2022 TRIBAL TRANSPORTATION PROGRAM
TRANSPORTATION FACILITY
MAINTENANCE PLAN

Karuk Tribe

Prepared by:

RED PLAINS

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PROJECT INTRODUCTION

The Maintenance Plan is intended to aid in the allocation of Tribal Transportation Program funding programmed specifically for maintenance activity. The Tribal Administration has established the goal of becoming more self—reliant as it relates to performing roadway maintenance and small public works projects utilizing a combination of funding sources from portions of the Tribal Transportation Program (TTP) Tribal Share to supplemental tribal funds. The ultimate goal is to build its internal capacity and self—sufficiency with tribal self—determination as the driving factor.

The maintenance plan will act as the guiding planning document from which the Tribal Transportation Department can annually pull specific maintenance project cost estimates from to support future Tribal Transportation Improvement Program (TTIP) annual maintenance funding levels.

On November 2, 2021, Ken Picard, Red Plains Professional (RPP) met with Misty Rickwalt, Transportation Systems Manager for the Karuk Tribe, regarding the development of a Road Maintenance Plan. During the meeting, they reviewed the scope of work, the project approach and discussed specific goals and expectations. Maintaining existing roadways for safety, quality and performance is of high priority to the Tribe and with that, RPP agreed to the following:

- Physically drive each route and document required maintenance activity
- Generate a prioritized list of maintenance projects/activities
- Generate a planning cost estimate for each maintenance activity
- Generate a Tribal TIP to append the current TTP Tribal TIP
- Generate a sample tribal resolution adopting the plan and TIP

Here is the link to view all videos taken for Maintenance Plan:

https://youtube.com/playlist?list=PLqr5MTEk0UIaz725N1zkfEdvuEX3G4rUT

REGULATIONS

When the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was passed in 2005, tribes were allowed to spend up to 25% of IRR funds on eligible road maintenance activities. In continuation and improvement of the policy, in July 2012, the Moving Ahead for Progress in the 21st Century (MAP-21) was signed into law. MAP-21 along with 25 CFR 170 allows the Tribe to use up to 25% of their Tribal Transportation Program (TTP) funding or $500,000.00, whichever is greater, for eligible and approved maintenance activities. These activities must be included on the Tribe's Transportation Improvement Plan (TTIP) approved by FHWA. A Road Maintenance Plan needs to be developed to determine priorities for inclusion in the Tribe's TIP. At the time of this report, under the current Fixing America's Surface Transportation Act (FAST Act) the regulation and allowance of TTP construction funding to be programmed for Maintenance on facilities has been extended through 2020. In order to expend TTP maintenance funds on a facility, the facility must be an "Official" record in the National Tribal Transportation and Facilities Inventory (NTTFI) as reported in the Road Inventory Field Data System (RIFDS).

The Tribe, with support from Red Plains Professional, has worked tirelessly to update, modify, and clarify the NTTFI Inventory for the Karuk Tribe. The Tribe now has a GIS—driven NTTFI in support of the LRTP, Maintenance Plan, and future TTIP's.

The specific regulations relevant at the time of this study to set parameters on the allowable uses of TTP funding in support of maintenance activities are located in Appendix A.

MAINTENANCE PRIORITIES

A RPP staff member videoed the Karuk Tribe's BIA and Tribal owned roads on the ground from November 2-3, 2021. On April 4, 2022, another site visit was completed to pick up additional information. Each roadway's condition was analyzed with respect to road maintenance needs and the safety of its travelers, resulting in the following suggested prioritization of maintenance and re—surfacing/construction projects. The following projects are broken into three areas: Yreka, Happy Camp and Orleans and are illustrated on the attached **Karuk Tribe Maintenance Priority Map**. The map provides a location for each of the high and medium prioritized projects below. The low priority projects are not illustrated on the road map.

YREKA AREA PRIORITIES

High Priority 2

The following roads should be next:

- Route 0037_010 — Apsuun Rd - Crack seal, slurry seal, restripe. Where fatalities occurred need double sided chevrons. What is the purpose of Painted boulders? These are a safety hazard and should be removed and replaced with delineators. Picture page 54.

Medium Priority 1

The following roads are paved and generally in good condition. Minor defects are noted and should be fixed sooner rather than later. Once minor defects are corrected, these routes should be set up on a 5 to 10 year schedule for slurry seal and striping as noted. To minimize the impact on residents and businesses, schedule slurry sealing on 1/4 to 1/3 of roads at a time:

- Route 0023_010 — Thook Rd - Crack seal, Slurry seal and restripe. Picture page 48.
- Route 0027_010 — Kutchy Katch - Crack seal, Slurry seal and restripe. Picture page 50.
- Route 0028_010 — Muh Chee Shee - Crack seal, Slurry seal. Picture page 51.
- Route 0029_040 — Kahtishraam Rd - Crack seal, slurry seal, restripe. Picture page 51.
- Route 0035_010 — Takaaka - Crack seal, Slurry seal, restripe. Picture page 53.
- Route 0038_010 — Puufich - Crack seal, Slurry, seal and restripe. Picture page 55.

Medium Priority 2

The following roads are paved and generally in good condition. Minor defects are noted and should be fixed sooner rather than later. Once minor defects are corrected, these routes should be set up on a 5 to 10 year schedule for slurry seal and striping as noted. To minimize the impact on residents and businesses, schedule slurry sealing on 1/4 to 1/3 of roads at a time:

- Route 0008_010 — Singleton Ln - Blade as needed, check culvert yearly. Picture page 48.
- Route 0008_020 — Singleton Ln - Blade as needed.
- Route 0008_030 — Singleton - Blade as needed.
- Route 0024_010 — Yellowhammer St - Crack seal, Slurry Seal and restripe. Picture page 49.
- Route 0024_020 — Yellowhammer St - Crack seal, Slurry Seal and restripe. Picture page 49.
- Route 0025_010 — Puh Nay Fitch - Crack seal, Slurry Seal and restripe. Picture page 49.
- Route 0026_010 — Ee Tucka Tucka Tee - Crack seal, Slurry Seal and restripe. Picture page 50.
- Route 0029_010 — Kahtishraam Rd - Crack Seal, Slurry Seal, Restripe. Picture page 51.
- Route 0032_010 — Virusur - Crack seal, slurry seal, restripe. Picture page 52.
- Route 0033_010 — Chuufish Rd - Crack seal, slurry seal, restripe. Picture page 52.
- Route 0034_010 — Kaaschip - Crack seal, slurry seal, restripe. Picture page 53.
- Route 0036_010 — Fathip - Gravel Road, blading need to water tower. Needs water bars to divert water from eroding road. May want to consider design/pave with cross drainage. Picture page 54.
- Route 0040_010 — Clinic Rd - Crack seal, Slurry Seal and restripe.
- Route 0045_010 — Pyrite Dr. - Crack Seal, Slurry seal, restripe. Picture page 57.
- Route 0047_010 — Xunyeep Ct - Crack Seal, Slurry Seal, Restripe. Picture page 58.

Low Priority 1

The following roads are gravel or primitive. These should be bladed and brushed as needed. Inspect drainage structures yearly to ensure that they are working:

- Route 0006_010 — Lower Casino Access Rd - Blade as needed. Picture page 47.
- Route 0006_020 — Lower Casino Access Rd - Primitive road, design for gravel. Picture page 47.
- Route 0044_010 — Placer Dr. - Proposed Rd

Parking Lots — Medium Priority 1

- Route 0024_815 — KTHA Maintenance Parking Lot - Crack seal, Slurry Seal and restripe 3-5 years. Replace Concrete Gutter at entrance. Fix alligatored section 10'x10' approx. Picture page 7-9.
- P001_010 — Karuk Head Start Parking Lot:

  Short Term (ST) - Crack and Slurry seal, Restripe. 1-3 Years.

  Long Term (LT) - Mill and Repave 5-10 years. Picture page 24-25.
- P007_010 — Justice Center Parking Lot - Blade as needed. May want to design for pavement. Picture 39.
- P016_010 — KTHA Housing Authority Parking Lot - Design to pave. Picture page 46-47.

Parking Lots — Medium Priority 2

- Route 0029_020 — Kahtishraam Wellness Center Parking Lot - Crack Seal, Slurry Seal, restripe in 5-7 years. Picture page 10
- Route 0029_030 — Kahtishraam Parking Extension - Crack Seal, Slurry Seal, restripe in 5-7 years. Picture page 11.

Parking Lots — Low Priority 1

- P006_010 — Oak Knoll Parking Lot:
  Short Term (ST) - Crack and Slurry seal, Restripe. 1-3 years.
  Long Term (LT) - Mill and Repave 3-5 years Picture page 38.

Remaining Roads

The following road is City, County or State jurisdiction. If those agencies need match money to leverage federal funding, Tribal TTP funds are eligible for that purpose.

- Route 1014 — Sharps Rd - Mill, repave and stripe. Need agreement with city to do any work. Picture page 73.

Casino Responsibility

- Route 0042_010 — Ishpuk Rd - Road is Alligatored - Recommend redesign for heavier loads and include improvements outlined in PP# 19. Replace painted boulders with delineators. Picture page 56.
- Route T054_010 — Casino Way
  Short Term (ST) - Crack seal, Slurry seal, restripe.
  Long Term (LT) - Repave. Picture page 74.
- Route T054_020 — Casino Way - Fix Alligatored section (150'x10'), crack seal, slurry seal restripe. Page 75.
- Route T054_030 — Casino Way - Upper entrance to Overflow Parking lot - Alligatored section to intersection with Sec 010 (275'). Reconstruct, design for heavier loads and pave. Picture pages 75-76.
- Route T054_040 — Casino Way - Crack seal, slurry seal, restripe. Picture page 76.
- Route P005_010 — Rain Rock Casino Parking lot - Crack and Slurry Seal, Restripe. Picture page 25-29.
- Route P005_020 — Rain Rock Casino Parking Lot - Crack and Slurry Seal, Restripe. Picture page 29-31.
- Route P005_030 — Rain Rock Casino Parking Lot - Crack and Slurry Seal, Restripe. Picture page 31-32.
- Route P005_040 — Rain Rock Casino Parking Lot - Crack and Slurry Seal, Restripe. Picture page 32-36.
- Route P005_050 — Rain Rock Casino Overflow Parking Lot - Blade as needed. Picture page 36-38

HAPPY CAMP AREA PRIORITIES

High Priority 1

The following roads require the immediate attention:

- Route 0111 —010 - Itroop Rd - Crack seal, Chip seal, restripe, clean debris out of Drop inlets, need object markers on ends of concrete barrier. Picture page 65.

High Priority 2

The following roads should be next:

- Route 0108_010 — Jacobs Way - ST - Patch Utility trench after first Speed bump.. LT - Crack Seal, Slurry Seal, Restripe 3-5 years. Picture page 63.

Medium Priority 1

The following roads are paved and generally in good condition. Minor defects are noted and should be fixed sooner rather than later. Once minor defects are corrected, these routes should be set up on a 5 to 10 year schedule for slurry seal and striping as noted. To minimize the impact on residents and businesses, schedule slurry sealing on 1/4 to 1/3 of roads at a time:

- Route 0041_010 — Anavkaam Rd - Crack seal, Slurry Seal and restripe. Picture page 55.
- Route 0041_015 — Anavkaam Rd - Crack seal, Slurry Seal and restripe. Picture page 55.
- Route 0110_010 — Shan D Dr. - Crack seal, Slurry seal sweep silt and debris off road where Route 0111_015 - Itroop Rd intersects. Water seeping through pavement 100' section, need to excavate and find out why then design fix. It may need underdrain. Picture pages 64.
- Route 0111_030 — Upper Itroop Rd - Gravel, Blade 2x/year spring & fall. Picture page 68-69.
- Route 0112_010 — Piith Dr. - Crack Seal, Slurry Seal, Restripe. Picture page 69.
- Route T050_810 — Hillside Rd - Slurry seal and restripe. Picture page 73.

Medium Priority 2

The following roads are paved and generally in good condition. Minor defects are noted and should be fixed sooner rather than later. Once minor defects are corrected, these routes should be set up on a 5 to 10 year schedule for slurry seal and striping as noted. To minimize the impact on residents and businesses, schedule slurry sealing on 1/4 to 1/3 of roads at a time:

- Route 0055_010 — Virusur Impah Rd - Crack seal, Slurry Seal. Picture page 59.
- Route 0109_010 —050 Jacobs Way Extension - Crack Seal, Slurry Seal, Restripe. Picture page 63

Low Priority 1

The following roads are gravel or primitive. These should be Bladed and brushed as needed. Inspect drainage structures yearly to ensure that they are working:

- Route 0022_010 — E Nok Impah - Blade as need, check drainage structures for obstructions.
- Route 0043_010 — Jacobs Ranch Rd - Blade and brush as needed. Picture page 57.
- Route 0064_010 — Bud's Rd - Blade. Picture page 60.

- Route 0111_015 – Itroop Road - Gravel first 200" blade as needed, fill hole in road by shack. Earth road the rest of length, recommend adding water bars on 150-200' intervals in steep section to correct drainage issues. Clean slit off Shan D Rd at intersection
- Route 0111_030 — Upper Itroop Rd - Gravel, Blade 2x/year spring & fall, reshape area near intersection with Itroop Rd to drain water, remove log piles. Picture pages 67-68.

Parking Lots — High Priority 2

- Route 0023_815 — KTHA Admin Parking Lot - Crack seal, Slurry Seal and restripe. Picture page 2-4.
- Route 0023_825 — KTHA Admin Parking Lot - Crack seal, Slurry Seal and restripe. Picture page 4-5.
- Route 0023_835 — Karuk Happy Camp Head Start Parking Lot - Crack seal, Slurry Seal and restripe. Picture page 5-6.
- Route 0041_020 — Anavkaam Parking Lot - Crack seal, Slurry Seal and restripe Picture page 12-15.
- Route 0120_815 — Headway Parking Facility - Crack Seal, Slurry Seal and Restripe Picture page 20-21.

Parking Lots — Medium Priority 1

- P016_010 — KTHA Housing Authority Parking Lot. Design to pave 1-5 years. Picture pages 46-47.
- Route 0023_845 — Jacobs Way Wellness Center Parking Lot - Crack seal, Slurry Seal and restripe. Picture page 7.

Parking Lots — Medium Priority 2

- Route T050_815 — Hillside Parking Lot - Crack seal, Slurry seal and restripe. Picture page 77-78.

ORLEANS AREA PRIORITIES

Medium Priority 1

The following roads are paved and generally in good condition. Minor defects are noted and should be corrected sooner rather than later. Once minor defects are corrected, these routes should be set up on a 5 to 10 year schedule for slurry seal and striping as noted. To minimize the impact on residents and businesses, schedule slurry sealing on 1/4 to 1/3 of roads at a time:

- Route 0113_010 — Panamnik Elder's Loop Rd/Toisheep - Minor Crack seal, Slurry seal, restripe. Picture page 38.
- Route 0050_810 — Somes Bar Work Center Road - Reconstruct, pave. Picture page 59.
- Route 0068_020 — Charlie Rd - Design for gravel surface. Picture page 60-61.

Medium Priority 2

The following roads are paved and generally in good condition. Minor defects are noted and should be corrected sooner rather than later. Once the minor defects are corrected, these routes should be set up on a 5 to 10 year schedule for slurry seal and striping as noted. To minimize the impact on residents and businesses, schedule slurry sealing on 1/4 to 1/3 of roads at a time:

- Route 0075_010 — Karuk Tribe DNR Access Rd - Crack seal, Slurry seal and restripe. Picture page 28.
- Route 0075_011 — Karuk Tribe DNR Access Rd - Crack seal, Slurry seal and restripe. Picture page 28.
- Route 0325_010 — Asip Rd - Crack seal, Slurry seal and restripe. Picture page 39.

- Route 0326_010 — Big Rock Rd - Minor Crack seal, Slurry seal, restripe. Picture page 39.
- Route 0327_010 — Yitha Ct - Minor Crack seal, Slurry seal. Picture page 40.
- Route 0328_010 — Axak Ct - Minor Crack seal, Slurry seal. Picture page 40.
- Route 0329_010 — Kuyraak Ct - Minor Crack seal, Slurry seal. Picture page 41.
- Route T057_010 — Lower Tishawnik Rd - Crack seal, Slurry seal. Picture page 45.

Low Priority 1

The following roads are gravel or primitive. These should be Bladed and brushed as needed. Inspect drainage structures yearly to ensure that they are working:

- Route 0003_010 — Upper Simms Rd - Blade and brush as needed
- Route 0040_010 — Clinic Rd - Crack seal, Slurry Seal and restripe
- Route 0079_010 — Ruben Riffle Rd - Blade and brush as needed. Picture page 62.
- Route 0051_810 — Katimiin Rd - Blade
- Route 0051_820 — Katimiin Rd - Blade
- Route T056_010 — Upper Tishawnik Rd - Blade as needed.
- Route T058_010 — Aan Chuuphan Rd - Blade as needed.
- Route T058_020 — Aan Chuuphan Rd - Blade as needed.
- Route 0046_010 — Shivshaneen Way - Blade and brush as needed. Picture page 58.
- Route T059_010 — Lower Camp Creek Rd - Blade as needed.

Parking Lots — Medium Priority 1

- P014_010 — Panamnik Way Parking Lot - Design to pave. Picture page 42-44.

Parking Lots — Medium Priority 2

- Route 0050_815 — Somes Bar Work Center Parking Lot - Reconstruct, pave. Picture page 17-20.
- Route 0325_815 — Panamnik Senior and Computer Center Parking Lot - Crack seal, Slurry seal and restripe. Picture page 21-23.
- Route P012_010 — Karuk Tribe Dept. of Natural Resources Parking Lot - Crack Seal, Slurry Seal, Restripe. Picture page 40-41.
- Route P013_010 — Karuk Tribe Dept. of Natural Resources Parking Lot - Clean concrete and restripe. Picture page 42.
- Route P015_010 — Orleans Clinic Parking Lot - Crack Seal, Slurry Seal, Restripe. Picture page 44-45.

Remaining Roads

The following road is City, County or State jurisdiction. If those agencies need match money to leverage federal funding, Tribal TTP funds are eligible for that purpose.

- Route 0096_090 — State Route 96 - Needs guardrail and curve warning signage - Safety Concern area - a proposed safety project. Picture page 62.

MAINTENANCE EQUIPMENT

Current equipment list

- 1978 Kenworth Truck — #156
- 2012 International Dump truck — #200
- End Dump Trailer
- Fruh Trailer
- Lowboy Trailer
- 14k Dump Truck
- Super shot 125 Crafco Crack pot
- 500 Gallon Wylie Water Wagon
- Seal-rite Sealcoat pot Lay-Mor Sweep Master Power Broom
- Ingersoll—Rand DD-24 Roller
- Case Front End Loader
- C436 CAT Backhoe
- 210 LE Skip Loader
- Line Laser II Paint Machine
- Generator
- Vibra Plate
- 2012 Ford F-250 — #158
- 2015 Nissan Frontier — #179
- 2008 Toyota Corolla — #142
- 2014 Honda Pilot — #166

Equipment Needs

- Culvert Jetter - Trailer mounted
- Mini Excavator w/Brush Hog Head
- Plow Truck w/Cinder Spreader
- Larger Work Truck
- Shop Truck w/Air Compressor, Torches, Welder
- Loader
- V600H Linear Crusher (Suggested)

MAINTENANCE FACILITIES

Existing

Maintenance Office in Orleans — Rented from KTHA and share a small storage Connex with the Medical Clinic.

Proposed

Yreka Office — Tribe has a location in mind that is currently for sale for $500,000. Tribe would like a shop, office and work yard.

Happy Camp — Tribe would like to have a small office with shop in Happy Camp, probably out at "The Ranch" located on China Grade Road.

Orleans — Tribe would like shop, office and work yard.

ROUTINE MAINTENANCE

Maintenance resource have been included in Appendix F Maintenance References

F-1 General Road Maintenance References

F-2 Drainage Maintenance Reference

F-3 Gravel Road Maintenance References

F-4 Paved Asphalt Road Maintenance References

F-5 Sign Maintenance References

F-6 Vegetation Maintenance Reference

The following items need to occur annually and on an as needed basis:

Culverts — See Appendix F-2 Drainage Maintenance Reference

Check all culverts on a yearly basis and after a major storm events to ensure that there is no blockage in the culverts and that they are free flowing.

Check inlet and outlet for embankment erosion, add erosion control as necessary.

Signs — See F-5 Sign Maintenance References

The MUTCD states:

Section 2A.22 Maintenance

Guidance:

01 *Maintenance activities should consider proper position; cleanliness, legibility, and daytime and nighttime visibility (see Section 2A.08). Damaged or deteriorated signs, gates, or object markers should be replaced.*

02 *To assure adequate maintenance, a schedule for inspecting (both day and night), cleaning, and replacing signs, gates, and object markers should be established. Employees of highway, law enforcement, and other public agencies whose duties require that they travel on the roadways should be encouraged to report any damaged, deteriorated, or obscured signs, gates, or object markers at the first opportunity.*

03 *Steps should be taken to see that weeds, trees, shrubbery, and construction, maintenance, and utility materials and equipment do not obscure the face of any sign or object marker.*

04 *A regular schedule of replacement of lighting elements for illuminated signs should be maintained.*

Check all signs for damage and replace damaged signs.

Check signs for visibility issues. Remove vegetation/obstruction.

Check your signs for retroreflectivity — the following is from the 2009 R2 MUTCD:

Section 2A.08 Maintaining Minimum Retroreflectivity

Support:

01 Retroreflectivity is one of several factors associated with maintaining nighttime sign visibility (See section 2A.22)

Standard:

02 Public agencies or officials having jurisdiction shall use an assessment or management method that is designed to maintain sign retroreflectivity at or above the minimum levels in Table 2A-3.

03 Compliance with the Standard in Paragraph 2 is achieved by having a method in place and using the method to maintain the minimum levels established in Table 2A—3. Provided that an assessment or management method is being used, an agency or official having jurisdiction would be in compliance with the Standard in Paragraph 2 even if there are some individual signs that do not meet the minimum retroreflectivity levels at a particular point in time.

Guidance:

04 Except for those signs specifically identified in Paragraph 6, one or more of the following assessment or management methods should be used to maintain sign retroreflectivity:

A. Visual Nighttime Inspection—The retroreflectivity of an existing sign is assessed by a trained sign inspector conducting a visual inspection from a moving vehicle during nighttime conditions. Signs that are visually identified by the inspector to have retroreflectivity below the minimum levels should be replaced.

B. Measured Sign Retroreflectivity—Sign retroreflectivity is measured using a retroreflectometer. Signs with retroreflectivity below the minimum levels should be replaced.

C. Expected Sign Life—when signs are installed, the installation date is labeled or recorded so that the age of a sign is known. The age of the sign is compared to the expected sign life. The expected sign life is based on the experience of sign retroreflectivity degradation in a geographic area compared to the minimum levels. Signs older than the expected life should be replaced.

D. Blanket Replacement—All signs in an area/corridor, or of a given type, should be replaced at specified intervals. This eliminates the need to assess retroreflectivity or track the life of individual signs. The replacement interval is based on the expected sign life, compared to the minimum levels, for the shortest—life material used on the affected signs.

E. Control Signs—Replacement of signs in the field is based on the performance of a sample of control signs. The control signs might be a small sample located in a maintenance yard or a sample of signs in the field. The control signs are monitored to determine the end of retroreflective life for the associated signs. All field signs represented by the control sample should be replaced before the retroreflectivity levels of the control sample reach the minimum levels.

F. Other Methods—Other methods developed based on engineering studies can be used.

Support:

05 Additional information about these methods is contained in the 2007 Edition of FHWA's "Maintaining Traffic Sign Retroreflectivity" (see Section 1A.11). Option:

06 Highway agencies may exclude the following signs from the retroreflectivity maintenance guidelines described in this Section:

A. Parking, Standing, and Stopping signs (R7 and R8 series)

B. Walking/Hitchhiking/Crossing signs (R9 series, R10-1 through R10-4b)

C. Acknowledgment signs

D. All signs with blue or brown backgrounds

E. Bikeway signs that are intended for exclusive use by bicyclists or pedestrians

Gravel Roads — See Appendix F—3 Gravel Road Maintenance References

Blade gravel roads annually — best time is in the spring to take advantage of moisture in the ground. Then blade as needed, depending on usage.

On roads with ditches, check to see if they still direct water into culverts. If not then pull ditches to correct. Be sure to maintain 2% roadway crown.

On roads without ditches, you want to maintain 2% outslope on roadway

Brush roads to remove downfall and encroaching vegetation into roadway as needed.

Paved Roads — See Appendix F—3 Paved Asphalt Road Maintenance References

Check Roads and Parking lots for cracks in pavement and develop a systematic process to seal them on a yearly basis. The best times to crack seal are in the spring or the fall. A crack seal program will extend the pavement life 3-5 years.

Check striping, if it is faded or worn, restripe.

If pavement is 3-5 years old, applying a surface treat will extend the life 3-5 years.

Sweep roads in the spring to remove accumulated winter sand and debris from streets. Then sweep as needed.

Check transition from pavement to gravel on the shoulders of roadway. If drop is more than 1-2 inches, reshape shoulder gravel to match pavement.

Check guardrail, supports, and end sections for damage. Replace damaged sections.

Check streetlights to see that if they are burned out and replace bulbs as needed.

APPENDICES

APPENDIX A

Tribal Transportation Program Regulations

APPENDIX B

Maintenance Project Cost Estimates per Prioritized Project

APPENDIX C

Karuk Tribe Maintenance Photo Album

APPENDIX D

Karuk Tribe Maintenance Priority Map

APPENDIX E

Karuk Tribe Maintenance Organization Chart

APPENDIX F

Maintenance Resources

APPENDIX A

Tribal Transportation Program Regulations

Federal Register 25 CFR Part 170 – Tribal Transportation Program Regulations

DEPARTMENT OF THE INTERIOR
Bureau of Indian Affairs
25 CFR Part 170
[No. BIA–2014–0005; 167A2100DD/
AAKC001030/A0A501010.999900 253G]

RIN 1076–AF19
Tribal Transportation Program
AGENCY: *Bureau of Indian Affairs, Interior.*
ACTION: *Final rule.*

SUBPART G — MAINTENANCE

§ 170.800 What funds are available for maintenance activities?

(a) Under 23 U.S.C. 202(a)(8), a Tribe can use TTP funding for maintenance, within the following limits, whichever is greater:
(1) 25 percent of its TTP funds; or
(2) $500,000.
(a) These funds can only be used to maintain the public facilities included in the NTTFI.
(b) Road sealing activities are not subject to this limitation.
(c) BIA retains primary responsibility, including annual funding request responsibility, for BIA road maintenance programs on Indian reservations.
(d) The Secretary shall ensure that funding made available under the TTP for maintenance of Tribal transportation facilities for each fiscal year is supplementary to, and not in lieu of, any obligation of funds by the BIA for road maintenance programs on Indian reservations.

§ 170.801 Can TTP funds designated on an FHWA-approved TTIP for maintenance be used to improve TTP transportation facilities?

No. The funds identified for maintenance on a FHWA-approved TTIP cannot be used to improve roads or other TTP transportation facilities to a higher road classification, standard or capacity.

§ 170.802 Can a Tribe perform road maintenance?

Yes. A Tribe may enter into self-determination contracts, self-governance agreements, program agreements, and other appropriate agreements to perform Tribal transportation facility maintenance.

§ 170.803 To what standards must a Tribal transportation facility be maintained?

Subject to availability of funding, Tribal transportation facilities must be maintained under either:
(a) A standard accepted by BIA or FHWA (as identified in the official Tribal Transportation Program guide on either the BIA transportation Web site at http://www.bia.gov/WhoWeAre/BIA/OIS/Transportation/index.htm or the Federal Lands Highway—Tribal Transportation Program Web site at http://flh.fhwa.dot.gov/programs/ttp/guide/), or
(b) Another Tribal, Federal, State, or local government maintenance standard negotiated in an ISDEAA road maintenance self-determination contract or self-governance agreement.

§ 170.804 Who should be contacted if a Tribal transportation facility is not being maintained to TTP standards due to insufficient funding?

The Tribe may notify BIA or FHWA if the Tribe believes that a facility on the NTTFI is not being adequately maintained to the standards identified in § 170.803. If BIA or FHWA determines that a Tribal transportation facility is not being maintained, it will:
(a) Notify the facility owner;
(b) Provide a draft copy of the report to the affected Tribe for comment before forwarding it to Secretary of Transportation; and
(c) Report these findings to the appropriate office within FHWA.

§ 170.805 What maintenance activities are eligible for TTP funding?

TTP maintenance funding support a wide variety of activities necessary to maintain facilities identified in the NTTFI. A list of eligible activities is shown in the appendix to this part.

Appendix to Subpart G—List of Eligible Maintenance Activities Under the Tribal Transportation Program

The following maintenance activities are eligible for funding under the TTP. The list is not all-inclusive.

1. *Cleaning and repairing ditches and culverts.*
2. *Stabilizing, removing, and controlling slides, drift sand, mud, ice, snow, and other impediments.*
3. *Adding additional culverts to prevent roadway and adjoining property damage.*
4. *Repairing, replacing or installing traffic control devices, guardrails and other features necessary to control traffic and protect the road and the traveling public.*
5. *Removing roadway hazards.*
6. *Repairing or developing stable road embankments.*
7. *Repairing parking facilities and appurtenances such as striping, lights, curbs, etc.*
8. *Repairing transit facilities and appurtenances such as bus shelters, striping, sidewalks, etc.*
9. *Training maintenance personnel.*
10. *Administering the BIA transportation facility maintenance program.*
11. *Performing environmental/archeological mitigation associated with transportation facility maintenance.*
12. *Leasing, renting, or purchasing of maintenance equipment.*
13. *Paying utilities cost for roadway lighting and traffic signals.*
14. *Purchasing maintenance materials.*
15. *Developing, implementing, and maintaining a BIA Transportation Facility Maintenance Management System (TFMMS).*
16. *Performing pavement maintenance such as pot hole patching, crack sealing, chip sealing, surface rejuvenation, and thin overlays (less than 1 inch).*
17. *Performing erosion control.*
18. *Controlling roadway dust.*
19. *Re-graveling roads.*
20. *Controlling vegetation through mowing, noxious weed control, trimming, etc.*
21. *Making bridge repairs.*
22. *Paying the cost of closing transportation facilities due to safety or other concerns.*
23. *Maintaining airport runways, heliport pads, and their public access roads.*
24. *Maintaining and operating BIA public ferry boats.*
25. *Making highway alignment changes for safety reasons. These changes require prior notice to the Secretary.*
26. *Making temporary highway alignment or relocation changes for emergency reasons.*
27. *Maintaining other TTP intermodal transportation facilities provided that there is a properly executed agreement with the owning public authority within available funding.*

Tribal Transportation Departments

§ 170.930 What is a Tribal transportation department?

A Tribal transportation department is a department, commission, board, or official of any Tribal government charged by its laws with the responsibility for transportation-related responsibilities, including but not limited to, administration, planning, maintenance, and construction activities. Tribal governments, as sovereign nations, have inherent authority to establish their own transportation departments under their own Tribal laws. Tribes may staff and organize transportation departments in any manner that best suits their needs.

Tribes can receive technical assistance from TTACs, BIA regional road engineers, FHWA, or AASHTO to establish a Tribal transportation department.

§ 170.931 Can Tribes use TTP funds to pay Tribal transportation department operating costs?

Yes. Tribes can use TTP funds to pay the cost of planning, administration, and performance of approved TTP activities (see § 170.116). Tribes can also use BIA road maintenance funds to pay the cost of planning, administration, and performance of maintenance activities under this part.

§ 170.932 Are there other funding sources for Tribal transportation departments?

There are many sources of funds that may help support a Tribal transportation department. The following are some examples of additional funding sources:

- *(a) Tribal general funds;*
- *(b) Tribal Priority Allocation;*
- *(c) Tribal permits and license fees;*
- *(d) Tribal fuel tax;*
- *(e) Federal, State, private, and local transportation grants assistance;*
- *(f) Tribal Employment Rights Ordinance fees (TERO); and*
- *(g) Capacity building grants from Administration for Native Americans and other organizations.*

FHWA's Tribal Transportation Program Delivery Guide - 2020

Tribal Transportation Program Delivery Guide

A Guide for Tribes with an FHWA Tribal Transportation Program Agreement

December 14, 2020

XII. Maintenance of Transportation Facilities

A. ***Overview:*** *Maintenance is any action required to preserve and maintain a current transportation facility within its right-of-way, so that the facility may be used safely and effectively for its designated purpose. The main categories of maintenance are listed here:*

- ***Preventive Maintenance*** *includes regularly scheduled inspections, and minor repairs.*
- ***Scheduled Maintenance*** *is planned, and results from preventive maintenance inspections.*
- ***Unscheduled Maintenance*** *is immediate action needed to correct unexpected occurrences which impact safety and efficiency of operations.*
- ***Normal Maintenance*** *is the planned, recurring day-to-day care of the facility.*

The intent of maintenance is to bring a current facility as close as possible to its original condition, when it was first constructed or improved. The amount of necessary maintenance performed depends primarily on the level of funding provided. Unfortunately, all government funding is decreasing, not only for State and Local agencies but also for the Tribal Transportation Program, which has historically been Federally funded at less than 55% of typical local agency levels.

Available maintenance funding can be used most effectively by accurately identifying the Tribe's maintenance needs, and then prioritizing those maintenance needs to fit the available funding. Maintenance is one of the key building blocks of an effective Asset Management program required for public agencies by the FAST Act.

Transportation facilities and assets include travelways with approaches, parking facilities, drainage structures, roadside slopes, sidewalks, pathways, rest areas and visitor centers, traffic control devices, transit vehicles and road maintenance equipment.

Public safety and the safety of maintenance employees must also be a high priority when carrying out maintenance, whether it is routine scheduled maintenance or unscheduled emergency response maintenance. It is essential to plan, budget and carry out safety measures in the maintenance work zone for the safety of the public and employees.

B. ***Types of Tribal Maintenance Funding****. There are two types of federal funds available to Tribes for Tribal transportation facility maintenance:*

i. ***TTP funding****. This is funding from a Tribe's annual TTP funds (received as tribal shares) that the Tribe uses for transportation facility maintenance. TTP funds can be used for maintenance only on facilities identified in the National Tribal Transportation Facility Inventory (NTTFI).*

ii. ***BIA Transportation Facility Maintenance Program****. This is funding in addition to the Tribes' TTP funds. Congress provides this separate funding for the BIA Transportation Facility Maintenance Program in the annual Department of the Interior appropriations acts. Tribes may use these funds for maintaining BIA Road System and BIA transportation facilities, and also other facilities identified in the National Tribal Transportation Facility Inventory (NTTFI) if permitted by the BIA on a case-by-case basis.*

C. ***Relationship of Maintenance activities to ERFO repairs.*** *Serious damage by a natural disaster over a wide area, or by a catastrophic failure, can possibly be reimbursed from the Emergency Relief for Federally Owned (ERFO) program. A Tribe's road maintenance program may perform repairs to restore essential traffic, protect remaining facilities and prevent additional damages. See Emergency Relief for Federally Owned (ERFO) in Chapter XV - Other Federal Transportation Grants and Programs.*

D. ***Statutory / Regulatory Requirements.***

- *TTP funds may be used for maintenance in accordance with 23 U.S.C. § 202(a), 25 CFR §§ 170.111-112 and 170.805, and 25 CFR Part 170 Appendix to Subpart G.*
- *TTP road maintenance requirements are in 25 CFR §§ 170.800 - 170.805.*
- *TTP funds can be used for the maintenance of TTP facilities identified in the National Tribal Transportation Facility Inventory (NTTFI) (25 CFR § 170.800(b)).*

- *TTP road maintenance standards according to 25 CFR § 170.803.*
- *According to 23 U.S.C. § 202(a)(8) and 25 CFR § 170.800(a), not more than 25 percent of the TTP funds allocated to a Tribe or $500,000, whichever is greater, may be expended for the purpose of maintenance, including purchase of maintenance equipment. Road sealing is not subject to this limitation.*
- *BIA Transportation Facility Maintenance Program in 25 FR 170.800(d).*
- *25 CFR § 170.802 authorizes a Tribe to perform tribal transportation facility maintenance.*

E. Guidelines / Procedures

i. ***Tribal responsibility.*** *The Tribe is responsible for identifying cost-effective maintenance actions that will extend the service life of their transportation system. The TC is available for technical support in this process.*

ii. ***TTIP.*** *Maintenance should be included on the FHWA-approved TTIP, if using TTP funds, before funds are expended.*

iii. ***Maintenance activities eligible for TTP funding.*** *TTP funding can be used for the following list of activities, on facilities identified in the NTTFI. The list is not all-inclusive:*

- *Cleaning and repairing ditches and culverts.*
- *Stabilizing, removing, and controlling slides, drift sand, mud, ice, snow, and other impediments.*
- *Adding additional culverts to prevent roadway and adjoining property damage.*
- *Repairing, replacing or installing traffic control devices, guardrails and other features necessary to control traffic and protect the road and the traveling public.*
- *Removing roadway hazards.*
- *Repairing or developing stable road embankments.*
- *Repairing parking facilities and appurtenances such as striping, lights, curbs, etc.*
- *Repairing transit facilities and appurtenances such as bus shelters, striping, sidewalks, etc.*
- *Training maintenance personnel.*
- *Administering the BIA transportation facility maintenance program.*
- *Performing environmental/archeological mitigation associated with transportation facility maintenance.*
- *Leasing, renting, or purchasing of maintenance equipment.*
- *Paying utilities cost for roadway lighting and traffic signals.*
- *Purchasing maintenance materials.*
- *Developing, implementing, and maintaining a BIA Transportation Facility Maintenance Management System (TFMMS).*
- *Performing pavement maintenance such as pot hole patching, crack sealing, chip sealing, surface rejuvenation, and thin overlays (less than 1 inch).*
- *Performing erosion control.*
- *Controlling roadway dust.*
- *Re-graveling roads.*
- *Controlling vegetation through mowing, noxious weed control, trimming, etc.*
- *Making bridge repairs.*
- *Paying the cost of closing of transportation facilities due to safety or other concerns.*
- *Maintaining airport runways, heliport pads, and their public access roads.*
- *Maintaining and operating BIA public ferry boats.*
- *Making highway alignment changes for safety reasons. These changes require prior notice to the Secretary.*
- *Making temporary highway alignment or relocation changes for emergency reasons.*
- *Maintaining other TTP intermodal transportation facilities provided that there is a properly executed agreement with the owning public authority within available funding.*

iv. ***Maintenance Standards*** *(see 25 CFR § 170.803). Subject to availability of funding, TTP transportation facilities must be maintained in accordance with an applicable standard that meets or exceeds any of the following:*

- *Appropriate National Association of County Engineers maintenance standards;*
- *AASHTO road and bridge maintenance manuals, latest edition; or*
- *Another tribal, Federal, State, or local government maintenance standard negotiated in an ISDEAA road maintenance self- determination contract or self-governance agreement.*

v. ***Maintenance Equipment.***

a. Purchase Request Process. *With prior approval from FHWA or the BIA, Tribes may purchase maintenance equipment with TTP funds, to be used for performing TTP funded maintenance on transportation facilities on the NTTFI. To purchase the equipment with TTP funds, a Tribe must first provide the BIA TC or the FHWA TC with written notice and a written "cost analysis" showing that it is more economical to purchase than lease (25 CFR Part 170 Appendix A to Subpart B (b)(49), and 2 CFR § 200.318(d)). Use the form shown in Exhibit 12.1 - Equipment Acquisition Request Form to document the cost analysis. A Tribe cannot purchase maintenance equipment with TTP funds unless specific approval is granted by the FLH Director of the Office of Tribal Transportation Program, or delegated official. If the maintenance equipment purchase is approved, then the Tribe needs to show the approved cost of the maintenance equipment purchase separately on the Tribe's TTIP. This may require the Tribe to update or amend its TTIP, and submit the updated/amended TTIP to FHWA or BIA for approval according to Chapter VI - Transportation Planning.*

The cost of the purchase needs to be less than the Tribe's total TTP maintenance spending limit, which is not more than 25 percent of the TTP funds allocated to a Tribe or $500,000, whichever is greater (23 U.S.C. § 202(a)(8) and 25 CFR § 170.800(a)).

b. Program Income. *Tribes may also use the maintenance equipment (purchased with TTP funds) for non-TTP related activities as long as appropriate rates are charged the user for the purpose of recovering costs to maintain, replace and operate the maintenance equipment.*

Payments or reimbursements collected for the use of this maintenance equipment are considered restricted program income, and must be used only to maintain, replace and operate the maintenance equipment.

This principle would also apply to maintenance equipment purchased with TTP funds that the Tribe later sells. The income from such sales is considered restricted program income. This does not apply to government equipment donated to the Tribe outside of the TTP Program.

F. Resources:

a. *American Association of State Highway and Transportation Officials (AASHTO) road and bridge maintenance manuals and maintenance management system manuals.*
b. *National Association of County Engineers (NACE) action guides, and other Federal, State, Tribal, or local government maintenance standards and operations manuals.*
c. *Maintenance related publications of the Transportation Research Board (TRB) and other international Transportation Organization located on the internet.*

APPENDIX B

Maintenance Project Cost Estimates per Prioritized Project

Estimated costs were determined by using the Tribal Transportation Roads Program Cost to Construction tables. For items of work not included in the previous tables, bid histories for CALTRANS for the last year were reviewed and used by averaging low bid prices for a particular item. These are planning level estimates which will allow the Tribe to program maintenance funds to address the specific project as they prioritize them and program funding for their completion on future TTIP's.

- Karuk Maintenance Worksheet 1 – Yreka Area
- Karuk Maintenance Worksheet 2 – Happy Camp Area
- Karuk Maintenance Worksheet 3 – Orleans Area

Karuk Tribe

2022 TTP Transportation Facility Maintenance Plan Table - Yreka Area

Maintenance Area	Route Name	Route Number	Section Number	Route_Section	Ownership	Surface Width (ft)	Length (MI)	Area (SF)	Area (SY)	Maintenance Need	Estimated Cost	Priority	Comments
Yreka	Casino Way	T054	030	T054_030	2-Tribe	29	0.2		3,403	Upper entrance to Overflow Parking lot - allegatored section to intersection with Sec 010 (275'). Reconstruct, design for heaver loads and pave.	$150,000	High 1	Casino Responsibility
Yreka	Apsuun Rd	0037	010	0037_010	1-BIA	0	2.1		34,496	ST -Where fatalities occurred need double sided chevrons. Replace Boulders with Delineators. Add Additional Speed Humps. LT - Crack seal, slurry seal, restripe. 3-5 years	$132,000	High 2	
Yreka	Rain Rock Casino Overflow Parking Lot	P005	050	P005_050	2-Tribe	250	0.1	146,553	16,284	Blade as needed	$20,300	High 2	Casino Responsibility
Yreka	Casino Way	T054	020	T054_020	2-Tribe	20	0.1		1,173	Fix alligatored section (150'x10'), crack seal, slurry seal, restripe	$8,300	High 2	Casino Responsibility
Yreka	Thook Rd	0023	010	0023_010	1-BIA	37	0.2		4,341	Crack seal, Slurry Seal and restripe 3-5 years	$16,100	Medium 1	
Yreka	KTHA Maintenance Parking Lot	0024	815	0024_815	2-Tribe	46	0.1	5,909	657	Crack seal, Slurry Seal and restripe 3-5 years. Replace Concrete Gutter at entrance. .Fix Allegatered section 10'x10' approx	$10,200	Medium 1	Added $750 for 10'x10' Alligatored section. Added $950 for Gutter at street (includes removal of existing) Added $3,400 for 20'x35' alligatored section
Yreka	Kutchy Katch	0027	010	0027_010	1-BIA	26	0.1		1,525	Crack seal, Slurry Seal and restripe 1-3 years	$6,400	Medium 1	
Yreka	Muh Chee Shee	0028	010	0028_010	1-BIA	26	0.1		1,525	Crack seal, Slurry Seal 1-3 years	$5,400	Medium 1	
Yreka	Kahtishraam Rd	0029	040	0029_040	2-Tribe	10	0.2		1,173	Crack seal, slurry seal, restripe in 3-5 years	$5,100	Medium 1	
Yreka	Takaaka	0035	010	0035_010	1-BIA	0	0.1		1,877	Crack seal, slurry seal, restripe in 1 - 3 years	$7,400	Medium 1	
Yreka	Puufich	0038	010	0038_010	1-BIA	0	0.2		3,285	Crack seal, slurry, seal and restripe	$13,100	Medium 1	
Yreka	Karuk Head Start Parking Lot	P001	010	P001_010	2-Tribe	64	0.1	5,237	582	ST - Crack and Slurry seal, Restripe. 1-3 Years LT - Mill and Repave 5-10 years	$15,300	Medium 1	
Yreka	Justice Center Parking Lot	P007	010	P007_010	2-Tribe	164	0.1	14,716	1,635	Blade as needed. May want to desgin for paving and pave	$2,500	Medium 1	Estimate including design/pave: $76,000
Yreka	KTHA Housing Authority Parking Lot	P016	010	P016_010	2-Tribe	89	0.1	14,820	1,647	Design to pave 1-5 years	$95,000	Medium 1	
Yreka	Casino Way	T054	010	T054_010	2-Tribe	29	0.4		6,805	Short-term Crack seal, Slurry seal, restripe Long-term repave	$95,000	Medium 1	Casino Responsibility
Yreka	Singleton Ln	0008	010	0008_010	2-Tribe	12	0.1		704	Blade as Needed, check culvert yearly	$1,500	Medium 2	
Yreka	Singleton Ln	0008	020	0008_020	2-Tribe	12	0.1		704	Blade as needed	$1,100	Medium 2	
Yreka	Singleton Ln	0008	030	0008_030	2-Tribe	12	0.2		1,408	Blade as needed	$2,100	Medium 2	
Yreka	Yellowhammer St	0024	010	0024_010	1-BIA	37	0.3		6,512	Crack seal, Slurry Seal and restripe 3-5 years	$23,300	Medium 2	
Yreka	Yellowhammer St	0024	020	0024_020	1-BIA	37	0.1		2,171	Crack seal, Slurry Seal and restripe 3-5 years	$8,600	Medium 2	
Yreka	Puh Nay Fitch	0025	010	0025_010	1-BIA	26	0.1		1,525	Crack seal, Slurry Seal and restripe 3-5 years	$6,400	Medium 2	
Yreka	Ee Tucka Tucka Tee	0026	010	0026_010	1-BIA	26	0.1		1,525	Crack seal, Slurry Seal and restripe 3-5 years	$6,400	Medium 2	
Yreka	Kahtishraam Rd	0029	010	0029_010	1-BIA	21	0.2		2,464	Crack Seal, Slurry Seal, Restripe 3-5 years	$10,700	Medium 2	
Yreka	Kahtishraam Wellness Center Parking Lot	0029	020	0029_020	2-Tribe	174	0.1	38,089	4,232	Crack Seal,Slurry Seal, restripe in 5-7 years	$15,800	Medium 2	
Yreka	Kahtishraam Parking Extension	0029	030	0029_030	2-Tribe	327	0.1	9,630	1,070	Crack seal, slurry seal, restripe in 5-7 years	$4,200	Medium 2	
Yreka	Virusur	0032	010	0032_010	1-BIA	0	0.2		3,285	Crack seal, slurry seal, restripe in 3 - 5 years	$14,000	Medium 2	Have Engineer view in Winter to see if there is a drainage problem that is causing road to Ice up.
Yreka	Chuufish Rd	0033	010	0033_010	1-BIA	0	0.1		1,643	Crack seal, slurry seal, restripe in 3 - 5 years	$6,700	Medium 2	
Yreka	Kaaschip	0034	010	0034_010	1-BIA	0	0.1		1,643	Crack seal, slurry seal, restripe in 3 - 5 years	$6,700	Medium 2	
Yreka	Fathip	0036	010	0036_010	1-BIA	0	0.2		1,643	Gravel Road, blading need to water tower. Needs water bars to divert water from eroding road. May want to consider design/pave with cross drainage.	$7,000	Medium 2	Estimate including design/pave: $79,000
Yreka	Pyrite Dr	0045	010	0045_010	1-BIA	26	0.1		1,525	Crack Seal, Slurry seal, restripe 3-5 years	$6,300	Medium 2	
Yreka	Xunyeep Ct	0047	010	0047_010	1-BIA	26	0.1		1,525	Crack Seal, Slurry Seal, Restripe 3-5 years	$6,300	Medium 2	
Yreka	Sharps Rd	I014	810	I014_810	4-Urban	33	0.4		7,744	Mill, Repave and stripe	$104,100	Medium 2	
Yreka	Rain Rock Casino Parking lot	P005	010	P005_010	2-Tribe	240	0.1	75,773	8,419	Crack and Slurry Seal, Restripe 5-10 years	$30,200	Medium 2	Casino Responsibility
Yreka	Rain Rock Casino Parking Lot	P005	020	P005_020	2-Tribe	90	0.1	15,475	1,719	Crack and Slurry Seal, Restripe 5-10 years	$6,900	Medium 2	Casino Responsibility
Yreka	Rain Rock Casino Parking Lot	P005	030	P005_030	2-Tribe	12	0.1	10,169	1,130	Crack and Slurry Seal, Restripe 5-10 years	$5,400	Medium 2	Casino Responsibility
Yreka	Rain Rock Casino Parking Lot	P005	040	P005_040	2-Tribe	217	0.1	77,951	8,661	Crack and Slurry Seal, Restripe 5-10 years	$31,400	Medium 2	Casino Responsibility
Yreka	Casino Way	T054	040	T054_040	2-Tribe	25	0.1		1,467	Crack seal, slurry seal, restripe	$5,900	Medium 2	Casino Responsibility
Yreka	Lower Casino Access Rd	0006	010	0006_010	2-Tribe	12	0.2		1,408	Blade as needed	$2,100	Low 1	
Yreka	Lower Casino Access Rd	0006	020	0006_020	2-Tribe	9	0.2		1,056	Primative road, design for gravel?	$14,500	Low 1	
Yreka	Ishpuk Rd	0042	010	0042_010	1-BIA	21	0.2		2,464	Road is alligatored and recommend redesign for heavier loads and include improvements outlined in PP# 19.Replace boulders with Delineators.	$150,000	Low 1	Casino Responsibility
Yreka	Yreka Clinic Parking Facility	0049	010	0049_010	2-Tribe	130	0.1	25,146	2,794	Crack Seal, Slurry Seal and Restripe 1-3 years. Reconstruct, pave 7-10 years	$133,600	Low 1	
Yreka	Oak Knoll	P006	010	P006_010	2-Tribe	62	0.1	10,056	1,117	ST - Crack and Slurry seal, Restripe. 1-3 Years LT - Mill and Repave 3-5 years	$26,500	Low 1	
Yreka	Placer Dr	0044	010	0044_010	1-BIA	24	0.1		1,408	Proposed Rd	$70,200	Low 2	Does not exist
										Total	**$1,290,000**		

Updated 01/16/2023

Karuk Tribe

2022 TTP Transportation Facility Maintenance Plan Table - Happy Camp Area

Maintenance Area	Route Name	Route Number	Section Number	Route_Section	Ownership	Surface Width (ft)	Length (MI)	Area (SF)	Area (SY)	Maintenance Need	Estimated Cost	Priority	Comments
Happy Camp	Itroop Rd	0111	010	0111_010	1-BIA	24	0.9		12,672	Crack Seal, Chip seal, restripe, Clean debris out of Drop inlets, need object markers on ends of concrete barrier.	$67,500	High 1	
Happy Camp	KTHA Admin Parking Lot	0023	815	0023_815	2-Tribe	63	0.1	12,500	1,389	Crack seal, Slurry Seal and restripe	$6,000	High 2	
Happy Camp	KTHA Admin Parking Lot	0023	825	0023_825	2-Tribe	41	0.1	5,270	586	Crack seal, Slurry Seal and restripe	$3,100	High 2	
Happy Camp	Karuk Happy Camp Head Start Parking Lot	0023	835	0023_835	2-Tribe	40	0.1	7,801	867	Crack seal, Slurry Seal and restripe	$3,800	High 2	
Happy Camp	Anavkaam Parking Lot	0041	020	0041_020	2-Tribe	164	0.1	82,366	9,152	Crack seal in 1-3 years. Slurry seal and restripe 5-7 Years	$34,200	High 2	
Happy Camp	Jacobs Way	0108	010	0108_010	1-BIA	30	0.4		7,040	ST - Patch Utility trench after first Speed bump.. LT - Crack Seal, Slurry Seal, Restripe 3-5 years	$26,100	High 2	
Happy Camp	Headway Parking Facility	0120	815	0120_815	2-Tribe	86	0.1	7,860	873	Crack Seal, Slurry Seal and Restipe 1-3 years	$3,800	High 2	
Happy Camp	Jacobs Way Wellness Center Parking Lot	0023	845	0023_845	2-Tribe	111	0.1	9,456	1,051	Crack seal, Slurry Seal and restripe 3-5 years	$4,500	Medium 1	
Happy Camp	Anavkaam Rd	0041	010	0041_010	2-Tribe	20	0.2		2,347	Crack seal, Slurry Seal and restripe 3-5 years	$9,100	Medium 1	
Happy Camp	Anavkaam Rd	0041	015	0041_015	2-Tribe	20	0.1		1,173	Crack seal, Slurry Seal and restripe 3-5 years	$4,800	Medium 1	
Happy Camp	Shan D Dr	0110	010	0110_010	1-BIA	25	0.3		4,400	Crack seal, Slurry seal sweep silt off road where Itropp Rd intersects. Water seeping through pavement 100' section need to excavate and find out why then design fix. It may need underdrain.	$30,600	Medium 1	
Happy Camp	Upper Itroop Rd	0111	030	0111_030	1-BIA	20	0.4		4,693	Gravel, Blade 2x/year spring & fall.	$55,000	Medium 1	
Happy Camp	Piith Dr	0112	010	0112_010	1-BIA	21	0.1		1,232	Crack Seal, Slurry Seal, Restripe 3-5 years	$5,500	Medium 1	
Happy Camp	Hillside Rd	T050	810	T050_810	2-Tribe	16	0.1		939	Fill potholes, Slurry seal and restripe 1-3 years	$4,800	Medium 1	
Happy Camp	Virusur Impah Rd	0055	010	0055_010	2-Tribe	22	0.1		1,291	Crack seal, Slurry Seal 3-5 years	$5,200	Medium 2	
Happy Camp	Jacobs Way Extension - Sect 10	0109	010	0109_010	1-BIA	30	0.1		1,760	Crack Seal, Slurry Seal, Restripe 3-5 years	$7,600	Medium 2	
Happy Camp	Jacobs Way Extension - Sect 20	0109	020	0109_020	1-BIA	30	0.1		1,760	Crack Seal, Slurry Seal, Restripe 3-5 years	$7,600	Medium 2	
Happy Camp	Jacobs Way Extension - Sect 30	0109	030	0109_030	1-BIA	30	0.1		1,760	Crack Seal, Slurry Seal, Restripe 3-5 years	$7,600	Medium 2	
Happy Camp	Jacobs Way Extension - Sect 40	0109	040	0109_040	1-BIA	30	0.1		1,760	Crack Seal, Slurry Seal, Restripe 3-5 years	$7,600	Medium 2	
Happy Camp	Jacobs Way Extension - Sect 50	0109	050	0109_050	1-BIA	30	0.2		3,520	Crack Seal, Slurry Seal, Restripe 3-5 years	$14,000	Medium 2	
Happy Camp	Hillside Parking Lot	T050	815	T050_815	2-Tribe	40	0.1	17,884	1,987	Crack seal, Slurry seal and restripe in 5-7 years	$7,800	Medium 2	
Happy Camp	E Nok Impah	0022	010	0022_010	1-BIA	30	1.5		26,400	Blade as need, check drainage structures for obstructions	$29,000	Low 1	
Happy Camp	Jacobs Ranch Rd	0043	010	0043_010	1-BIA	12	0.8		5,632	Blade and brush as needed	$9,700	Low 1	
Happy Camp	Bud's Rd	0064	010	0064_010	2-Tribe	12	0.2		1,408	Blade	$2,100	Low 1	
Happy Camp	Itroop Rd	0111	015	0111_015	2-Tribe	9	0.3		1,584	Gravel first 200" blade as needed, fill hole in road by shack. Earth road the rest of length, recommend adding water bars on 150-200' intervals in steep section to correct drainage issues. Clean slit off Shan D Rd at intersection	$21,000	Low 1	
Happy Camp	Upper Itroop Rd	0111	020	0111_020	1-BIA	15	0.9		7,920	Gravel, Blade 2x/year spring & fall, reshape area near interesection with Itroop Rd to drain water, remove log piles,	$91,500	Low 1	
										Total	**$469,500**		

Updated 01/16/2023

Karuk Tribe

2022 TTP Transportation Facility Maintenance Plan Table - Orleans Area

Maintenance Area	Route Name	Route Number	Section Number	Route_Section	Ownership	Surface Width (ft)	Length (MI)	Area (SF)	Area (SY)	Maintenance Need	Estimated Cost	Priority	Comments
Orleans	Somes Bar Work Center Road	0050	810	0050_810	2-Tribe	16	0.1		939	Reconstruct, pave 1-3 year.	$59,200	Medium 1	
Orleans	Somes Bar Work Center Parking Lot	0050	815	0050_815	2-Tribe	125	0.1	13,246	1,472	Reconstruct , pave 1-3 years	$92,800	Medium 1	
Orleans	Charlie Rd	0068	020	0068_020	2-Tribe	10	0.1		587	Desgin for gravel surface	$15,000	Medium 1	
Orleans	Panamnik Elder's Loop Rd/Toisheep	0113	010	0113_010	1-BIA	32	0.2		3,755	Minor Crack seal, Slurry seal, restripe 3-5-years	$13,300	Medium 1	
Orleans	Panamnik Way	P014	010	P014_010	2-Tribe	40	0.1	8,514	946	Design to pave 1-5 years	$59,500	Medium 1	
Orleans	Karuk Tribe DNR Access Rd	0075	010	0075_010	2-Tribe	28	0.1		1,643	Crack seal, Slurry seal and restripe 3-5 years	$6,500	Medium 2	
Orleans	Karuk Tribe DNR Access Rd	0075	011	0075_011	2-Tribe	28	0.1		1,643	Crack seal, Slurry seal and restripe 3-5 years	$6,500	Medium 2	
Orleans	Asip Rd	0325	010	0325_010	1-BIA	24	0.1		1,408	Crack seal, Slurry seal and restripe	$6,400	Medium 2	
Orleans	Panamnik Senior and Computer Center Parking Lot	0325	815	0325_815	2-Tribe	100	0.1	13,258	1,473	Crack seal, Slurry seal and restripe 3-5 years	$5,900	Medium 2	
Orleans	Big Rock Rd	0326	010	0326_010	1-BIA	28	0.2		3,285	Minor Crack seal, Slurry seal, restripe 5-7 years	$12,700	Medium 2	
Orleans	Yitha Ct	0327	010	0327_010	1-BIA	32	0.1		1,877	Minor Crack seal, Slurry seal, 5-7 years	$6,400	Medium 2	
Orleans	Axak Ct	0328	010	0328_010	1-BIA	32	0.1		1,877	Minor Crack seal, Slurry seal, 5-7 years	$6,400	Medium 2	
Orleans	Kuyraak Ct	0329	010	0329_010	1-BIA	32	0.1		1,877	Minor Crack seal, Slurry seal, 5-7 years	$6,400	Medium 2	
Orleans	Karuk Tribe Dept of Natural Resources Parking Lot	P012	010	P012_010	2-Tribe	120	0.1	25,870	2,874	Crack Seal, Slurry Seal, Restripe 3-5 years	$11,000	Medium 2	
Orleans	Karuk Tribe Dept of Natural Resources Parking Lot	P013	010	P013_010	2-Tribe	19	0.1	1,063	118	Clean concrete and restripe	$1,600	Medium 2	
Orleans	Orleans Clinic Parking Lot	P015	010	P015_010	2-Tribe	80	0.1	7,405	823	Crack Seal, Slurry Seal, Restripe 3-5 years	$3,700	Medium 2	
Orleans	Upper Simms Rd	0003	010	0003_010	2-Tribe	8	0.7		3,285	Blade and brush as needed	$6,200	Low 1	
Orleans	Clinic Rd	0040	010	0040_010	1-BIA	10	0.1		587	Crack seal, Slurry Seal and restripe 5-7 years	$3,200	Low 1	Rt was not videoed, but looking at the recent GIS layer. It looks like it has been paved and striped.
Orleans	Shivshaneen Way	0046	010	0046_010	1-BIA	11	0.1		645	Blade Yearly	$1,150	Low 1	
Orleans	Katimiin Rd	0051	810	0051_810	2-Tribe	13	0.2		1,525	Blade	$2,200	Low 1	
Orleans	Katimiin Rd	0051	820	0051_820	2-Tribe	13	0.1		763	Blade	$1,300	Low 1	
Orleans	Ruben Riffle Rd	0079	010	0079_010	2-Tribe	10	0.4		2,347	Gravel, Blade as needed	$21,000	Low 1	
Orleans	Upper Tishawnik Rd	T056	010	T056_010	2-Tribe	23	0.1		1,349	Blade Yearly	$2,100	Low 1	
Orleans	Lower Tishawnik Rd	T057	010	T057_010	2-Tribe	12	0.2		1,408	Crack seal, Slurry seal 5 years	$5,000	Low 1	
Orleans	Aan Chuuphan Rd	T058	010	T058_010	2-Tribe	13	0.4		3,051	Blade yearly, future design to pave	$4,700	Low 1	Estimate including design/pave: $139,200
Orleans	Aan Chuuphan Rd	T058	020	T058_020	2-Tribe	18	0.1		1,056	Blade yearly, future design to pave	$1,600	Low 1	Estimate including design/pave: $48,100
Orleans	S.R. 96	0096	090	0096_090	3-State	28	5.5		90,347	Needs guardrail and curve warning signage	$100,000	Other	Safety Concern area
										Total	**$461,750**		

APPENDIX C

Karuk Tribe Maintenance Photo Album

Karuk Tribe Road Maintenance Photo Album

by Red Plains Professional

0023_815 1 - KTHA Admin Parking Lot

0023_815 2 - KTHA Admin Parking Lot

0023_815 3 - KTHA Admin Parking Lot

0023_815 4 - KTHA Admin Parking Lot

0023_815 5 - KTHA Admin Parking Lot

0023_825 1 - KTHA Admin Parking Lot

0023_825 2 - KTHA Admin Parking Lot

0023_835 1 - Karuk Happy Camp Head Start Parking Lot

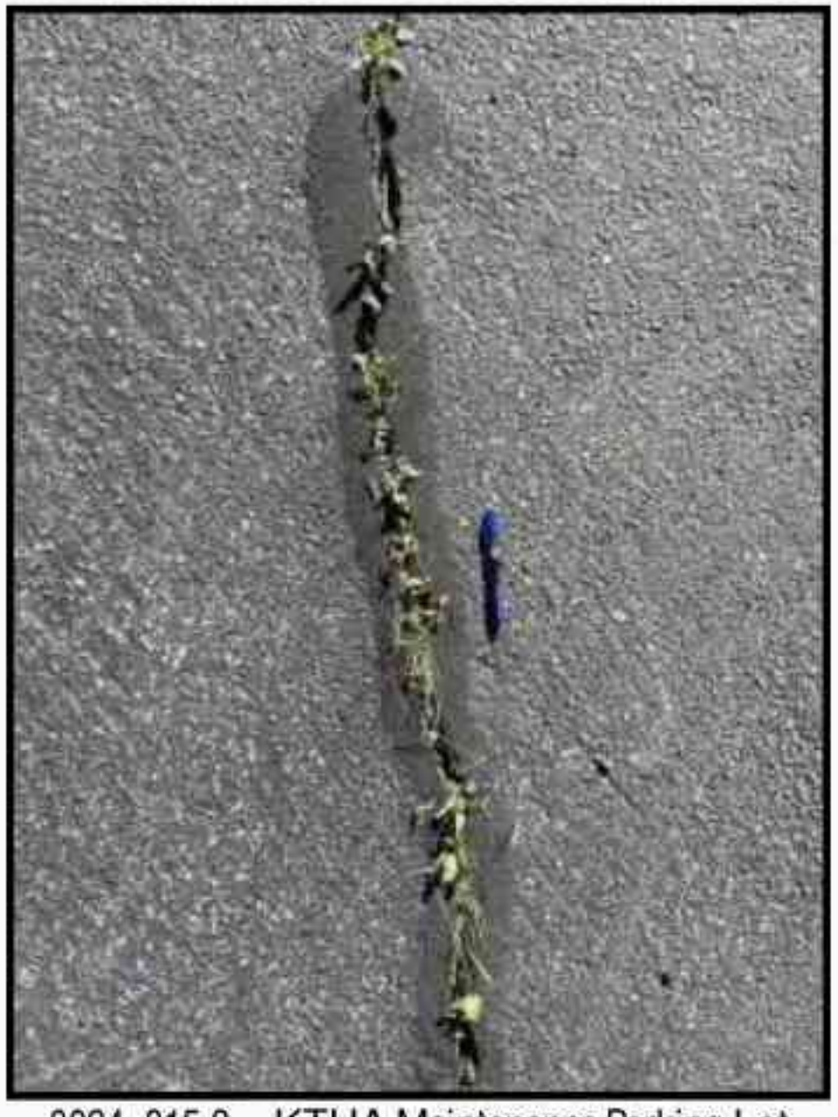
0023_835 2 - Karuk Happy Camp Head Start Parking Lot

0023_835 3 - Karuk Happy Camp Head Start Parking Lot

0023_845 1 Jacobs Way Wellness Canter Parking Lot

0024_815 1 - KTHA Maintenance Parking Lot

0024_815 2 - KTHA Maintenance Parking Lot



0024_815 3 - KTHA Maintenance Parking Lot

0024_815 4 - KTHA Maintenance Parking Lot

0024_815 5 - KTHA Maintenance Parking Lot

0029_020 1 - Kahtishraam Parking lot

0029_020 2 - Kahtishraam Parking lot

0029_030 1 - Kahtishraam Parking Extension

0029_030 2 - Kahtishraam Parking Extension

0041_020 1 - Anavkaam Parking Lot

0041_020 2 - Anavkaam Parking Lot

0041_020 3 - Anavkaam Parking Lot

0041_020 4 - Anavkaam Parking Lot

0041_020 5 - Anavkaam Parking Lot

0041_020 6 - Anavkaam Parking Lot

0041_020 7 - Anavkaam Parking Lot

0049_010 1 - Yreka Clinic Parking Facility

0049_010 2 - Yreka Clinic Parking Facility

0049_010 3 - Yreka Clinic Parking Facility

0049_010 4 - Yreka Clinic Parking Facility

0050_815 - Somes Bar Work Center Parking Lot

0050_815 1 - Somes Bar Work Center Parking Lot

0050_815 2 - Somes Bar Work Center Parking Lot

0050_815 3 - Somes Bar Work Center Parking Lot

0050_815 4 - Somes Bar Work Center Parking Lot

0050_815 5 - Somes Bar Work Center Parking Lot

0120_815 1 - Headway Parking Facility

0120_815 2 - Headway Parking Facility

0325_815 0 - Panamnik Senior and Computer Center Parking Lot

0325_815 1 - Panamnik Senior and Computer Center Parking Lot

0325_815 2 - Panamnik Senior and Computer Center Parking Lot

0325_815 3 - Panamnik Senior and Computer Center Parking Lot

P001_010 1 - Karuk Head Start Parking Lot

P001_010 2 -Karuk Head Start Parking Lot

P001_010 3 - Karuk Head Start Parking Lot

P005_010 1 - Rain Rock Casino Parking lot

P005_010 2 - Rain Rock Casino Parking lot

P005_010 3 - Rain Rock Casino Parking lot

P005_010 4 - Rain Rock Casino Parking lot

P005_010 5 - Rain Rock Casino Parking lot

P005_010 6 - Rain Rock Casino Parking lot

P005_010 7 - Rain Rock Casino Parking lot

P005_010 8 - Rain Rock Casino Parking lot

P005_020 1 - Rain Rock Casino Parking lot

P005_020 2 - Rain Rock Casino Parking lot

P005_020 3 - Rain Rock Casino Parking lot

P005_020 4 - Rain Rock Casino Parking lot

P005_030 1 - Rain Rock Casino Parking lot

P005_030 2 - Rain Rock Casino Parking lot

P005_040 1 - Rain Rock Casino Parking lot

P005_040 2 - Rain Rock Casino Parking lot

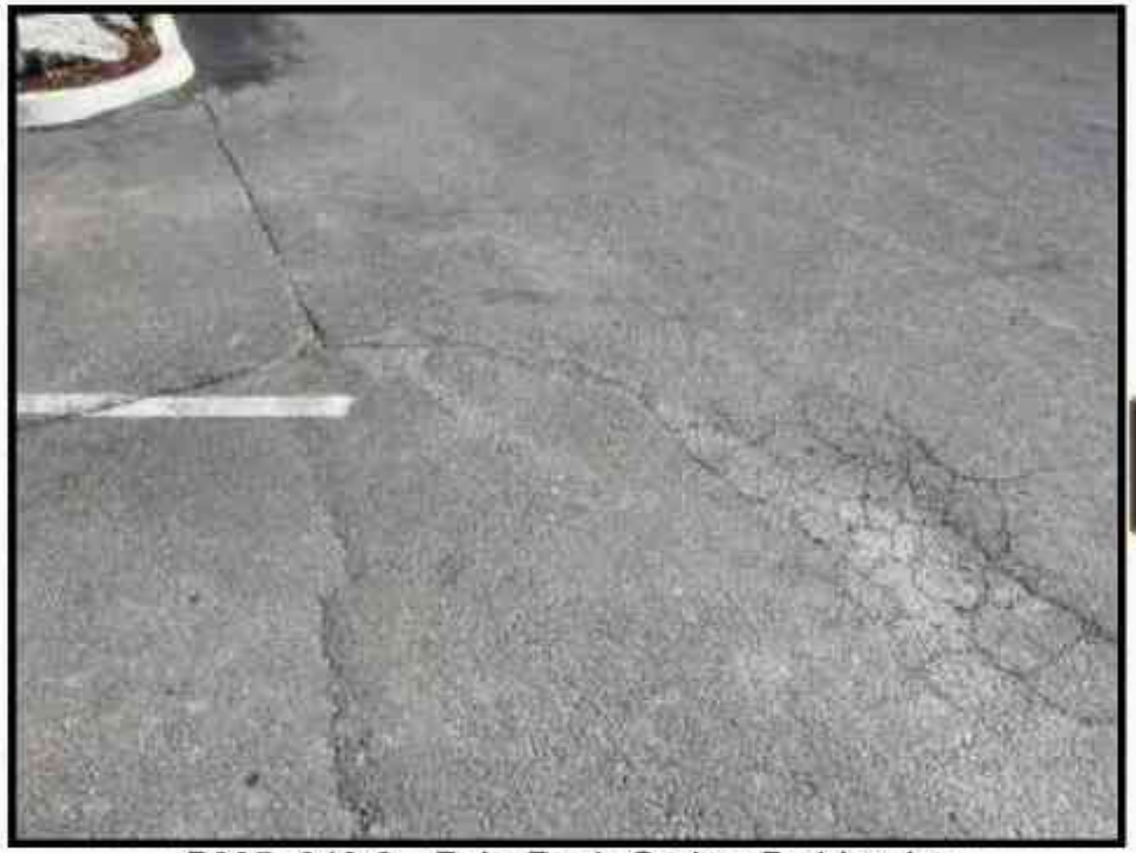
P005_040 3 - Rain Rock Casino Parking lot

P005_040 4 - Rain Rock Casino Parking lot

P005_040 5 - Rain Rock Casino Parking lot

P005_040 6 - Rain Rock Casino Parking lot

P005_040 7 - Rain Rock Casino Parking lot



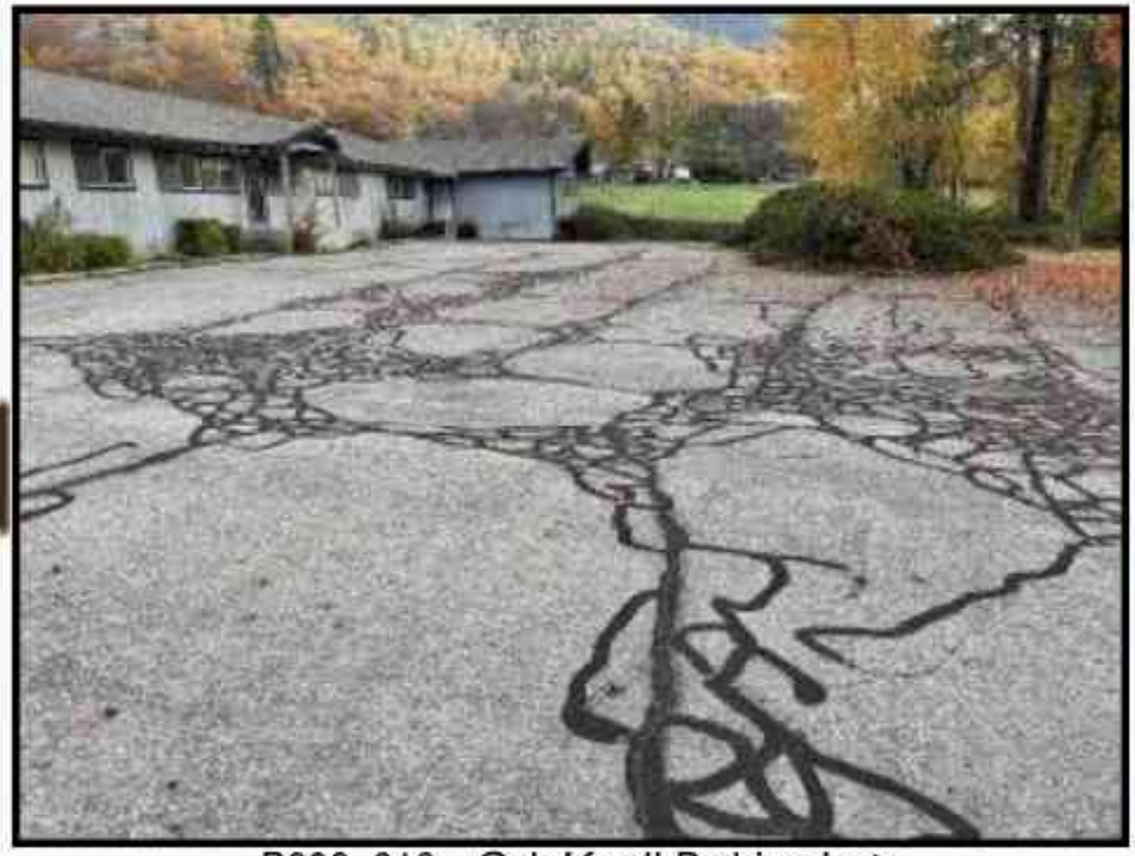
P005_040 8 - Rain Rock Casino Parking lot

P005_050 1 - Rain Rock Casino Overflow Parking lot

P005_050 2 - Rain Rock Casino Overflow Parking lot

P005_050 3 - Rain Rock Casino Overflow Parking lot

P005_050A - Rain Rock Casino Overflow Parking Lot



P006_010 - Oak Knoll Parking Lot

P007_010 - Justice Center Parking Lot

P012_010 - Karuk Tribe DNR Parking Lot

P012_010 1 - Karuk Tribe DNR Parking Lot

P012_010 2 - Karuk Tribe DNR Parking Lot

P012_010 3 - Karuk Tribe DNR Parking Lot

P012_010 Karuk DNR Parking Lot

P013_010 1 - Karuk Tribe DNR Parking Lot

P014_010 - Panamnik Way Parking Lot

P014_010 1 - Panamnik Way Parking Lot

P014_010 2 - Panamnik Way Parking Lot

P014_010 3 - Panamnik Way Parking Lot

P015_010 - Orleans Clinic Parking Lot

P015_010 1 - Orleans Clinic Parking Lot

P015_010 2 - Orleans Clinic Parking Lot

P016_010 - KTHA Housing Authority Parking Lot

P016_010 1 - KTHA Housing Authority Parking Lot

P016_010 2 - KTHA Housing Authority Parking Lot

Rt 0006 - Lower Casino Access Rd

Rt 0008 - Singleton Lane

Rt 0023 - Thook St

Rt 0024 - Yellowhammer St

Rt 0025 Puh Nay Fitch

Rt 0026 - EE Tucka Tucka Tee

Rt 0027 - Kutchy Katch

Rt 0028 - Mu Chee Shee

Rt 0029 - Kahtishraam Rd

Rt 0032 - Virusur

Rt 0033 - Chuufish Rd

Rt 0034 - Kaaschip

Rt 0035 - Takaaka

Rt 0036 - Fathip

Rt 0037 - Apsuun Rd

Rt 0038 Puufich

Rt 0041 - Anavkaam RD Sec 010-015

Rt 0042 - Ishpuk Rd Purpose of Painted Boulders

Rt 0042 - Ishpuk Rd

Rt 0043_010 - Jacobs Ranch RD

Rt 0045 - Pyrite Dr

Rt 0046_010 - Shivshaneen Way

RT 0047 - Xunyeep Ct (Oak Tree Ct)

Rt 0050 - Somes Bar Work Center Rd

Rt 0055 - Virusur Impah Rd

Rt 0064_010 - Bud's Rd

Rt 0068_010 - Charlie Rd

Rt 0068_020 - Charlie Rd

Rt 0075 - Karuk Tribe DNR Access

Rt 0079 - Ruben Riffle Rd

Rt 0096 - SR-96 Concern Area - drop off to river on Right

Rt 0108 - Jacobs Way

Rt 0109_010 - Jacobs Way Extension

Rt 0110 - Shan D Dr. water coming up through pavement

Rt 0110 - Shan D Dr.

Rt 0111_010(1) - Itroop Rd

Rt 0111_010(2) - Itroop Rd - Need Object markers on both ends of Concrete Barrier

Rt 0111_015(1) - Itroop Rd

Rt 0111_015(2) - Itroop Rd start of steep section past Water Towers

Rt 0111_015(3) - Itroop Rd Erosion

Rt 0111_015(4) - Itroop Rd Juction with Shan D Dr

Rt 0111_020 - Upper Itroop Rd

Rt 0111_020(3) - Upper Itroop Rd Mud hole near Int with Rt 0111_010

Rt 0111_030(1) - Upper Itroop Rd

Rt 0111_030(2) - Upper Itroop Rd Erosion issues

Rt 0112 - Pith Dr

Rt 0113 - Panamnik Elders Loop Rd

Rt 0325 - Asip Rd

Rt 0326 - Big Rock Rd

Rt 0327 - Yitha Ct

Rt 0328 - Axak Ct.

Rt 0329 - Kuyraak Ct.

Rt 1014 - Sharps Rd

Rt T050 - Hillside Rd

Rt T054_010 - Casino Way

Rt T054_020(1) - Casino Way

Rt T054_020(2) - Casino Way Alligatored Area

Rt T054_030(1) - Casino Way

Rt T054_030(2) - Casino Way Entrance to Overflow Parking Alligatored

Rt T054_040 - Casino Way

Rt T057 - Lower Tishawnik Rd

T050_815 1 - Hillside Parking Lot

T050_815 2 - Hillside Parking Lot

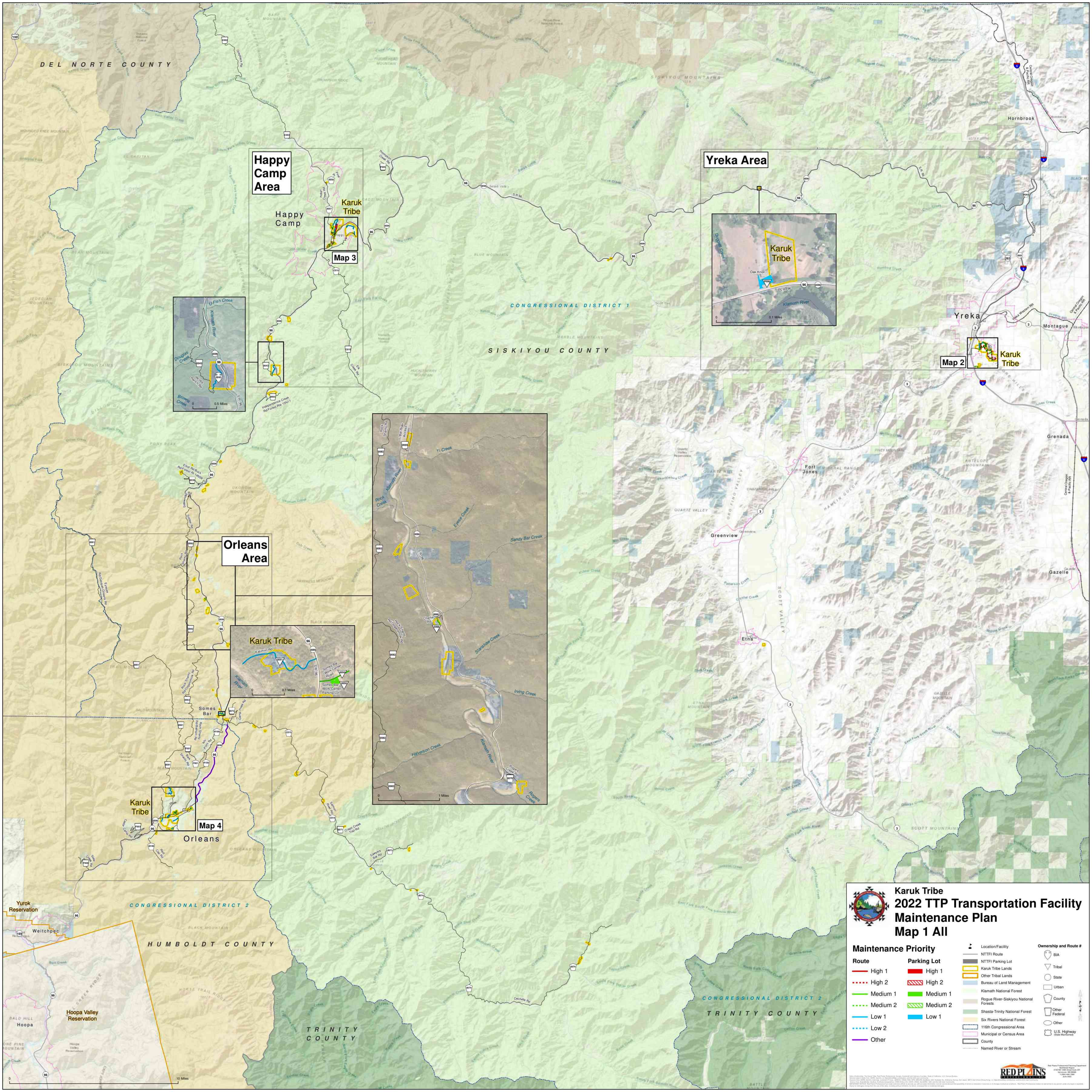
T050_815 3 - Hillside Parking Lot

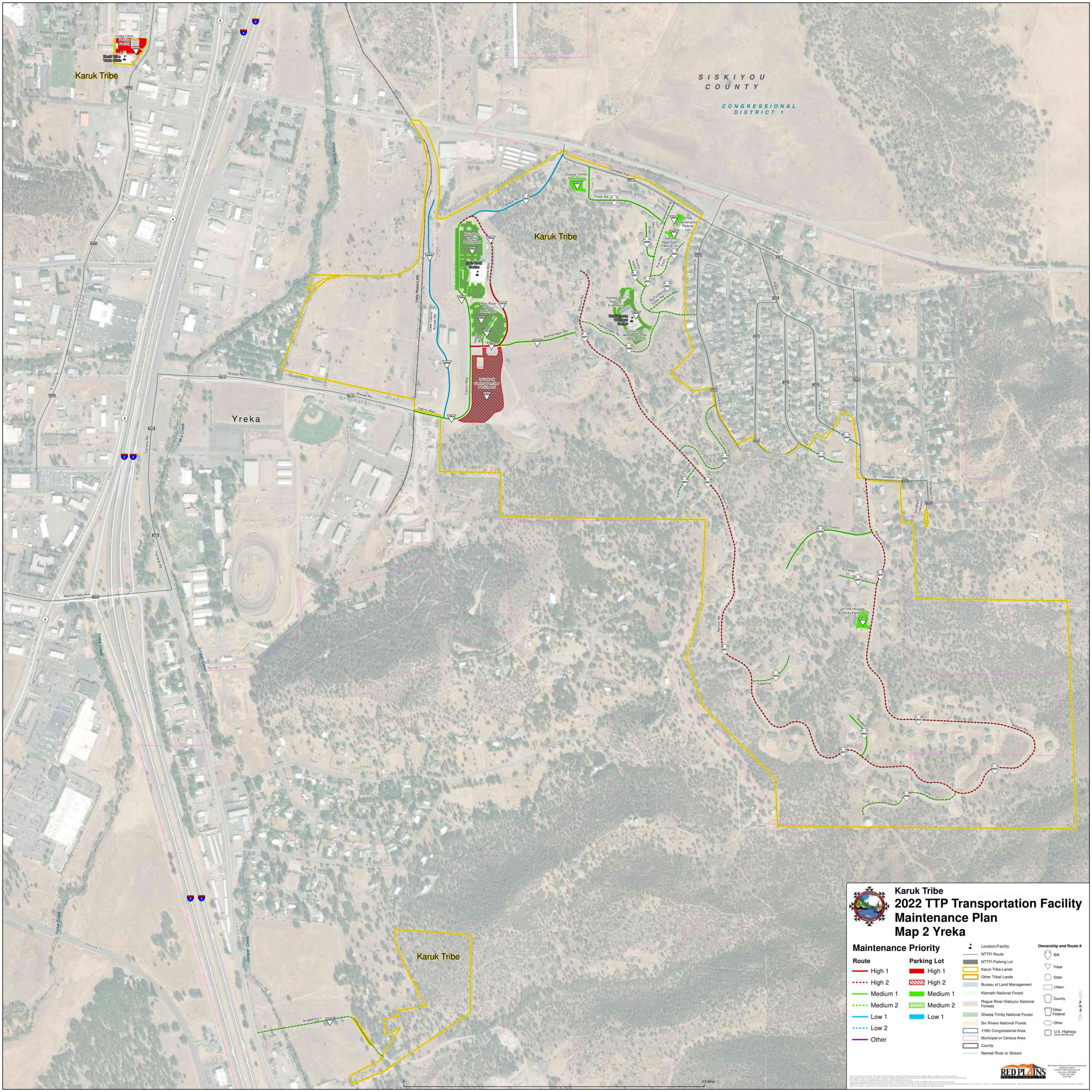
APPENDIX D

Karuk Tribe Maintenance Priority Maps

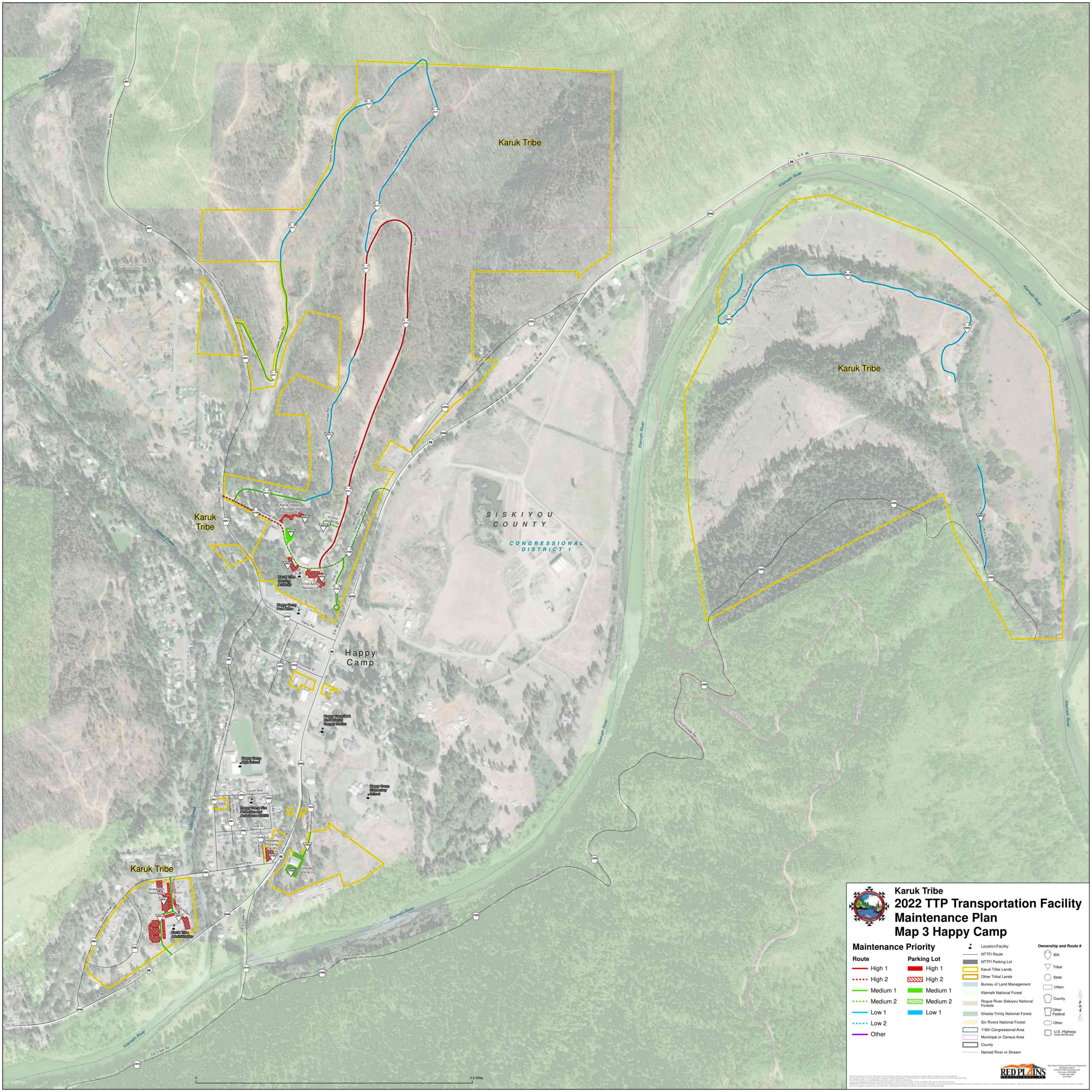
Link to Web App showing Maintenance Priorities — https://red-plains.xyz/KarukTribe

- Karuk 2022 Maintenance Plan Map 1 – All Areas
- Karuk 2022 Maintenance Plan Map 2 – Yreka
- Karuk 2022 Maintenance Plan Map 3 – Happy Camp
- Karuk 2022 Maintenance Plan Map 4 – Orleans

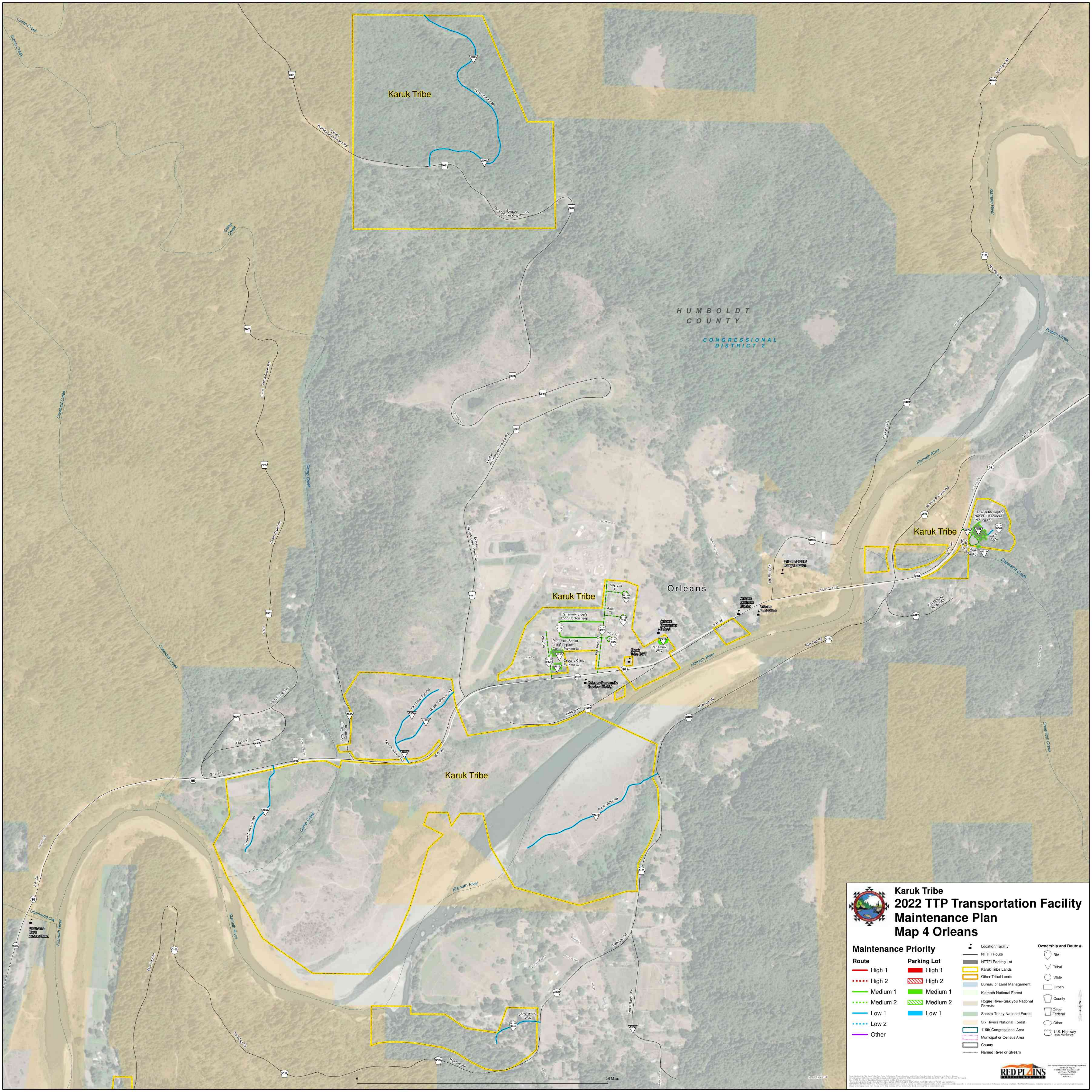

Karuk Tribe
2022 TTP Transportation Facility
Maintenance Plan
Map 1 All
Maintenance Priority
Route
High 1
High 2
Medium 1
Medium 2
Low 1
Low 2
Other
Parking Lot
High 1
High 2
Medium 1
Medium 2
Low 1
Location/Facility
NTTFI Route
NTTFI Parking Lot
Karuk Tribe Lands
Other Tribal Lands
Bureau of Land Management
Klamath National Forest
Rogue River-Siskiyou National Forests
Shasta-Trinity National Forest
Six Rivers National Forest
116th Congressional Area
Municipal or Census Area
County
Named River or Stream
Ownership and Route #
BIA
Tribal
State
Urban
County
Other Federal
Other
U.S. Highway (State Maintained)
Red Plains Professional Planning Department
Northwest Region
2103 NE 129th Street Suite 201
Vancouver, WA 98686
1-(360)-448-7993
June 2022
Happy Camp Area
Happy Camp
Karuk Tribe
Map 3
Yreka Area
Karuk Tribe
Yreka
Map 2
Karuk Tribe
Orleans Area
Karuk Tribe
Map 4
Karuk Tribe
Orleans
Somes Bar
DEL NORTE COUNTY
SISKIYOU COUNTY
HUMBOLDT COUNTY
TRINITY COUNTY
CONGRESSIONAL DISTRICT 1
CONGRESSIONAL DISTRICT 2
Yurok Reservation
Hoopa Valley Reservation
Weitchpec
Hoopa
Hornbrook
Montague
Grenada
Fort Jones
Greenview
Gazelle
Etna
Klamath River
SCOTT VALLEY
SISKIYOU MOUNTAINS
SCOTT MOUNTAINS



Karuk Tribe
2022 TTP Transportation Facility
Maintenance Plan
Map 2 Yreka
Maintenance Priority
Route
High 1
High 2
Medium 1
Medium 2
Low 1
Low 2
Other
Parking Lot
High 1
High 2
Medium 1
Medium 2
Low 1
Location/Facility
NTTFI Route
NTTFI Parking Lot
Karuk Tribe Lands
Other Tribal Lands
Bureau of Land Management
Klamath National Forest
Rogue River-Siskiyou National Forests
Shasta-Trinity National Forest
Six Rivers National Forest
116th Congressional Area
Municipal or Census Area
County
Named River or Stream
Ownership and Route #
BIA
Tribal
State
Urban
County
Other Federal
Other
U.S. Highway
(State Maintained)
RED PLAINS
Karuk Tribe
Karuk Tribe
Karuk Tribe
Yreka
SISKIYOU COUNTY
CONGRESSIONAL DISTRICT 1
Yreka Clinic
Rain Rock Casino
Casino Way
Sharps Rd
E Oberlin Rd
Campbell Ave
Apsuun Rd
Kahtishraam Rd
Thook Rd
Yreka Creek
Yreka Western RR
Moonlit Oaks Ave
Singleton Ln
Swallow Ct
Pufich
KTHA Housing Authority Parking Lot
Justice Center Parking Lot



Karuk Tribe
2022 TTP Transportation Facility
Maintenance Plan
Map 3 Happy Camp
Maintenance Priority
Route
High 1
High 2
Medium 1
Medium 2
Low 1
Low 2
Other
Parking Lot
High 1
High 2
Medium 1
Medium 2
Low 1
Location/Facility
NTTFI Route
NTTFI Parking Lot
Karuk Tribe Lands
Other Tribal Lands
Bureau of Land Management
Klamath National Forest
Rogue River-Siskiyou National Forests
Shasta-Trinity National Forest
Six Rivers National Forest
116th Congressional Area
Municipal or Census Area
County
Named River or Stream
Ownership and Route #
BIA
Tribal
State
Urban
County
Other Federal
Other
U.S. Highway
(State Maintained)
Karuk Tribe
Karuk Tribe
Karuk Tribe
Karuk Tribe
Happy Camp
SISKIYOU COUNTY
CONGRESSIONAL DISTRICT 1
Klamath River
Indian Creek
Cade Creek
S.R. 96
Happy Camp High School
Happy Camp Elementary School
Happy Camp Post Office
Karuk Tribe Administration
Hillside Parking Lot
Davis Rd
Second Ave
Third St
Fourth Ave
Indian Creek Rd
Elk Creek Rd
Curly Jack Rd
0
0.5 Miles
Red Plains Professional Planning Department
Northwest Region
June 2022


Karuk Tribe
2022 TTP Transportation Facility
Maintenance Plan
Map 4 Orleans
Maintenance Priority
Route
High 1
High 2
Medium 1
Medium 2
Low 1
Low 2
Other
Parking Lot
High 1
High 2
Medium 1
Medium 2
Low 1
Location/Facility
NTTFI Route
NTTFI Parking Lot
Karuk Tribe Lands
Other Tribal Lands
Bureau of Land Management
Klamath National Forest
Rogue River-Siskiyou National Forests
Shasta-Trinity National Forest
Six Rivers National Forest
116th Congressional Area
Municipal or Census Area
County
Named River or Stream
Ownership and Route #
BIA
Tribal
State
Urban
County
Other Federal
Other
U.S. Highway
(State Maintained)
RED PLAINS
Karuk Tribe
Orleans
HUMBOLDT
COUNTY
CONGRESSIONAL
DISTRICT 2
Klamath River
Camp Creek
Crawford Creek
Pearch Creek
Ullathorne Crk
S.R. 96
Eyesee Rd Gasquet Orleans Rd
Red Cap Rd
Ferris Ranch Rd
Ishi Pishi Rd
Ruben Poffie Rd
Lower Tishawnik Rd
Aah Chuupan Rd
Panamnik Elder's Loop Rd Toishkeep
Panamnik Senior and Computer Center Parking Lot
Orleans Clinic Parking Lot
Panamnik Way
Orleans Elementary School
Orleans Post Office
Orleans Business District
Orleans District Ranger Station
Orleans Community Services District
Karuk Tribe Dept of Natural Resources Parking Lot
Ullathorne River Access Road
Shivshaneen Way
0.6 Miles

APPENDIX E

Karuk Tribe Maintenance Organization Chart

(To be added by Tribe)

APPENDIX F

Maintenance Resources

All Documents included as Separate Digital Files Only

F-1 General Road Maintenance References

- A 25 CFR 170 subpart G Road Maintenance
- B AASHTO Maintenance Manual for Roadways and Bridges

F-2 Drainage Maintenance Reference

- A FHWA Gravel Roads Maintenance & Design Manual – Section 2 – Drainage

F-3 Gravel Road Maintenance References

- A FHWA Gravel Roads Maintenance & Design Manual
- B FHWA Gravel Roads Maintenance & Design Manual - Section 3 – Surface Gravel
- C FHWA Gravel Roads Maintenance & Design Manual - Section 4 – Dust Control & Stabilization

F-4 Paved Asphalt Road Maintenance References

- A NCHRP Report 784 – Best Practices for Crack Treatments for Asphalt Pavements
- B Caltranz Flexible Pavement Materials Program – Chapter 3
  Crack Sealing, Crack Filling & Joint Sealing of Flexible & Rigid Pavements
- C Minnesota DOT 2000-04 Best Practices Handbook on Asphalt Pavement Maintenance
- D Basic Asphalt Emulsion Manual – Section 6 – Surface Treatments

F-5 Sign Maintenance References

- A FHWA-SA-07-020 2007 Maintaining Traffic Sign Retroreflectivity
- B FHWA-SA-09-025 Maintenance of Signs and Sign Supports
- C FHWA Manual on Uniform Traffic Control Devices (MUTCD) 2009 Revised 2012
- D FHWA-SA-15-063 Synthesis of Pavement Marking Research
- E FHWA-SA-07-020 2013 Maintaining Traffic Sign Retroreflectivity

F-6 Vegetation Maintenance Reference

- A F-6-A FHWA Vegetation Control for Safety August 2008