

CITY OF WHITEHORSE

COUNCIL POLICY

POLICY: **TRANSPORTATION MAINTENANCE**

PURPOSE: To describe the manner in which the maintenance of transportation infrastructure will be carried out on roads designated for maintenance by the City.

AUTHORITY: Council Resolution 2015-26-07 dated December 14, 2015

TRANSPORTATION MAINTENANCE POLICY

ENABLING LEGISLATION

1. Section 272 of the *Municipal Act* provides, “subject to this and the *Highways Act*, a municipality has jurisdiction, management and control over all highways within the boundaries of the municipality, other than a highway excepted by order of the Commissioner in Executive Council”.

POLICY STATEMENT

2. The City of Whitehorse is responsible for the maintenance of public road rights-of-way, including storm water management, within the geographical boundaries of the City, excluding the Alaska Highway, Klondike Highway and private developments. This maintenance responsibility includes, but is not limited to, regularly scheduled remedial and repair work to provide for a reasonable level of service, safe conditions, and to extend the life of the infrastructure. The City will provide this service on a priority basis in a cost-effective manner, keeping in mind safety, budgets, personnel and environmental concerns.

OBJECTIVES

3. The objectives of this policy are:
 - (1) To provide vehicular and pedestrian traffic with adequate mobility within the City’s financial resources.
 - (2) To prevent or reduce accidents and injuries.
 - (3) To extend the life of transportation infrastructure.
 - (4) To set the level of service for transportation infrastructure maintenance.
 - (5) To provide an operational plan outlining how, when, where and in what order of priority transportation maintenance is carried out.
 - (6) To minimize economic loss to the community resulting from restricted transportation routes.

DEFINITIONS

4. In this policy,

“ASPHALT” means mixture of bitumen oil and aggregate to form asphalt concrete surface.

“BICYCLE” means any cycle, excluding a mobility device, propelled solely by human power, upon which a person may ride, regardless of the number of wheels it may have.

“BICYCLE LANE” means a lane on a road or street that has been designated by authorised signs or painted markings and is primarily used by bicycles, but which motor vehicles may temporarily use by crossing when at an intersection or accessing a driveway or parking area, and does not include a turning lane where there are dashed lines painted on the road or street or signage indicating the lane is a turning lane.

“CENTRAL BUSINESS DISTRICT” means the downtown core bordered by Front Street, Elliott Street, Fifth Avenue and Wood Street, as illustrated in Appendix “A”.

“BST” means bituminous surface treatment.

“CRACK SEALING” means the procedure for filling cracks in pavement with rubberized asphalt.

“DUST CONTROL” means a treatment for gravel surfaces to suppress dust.

“FEES AND CHARGES” means the City of Whitehorse Fees and Charges Bylaw as amended from time to time.

“FLUSHING” means the application of water in order to clean.

“GRADING” means grading a road using a mechanical grader.

“IMPASSABLE” means impracticable or unsafe to cross or travel along.

“MANAGER OF OPERATIONS” means the Manager of the Operations Department for the City of Whitehorse, or his approved designate.

“MILLING” means the material produced as the result of grinding out asphalt prior to repairs.

“PARKING METER” means a device used to time length of stay of vehicles at parking spot.

“PAVEMENT” means hard road surface constructed of asphalt or BST.

“POTHOLE” means depression in road surface caused by traffic or surface deterioration.

“POTHOLE PATCHING” means the operation of filling a pothole with a mixture of fine aggregate and bitumen or asphalt.

“REGULATORY TRAFFIC SIGN” means a sign that indicates the applicability of legal requirements that may not otherwise be apparent to the driver.

“ROAD/STREET” used interchangeably, means the portion of the roadway that is designed and normally used by vehicles such as bicycles and motor vehicles such as cars, trucks and vans, and includes the shoulder but not the sidewalk as identified, prioritized and shown in Appendix A.

“ROAD RIGHTS-OF-WAY”, means that parcel of land within and owned by the City of Whitehorse dedicated to vehicular and pedestrian traffic.

“SIDEWALK” means the hard surface designed and constructed for and normally used by pedestrian traffic, excluding multi-use paths.

“SEASON” means the period of time during which a maintenance activity is carried out.

“SNOW AND ICE CONTROL AGGREGATE” means material placed during winter generally with a gradation of 12.5mm minus.

“SPRING CLEANUP” means a period during spring where crews concentrate on an initial clean-up of dust and dirt on hard-surfaced City streets, sidewalks and multi-use trails.

“STORM SEWER” means sewer system designed to transport surface water run-off from streets.

“STREET LIGHT” means an overhead light to enhance night time visibility for vehicular and pedestrian traffic.

“STREET SWEEPING” means the sweeping up and removal of dust and dirt from City Streets with a mechanical sweeper.

“TRAFFIC CONTROL UNIT” means electronic control device used to control traffic lights.

“TRAFFIC LIGHT” means an electrical signal light at intersections and along roadways to control the flow of traffic, pedestrians and cyclists.

“TRAFFIC SIGN” means a road sign to notify, control or provide warning for motorists, pedestrians and cyclists.

“TRANSPORTATION MAINTENANCE ACTIVITIES” means any maintenance activity as set out in this policy.

“WARNING SIGN” means a sign that indicates in advance conditions on or adjacent to a road that will normally require caution and may require a reduction in speed.

RESPONSIBILITIES

5. City Council shall annually set and adopt:

- (1) The Transportation Maintenance budgets;
- (2) The levels of service; and
- (3) The priority street maps, sidewalk maps, multi-use trail maps, and storm sewer maps.

6. Should revisions to this policy and/or the attached maps not be required as a result of the annual review, the latest approved policy will remain in effect.
7. The Manager of Operations shall ensure the implementation of the Transportation Maintenance Policy by:
 - (1) Determining when and how to initiate and perform Transportation Maintenance activities in accordance with this policy.
 - (2) Allocating and scheduling Operations resources.
 - (3) Obtaining, allocating and scheduling privately held resources.
 - (4) Addressing public concerns.
 - (5) Managing the budget.
 - (6) Recommending revisions to the policy and priority roads, sidewalks and storm sewer maps on an annual basis.
8. Operations employees shall carry out maintenance in accordance with the Transportation Maintenance Policy and in accordance with the instructions of the Manager of Operations.

ROADWAY PRIORITIES

9. The City operates with a limited amount of funds, which are required for a number of purposes. In establishing the Transportation Maintenance Policy, the City must take into consideration its financial resources and its personnel. Priorities are established to provide the greatest benefit to the majority of the travelling public. In setting priorities, consideration is given to criteria such as construction of the road in relation to the City of Whitehorse Servicing Standards Manual; traffic volume; road classification; road geometrics; transit; emergency services, budget funds, personnel, resources and environmental considerations.
10. The City has set four priority ratings for roads as follows and as illustrated and identified in the maps attached in Appendix A:

Priority 1: Freeways, major arterial roads, emergency routes, major bus routes, roads adjacent to areas with concerns of impact relating to water quality and the environment.

Priority 2: Remainder of the arterial roads, remainder of the bus routes, roads in the Central Business District, roads adjacent to schools and roads to prioritised City owned facilities and emergency routes within priority 2 zones.

Priority 3: The remainder of roads in the City.

Priority 4: City owned parking lots and lanes.

- (1) Unless specifically authorized by the Manager of Operations, the City will not maintain any road, sidewalk or multi-use trail not illustrated and identified in Appendix A.

PUBLIC RELATIONS

11. All concerns and inquiries shall be handled by the Operations Department Administrative Assistant at 668-8345, Monday to Friday, 0800 to 1600. At all other times, emergency concerns and inquiries shall be directed to the **After Hours Trouble Line** at 667-2111, and routine concerns and inquiries shall be directed to the Maintenance Control Centre Line (633-7669). Maintenance activities or information may also be advertised in local newspapers, daily radio reports, and may be included in the Operations Department pages on the City website (www.whitehorse.ca).

HOURS OF OPERATION AND STAFF DEPLOYMENT

12. The City will provide Transportation Operation and Maintenance functions on road rights-of-way within the geographical boundary of the City of Whitehorse, excluding the Alaska Highway, Klondike Highway and private developments, as illustrated and identified in Appendix A.
13. Standard hours of operation are weekdays 0700 to 1730. Weekend shifts, early morning shifts and night shifts may also be deployed as determined by the Manager of Operations.
14. Operations that will constrain traffic flow will not take place in school zones between the hours of 0800 to 0900, 1130 to 1300 and 1500 to 1630, when school is in session, unless in case of emergency.
15. Except on priority 1 and priority 2 streets, operations will not take place in residential areas between the hours of 2300 to 0700 unless in case of emergency.
16. When in the opinion of the Manager of Operations abnormal conditions exist, overtime, additional City equipment and outside forces and equipment may be mobilized.
17. Un-seasonal or abnormal weather conditions may affect regularly scheduled maintenance activities.

PARKING BANS

18. Parking bans may be implemented to provide for transportation and maintenance operations. Areas where parking is to be banned will be signed 24 hours in advance. Vehicles that do not adhere to the parking ban shall be towed and the owner of the vehicle shall be responsible for all towing costs.

SAFETY

19. All work shall be carried out in accordance with the General Safety Regulations of the *Yukon Occupational Health and Safety Act*. Scheduled or emergency maintenance work may at times require traffic lanes, bike lanes, sidewalks and multi-use trails to be closed or detoured in order to safely carry out work.

UNPAVED ROAD MAINTENANCE

20. Maintenance on unpaved roads is carried out in order to restore the road structure and to improve ride and safety for motorists.
21. Unpaved road conditions are inspected, classified and logged on a three-year rotational basis as part of the Pavement Management System maintained by the City's Engineering Department. Data is used to schedule maintenance, capital upgrades and reconstruction.
22. Unpaved Road maintenance begins when ambient temperatures are above freezing and the frost is out of the ground. Work typically commences at the beginning of May and is completed by the end of September
23. The City's Parks and Community Development Department may provide maintenance on multi-use paved trails as per the approved annual operating and maintenance budget.
24. Unpaved road maintenance consists of the following activities:
 - (1) **Road Grading** is carried out on unpaved roads using a motor grader and is done in order to mix road aggregates, to re-establish the crown of the road, and to smooth and fill potholes and uneven road surfaces. New granular material is added as required. Road grading is a slow operation with speeds of 3-5 km/hr. Windrows may be left for short periods of time during active grading operations until successive passes spread material over the grade of the road.
 - (2) **Dust Control** is carried out on unpaved roads as a preventative maintenance measure that helps to maintain the integrity of the road, improve visibility for vehicular traffic, and reduce the health and aesthetic impacts caused by dust on adjacent developments. Calcium chloride is generally used as dust palliative. Road surfaces are graded and then calcium chloride is applied, usually with water, and then graded and mixed into the road surface. The application involves the use of a grader, dump truck and water truck. Application of calcium is a slow process and may result in temporary muddy conditions. Generally it takes two days for the road surface to set and become a hard driving surface.
25. The City has set the following standards for unpaved road maintenance:
 - (1) Maintenance is to be done in accordance with approved budgets.
 - (2) Scheduled operations will be conducted on unpaved road surfaces as indicated in priorities below.

Priority 1: The roads shall be graded first during spring and then on a monthly basis, if needed, for the rest of the season. Roads will be evaluated for the need of dust control and, if needed, dust control will be scheduled and carried out first.

Priority 2: The roads shall be graded second during spring and then on a monthly basis, if needed, for the rest of the season. Roads will be

evaluated for the need of dust control and, if needed, dust control will be scheduled and carried out second.

Priority 3: The roads shall be graded and have dust control operations carried out on an irregular basis as required by the Manager of Operations.

Priority 4: Unpaved lanes and parking lots shall be graded and have dust control operations carried out on an irregular basis as required by the Manager of Operations.

DITCHING AND SHOULDERING

26. Ditching and shouldering is carried out as a restorative or preventative maintenance activity to improve safety along roadways.

27. Maintenance begins when ambient temperatures are above freezing and the frost is out of the ground. Work typically begins at the beginning of May and is completed by the end of September.

28. Ditching and shouldering consists of the following activities:

- (1) **Shouldering** is carried out on roads as a preventative maintenance measure that helps to maintain the integrity of the road. Shoulders provide structure to the road and allow drainage from the road surface into ditches. They also allow a safe area for vehicles to pull off the travelled portion of the road. Maintenance is carried out using a motor grader. The grader pulls material from the ditch back up onto the shoulder, which is then graded to match original road grades. New granular material may be added in cases of washouts. The process is slow with grader speeds of 3-5 km/hr. Shoulders may be re-compacted. Any damaged guide rails or other road appurtenances are identified and scheduled for repair.
- (2) **Ditching** is carried out as a preventative maintenance activity to ensure that surface water drains away from the road structure. Ditches and culverts are inspected annually to observe any flow restrictions or other problems that are subsequently scheduled for repair. Maintenance and repairs may be provided, if needed, depending on the nature of the problem. During spring break-up culverts are thawed, if needed, to maintain flow. Culverts with a history of silting are flushed out in the fall. Failed culverts are scheduled for replacement.
- (3) **Brushing** is carried out in order to control excessive vegetation growth along shoulders of roads and in ditches that can cause visibility problems for motorists and can also interfere with drainage. Brushing is carried out using a mechanical rotating brushing attachment mounted onto a skid steer loader. In areas that cannot be reached by machine, brushing is done by hand.

29. The City has set the following standards for ditching and shouldering:

- (1) Maintenance is to be done in accordance with approved budgets.

- (2) Scheduled operations will be conducted along roads as indicated in priorities below.

Priority 1: The roads shall be inspected first during spring and evaluated for ditching, shouldering and brushing needs. Maintenance work will be scheduled in first priority and then only on an as required basis.

Priority 2: The roads shall be inspected second during spring and evaluated for ditching, shouldering and brushing needs. Maintenance work will be scheduled after priority 1 roads and then only on an as required basis.

Priority 3: The roads shall be inspected and evaluated for ditching, shouldering and brushing needs and have maintenance work scheduled as required by the Manager of Operations.

Priority 4: Unpaved lanes and parking lots shall be inspected and evaluated for ditching, shouldering and brushing needs and have maintenance work scheduled as required by the Manager of Operations.

PAVEMENT MAINTENANCE

30. Pavement maintenance is carried out in order to extend the life of paved and BST surfaces and to improve ride and safety for motorists. Maintenance includes work done on asphalt and BST roads. Over time paved surfaces form cracks and surface deterioration leads to potholes and, in some cases, total deterioration of entire sections of pavement.
31. Paved road conditions are inspected, classified and logged on a three-year rotational basis as part of the Pavement Management System maintained by the City's Engineering Department. Data is used to schedule maintenance, capital upgrades and replacement.
32. Pavement maintenance begins when ambient temperatures are above freezing and the frost is out of the ground. Work typically begins at the beginning of June and is completed by the end of August.
33. Pavement maintenance consists of the following activities:
- (1) **Pothole Patching** is carried out on paved and BST roads either by hand placement of hot/cold asphalt mix to fill potholes or using a spray patch machine which fills the pothole with a mixture of liquid asphalt and granular material. Patches are ready for traffic immediately after the repair has been made. Potholes shall be logged as they are reported either by City crews or by public complaint and scheduled for repair. Initially a temporary patch may be installed with a permanent patch scheduled for later installation.
 - (2) **Crack sealing** is carried out on asphalt surfaces using a crack-sealing machine. Most cracks are routed and cleaned and then a hot asphalt sealant is poured into the crack to seal. Sand is placed over the sealed crack to protect the surface from traffic. The sealed crack is ready for traffic within one hour of work being complete. Crack sealing needs are

logged as part of the pavement management program. Initial crack sealing shall commence within the first two years of a surface being paved.

- (3) **Large pavement patches** are required where there is a failure of the paved surface or as the result of excavation rehabilitation. The deteriorated section of pavement is removed and new asphalt laid using a paving machine. The patch is ready for traffic within one hour of the work being complete. Major pavement road failures will be scheduled for asphalt overlay or reconstruction under capital works.

34. The City has set the following standards for pavement maintenance:

- (1) Maintenance is to be done in accordance with approved budgets.
- (2) Scheduled pavement maintenance operations will be conducted on paved and BST road surfaces as indicated below.

Priority 1: The roads shall be inspected first during spring. Potholes, cracks and large pavement patch requirements shall be logged and any maintenance needs that are identified in the pavement management program reviewed. Any roads with pavement or pavement overlay work completed within the previous two years shall receive priority for crack sealing. All maintenance work shall be scheduled and work carried out first and then on an as needed basis thereafter. Severe potholes or pavement failures shall be responded to within 24 hours after the City has been notified.

Priority 2: The roads shall be inspected second during spring. Potholes, cracks and large pavement patch requirements shall be logged and any maintenance needs that are identified in the pavement management program reviewed. Any roads with pavement or pavement overlay work completed within the previous two years shall receive priority for crack sealing. All maintenance work shall be scheduled and work carried out after priority 1 roads and then only as needed for the rest of the season. Severe potholes or pavement failures shall be responded to within 48 hours after the City has been notified.

Priority 3: The roads shall have pavement maintenance operations carried out as required by the Manager of Operations.

Priority 4: Paved lanes and parking lots shall have pavement maintenance operations carried out as required by the Manager of Operations.

STREET AND SIDEWALK SWEEPING

- 35. Street sweeping is carried out in order to remove dust and debris that has collected on city streets. Excessive dust can result in poor visibility that can result in safety concerns for motorists, cyclists and pedestrians. In addition, excessive dust may pose health concerns and is aesthetically displeasing.

36. Street sweeping is carried out during spring, summer and fall. Spring clean-up is an annual maintenance activity that focuses on removal of snow and ice control aggregate that has accumulated over the winter. Spring clean-up begins when streets are significantly clear of snow and ice, usually in mid-April after the risk of snow has passed. Spring clean-up is typically complete by the end of May after which sweeping is carried out at various levels of service for the duration of the season, which usually extends to the end of September.
37. Sweeping operations will only be conducted when weather conditions permit. Temperatures below 0°C, wind, rain, snow and frozen gutter lines are factors that may delay sweeping operations.
38. Sweeping is carried out using a mechanical street sweeper. It is a slow process with average gutter line speeds for the first sweeping in spring that can be as slow as 3-5 km per hour. Vacuum or flushing equipment may be used in order to remove very fine dust particles.
39. During extreme situations where sweeping operations are causing poor visibility conditions, a pilot car shall follow the sweeper.
40. The City has set the following standards for street and sidewalk sweeping:
 - (1) Maintenance is to be done in accordance with approved budgets.
 - (2) Scheduled operations will be conducted on paved and BST road surfaces as indicated in priorities below.

Priority 1: The roads shall be swept first during spring clean-up and then be swept and flushed on a weekly basis, if needed, throughout the sweeping season.

Priority 2: The roads shall be swept second during spring clean-up and then be flushed and swept on a monthly basis, if needed, throughout the sweeping season.

Priority 3: The roads shall be swept and flushed once during spring clean-up and only as required by the Manager of Operations thereafter.

Priority 4: Paved lanes and parking lots shall be swept and flushed as required by the Manager of Operations.
 - (3) Street sweeping on City boulevards and medians will be carried out once during spring clean-up and then only if needed throughout the rest of the season.
 - (4) Loose material left on roads as the result of crack sealing, pothole patching or milling operations will be swept within two days after completion of the work, during which time warning signs shall remain in place.
 - (5) Areas of storm water concern will be swept on a priority basis as determined by the Manager of Operations throughout the season.

41. To provide for reasonable community aesthetics and safe pedestrian travel, the City will provide sweeping throughout the sweeping season on sidewalks adjacent to City property and on multi-use paved trails as illustrated and identified in Appendix "B". All other sidewalks shall be swept in accordance with the City's Maintenance Bylaw.
42. During spring clean-up only, the City will provide sweeping once on sidewalks adjacent to priority 1 and priority 2 streets in the downtown area.
43. The City will provide sweeping at paved transit stops, on an as-required basis, to provide for reasonably safe pedestrian travel.

STORM SEWER MAINTENANCE

44. Storm sewer maintenance is carried out in order to ensure surface water is able to drain off and away from streets. Keeping water off the street ensures vehicular, cyclist and pedestrian mobility; reduces the potential for economic loss due to flooding, and extends the life of the road and pavement structure. Regular storm system maintenance is also important in maintaining acceptable storm water effluent quality.
45. Storm sewer maintenance begins when ambient temperatures are above freezing and the spring melt water begins to pond. The storm sewer system consists of catch basins, manholes, laterals, mains and outfalls. Maintenance consists of the following activities:
 - (1) **Thawing** is carried out in order to maintain flow of water as needed when freezing and thawing conditions exist. This generally occurs March through May. Thawing is done using steam. In areas with drainage problems as identified in Appendix "A", snow shall be removed from streets prior to thawing of the storm water system in order to reduce the potential for "re-freezing" during successive freeze/thaw cycles.
 - (2) **Cleaning and Flushing** is carried out on storm water systems as a preventative maintenance activity to ensure proper drainage and to maintain acceptable effluent quality. Cleaning and flushing is done using a sewage vacor truck. Accumulation of sediments and debris are dislodged using water at high pressure and then removed using suction. Any material found in a storm system that appears to be deleterious in nature, shall be removed and disposed of in accordance with the Yukon Government Special Waste Regulation under the Environment Act.
 - (3) **Storm Sewer System Repairs** are carried out as a preventative maintenance activity or as needed in order to ensure the system is working as it was intended. Annual inspections shall identify maintenance work required. Work may include the levelling of catch basin frames or grouting and benching of catch basins and storm manholes. Defective catch basin frames or covers shall be repaired or replaced.

46. The City has set the following standards for storm sewer maintenance:
- (1) Maintenance is to be done in accordance with approved budgets.
 - (2) Scheduled storm sewer maintenance operations will be carried out as indicated in priorities below.
 - 1st Priority:** Storm systems in the Downtown area as identified in Appendix "B" shall have first priority for thawing during spring. Storm systems that discharge directly into the Yukon River as identified in Appendix "B" shall be inspected and cleaned, as determined by the Manager of Water and Waste Services, first during spring and then once again during fall.
 - 2nd Priority:** Storm systems in problem drainage areas as identified in Appendix "A" shall be given second priority for thawing during spring. Storm systems shall be inspected and cleaned once during fall.
 - 3rd Priority:** The remainder of storm systems shall be thawed as needed. Storm systems shall be inspected and cleaned once during the fall.
 - (3) Storm sewer and appurtenance repair needs are identified during scheduled maintenance and then shall be scheduled for repair as needed.

SIDEWALK MAINTENANCE

47. Sidewalk maintenance is carried out in order to provide a reasonable walking surface and level of safety for pedestrians. Ongoing maintenance also extends the life of sidewalk infrastructure.
48. Sidewalks are inspected, classified and logged on a three-year rotational basis as part of the Pavement Management System maintained by the City's Engineering Department.
49. Public complaints are received and logged. Data is used to schedule for maintenance, capital upgrades and replacement.
50. Sidewalk maintenance includes repair or replacement of single panels of sidewalk, or entire sections, depending on the need. Surface restoration may be carried out where feasible. Curbs and medians are repaired or replaced as needed.
51. Sidewalk maintenance begins when ambient temperatures are above freezing and the frost is out of the ground. Work typically begins at the beginning of May and is completed by the end of October.
52. The City has set the following standards for sidewalk maintenance:
 - (1) Maintenance is to be done in accordance with approved budgets.
 - (2) Sidewalks shall be repaired and maintained in a reasonable condition to allow for safe passage of pedestrians. Priority is given to high volume sidewalks with the objective of reducing or eliminating tripping hazards.

- (3) Curbs and medians are maintained in a satisfactory condition to delineate driving and parking areas and to channel and contain drainage.

TRAFFIC CONTROL SYSTEMS MAINTENANCE

- 53. Maintenance on traffic control systems is carried out in order to ensure control systems are in place and operating for vehicular, cyclist and pedestrian traffic safety and mobility. Traffic control systems consist of traffic lights, traffic signs, street markings, parking meters and streetlights.
- 54. **Traffic signals** and pedestrian crossings control vehicular, cyclist and pedestrian traffic in higher traffic volume areas. Systems are inspected and maintained on a year-round ongoing basis.
- 55. The City has set the following standards for traffic light maintenance:
 - (1) Maintenance is to be done in accordance with approved budgets.
 - (2) Ongoing visual inspections of traffic lights are conducted by City crews or are reported from outside agencies or the public. All concerns are logged. Complete repairs to failed traffic lights are a high priority and shall be attended to as soon as practical by the regular scheduled crew, call out crew or contractors as needed.
 - (3) Traffic control units shall be inspected and preventative maintenance undertaken on an annual basis during summer.
 - (4) Poles and mounting hardware shall be inspected annually during summer.
 - (5) Traffic light heads and pedestrian crossing lights shall be cleaned and LED units checked annually during summer.
- 56. **Traffic signs** control and guide vehicular movement throughout the City. Signs are inspected and maintained on a year round ongoing basis.
- 57. The City has set the following standards for traffic sign maintenance:
 - (1) Maintenance is to be done in accordance with approved budgets.
 - (2) Ongoing visual inspections for traffic sign problems are conducted by City crews or are reported from outside agencies or the public. All concerns are logged. Repairs or replacement of damaged or missing regulatory traffic and warning signs are a high priority and shall be attended to as soon as practical by regular scheduled crew or by call out crew as needed. All other signs will be replaced during regular scheduled work.
 - (3) All signs and sign posts locations and type are logged in a sign database.
 - (4) Signs are cleaned and maintained on an annual basis or as needed.
- 58. **Street Markings** guide and control vehicular, pedestrian and bicycle movements throughout the City.
- 59. The street marking program includes longitudinal driving lines and divisional lines, crosswalks, stop bars, arrows, and auxiliary markings. Maintenance

operations begin in the spring once ambient temperatures are above freezing. They do not begin until after ice control aggregate has been swept and roads have been flushed. Work generally commences in mid-May and extends through August. Crews inspect all street markings and schedule the repainting of markings as required.

60. The City has set the following standards for priorities for street marking maintenance:
- (1) The maintenance of the standards is to be done in accordance with approved budgets.
 - 1st Priority:** Driving and divisional lines throughout the City.
 - 2nd Priority:** Pedestrian crossings and stop bars in school zones.
 - 3rd Priority:** Pedestrian crossings and stop bars in the downtown core.
 - 4th Priority:** The remainder of pedestrian crossings and stop bars in the City.
 - 5th Priority:** The remainder of all markings in the City.
 - (2) A pilot car shall be used behind the paint truck during application of driving lines and divisional lines.
61. **Parking Meters** control Downtown parking by limiting the amount of time vehicles may park in a stall.
62. Parking meter maintenance is to be done in accordance with approved budgets. Meters shall be repaired and maintained in acceptable working order. Meters are serviced annually in the fall. On a rotating basis all meters shall be periodically checked for accuracy.
63. Failed meters are reported through the Operations Department or through the Bylaw Department and logged. Installation and repairs are performed during regular scheduled work throughout the year as required.
64. **Street Lights** provide lighting for roadways and parking lots to enhance night-time visibility for vehicular, cyclist and pedestrian traffic
65. Design levels for street lights are established by ATCO Electric Yukon in conjunction with the City's Engineering Department. The system is owned, operated and maintained by ATCO Electric Yukon with the service paid for by the City on a unit-based rate that is reviewed periodically.
66. When street light failures are reported to the Operations Department they are logged and then forwarded to ATCO Electric Yukon for repair.

APPENDICES

- Appendix "A" Priority Streets (maps and text)
- Appendix "B" Priority Storm Sewer Cleaning (maps only)

APPENDIX “A” TEXT – ROAD MAINTENANCE PRIORITY ROADS

PRIORITY 1

Mountainview Drive to Wann Road

Whistle Bend Way

Robert Service Way

Two Mile Hill

Hamilton Boulevard

Lewes Boulevard

Landfill Road

Lobird Road

Roundabouts

The Alaska and Klondike Highways are maintained by Government of Yukon

Riverdale Hospital Road, Alsek Road, Nisutlin Drive

Downtown Second Avenue, Fourth Avenue; Ogilvie Street

Marwell Area Quartz Road, Copper Road

Takhini Range Road North, College Road

Porter Creek 12th Avenue, Centennial Street from the Alaska Highway to
Clyde Wann Road, Hickory Street, Clyde Wann Road

Crestview Azure Road to Klukshu Avenue, Kathleen Road

Whistle Bend Casca Boulevard from Whistle Bend Way to Iskoot Crescent
(pump house), Keno Way, Casca Boulevard to Olive May
Way (lift station)

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APPENDIX “A” TEXT – ROAD MAINTENANCE PRIORITY ROADS

PRIORITY 2

Cowley Creek:	Salmon Trail, Dolly Varden Drive
Mary Lake	Fireweed Drive
Wolf Creek	Dawson Road, Cronkite Road
Wolf Creek North	Blaker Place
Pineridge	Castle Drive, Logan Road, Harvey Road, Nansen Drive
McLean Lake	McLean Lake Road (truck route)
Riverdale	Klondike Road, Duke Street; Bus loop
Downtown	First Avenue between Lambert Street and Black Street Third Avenue between Hanson Street and Strickland Street Sixth Avenue between Hanson Street and Ogilvie Street Main Street Ray Street The central business district Third Avenue between Second Avenue and Ogilvie Street Keish Street Black Street between First Avenue and Second Avenue Ogilvie Street from First Avenue to Second Avenue First Avenue from Keish Street to Ogilvie Street
Marwell Area	Chilkoot Way; Industrial Road, Silver Road, Gypsum Road, Tungsten Road and Tlingit Street
Takhini Area	Normandy Road; Range Way
Valleyview Area	Range Road South and Sumanik Drive between Alaska Highway and Hamilton Boulevard
McRae	Lorne Road, Denver Road and Frazer Road
Kulan	Laberge Road, Bennett Road and Lindeman Road
Spruce Hill	Portion of Englemann Drive to Sitka Crescent and Sitka Crescent
McIntyre	McIntyre Drive

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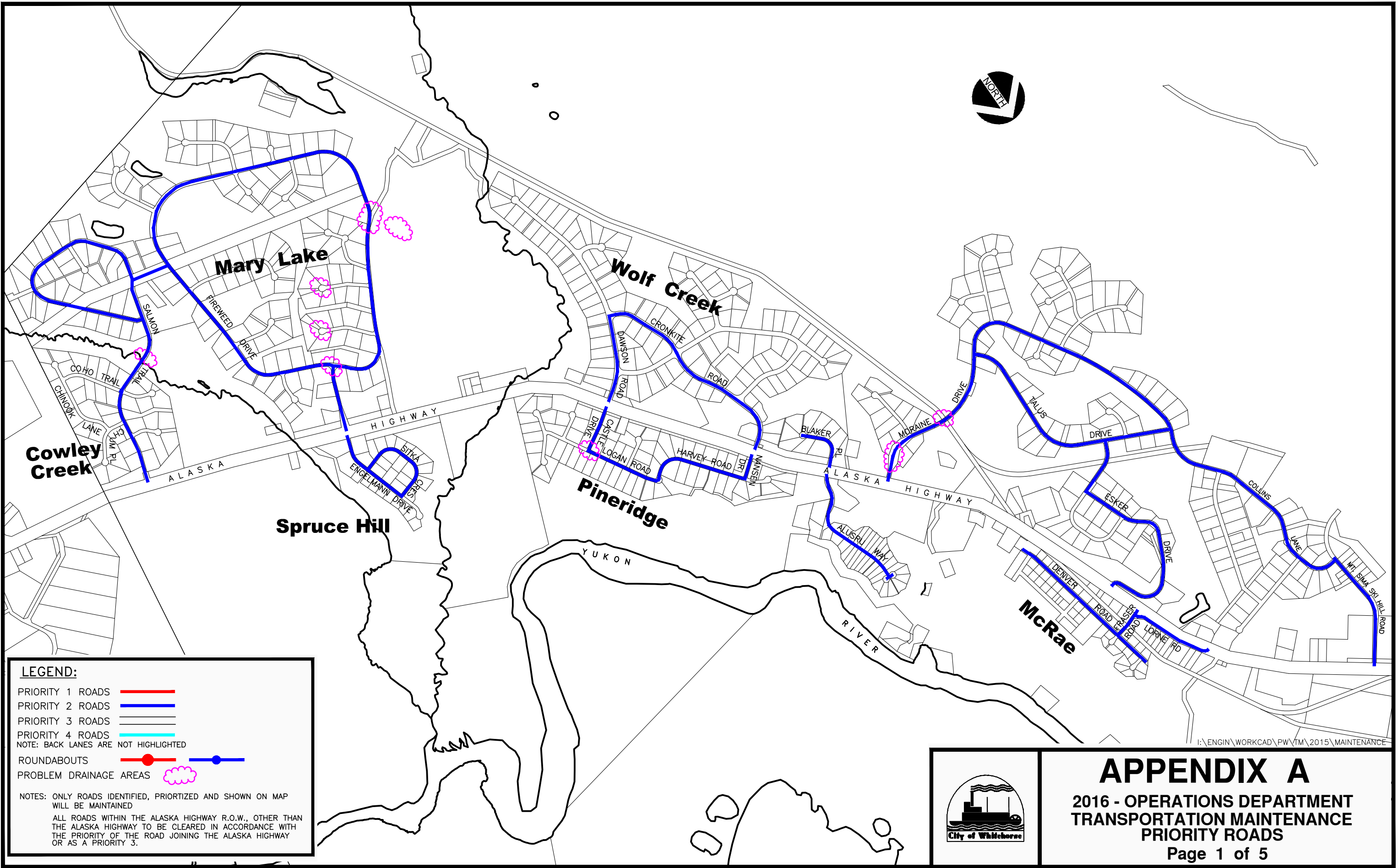
APPENDIX “A” TEXT – ROAD MAINTENANCE PRIORITY ROADS

PRIORITY 2 ROADS (Continued)

Granger	Thompson Road
Arkell	Heron Drive
Logan	Falcon Drive
Copper Ridge	Falcon Drive, Lazulite Drive, Emerald Trail, North Star Drive
Hillcrest	Hillcrest Drive, Sunset Drive, Park Lane; Roundel Road, Burns Road
Porter Creek	11 th Avenue between Fir Street and Pine Street 13 th , 14 th and 15 th Avenues 17 th Avenue east of the Alaska Highway Pine Street south of 12 th Avenue Ponderosa Drive Grove Street Fir Street between 9 th Avenue and 14 th Avenue Holly Street
Crestview	Rainbow Road; Klukshu Road; Squanga Road
Hidden Valley	Couch Road
McPherson	McPherson Road and Marion Crescent
Whitehorse Copper	Esker Road and Collins Lane
Mt. Sima	Ski Hill Road
Fox Haven	Alusru Way
Raven Ridge	War Eagle Way
Mountain View Place	River Ridge Road
Ingram	Mallard Way
Yukon Gardens	Metropolit Way

PRIORITY 3 All remaining roads

PRIORITY 4 City-owned public parking lots and lanes



LEGEND:

- PRIORITY 1 ROADS
- PRIORITY 2 ROADS
- PRIORITY 3 ROADS
- PRIORITY 4 ROADS

NOTE: BACK LANES ARE NOT HIGHLIGHTED

ROUNDABOUTS

PROBLEM DRAINAGE AREAS

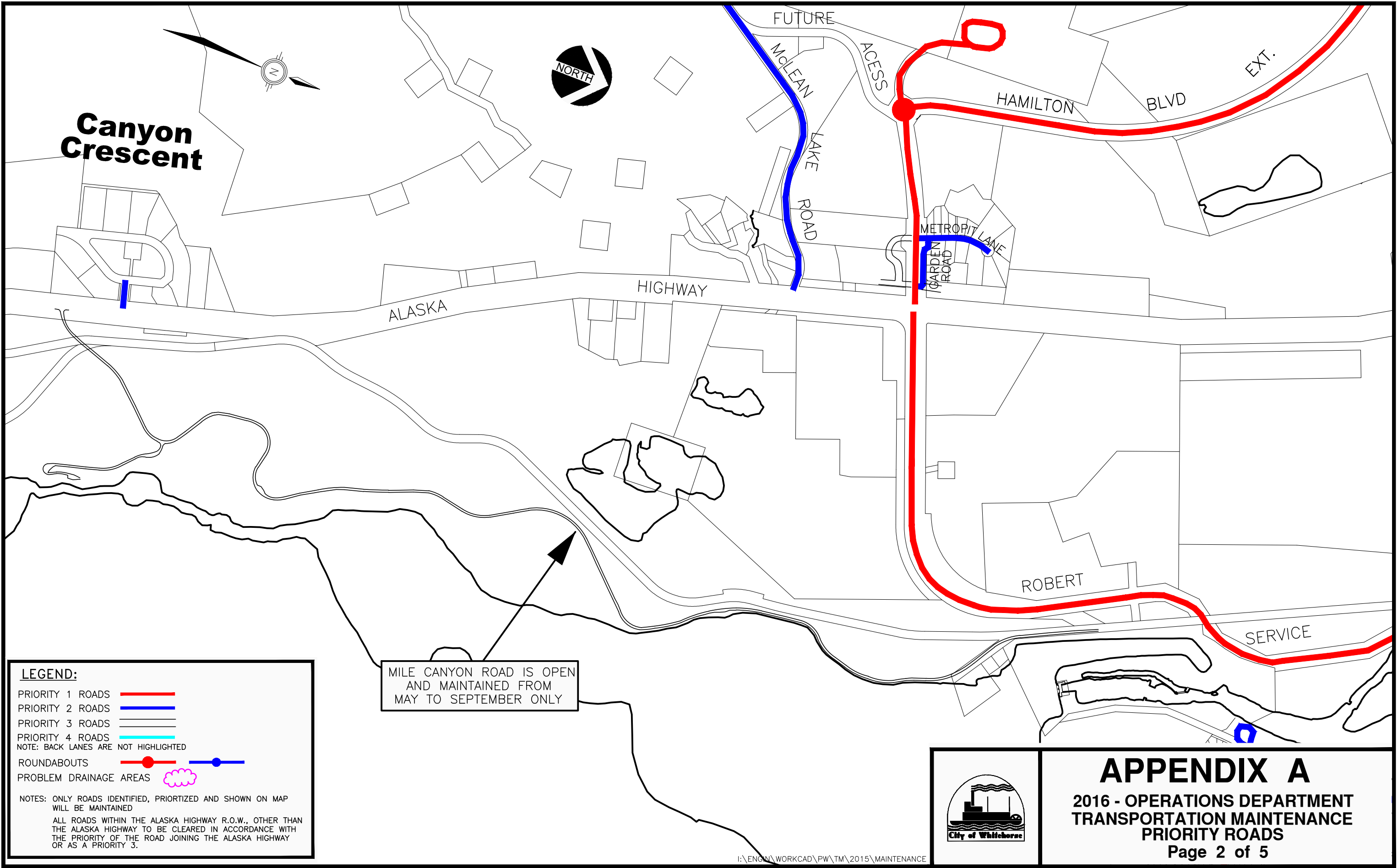
NOTES: ONLY ROADS IDENTIFIED, PRIORITIZED AND SHOWN ON MAP WILL BE MAINTAINED

ALL ROADS WITHIN THE ALASKA HIGHWAY R.O.W., OTHER THAN THE ALASKA HIGHWAY TO BE CLEARED IN ACCORDANCE WITH THE PRIORITY OF THE ROAD JOINING THE ALASKA HIGHWAY OR AS A PRIORITY 3.



APPENDIX A

2016 - OPERATIONS DEPARTMENT
TRANSPORTATION MAINTENANCE
PRIORITY ROADS



LEGEND:

PRIORITY 1 ROADS

PRIORITY 2 ROADS

PRIORITY 3 ROADS

PRIORITY 4 ROADS

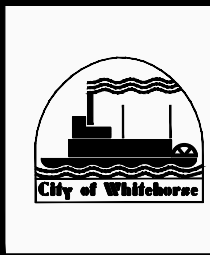
NOTE: BACK LANES ARE NOT HIGHLIGHTED

ROUNDABOUTS





PROBLEM DRAINAGE AREAS

NOTES: ONLY ROADS IDENTIFIED, PRIORTIZED AND SHOWN ON MAP WILL BE MAINTAINED

ALL ROADS WITHIN THE ALASKA HIGHWAY R.O.W., OTHER THAN THE ALASKA HIGHWAY TO BE CLEARED IN ACCORDANCE WITH THE PRIORITY OF THE ROAD JOINING THE ALASKA HIGHWAY OR AS A PRIORITY 3.



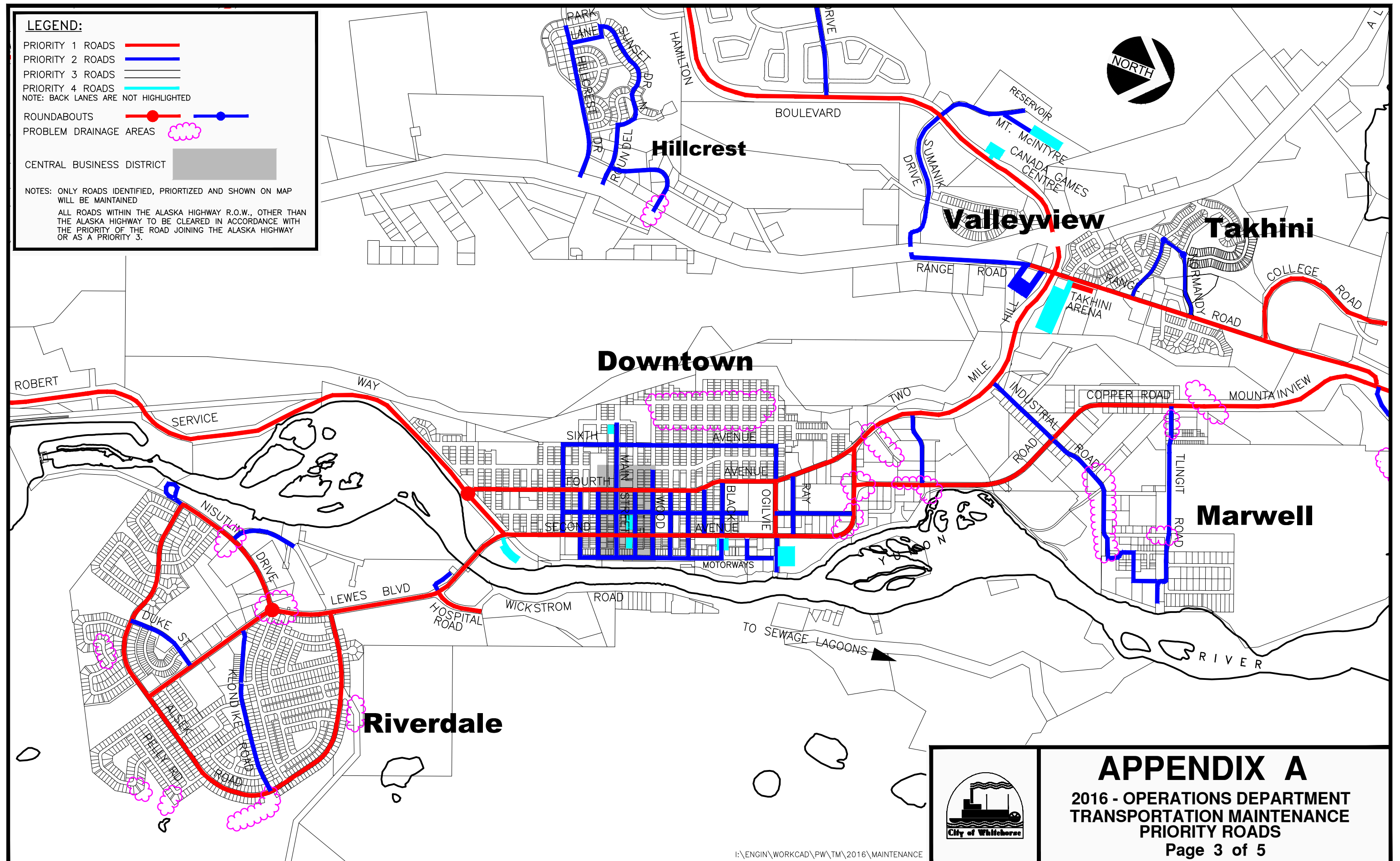
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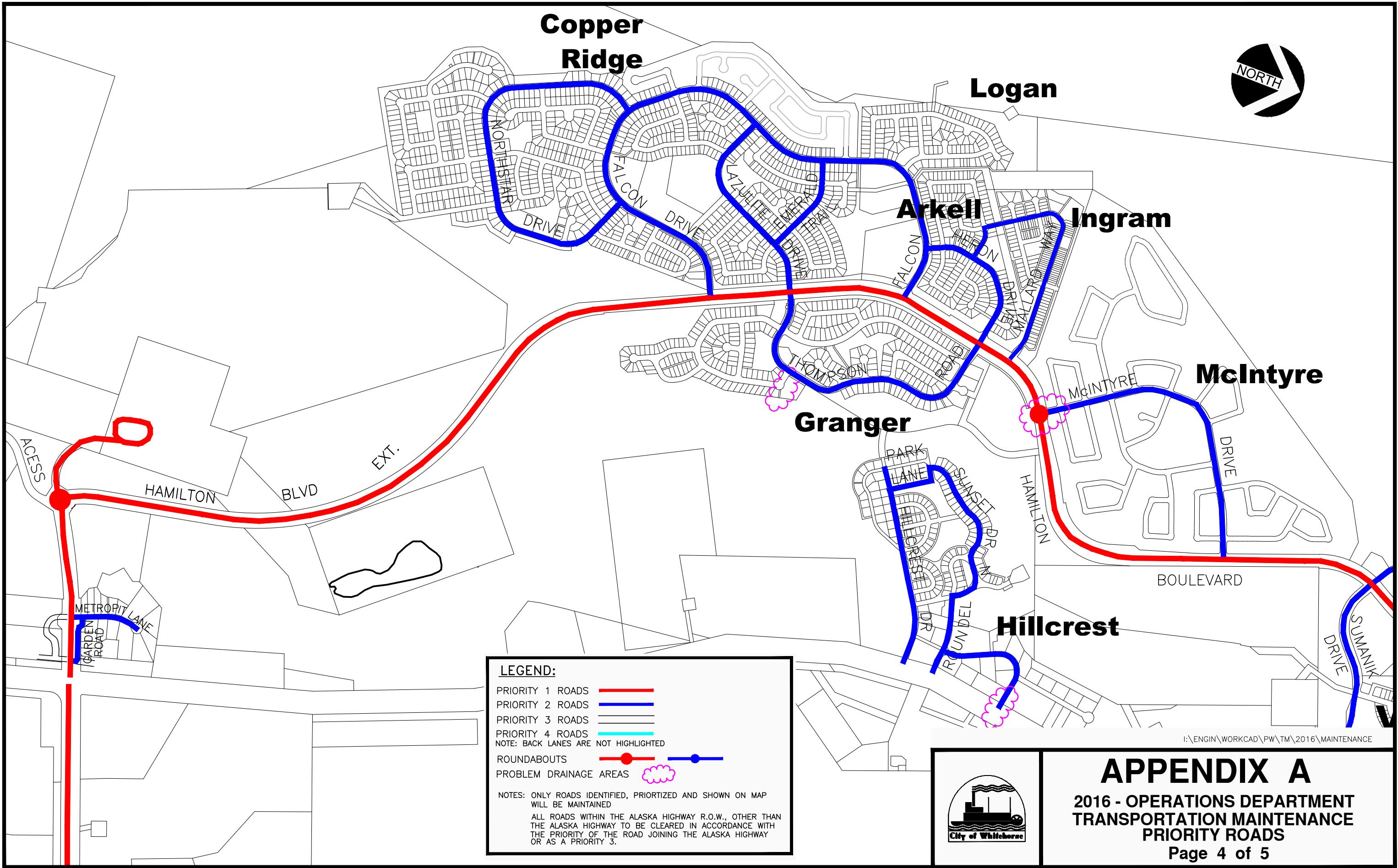
PRIORITY 1 ROADS 
PRIORITY 2 ROADS 
PRIORITY 3 ROADS 
PRIORITY 4 ROADS 
NOTE: BACK LANES ARE NOT HIGHLIGHTED

ROUNDBABOUTS  
PROBLEM DRAINAGE AREAS 

CENTRAL BUSINESS DISTRICT 

NOTES: ONLY ROADS IDENTIFIED, PRIORITIZED AND SHOWN ON MAP
WILL BE MAINTAINED
ALL ROADS WITHIN THE ALASKA HIGHWAY R.O.W., OTHER THAN
THE ALASKA HIGHWAY TO BE CLEARED IN ACCORDANCE WITH
THE PRIORITY OF THE ROAD JOINING THE ALASKA HIGHWAY
OR AS A PRIORITY 3.





LEGEND:

PRIORITY 1 ROADS —

PRIORITY 2 ROADS —

PRIORITY 3 ROADS —

PRIORITY 4 ROADS —

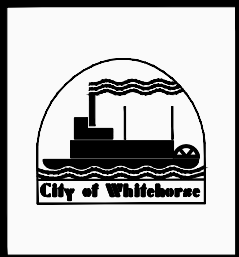
NOTE: BACK LANES ARE NOT HIGHLIGHTED

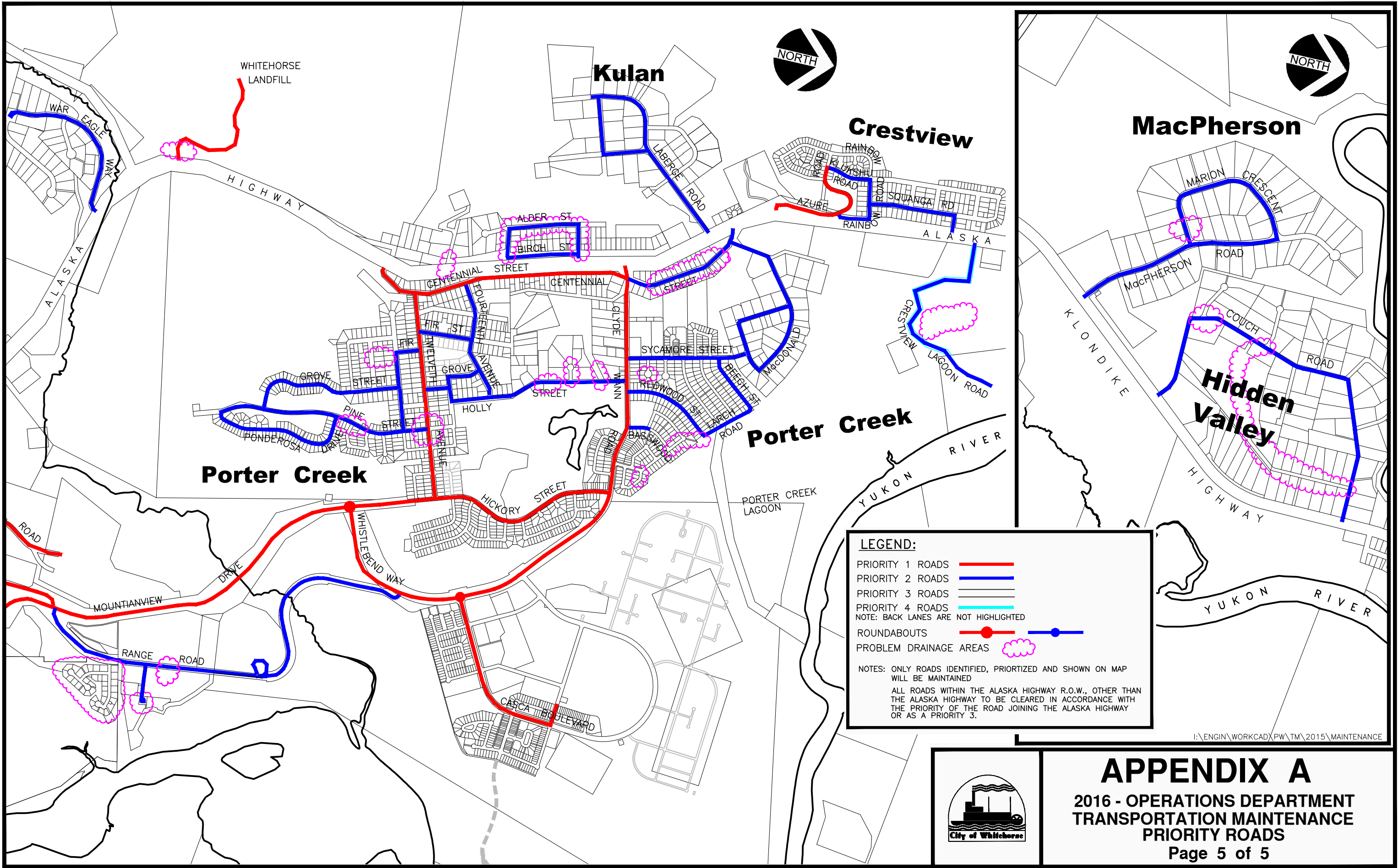
ROUNDABOUTS ● ●

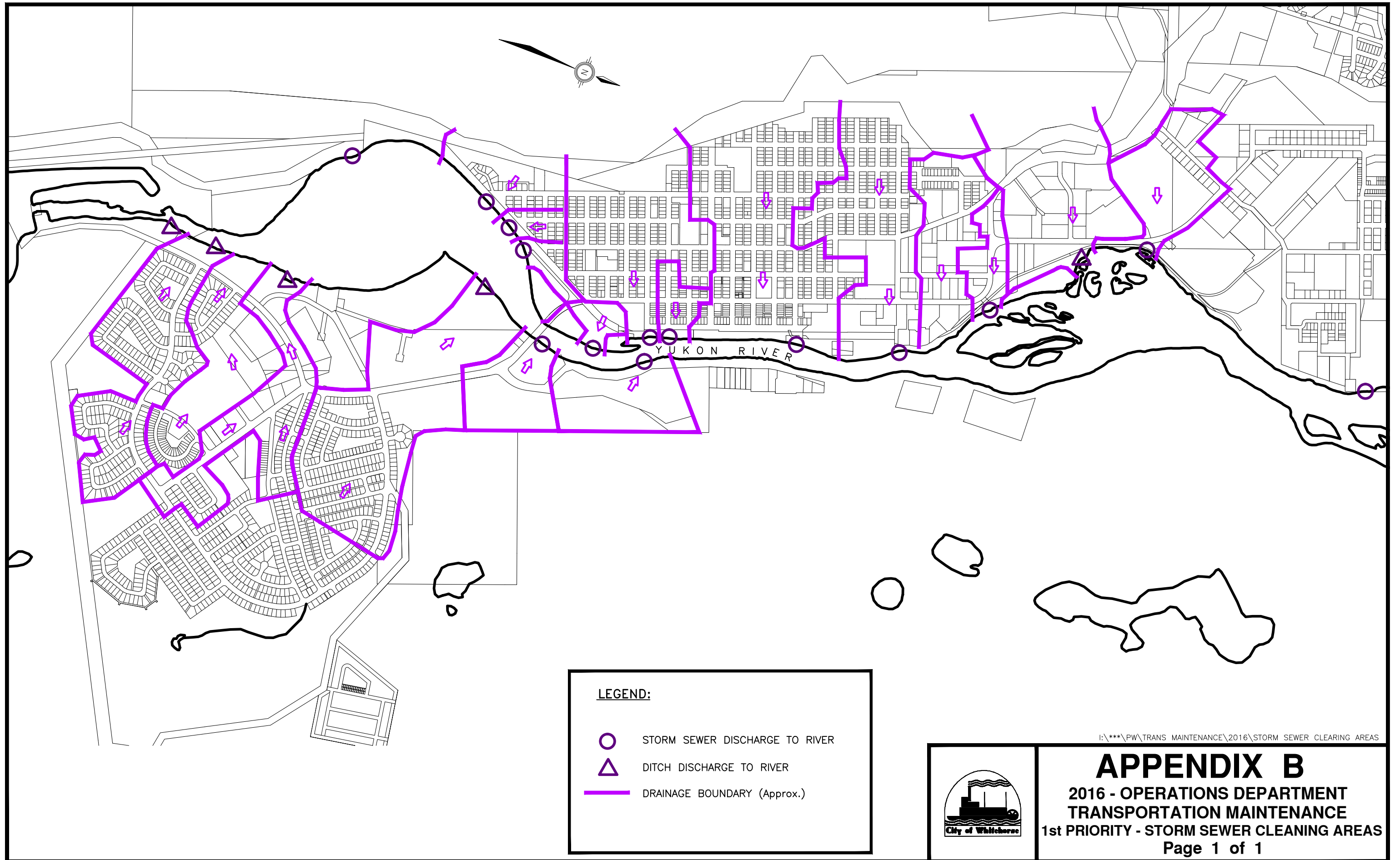
PROBLEM DRAINAGE AREAS ☁

NOTES: ONLY ROADS IDENTIFIED, PRIORTIZED AND SHOWN ON MAP WILL BE MAINTAINED




ALL ROADS WITHIN THE ALASKA HIGHWAY R.O.W., OTHER THAN THE ALASKA HIGHWAY TO BE CLEARED IN ACCORDANCE WITH THE PRIORITY OF THE ROAD JOINING THE ALASKA HIGHWAY OR AS A PRIORITY 3.







LEGEND:

-  STORM SEWER DISCHARGE TO RIVER
-  DITCH DISCHARGE TO RIVER
-  DRAINAGE BOUNDARY (Approx.)



I:***\PW\TRANS MAINTENANCE\2016\STORM SEWER CLEARING AREAS

APPENDIX B

**2016 - OPERATIONS DEPARTMENT
TRANSPORTATION MAINTENANCE
1st PRIORITY - STORM SEWER CLEARING AREAS
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