Paved Shoulder Widths for Active Transportation Policy

Policy Statement

To provide staff with consistent direction in determining when paved shoulders are to be included, and to identify appropriate shoulder widths to accommodate Active Transportation on provincial roads.

Rationale

The Department is committed to supporting Active Transportation with the introduction of paved shoulders on provincial roads. Paving of shoulders will be considered during repaving, reconstruction or construction on provincial roadways.

Policy Objectives

To provide a consistent approach on the implementation of paved shoulder widths for Active Transportation on provincial roadways.

DEFINITIONS

For the purposes of the Paved Shoulder Widths for Active Transportation Policy, the following definitions apply.

Annual Average Daily Traffic (AADT): The average number of vehicles passing the count location in a 24 hour period, averaged on the basis of one year. The AADT for provincial roads is determined by TIR Traffic Engineering Services

Active Transportation (AT) is any form of human-powered transportation including, but not limited to, walking and cycling. Within Transportation and Infrastructure Renewal (TIR), AT includes strategically investing in infrastructure where there is either sole jurisdictional responsibility or opportunities to partner with municipalities.

Active Transportation Coordinator (ATC) – a Transportation and Infrastructure Renewal employee responsible for coordinating active transportation initiatives.

Maintenance Paving – Placing a single lift asphalt overlay on deteriorated and rough paved sections to improve riding smoothness.

Paved Shoulders - The area to the right of the travel lane, between the white painted line and the edge of pavement. For Active Transportation purposes,

paved shoulders provide a separate space for AT use and are not designated or marked as a bicycle lane.

Pavement Preservation – Includes various techniques to extend the life of pavement, including crack sealing, chip sealing, micro surfacing, single lift overlay, black gravel, and double chip sealing of gravel surfaces.

Provincial Roads – Roads owned and maintained by TIR.

Application

This policy applies directly to all highway improvement projects, and staff involved in planning and designing road improvement projects.

Accountability

All Highway Programs staff involved in highway planning, and design, and all Highway Engineering and Construction staff involved in planning road improvement projects are responsible for the consistent application of the Policy and related guidelines.

The District Director, or delegate, is responsible for identifying requirements and constructing Active Transportation facilities, including paved shoulder widths on capital projects. The District Director or delegate is responsible for contacting the Active Transportation Coordinator for eligibility of capital projects and estimates.

The Executive Director of Highway Engineering and Construction and the Chief Engineer, Highway Programs are responsible for ensuring the policy is effective in enabling Highway Programs Staff to determine appropriate application of paved shoulders. The District Director, or delegate, receives approval from the Chief Engineer, Highway Programs for the project to proceed.

The Executive Director of Highway Engineering and Construction and the Chief Engineer, Highway Programs are responsible for complying with this policy in determining funding feasibility for paving shoulders under this policy.

The Active Transportation Coordinator is responsible for reviewing the Capital Program list of projects and providing recommendations for any identified AT upgrades, prior to tendering the projects. The District Director is responsible for providing this list to the ATC.

Monitoring

The District Director and Construction Manager will monitor the policy's implementation, performance and effectiveness with regards to construction of shoulder widths.

The Active Transportation Coordinator will review and update this policy, with feedback from the Districts, as conditions warrant.

Directives

1.0 Selection Criteria for Shoulder Paving

1.1 Determination of Average Annual Daily Traffic (AADT) volumes

i. Obtained from TIR Traffic Count Data from results collected by TIR Traffic Engineering Census Team and published in Traffic Volume Books.

ii. For roads that are classified C to H (as shown in Traffic Volume Books), with an AADT of 500 to 2500, the Traffic Engineering and Road Safety Section/Division shall be contacted to provide an estimate of the summertime (July 1 – August 31) daily traffic volumes. This will provide a volume estimate that is more relevant to peak cycling times.

1.2 A provincial road is **ineligible** for shoulder paving when one of the following is identified:

i. AADT is less than 1000 vehicles per day (vpd)
ii. Posted speed limit is greater than 80 kilometers per hour
iii Maintenance paving or other pavement preservation is being conducted

1.3 Provincial roads are **eligible** for shoulder paving when all of the following are identified:

i. AADT is greater than 1000 vpd
ii. Posted Speed zones are 80 km/h or less.
iii. The road is part of new road construction
iv. The road is included in capital paving and repaving projects

See Guidelines, Special Circumstances, Item 2.1, if a road is considered a candidate, but not all these criteria apply.

1.4 If the provincial road is considered eligible for shoulder paving, then the Active Transportation Coordinator must be consulted to determine if paved shoulders are a suitable AT facility for that area.

1.5 In determining the suitability of a road for paved shoulders, the Active Transportation Coordinator shall consider factors which include, but are not limited to, whether the provincial road is associated with:

i. A municipal council approved AT plan
ii. A cycling route (Blue Route, or other route promoted by a local municipality or cycling group)
iii. Proximity to common destinations (schools, shops, libraries, etc)

2.0 Active Transportation Paved Shoulder Approval Process

2.1 When a road section is approved for shoulder paving for AT, the "Paved Shoulder Width for Active Transportation" table in TIR's standard drawings shall be followed (S-2011-200).

2.2 If a project is eligible for paved shoulders, the Executive Director of Highway Engineering and Construction and the Chief Engineer, Highway Programs will determine the funding feasibility and prioritization of the various eligible projects. Local roads that are not part of the proposed provincial "Blue Route" cycling network may require cost sharing from the municipality.

2.3 The District Director is to be the first point of contact for any person, group or committee with local AT issues as per guidelines developed and attached Appendix A ("Involvement of TIR in Active Transportation (AT) issues").

2.4 The District Director and Area Manager will inform the Construction Manager of any Active Transportation initiatives in the area that will require capital construction, so that they will be considered in the planning of any future capital work.

2.5 If a shoulder is to be widened by paving for AT purposes and is not part of a repaving project, it must be keyed in to the existing paved surface as shown in Standard Drawing S-2009-015 *Asphalt Shoulder Widening Freeways and Arterials.*

Guidelines

1.0 Guideline for AT Paved Shoulder Approval Process

The District Director, Construction Manager or Area Manager is encouraged to review AT plans or other cycling initiatives within the project area prior to contacting the AT Coordinator.

2.0 Special Circumstances

2.1 It is recognized that in some circumstances provincial roads may not meet all eligibility criteria for shoulder paving. However, to assist in addressing community Active Transportation needs, the road may be considered for paved shoulders when:

i. The AADT is not greater than 1000 vpd (See 4.1) and the section of provincial road is a known cycling route or part of an approved AT Plan.

2.2 Variation in recommended paved shoulder width will only be considered in special situations. If a road meets the eligibility criteria outlined in Directives, Section 1.3 but has insufficient subgrade width to pave the shoulders to the width recommended in the "Paved shoulder Width for Active Transportation" table, the paved shoulder width may be reduced to 1.0m.

2.3 The District Director, or delegate, is to justify this reduction in shoulder width, with documented approval from the Manager of Highway Planning and Design. Signage may be required to notify road users of the narrower paved shoulder condition. Signage will be provided based on an assessment of the project area by the Manager of Traffic Engineering and Road Safety.

References

The Motor Vehicles Act
The Public Highways Act
Municipal Services Agreement
TIR Manual PO1033 Trails Policy and TIR Manual PR5092 Trails Procedure
TIR Manual PO1001 Sidewalk Construction and Maintenance Policy
TAC Geometric Design Guide for Canadian Roads Chapter 3.4 Bikeways
Velo Quebec "Planning and Design for Pedestrians and Cyclists"
Local Active Transportation or cycling initiatives
S-2009-015 Asphalt Shoulder widening freeways and arterials
Traffic volume books, recent edition

Enquiries

District Directors
Construction Managers
Area Managers
Manager, Highway Planning and Design
Special Projects Engineer, Highway Planning and Design
District Traffic Supervisors
Manager Traffic Engineering Services

Appendices

Appendix A: Involvement of TIR in Active Transportation (AT) issues
Appendix B: S-2011-200 Paved Shoulder Width for Active Transportation

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Involvement of TIR in Active Transportation (AT) issues

The Special Projects Engineer in Highway Planning and Design is the person responsible for policy development, communications of policy to Department staff, providing advice and direction to staff and public stakeholder groups with respect to TIR's policy, and representing TIR at conferences and public stakeholder events.

For local Active Transportation Committees or Plans, the group requesting input should contact the District Director for the assignment of an appropriate representative. This is most likely to be the Area Manager (AM), as improvements recommended in a Plan will generally be the (financial) responsibility of the Municipality, with permits or advice needed from TIR should they need work done within our ROW. However in instances where the AT plan covers a County, it may be more appropriate to have the Construction Manager (CM) involved as well, as road improvements will undoubtedly require Capital funds. The District Director can decide who, perhaps both, should be involved. In some instances, it may be appropriate for the Special Projects Engineer, who is responsible for AT, to be the contact.

Area Managers are typically the Department representatives who have relationships with the Municipalities, and can deal with all issues relating to things like adjusting grates, keeping shoulders clear of gravel, trail crossings, fitting sidewalks or trails into our ROW, permitting, share the road signs, etc, as well as small road repairs. They also have access to Road Safety Audits and the corresponding funding, if the issue is appropriate.

Construction Managers should be aware of any AT plans in their district which recommend Capital improvements to provincial roads. If these improvements receive approval for construction, they would appear on the Capital Construction Program. Once estimates are completed for proposed AT projects, the group will meet to determine financial responsibilities of the parties involved (similar to J class road cost sharing).

AT should become a regular item on the agenda at District meetings, so that communication on these issues between Area Managers and Construction Managers is not lost, and so that AM's can maintain consistency across the District.

TIR should be represented on all AT Committees across the province, to ensure they are reasonable and able to be implemented. The level of input can vary, from regular meetings with an active group, to reviewing a report, and making sure the appropriate individuals are aware of any recommendations that impact TIR.

POSTED SPEED (km/h)	AADT <1000	PAVED SHOULDER WIDTH (m)				GRAVEL WIDTH (m)	
		AADT 1000–3000		AADT >3000			
		REPAVING[1] (MIN. – DESIRED)	NEW CONSTRUCTION/ RECONSTRUCTION[2] (MIN. – DESIRED)	REPAVING (MIN. – DESIRED)	NEW CONSTRUCTION/ RECONSTRUCTION (MIN. – DESIRED)	REPAVING (MIN. – DESIRED)	NEW CONSTRUCTION/ RECONSTRUCTION
50	NA	1.2 – 1.5	1.5	1.2 – 1.5	1.5	0.3 – 0.5	0.5
60–70	NA	1.2 – 1.8	1.5 – 1.8	1.2 – 1.8	1.8	0.3 – 0.5	0.5
80	NA	1.2 – 1.8	1.8 – 2.0[3]	1.5 – 1.8	1.8 – 2.0[3]	0.3 – 0.5	0.5
80+	TO BE DISCUSSED WITH HIGHWAY PLANNING & DESIGN						

NOTES:
1. REPAVING: NO WIDENING OF SUBGRADE IS PLANNED.
2. NEW CONSTRUCTION/RECONSTRUCTION GUIDELINES APPLY TO RECONSTRUCTION OR REPAVING WORK AREAS WHERE THE EXISTING SUBGRADE IS WIDE ENOUGH TO MEET THE NEW CONSTRUCTION SHOULDER STANDARDS, e.g. REMOVING CLIMBING LANES, NARROWING LANE WIDTH.
3. 1.5m PAVED SHOULDER WITH A 0.5m BUFFER.
4. MINIMUM WIDTH MAY BE UNACHIEVABLE DUE TO SUBGRADE CONSTRAINTS. EVERY EFFORT WILL BE MADE TO HAVE THE SHOULDER AS WIDE AS POSSIBLE, WITH AN ABSOLUTE MINIMUM OF 1.0m. IF MINIMUM WIDTHS ARE UNACHIEVABLE, SIGNAGE MAY BE NECESSARY.
5. NO SHOULDER WIDENING IS RECOMMENDED WHEN PAVEMENT PRESERVATION, MAINTENANCE OVERLAYS, ETC. ARE PLANNED.
6. A MINIMUM OF 1.5m IS REQUIRED NEXT TO GUARDRAIL, CURB OR OTHER FIXED OBJECTS. ON SHOULDERS 1.5m OR GREATER, ADD 0.2m TO 0.5m IN AREAS WHERE THERE IS A FIXED OBJECT.

Manager Highway Planning and Design

Director Highway Engineering Services

Executive Director Highway Engineering and Construction

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No.	REVISION
3	REVISED SEP. 2018
2	NOTES REVISED JAN. 2014
1	CHANGE TO NOTES 27 JUNE 2013

Scale : N.T.S.
Drawn by : R.SUTCLIFFE
Checked by : E.PUGH
Date of Plan : JUNE2011
File No. : S–2011–200

PAVED SHOULDER WIDTH FOR ACTIVE TRANSPORTATION