improve telework capabilities) rather than require employees to incur the eligible cost and submit for reimbursement?

Expenditures paid for with payments from the Fund must be limited to those that are necessary due to the public health emergency. As such, unless the government were to determine that providing assistance in the form of a stipend is an administrative necessity, the government should provide such assistance on a reimbursement basis to ensure as much as possible that funds are used to cover only eligible expenses.

May Fund payments be used for COVID-19 public health emergency recovery planning?

Yes. Expenses associated with conducting a recovery planning project or operating a recovery coordination office would be eligible, if the expenses otherwise meet the criteria set forth in section 601(d) of the Social Security Act outlined in the Guidance.

Are expenses associated with contact tracing eligible?

Yes, expenses associated with contract tracing are eligible.

To what extent may a government use Fund payments to support the operations of private hospitals?

Governments may use Fund payments to support public or private hospitals to the extent that the costs are necessary expenditures incurred due to the COVID-19 public health emergency, but the form such assistance would take may differ. In particular, financial assistance to private hospitals could take the form of a grant or a short-term loan.

May payments from the Fund be used to assist individuals with enrolling in a government benefit program for those who have been laid off due to COVID-19 and thereby lost health insurance?

Yes. To the extent that the relevant government official determines that these expenses are necessary and they meet the other requirements set forth in section 601(d) of the Social Security Act outlined in the Guidance, these expenses are eligible.

May recipients use Fund payments to facilitate livestock depopulation incurred by producers due to supply chain disruptions?

Yes, to the extent these efforts are deemed necessary for public health reasons or as a form of economic support as a result of the COVID-19 health emergency.

Would providing a consumer grant program to prevent eviction and assist in preventing homelessness be considered an eligible expense?

Yes, assuming that the recipient considers the grants to be a necessary expense incurred due to the COVID-19 public health emergency and the grants meet the other requirements for the use of Fund payments under section 601(d) of the Social Security Act outlined in the Guidance. As a general matter, providing assistance to recipients to enable them to meet property tax requirements would not be an eligible use of funds, but exceptions may be made in the case of assistance designed to prevent foreclosures.

May recipients create a “payroll support program” for public employees?

Use of payments from the Fund to cover payroll or benefits expenses of public employees are limited to those employees whose work duties are substantially dedicated to mitigating or responding to the COVID-19 public health emergency.

May recipients use Fund payments to cover employment and training programs for employees that have been furloughed due to the public health emergency?

Yes, this would be an eligible expense if the government determined that the costs of such employment and training programs would be necessary due to the public health emergency.

May recipients use Fund payments to provide emergency financial assistance to individuals and families directly impacted by a loss of income due to the COVID-19 public health emergency?

Yes, if a government determines such assistance to be a necessary expenditure. Such assistance could include, for example, a program to assist individuals with payment of overdue rent or mortgage payments to avoid eviction or foreclosure or unforeseen financial costs for funerals and other emergency individual needs. Such assistance should be structured in a manner to ensure as much as possible, within the realm of what is administratively feasible, that such assistance is necessary.

The Guidance provides that eligible expenditures may include expenditures related to the provision of grants to small businesses to reimburse the costs of business interruption caused by required closures. What is meant by a “small business,” and is the Guidance intended to refer only to expenditures to cover administrative expenses of such a grant program?

Governments have discretion to determine what payments are necessary. A program that is aimed at assisting small businesses with the costs of business interruption caused by required closures should be tailored to assist those businesses in need of such assistance. The amount of a grant to a small business to reimburse the costs of business interruption caused by required closures would also be an eligible expenditure under section 601(d) of the Social Security Act, as outlined in the Guidance.

The Guidance provides that expenses associated with the provision of economic support in connection with the public health emergency, such as expenditures related to the provision of grants to small businesses to reimburse the costs of business interruption caused by required closures, would constitute eligible expenditures of Fund payments. Would such expenditures be eligible in the absence of a stay-at-home order?

Fund payments may be used for economic support in the absence of a stay-at-home order if such expenditures are determined by the government to be necessary. This may include, for example, a grant program to benefit small businesses that close voluntarily to promote social distancing measures or that are affected by decreased customer demand as a result of the COVID-19 public health emergency.

May Fund payments be used to assist impacted property owners with the payment of their property taxes?

Fund payments may not be used for government revenue replacement, including the provision of assistance to meet tax obligations.

May Fund payments be used to replace foregone utility fees? If not, can Fund payments be used as a direct subsidy payment to all utility account holders?

Fund payments may not be used for government revenue replacement, including the replacement of unpaid utility fees. Fund payments may be used for subsidy payments to electricity account holders to the extent that the subsidy payments are deemed by the recipient to be necessary expenditures incurred due to the COVID-19 public health emergency and meet the other criteria of section 601(d) of the Social Security Act outlined in the Guidance. For example, if determined to be a necessary expenditure, a government could provide grants to individuals facing economic hardship to allow them to pay their utility fees and thereby continue to receive essential services.

Could Fund payments be used for capital improvement projects that broadly provide potential economic development in a community?

In general, no. If capital improvement projects are not necessary expenditures incurred due to the COVID-19 public health emergency, then Fund payments may not be used for such projects.

However, Fund payments may be used for the expenses of, for example, establishing temporary public medical facilities and other measures to increase COVID-19 treatment capacity or improve mitigation measures, including related construction costs.

The Guidance includes workforce bonuses as an example of ineligible expenses but provides that hazard pay would be eligible if otherwise determined to be a necessary expense. Is there a specific definition of “hazard pay”?

Hazard pay means additional pay for performing hazardous duty or work involving physical hardship, in each case that is related to COVID-19.

The Guidance provides that ineligible expenditures include “[p]ayroll or benefits expenses for employees whose work duties are not substantially dedicated to mitigating or responding to the COVID-19 public health emergency.” Is this intended to relate only to public employees?

Yes. This particular nonexclusive example of an ineligible expenditure relates to public employees. A recipient would not be permitted to pay for payroll or benefit expenses of private employees and any financial assistance (such as grants or short-term loans) to private employers are not subject to the restriction that the private employers’ employees must be substantially dedicated to mitigating or responding to the COVID-19 public health emergency.

May counties pre-pay with CARES Act funds for expenses such as a one or two-year facility lease, such as to house staff hired in response to COVID-19?

A government should not make prepayments on contracts using payments from the Fund to the extent that doing so would not be consistent with its ordinary course policies and procedures.

Must a stay-at-home order or other public health mandate be in effect in order for a government to provide assistance to small businesses using payments from the Fund?

No. The Guidance provides, as an example of an eligible use of payments from the Fund, expenditures related to the provision of grants to small businesses to reimburse the costs of business interruption caused by required closures. Such assistance may be provided using amounts received from the Fund in the absence of a requirement to close businesses if the relevant government determines that such expenditures are necessary in response to the public health emergency.

Should States receiving a payment transfer funds to local governments that did not receive payments directly from Treasury?

Yes, provided that the transferred funds are used by the local government for eligible expenditures under the statute. To facilitate prompt distribution of Title V funds, the CARES Act authorized Treasury to make direct payments to local governments with populations in excess of 500,000, in amounts equal to 45% of the local government's per capita share of the statewide allocation. This statutory structure was based on a recognition that it is more administratively feasible to rely on States, rather than the federal government, to manage the transfer of funds to smaller local governments. Consistent with the needs of all local governments for funding to address the public health emergency, States should transfer funds to local governments with populations of 500,000 or less, using as a benchmark the per capita allocation formula that governs payments to larger local governments. This approach will ensure equitable treatment among local governments of all sizes.

For example, a State received the minimum \$1.25 billion allocation and had one county with a population over 500,000 that received \$250 million directly. The State should distribute 45 percent of the \$1 billion it received, or \$450 million, to local governments within the State with a population of 500,000 or less.

May a State impose restrictions on transfers of funds to local governments?

Yes, to the extent that the restrictions facilitate the State's compliance with the requirements set forth in section 601(d) of the Social Security Act outlined in the Guidance and other applicable requirements such as the Single Audit Act, discussed below. Other restrictions are not permissible.

If a recipient must issue tax anticipation notes (TANs) to make up for tax due date deferrals or revenue shortfalls, are the expenses associated with the issuance eligible uses of Fund payments?

If a government determines that the issuance of TANs is necessary due to the COVID-19 public health emergency, the government may expend payments from the Fund on the interest expense payable on TANs by the borrower and unbudgeted administrative and transactional costs, such as necessary payments to advisors and underwriters, associated with the issuance of the TANs.

May recipients use Fund payments to expand rural broadband capacity to assist with distance learning and telework?

Such expenditures would only be permissible if they are necessary for the public health emergency. The cost of projects that would not be expected to increase capacity to a significant extent until the need for distance learning and telework have passed due to this public health emergency would not be necessary due to the public health emergency and thus would not be eligible uses of Fund payments.

Are costs associated with increased solid waste capacity an eligible use of payments from the Fund?

Yes, costs to address increase in solid waste as a result of the public health emergency, such as relates to the disposal of used personal protective equipment, would be an eligible expenditure.

May payments from the Fund be used to cover across-the-board hazard pay for employees working during a state of emergency?

No. The Guidance says that funding may be used to meet payroll expenses for public safety, public health, health care, human services, and similar employees whose services are substantially dedicated to mitigating or responding to the COVID-19 public health emergency. Hazard pay is a form of payroll expense and is subject to this limitation, so Fund payments may only be used to cover hazard pay for such individuals.

May Fund payments be used for expenditures related to the administration of Fund payments by a State, territorial, local, or Tribal government?

Yes, if the administrative expenses represent an increase over previously budgeted amounts and are limited to what is necessary. For example, a State may expend Fund payments on necessary administrative expenses incurred with respect to a new grant program established to disburse amounts received from the Fund.

May recipients use Fund payments to provide loans?

Yes, if the loans otherwise qualify as eligible expenditures under section 601(d) of the Social Security Act as implemented by the Guidance. Any amounts repaid by the borrower before December 30, 2020, must be either returned to Treasury upon receipt by the unit of government providing the loan or used for another expense that qualifies as an eligible expenditure under section 601(d) of the Social Security Act. Any amounts not repaid by the borrower until after December 30, 2020, must be returned to Treasury upon receipt by the unit of government lending the funds.

May Fund payments be used for expenditures necessary to prepare for a future COVID-19 outbreak?

Fund payments may be used only for expenditures necessary to address the current COVID-19 public health emergency. For example, a State may spend Fund payments to create a reserve of personal protective equipment or develop increased intensive care unit capacity to support regions in its jurisdiction not yet affected, but likely to be impacted by the current COVID-19 pandemic.

May funds be used to satisfy non-federal matching requirements under the Stafford Act?

Yes, payments from the Fund may be used to meet the non-federal matching requirements for Stafford Act assistance to the extent such matching requirements entail COVID-19-related costs that otherwise satisfy the Fund's eligibility criteria and the Stafford Act. Regardless of the use of Fund payments for such purposes, FEMA funding is still dependent on FEMA's determination of eligibility under the Stafford Act.

Must a State, local, or tribal government require applications to be submitted by businesses or individuals before providing assistance using payments from the Fund?

Governments have discretion to determine how to tailor assistance programs they establish in response to the COVID-19 public health emergency. However, such a program should be structured in such a manner as will ensure that such assistance is determined to be necessary in response to the COVID-19 public health emergency and otherwise satisfies the requirements of the CARES Act and other applicable law. For example, a per capita payment to residents of a particular jurisdiction without an assessment of individual need would not be an appropriate use of payments from the Fund.

May Fund payments be provided to non-profits for distribution to individuals in need of financial assistance, such as rent relief?

Yes, non-profits may be used to distribute assistance. Regardless of how the assistance is structured, the financial assistance provided would have to be related to COVID-19.

May recipients use Fund payments to remarket the recipient's convention facilities and tourism industry?

Yes, if the costs of such remarketing satisfy the requirements of the CARES Act. Expenses incurred to publicize the resumption of activities and steps taken to ensure a safe experience may be needed due to

the public health emergency. Expenses related to developing a long-term plan to reposition a recipient's convention and tourism industry and infrastructure would not be incurred due to the public health emergency and therefore may not be covered using payments from the Fund.

May a State provide assistance to farmers and meat processors to expand capacity, such to cover overtime for USDA meat inspectors?

If a State determines that expanding meat processing capacity, including by paying overtime to USDA meat inspectors, is a necessary expense incurred due to the public health emergency, such as if increased capacity is necessary to allow farmers and processors to donate meat to food banks, then such expenses are eligible expenses, provided that the expenses satisfy the other requirements set forth in section 601(d) of the Social Security Act outlined in the Guidance.

The guidance provides that funding may be used to meet payroll expenses for public safety, public health, health care, human services, and similar employees whose services are substantially dedicated to mitigating or responding to the COVID-19 public health emergency. May Fund payments be used to cover such an employee's entire payroll cost or just the portion of time spent on mitigating or responding to the COVID-19 public health emergency?

As a matter of administrative convenience, the entire payroll cost of an employee whose time is substantially dedicated to mitigating or responding to the COVID-19 public health emergency is eligible, provided that such payroll costs are incurred by December 30, 2020. An employer may also track time spent by employees related to COVID-19 and apply Fund payments on that basis but would need to do so consistently within the relevant agency or department.

May Fund payments be used to cover increased administrative leave costs of public employees who could not telework in the event of a stay at home order or a case of COVID-19 in the workplace?

The statute requires that payments be used only to cover costs that were not accounted for in the budget most recently approved as of March 27, 2020. As stated in the Guidance, a cost meets this requirement if either (a) the cost cannot lawfully be funded using a line item, allotment, or allocation within that budget or (b) the cost is for a substantially different use from any expected use of funds in such a line item, allotment, or allocation. If the cost of an employee was allocated to administrative leave to a greater extent than was expected, the cost of such administrative leave may be covered using payments from the Fund.

Questions Related to Administration of Fund Payments

Do governments have to return unspent funds to Treasury?

Yes. Section 601(f)(2) of the Social Security Act, as added by section 5001(a) of the CARES Act, provides for recoupment by the Department of the Treasury of amounts received from the Fund that have not been used in a manner consistent with section 601(d) of the Social Security Act. If a government has not used funds it has received to cover costs that were incurred by December 30, 2020, as required by the statute, those funds must be returned to the Department of the Treasury.

What records must be kept by governments receiving payment?

A government should keep records sufficient to demonstrate that the amount of Fund payments to the government has been used in accordance with section 601(d) of the Social Security Act.

May recipients deposit Fund payments into interest bearing accounts?

Yes, provided that if recipients separately invest amounts received from the Fund, they must use the interest earned or other proceeds of these investments only to cover expenditures incurred in accordance with section 601(d) of the Social Security Act and the Guidance on eligible expenses. If a government deposits Fund payments in a government's general account, it may use those funds to meet immediate cash management needs provided that the full amount of the payment is used to cover necessary expenditures. Fund payments are not subject to the Cash Management Improvement Act of 1990, as amended.

May governments retain assets purchased with payments from the Fund?

Yes, if the purchase of the asset was consistent with the limitations on the eligible use of funds provided by section 601(d) of the Social Security Act.

What rules apply to the proceeds of disposition or sale of assets acquired using payments from the Fund?

If such assets are disposed of prior to December 30, 2020, the proceeds would be subject to the restrictions on the eligible use of payments from the Fund provided by section 601(d) of the Social Security Act.

Are Fund payments to State, territorial, local, and tribal governments considered grants?

No. Fund payments made by Treasury to State, territorial, local, and Tribal governments are not considered to be grants but are "other financial assistance" under 2 C.F.R. § 200.40.

Are Fund payments considered federal financial assistance for purposes of the Single Audit Act?

Yes, Fund payments are considered to be federal financial assistance subject to the Single Audit Act (31 U.S.C. §§ 7501-7507) and the related provisions of the Uniform Guidance, 2 C.F.R. § 200.303 regarding internal controls, §§ 200.330 through 200.332 regarding subrecipient monitoring and management, and subpart F regarding audit requirements.

Are Fund payments subject to other requirements of the Uniform Guidance?

Fund payments are subject to the following requirements in the Uniform Guidance (2 C.F.R. Part 200): 2 C.F.R. § 200.303 regarding internal controls, 2 C.F.R. §§ 200.330 through 200.332 regarding subrecipient monitoring and management, and subpart F regarding audit requirements.

Is there a Catalog of Federal Domestic Assistance (CFDA) number assigned to the Fund?

Yes. The CFDA number assigned to the Fund is 21.019.

If a State transfers Fund payments to its political subdivisions, would the transferred funds count toward the subrecipients' total funding received from the federal government for purposes of the Single Audit Act?

Yes. The Fund payments to subrecipients would count toward the threshold of the Single Audit Act and 2 C.F.R. part 200, subpart F re: audit requirements. Subrecipients are subject to a single audit or program-

specific audit pursuant to 2 C.F.R. § 200.501(a) when the subrecipients spend \$750,000 or more in federal awards during their fiscal year.

Are recipients permitted to use payments from the Fund to cover the expenses of an audit conducted under the Single Audit Act?

Yes, such expenses would be eligible expenditures, subject to the limitations set forth in 2 C.F.R. § 200.425.

If a government has transferred funds to another entity, from which entity would the Treasury Department seek to recoup the funds if they have not been used in a manner consistent with section 601(d) of the Social Security Act?

The Treasury Department would seek to recoup the funds from the government that received the payment directly from the Treasury Department. State, territorial, local, and Tribal governments receiving funds from Treasury should ensure that funds transferred to other entities, whether pursuant to a grant program or otherwise, are used in accordance with section 601(d) of the Social Security Act as implemented in the Guidance.



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

DIVISION OF WATER
Capacity Development and Operator Certification Program

P.O. Box 111800
Juneau, Alaska 99811-1800
Main: 907.465.1139
Fax: 907.465.5177

Todd Cook
3575 Heath Street
Homer, AK 99603

June 18, 2020

Dear Mr. Cook,

On behalf of the Department of Environmental Conservation (DEC), we want to congratulate the Homer (PWSID 240456) on achieving Ursa Major status in Water System Excellence for 2019! The work your system has done to demonstrate stellar compliance with both the Drinking Water and Operator Certification Programs has not gone unnoticed.

The Water System Excellence Award is a coordinated effort between ADEC's Drinking Water Program and the Capacity Development and Operator Certification Program to recognize exceptional performance. Drinking Water systems are evaluated for their efforts during the award year and recognized in one of two tiers – Ursa Major and Ursa Minor. The Homer met the following criteria:

Ursa Major: Maintain 4 quarters of Operator Certification compliance and have no open, unresolved, or incurred Drinking Water violations during the award year.

While DEC focuses on assisting system owners and operators with achieving and maintaining compliance, the responsibility for complying with the regulations lies with the system. Your demonstrated expertise and dedication to safety and health is an excellent benefit to your community. Thank you for your ongoing efforts to provide safe drinking water to those served by your water system.

Sincerely,

Handwritten signature of Cindy Christian in cursive.

Cindy Christian
Drinking Water Program Manager

Handwritten signature of Martin Suzuki in cursive.

Martin Suzuki
Operator Certification Program Manager

Enclosure:
Ursa Major Certificate



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

**Department of Environmental
Conservation**

DIVISION OF WATER
Technical Assistance and Financing

555 Cordova Street
Anchorage, Alaska 99501
Main: 907.269.7502
Fax 907.269.7509
dec.alaska.gov

July 22, 2020

Rick S. Abboud, Acting City Manager
City of Homer
491 E. Pioneer Avenue
Homer, AK 99603

Dear Mr. Abboud:

The project listed below has been included in the State Fiscal Year 2021 (SFY21) Alaska Drinking Water Fund (ADWF) Project Priority List. The complete Project Priority List can be found online at: <https://dec.alaska.gov/water/technical-assistance-and-financing/state-revolving-fund/intended-use-plans/>.

Score	Project Name	Assistance Amount
76	Seawall Armor Rock	\$1,644,000

We have received the loan application that was signed on June 15, 2020. The application review process has been initiated

The SRF Program looks forward to working with you to provide this important infrastructure improvement. If I can answer any questions about the process, please feel free to contact me at peggy.ulman@alaska.gov.

Sincerely,

A handwritten signature in cursive script that reads "Peggy Ulman".

Peggy Ulman
SRF Program Coordinator

cc: Carey S. Meyer, City Engineer
Elizabeth S. Walton, Finance Director

City of Homer

Road Assessment Report

Summer 2020

City of Homer Public Works Department
7-20-2020

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Executive Summary

Data collection and record keeping are necessary for producing and maintaining organized and efficient work processes. A data-driven and systematic process for identifying road deficiencies will help the City of Homer identify and achieve short and long term maintenance goals by generating evidenced-based action plans for prioritizing tasks and guiding budgeting decisions. Additionally, having quantifiable data regarding the City's infrastructure will help educate, demonstrate accountability to, and build credibility with the City's executive leadership, elected officials and the public.

This Report describes the road assessment process developed by the City of Homer Public Works Department in the summer of 2020. The process included the following steps:

- a. Researching best practices related to road assessment models;
- b. Adapting a selected model to Homer conditions;
- c. Conducting a field review of actual road conditions;
- d. Compiling the data into an assessment report, complete with findings and ratings of Homer's road conditions;
- e. Integrating the ratings into the City's existing GIS maps;
- f. Preparing this Road Assessment Study; and
- g. Using the Study to program road maintenance tasks.

A result of the process is a system of methods and standards, which can be used to regularly assess road conditions. This system can be used as a tool to plan and explain road maintenance work.

Introduction

The City of Homer's crew of heavy equipment operators maintain fifty miles of roads within the City of Homer. Of that total, 29 miles are gravel roads and 21 miles are paved roads. Regular road maintenance duties include (a) snow removal and sanding in the winter; and (b) ditch clearing, corridor brushing, crack sealing, patching, grading and dust control in the summer and shoulder seasons. Maintenance procedures and requirements differ, depending on road type – gravel or paved. For example, crack sealing is a paved road repair, while grading is a routine maintenance duty for the City's gravel roads.

As winter road maintenance is devoted to snow removal and sanding, maintenance that directly affects road structural conditions occurs in the summer and shoulder seasons. For example, grading and dust control of gravel roads takes place in early summer, just after the ground has thawed. Crack sealing of paved roads takes place in mid-summer, when it's dry. Brush cutting and ditch cleaning of all roads takes place in late summer, because these activities are less weather dependent. The record of what maintenance activities are conducted on what roads is largely anecdotal, rather than documented.

An annual or biannual road condition inventory, based on a systematic road assessment strategy, with detailed spatial information will provide a documented record of deficiencies, repairs, and progress. This will enable road maintenance activities to be budgeted for and planned with greater efficiency. It will also allow crews to conduct training and preparedness activities more mindfully in the event of employee turnover.

The road condition assessment data was largely collected by and integrated with the City's web-based, GPS-enabled Geographic Information System (GIS) by the City's GIS Technician, Aaron Yeaton. In the future, updates to the road condition assessment survey will be made by the road maintenance crews utilizing the same system. This will allow for mobile and spatially accurate data gathering that can be updated with real time immediacy. When needed, this information could be disseminated in maps and tables to other Public Works and City of Homer employees. Having evidenced- based information in this format will also allow the City to engage in more proactive public outreach – to educate the community about road maintenance activities.

Methodology

Two methods were used in the assessment process. Method 1 utilized GPS and a Geographic Information System (GIS) to thoroughly map road deficiencies, to documented observations about road conditions while walking along the roads. This data was later analyzed to evaluate and rate overall road condition. Initially, the goal was to walk all fifty miles of Homer’s roads throughout the summer for a close, highly detailed evaluation of the City’s roads. While this method did create detailed data, it was time-consuming. Further, the data indicated that many of Homer’s roads had similar problems, so the high level of detail was not the most efficient use of time. To expedite the process, Method 2, where the roads were evaluated from a vehicle, was used.

Method 2 involved a “pencil and clipboard” assessment while driving along the roads with a member of the City’s road maintenance crew. It was accomplished much more quickly and with the added assistance of an experienced road maintenance expert, it generated a detailed and accurate summation of road conditions.

Both methods relied on the criteria set forth in the Pavement Surface Evaluation and Rating (PASER) model developed by the Transportation Information Center, University of Wisconsin – Madison.¹ There is a separate PASER manual for paved roads and for gravel roads. The PASER manuals guided the quantification of road conditions and provided important insights into the process of (a) conducting objective road assessment data and (b) documenting ratings of road conditions.

The PASER model doesn’t specifically address brush and tree obstructions, which are important issues in the City of Homer. The criteria in the PASER model were augmented to include vegetation as an element of road corridor conditions. Yet, to maintain fidelity with PASER’s quantification methods, which mostly focuses on road surface conditions, the assessment of vegetation and corridor conditions did not overly impact the final road condition ratings.

Method 1

Gravel roads were first assessed. This choice was made so that springtime breakup conditions endemic to many of Homer’s gravel roads, could be evaluated prior to grader maintenance. Ninety-six roads totaling 21 miles were inventoried using a web-interfaced Trimble R2 GPS device and associated base station. With 3-inch accuracy, affording detailed assessment and mapping of road deficiencies, two-thirds of the gravel roads were walked and inventoried in GIS – Method 1. The remaining third of the gravel roads was mapped using GPS and GIS but while driving – Method 2. Time was of the essence because of the need to record gravel road conditions ahead of advancing grader maintenance. This quicker assessment undoubtedly left out some deficiency details, particularly regarding culverts, but the overall condition of roads was nevertheless mapped adequately.

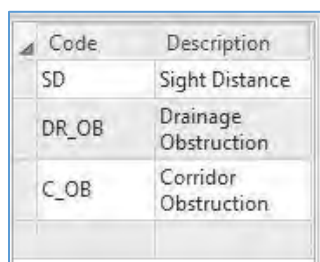
Generally, gravel road conditions can change rapidly due to environmental factors and recent maintenance activities. Because of this, the PASER model recommends that gravel road assessment be based on major factors rather than detailed surface conditions. The five main surface conditions and defects for gravel roads are:

1. crown condition,
2. drainage,
3. gravel layer,
4. surface deformation, and
5. surface defects.

¹ The City of Soldotna uses the PACER Model for its Road Maintenance Plan.

These categories provide the basis for quantifying overall road condition. Spring breakup conditions, as a seasonal inevitability, were included in the “surface deformation” category. According to the PASER model, “surface deformations” are limited to washboarding, potholes and ruts, but not the kind of seasonal frost-heaving some Alaskan roads experience. This is probably because the original Pacer criteria were developed in Wisconsin where it is unlikely the ground shifts as dynamically as it does in Alaska.

Prior to field work, a series of GIS feature classes applicable to PASER’s road deficiency categories were created in a Geodatabase to be used for mapping road conditions. For example, polygon features were made to represent breakup conditions, polyline features to represent sub-standard ditches, and point features to represent vegetation obstructions. These features were given added specificity by applying “domains”, or coded descriptions, within their attribute tables. For example, for vegetation obstructions, a domain was created to describe the nature of the obstruction in the form of a drop down menu, as shown in the figure below.



Code	Description
SD	Sight Distance
DR_OB	Drainage Obstruction
C_OB	Corridor Obstruction

Figure 1: Domains assigned to vegetation obstruction feature

Having such fields in the Attribute Tables facilitated data gathering in the field. A “Notes” field was also added to the Attribute Table to further augment basic attribute information. For instance, a “features condition” could be rated with considerable detail by added notes such as severe, moderate, etc. This gave us the opportunity to add historic notes about a particular road – for example, whether it was built to City standards or not.

When taking measurements, the GPS device interfaces with the GIS “Collector” App, which is a cloud-based platform that hosts editable maps used for taking field measurements. The Collector App records location, counts, lengths, areas, dates, as well as any notes and posts them to the City’s GIS organizational account in real time. Once features are collected the maps were uploaded locally onto a desktop to ArcGIS Pro for further analysis and editing of symbology.

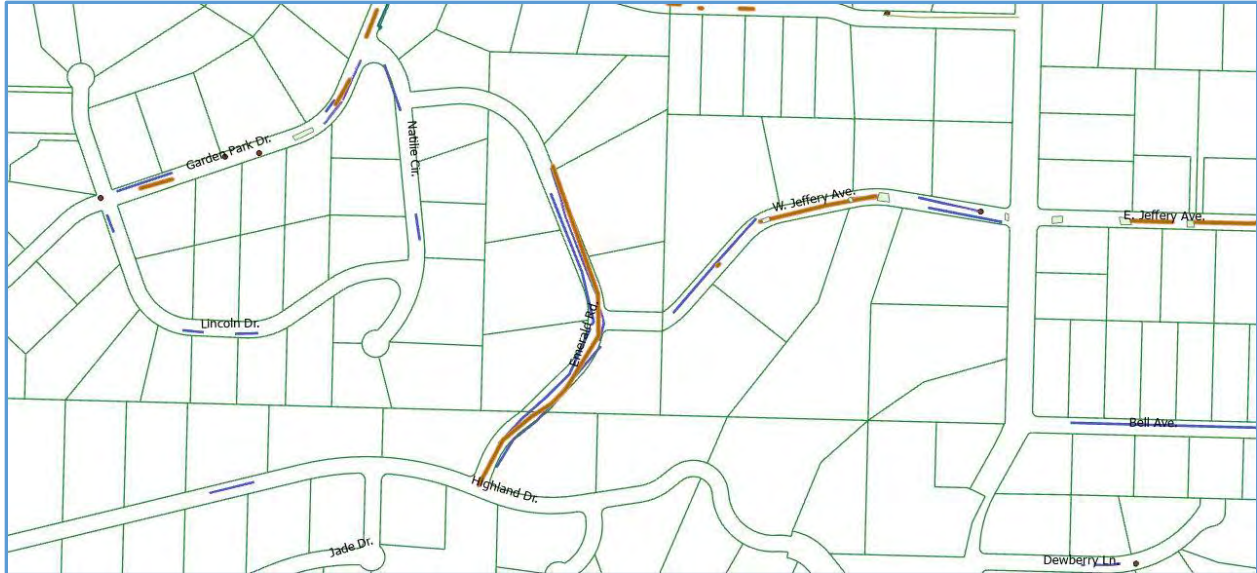


Figure 2: Gravel road deficiencies mapped in a GIS. Different symbology represent different deficiencies: i.e. breakup, potholes, and shallow ditches.

Analysis of mapped features in ArcGIS Pro allowed close evaluation of the counts, lengths and areas of road deficiencies. This information was compared to individual road length, thereby providing close approximation of overall road condition for rating purposes. Each deficiency category (surface conditions, and defects listed by PASER) was then given an averaged value ranging from poor to excellent. The values were weighted based on comparisons of road condition segments. For example if a small length of a long road was experiencing severe breakup, but the remainder of the road was in fair condition, the overall value for surface deformation was ranked from “fair to moderate”.

PASER ratings for gravel roads range from 1 – 5; with “1” being a road in failed condition, “5” being excellent. Ultimately, the ratings are prescriptive in nature; meaning each rating corresponds to the level of maintenance the road needs. If a rating of “5” is given, the road has been recently constructed and needs no maintenance, whereas a road with a rating of “1” requires complete reconstruction. To produce a final rating for a particular road, the scores in the individual deficiency categories were averaged to produce an overall rating. The final ratings were exported from ArcGIS attribute tables into Excel formats to produce finished tables.

Method 2

The City’s paved roads were assessed using Method 2, the drive-along method. The roads were evaluated by directly applying the PASER model’s paved roads criteria. Before the field survey began, the criteria were inserted into an Excel table. These categories involved assessment of the following conditions:

1. surface defects,
2. surface deformation,
3. cracks,
4. patches, and
5. potholes.

Since drainage isn’t as crucial a factor to paved road surfaces as it is for gravel roads, the PASER model does not use it as a standalone category. To maintain as comprehensive a survey as possible, a drainage category was added to the PASER model. As with the gravel road assessments, we added a vegetation category, which, as with

the gravel road assessments, did not overly effect the final road rating so as to maintain the integrity of the PASER model's quantification methods.

Over the course of several days, the team, including the City's GIS Technician and an experienced road maintenance operator, drove along the City's paved roads to observe, evaluate and rate them. They routinely stopped to more closely examine defects and deformities. Adding the expertise of a seasoned road maintenance operator proved invaluable in making comprehensive assessments more quickly.

Because paved roads are not typically subject to the same type of rapid changes that gravel roads are, the ratings for paved roads tend to be more nuanced. Condition categories have more variables to consider. For example, the category of "surface deformation" includes rutting, distortion – rippling and shoving, settling, and frost heave. The condition of "cracking" includes there are longitudinal, transverse, slippage, reflection, block and alligator cracking. Final road conditions ranged from 1 to 10, with "1" meaning "failed" and "10" meaning "excellent". The ratings encompassed varying degrees of poor, fair, good and excellent. Like the gravel road assessments, final paved road ratings were based on averaging the values of the condition categories. And, as with the gravel road assessments, ratings are based on road maintenance needs.

Results

Gravel Roads

The majority of gravel roads fall into the “Fair” category (rating – 3), with the next numerous being “Good” (rating 4). A considerable number of roads fall into the “Poor” category (rating – 2). The “fair” and “poor” rated roads mostly comprise those of the annexation area. These roads were not constructed to City standards and inherently have structural issues and alignment problems. The “excellent” ratings are roads that have been constructed within the last year. A “failed” rating was applied to Crossman Ridge Road, due to severe breakup issues. The major deficiencies contributing to a less than good rating were poor gravel layer and breakup issues.

Table 1

GRAVEL					
Rating	1	2	3	4	5
Descrp.	Failed	Poor	Fair	Good	Excellent
# Roads	1	35	60	50	3

RATINGS ARE RELATED TO NEEDED MAINTENANCE OR REPAIR

- Rating 5** Newly constructed road. Excellent crown and drainage. No maintenance required.
- Rating 4** Good crown and drainage. Routine maintenance.
- Rating 3** Roadway shows traffic effects. Needs regrading, minor ditch maintenance, and spot gravel application.
- Rating 2** Road needs additional aggregate layer, major drainage improvements.
- Rating 1** Travel is difficult. Complete rebuilding required.

Table 2: PASER rating descriptions for gravel roads



Figure 3: Severe Breakup area on Sprucewood Dr.



Figure 4: Extensive Breakup down the length of Eagle Pl.

As stated previously, local road condition issues, particularly breakup-related subsidence and boiling, are not reflected in PASER's rating criteria. Interpolation of PASER criteria were made to suit local conditions. Therefore springtime breakup was a major factor in evaluating gravel road surface deformities. Even though these inferences were made, the basic evaluation process outlined by PASER was valuable and applicable for rating Homer's gravel roads.

Paved Roads

Overall, Homer’s paved roads are in better condition than the gravel roads. The majority of paved roads fell into the lower “Good” category (Rating 6), followed by the upper “Good” category (Rating 7) and then “Fair” (Ratings 4 & 5). Of the Hundred plus paved roads in the community, only 8 rated in the two “Poor” categories.

PAVED										
Rating	1	2	3	4	5	6	7	8	9	10
Descrp.	Failed	Very Poor	Poor	Fair	Fair	Good	Good	Very Good	Excellent	Excellent
# Roads	0	4	4	3	7	44	33	9	1	4

Table 3

Surface rating	Visible distress*	General condition/treatment measures
10 Excellent	None.	New construction.
9 Excellent	None.	Recent overlay. Like new.
8 Very Good	No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced (40' or greater). All cracks sealed or tight (open less than 1/8").	Recent sealcoat or new cold mix. Little or no maintenance required.
7 Good	Very slight or no raveling, surface shows some traffic wear. Longitudinal cracks (open 1/8") due to reflection or paving joints. Transverse cracks (open 1/8") spaced 10' or more apart, little or slight crack raveling. No patching or very few patches in excellent condition.	First signs of aging. Maintain with routine crack filling.
6 Good	Slight raveling (loss of fines) and traffic wear. Longitudinal cracks (open 1/8"–1/2"), some spaced less than 10'. First sign of block cracking. Slight to moderate flushing or polishing. Occasional patching in good condition.	Shows signs of aging. Sound structural condition. Could extend life with sealcoat.
5 Fair	Moderate to severe raveling (loss of fine and coarse aggregate). Longitudinal and transverse cracks (open 1/2") show first signs of slight raveling and secondary cracks. First signs of longitudinal cracks near pavement edge. Block cracking up to 50% of surface. Extensive to severe flushing or polishing. Some patching or edge wedging in good condition.	Surface aging. Sound structural condition. Needs sealcoat or thin non-structural overlay (less than 2").
4 Fair	Severe surface raveling. Multiple longitudinal and transverse cracking with slight raveling. Longitudinal cracking in wheel path. Block cracking (over 50% of surface). Patching in fair condition. Slight rutting or distortions (1/2" deep or less).	Significant aging and first signs of need for strengthening. Would benefit from a structural overlay (2" or more).
3 Poor	Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Severe block cracking. Some alligator cracking (less than 25% of surface). Patches in fair to poor condition. Moderate rutting or distortion (1" or 2" deep). Occasional potholes.	Needs patching and repair prior to major overlay. Milling and removal of deterioration extends the life of overlay.
2 Very Poor	Alligator cracking (over 25% of surface). Severe distortions (over 2" deep). Extensive patching in poor condition. Potholes.	Severe deterioration. Needs reconstruction with extensive base repair. Pulverization of old pavement is effective.
1 Failed	Severe distress with extensive loss of surface integrity.	Failed. Needs total reconstruction.

Table 4: PASER rating description for paved roads



*Figure 5:
Extensive
Alligator
cracking
and Rutting
on Ohlsen
Ln.*



*Figure 6:
Longitudinal
cracking at
shoulder indicative
of failing subgrade.
Tulin Terrace*

The vast majority of paved roads have minor to moderate longitudinal and lateral cracking that is maintainable with annual crack sealing. Most roads have minor surface defects, most notably ravelling, which is a condition where pavement material deteriorates exposing the aggregate. Among the roads meriting reconstruction are Ohlsen Lane, Tulin Terrace Blvd. and Woodside Ave. These roads have extensive alligator cracking, rutting and potholes; deformities that indicate the road structure itself, not just the pavement surface, is failing. Many roads have minor rutting. Although the PASER model considers rutting to be a surface deformity caused by sub-surface settling, in the case of Homer, rutting is mostly due to studded tire use. Nevertheless, as rutting compromises sheeting of water from crown to shoulder, it was a contributing factor in road rating.

Vegetation

A significant aspect of this assessment outside the PASER criteria involved inventorying vegetation obstructions. As the road crew annually brushes out road corridors to an extent reasonable for proper maintenance, the areas of alder, perennial grasses, etc. within the corridor were generally disregarded during this assessment. Exceptions were made when these obstructions impeded sight distance or the establishment of drainage ditches. These situations often occur in cases where the road is not aligned with the right-of-way. In some cases, the road is so far off center, the edge of the road practically grazes the outer boundary of the right-of-way. In such cases, the road crew does its best to maintain a reasonably brush-free corridor to enable snow plowing, ditching and other essential maintenance activities. However, this is not always possible.

Corridor obstructions, such as large spruce, located inside the right-of-way were mapped in Method 1 or made note of in Method 2. These obstructions often impede operator maintenance during snow removal and ditching. Roads that have notable vegetation impediments are Easy Street, Mountain Park Street, and Race Road. Vegetation ratings are available in the master spreadsheets located in the Appendices. Landowner concern for the vegetation fronting their property, often makes problem tree removal a sensitive issue.



Figure 7: Tree, well inside right of way, scarred from grader during snow removal



Figure 8: Tree limbs within roadway

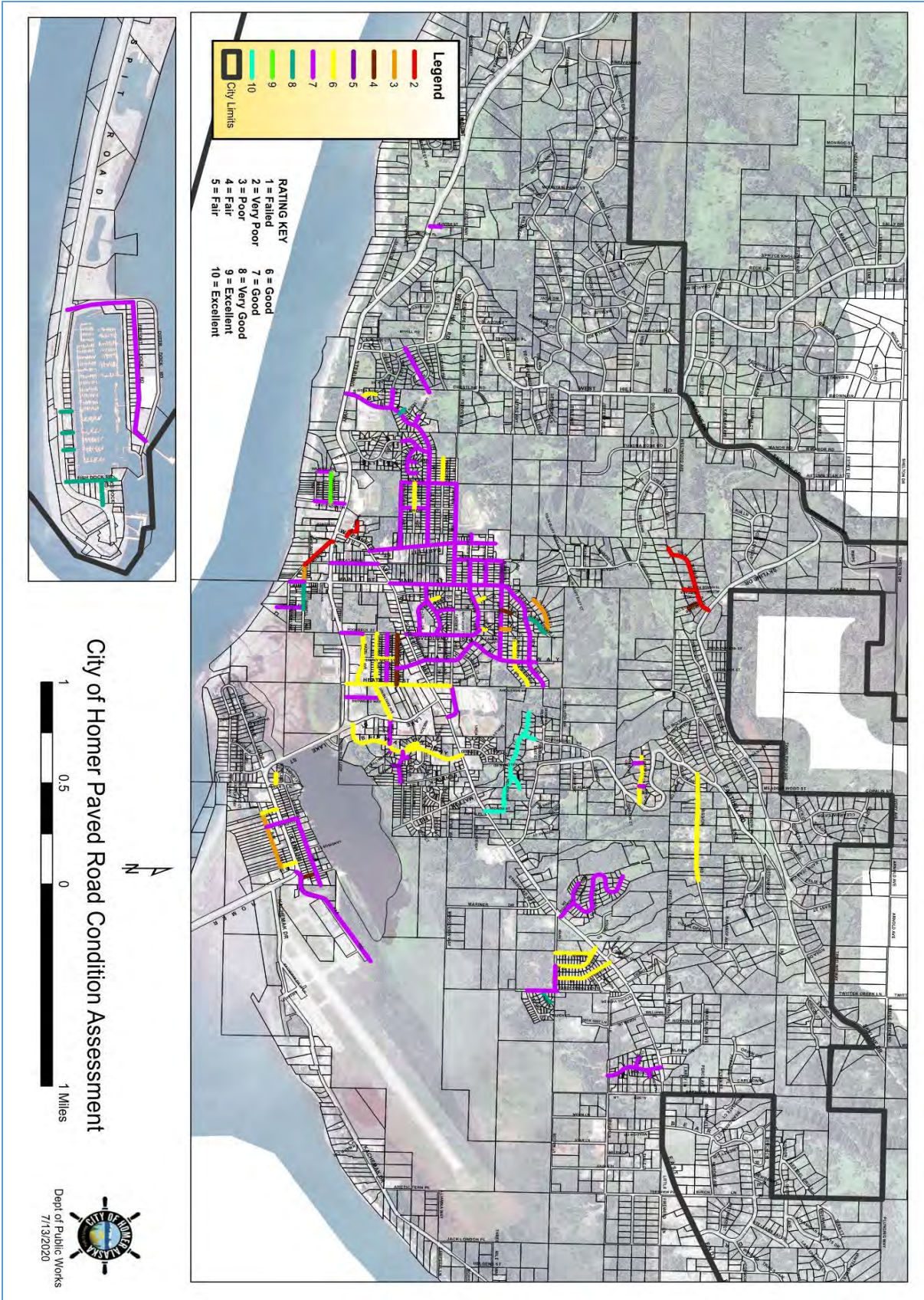


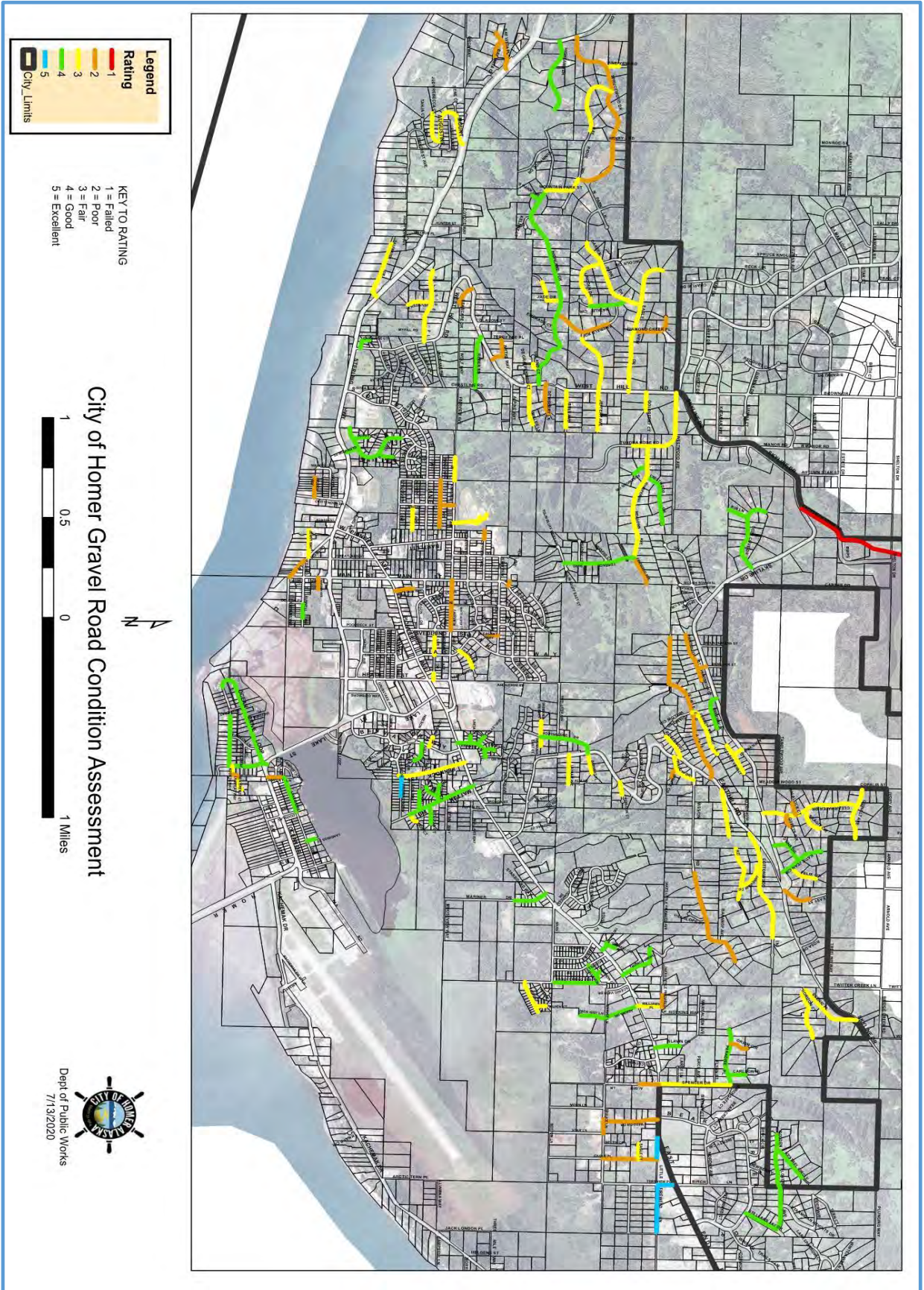
Figure 9: Alder, routinely hedged, yet impeding ditch establishment due to road misalignment



Figure 10: Spruce trees in corridor preventing proper ditch establishment

Appendix A - Maps





Appendix B – Paved Road Assessment Tables

PAVED ROAD INFO			ROAD SURFACE CONDITION					VEG	RATING
STREET	TYPE	ANNEXED	SURFACE DEFECTS	SURFACE DEFORMATION	CRACKS	PATCHES & POTHOLES	DRAINAGE	VEGETATION	1:FAILED 2:VERY POOR 3:POOR 4:FAIR 5:FAIR 6:GOOD 7:GOOD 8:VERY GOOD 9:EXCELLENT 10:EXCELLENT
A St.	Paved		Minor	Minor	Severe	Minor			4 Moderate
B St.	Paved		Minor	Minor	Moderate	Minor			6 Moderate
Bay Ave.	Paved		Moderate	Moderate	Severe	Moderate			3 Minor
W. Bayview Ave.	Paved		Minor	Minor	Severe	Moderate			5 None
E. Bayview Ave.	Paved		Minor	Minor	Moderate	None			6 Moderate
Bayview Ct.	Paved		Minor	Severe	Severe	Minor			3 None
Beluga Pl.	Paved		Minor	Minor	Minor	None			7 None
Ben Walters Ct.	Paved		Minor	Minor	Minor	Minor			7 None
Ben Walters Ln.	Paved		Minor	Minor	Moderate	None			6 None
Bonanza Ave.	Paved		Minor	Minor	Minor	Minor			5 None
W. Bunnell Ave.	Paved		Moderate	Moderate	Severe	Moderate			3 None
Calhoun Ct.	Paved		Minor	Moderate	Moderate	Minor			4 Minor
Cattenden Dr.	Paved		Moderate	Minor	Minor	Minor			7 None
Nielson Cir.	Paved		Moderate	Minor	Moderate	Minor			6 Minor
Clover Pl.	Paved		Minor	None	Minor	None			7 None
Clover Ln.	Paved		Minor	Minor	Minor	None			7 Minor
East Hill Rd.	Paved		Minor	None	Minor	None			7 Minor
Ice Dock Rd.	Paved		None	None	None	None			8 None
FAA Rd.	Paved		Minor	Minor	Moderate	Minor			6 None
E. St.	Paved		Minor	Minor	Moderate	Moderate			6 None
Grubstake Ave. East	Paved		Minor	Minor	Minor	None			7 None
Daybreeze Ct.	Paved		Minor	Minor	Minor	None			7 None
Calamari Ct.	Paved		Minor	Minor	Minor	None			7 None
Sea Plane Ct.	Paved		Minor	Minor	Minor	Minor			6 None
El Sario Ct.	Paved		Minor	Minor	Moderate	None			6 None
Elderberry Ct.	Paved		Minor	Minor	Moderate	None			6 None
Elderberry Dr.	Paved		Minor	Minor	Moderate	None			6 None
W. Fairview Ave.	Paved		Minor	None	Minor	None			7 None
Freight Dock Rd.	Paved		Minor	None	None	None			7 None
Frisbee Ct.	Paved		None	None	None	None			8 None

Gravel_Roads_Table

PAVED ROAD INFO			ROAD SURFACE CONDITION					VEG	RATING
STREET	TYPE	ANNEXED	SURFACE DEFECTS	SURFACE DEFORMATION	CRACKS	PATCHES & POTHOLES	DRAINAGE	VEGETATION	1:FAILED 2:VERY POOR 3:POOR 4:FAIR 5:FAIR 6:GOOD 7:GOOD 8:VERY GOOD 9:EXCELLENT 10:EXCELLENT
Gavin Ct.	Paved		Minor	Minor	Moderate	None		None	6
Hazel Ave	Paved		Minor	Minor	Moderate	Minor	6	None	6
Herdon Dr.	Paved		Minor	Minor	Moderate	None	6	Minor	7
Hillview Pl.	Paved		Minor	Minor	Minor	None	7	Moderate	7
E. Danview Ave.	Paved		Minor	Minor	Moderate	None	5	None	7
Larkspur Ct.	Paved		Minor	Minor	Moderate	None	6	Moderate	6
N. Larkspur Cir.	Paved		Minor	Minor	Minor	None	7	Moderate	7
S. Larkspur Cir.	Paved		Minor	Minor	Minor	None	7	Moderate	7
Lakeside Ct.	Paved		Minor	Minor	Minor	None	7	None	7
Lakeside Dr.	Paved		Minor	Minor	Minor	None	7	None	7
Lakeside Cir.	Paved		Moderate	Minor	Minor	None	5	None	5
Pine Terrace Cir.	Paved	YES	Moderate	Moderate	Severe	None	2	Minor	2
Smoky Bay Way	Paved		Minor	Minor	Moderate	None	6	None	7
Rochelle Rd.	Paved		Minor	Minor	Minor	Minor	6	None	6
Sabrina Rd.	Paved		Minor	Minor	Minor	Minor	6	None	6
Silka Rose Cir	Paved		Minor	Minor	Minor	Minor	6	None	6
Spruce Terrace Cir.	Paved	YES	Moderate	Moderate	Moderate	None	4	None	4
Svedlund Cir	Paved		Minor	Minor	Moderate	Moderate	6	None	6
Svedlund St.	Paved		Minor	Minor	Moderate	Minor	6	None	7
Tamara St.	Paved		Minor	Minor	Moderate	Minor	6	Minor	6
Towne Heights Ln.	Paved		None	None	None	None	8	None	8
Tulin Terrace Blvd.	Paved	YES	Moderate	Moderate	Severe	Moderate	2	Moderate	2
Waddell St.	Paved		None	None	Minor	None	9	None	9
Woodside Ave.	Paved		Moderate	Severe	Severe	Moderate	2	None	2
Freight Dock Rd.	Paved		Minor	None	Minor	None	7	None	7
Harbor Entrance Roads	Paved		Minor	None	None	None	8	None	8
Harbor Entrance Roads	Paved		Moderate	None	None	Moderate	7	None	7
Harbor Entrance Roads	Paved		Moderate	None	None	Minor	7	None	7
Fish Dock Rd.	Paved		None	None	None	None	8	None	8
Lakeshore Dr.	Paved		Minor	Minor	Moderate	Minor	6	None	7
Douglas Pl.	Paved		Minor	None	Minor	None	6	None	7
Douglas Pl.	Paved		Minor	None	Minor	None	6	None	7
Forest Glenn Dr.	Paved		Minor	Minor	Minor	Minor	7	None	7

Gravel_Roads_Table

PAVED ROAD INFO			ROAD SURFACE CONDITION					VEG	RATING
STREET	TYPE	ANNEXED	SURFACE DEFECTS	SURFACE DEFORMATION	CRACKS	PATCHES & POTHOLES	DRAINAGE	VEGETATION	1:FAILED 2:VERY POOR 3:POOR 4:FAIR 5:FAIR 6:GOOD 7:GOOD 8:VERY GOOD 9:EXCELLENT 10:EXCELLENT
W. Danview Ave.	Paved		Minor	None	Moderate	None		None	7
W. Danview Ave.	Paved		Minor	None	Moderate	None		None	7
Rangeview Ave.	Paved		Minor	Minor	Moderate	None		None	6
Galhoun St.	Paved		Minor	Minor	Moderate	None		None	7
Lee Dr.	Paved		Minor	Minor	Moderate	None		None	7
Mark White Ave.	Paved		Minor	Minor	Minor	None		None	7
Mission Rd.	Paved		Minor	Minor	Moderate	None		Minor	6
Fairview Ave.	Paved		Minor	Minor	Minor	None		None	6
E. Bunnell Ave.	Paved		Minor	None	None	None		None	8
Main St.	Paved		Minor	Minor	Minor	None		None	6
Heath St.	Paved		Minor	Minor	Moderate	Minor		None	5
Heath St.	Paved		Minor	Minor	Moderate	Minor		None	5
Mountain View Dr.	Paved		Minor	Minor	Moderate	None		None	6
Klondike Ave.	Paved		Moderate	Moderate	Moderate	Moderate		None	4
Kachemak Way	Paved		Minor	Minor	Minor	None		None	7
Soundview Ave.	Paved		Minor	Minor	Moderate	None		None	6
Barlett St.	Paved		Minor	Minor	Minor	None		None	6
Spruceview Ave.	Paved		Minor	None	Moderate	Minor		None	6
Mulliken St.	Paved		Minor	Minor	Minor	None		None	7
Shelly Ave.	Paved		Minor	Minor	Minor	None		None	7
Talen Ln.	Paved		Minor	None	None	None		None	8
Cabana Ct.	Paved		Minor	Minor	Minor	None		None	6
Compass Dr.	Paved		Minor	Minor	Minor	None		None	7
Candlelight Ct.	Paved		Minor	Minor	Minor	None		None	7
Craftsman Rd.	Paved		Minor	Minor	Minor	None		None	7
Kachemak Way	Paved		Minor	Minor	Minor	None		None	7
Hunter St.	Paved		Minor	Minor	Minor	None		None	7
Early Spring St.	Paved		Minor	Minor	Minor	None		None	7
Snowbird St.	Paved		Minor	None	Minor	None		None	7
Grubstake Ave.	Paved		Minor	Minor	Moderate	None		None	5
Main St.	Paved		Minor	Minor	Minor	None		None	6
Eric Ln.	Paved		Minor	Minor	Minor	None		None	8
Craftsman Rd.	Paved		Minor	Minor	Minor	None		None	7

Gravel_Roads_Table

PAVED ROAD INFO			ROAD SURFACE CONDITION					VEG	RATING
STREET	TYPE	ANNEXED	SURFACE DEFECTS	SURFACE DEFORMATION	CRACKS	PATCHES & POTHOLES	DRAINAGE	VEGETATION	1:FAILED 2:VERY POOR 3:POOR 4:FAIR 5:FAIR 6:GOOD 7:GOOD 8:VERY GOOD 9:EXCELLENT 10:EXCELLENT
Greatland St.	Paved		Minor	None	Minor	Minor		None	7
Lucky Shot St.	Paved		Minor	Minor	Minor	Minor		6 Minor	6
Noview	Paved		Minor	Minor	Minor	Minor		7 None	7
Ronda S.	Paved		None	None	None	None		10 None	10
Nelson Ave.	Paved		None	None	None	None		10 None	10
South Slope Dr.	Paved		None	None	None	None		10 None	10
Father Dean Ct.	Paved		None	None	None	None		10 None	10
Wright St.	Paved		Minor	Minor	Moderate	None		6 None	7
Noview Ave.	Paved		Minor	Minor	Minor	Minor		6 None	6
Island View Ct.	Paved		Minor	Moderate	Severe	None		3 None	3
Hohe St.	Paved		Minor	Minor	Moderate	None		6 None	7
Poopdeck St.	Paved		Minor	Minor	Moderate	None		7 None	7

Gravel_Roads_Table

Appendix C – Gravel Road Assessment Tables

GRAVEL ROAD			ROAD SURFACE CONDITIONS				VEGETATION CONDITIONS		RATING	
STREET	TYPE	ANNEX	CROWN	DRAIN AGE	GRAVEL LAYER	SURFACE DEFORMATION	SURFACE DEFECTS	VEG	VEGETATION NOTES	1:FAILED 2:POOR 3:FAIR 4:GOOD 5:EXCELLENT
Adams Dr.	Gravel		Good	Good	Good	None	None	None		4
Alder Ln.	Gravel		Poor	Fair	Poor	Moderate	None	None		2
April Pl.	Gravel		Good	Good	Good	None	None	None		4
Aspen Ct.	Gravel		Fair	Fair	Fair	Minor	None	Minor	Routine Brushing	3
Aspen Ln.	Gravel		Fair	Fair	Fair	Minor	None	Minor	Ditch Obst	3
Aurora Ct.	Gravel		Good	Good	Good	None	None	None		4
Barnett Pl.	Gravel		Good	Fair	Fair	None	None	None		3
Bay Ridge Rd.	Gravel	YES	Fair	Good	Fair	Minor	None	None		3
Bay Vista Ct.	Gravel		Fair	Poor	Poor	Moderate	Moderate	None		2
Bay Vista Pl.	Gravel		Fair	Poor	Poor	Minor	None	None		2
Bell Ave.	Gravel	YES	Fair	Fair	Fair	Minor	None	None		3
Beluga Cir.	Gravel		Good	Good	Good	None	None	None		4
Beluga Ct.	Gravel		Good	Good	Good	None	None	None		4
Camppground Rd.	Gravel		Fair	Fair	Fair	None	None	None		3
Carlson Pl.	Gravel	YES	Good	Good	Good	None	None	None		4
Carriage Ct.	Gravel		Good	Good	Good	None	None	None		4
Clearwater Dr.	Gravel	YES	Good	Fair	Good	Minor	None	None		3
Cook Way	Gravel		Good	Good	Good	None	None	None		4
Cottonwood Ln.	Gravel	YES	Fair	Good	Poor	Moderate	Minor	None		3
Cozy Cove Dr.	Gravel		Good	Good	Good	None	None	None		4
Crestwood Cir.	Gravel	YES	Good	Good	Good	Minor	None	None		4
Crossman Ridge Rd.	Gravel	YES	Poor	Poor	Poor	Severe	None	None		1
Dehel Ave.	Gravel		Poor	Poor	Fair	Minor	None	None		2
Dewberry Ln.	Gravel		Poor	Fair	Poor	Minor	None	None		2
Diamond Creek Pl.	Gravel	YES	Fair	Fair	Poor	Moderate	None	None		2
Dons Dr.	Gravel	YES	Good	Fair	Good	None	None	None		4
E. Bunnell Ave.	Gravel		Good	Good	Good	None	None	None		4
E. Fairview Ave.	Gravel		Poor	Poor	Poor	Severe	None	None		2
E. Jeffery Ave.	Gravel	YES	Fair	Fair	Good	Moderate	None	None		3
Eagle Court	Gravel		Fair	Fair	Fair	Minor	Minor	None		3
Eagle Pl.	Gravel		Poor	Poor	Poor	Severe	None	Moderate		2

Gravel_Roads_Table

STREET	TYPE	ANNEX	CROWN	DRAIN	GRAVEL	SURFACE DEFORMA	SURFACE DEFECTS	VEG	VEGETATION	1:FAILED 2:POOR 3:FAIR 4:GOOD 5:EXCELLENT
Eagle View Dr.	Gravel	YES	Good	Good	Poor	Moderate	None	Minor	Routine Brushing/1 spruce Spruce within entire	3
Easy St.	Gravel	YES	Fair	Poor	Fair	Minor	None	Severe	maintenance corridor	2
Emerald Rd.	Gravel	YES	Fair	Poor	Poor	Severe	None	None		2
Felix Cir.	Gravel	YES	Good	Fair	Good	None	None	Moderate	Spruce Obst	3
Fireweed Ave.	Gravel	YES	Fair	Fair	Poor	Severe	None	None	Bad Breakup	2
Forest Glenn Dr.	Gravel		Good	Good	Good	None	None	None		4
Forget Me Not Ln.	Gravel	YES	Good	Fair	Fair	Minor	None	None		3
Garden Park Dr.	Gravel	YES	Good	Fair	Fair	Moderate	None	None		3
Glacier View Ct.	Gravel	YES	Good	Poor	Good	Minor	None	None		3
Glenview St.	Gravel		Good	Good	Good	None	None	None		4
Goldberry Ct.	Gravel	YES	Fair	Fair	Fair	None	None	None		3
Golden Plover Ave.	Gravel		Good	Good	Good	None	None	None		4
Hanson Ave.	Gravel		Poor	Poor	Poor	Minor	None	Minor		2
Heidi Ct.	Gravel		Good	Good	Good	Minor	Minor	None		4
Hidden Way	Gravel		Poor	Poor	Poor	Moderate	Moderate	Moderate		2
Highland Dr.	Gravel		Good	Good	Good	Minor	None	None		4
Highland Dr.	Gravel		Fair	Fair	Fair	Moderate	None	None		3
Hightlook Ct.	Gravel		Good	Fair	Good	None	None	None		3
Hilfair Ct.	Gravel		Good	Good	Good	None	None	None		4
Hillside Pl.	Gravel		Fair	Fair	Fair	Minor	None	None		3
Horizon Ct.	Gravel		Fair	Poor	Fair	Minor	None	Moderate	Row Misaligned crowding road	3
Hornaday Parking Ave	Gravel		Fair	Fair	Fair	None	None	None		3
Iris Ct.	Gravel		Good	Poor	Good	None	None	None	No Drainage at CuldeSac	3
Jack Gist Ln.	Gravel		Good	Good	Good	None	None	None		4
Jade Dr.	Gravel		Fair	Fair	Poor	Moderate	None	None		3
Jakes Little Fireweed	Gravel	YES	Good	Poor	Good	None	None	Severe	alders prevent ditch establishment	2
Janeview Dr.	Gravel	YES	Good	Fair	Good	Minor	None	Minor	SD Obs'ts	3
Jennifer Pl.	Gravel		Good	Good	Good	Minor	Minor	None		3

Gravel_Roads_Table

STREET	TYPE	ANNEX	CROWN	DRAIN AGE	GRAVEL LAYER	SURFACE DEFORMATION	SURFACE DEFECTS	VEG	VEGETATION NOTES	1:FAILED 2:POOR 3:FAIR 4:GOOD 5:EXCELLENT
Jenny Way	Gravel		Good	Fair	Fair	None	None	None		3
Judy Rebecca Ct.	Gravel		Fair	Fair	Fair	Minor	None	None		3
Kalalock Ct.	Gravel	YES	Poor	Fair	Poor	Moderate	None	Moderate	Spruce/Alder	2
Kestrel Circle	Gravel		Good	Good	Good	None	None	None		4
Kia Ln.	Gravel		Good	Good	Good	None	None	Minor	SD Obst	4
Kramer Ln.	Gravel		Good	Good	Good	Minor	None	None		4
Krueth Way	Gravel		Good	Poor	Good	None	None	None		3
Lake St.	Gravel		Good	Good	Good	None	None	None		4
Lakeshore Dr. (W)	Gravel		Good	Good	Good	None	None	Minor		4
Lampert Ln.	Gravel		Good	Poor	Good	Severe	None	None		2
Lampert Ln.	Gravel		Good	Good	Good	Minor	None	None		4
Landing St.	Gravel		Good	Good	Good	None	None	None		4
Latham Ave.	Gravel		Fair	Good	Poor	Moderate	None	None		3
Lee Dr.	Gravel		Poor	Fair	Poor	None	None	Minor		3
Lincoln Dr.	Gravel	YES	Good	Good	Fair	None	None	None		3
Linda Ct.	Gravel		Good	Good	Good	Minor	None	None		4
Little Fireweed Ln.	Gravel		Excellent	Good	Excellent	None	None	None		5
Little Fireweed Ln.	Gravel		Good	Good	Good	None	None	None		4
Lupine Ct.	Gravel		Good	Fair	Good	Minor	None	None		3
Mariner Dr.	Gravel		Fair	Good	Good	Good	None	None		4
Mariner Dr.	Gravel		Fair	Fair	Fair	Minor	None	None		3
Mattox Rd.	Gravel		Good	Good	Good	Minor	None	None		4
Meadow Dr.	Gravel		Poor	Poor	Fair	Moderate	None	None		2
Miller Ln.	Gravel		Fair	Fair	Fair	Moderate	None	None		3
Mission Rd.	Gravel	YES	Fair	Poor	Poor	Moderate	None	Minor	Routine Brushing	2
Mount Augustin Dr.	Gravel		Fair	Fair	Poor	Moderate	None	Minor	Routine Brushing Spruce well within	3
Mountain Park Street	Gravel		Good	Fair	Good	Minor	None	Moderate	corridor	3
N. Glacier View Ct.	Gravel	YES	Good	Fair	Good	None	None	None		3
Natile Cir.	Gravel	YES	Good	Fair	Good	None	None	None		4
Noview Ave.	Gravel		Fair	Poor	Good	None	None	None		3
Ocean Drive Lp.	Gravel		Good	Fair	Good	None	None	Minor	Spruce	4
Ohlson Ln.	Gravel		Poor	Poor	Poor	Moderate	None	None		2
Orion Cir.	Gravel	YES	Poor	Good	Poor	Minor	Minor	None		2
Palinbrush Ct.	Gravel	YES	Fair	Poor	Fair	Severe	None	Moderate	Spruce&SD Obst	2

Gravel_Roads_Table

STREET	TYPE	ANNEX	CROWN	DRAIN AGE	GRAVEL LAYER	SURFACE DEFORMATION	SURFACE DEFECTS	VEG	VEGETATION NOTES	1: FAILED 2: POOR 3: FAIR 4: GOOD 5: EXCELLENT
Painbrush St.	Gravel	YES	Poor	Poor	Poor	Moderate	None	Moderate	Spruce obst	2
Paradise Pl.	Gravel	YES	Good	Good	Good	Minor	None	None		4
Pennock St.	Gravel		Good	Fair	Good	Minor	None	Moderate		3
Pine View Rd.	Gravel	YES	Fair	Fair	Fair	None	None	None		3
Pleasant Way	Gravel		Poor	Poor	Poor	None	None	Moderate		2
Poppy Cir.	Gravel		Good	Good	Good	None	None	None		4
Queets Cir.	Gravel	YES	Fair	Good	Poor	Moderate	None	None		2
Quinall Ave.	Gravel	YES	Good	Fair	Fair	None	None	Minor	Spruce Obst/SD	3
Race Rd.	Gravel	YES	Good	Good	Poor	Moderate	None	None		3
Race Rd.	Gravel	YES	Good	Good	Poor	Moderate	None	None		3
Rainbow Ct.	Gravel		Fair	Poor	Poor	Minor	None	Severe		3
Rainbow Pl.	Gravel		Poor	Poor	Poor	Moderate	None	None		2
Rangview Ave.	Gravel		Fair	Good	Poor	Severe	None	Severe		2
Rangview Ave.	Gravel		Fair	Fair	Poor	Severe	None	None		2
Reber Rd.	Gravel		Good	Fair	Good	None	None	None		4
Ridgeaway Ct.	Gravel	YES	Good	Fair	Good	None	None	Moderate	Ditch Obst	4
Rosebud Ct.	Gravel	YES	Fair	Poor	Fair	Moderate	None	None		3
Rosewood Cir.	Gravel	YES	Good	Good	Good	Minor	None	Minor	SD Obst	4
S. Park Cir.	Gravel	YES	Good	Good	Good	Minor	None	None		4
Saltwater Dr.	Gravel		Fair	Good	Poor	Moderate	None	Minor		3
Scenic Pl.	Gravel	YES	Fair	Fair	Fair	Minor	None	None		3
Sea Breeze Ct.	Gravel		Good	Poor	Good	None	None	Moderate		3
Seascape Dr.	Gravel		Fair	Poor	Fair	None	None	None	Severe ROW Misalignment	2
Shannon Ct.	Gravel		Good	Good	Good	None	None	None		4
Shannon Ln.	Gravel		Good	Good	Good	None	None	None		4
Shelford St.	Gravel		Poor	Poor	Poor	Poor	None	Moderate		2
Shirley Ct.	Gravel		Good	Good	Good	Minor	None	None		4
Skagit Cir.	Gravel		Fair	Fair	Fair	Fair	None	None		3
Slavin Dr.	Gravel	YES	Good	Fair	Good	None	None	None		4
South Slope Dr.	Gravel		Good	Good	Good	None	None	Minor	Routine Brushing	4
Spencer Dr.	Gravel	YES	Good	Poor	Good	None	None	Severe	Row Misalignnd crowding road	3
Spruce Cir.	Gravel	YES	Fair	Poor	Poor	Moderate	None	None		2
Spruce Ln.	Gravel		Poor	Poor	Poor	Moderate	None	None		2

Gravel_Roads_Table

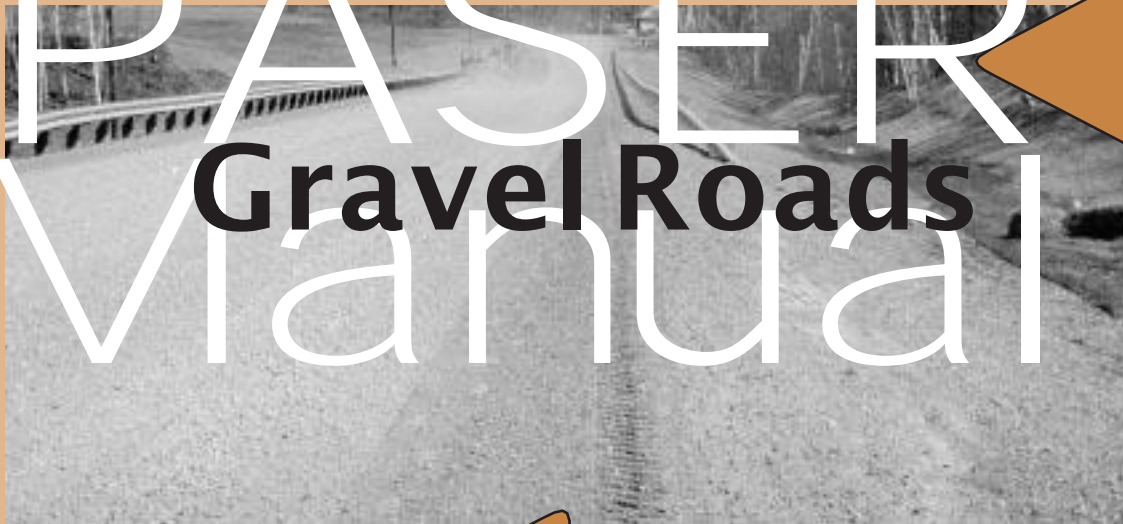
STREET	TYPE	ANNEX	CROWN	DRAIN AGE	GRAVEL LAYER	SURFACE DEFORMATION	SURFACE DEFECTS	VEG	VEGETATION NOTES	1:FAILED 2:POOR 3:FAIR 4:GOOD 5:EXCELLENT
Spurcewood Dr.	Gravel	YES	Good	Poor	Poor	Severe	None	None		2
Stellars Jay	Gravel		Good	Good	Good	Minor	None	None		4
Tasmania East	Gravel		Good	Good	Poor	None	None	Minor	Routine Brushing	3
Tasmania West	Gravel		Good	Fair	Poor	None	None	Minor	Routine Brushing	3
Terriview Pl.	Gravel		Excellent	Excellent	Excellent	None	None	None		5
Thompson Dr.	Gravel		Good	Fair	Good	None	None	Minor	Brush in Travelway	4
Tilon Ct.	Gravel		Good	Good	Good	None	None	None		4
Tundra Rose Rd.	Gravel	YES	Good	Fair	Good	Moderate	None	Minor	Routine Brushing	3
Uminski Ct.	Gravel		Good	Fair	Good	None	None	Minor		4
Upland Ct.	Gravel		Good	Fair	Poor	None	None	None		3
Virginalyn Way	Gravel		Excellent	Excellent	Excellent	None	None	None		5
W. Cityview Ave.	Gravel		Fair	Poor	Poor	Moderate	None	None		2
W. Fairview Ave.	Gravel		Fair	Fair	Fair	Minor	None	None		3
W. Jeffrey Ave.	Gravel	YES	Fair	Poor	Fair	Moderate	None	Minor		3
West Terrace Blvd.	Gravel		Good	Good	Good	None	None	None		4
Westwood Ave.	Gravel	YES	Good	Fair	Good	Minor	None	None		3
Whispering Meadow A	Gravel	YES	Good	Good	Poor	Moderate	None	None		3
Williams Pl.	Gravel		Good	Fair	Good	None	None	None		3
Willow Dr.	Gravel	YES	Good	Fair	Good	Minor	None	None		3
Wright St.	Gravel		Poor	Poor	Poor	Severe	None	Moderate		2
Wythe Way	Gravel		Poor	Poor	Poor	Minor	None	None		2

Gravel_Roads_Table

Appendix D – Manuals for the PASER Road Assessment Model

Pavement Surface Evaluation and Rating

PASER Gravel Roads Manual



RATING

5



RATING

3



RATING

1

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This manual is intended to assist local officials in understanding and rating the surface condition of gravel roads. It describes types and causes of distress and provides a simple system to visually rate the road segment's condition. The rating procedure can be used as condition data for the Wisconsin DOT local road inventory and as part of a computerized pavement management system like PASERWARE.

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Pavement Surface Evaluation and Rating

PASEI Manual

Gravel Roads

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Pavement Surface Evaluation and Rating

Gravel PASER Manual

There are many miles of unsurfaced roads in this country. Wisconsin alone has over 22,000 miles of gravel roads under the jurisdiction of local governments. Maintaining and improving these roads is a major responsibility for local governments.

Gravel roads may service very remote areas and very few vehicles. On the other hand it is common to have gravel roads providing service to agricultural, logging, and recreational areas with fairly high traffic volumes. Many urban areas also have some gravel roads. Heavy trucks and residential traffic can combine to make very heavy demands on these unsurfaced roads.

This manual is intended to help you plan the maintenance and overall management of gravel roads. It discusses common problems and typical repairs. A simple system for evaluating conditions and rating roads is included.

The Wisconsin Transportation Information Center also has PASER manuals for other pavement types (see inside back cover). The rating systems are similar and compatible so that local road agencies can work with a comprehensive condition rating method. The rating procedure can be used as condition data for the Wisconsin DOT local road inventory (WISLR) and as part of a computerized pavement management system like PASERWARE.

Taking an organized approach to roadway management has many benefits. By documenting the actual conditions of roads you can set realistic budgets, make timely repairs, and set up cost effective maintenance procedures. Developing an overall plan for the roadway system lets local agencies develop budgets and plan for future needs. When detailed information is available, local officials can respond more effectively to questions from the public. A planned approach is easier to explain and receives greater public support.

Several key steps are necessary to develop a meaningful roadway management plan. First, you must inventory the existing condition. This is normally done by dividing the roadway into segments with similar conditions. During the inventory you collect information on construction history, roadway width, etc. Then you need some method for assessing the condition of the existing roadway. This Gravel PASER Manual uses a visual approach. Other information from material sampling, testing, and traffic counts can be useful for a more detailed system plan.

Another necessary step is setting priorities for roadway improvements. You can use roadway condition and the local importance of these roads to assign priorities. Then budgets can be developed based on cost estimates for the projected improvements. Since not all improvements can be made in one year, you can set up a multi-year budget plan. You can make a capital improvement plan for three to five years. Normally this is updated annually.

Gravel road evaluation

Evaluating and rating gravel roads requires a different perspective than similar evaluations of asphalt or concrete pavements. This is due to the nature of gravel roads and their variability. Surface conditions on gravel roads can change literally overnight. Heavy rains and local heavy traffic can dramatically change the surface characteristics of gravel roads from one day to the next. In addition, routine maintenance activities, such as one pass of a motor grader, could improve the surface conditions of a gravel road significantly.

Since the evaluation or rating of a road could vary depending on recent weather conditions or recent maintenance activities, it should be based on major factors. Detailed surface conditions should be secondary.

The most important factors in evaluating a gravel road are the road cross section, drainage, and adequacy of the gravel layer. The gravel road cross section must contain adequate crown and good lateral drainage systems. The crown should be approximately 6", the adjacent ditches should be deep enough to contain surface water, and the culvert systems should be clean and sized to prevent any serious impoundment of water against the roadway.

The depth of the gravel layer will obviously depend on the existing soils and the amount of heavy traffic. For most conditions, a minimum gravel thickness of 6" is required. Heavier layers are necessary for very poor soils and/or very heavy traffic loads. Using geotextiles in very poor subgrade soil conditions can also significantly improve the performance of a gravel road.

Surface distress, such as ruts and potholes, indicates a lack of strength. This could be caused by improper drainage, by lack of adequate gravel cover, or possibly both. Therefore, surface distress becomes an important indicator of the primary concern for drainage and adequate gravel. The level of service that a gravel road provides to the driver also depends on smooth ride and dust control. Therefore distress such as washboarding, loose rock, and dust are important in the overall service of the road. However, these conditions are secondary since they can change quickly due to weather and maintenance activities. They should not influence the primary evaluation of the roadway.

It may be difficult to distinguish between a poorly maintained gravel road and an unimproved (dirt) road. The local road agency must first decide if they plan to maintain the road with a gravel surface or as an unimproved road. A minimum of 1½"– 2" of gravel surfacing is generally necessary to be considered a gravel road. More gravel is needed to provide a good level of service.

Surface conditions and defects

The *Gravel PASER Manual* presents a method for visually assessing and rating the conditions of existing roadways. It is based on understanding the conditions and defects common on gravel roads. To set a rating you assess both the extent of problems on the road and the appropriate repairs or reconstruction needed.

It is helpful to separate the various conditions common to gravel roads. Five road conditions can be used to evaluate and rate gravel roads.

Crown

The height and condition of crown, and an unrestricted slope of roadway from the center across the shoulders to the ditches.

Drainage

The ability of roadside ditches and under-road culverts to carry water away from the road.

Gravel layer

Adequate thickness and quality of gravel to carry the traffic loads.

Surface deformation

Washboarding, potholes and ruts.

Surface defects

Dust and loose aggregate.

Each of these is described in some detail in this manual. Assessing the condition of an actual roadway usually involves looking for different combinations of conditions.

In reviewing different conditions and defects, it is important to consider their severity and extent. Generally problems begin slowly and progressively become more serious. Slight defects will grow into moderate and then severe conditions. At first, defects may be found in only a few isolated places. As the condition worsens, more defects will show up on the surface. Examples in this manual will help you identify conditions and determine both how bad they are and how extensive they are.

CROWN

An unsurfaced road must be built so water drains quickly off the roadway. If it is not, water stays in ponds or puddles, soaks into the roadbed, and softens it. Building a crown into the road—making the center of the road higher than the shoulder—enhances drainage. Normally, a gravel road will have 4"–6" of crown, or fall, from its center to the edge.

A roadway that has no crown will pond water. A windrow of soil or a high shoulder may also trap water on the roadway and impede drainage. In severe cases the crown is reversed—

lower than the edges—so that the road is in a bowl shape. Naturally, this traps water and rapidly deteriorates the roadway, especially under traffic.

Inadequate crown can be restored by regrading with a motor patrol grader. Light blading will restore minor irregularities. Restoring crown to a flat roadway may require complete reworking. This involves scarifying, or cutting loose, 3"–4" of gravel and reshaping the crown. It is helpful to apply water and use compaction to establish the crown.

If the surface gravel on the roadway is inadequate you may need to add gravel to construct a road with proper crown. Use good quality aggregate.

Hard and sound aggregate will prevent the breakdown of large aggregate into small particles under traffic. A proper mixture of aggregate sizes (gradation) is also important. You need an adequate amount of fines to bind the gravel together on the road. See Wisconsin Transportation Bulletins No. 4, *Road Drainage* and No. 5, *Gravel Roads* for more information.

When you do routine maintenance grading, take care to grade the roads to allow free drainage from the center of the road to the shoulder and into the ditch. Improper grading can create a secondary ditch.

► Excellent crown. No restriction to water flow from centerline to ditch.



Flat crown with poor grading has created secondary ditch preventing free drainage into

▼ roadside ditch.



Poorly graded crown traps water causing it to run down center of road.

DRAINAGE

Roadside ditches and culverts must be able to handle surface water flow. Without adequate ditches, water will pond on the roadway and soften the road base. The ditch must be wide and deep enough to accommodate all the surface water. It must slope so water drains and doesn't form local ponds. A ditch bottom which is several feet below the top of the road is best. This will provide thorough drainage of the roadbed and prevent flooding. Deeper and wider ditches may be necessary to

accommodate very heavy surface water flow. Ditches must be maintained to prevent erosion or the buildup of debris.

Drainage across roadways is handled with culverts or bridges. These drainage structures must be maintained to prevent ponding and water backup. Culvert headwalls and riprap are very helpful in directing water flow and preventing erosion of the roadbed.

Ditch cleaning is a routine maintenance procedure necessary to keep water flowing properly. Spoil material from a ditch may be used along the roadway if there is room. Major ditch

cleaning may require loading and hauling excess material. Take care to maintain uniform ditch slopes. Seed the soil or install additional erosion control after major ditching repairs.

Roadway culverts tend to fill with debris and silt. They must be cleaned routinely to maintain their water carrying capacity. Replacing headwalls and riprap is also necessary to prevent erosion. Collapsed or damaged culverts must be replaced.



◀ Excellent drainage with wide deep ditches.

Partial drainage. Ditch and new culvert being added on left. Little or no drainage on right.



▲ Good ditches.



DRAINAGE

Continued

► Poor drainage due to little or no ditch, no driveway culverts.



Shallow, narrow ditch cannot carry surface water causing ditch erosion and temporary roadway flooding.



◀ Shallow ditch and partially filled culvert. Ditch needs cleaning and culvert should be lowered to allow a minimum of **12"** of aggregate cover.

► No ditch. Road is actually trenched into roadside forcing water onto surface.



▶
Excellent
gravel
layer.



GRAVEL LAYER

Traffic loads require an adequate layer of gravel to carry and distribute the loads to the subsoils. The thickness needed will vary with the amount of heavy traffic and the stability of the subsoils. A minimum layer of 6" is normally required. Heavier layers, up to 10" or more, are sometimes used for heavy loads or poor soil conditions.

The gravel must be of good quality to provide long term service. The gradation and durability of the gravel (measured by hardness and soundness testing) are important. A proper gradation contains a mixture of larger aggregate (1"), sand-sized aggregate, and fines. More fines (8%–15%) are recommended for surfacing gravel than are normally used in base gravel. See Transportation Information Bulletin No. 5, *Gravel Roads*, for more information.



◀
Adequate gravel
layer. No ruts or
potholes.



◀
Little or
no gravel
layer.

SURFACE DEFORMATION

Washboard

Traffic action can dislodge aggregate and create a washboard effect on the surface. This washboarding or corrugation develops across the road, perpendicular to the direction of traffic. It is more prevalent under heavy traffic and under loose aggregate conditions. It may also tend to develop on hills or curves, near intersections, or in areas where traffic is accelerating or decelerating. Soft roadbeds and improper grader operation can also cause washboards.

Light washboarding can be removed with routine grading. Washboarding that is moderate or severe often requires scarification, cutting down 3"-4", and regrading. If there is insufficient material, new gravel will be required. Select an aggregate with sufficient fines to resist future washboarding.

Since washboarding may be concentrated at specific locations, spot regrading is often required. Take care to blend the regraded sections into the adjoining roadway. Since moisture is needed for compaction, correcting washboarding after a rain is more effective. Maintain the crown, and super-elevation, and match bridges and intersections when repairing spot corrugations.

Operating a motor patrol grader at a high rate of speed can actually create corrugations during routine maintenance. Speeds below 10 mph are recommended. Proper blade angle and pitch, and proper tire inflation, are also essential.

▼ Moderate washboarding in center of road.



► Severe washboarding traps water.



Potholes

Potholes and depressions can develop in the gravel or surface. They're caused when surface material is worn away or soft spots develop in underlying soils. They may fill with water and are accelerated in roads without adequate crown. Isolated potholes may be repaired by hand. This can involve putting granular material into the holes and compacting it.

- ◀ Small, isolated potholes. Routine regrading should eliminate them.
- ▶ Series of moderate potholes require scarification and regrading.



- ▶ Potholes at bridge may require scarification and hand patching. Gravel and debris should be cleaned off bridge deck.
- ◀ Severe potholes covering most of road need additional gravel and regrading.

Extensive potholes require reworking and major regrading. It is usually necessary to add granular material to repair them. Scarify the area prior to repair to insure a good blend. You may need to reshape the road to restore a crown and make drainage improvements to restore surface stability and prevent future potholes.

Ruts

Traffic can create a surface depression or rut over a portion of a gravel road. The ruts may be caused by dislodging some of the surface gravel. Loose unstable gravel may be displaced by traffic causing minor surface ruts. Severe rutting (over 3") may be caused by weak underlying soils. Poor crown and drainage conditions weaken the base and accelerate rutting.

Slight rutting can be removed by blading and restoring the crown. Severe rutting caused by unstable subsurface soils will require improvements in drainage and addition of aggregate.



- ▲ Rut in wheel path needs regrading to eliminate ponding and prevent further road deterioration.

Numerous ruts and very poor drainage create soft roadbed conditions and need major

- ▼ regrading and new aggregate.



SURFACE DEFECTS

Dust

Traffic on dry gravel roads can generate dust. Good quality gravel used in the construction of gravel roads has a combination of large aggregate, sand, and fine material or binder. These fines can be picked up under the action of traffic and become airborne.

Dust on gravel roads creates several problems. Visibility can be severely restricted under heavy dust conditions,

creating traffic safety hazards. Dust is a form of air pollution and can be very objectionable to nearby property owners. The loss of the fine material from a well-graded gravel surface can eventually lead to a loss of stability. Without the fine binder material, the larger particles become unstable and are dislodged by traffic.

Rolling and compacting a new gravel surface will help maintain a tight and impervious surface or crust. Under traffic and during extended dry periods this crust may be disturbed and heavy

dust conditions result. Controlling dust with liquid calcium chloride or other surface treatment agents can be very helpful.

It is essential to replace the fines in the gravel mix to maintain the road and keep it stable under traffic. Fines can often be reclaimed from the shoulder edge and regraded and mixed with existing gravel. This should be done as routine maintenance while restoring and maintaining the crown.



◀ Heavy dust obscures vision and causes loss of roadway fine material. A dust control chemical may be advisable in areas of heavy traffic.

Loose aggregate

Loose aggregate or unstable surface gravel conditions can develop from loss of fines through heavy dust action or from erosion due to an improper gradation mix of the original aggregate. Vehicles can move loose or unstable aggregate forming ridges or windrows in the direction of traffic. Generally gravel will be moved from the wheel path and form ridges at the center of lanes and at roadway edges. Loose aggregate can also accumulate at places where vehicles frequently turn or stop.

Loose aggregate may be temporarily bladed to the shoulder although you have to be careful not to restrict drainage. By remixing loose aggregate with fines from the road edge it may be possible to produce a well graded mix. However, a severe accumulation of loose aggregate usually requires mixing with additional well graded surface gravel.



- ▲ Loose aggregate over most of road. Light grading and compaction during wet weather would improve stability and develop a surface crust.

► Heavy accumulation of loose aggregate on outside of roadway.

Regrading and possibly new aggregate are needed.



Rating road surface condition

A simplified rating system has been developed to help manage gravel roads. It uses a scale of 1 to 5—5 is excellent condition and 1 is failed. In a normal progression the road will start out in excellent condition and gradually deteriorate under the effects of traffic and weather. Routine grading and minor patching may be sufficient to restore the road to excellent condition. As conditions worsen, more extensive maintenance

may be required; complete rebuilding may eventually be necessary.

To select a rating first assess the crown, drainage, and gravel layer. Then review the individual defects and select the type of maintenance or rehabilitation necessary. The rating should reflect the condition and type of maintenance or repairs required. Look at the photographs in this section to become more familiar with the ratings and conditions.

RATINGS ARE RELATED TO NEEDED MAINTENANCE OR REPAIR

Rating 5 Newly constructed road. Excellent crown and drainage. No maintenance required.

Rating 4 Good crown and drainage. Routine maintenance.

Rating 3 Roadway shows traffic effects. Needs regrading, minor ditch maintenance, and spot gravel application.

Rating 2 Road needs additional aggregate layer, major drainage improvements.

Rating 1 Travel is difficult. Complete rebuilding required.

Surface rating	Visible distress*	General condition/treatment measures
5 Excellent	No distress. Dust controlled. Excellent surface condition and ride.	New construction—or total reconstruction. Excellent drainage. Little or no maintenance needed.
4 Good	Dust under dry conditions. Moderate loose aggregate. Slight washboarding.	Recently regraded. Good crown and drainage throughout. Adequate gravel for traffic. Routine grading and dust control may be needed.
3 Fair	Good crown (3"-6"). Adequate ditches on more than 50% of roadway. Gravel layer mostly adequate but additional aggregate may be needed in some locations to correct washboarding or isolated potholes and ruts. Some culvert cleaning needed. Moderate washboarding (1"-2" deep) over 10%-25% of the area. Moderate dust, partial obstruction of vision. None or slight rutting (less than 1" deep). An occasional small pothole (less than 2" deep). Some loose aggregate (2" deep).	Shows traffic effects. Regrading (reworking) necessary to maintain. Needs some ditch improvement and culvert maintenance. Some areas may need additional gravel.
2 Poor	Little or no roadway crown (less than 3"). Adequate ditches on less than 50% of roadway. Portions of the ditches may be filled, overgrown and/or show erosion. Some areas (25%) with little or no aggregate. Culverts partially full of debris. Moderate to severe washboarding (over 3" deep) over 25% of area. Moderate rutting (1"-3"), over 10%-25% of area. Moderate potholes (2"-4") over 10%-25% of area. Severe loose aggregate (over 4").	Travel at slow speeds (less than 25 mph) is required. Needs additional new aggregate. Major ditch construction and culvert maintenance also required.
1 Failed	No roadway crown or road is bowl shaped with extensive ponding. Little if any ditching. Filled or damaged culverts. Severe rutting (over 3" deep), over 25% of the area. Severe potholes (over 4" deep), over 25% of area. Many areas (over 25%) with little or no aggregate.	Travel is difficult and road may be closed at times. Needs complete rebuilding and/or new culverts.

* Individual road sections will not have all of the types of distress listed for any particular rating. They may have only one or two types.

RATING 5

EXCELLENT — Little or no maintenance required

New construction with excellent crown, drainage and gravel layer. Little or no distress.

►
Newly constructed road with excellent crown, drainage and gravel layer.



►
Road has excellent crown. Gravel has been stabilized for dust control. Very good drainage.





RATING 4

GOOD — Routine maintenance may be required

Good crown, drainage and gravel layer. Distress limited to traffic effects such as dust, loose aggregate, and slight washboarding.



Good crown, ditches, and gravel layer.

Slight traffic effects, washboarding, and loose gravel.



Good crown and gravel, ditch appears good throughout.

Occasional routine grading for traffic effects.



Plenty of crown and excellent ditch. Needs routine grading to eliminate slight secondary ditch and loose gravel.

RATING 3

FAIR — Regrading and drainage improvement, spot gravel application needed

Adequate drainage and crown on more than 50% of roadway. Gravel layer is adequate with only need for spot replacement. Regrading needed to improve crown and repair wash-boarding and slight ruts or potholes.



▶ Good gravel and crown but ditch partially blocked. Needs cleaning or additional culvert.



▶ Heavy accumulation of loose gravel.

Requires regrading. Ditch cleaning needed on right side.



▶ Fair crown and good gravel layer. Shallow ditch needs improvement.

RATING 3

FAIR — *(continued)*
Regrading and drainage
improvement, spot gravel
application needed



◀
Fair crown and
gravel layer.

Needs ditching
on right and
more crown.



◀
Adequate
drainage and
fair crown. A
few small
potholes
indicate need
for regrading
and additional
gravel.

RATING 2

POOR — More gravel and major drainage improvements required

Travel at slow speeds (25 mph) may be necessary. Additional gravel layer needed to carry traffic. Little or no crown. Ditching is inadequate on more than 50% of roadway.

► Some gravel and crown but almost no ditch. Driveway culvert required.



▲ Little gravel and almost no ditches or crown.

No crown, poor drainage, and needs gravel. ▼



▲ Lack of ditch on right causes ruts. Needs gravel.

Numerous potholes indicate additional gravel most likely required to restore crown. Needs extensive reworking. ►





RATING 1

Failed — Reconstruction required
Needs complete rebuilding. Travel is difficult; road may be closed at times.

◀ Ruts. No ditch or aggregate.



Deep ruts and potholes.
No drainage. Travel is difficult.
▲



▲ Complete failure.
Restricted travel.

Practical advice on rating roads

Inventory and field inspection

Most agencies routinely observe roadway conditions as a part of their normal work and travel. However, an actual inspection means looking at the entire roadway system and preparing a written summary of conditions. This inspection has many benefits over casual observations. Useful comparisons between segments can be made and more dependable decisions are likely because the entire roadway system is considered.

An inspection also encourages a review of specific conditions important in roadway maintenance—drainage and adequate strength, for example.

A simple written inventory is useful in making decisions where other people are involved. You do not have to trust your memory, and you can usually answer questions in more detail. Having a written record also improves your credibility with the public.

Finally, a written inventory is very useful in documenting the changing roadway conditions. Without records extending over several years, it is impossible to know if your road conditions are improving, holding their own, or declining.

Annual budgets and long range planning are best done when based on actual needs as documented with a written inventory.

The Wisconsin DOT local road inventory (WISLR) is a valuable resource for managing your local roads. Adding PASER surface condition ratings is an important improvement.

Averaging and comparing sections

For evaluation, divide the local road system into individual segments which are similar in construction and condition. Rural segments may vary from ½ mile to a mile long, while some sections in urban areas will likely be 1-4 blocks long or more. If you are starting with the WISLR inventory, the segments have already been established. You may want

to review them for consistent road conditions. Obviously no roadway segment has entirely consistent conditions. Some “averaging” will be necessary. Also, individual road segments will not have all of the types of distress listed for any particular rating; they may have only one or two. The objective is to rate the condition that represents the majority of the roadway. Small or isolated conditions should not influence the rating. It is useful to note these special conditions on the inventory form so this information can be used in project design. For example, some spot repairs may be required.

Occasionally pavement conditions vary significantly. For example, short sections of good condition may be followed by sections of poor pavement conditions. In these cases it is best to rate the pavement according to the worst conditions and note the variation on the form.

The overall purpose of condition rating is to provide a relative comparison of the condition of all your pavement segments. Therefore, comparing any two pavement segments would show the better pavement having a higher rating. Within a given rating, say 3, not all pavements will be exactly the same. However, they should all be considered to be in better condition than those with lower ratings, say 2. Sometimes it is helpful in rating a difficult segment to compare it to other previously rated segments. For example, if it is better than one you rated 2, and worse than a typical 4, then a rating of 3 is appropriate. Having all road segments rated in the proper relative order is most important and useful.

Separating road function from conditions

Gravel roads often are found in very low volume applications. This sometimes is confusing. People rating roads are more willing to accept poor condition on a road if it is little used. In higher traffic situations, they expect a road in better condition.

Therefore, there may be a tendency in evaluating the condition of a road to evaluate the condition more harshly in higher traffic volume situations and to be more lenient in evaluating little-used roads. This tendency should be avoided. The evaluation of the actual roadway condition must be objective.

You will also consider the road's function or importance but this must be done separately. Roads can be categorized by their use or their function. In selecting project improvements, you will likely consider both the road condition and the road's importance to select the most needed projects.

Planning maintenance and repair

We have found that relating a normal maintenance or rehabilitation procedure to the surface rating scheme helps local officials use the rating system. However, an individual surface rating should not automatically dictate the final maintenance or rehabilitation technique. You should consider safety, future traffic projections, original construction, and roadway strength since these may dictate a more comprehensive rehabilitation than the rating suggests.

Summary

Using local road funds most efficiently requires good planning and accurate identification of appropriate rehabilitation projects. Assessing roadway conditions is an essential first step in this process. The PASER evaluation procedure has proven effective in improving decision making and using highway funds more efficiently. It can be used directly by local officials and staff. It may be combined with additional testing and data collection in a more comprehensive pavement management system. For additional training and information, contact the Wisconsin Transportation Information Center.

*Transportation
Information
Center
Publications*

Pavement Surface Evaluation and Rating (PASER) Manuals

Asphalt PASER Manual, 2002, 28 pp.

Brick and Block PASER Manual, 2001, 8 pp.

Concrete PASER Manual, 2002, 28 pp.

Gravel PASER Manual, 2002, 20 pp.

Sealcoat PASER Manual, 2000, 16 pp.

Unimproved Roads PASER Manual, 2001, 12 pp.

Drainage Manual

Local Road Assessment and Improvement, 2000, 16 pp.

SAFER Manual

Safety Evaluation for Roadways, 1996, 40 pp.

Flagger's Handbook (pocket-sized guide), 1998, 22 pp.

Work Zone Safety, Guidelines for Construction, Maintenance,
and Utility Operations, (pocket-sized guide), 2002, 58 pp.

Wisconsin Transportation Bulletins

#1 Understanding and Using Asphalt

#2 How Vehicle Loads Affect Pavement Performance #3
LCC—Life Cycle Cost Analysis

#4 Road Drainage

#5 Gravel Roads

#6 Using Salt and Sand for Winter Road Maintenance #7
Signing for Local Roads

#8 Using Weight Limits to Protect Local Roads #9
Pavement Markings

#10 Seal Coating and Other Asphalt Surface Treatments #11
Compaction Improves Pavement Performance

#12 Roadway Safety and Guardrail

#13 Dust Control on Unpaved Roads

#14 Mailbox Safety

#15 Culverts-Proper Use and Installation

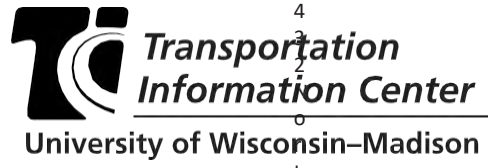
#16 Geotextiles in Road Construction/Maintenance and Erosion Control #17
Managing Utility Cuts

#18 Roadway Management and Tort Liability in Wisconsin #19
The Basics of a Good Road

#20 Using Recovered Materials in Highway Construction #21
Setting Speed Limits on Local Roads

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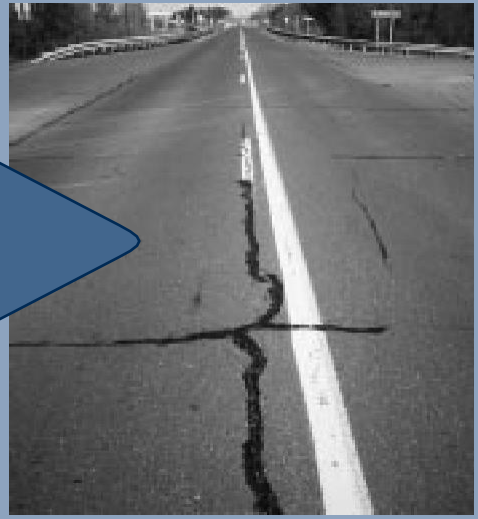
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Gravel Roads

Pavement Surface Evaluation and Rating

PASER Asphalt Roads Manual



RATING
10



RATING
7

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Department of Engineering Professional Development,
University of Wisconsin–Madison.

This manual is intended to assist local officials in understanding and rating the surface condition of asphalt pavement. It describes types of defects and provides a simple system to visually rate pavement condition. The rating procedure can be used as condition data for the Wisconsin DOT local road inventory and as part of a computerized pavement management system like PASERWARE.

The PASER system described here and in other T.I.C. publications is based in part on a roadway management system originally developed by Phil Scherer, transportation planner, Northwest Wisconsin Regional Planning Commission.

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Pavement Surface Evaluation and Rating

PASEI
Asphalt Roads
Manual

Donald Walker, T.I.C. Director, *author*
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Pavement Surface Evaluation and Rating

Asphalt PASER Manual

A local highway agency's major goal is to use public funds to provide a comfortable, safe and economical road surface—no simple task. It requires balancing priorities and making difficult decisions in order to manage pavements. Local rural and small city pavements are often managed informally, based on the staff's judgment and experience. While this process is both important and functional, using a slightly more formalized technique can make it easier to manage pavements effectively.

Experience has shown that there are three especially useful steps in managing local roads:

1. Inventory all local roads and streets.
2. Periodically evaluate the condition of all pavements.
3. Use the condition evaluations to set priorities for projects and select alternative treatments.

A comprehensive pavement management system involves collecting data and assessing several road characteristics: roughness (ride), surface distress (condition), surface skid characteristics, and structure (pavement strength and deflection). Planners can combine this condition data with economic analysis to develop short-range and long-range plans for a variety of budget levels. However, many local agencies lack the resources for such a full-scale system.

Since surface condition is the most vital element in any pavement management system, local agencies can use the simplified rating system presented in this *Asphalt PASER Manual* to evaluate their roads. The PASER ratings combined with other inventory data (width, length, shoulder, pavement type, etc.) from the WisDOT local roads inventory (WISLR) can be very helpful in planning future budgets and priorities.

WISLR inventory information and PASER ratings can be used in a computerized pavement management system, PASERWARE, developed by the T.I.C and WisDOT. Local officials can use PASERWARE to evaluate whether their annual road budgets are adequate to maintain or improve current road conditions and to select the most cost-effective strategies and priorities for annual projects.

PASER Manuals for gravel, concrete, and other road surfaces, with compatible rating systems are also available (page 29). Together they make a comprehensive condition rating method for all road types. PASER ratings are accepted for WISLR condition data.

Asphalt pavement distress

PASER uses visual inspection to evaluate pavement surface conditions. The key to a useful evaluation is identifying different types of pavement distress and linking them to a cause. Understanding the cause for current conditions is extremely important in selecting an appropriate maintenance or rehabilitation technique.

There are four major categories of common asphalt pavement surface distress:

Surface defects

Raveling, flushing, polishing.

Surface deformation

Rutting, distortion—rippling and shoving, settling, frost heave.

Cracks

Transverse, reflection, slippage, longitudinal, block, and alligator cracks.

Patches and potholes

Deterioration has two general causes: environmental due to weathering and aging, and structural caused by repeated traffic loadings.

Obviously, most pavement deterioration results from both environmental and structural causes. However, it is important to try to distinguish between the two in order to select the most effective rehabilitation techniques.

The rate at which pavement deteriorates depends on its environment, traffic loading conditions, original construction quality, and interim maintenance procedures. Poor quality materials or poor construction procedures can significantly reduce the life of a pavement. As a result, two pavements constructed at the same time may have significantly different lives, or certain portions of a pavement may deteriorate more rapidly than others. On the other hand, timely and effective maintenance can extend a pavement's life. Crack sealing and seal coating can reduce the effect of moisture in aging of asphalt pavement.

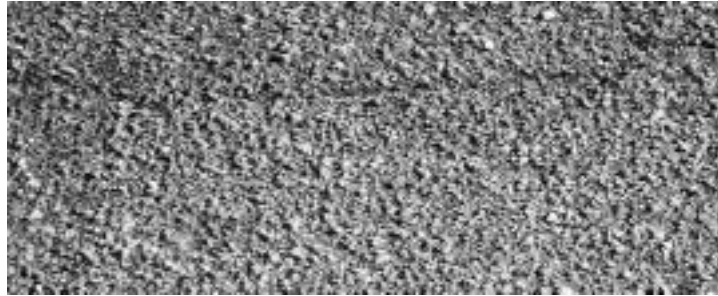
With all of these variables, it is easy to see why pavements deteriorate at various rates and why we find them in various stages of disrepair. Recognizing defects and understanding their causes helps us rate pavement condition and select cost-effective repairs. The pavement defects shown on the following pages provide a background for this process.

Periodic inspection is necessary to provide current and useful evaluation data. It is recommended that PASER ratings be updated every two years, and an annual update is even better.

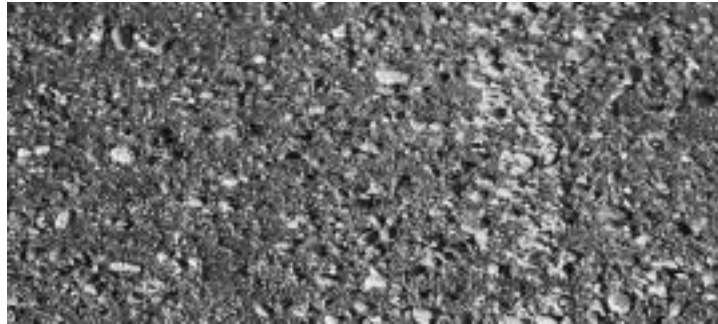
SURFACE DEFECTS

Raveling

Raveling is progressive loss of pavement material from the surface downward, caused by: stripping of the bituminous film from the aggregate, asphalt hardening due to aging, poor compaction especially in cold weather construction, or insufficient asphalt content. Slight to moderate raveling has loss of fines. Severe raveling has loss of coarse aggregate. Raveling in the wheelpaths can be accelerated by traffic. Protect pavement surfaces from the environment with a sealcoat or a thin overlay if additional strength is required.



◀ Slight raveling. Small aggregate particles have worn away exposing tops of large aggregate.



◀ Moderate to severe raveling. Erosion further exposes large aggregate.



◀ Severe raveling and loss of surface material.

Flushing

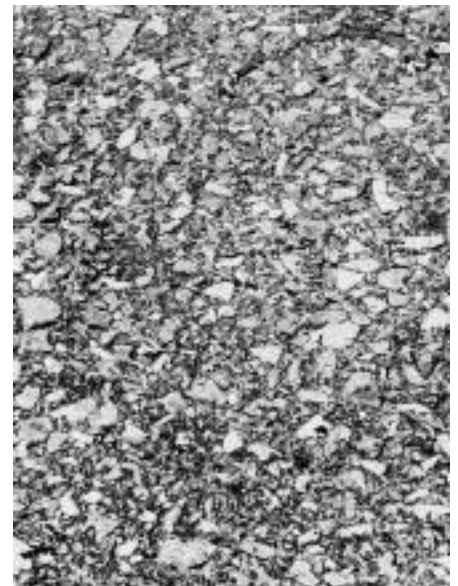
Flushing is excess asphalt on the surface caused by a poor initial asphalt mix design or by paving or sealcoating over a flushed surface. Repair by blotting with sand or by overlaying with properly designed asphalt mix.

Polishing

Polishing is a smooth slippery surface caused by traffic wearing off sharp edges of aggregates. Repair with sealcoat or thin bituminous overlay using skid-resistant aggregate.

Polished, worn aggregate needs repair. ▼

▶ Flushing. Dark patches show where asphalt has worked to surface.



SURFACE DEFORMATION

Rutting

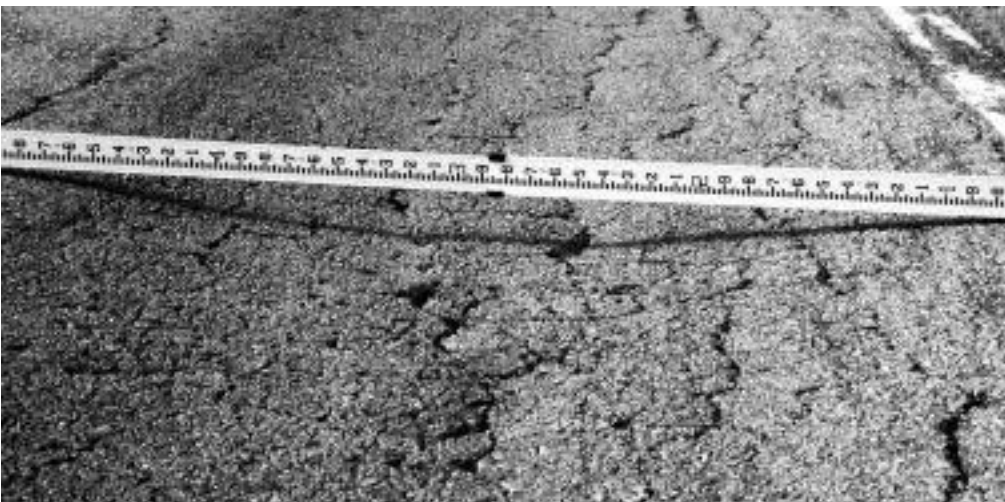
Rutting is displacement of material, creating channels in wheelpaths. It is caused by traffic compaction or displacement of unstable material. Severe rutting (over 2") may be caused by base or subgrade consolidation. Repair minor rutting with overlays. Severe rutting requires milling the old surface or reconstructing the roadbed before resurfacing.



Even slight rutting is evident after a rain.



Severe rutting over 2" caused by poor mix design.



Severe rutting caused by poor base or subgrade.

Distortion

Shoving or rippling is surfacing material displaced crossways to the direction of traffic. It can develop into washboarding when the asphalt mixture is unstable because of poor quality aggregate or improper mix design. Repair by milling smooth and overlaying with stable asphalt mix.

Other pavement distortions may be caused by settling, frost heave, etc. Patching may provide temporary repair. Permanent correction usually involves removal of unsuitable subgrade material and reconstruction.

Heavy traffic has shoved pavement

▼ into washboard ripples and bumps.



► Severe settling from utility trench.



► Frost heave damage from spring break-up.

▼ Widely spaced, well-sealed cracks.



CRACKS

Transverse cracks

A crack at approximately right angles to the center line is a transverse crack. They are often regularly spaced. The cause is movement due to temperature changes and hardening of the asphalt with aging.

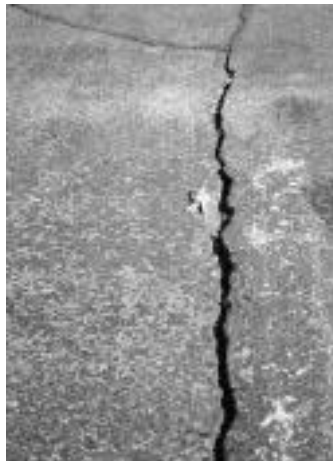
Transverse cracks will initially be widely spaced (over 50'). Additional cracking will occur with aging until they are closely spaced (within several feet). These usually begin as hairline or very narrow cracks; with aging they widen. If not properly sealed and maintained, secondary or multiple cracks develop parallel to the initial crack. The crack edges can further deteriorate by raveling and eroding the adjacent pavement.

Prevent water intrusion and damage by sealing cracks which are more than 1/4" wide.

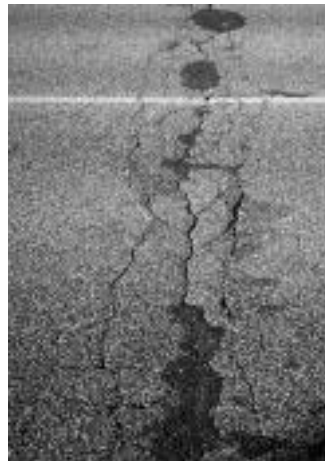
◀ Sealed cracks, a few feet apart.



▲ Tight cracks less than 1/4" in width.



▲ Open crack — 1/2" or more in width.



▲ Water enters unsealed cracks softening pavement and causing secondary cracks.



▲ Pavement ravels and erodes along open cracks causing deterioration.

Reflection cracks

Cracks in overlays reflect the crack pattern in the pavement underneath. They are difficult to prevent and correct. Thick overlays or reconstruction is usually required.

►
Concrete joints
reflected through
bituminous overlay.



Slippage cracks

Crescent or rounded cracks in the direction of traffic, caused by slippage between an overlay and an underlying pavement. Slippage is most likely to occur at intersections where traffic is stopping and starting. Repair by removing the top surface and resurfacing using a tack coat.

►
Crescent-
shaped cracks
characteristic of
slippage.



►
Loss of bond between
pavement layers allows
traffic to break
loose pieces of surface.



Centerline crack
(still tight). ▶



Edge cracking
from weakened
subbase and
traffic loads. ▼



Longitudinal cracks

Cracks running in the direction of traffic are longitudinal cracks. Center line or lane cracks are caused by inadequate bonding during construction or reflect cracks in underlying pavement. Longitudinal cracks in the wheel path indicate fatigue failure from heavy vehicle loads. Cracks within one foot of the edge are caused by insufficient shoulder support, poor drainage, or frost action. Cracks usually start as hairline or vary narrow and widen and erode with age. Without crack filling, they can ravel, develop multiple cracks, and become wide enough to require patching.

Filling and sealing cracks will reduce moisture penetration and prevent further subgrade weakening. Multiple longitudinal cracks in the wheel path or pavement edge indicate a need for strengthening with an overlay or reconstruction.

▶
First stage of
wheelpath cracking
caused by heavy
traffic loads.



Multiple open cracks at center line, wheelpaths and lane center. ▼



Block cracks

Block cracking is interconnected cracks forming large blocks. Cracks usually intersect at nearly right angles. Blocks may range from one foot to approximately 10' or more across. The closer spacing indicates more advanced aging caused by shrinking and hardening of the asphalt over time. Repair with sealcoating during early stages to reduce weathering of the asphalt. Overlay or reconstruction required in the advanced stages.

▶ Large blocks, approximately 10' across.



▶ Intermediate-size block cracking, 1'-5' across with open cracks.



▲ Extensive block cracking in an irregular pattern.

▶ Severe block cracking — 1' or smaller blocks. Tight cracks with no raveling.



Alligator cracks

Interconnected cracks forming small pieces ranging in size from about 1" to 6". This is caused by failure of the surfacing due to traffic loading (fatigue) and very often also due to inadequate base or subgrade support. Repair by excavating localized areas and replacing base and surface. Large areas require reconstruction. Improvements in drainage may often be required.

◀
Alligator crack pattern.
 Tight cracks and one patch.



◀
 Characteristic
 "chicken wire" crack
 pattern shows smaller
 pavement pieces and
 patching.



◀
 Open raveled alligator
 cracking with
 settlement along lane
 edge most likely due to
 very soft subgrade.

PATCHES AND POTHOLES

Patches

Original surface repaired with new asphalt patch material. This indicates a pavement defect or utility excavation which has been repaired. Patches with cracking, settlement or distortions indicate underlying causes still remain. Recycling or reconstruction are required when extensive patching shows distress.

►
Typical repair of utility excavation. Patch in fair to good condition.



►
Edge wedging. Pavement edges strengthened with wedges of asphalt. Patch is in very good condition.



►
Extensive patching in very poor condition.



Potholes

Holes and loss of pavement material caused by traffic loading, fatigue and inadequate strength. Often combined with poor drainage. Repair by excavating or rebuilding localized potholes. Reconstruction required for extensive defects.



◀
Small pothole where top course has broken away.



◀
Multiple potholes show pavement failure, probably due to poor subgrade soils, frost heave, and bad drainage.



◀
Large, isolated pothole, extends through base.

Note adjacent alligator cracks which commonly deteriorate into potholes.

Rating pavement surface condition

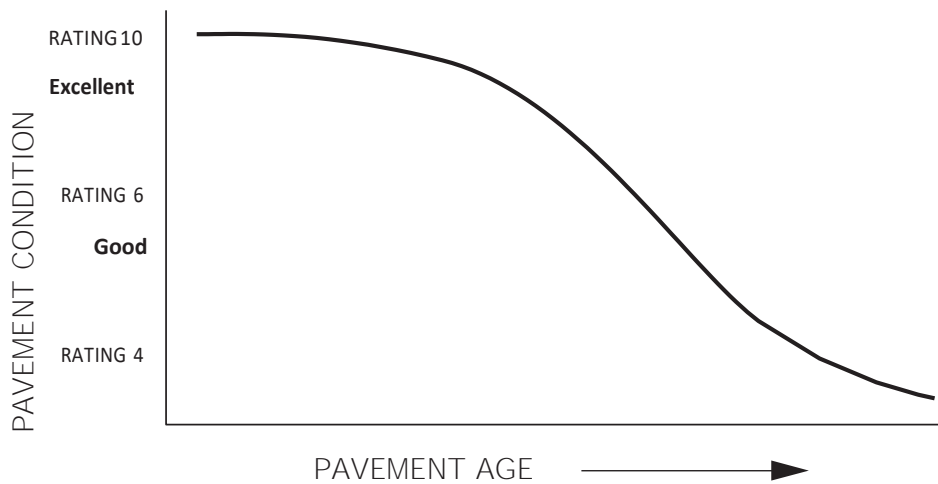
With an understanding of surface distress, you can evaluate and rate asphalt pavement surfaces. The rating scale ranges from 10 - excellent condition to 1- failed. Most pavements will deteriorate through the phases listed in the rating scale. The time it takes to go from excellent condition (10) to complete failure (1) depends largely on the quality of the original construction and the amount of heavy traffic loading.

Once significant deterioration begins, it is common to see pavement decline rapidly. This is usually due to a combination of loading and the effects of additional moisture. As a pavement ages and additional cracking develops, more moisture can enter the pavement and accelerate the rate of deterioration.

Look at the photographs in this section to become familiar with the descriptions of the individual rating categories. To evaluate an individual pavement segment, first determine its general condition. Is it relatively new,

toward the top end of the scale? In very poor condition and at the bottom of the scale? Or somewhere in between? Next, think generally about the appropriate maintenance method. Use the rating categories outlined below.

Finally, review the individual pavement distress and select the appropriate surface rating. Individual pavements will *not* have all of the types of distress listed for any particular rating. They may have only one or two types.



In addition to indicating the surface condition of a road, a given rating also includes a recommendation for needed maintenance or repair. This feature of the ratings system facilitates its use and enhances its value as a tool in ongoing road maintenance.

RATINGS ARE RELATED TO NEEDED MAINTENANCE OR REPAIR

Rating 9 & 10	No maintenance required
Rating 8	Little or no maintenance
Rating 7	Routine maintenance, crack sealing and minor patching
Rating 5 & 6	Preservative treatments (seal coating)
Rating 3 & 4	Structural improvement and leveling (overlay or recycling)
Rating 1 & 2	Reconstruction

Rating system

Surface rating	Visible distress*	General condition/ treatment measures
10 Excellent	None.	New construction.
9 Excellent	None.	Recent overlay. Like new.
8 Very Good	No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced (40' or greater). All cracks sealed or tight (open less than 1/4").	Recent sealcoat or new cold mix. Little or no maintenance required.
7 Good	Very slight or no raveling, surface shows some traffic wear. Longitudinal cracks (open 1/4") due to reflection or paving joints. Transverse cracks (open 1/4") spaced 10' or more apart, little or slight crack raveling. No patching or very few patches in excellent condition.	First signs of aging. Maintain with routine crack filling.
6 Good	Slight raveling (loss of fines) and traffic wear. Longitudinal cracks (open 1/4"– 1/2"), some spaced less than 10'. First sign of block cracking. Slight to moderate flushing or polishing. Occasional patching in good condition.	Shows signs of aging. Sound structural condition. Could extend life with sealcoat.
5 Fair	Moderate to severe raveling (loss of fine and coarse aggregate). Longitudinal and transverse cracks (open 1/2") show first signs of slight raveling and secondary cracks. First signs of longitudinal cracks near pavement edge. Block cracking up to 50% of surface. Extensive to severe flushing or polishing. Some patching or edge wedging in good condition.	Surface aging. Sound structural condition. Needs sealcoat or thin non-structural overlay (less than 2")
4 Fair	Severe surface raveling. Multiple longitudinal and transverse cracking with slight raveling. Longitudinal cracking in wheel path. Block cracking (over 50% of surface). Patching in fair condition. Slight rutting or distortions (1/2" deep or less).	Significant aging and first signs of need for strengthening. Would benefit from a structural overlay (2" or more).
3 Poor	Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Severe block cracking. Some alligator cracking (less than 25% of surface). Patches in fair to poor condition. Moderate rutting or distortion (1" or 2" deep). Occasional potholes.	Needs patching and repair prior to major overlay. Milling and removal of deterioration extends the life of overlay.
2 Very Poor	Alligator cracking (over 25% of surface). Severe distortions (over 2" deep). Extensive patching in poor condition. Potholes.	Severe deterioration. Needs reconstruction with extensive base repair. Pulverization of old pavement is effective.
1 Failed	Severe distress with extensive loss of surface integrity.	Failed. Needs total reconstruction.

* Individual pavements will not have all of the types of distress listed for any particular rating. They may have only one or two types.

RATING 10 & 9

EXCELLENT —

No maintenance required

Newly constructed or recently overlaid roads are in excellent condition and require no maintenance.



RATING 10

New construction.



RATING 9

Recent overlay, rural.



RATING 9

Recent overlay, urban.





RATING 8

VERY GOOD —
Little or no maintenance required

This category includes roads which have been recently sealcoated or overlaid with new cold mix. It also includes recently constructed or overlaid roads which may show longitudinal or transverse cracks. All cracks are tight or sealed.

◀
Recent
chip seal.



◀
Recent
slurry seal.

▼ Widely spaced,
sealed cracks.



New cold mix surface.



RATING 7

GOOD —

Routine sealing recommended

Roads show first signs of aging, and they may have very slight raveling. Any longitudinal cracks are along paving joint. Transverse cracks may be approximately 10' or more apart. All cracks are 1/4" or less, with little or no crack erosion. Few if any patches, all in very good condition. Maintain a crack sealing program.

► **Tight and sealed transverse and longitudinal cracks. Maintain crack sealing program.**



► **Tight and sealed transverse and longitudinal cracks.**



► **Transverse cracks about 10' or more apart. Maintain crack sealing program.**



**RATING 6**

GOOD —

Consider preservative treatment

Roads are in sound structural condition but show definite signs of aging. Seal-coating could extend their useful life. There may be slight surface raveling. Transverse cracks can be frequent, less than 10' apart. Cracks may be $\frac{1}{4}$ – $\frac{1}{2}$ " and sealed or open. Pavement is generally sound adjacent to cracks. First signs of block cracking may be evident. May have slight or moderate bleeding or polishing. Patches are in good condition.



Slight surface raveling with tight cracks, less than 10' apart.

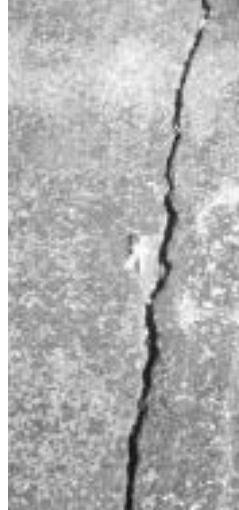


Transverse cracking less than 10' apart; cracks well-sealed.

Large blocks, early signs of
▼ raveling and blockcracking.



Open crack, $\frac{1}{2}$ "
wide; adjoining
▼ pavement sound.



▼ Moderate flushing.



RATING 5

FAIR —

Preservative maintenance treatment required

Roads are still in good structural condition but clearly need sealcoating or overlay. They may have moderate to severe surface raveling with significant loss of aggregate. First signs of longitudinal cracks near the edge. First signs of raveling along cracks. Block cracking up to 50% of surface. Extensive to severe flushing or polishing. Any patches or edge wedges are in good condition.

▼ Block cracking with open cracks.



► Moderate to severe raveling in wheel paths.



▼ Severe flushing.



▲ Wedges and patches extensive but in good condition.

Severe raveling with
▼ extreme loss of aggregate.



Load cracking and slight
▼ rutting in wheel path.



RATING 4

FAIR —

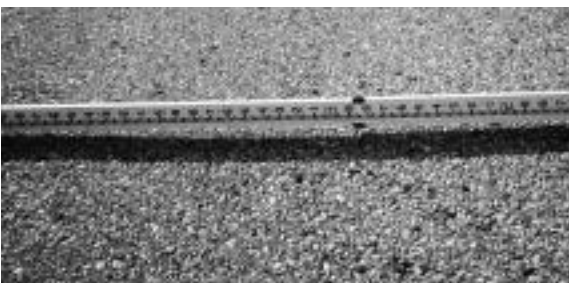
Structural improvement required

Roads show first signs of needing strengthening by overlay. They have very severe surface raveling which should no longer be sealed. First longitudinal cracking in wheel path. Many transverse cracks and some may be raveling slightly. Over 50% of the surface may have block cracking. Patches are in fair condition. They may have rutting less than 1/2" deep or slight distortion.



◀ Longitudinal cracking;
early load-related distress
in wheel path.
Strengthening needed.

▼ Slight rutting; patch in
good condition.



✦ Extensive block cracking.
Blocks tight and sound.
Slight rutting in wheel
path.

RATING 3

POOR—

Structural improvement required

Roads must be strengthened with a structural overlay (2" or more). Will benefit from milling and very likely will require pavement patching and repair beforehand. Cracking will likely be extensive. Raveling and erosion in cracks may be common. Surface may have severe block cracking and show first signs of alligator cracking. Patches are in fair to poor condition. There is moderate distortion or rutting (1-2") and occasional potholes.

▶ Many wide and raveled cracks indicate need for milling and overlay.



▶ 2" ruts need mill and overlay.



▶ Open and raveled block cracks.



**RATING 3**

POOR — (continued)

Structural improvement required

◀ **Alligator cracking.**
Edge needs repair and drainage needs improvement prior to rehabilitation.

▼ **Distortion with patches in poor condition. Repair and overlay.**



RATING 2

VERY POOR—

Reconstruction required

Roads are severely deteriorated and need reconstruction. Surface pulverization and additional base may be cost-effective. These roads have more than 25% alligator cracking, severe distortion or rutting, as well as potholes or extensive patches in poor condition.



▶ Extensive alligator cracking. Pulverize and rebuild.



▲ Severe rutting. Strengthen base and reconstruct.

▲ Patches in poor condition, wheelpath rutting. Pulverize, strengthen and reconstruct.



▶ Severe frost damage. Reconstruct.

RATING 1



FAILED —
Reconstruction required

Roads have failed, showing severe distress and extensive loss of surface integrity.

◀
Potholes from frost damage. Reconstruct.



◀
Potholes and severe alligator cracking. Failed pavement. Reconstruct.



◀
Extensive loss of surface material:
Rebuild

Ext

Practical advice on rating roads

Inventory and field inspection

Most agencies routinely observe roadway conditions as a part of their normal work and travel. However, an actual inspection means looking at the entire roadway system as a whole and preparing a written summary of conditions. This inspection has many benefits over casual observations. It can be helpful to compare segments, and ratings decisions are likely to be more consistent because the roadway system is considered as a whole within a relatively short time.

An inspection also encourages a review of specific conditions important in roadway maintenance, such as drainage, adequate strength, and safety.

A simple written inventory is useful in making decisions where other people are involved. You do not have to trust your memory, and you can usually answer questions in more detail. Having a written record and objective information also improves your credibility with the public.

Finally, a written inventory is very useful in documenting changing roadway conditions. Without records over several years it is impossible to know if road conditions are improving, holding their own, or declining.

Annual budgets and long range planning are best done when based on actual needs as documented with a written inventory.

The Wisconsin DOT local road inventory (WISLR) is a valuable resource for managing your local roads. Adding PASER surface condition ratings is an important improvement.

Averaging and comparing sections

For evaluation, divide the local road system into individual segments which are similar in construction and condition. Rural segments may vary from

½ mile to a mile long, while sections in urban areas will likely be 1-4 blocks long or more. If you are starting with the WISLR Inventory, the segments have already been established. You may want to review them for consistent road conditions.

Obviously, no roadway segment is entirely consistent. Also, surfaces in one section will not have all of the types of distress listed for any particular rating. They may have only one or two types. Therefore, some averaging is necessary.

The objective is to rate the condition that represents the majority of the roadway. Small or isolated conditions should not influence the rating. It is useful to note these special conditions on the inventory form so this information can be used in planning specific improvement projects. For example, some spot repairs may be required.

Occasionally surface conditions vary significantly within a segment. For example, short sections of good condition may be followed by sections of poor surface conditions. In these cases, it is best to rate the segment according to the worst conditions and note the variation on the form.

The overall purpose of condition rating is to be able to compare each

segment relative to all the other segments in your roadway system. On completion you should be able to look at any two pavement segments and find that the better surface has a higher rating.

Within a given rating, say 6, not all pavements will be exactly the same. However, they should all be considered to be in better condition than those with lower ratings, say 5. Sometimes it is helpful in rating a difficult segment to compare it to other previously rated segments. For example, if it is better than one you rated 5 and worse than a typical 7, then a rating of 6 is appropriate. Having all pavement segments rated in the proper relative order is most important and useful.

Assessing drainage conditions

Moisture and poor pavement drainage are significant factors in pavement deterioration. Some assessment of drainage conditions during pavement rating is highly recommended. While you should review drainage in detail at the project level, at this stage simply include an overview drainage evaluation at the same time as you evaluate surface condition.



**Urban
drainage.**

RATING:

Excellent

Good rural ditch and driveway culvert. Culvert end needs cleaning.
RATING: Good



Consider both pavement surface drainage and lateral drainage (ditches or storm sewers). Pavement should be able to quickly shed water off the surface into the lateral ditches. Ditches should be large and deep enough to drain the pavement and remove the surface water efficiently into adjacent waterways.

Look at the roadway crown and check for low surface areas that permit ponding. Paved surfaces should have approximately a 2% cross slope or crown across the roadway. This will provide approximately 3" of fall on a 12' traffic lane. Shoulders should have a greater slope to improve surface drainage.

A pavement's ability to carry heavy traffic loads depends on both the pavement materials (asphalt surfacing and granular base) and the strength of the underlying soils. Most soils lose strength when they are very wet. Therefore, it is important to provide drainage to the top layer of the subgrade supporting the pavement structure.

In rural areas, drainage is provided most economically by open ditches that allow soil moisture to drain laterally. As a rule of thumb, the bottom of the ditch ought to be at least one foot below the base course of the pavement in order to drain the soils. This means that minimum ditch depth should be about 2' below the center of the pavement. Deeper ditches, of course, are required to accommodate roadway culverts and maintain the flow line to adjacent drainage channels or streams.

You should also check culverts and storm drain systems. Storm drainage systems that are silted in, have a large accumulation of debris, or are in poor structural condition will also degrade pavement performance.

The T.I.C. publication, *Drainage Manual: Local Road Assessment and Improvement*, describes the elements of drainage systems, depicts them in detailed photographs, and explains how to rate their condition. Copies are available from the Transportation Information Center.

Highshoulder and no ditch lead to pavement damage.
 Needs major ditch improvement for a short distance.
RATING: Fair



No drainage leads to failed pavement.
RATING: Poor



Planning annual maintenance and repair budgets

We have found that relating a normal maintenance or rehabilitation procedure to the surface rating scheme helps local officials use the rating system. However, an individual surface rating should not automatically dictate the final maintenance or rehabilitation technique.

You should consider future traffic projections, original construction, and

pavement strength since these may dictate a more comprehensive rehabilitation than the rating suggests. On the other hand, it may be appropriate under special conditions to do nothing and let the pavement fully deteriorate, then rebuild when funds are available.

Summary

Using local road funds most efficiently requires good planning and accurate identification of appropriate rehabili-

tation projects. Assessing roadway conditions is an essential first step in this process. This asphalt pavement surface condition rating procedure has proved effective in improving decision making and using highway funds more efficiently. It can be used directly by local officials and staff. It may be combined with additional testing and data collection in a more comprehensive pavement management system.

T *s*por
r *t*atio
a *n*
n *I*nfo

Pavement Surface Evaluation and Rating (PASER) Manual, 2002, 28 pp.

SAFER Manual

Safety Evaluation for Roadways, 1996, 40 pp.

Flagger's Handbook (pocket-sized guide), 1998, 22 pp.

Work Zone Safety, Guidelines for Construction, Maintenance, and Utility Operations, (pocket-sized guide), 1999, 55 pp.

Wisconsin Transportation Bulletins

- #1 Understanding and Using Asphalt
- #2 How Vehicle Loads Affect Pavement Performance #3 LCC—Life Cycle Cost Analysis
- #4 Road Drainage
- #5 Gravel Roads
- #6 Using Salt and Sand for Winter Road Maintenance #7 Signing for Local Roads
- #8 Using Weight Limits to Protect Local Roads #9 Pavement Markings
- #10 Seal Coating and Other Asphalt Surface Treatments #11 Compaction Improves Pavement Performance
- #12 Roadway Safety and Guardrail
- #13 Dust Control on Unpaved Roads
- #14 Mailbox Safety
- #15 Culverts-Proper Use and Installation
- #16 Geotextiles in Road Construction/Maintenance and Erosion Control #17 Managing Utility Cuts
- #18 Roadway Management and Tort Liability in Wisconsin #19 The Basics of a Good Road
- #20 Using Recovered Materials in Highway Construction #21 Setting Speed Limits on Local Roads

Brick and Block PASER Manual, 2001, 8 pp.

Concrete PASER Manual, 2002, 28 pp.

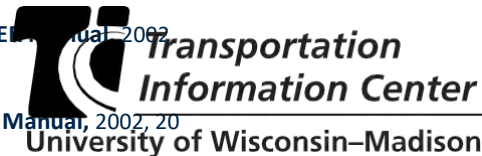
Gravel PASER Manual, 2002, 20 pp.

Sealcoat PASER Manual, 2000, 16 pp.

Unimproved Roads PASER Manual, 2001, 12 pp.

Drainage Manual

Local Road Assessment and Improvement, 2000, 16 pp.



432 North Lake Street
Madison, WI 53706

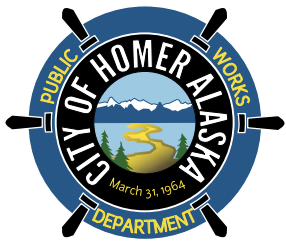
phone 800/442-4615

fax 608/263-3160

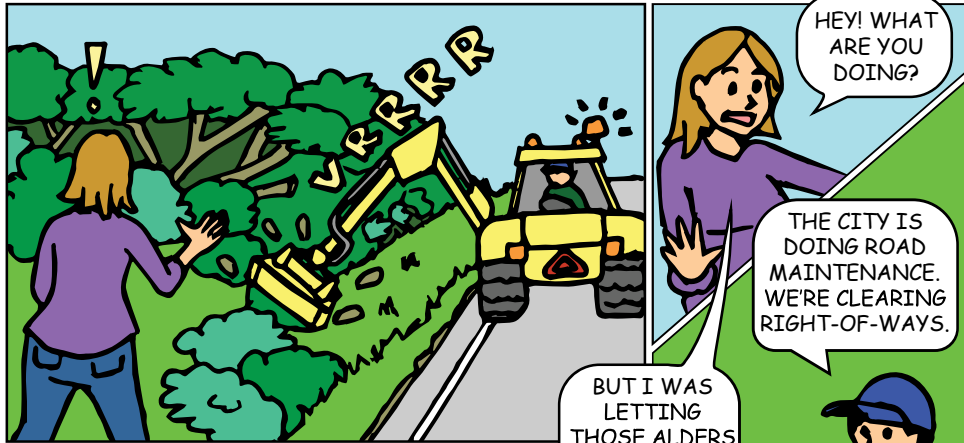
E-mail tic@epd.engr.wisc.edu

URL http://tic.engr.wisc.edu





BRUSH CUTTING: Maintaining Our Roads & Right-of-Ways

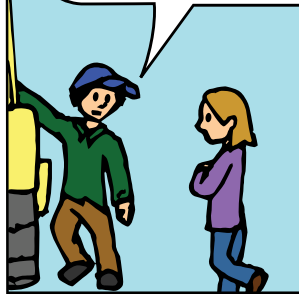


HEY! WHAT ARE YOU DOING?

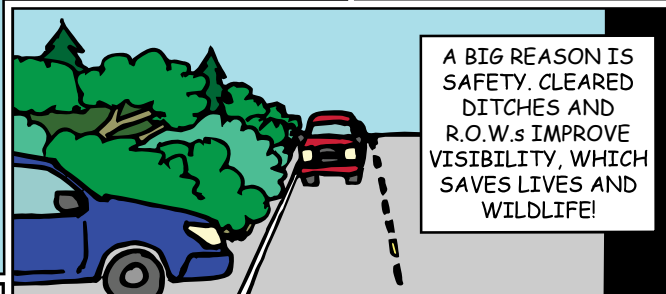
THE CITY IS DOING ROAD MAINTENANCE. WE'RE CLEARING RIGHT-OF-WAYS.

BUT I WAS LETTING THOSE ALDERS GROW! THEY MAKE A GREAT BUFFER FROM THE ROAD.

YEAH, THE MACHINE CAN BE PRETTY OBTRUSIVE, AND HAVING THE WILD VEGETATION MAKES A NICE BLOCK FROM THE ROAD, BUT WE DO ANNUAL BRUSH CUTTING FOR A FEW REASONS...



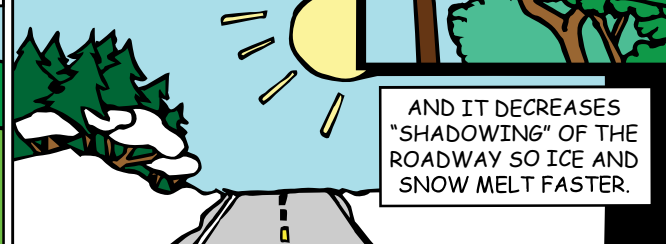
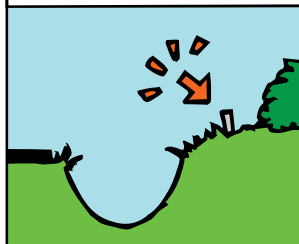
STILL WANT THAT PLANT BUFFER? LOCATE YOUR PROPERTY MARKERS TO DETERMINE WHERE THE R.O.W. IS.



A BIG REASON IS SAFETY. CLEARED DITCHES AND R.O.W.s IMPROVE VISIBILITY, WHICH SAVES LIVES AND WILDLIFE!

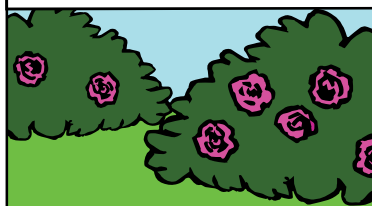


IT ALSO PROTECTS OVERHEAD UTILITY LINES FROM BEING DAMAGED BY FALLING LIMBS OR TREES.



AND IT DECREASES "SHADOWING" OF THE ROADWAY SO ICE AND SNOW MELT FASTER.

R.O.W.'s ARE USED FOR UTILITIES, SIDEWALKS, DITCHES, AND ARE SUBJECT TO CITY MAINTENANCE. SO BE SURE TO FIND WHERE YOUR PROPERTY LINE ENDS AND THE R.O.W. BEGINS BEFORE PLANTING THAT ROSEBUSH!

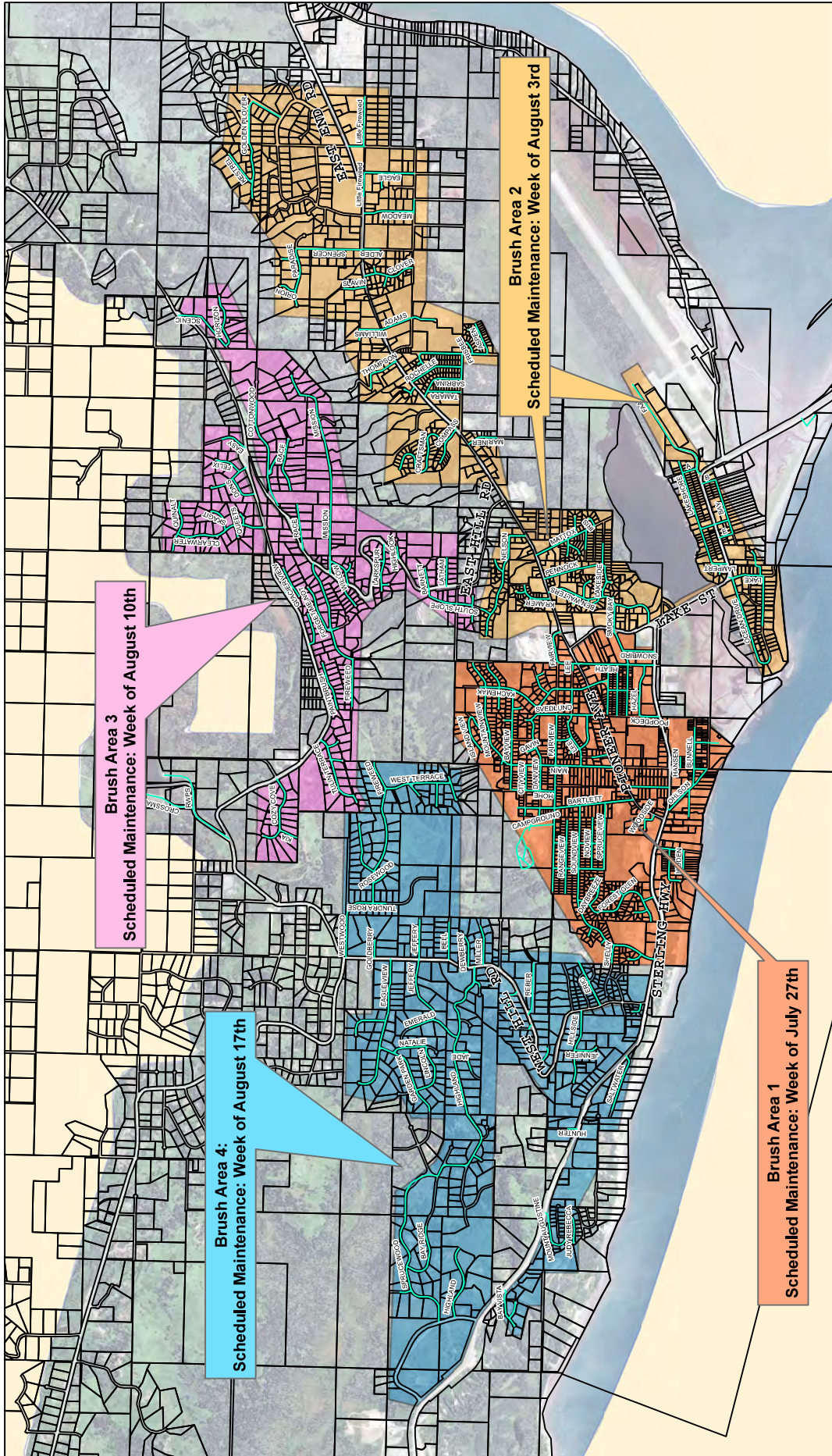


Help Us Help the Community!

We want safe roadways for all and appreciate everyone's understanding.

Brush cutting begins Monday, July 27th and will take place in phases. Visit www.cityofhomer-ak.gov/publicworks for more information and a map of the phased areas to be cleared.

Questions? Call Public Works 907-235-3170



Brush Area 3
Scheduled Maintenance: Week of August 10th

Brush Area 4:
Scheduled Maintenance: Week of August 17th

Brush Area 2
Scheduled Maintenance: Week of August 3rd

Brush Area 1
Scheduled Maintenance: Week of July 27th



Dept. of Public Works
July 7, 2020

Coordinate System: NAD 1983 StatePlane Alaska 4 FIPS 5004 Feet
Projection: Transverse Mercator
Datum: North American 1983
Spheroid: GRS 1980
Prime Meridian: 150.0000
Scale Factor: 0.9999
Latitude Of Origin: 54.0000
Units: Foot US

City of Homer Road Brushing Maintenance Schedule



Special COVID-19 Edition

Representative Sarah Vance

Friends of District 31,

July here on the Lower Peninsula has been so beautiful. While I am thankful for the abundance of sunshine, rain, and the coming berry harvest, it is not lost on me that many in our community are struggling to stay afloat. If that is you, remember to take a deep breath and remember that you are not alone. **If your business has been directly impacted by COVID-19 and you need help, check out the resources within this newsletter, and do not hesitate to contact my office for real-time assistance.**



City of Homer Small Business Economic Relief Grant (SBERG)

The Homer City Council on May 26, 2020 accepted Federal CARES Act funds from the State of AK to assist communities and businesses that suffered economic harm from the COVID-19 public health emergency. City Council allocated \$3,000,000 of those funds to be distributed to Homer's small businesses in \$3,000 grants through a [Small Business Economic Relief Grant \(SBERG\) Program](#).

<https://www.cityofhomer-ak.gov/covid-relief/city-homer-small-business-economic-relief-grant-sberg>

Any business located within the City of Homer with 50 or fewer employees that can certify and disclose financial loss due to COVID-19 is eligible to apply for the grant until it closes on **September 25, 2020**.

Visit the link above or contact Jody Mastey, the SBERG Program Manager at jmastey@ci.homer.ak.us or (907) 299-5978 for more information.

KPB CARES

On June 16, 2020 the Kenai Peninsula Borough Assembly approved \$15 Million from the CARES Act Coronavirus Relief Fund to be distributed to eligible small businesses and nonprofits.

Until Friday, July 24, applicants can apply for a [grant from the Relief Fund](#). An applicant business or nonprofit must be physically located within the Borough, but not within the boundaries of the incorporated cities (Homer, Kachemak City, Kenai, Seldovia, Seward, and Soldotna).

https://cares.kpb.us/?fbclid=IwAR0cHmjHA3U7sZuPijfVs593CLOH08R5Gi38pq90xLqYq___-q7n5HKCeWTc

The program is open to all qualifying businesses and nonprofit organizations, regardless of whether they have applied for or have obtained any other state or federal COVID-19 related assistance, as long as they can provide proof upon request that the Borough-provided relief funds have been applied to receipts for expenses not previously requested and received through any other local, state or federal assistance. The distribution matrix is the same for small businesses and nonprofit organizations.

[The KPB COVID-19 Information Hub](#) is a great place to go to get up to speed on COVID data in Alaska.

Expansion of CARES Act Funding

The following press release was shared on the 17th by the Department of Commerce. It states that small Alaska businesses that received \$5,000 or less in PPP or EIDL funds and 501(c)(6) nonprofit organizations will become eligible for the State's grant program as long as they were located in Alaska and have 50 or fewer full-time employees.

Julie Anderson
Commissioner

www.Commerce-Alaska.Gov



Department of Commerce,
Community, and
Economic Development

Anchorage, Alaska

STATE OF ALASKA PRESS RELEASE

For Immediate Release
20-017

CARES Act Funding for Alaska Businesses to be Expanded

Wednesday, June 17, 2020 (Anchorage) — Today, Department of Commerce, Community and Economic Development (DCCED) Commissioner Julie Anderson announced upcoming changes to the [AK CARES Grant program](#)'s eligibility criteria to provide additional financial assistance to Alaska businesses.

Small Alaska businesses that received \$5,000 or less in Paycheck Protection Program (PPP) or Economic Injury Disaster Loan (EIDL) funds and 501(c)(6) nonprofit organizations will become eligible for the State's grant program, as long as they were based, licensed, and located in Alaska when the public health disaster emergency was declared on March 11, 2020 and have 50 or fewer full-time equivalent employees.

"Since the beginning of our COVID-19 response, ensuring the stabilization of Alaska's business community has been a top priority. With these eligibility adjustments, I am pleased to expand our economic relief offerings to small businesses and nonprofit organizations who previously qualified for a small amount of federal aid," **said Governor Mike Dunleavy**.

"The ability to make these changes to the AK CARES eligibility criteria will provide funds to those entities that received small amounts of funding from federal programs and are still greatly in need of relief," **said Commissioner Anderson**. "We look forward to working together to get these funds into the economy as quickly as possible."

DCCED and the Alaska Industrial Development and Export Authority (AIDEA) are finalizing program details based on these changes. The updated program details and the effective date will be announced in the coming days.

DCCED encourages businesses that will meet the new eligibility criteria for the AK CARES Grant program to begin preparing their application packages now. The application checklist and frequently asked questions are available on the AK CARES Grant website. These items should be reviewed carefully prior to submission of an application.

For additional information about the AK CARES grant program, visit www.commerce.alaska.gov/web/dced/AKCARESGrant. For additional information about the Department of Commerce, Community, and Economic Development and its other agencies, please visit www.commerce.alaska.gov.

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Media Contact: Glenn Hoskinson, (907) 465-6466, Glenn.Hoskinson@Alaska.gov

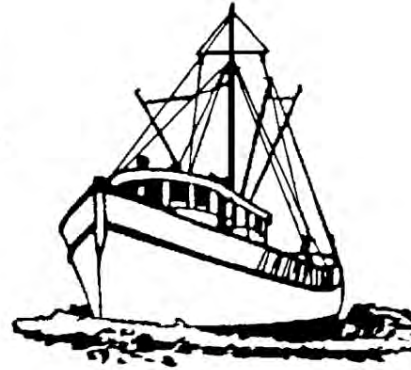
PAYCHECK PROTECTION PROGRAM

FOR COMMERCIAL FISHERMAN

DEADLINE EXTENSION

The Department of Treasury and Small Business Administration has amended a rule that previously counted crew as independent contractors, and on July 6th passed an extension to the PPP program. Commercial fishing businesses can still apply for Paycheck Protection Program loans that include crew in payroll costs, as well as gloves and masks.

The application deadline is Aug. 8th



For more information contact:
Rep. Sarah Vance

907-235-2921
rep.sarah.vance@akleg.gov

The Paycheck Protection Program (PPP) is a federal loan that can be used on employee payroll as well as additional expenses such as gloves, masks, and anything else required to mitigate the spread of COVID-19. The deadline has been extended to August 8th. Applications need to be submitted by that date, even if they aren't processed by then.

NOTE: If you request or receive \$5,000 or more in Federal PPP or EIDL funds, you **will** become **ineligible** for AK CARES Act money from the State.

<https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/paycheck-protection-program>



Dizzy Yet?

There are a lot of programs that offer monetary relief from COVID-19 related hardships. Some conflict with others. How do I know which ones are right for me?

The **wisest** thing to do is to apply for the local grants first and work your way up from there. **Local grants do not need to be repaid**, and are available for businesses within city limits, and from the borough for businesses not within city limits. Local grants expire soon though. APPLY NOW.

The State relief money will be available for longer, and most of it is in the form of a grant, (ex. AK CARES Act). **It does not need to be repaid**. Many businesses have found themselves ineligible for state grants because they received federal loans. In response to this initial conflict, The AK CARES Act was modified on June 17th to accept the applications of those who have received \$5,000 or less in federal PPP/EIDL loans, and the applications of many non-profit businesses. Click [here](#) to learn more.

Note: AS of this writing, The AK CARES Act is not yet open to commercial fishermen. They are working tirelessly to fix this, and I will provide updates if you call or email me.

Federal programs are surely the most inclusive, and longest lasting, but they also come with the most risk. Most of them come in the form of a loan, which **must be paid back with interest**. Some loans can turn into a grant if they exceed a certain amount. ALWAYS read what you are applying for and make sure that you understand and accept the conditions.

Department of Commerce, Community & Economic Development (DCCED)

FAQ's:

If I receive funds from a municipal relief program that is distributing CARES Act money, am I ineligible to apply for an AK CARES grant?

No. Businesses that receive money from a municipal relief program are still eligible to apply for an AK CARES grant, assuming they meet the eligibility criteria. However, the business cannot receive reimbursement for expenses that have already been reimbursed through another program i(e., no “double-dipping”).

If I'm a small business owner who received federal money as an individual (as opposed to as a business) from a program such as unemployment, am I ineligible to apply for an AK CARES grant for my business?

No, receiving unemployment as an individual will not make you ineligible for an AK CARES grant for your small business.

As always, please feel free to reach out to my office with your questions or concerns. It is a pleasure serving the people of District 31.



Representative Sarah Vance
Rep.Sarah.Vance@AKleg.gov
(907) 235-2921