

THE CORPORATION OF THE CITY OF NELSON

POLICY TITLE: Snow and Ice Control

POLICY NO: 5400.11.010

EFFECTIVE DATE: December 6, 2022

SUPERSEDES: December 17, 2021

APPROVAL: Council

PAGE: 1 of 8

PURPOSE:

To provide for the safe passage of vehicles and pedestrians within the City of Nelson during snow and ice season.

POLICY:

The Council of the City of Nelson wishes to provide for the safe passage of vehicles and pedestrians within the City of Nelson by ensuring that snow and ice control operations are carried out on roads, sidewalks and stairs in a timely manner in accordance with priorities identified by Council, included as Schedules A, B and C of the Policy. The system of snow and ice control established by this policy is a reasonable allocation of budgetary resources and the availability of City of Nelson personnel and equipment considering its other social and budgetary priorities.

DEFINITIONS:

The following definitions apply to this policy:

- a. **Roads:** include asphalt roads and lanes but do not include gravel roads.
- b. **Snow Event:** is a snowfall of greater than 1 cm;
- c. **Snow Plowing:** means to move or push the accumulation of snow from the driving lanes of a road towards the edge of the road and left in a windrow or stockpile. Snow plowing is done using equipment, including, but not limited to, graders, loaders, plow trucks, pickup trucks and skid-steer loaders. Snow will not be cleared to bare pavement;
- d. **Snow Removal:** involves loading the windrowed snow onto trucks and subsequently hauling the snow to snow disposal sites. No attempt will be made to remove snow from driveway entrances;
- e. **Snow Shoveling:** means to manually move or push the accumulation of snow from the middle to edge of the sidewalk or stairs and left in a windrow or stockpile. Snow will not be cleared to bare concrete/pavement;
- f. **Ice Control:** Involves the control of the build-up of packed snow or ice on roadways through the use of equipment, abrasive materials or chemicals;
- g. **Sanding:** involves the application of treated or dry sand to roadways to improve traction;
- h. **Bare Surface:** snow remaining on either the roadway pavement or the concrete sidewalk, after Snow Plowing has concluded, shall not exceed four (4) cm;
- i. **Compacted Snow Surface:** snow that has accumulated on the roadway surface and is packed by traffic or leveled by snow plows;
- j. **Recorded Temperature:** the temperature recorded by Environment Canada;
- k. **Regular Operational Hours:** means Monday through Friday inclusive, 7:00 am to 3:00 pm. Does not include weekends or statutory holidays;
- l. **Downtown Core:** means the area bounded by Vernon to Victoria Street and Highway 3 to Cedar Street;

- m. **Special Winter Shifts:** means scheduled staff from 4:00 am to 11:00 pm, seven (7) days a week for the purpose of utilizing existing staff resources to conduct snow and ice control. The utilization of Special Winter Shifts is subject to budgetary limitations and the weather forecast. Staff may be moved into and out of a Special Winter Shift more than once during the winter season, in response to budget constraints and forecast weather conditions;
- n. **Windrow:** means a row of snow that is left from a snow plow's blade when clearing the public roadway and sidewalks. Windrows occur as an outcome of Snow Plowing activities;
- o. **Stockpile:** means snow that has been deposited into a pile during snow and ice control activities;
- p. **Extraordinary Snowfall:** means a snowfall over 30 cm (12 inches) of continuous accumulation.

Snow Control: Roads

1. The Director of Operations and/or his or her designate(s) will direct the commencement of Snow Plowing after a Snow Event when staff is scheduled to work during Regular Operational Hours. Staff scheduled to work Special Winter Shifts have been directed by the Director of Operations and/or his or her designate(s) to respond to Snow Events, though the process of being scheduled into a Special Winter Shift.
2. The Director of Operations and/or his or her designate(s) will monitor the weather forecast during Regular Operational Hours. Any change to the forecast that occurs outside of Regular Operational Hours and has the potential to impact the commencement of Snow Plowing, will be re-evaluated during the next regular shift.
3. Snow Plowing priorities are identified as high priority (Priority 1 Roads), secondary priority (Priority 2 Roads), tertiary priority (Priority 3 Roads), quaternary priority (Priority 4 Roads) and quinary priority (Priority 5 Roads). See Appendix A for defined priority routes. Exceptions will be made where an emergency request is received by police, fire or ambulance.
4. Snow Plowing shall be done in a manner to achieve two driving lanes width:
 - a. Bare Surface conditions on Priority 1 and 2 Roads;
 - b. Compacted Snow Surface on Priority 3, 4 and 5 Roads.During most winters, parked vehicles can constrain the road surface resulting in areas where only one driving lane can be achieved.
5. Staff will initially plow Priority 1 Roads and maintain Priority 1 roads to a Bare Surface condition until the termination of a Snow Event.
6. Priority 2 roads will be plowed to a Bare Surface condition once Priority 1 Roads can be maintained to a Bare Surface condition.
7. Priority 3 Roads will be plowed to a Compacted Snow Surface once Priority 1 and 2 Roads can be maintained to a Bare Surface condition.

8. Priority 4 Roads will be plowed to a Compacted Snow Surface once Priority 1 and 2 Roads can be maintained to a Bare Surface Condition and Priority 3 Roads can be maintained to a Compacted Snow Surface.
9. Priority 5 Roads will be plowed to a Compacted Snow Surface only after other Roads have been maintained to the stated service levels or when the City's Sanitation Collection Crews indicate that a lane has become unpassable and the Sanitation Collection Crews request that the lane be plowed to a Compacted Snow Surface. Exceptions will also be made where an emergency request is made for police, fire or ambulance access.
10. In the event that available resources are not adequate to meet the Snow Plowing demand, unsafe or impassable roads may be temporarily closed by the Director of Operations or their designate(s) until the City of Nelson has the resources available to plow the roads.
11. Roads that have been temporarily closed by the Director of Operations or their designate(s) will be posted on the City of Nelson website (www.nelson.ca) during regular operational hours.

Snow Removal

12. Snow Removal shall be undertaken only in situations where lack of adequate storage prohibits the reasonable movement of vehicular and/or pedestrian traffic, due to the presence of a windrow or stockpile of snow. During most winter seasons, only a limited amount of Snow Removal will be done due to space and budgetary limitations.
13. Snow Removal priorities are based on the priority routes set out in Schedule A. If Snow Removal is required, the snow would be removed first from Priority 1 Roads, and any additional removal would follow the hierarchy of roads that is set out in Schedule A.
14. A snowfall over 30 cm (12 inches) of continuous accumulation is considered an extraordinary snowfall. Where this circumstance occurs, the Director of Operations or their designate(s) may engage contracted snow removal services to assist with snow removal, if available, and subject to budget considerations.

Ice Control/Sanding: Roads

15. The same priority routes identified in Schedule A for Snow Removal will also be utilized to establish the priority for Ice Control and Sanding. Ice Control and Sanding may occur in conjunction with other Snow Control activity, or may be done independently.
16. Ice Control and Sanding will be initiated by the Director of Operations or their designate(s), during Regular Operational Hours, when the temperature and ambient conditions are conducive to the formation of ice on roads. Staff scheduled to work Special Winter Shifts have been directed by the Director of Operations and/or his or her designate(s) to respond to icy roads, though the process of being scheduled into a Special Winter Shift.
17. The Director of Operations and/or his or her designate(s) will monitor the weather forecast during Regular Operational Hours. Any change to the forecast that occurs outside of Regular

Operational Hours and has the potential to impact the commencement of Ice Control and Sanding, will be re-evaluated during the next regular shift.

18. When the temperature and ambient conditions are conducive to the formation of ice on roads, Sanding will be undertaken to promote traction. Sanding will only take place on the following:
 - a. hills;
 - b. curves;
 - c. school zones;
 - d. bus stops;
 - e. 30 metres before street signalized intersections; and,
 - f. 30 metres before stop signs.
19. Members of the public and staff be encouraged to report any observed icy conditions for Priority 1 and 2 Roads located in the City of Nelson to the Director of Operations and/or his or her designate(s). Reports of observed icy conditions will be reviewed during Regular Operational Hours. The Director of Operations and/or his or her designate(s) will investigate the reported icy conditions. If the surface is found to be slippery, Sanding will be undertaken to promote traction in accordance with this policy;

Snow/Ice Control: Sidewalks

20. Snow Plowing and Ice Control on sidewalks is the responsibility of the resident or business of which the sidewalk fronts according to the City of Nelson Traffic Bylaw No. 3156, 2010.
21. The City of Nelson will be responsible for Snow Plowing and Ice Control on sidewalks on a priority basis in accordance with the route set out in Schedule B.
22. Snow Plowing and Ice Control on sidewalks will occur after a Snow Event and will be conducted along with the Snow Plowing and Ice Control on roadways, subject to the availability of staffing.
23. The City of Nelson will prioritize snow and ice control on the roadways over snow and ice control on sidewalks if suitable staffing resources are not available to address both priorities.
24. Ice Control and Sanding will be initiated by the Director of Operations or their designate(s), during Regular Operational Hours, when the temperature and ambient conditions are conducive to the formation of ice on sidewalks. Staff scheduled to work Special Winter Shifts have been directed by the Director of Operations and/or his or her designate(s) to respond to icy sidewalks, though the process of being scheduled into a Special Winter Shift.
25. The Director of Operations and/or his or her designate(s) will monitor the weather forecast during Regular Operational Hours. Any change to the forecast that occurs outside of Regular Operational Hours and has the potential to impact the commencement of Ice Control and Sanding, will be re-evaluated during the next regular shift.
26. When the temperature and ambient conditions are conducive to the formation of ice on sidewalks, Sanding will be undertaken to promote traction on the route set out in Schedule B.

27. In the event that available resources are not adequate to meet the Snow and Ice control demand, unsafe or impassable sidewalks may be temporarily closed by the Director of Operations or their designate(s) until the City of Nelson has the resources available to conduct Snow and Ice control on sidewalks.
28. Sidewalks that have been temporarily closed by the Director of Operations or their designate(s) will be posted on the City of Nelson website (www.nelson.ca) during regular operational hours.

Snow/Ice Control: Stairs

29. The City of Nelson will undertake hand shovelling of stairs as outlined on the attached Sidewalk/Stair/Landing Locations Designated for Hand Shoveling map set out in Schedule C. The hand shovelling of the stairs is scheduled to occur 7 am to 3 pm Monday through Friday.
30. Snow Shoveling and Ice Control on sidewalks will occur after a Snow Event and will be conducted along with the Snow Plowing and Ice Control on roadways and sidewalks, subject to the availability of staffing.
31. The snow and ice control on the roadways and sidewalks will take priority over snow and ice control on stairs if suitable staffing resources are not available to address all priorities.
32. In the event that available resources are not adequate to meet the Snow and Ice control demand, unsafe or impassable stairs may be temporarily closed by the Director of Operations or their designate(s) until the City of Nelson has the resources available to conduct Snow and Ice control on stairs.
33. Stairs that have been temporarily closed by the Director of Operations or their designate(s) will be posted on the City of Nelson website (www.nelson.ca) during regular operational hours.

Record Keeping

34. The Director of Operations and/or his or her designate(s) prepare and maintain written or electronic documentation noting:
 - a. daily weather forecast;
 - b. records that identify the time, equipment and the operator for Snow Plowing, Snow Removal, Ice Control and Sanding operations;
 - c. GPS records of equipment used where available; and,
 - d. complaints made by the public and the response to each complaint;

SCHEDULE A

Roads

Snow plowing and sanding and removal activities of City streets shall be carried out on a priority schedule to best serve the public and accommodate emergency equipment within budget guidelines.

Priority One Roads:

- Emergency routes
- Bus routes
- Downtown core

Priority Two Roads:

- Critical Utility routes
- Major hills

Priority Three Roads:

- Cross streets
- Intersections and crosswalks
- Handicapped parking in the downtown core
- Bus stops and fire hydrants

Priority Four Roads:

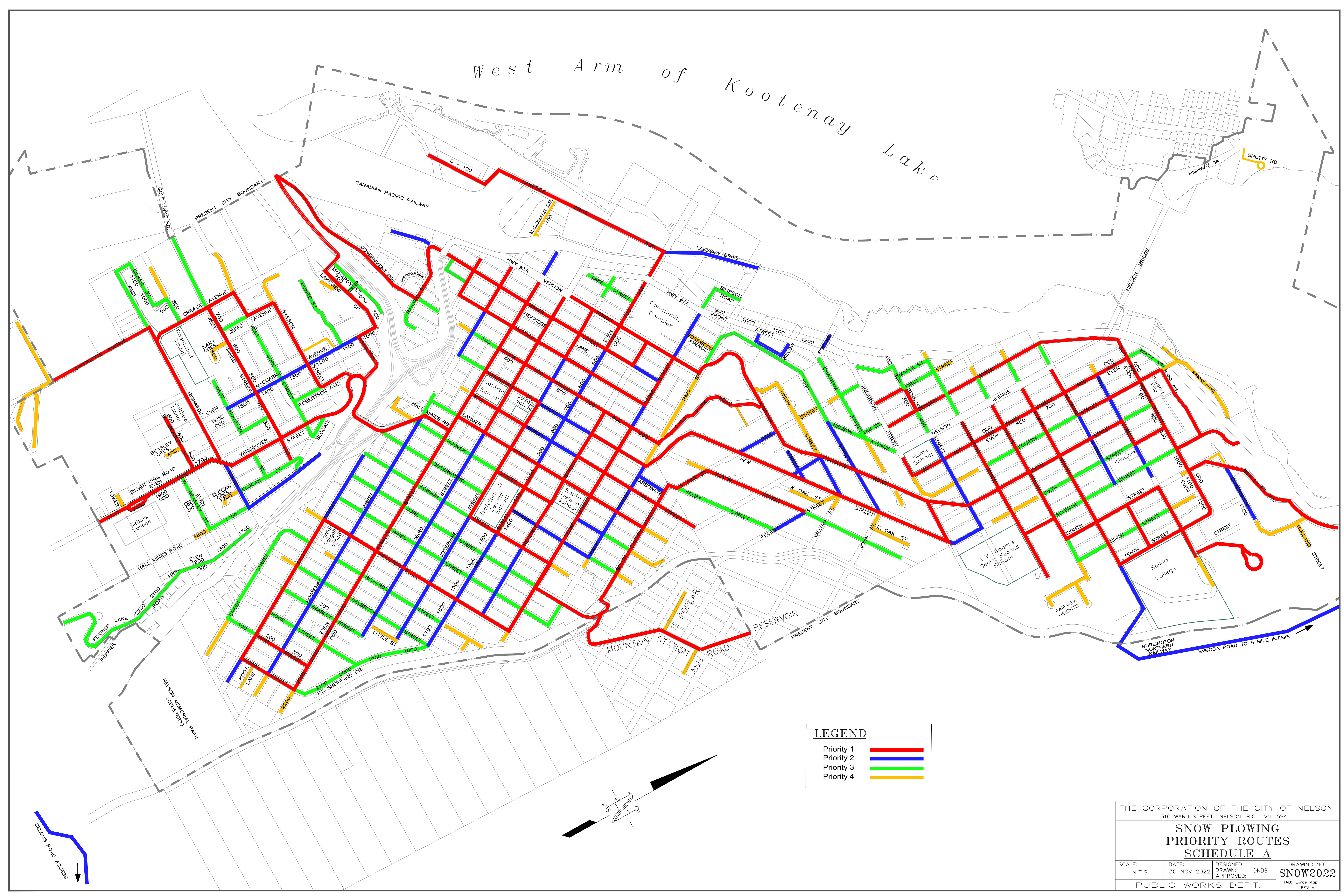
- Dead end streets

Priority Five Roads:

- Rear lanes
- Dead end lanes

In areas where rear lane is noted as being important to the collection of garbage and recycling, the lane may be plowed with increased priority.

The attached map illustrates the City Roadway network with priority designations.



West Arm of Kootenay Lake

LEGEND

- Priority 1
- Priority 2
- Priority 3
- Priority 4

THE CORPORATION OF THE CITY OF NELSON
310 WARD STREET NELSON, B.C. V1L 5S4

**SNOW PLOWING
PRIORITY ROUTES
SCHEDULE A**

SCALE: N.T.S.	DATE: 30 NOV 2022	DESIGNED: DRAWN: APPROVED:	DND B
PUBLIC WORKS DEPT.			DRAWING NO. SNOW2022 TAB: Large Map REV A:

SCHEDULE B

Sidewalks

Snow removal, sanding and plowing of designated sidewalk routes will be done as outlined on the attached sidewalk map.



LEGEND

SIDEWALK PLOW ROUTE PRIORITY

SIDEWALK PLOW ROUTE REMOVED

SIDEWALK PLOW ROUTE ADDED

SIDEWALK PLOW ROUTE LANE REMOVED

THE CORPORATION OF THE CITY OF NELSON
310 WARD STREET NELSON, B.C. V1L 5S4

**SIDEWALK PLOWING
SCHEDULE B**

SCALE:
N.T.S.

DATE:
21 DEC 2021

DESIGNED:
DRAWN:
APPROVED:

DNDB

DRAWING NO.
SNOW2021

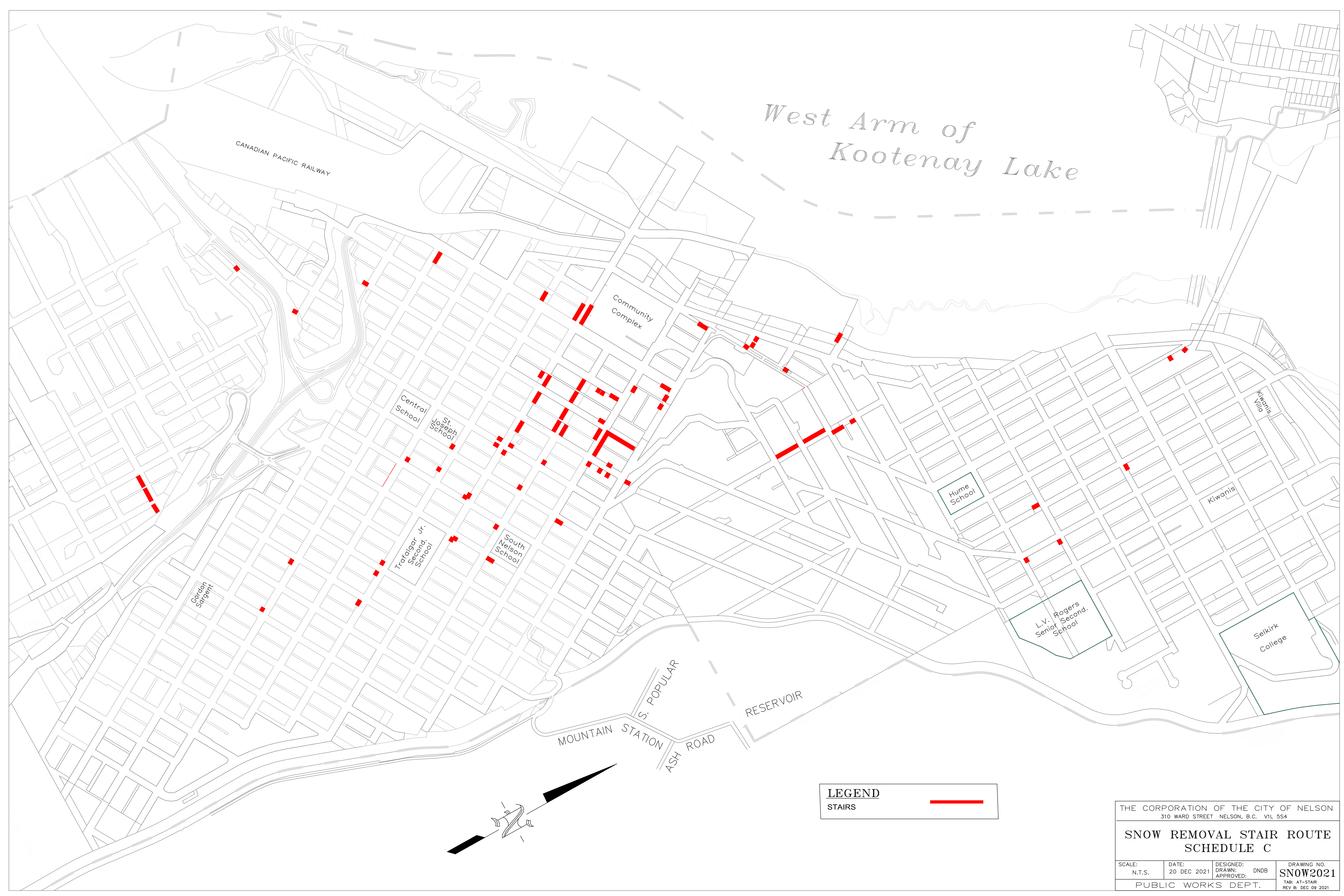
TAB: AT-SW PLOW FINAL
REV: NOV 30 2022 VS

PUBLIC WORKS DEPT.

SCHEDULE C

Stairs

Snow removal, sanding and plowing of designated stairs will be done as outlined on the attached stairs map.



West Arm of
Kootenay Lake

CANADIAN PACIFIC RAILWAY

Community
Complex

Central
School

St.
Joseph
School

Trafalgar Jr.
Second
School

South
Nelson
School

Hume
School

L.V. Rogers
Senior Second.
School

Selkirk
College

Kiwanis
Vila

Kiwanis

S. POPULAR

MOUNTAIN STATION

ASH ROAD

RESERVOIR

LEGEND
STAIRS



THE CORPORATION OF THE CITY OF NELSON
310 WARD STREET NELSON, B.C. V1L 5S4

**SNOW REMOVAL STAIR ROUTE
SCHEDULE C**

SCALE: N.T.S.	DATE: 20 DEC 2021	DESIGNED: DRAWN: APPROVED:	DND DND DND	DRAWING NO. SNOW2021 TAB: AT-STAIR REV B: DEC 09 2021
PUBLIC WORKS DEPT.				