

HIGHWAY DESIGN REPORT

APPENDIX 1 PROPOSED PRINCIPLES FOR SELECTION OF INTERSECTION TYPE

Attachment A

Selection Diagrams and Traffic Conditions

June 2000



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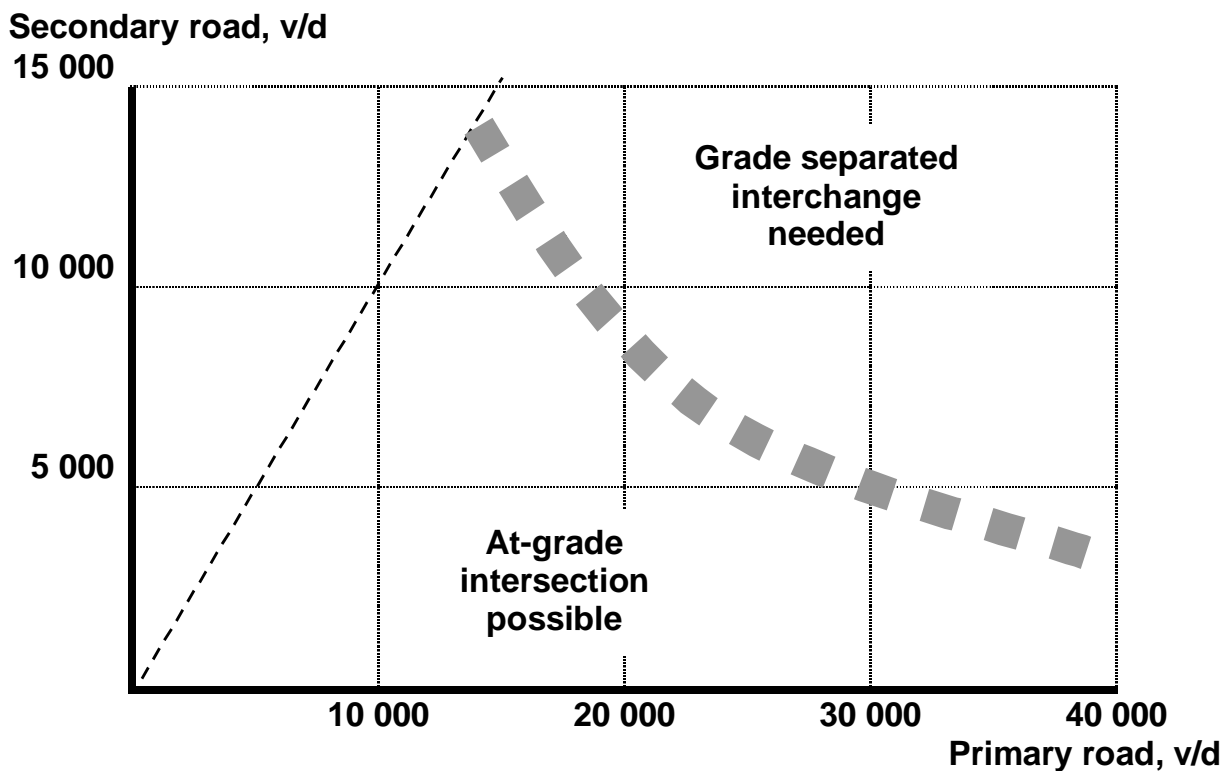
Introduction

In Appendix 1, only examples of safety and capacity diagrams for the selection of intersection types are presented.

In this attachment diagrams for different intersection conditions (three or four legs) and speeds (70 and 90 km/h) are presented. The traffic conditions on which the diagrams are based are also briefly described.

The purpose of the diagrams and traffic parameters is to serve as basis for the elaboration of suitable diagrams adopted to Turkish conditions.

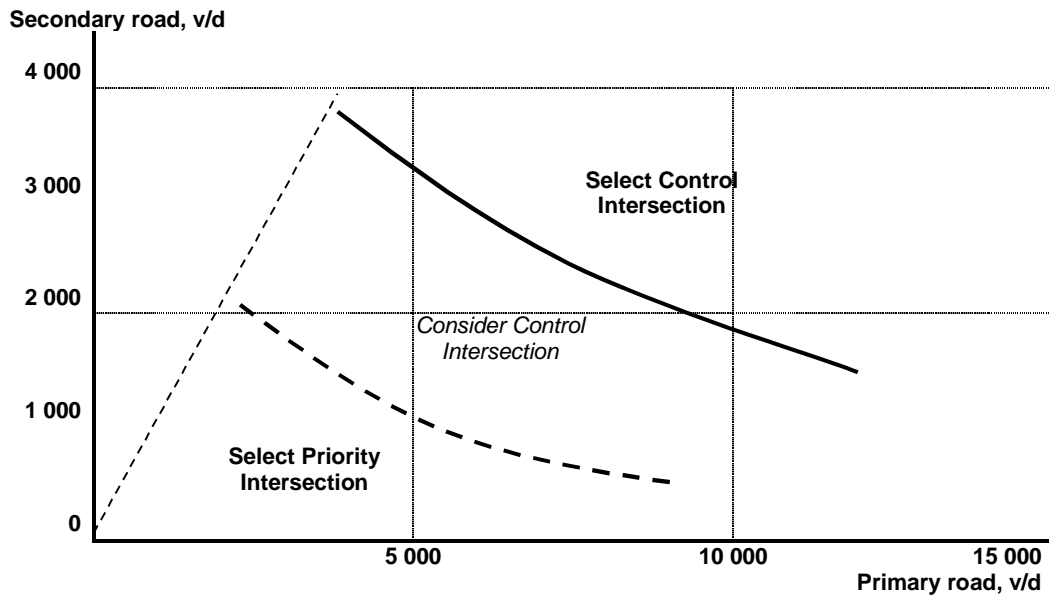
Applicability of at-grade intersection



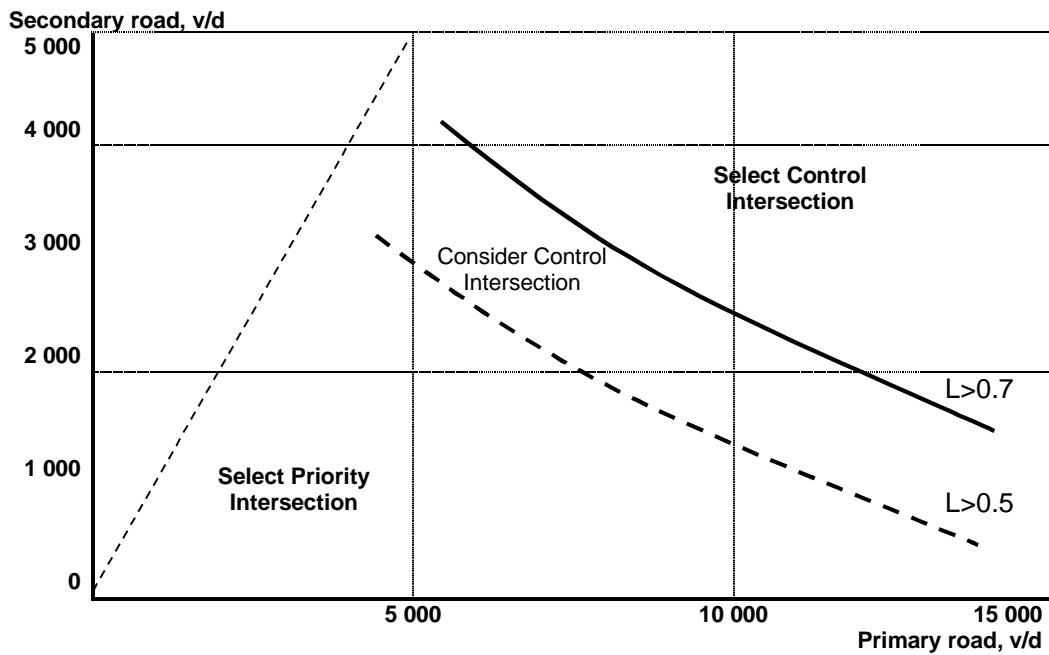
Applicability of priority intersection

T – intersection, 70 km/h

Safety



Capacity

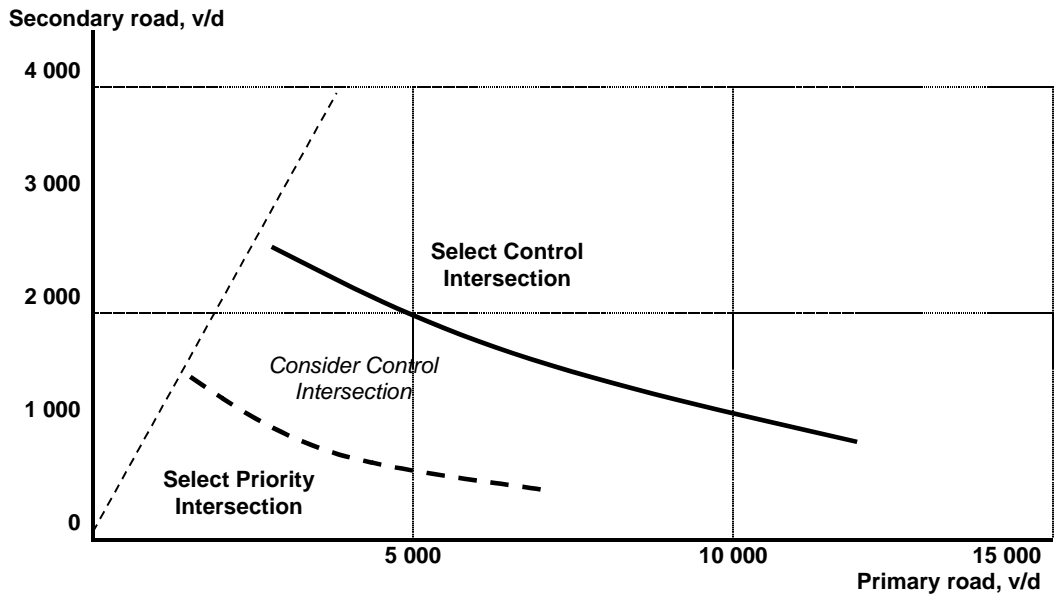


L = Load factor (flow/capacity)

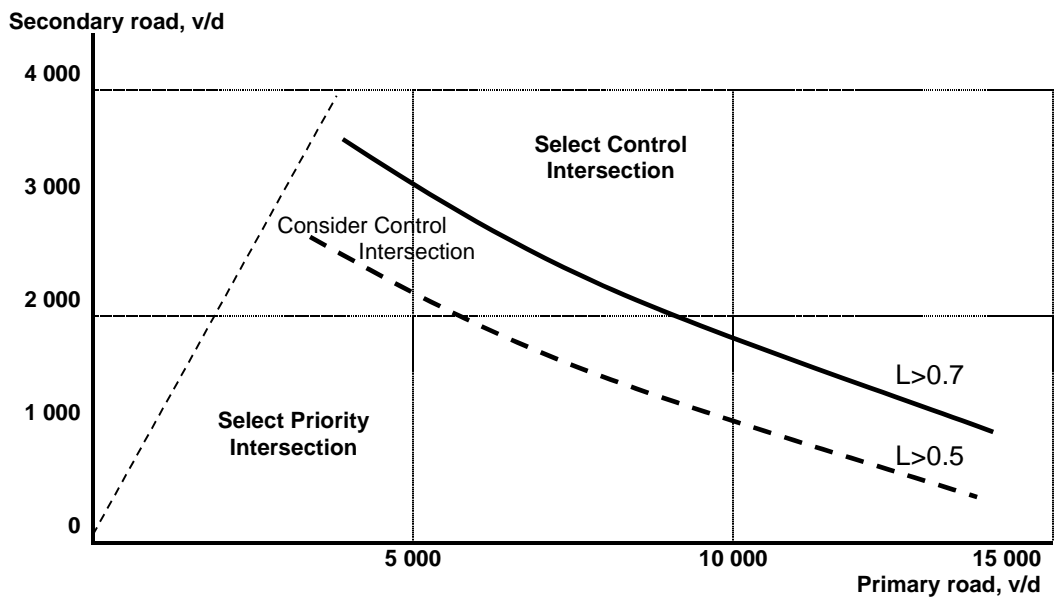
Applicability of priority intersection

T – intersection, 90 km/h

Safety



Capacity

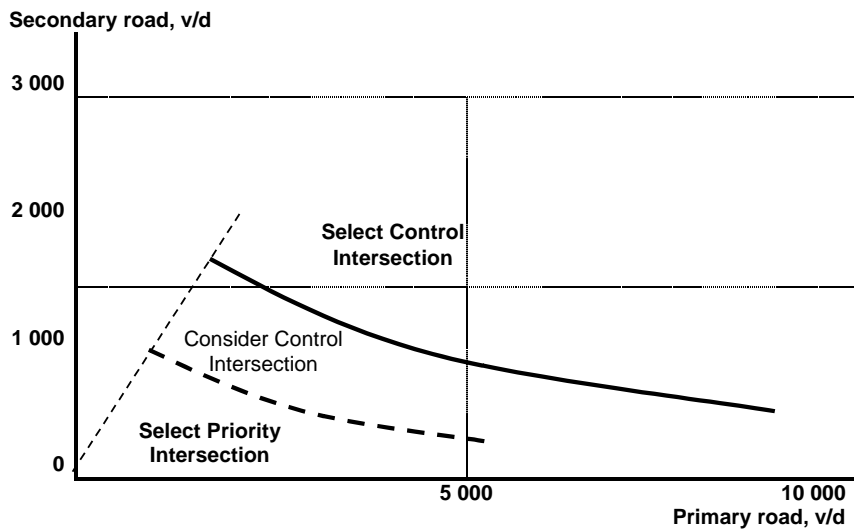


L = Load factor (flow/capacity)

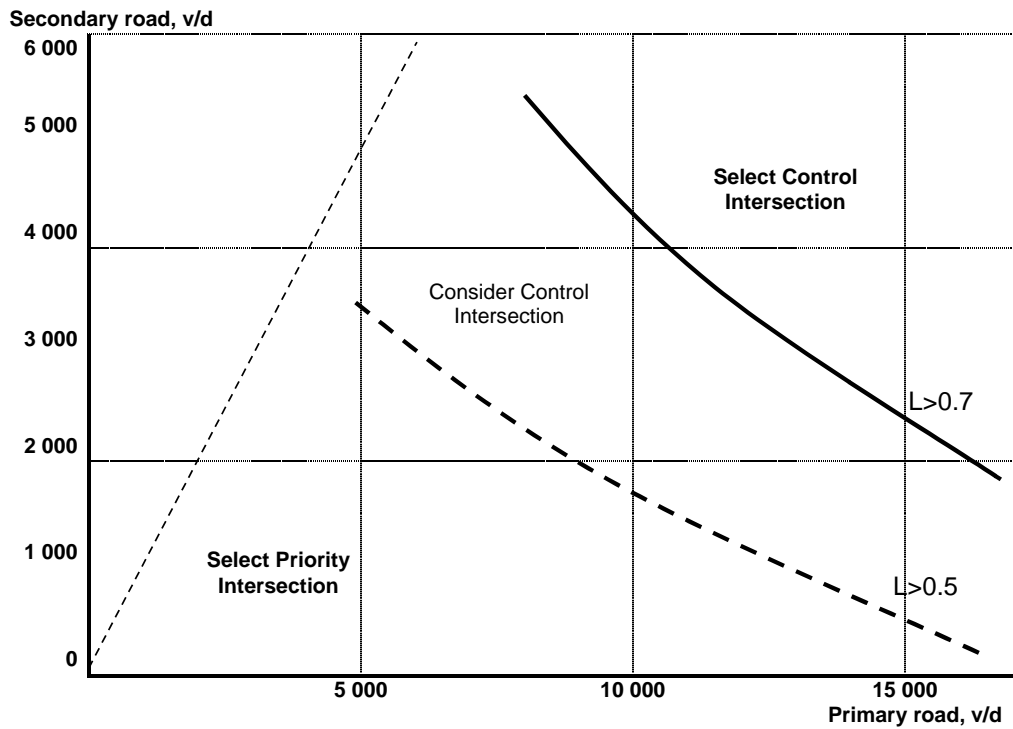
Applicability of priority intersection

X – intersection, 70 km/h

Safety



Capacity

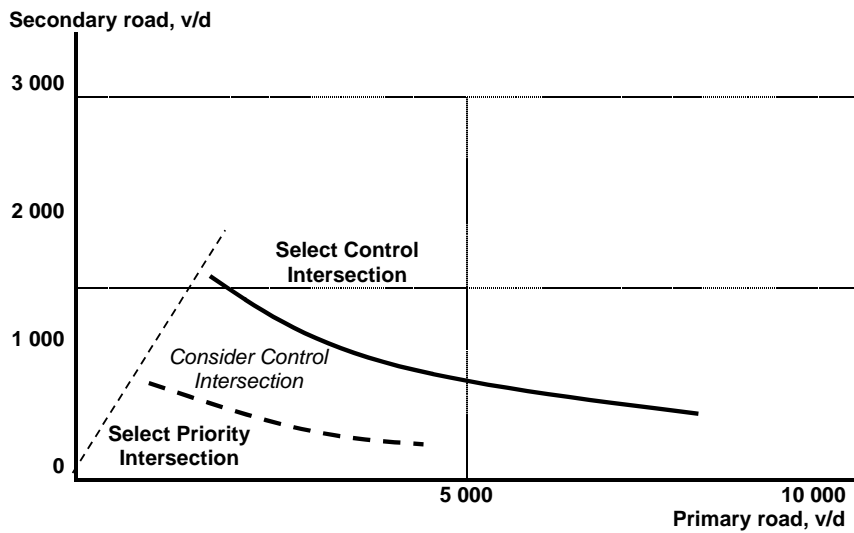


L = Load factor (flow/capacity)

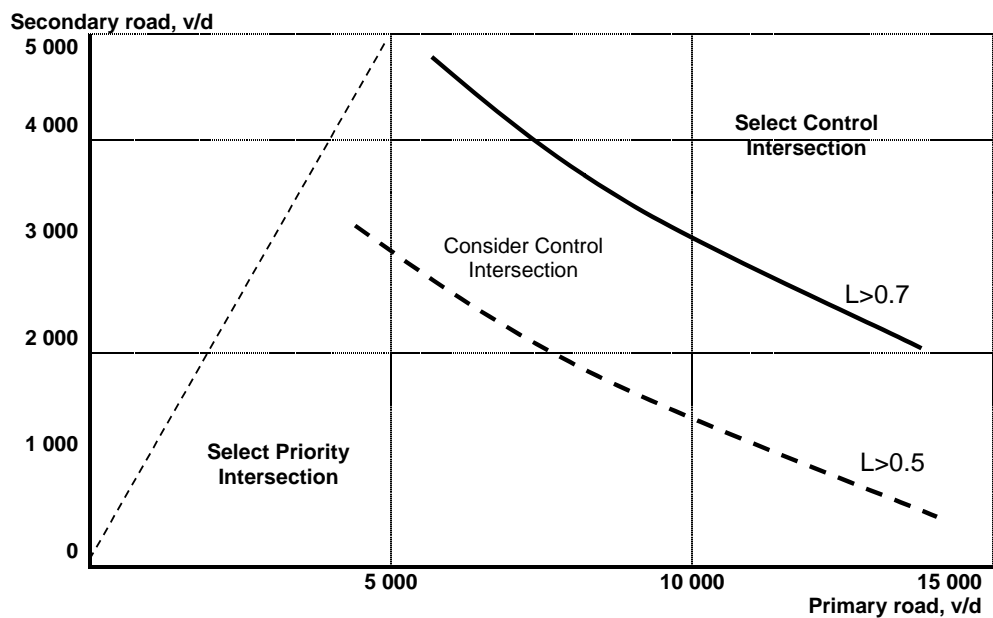
Applicability of priority intersection

X – intersection, 90 km/h

Safety



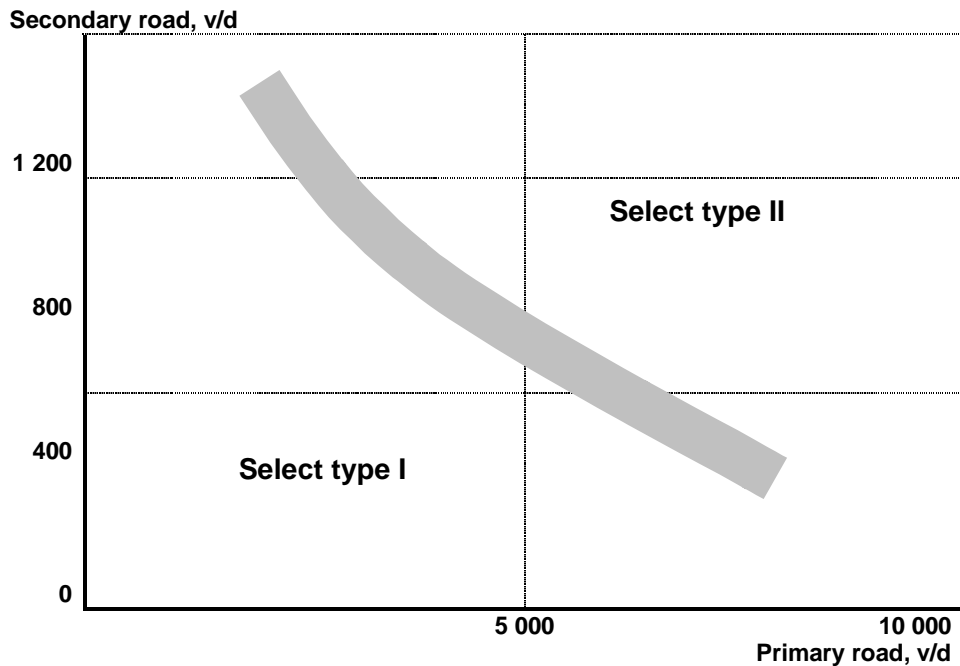
Capacity



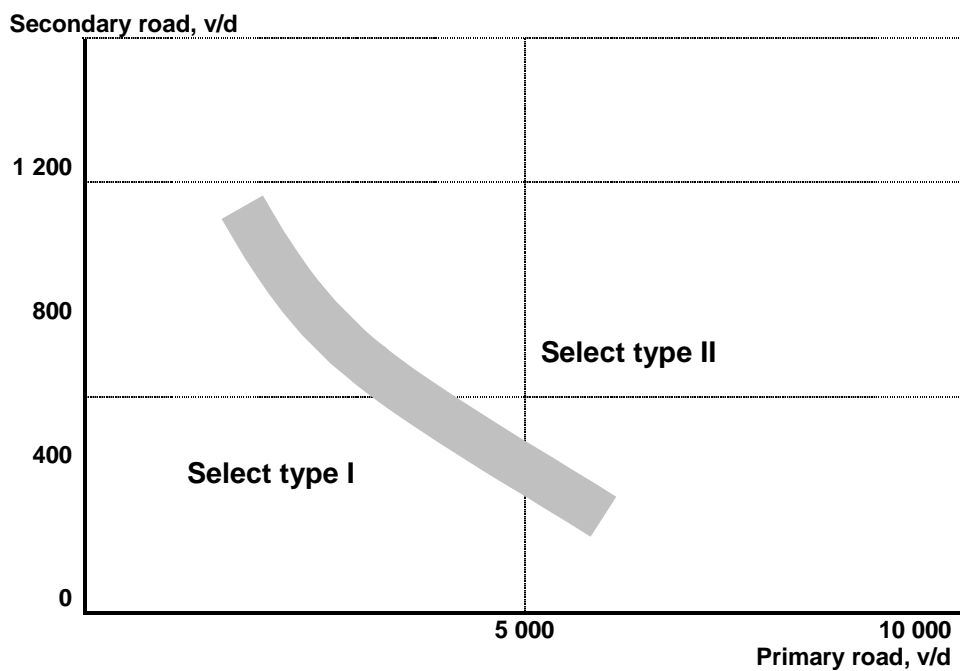
L = Load factor (flow/capacity)

Selection of priority intersection type

T – intersection, 70 km/h

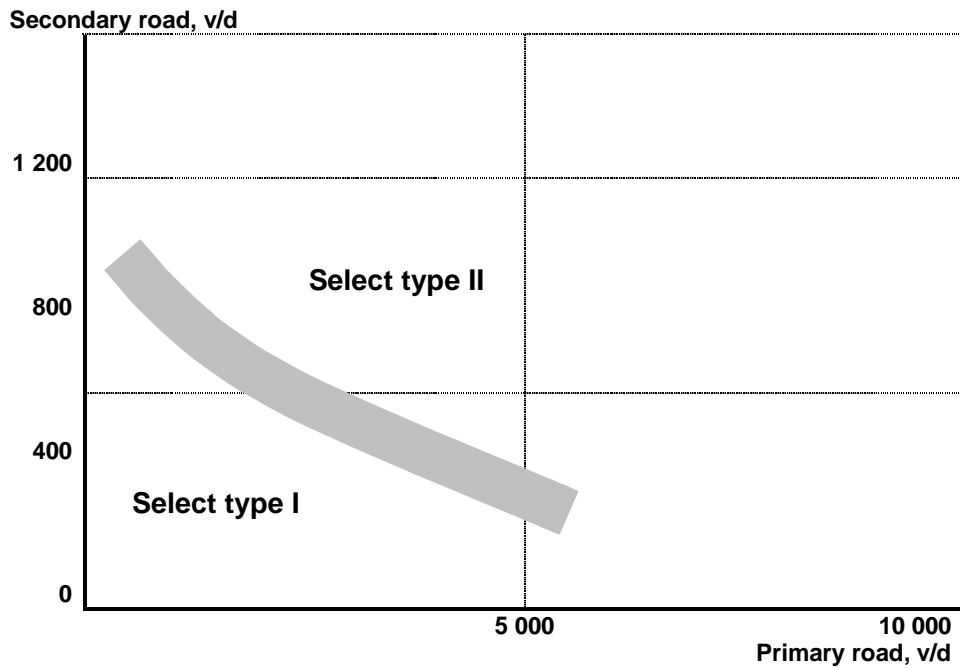


T – intersection, 90 km/h

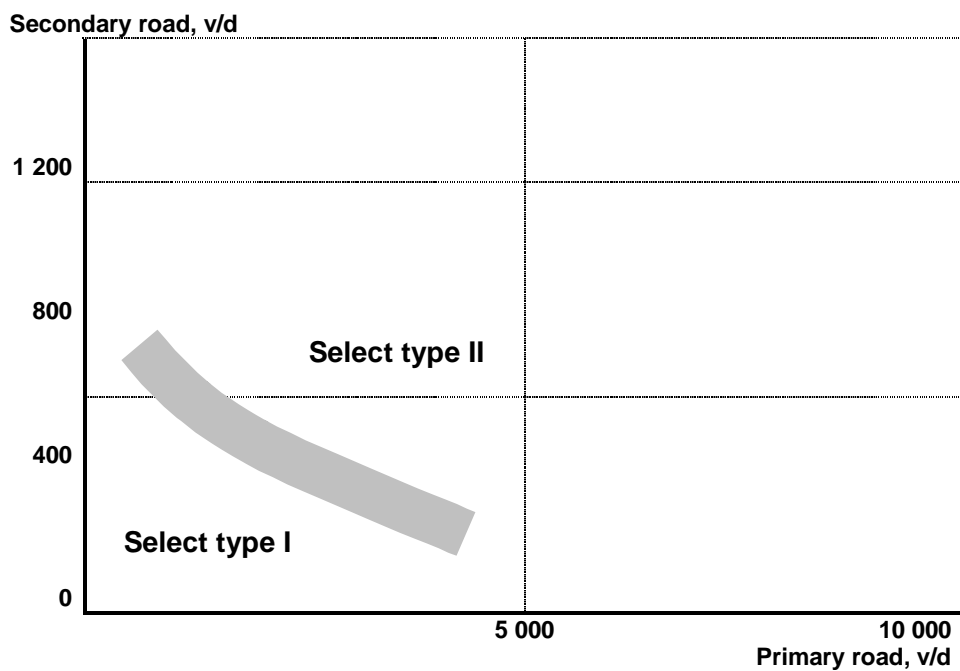


Selection of priority intersection type

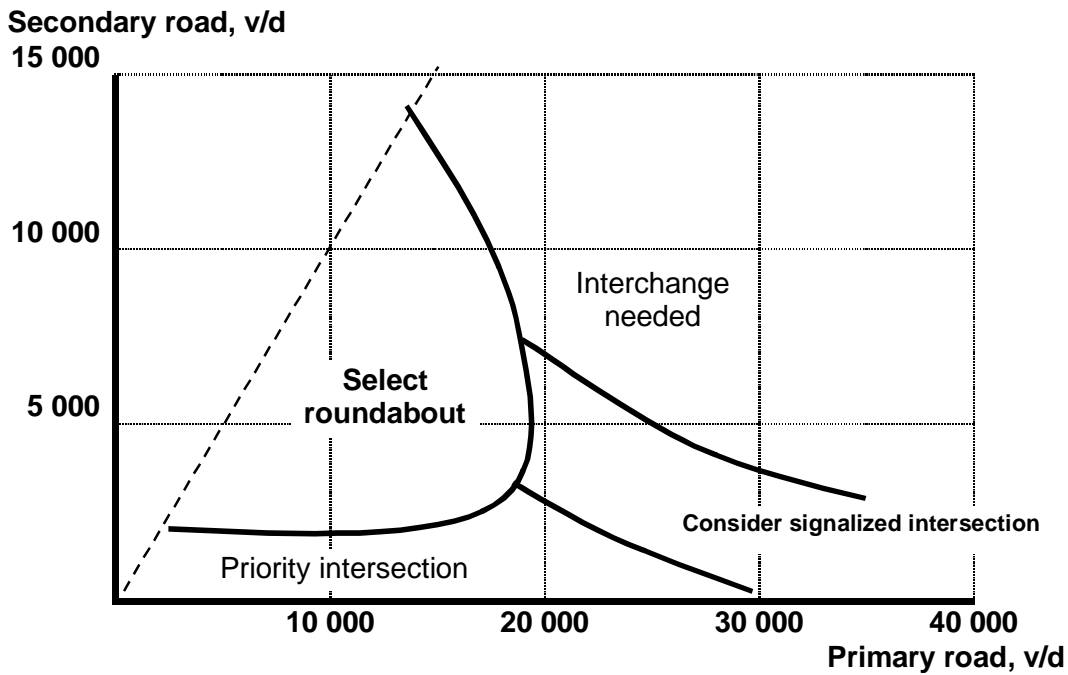
X – intersection, 70 km/h



X – intersection, 90 km/h



Selection of control intersection type



Traffic conditions

Composition

The design guidelines are based on the following traffic composition (%).

Road type	Passenger cars (2 axis/vehicle)	Busses and trucks (2,2 axis/vehicle)	Trailers (5,5 axis/vehicle)
State road I	86	6	8
State road II	92	4	4
State road III	95	2,5	2,5
Urban roads	93	4	3

Forecast – design year

Roads are generally designed for the predicted traffic volume **20 years** ahead – design year.

Time variation

The maximum hourly traffic volume is generally assumed to be **12%** of the daily volume for rural roads and major urban roads and **10%** for other urban roads.