



**City of Cranbrook
Growth Management Study
Volume 2: Transportation Planning**

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Prepared for:
City of Cranbrook

Prepared by:
Stantec Consulting Ltd.

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**CITY OF CRANBROOK GROWTH MANAGEMENT STUDY
- VOL. 2 TRANSPORTATION PLANNING REPORT**

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1.0 Introduction

1.1 BACKGROUND

As the regional service centre of the Kootenays, the City of Cranbrook is approaching a current population of approximately 20,000. Recognizing the importance and necessity to plan and design the future transportation system, the City has requested preparation of a transportation planning model as one major component of the City of Cranbrook Growth Management Study - Transportation Planning Section.

1.2 STUDY OBJECTIVES

The following are the main objectives of this transportation planning study:

- ❖ Review existing traffic operations, collect traffic counts at major/critical intersections
- ❖ Review existing transportation system, including transit, bicycle/pedestrian trail, rail and air transportation system
- ❖ Assess the current major roadway network, prepare a fully calibrated computerized base year transportation model
- ❖ Apply the Base Year model to future horizons, perform travel demand forecasting
- ❖ Evaluate the major roadway network required for a short term horizon (10 year) and longer term horizons (e.g. full build out of current City boundary).
- ❖ Prepare conceptual cost estimate at planning level

1.3 BACKGROUND MATERIALS

For this study, the following background materials were collected and reviewed:

- ❖ Cranbrook Official Community Plan (2006) and its update
- ❖ Cranbrook Subdivision Servicing and Development Control Bylaw (1994)
- ❖ Cranbrook Zoning Bylaw (1994)
- ❖ Cranbrook roads record drawings

2.0 Existing Transportation System

As part of the study, the existing transportation systems including roadways, transit service, trail system, as well as rail and air transportation were reviewed. The key findings and the characteristics of each system were summarized below.

2.1 EXISTING ROADWAY SYSTEM

2.1.1 Roadway Functional Classification

The two main functions of a roadway are to provide mobility and land access. These two functions typically compete with each other, and a hierarchical functional classification for roadways is often used for transportation planning and design purposes.

The functional classification most commonly used is defined in the Transportation Association of Canada (TAC) “*Geometric Design for Canadian Roads*”. They include:

- ❖ Highway / Expressway
- ❖ Highway Connector
- ❖ Arterial
- ❖ Collector
- ❖ Local

The following paragraphs provide a brief description of the function and typical characteristics of these roadway classifications.

Highway / Expressway

A highway or expressway’s principal function is to provide for through traffic movements and to accommodate longer distance trips. Few access points are permitted to an expressway and often these only provide grade separated interchange. In and close to urban areas, traffic volumes on an expressway often exceed 20,000 vehicles per day.

Although the current daily traffic volumes along Highway 3/95 and Highway 95A in the context of Cranbrook are within 10,000 veh/day, based on the road characteristics Highway 3/95 and Highway 95A are still categorized into Highway / Expressway classification.

Highway Connector

A Highway Connector provides a link through the city between external highways, like Cranbrook Street and Van Horne Street in Cranbrook.

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Arterial

An arterial roadway provides for traffic movement and connects the principal areas of traffic generation in community. Ideally, only other arterial or collector roadway should intersect with an arterial. Intersections, typically at a minimum spacing of 400 metres, are usually controlled by means of traffic signals, or in special circumstances by grade separated interchanges. Preferably, arterials provide no direct access to adjacent developments and parking is generally not permitted. Traffic volumes on arterials usually vary between 10,000 and 30,000 vehicles per day, but can be substantially higher.

Collector

Collector roadways place roughly equal emphasis on mobility and land access. In general, collector roadways provide a link for traffic to travel from a local road to the nearest arterial roadway. They are intended to accommodate most of the traffic movements within a neighbourhood and often serve as bus routes. Average traffic volumes on a collector typically range between 1,000 and 12,000 vehicles per day. In residential areas, traffic volumes are usually kept below 5,000 to 6,000 vehicles per day. Parking is usually permitted on collector roadways.

Local

A Local roadway's primary function is to provide direct access to abutting land uses. Through traffic and bus routes on these roadways are not considered desirable and traffic volumes are typically kept below 1,000 vehicles per day. Parking is usually permitted on local roadways.

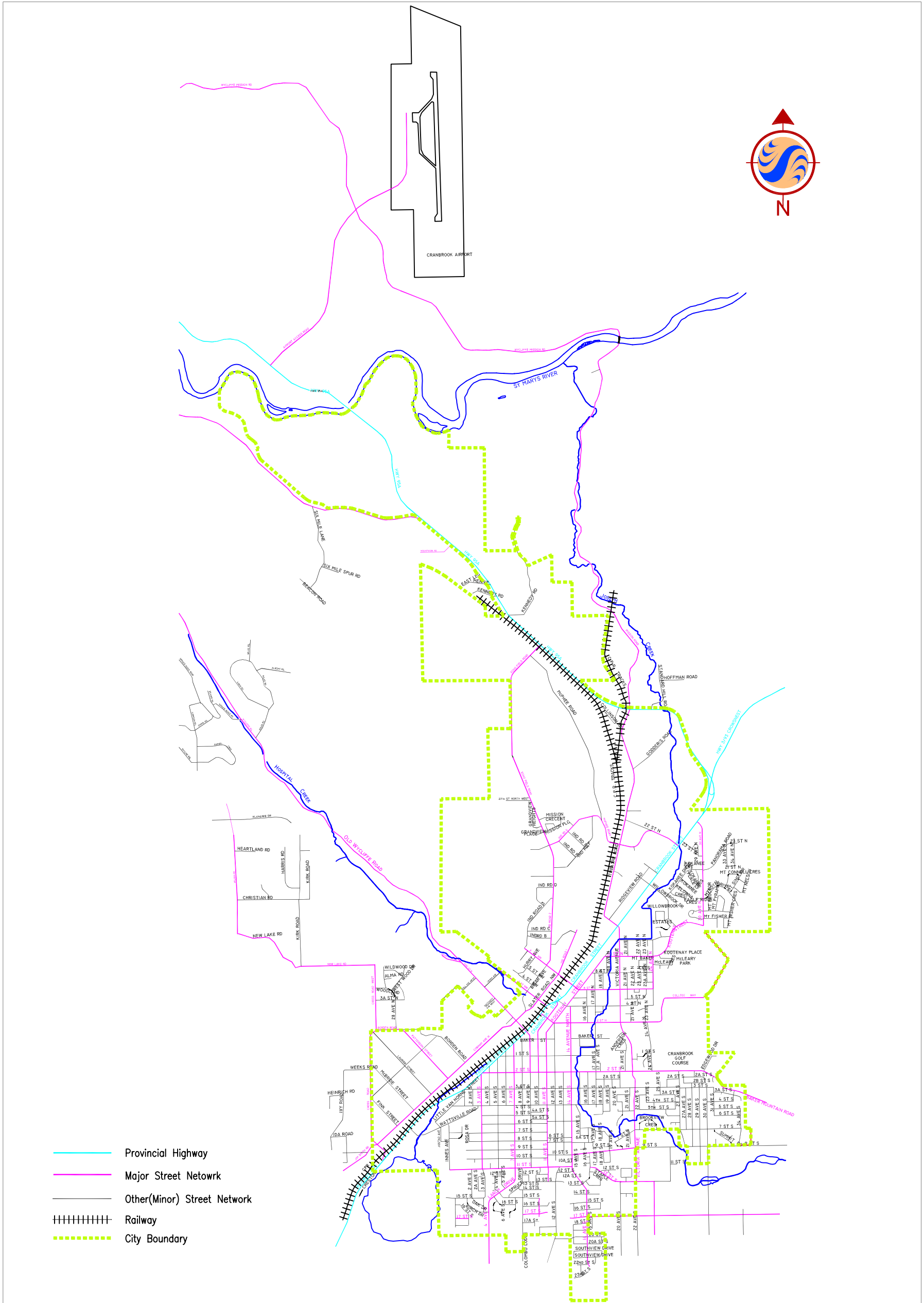
2.1.2 Existing Roadway Characteristics

Cranbrook has defined its own simple roadway classification, which includes provincial highway, major road and other (minor) road. A comparison table with TAC guidelines is shown below.

Table 2.1
City of Cranbrook Roadway Classification

City's Roadway Classification	TAC Comparable Classification
Provincial Highway	Highway / Expressway and Highway Connector
Major Road	Arterial and Collector
Other (Minor) Road	Local

The existing roadway network and roadway classification in Cranbrook is shown in Figure 2.1.



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Figure No.
2.1

Title
Existing Roadway Network and
Roadway Classification

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2.1.3 Existing Traffic Volumes

Planning of roadway facilities is usually done on the basis of weekday traffic volumes. However, weekend and special event volumes may be considered in special cases.

To identify existing traffic, a total of 24 intersection peak hour turning movement counts and 11 automatic traffic recorder (ATR) counts were collected by TransTech Data Service in June 2008. A summary of these counts is contained in Appendix A. In addition, a number of counts along Highway 3/95 and Highway 95A were obtained from Ministry of Transportation and Infrastructure (MoT) website.

The 7 day ATR counts completed by TransTech and MoT were reviewed to determine variations in the traffic pattern over the period of a day and a week. In general, mid-week traffic volumes most closely approximate the average weekday traffic volumes. Daily traffic on Fridays are typically 10% higher than the average weekday traffic volumes, while daily traffic volumes on Monday are typically 10% lower than the average weekday traffic volumes.

During the weekday, Monday to Friday, three peak periods occur usually between the hours of 0700 to 0900 (AM), 1130 to 1330 (Noon) and 1600 to 1800 (PM). In most cities, the PM peak period has the highest traffic volumes and is used for both roadway and traffic signal design. Therefore, the PM Peak hour was the selected scenario for model analysis. While the PM peak hour traffic volume as a percentage of the total daily volume varies depending on the location of the count, on average it represents 8 to 10% of the daily traffic volume. As such, daily volumes were projected by multiplying PM peak hour traffic volumes by 11 (i.e. the inverse of 9%).

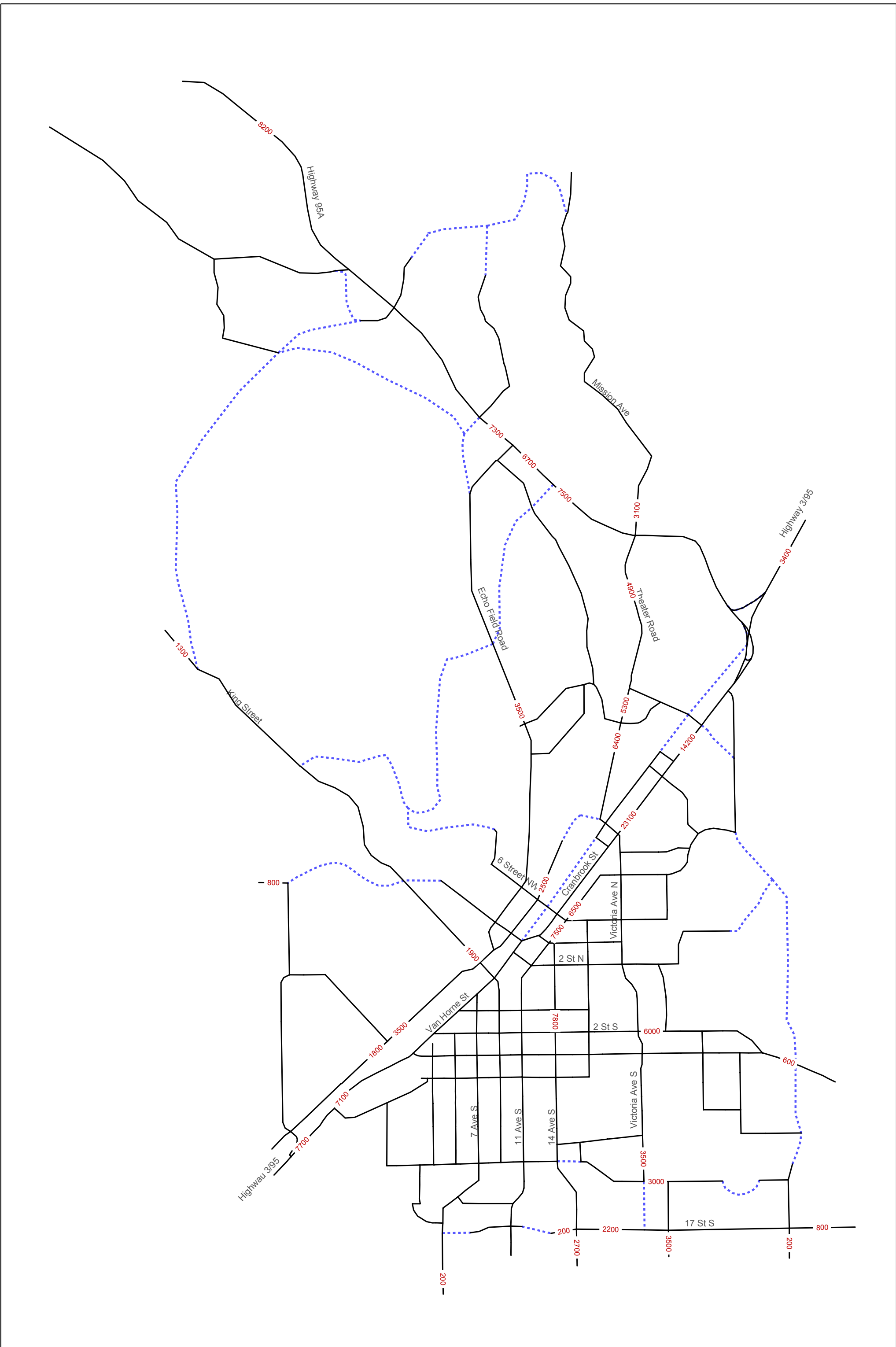
The existing Daily traffic volumes on key roads either collected by the ATR counts or scaled based on the PM peak hour counts are shown in Figure 2.2.

2.1.4 Definition of Roadway Capacity

Link capacity is influenced by many factors. The most important of these factors is the motorist's perception of an acceptable amount of congestion and delay. The amount of congestion or delay is typically defined by the concept of a volume to capacity (V/C) ratio. The V/C ratio is a percentage that indicates the amount of capacity being utilized by the traffic volume.

In larger cities, such as Vancouver and Calgary, motorists commonly experience delays and congestion and have come to accept them. Typically, roadway network improvements are usually not initiated until a V/C of 90% or higher is reached. In smaller cities, such as Cranbrook, motorist expectations typically are for higher levels of service. The consultation with the City of Cranbrook Engineering Department as well as the consultant's experience from other similar sized cities indicate that motorists in Cranbrook typically will not accept worse than a V/C of 70% before they begin to express dissatisfaction.

Table 2.2 outlines general characteristics of traffic in an urban environment for various levels of service.



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Table 2.2
Level of Service Characteristics

Level of Service	Overall Volume Capacity	Characteristics
A	<0.60	Free Flow; low volumes and high speeds most drivers can select own speed.
B	0.60 to 0.69	Stable flow; speed restricted slightly by traffic
C	0.70 to 0.79	Stable flow; speed controlled by traffic.
D	0.80 to 0.89	Approaching unstable flow; low speed.
E	0.90 to 0.99	Unstable flow; low, varying speeds, volumes at or near capacity.
F	≥ 1.0	Forced flow; low speed; volume below capacity; stoppages.

2.1.5 Existing Level of Service

The City of Cranbrook has a relatively well developed roadway network with a highway handling major traffic. Due to a small size community but with this well developed road network, all sections of the roadway network within the City’s jurisdiction function at level of service (LOS) of “B” or better under normal traffic operations (e.g. railway trains are not crossing/occupying the City roadways and blocking the adjacent intersections).

Stantec conducted a site visit during June 24 to 26, 2008. The site observation confirms the above conclusion.

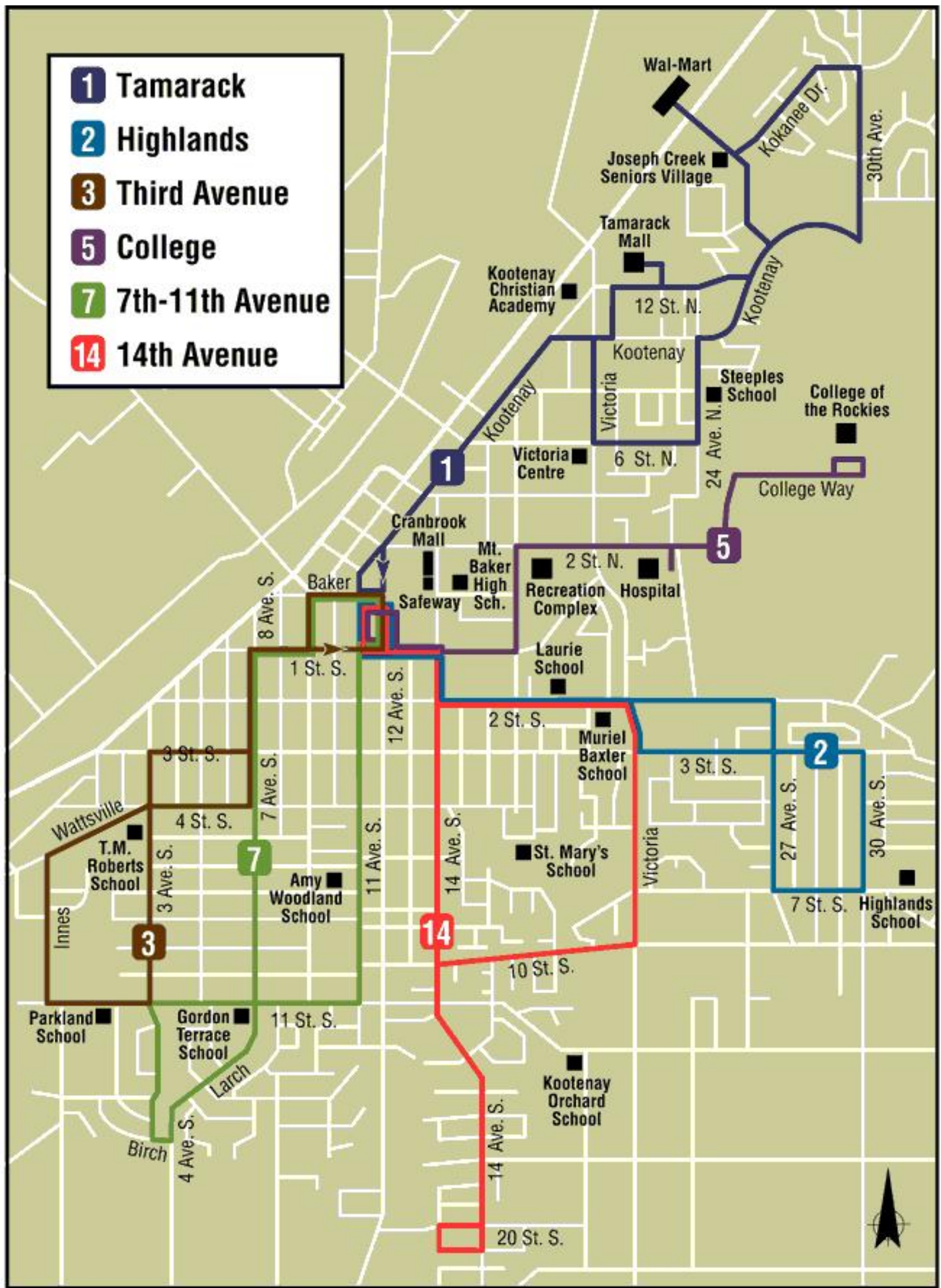
2.2 EXISTING TRANSIT SYSTEM

At time of this study, the City of Cranbrook Transit System provides an integrated transit system that allows riders convenience and flexibility travelling within the city. In addition, Kimberley Transit System provides inter-city service to/from Cranbrook with three round trips on every Tuesday and Thursday.

Currently, four types of accessible transit services are provided in the City. They are:

❖ **Conventional Transit Service**

The conventional transit service in Cranbrook started in December 2000. As shown in Figure 2.3, the existing conventional transit system includes 6 fixed transit routes. From Monday to Saturday the conventional buses run from 7:45 am to 9:40 pm. On Sundays they run from 9:45 am to 5:45 pm. The buses do not run on most holidays.



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Conventional Transit System

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❖ HandyDART

HandyDART, starting in 1982 as a paratransit system, is a fully accessible door-to-door service for those residents who are unable to use the conventional fixed-route system. Both the conventional transit service and handyDART transit system are currently operated by Greyhound of Canada Corporation.

❖ Taxi Saver Program

The Taxi Saver Program provides registered handyDART passengers with subsidized taxi service, giving them the flexibility to coordinate their own trips when the handyDART system is unavailable.

❖ Taxi Supplement Program

The Taxi Supplement Program enables the handyDART operator to book trips in taxis when the regular vehicle(s) is unavailable, either because of capacity issues or because the trip cannot be accommodated in a timely manner.

In 2004, BC Transit conducted Transit Service Review for Cranbrook Transit System. The summary report has described the City's transit service and proposed some service plan changes.

As indicated in the report as well as in other BC Transit documents, the transit ridership in Cranbrook has increased each year as the system matures. For example, the 2007 Cranbrook transit ridership has increased by 16% as compared with 2006.

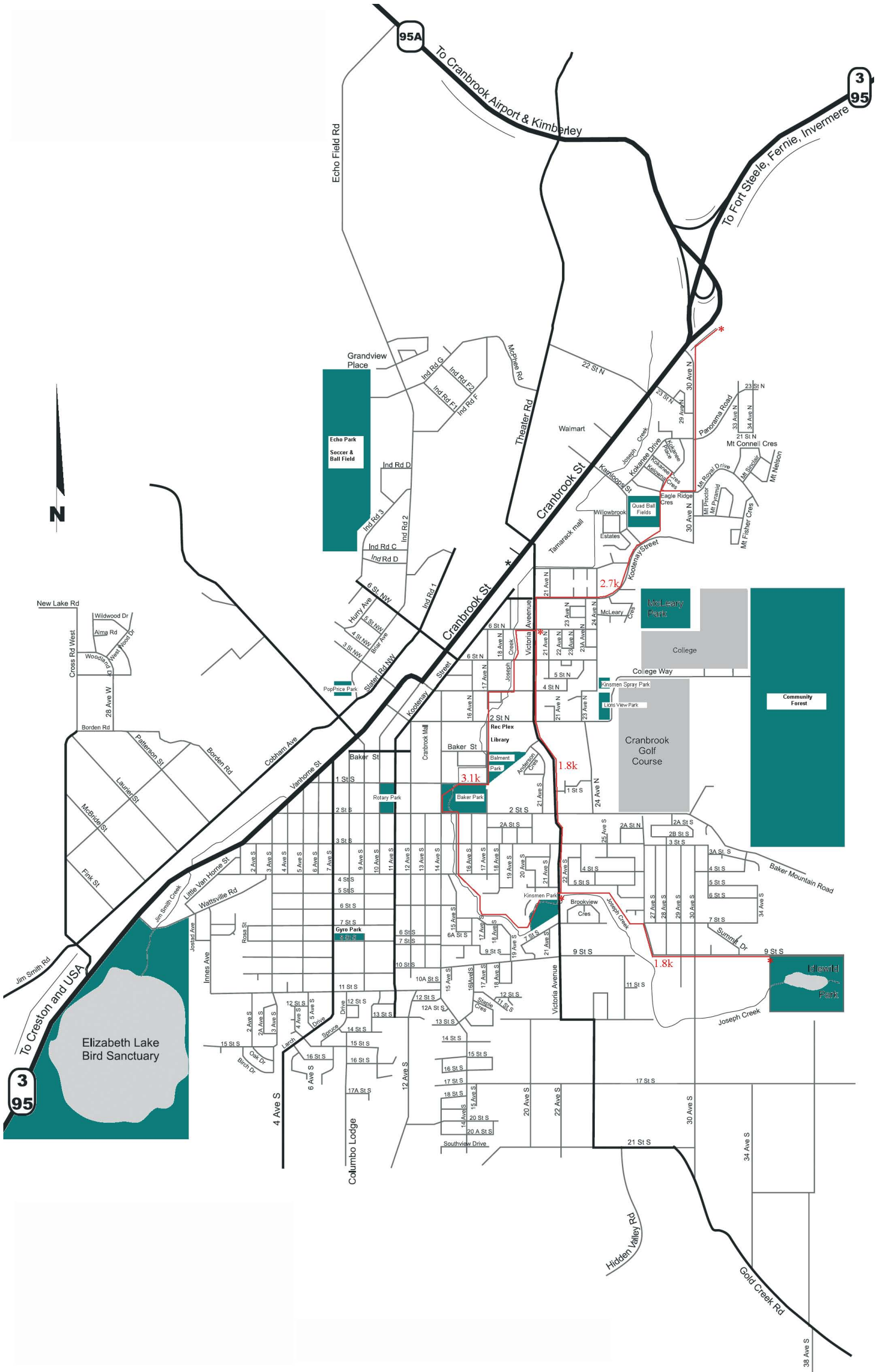
In 2006, Cranbrook was recognized as the smallest transit system in BC to start negotiation of a U-Pass program with Rocky Mountain College.

As shown in Figure 2.3, the majority of the City is within 300 metres of transit service. However it should be noted that no transit service is provided in the area west of the railway line. The Transit Service Review Report has suggested providing morning and afternoon commuter trips for residents working in the light industrial area (west of the railway line), and mid-day transit service for residents living in Grandview Heights and through the Slaterville neighbourhood.

2.3 EXISTING BICYCLE AND PEDESTRIAN SYSTEM

Most roadways in Cranbrook include sidewalks on one or both sides of the carriageway, providing dedicated space for pedestrian traffic. Bicycles, legally defined as vehicles, are accommodated within shared-traffic travel lanes with motorized vehicles. In addition to the core roadway system, pedestrian and bicycle traffic is served by numerous pedway connections (typically linking cul-de-sac or other local roads with nearby major streets).

As shown in Figure 2.4, the existing pedestrian/bicycle recreational trail system within the City connects Idlewild Park at south, and then extends north along 9 Street S and Joseph Creek connecting Kinsmen Park. Thereafter, the trail is split into two north/south trails with one along



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Existing Trail

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Title
Existing Trail System

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Victoria Avenue, and another along Joseph Creek connecting Baker Park, Balment Park and Recreation Plex. The two split trails join again at Victoria Avenue N with 6 Street N, and continue along Kootenay Street connecting Quad Ball Fields and then further north along 30 Avenue N to Fort Steel Interchange at the north end. The total length of the existing pedestrian/bicycle trails in Cranbrook is about 9.4 km.

2.4 EXISTING RAIL TRANSPORTATION SYSTEM

Cranbrook has been the railway centre of the East Kootenay in British Columbia since the Crowsnest Pass Route was in operation in 1898. Canadian Pacific Railway forms the main lines north and rail spurs run adjacent to the industrial parks. Some rail spurs are available to both private and City property. The current rail system in Cranbrook is illustrated in Figure 2.1.

The main line crosses some major roads in the City, including King Street W, 3 Street NW and 6 Street NW, immediately northwest of Highway 3/95. Due to high traffic volumes in peak hours, it was observed that the train crossing has significant impacts on the traffic at adjacent intersections. Train operations, especially train shunting, occupied the roads for up to 10 minutes, and all the side street turning movements were blocked. Long queues for some high-traffic movements therefore formed.

In order to mitigate the train impacts, optimizing the train operation (e.g. avoid train operation or at least avoid shunting operation in peak hours), and implementing appropriate railway pre-emption measures at impacted highway intersections are recommended.

2.5 EXISTING AIR TRANSPORTATION SYSTEM

Canadian Rockies International Airport is located on Airport Access Road, a short distance off Highway 95A. It is a small regional airport, approximately 9.3 km north of Cranbrook.

As the regional centre of Kootenays and a famous four-season resort destination, Cranbrook attracts visitors all around the world. In 2008, the airport served about 106,000 passengers and had 9,672 aircraft movements.

Currently, Cranbrook has direct connections with Calgary, Vancouver and Salt Lake City via three airline companies (Air Canada, Pacific Coastal Airlines and Delta Air Lines), and through them connecting the rest of the world.

3.0 Base Year Model Structure

Traffic supply and traffic demand are the two key components of a transportation model, which need to be established prior to calibration of the base year model.

- ❖ Traffic supply is typically provided by a road network and a transit network. Given that transit use is quite limited in Cranbrook, this model will comprise the road network for modeling auto vehicles only.
- ❖ Traffic demand refers to trips/vehicles traveling on a road network. In a transportation model, the population and employment data coded in traffic analysis zones (TAZ) is used to generate traffic. Via zone connectors, the traffic in each zone will then be distributed to the road network.

In order to develop the City of Cranbrook transportation model, VISUM, one of the dominant transportation modeling computer programs was utilized.

3.1 ROAD NETWORK - LINKS

Links are network symbols which connect nodes (to and from) and essentially represent roadways. A link has a particular direction, so that the opposite direction of a link represents a separate network object. As with nodes, links are assigned several attributes such as link number, from/to node number, link type, link length, link speed, link capacity, number of lanes, and permitted transportation mode system (e.g. car, bus, walk, etc.).

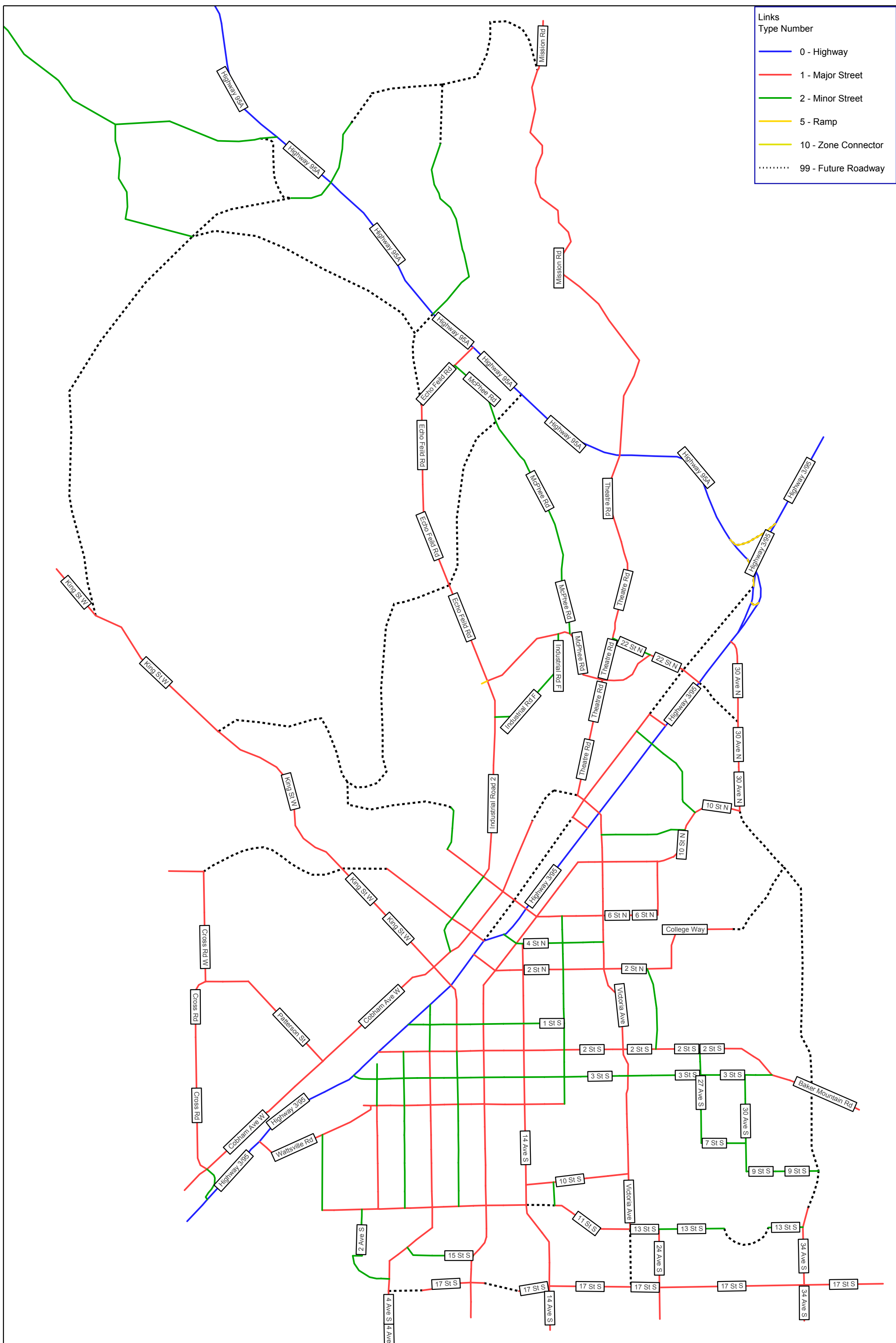
A number of user-defined attributes were created in the VISUM model for modeling purposes, including link capacity per lane, 2008 traffic counts, roadway classification, and peak hour design volumes.

The following sections describe several important link attributes in detail.

3.1.1 Link Type

The link type allows the modeler to set up a consistent identification / classification and coding system. In this model, link type mainly reflects its road function / classification based on a number of link characteristics defined, such as link capacity per lane and link speeds.

Figures 3.1 illustrates the link types used for the City of Cranbrook model. A summary table of the link types is shown in Table 3.1.



Links	
Type Number	
—	0 - Highway
—	1 - Major Street
—	2 - Minor Street
—	5 - Ramp
—	10 - Zone Connector
.....	99 - Future Roadway

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Table 3.1
Link Types

Type	Function	Comment
0	Highway	Highway 3/95 (Cranbrook Street N), Highway 95A
1	Major Road	major roads in Cranbrook
2	Minor Road	other city streets in the model
5	Ramp	Highway3/95 with Highway 95 A interchange ramps
10	Zone Connector	links added by Stantec to join traffic zone to road network
99	Future Roadway	City planned future roadways

3.1.2 Link Length / Speed

Link length and speed are used for calculating travel time. In VISUM, link length can be calculated automatically based on the X and Y co-ordinates of the nodes at either end of a link or the intermediate point on curved links.

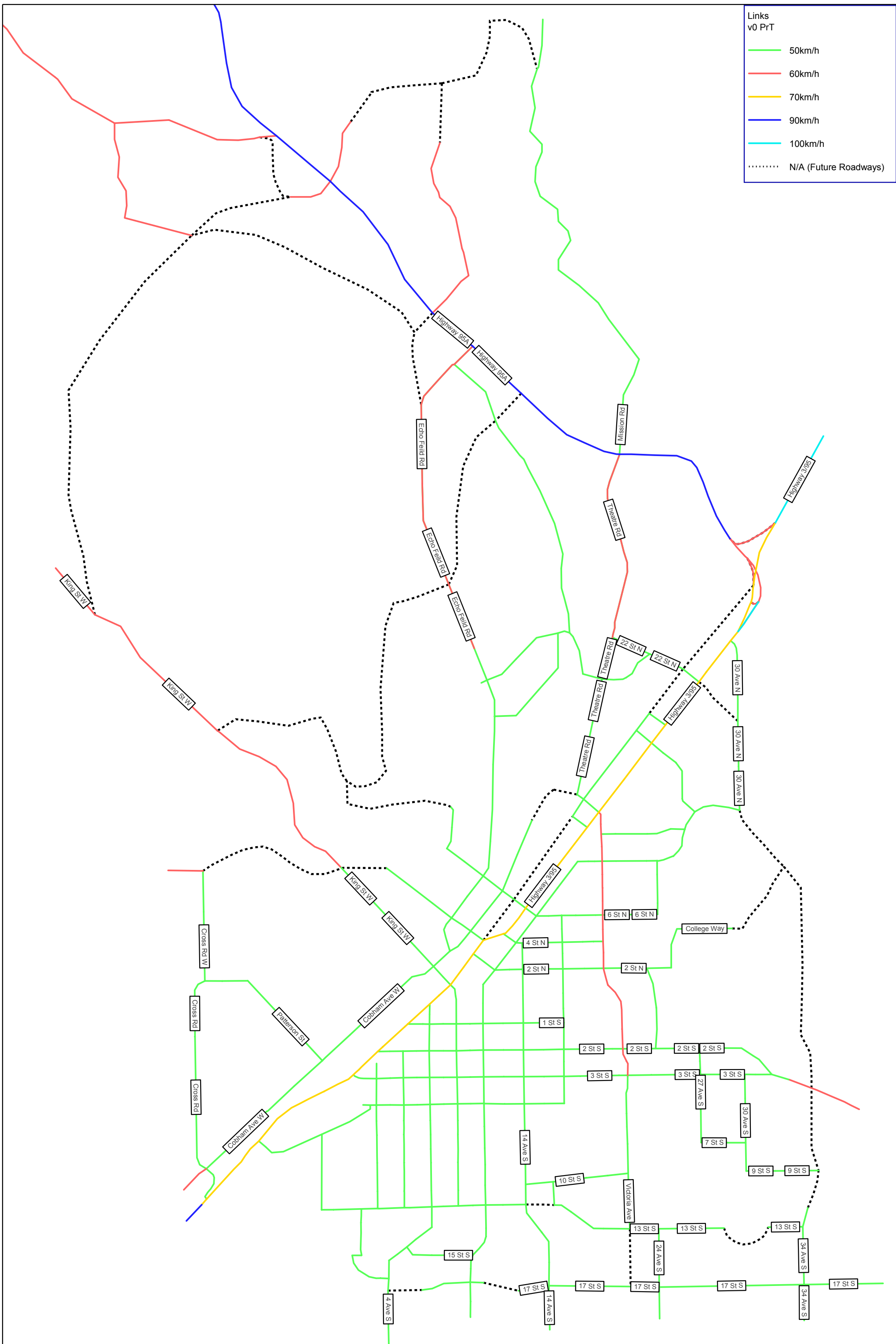
The posted speed limits along the City roads were used initially as model link speeds. With the model operation, a few modifications to the link speeds were introduced to improve modeling results by ‘tweaking’ the performance of the model. For example, the 60 km/h posted speed limit along Cranbrook Street N and Van Horne Street N (or Highway 3/95 within the City) has been modeled initially and the model results indicated that fewer trips would like to use this major road, as compared with the existing traffic counts. As such, the link speed along this road in the model was increased from 60 km/h to 70 km/h, in order to improve the modeling results.

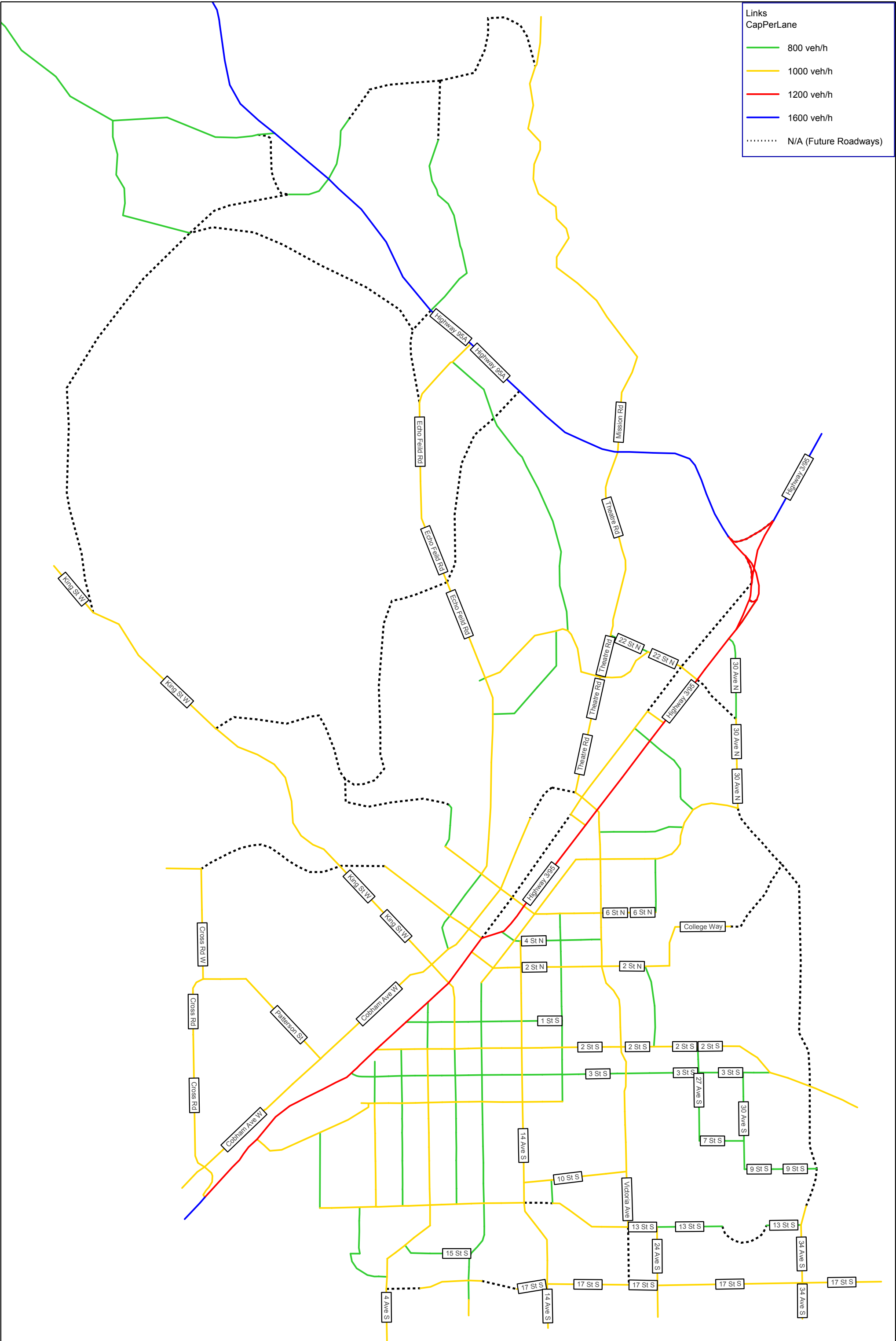
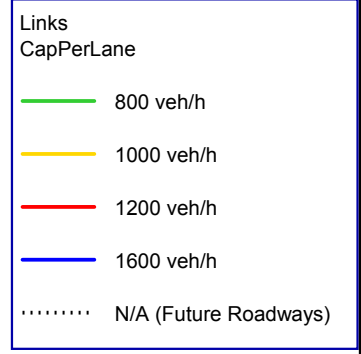
The modeled link speeds applied to the roadways in the City are illustrated in Figure 3.2.

3.1.3 Link Capacity / Number of Lanes

The capacities used for this model are intended to represent "environmental" capacities as opposed to physical link capacities. An "environmental" capacity is a measure of the amount of traffic that is considered acceptable on a link. For example, in a suburban area, a collector road maybe physically capable of handling traffic flows of up to 1200 vehicles/hour/lane, depending upon the roadway geometry. However, this would not typically be acceptable to the residents of the area or may be perceived as inappropriate levels of congestion by drivers. To avoid the model assigning excessive traffic to the collector roadway due to minor congestion on the adjoining arterial road network, a lower “environmental” capacity is utilized.

Figure 3.3 summarizes the link capacity per lane per hour recommended for the City of Cranbrook Transportation Model.





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The capacity of a link is a total directional capacity, and is related to the class of the roadway and the number of lanes. The number of lanes defines how many useable lanes a link has for traffic traveling in each direction and does not include on-street parking lanes. A visual illustration of number of lanes on links comprising the roadway network is contained in Figure 3.4.

3.2 ROAD NETWORK - NODES

Nodes are the start or end points of links, where there are turning movements (called turning relations in VISUM) from one link to another. Each node in the Cranbrook VISUM network represents a street intersection or a physical feature of the road, such as curve or link end.

Each node in the network has several attributes including node number, node type, junction control type, node capacity, and node position in X and Y co-ordinates. Other node user-defined attributes such as K4 (used for node capacity calculation) were created for modeling purposes.

3.2.1 Node Type

Node types are created based on node junction control and classification. For each node type, the value of K4 is assigned to determine node capacity, and a node volume-delay function (VDF) is assigned to calculate node delay.

Table 3.2 summarizes the node types and node descriptions used in the Cranbrook Model. Detailed node junction control types are illustrated in Figure 3.5.

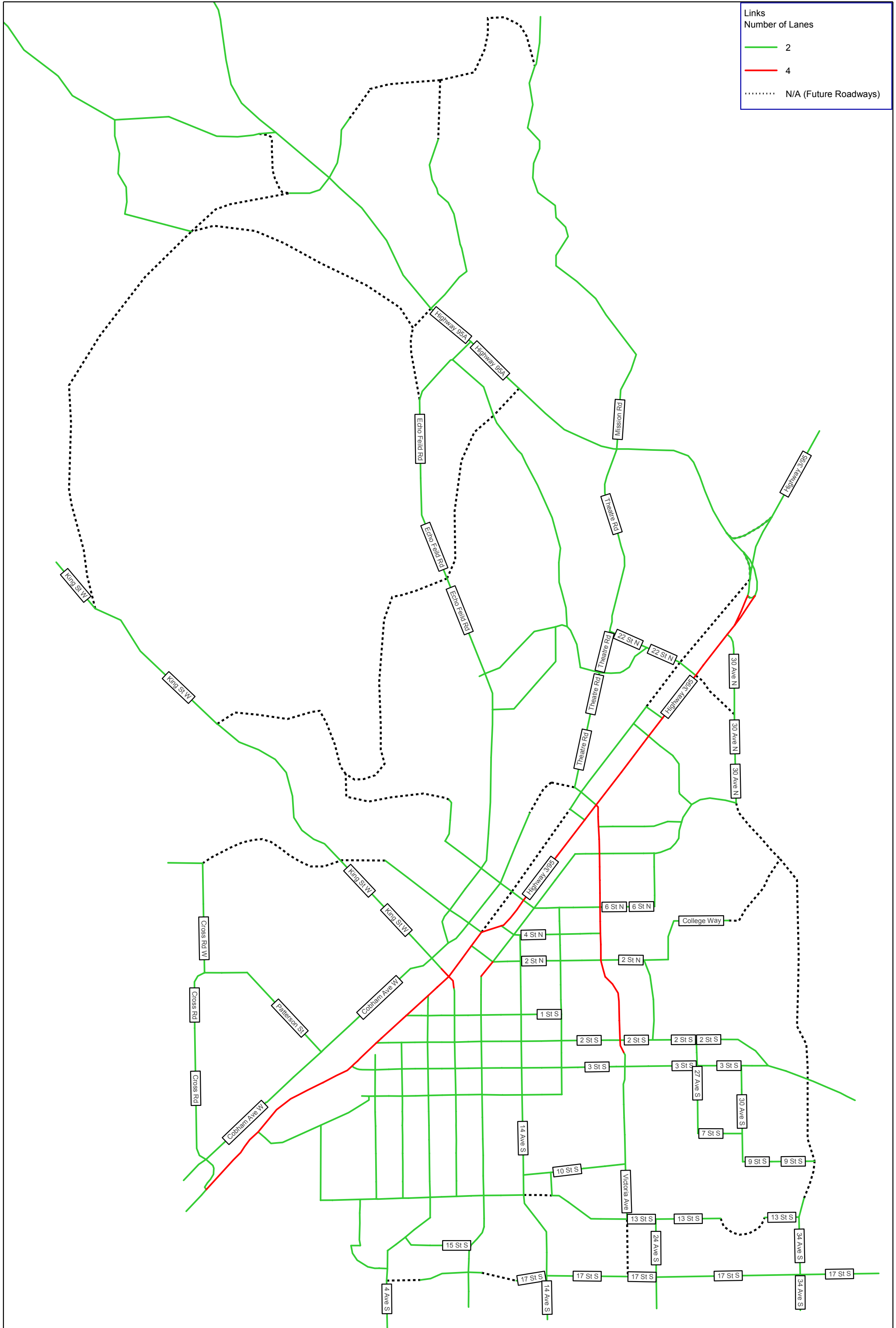
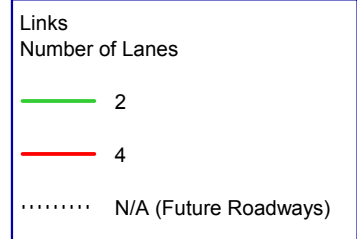
Table 3.2
VISUM Node Information by Type

Type	K4	Node Description
1	1.00	Shape Nodes (uncontrolled)
2	0.50	Two-way Stop Sign Controlled Intersections
3	0.45	Signalized Intersections
4	0.45	All -way Stop Sign Controlled Intersections
5	1.00	Ramp Diverge or Merge

3.2.2 Node Capacity

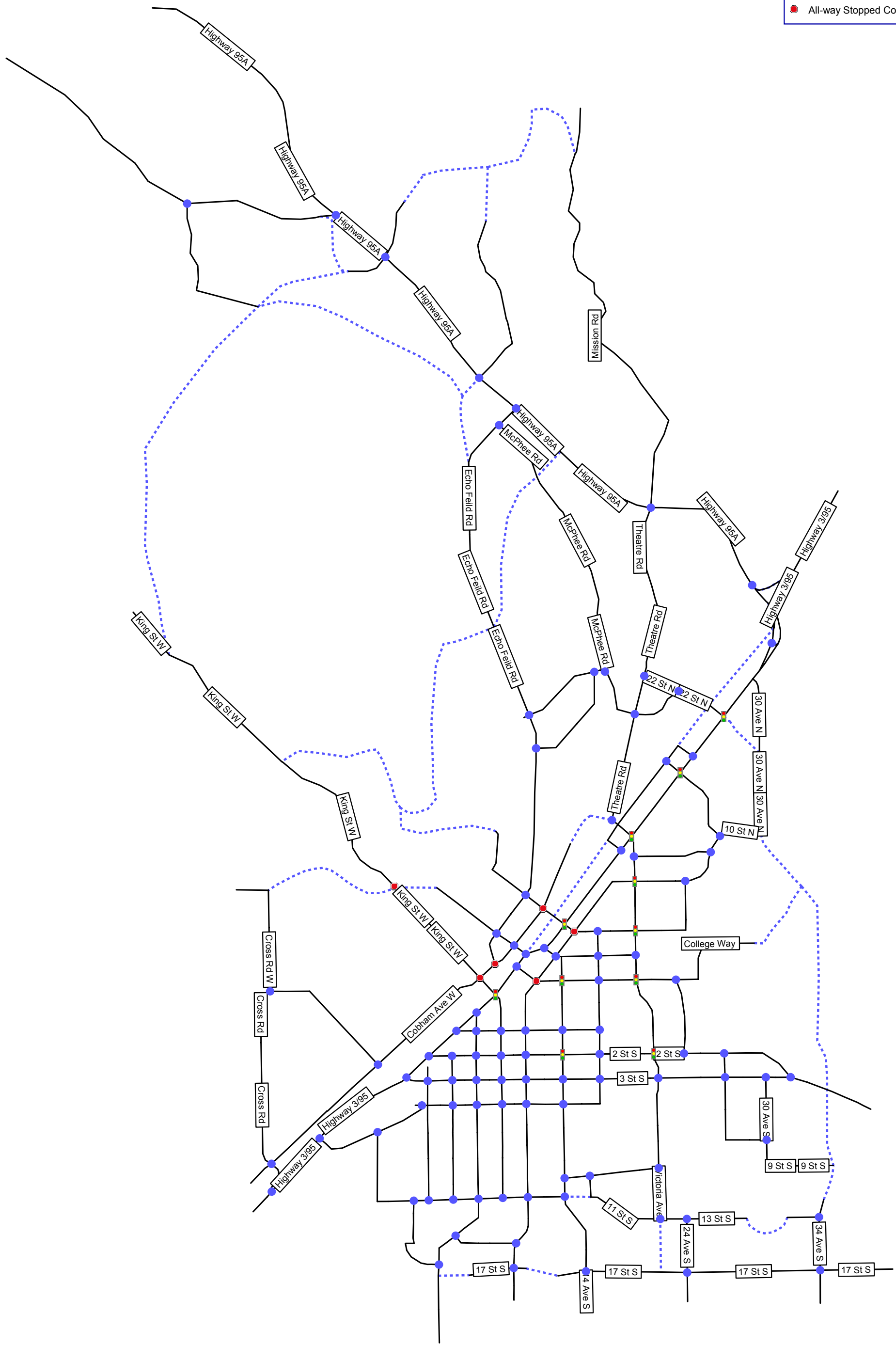
Each node is assigned a capacity referring to the total amount of traffic that can pass through a node within one hour. Like link capacity, node capacity is used to determine travel delay at nodes, which is discussed in Section 4.3.1.

Node capacity is dependent upon two factors: the intersection control type (i.e., signalized / unsignalized, etc.) and the capacity of the inbound links.



Node
Control Type

- Two-way Stopped Control
- Signal Control
- All-way Stopped Control



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VISUM allows the user to code node capacity parameter (K4) which is used together with the total inbound link capacity at a node to determine capacity. The equations used for determining node capacity are expressed as follows:

$$\text{Node Capacity} = K4 * \sum_i^n (\text{lane}_i * \text{icap}_i)$$

where

K4 is user-defined constants, see Table 3.2;
n is the total number of links entering the intersection;
lane_i is the number of lanes of link i entering the intersection; and
icap_i is the link capacity per lane of the link i entering the intersection.

3.3 TRAFFIC ANALYSIS ZONES

3.3.1 Zone System

A transportation zone system is used to disaggregate the study area into smaller areas for analysis of travel patterns. Generally, a zone system is developed by creating zones with similar land uses, where identifiable physical boundaries and representative access to transportation corridors can be logically defined.

In developing the zone system for Cranbrook, the following documents were reviewed:

- City of Cranbrook Official Community Plan;
- City of Cranbrook zoning bylaw;
- The federal block and dissemination area system used in the 2006 national census.

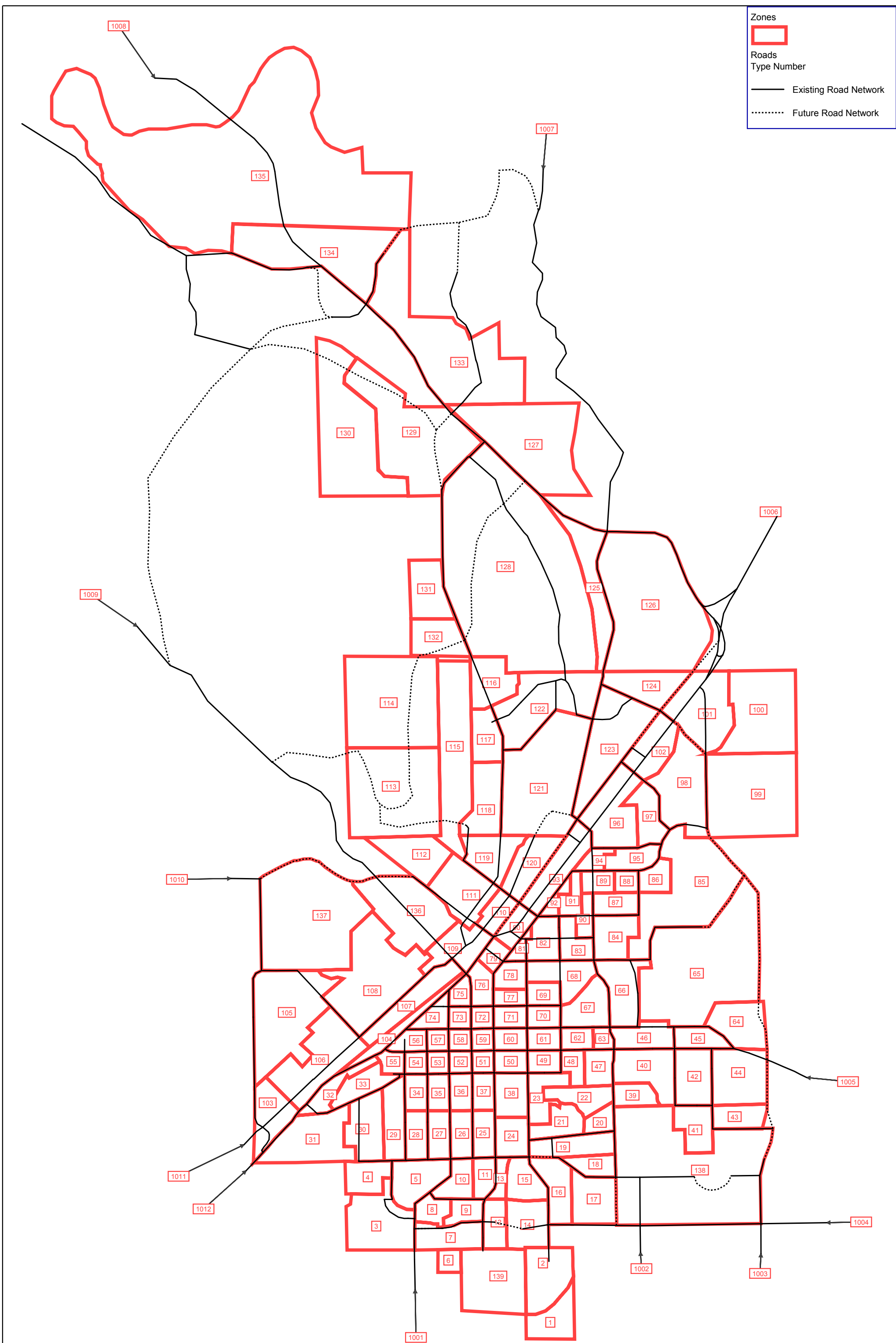
These plans also identify major physical features and transportation corridors.

The resulting transportation zone system includes a total of 151 zones, which consists of 139 zones within the current city and adjacent area (numbered 1 to 139), and 12 external zones (numbered 1001 to 1012) representing the region outside the study area. The external zones have been assigned to each major access gate around the model boundary to simulate vehicles entering and exiting the model on the surrounding highways and major roadways.

Figure 3.6 illustrates the transportation zones created for the City of Cranbrook transportation model.

3.3.2 Zone Connectors

Zone connectors are used to distribute traffic generated by a zone onto the road network. A zone may have several connectors used for multi-point assignment. The amount of traffic using each connector can be defined by percent share based on land use and access plans.



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In order to avoid undue influence of zone connectors on major intersections, the zone connectors in this model were not allowed to connect to these major intersections directly. Usually, another intersection or shape node was available to create the connection; alternatively, in some cases a short “dummy” link was created to connect the zone connector.

4.0 Base Year Model Calibration

4.1 GENERAL

Building a transportation planning model with VISUM requires roadway network data as discussed in the previous section. Also required is land use data and a quantified knowledge of the travel characteristics and travel patterns of the residents of the city and the surrounding areas. These requirements include an estimation of population and employment positions, as well as trip generation rates and trip distribution patterns.

The required land use data was obtained in consultation with the City of Cranbrook, and Stantec Urban Planners. The trip generation rates and trip distribution patterns were obtained from the collected turning movement counts, place of residence / place of work commuting data indicated in the 2006 federal census, the Institute of Transportation Engineers (ITE) Trip Generation Manual (7th edition), and Stantec previous similar studies.

4.1.1 Existing Population & Employment

The data presented was disaggregated to match the transportation zone system and input into the transportation model using the following categories:

- residential population;
- retail employment;
- non-retail employment; and
- educational land use (College of The Rockies attendance).

Population Coding

Base year population data was primarily based on the 2006 federal census information. The GeoSearch GIS system in the Statistics Canada's website provides the population and dwelling units information at dissemination block¹ (DB) level.

Stantec reviewed the census data and then aggregated the DB information into the transportation analysis zone level.

Appendix B shows the breakdown of base year population at the Cranbrook traffic analysis zone level. Table 4.1 below illustrates that the base year City population is 18,306, with a total population of 19,189 residing in the model boundary area.

¹ A dissemination block (DB) is an area bounded on all sides by roads and/or boundaries of standard geographic areas. The dissemination block is the smallest census geographic area for which population and dwelling counts are disseminated.

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Table 4.1
Base Year Population and Employment

Jurisdiction	Population	Non-home Based Employment Positions	Employment / Population Ratio
City of Cranbrook	18,306	9,589	0.52
Outside the City	883	128	0.14
Total Study Area	19,189	9,717	0.51

Employment Coding

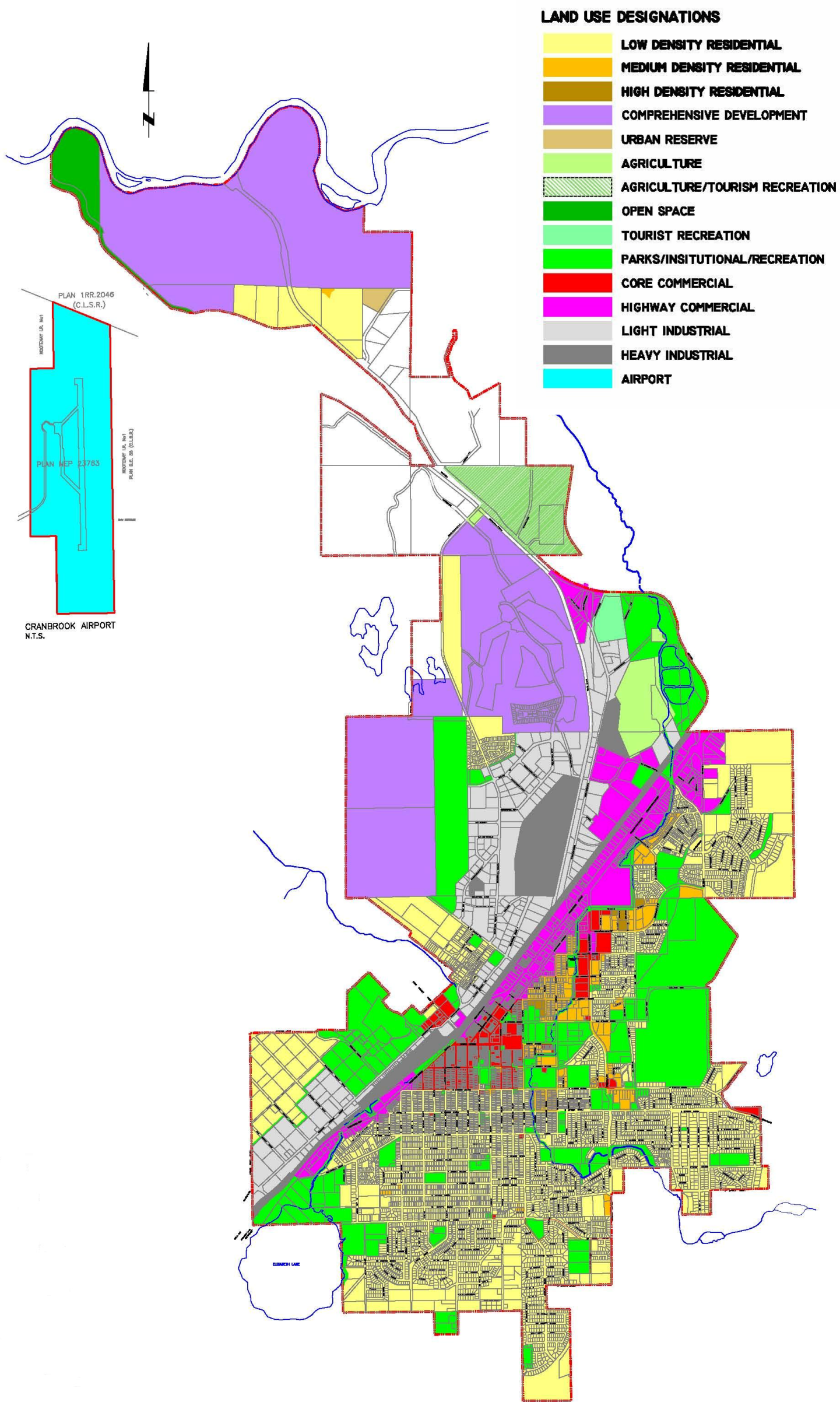
Base year employment data was also primarily based on the federal 2006 census data. Statistics Canada provides employed labour force counts for dissemination areas in Cranbrook. Stantec then disaggregated the employment numbers at the transportation analysis zones based on zone sizes and land use designations shown in the City's updated Official Community Plan (OCP) as illustrated in Figure 4.1.

Given that retail land use has quite different trip generation characteristics, the employment positions were broken down as retail jobs and non-retail jobs. The employment data for each zone was estimated based on the zonal land uses and the employment densities Stantec used for other similar studies (shown in Table 4.2).

Table 4.2
Projected Employment Land Use Density

Land Use Type	Retail Jobs	Non-retail Jobs	Total Jobs
Commercial (per gross ha)	25	10	35
Light Industrial (per gross ha)	1	17	18
Heavy Industrial (per gross ha)	0	10	10
Highway Business/Commercial (per gross ha)	12	13	25
Shopping Mall (per gross ha)	50	85	135
Residential (per capita)	0.03	0.08	0.11

As shown above in Table 4.1, there are a total of 9,717 non-home-based employment positions in the study area, among which 9,589 positions are located in the City, and 128 positions



Stantec

Client/Project
City of Cranbrook Growth Management Study - Transportation Planning
 Figure No. 4.1

Title
Official Community Plan

February 2010
 1127 20147

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outside the City boundary. The breakdown of base year employment data by zone and by type is contained in Appendix B.

Using the above information a non-home based employment to population ratio was calculated. It is estimated that the City of Cranbrook has 0.52 non-home-based employment positions per capita. For the purposes of this study, we assumed this ratio will remain constant as the City grows.

College Student Coding

College of The Rockies has two campuses in Cranbrook and five regional campuses outside Cranbrook offering programs, courses and services. For this study, only the Main Campus located adjacent to College Way in Cranbrook was included, due to its significant impact on Cranbrook transportation system.

Based on the information available from the college's website, it is assumed 1,000 students (approximately 50% of the total full-time equivalent students in the seven campuses) are attending the Cranbrook Main Campus.

4.1.2 Trip Types

Trips taken during the PM peak hour are divided into three basic trip types for the Cranbrook model:

- Home-Based Work (HBW)
- Home-Based Other (HBO)
- Non-Home Based (NHB)

Each of these trip types has different trip characteristics and therefore produces different travel patterns. Because of these differences, they have been divided into groups so that they may be modeled separately. The following sections outline how each trip type is accounted for in the modeling procedure.

Home-Based Work

During the PM peak hour, these trips are primarily generated by the various employment areas and are attracted to the residential areas.

Home-Based Other

During the PM peak hour, these trips are generally attracted to retail/service areas and generated by the residential areas (home based shopping trips), as well as students attracted to home (home based school trips).

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Non-Home Based

During the PM peak hour, these trips are generally produced by the employment or college areas and attracted to other employment and retail/service areas.

The allocation of the trip types illustrated in Table 4.3 in the next section summarizes the contribution each land use makes to the three trip types. This allocation is based on industry standards and experience in completing models for other similar small urban areas.

4.1.3 Four-Step Transportation Planning Model

The 4-step transportation planning model is the most common model approach used in regional and municipal transportation planning. The four steps, as stated below, have strong relationship with each other, and usually need an iterative analysis to achieve the best result.

- Trip Generation
- Trip Distribution
- Mode Split
- Trip Assignment

Within the scope of this model development, trip generation refers to private automobile trip generation, and mode split to transit, bicycle, or other modes is not included in this study.

4.2 TRIP GENERATION

Based on the location of trip generators (within or outside the study area), trips can be divided into two categories: internal zone-generated trips and external zone-generated trips.

4.2.1 Internal Zone Trip Generation

To estimate the total trips generated by an internal zone, the trip generation rates for each type of land use need to be determined first.

Trip generation rates are factors that indicate the number of trips that occur in an area for every unit of associated land use. For the City of Cranbrook model the rates have been calculated in vehicle trips per person for residential land uses and vehicle trips per employee for employment land uses.

The residential and employment trip generation rates were established from intersection turning movement and link automatic traffic recorder (ATR) counts, from the ITE trip generation data, and from data compiled for previous transportation models completed by Stantec. Table 4.3 summarizes the trip generation rates recommended for the Cranbrook transportation model.

Table 4.3 - PM Peak Hour Trip Generation Rates

Land Use	Unit	PM Peak Generation Rate	Split		Trip Type Split			Trip Generation Rates					
								HBW		HBO		NHB	
			In	Out	HBW	HBO	NHB	In	Out	In	Out	In	Out
RESIDENTIAL	Person	0.30	65%	35%	40%	60%	0%	0.078	0.042	0.117	0.063	0.000	0.000
EMPLOYMENT													
Retail	Employee	2.05	45%	55%	15%	40%	45%	0.138	0.169	0.369	0.451	0.600	0.323
NHB Retail			65%	35%									
Others	Employee	0.50	30%	70%	40%	30%	30%	0.060	0.140	0.045	0.105	0.045	0.105
EDUCATIONAL													
College	Student	0.22	25%	75%	20%	65%	15%	0.011	0.033	0.036	0.107	0.008	0.025

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4.2.2 External Zone Trip Generation

Depending on trip destinations, two types of trips are generated by external zones: external-external trips and external-internal trips.

- External-external trips are commonly called through trips. They are trips that originate in, and are destined to, external zones. They have neither an origin nor destination within the study area.
- External-internal trips are trips that have a trip end in an external zone and the other end in an internal zone.

An estimation of external trips was done based on the 2008 link ATR counts at the major roadways connecting to the external zones, as well as the City's roadway functions.

4.3 TRIP DISTRIBUTION

After the total outbound/inbound trips are generated for each zone, the next step is to estimate trip interchanges between and within traffic zones. In order to match model travel patterns to observed travel patterns, a gravity model was formulated for Cranbrook as follows.

$$f(U_{ij}) = 1 / (U_{ij}^{\beta} + C * U_{ij}^{\alpha})$$

Where:

U_{ij} = value of utility (e.g. travel time or distance) between Zone i and Zone j

α, β and C = model parameters, calibrated as described in Section 4.3.2

The basic premise of the gravity model is that the trip-interchange magnitude between two zones is proportional to the trips produced in the origin zone and the trips attracted to the destination zone, and inversely proportional to the travel impedance (travel time) between the two zones.

4.3.1 Travel Time Parameters

Travel times for motorized transport are determined by the level of congestion of links and intersections, reflecting traffic volumes and capacities of these network objects. As such, the travel time between two zones consists of:

- travel times along zone connectors,
- travel times along links, and
- travel times at nodes / intersections.

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Connector Travel Time

A connector is a dummy link to connect a zone with the street network. To simulate the traffic along connectors, a 30 km/h speed is used for all zone connectors, and no capacity constraint is considered for connectors. Therefore, the connector travel time can be obtained based on the speed and the connector distance.

For external zone connectors, the travel times to/from activity centers outside the study area were estimated as part of the calibration process to provide greater control over the distribution of internal-external and external-internal trip patterns.

Link Travel Time

Link travel time is the total travel time required for a trip to proceed from one end of a link to the other, which is dependent on the length of the link and the vehicle speed along it. Under free traffic flow, the free flow speed will decide the free flow travel time (t_0). The travel time, however, is calculated as a function of volume and capacity, using a volume delay function (VDF). Cranbrook's Transportation Model utilized the following TModel link VDF to calculate travel time:

$$t_{cur}^{link} = (t_0 + a) * [1 + d * (sat + f)^b]$$

$$sat = \frac{vol}{cap * c}$$

Where:

t_0 = free flow link travel time

vol = loaded link traffic volume

cap = directional link capacity

a, b, c, d, f = user-defined parameters.

For the Cranbrook model, two ranges of parameters are recommended, as follows.

- When $sat < 0.80$: a = 0, b = 3.5, c = 1, d = 0.25, and f = 0.25
- When $sat \geq 0.80$: a = 0, b = 10, c = 1, d = 0.25, and f = 0.25

The above link delay functions were used for all classes of links. This formula is intended to simulate the effect of congestion on travel time, with increased traffic volumes corresponding to increased travel times.

As a starting point, the posted speed limit was used as the modeled free-flow speed (called V_0Prt in VISUM) to obtain free-flow time (t_0). The actual model free-flow speed, however, was subject to manual adjustment where appropriate to reflect actual travel patterns as closely as

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possible. For example, initially the model was assigning less numbers of trips on highway 3/95, whereas traffic counts indicate that trips within the City would be more likely to remain on the highway and urban major roadways. As such, the model free-flow speed along Highway 3/95 was increased to 70 km/h (posted speed limit = 60 km/h).

Node Travel Time

Node travel time relates to permissive turning movements at a node in the model network. Node travel times are used mainly to restrict prohibited movements or to deter movements that are being over-assigned by the model. The VISUM model used a TModel Node VDF to calculate node travel times. The methodology described in VISUM is as follows:

- The TModel Node VDF assumes that each turn delay is the total of node delay and an optional turn-specific delay. A node delay is calculated by applying a volume-delay function to the node volume-capacity ratio. The optional turn-specific delay is used to add additional penalty to some specified turns. For different junction control intersections, VISUM can assign “special” links to restrict that only turns originating from one of these “special” links will have a turn time penalty; and all others have zero turn times. For example, at a two-way stop intersection only minor roads will have node delays.

The formula of the node VDF is shown as follows:

$$t_{cur}^{node} = a + d * (sat + f)^b$$
$$sat = \frac{vol}{cap * c}$$

Where:

vol = loaded total volume entering the node

cap = total capacity of the node

a, b, c, d, f = user-defined parameters

The node delay parameters as defined below were used for all types of intersections.

- When $sat < 0.75$: $a = 1$, $b = 3.5$, $c = 1$, $d = 15$, and $f = 0.2$
- When $sat \geq 0.75$: $a = 1$, $b = 5$, $c = 1$, $d = 15$, and $f = 0.2$

For this study, the optional turn-specific delays are coded for left turn and right turn movements, as shown in Table 4.4. U-turns are not allowed for the model.

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Table 4.4
Intersection Turning Movement Delay

Turn Type	Delay (Sec)
Through	0
Left	10
Right	6

Intra-zonal Travel Time

The intra-zonal travel times were incorporated into the model to generate some intra-zonal trips (i.e. those remaining within a zone and not adding to external street network volumes). The formula of the intra-zonal travel time is expressed as follows:

$$t_{intra-zonal} = \sqrt{Area_{Zone}} \div Speed$$

Where:

Area_{Zone}: the area of a transportation analysis zone

Speed: model speeds for intra-zonal trips. Since the transportation system is relatively small, a low speed of 7.5 km/h is assumed for this study.

4.3.2 Curve Parameters Calibration

The model was calibrated by adjusting the gravity model curve parameters, Alpha (α), Beta (β) and Const (C) as discussed in Section 4.3, to achieve a reasonable match with ground traffic counts across screenlines, place of residence/place of work commuting data, and external trip making activities.

A screenline is an imaginary line imposed across an area, which divides that area into sections between which trip exchanges are expected to occur. For this model, Highway 3/95 (Cranbrook Street/Van Horne Street) was selected for the screen line analysis.

The resulting Alpha, Beta and Const factors for the three trip types are summarized in Table 4.5.

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Table 4.5
Calibration Factors

Trip Type	Alpha	Beta	Const
HBW	-1	1.50	100
HBO	-1.5	2.50	200
NHB	-1.5	2.00	200

4.4 TRIP ASSIGNMENT

The last step of the model is to assign the inter-zonal trips to the road network. In this model, the Multi-Equilibrium Assignment methodology was used, as it can reasonably simulate travel characteristics indicated in Wardrop's first principle:

Every road user selects their route in such a way that the travel time on all alternative routes is the same, and that switching to a different route would increase personal travel time (user-optimized behaviour).

In this method, a state of balance (or equilibrium) in the volume assignments is reached by a multiple-step iteration process. Vehicle assignments shift from among various alternative routes based on changing levels of congestion and travel times as vehicles are added incrementally to the network.

Figure 4.2 shows the base year model volumes in the City of Cranbrook, which indicates the modeled traffic mainly travels along Highway 3/95, 95A, and City major roads such as Victoria Avenue, 14 Avenue, Kootenay Street, etc. This matches the real-world traffic situation very well.

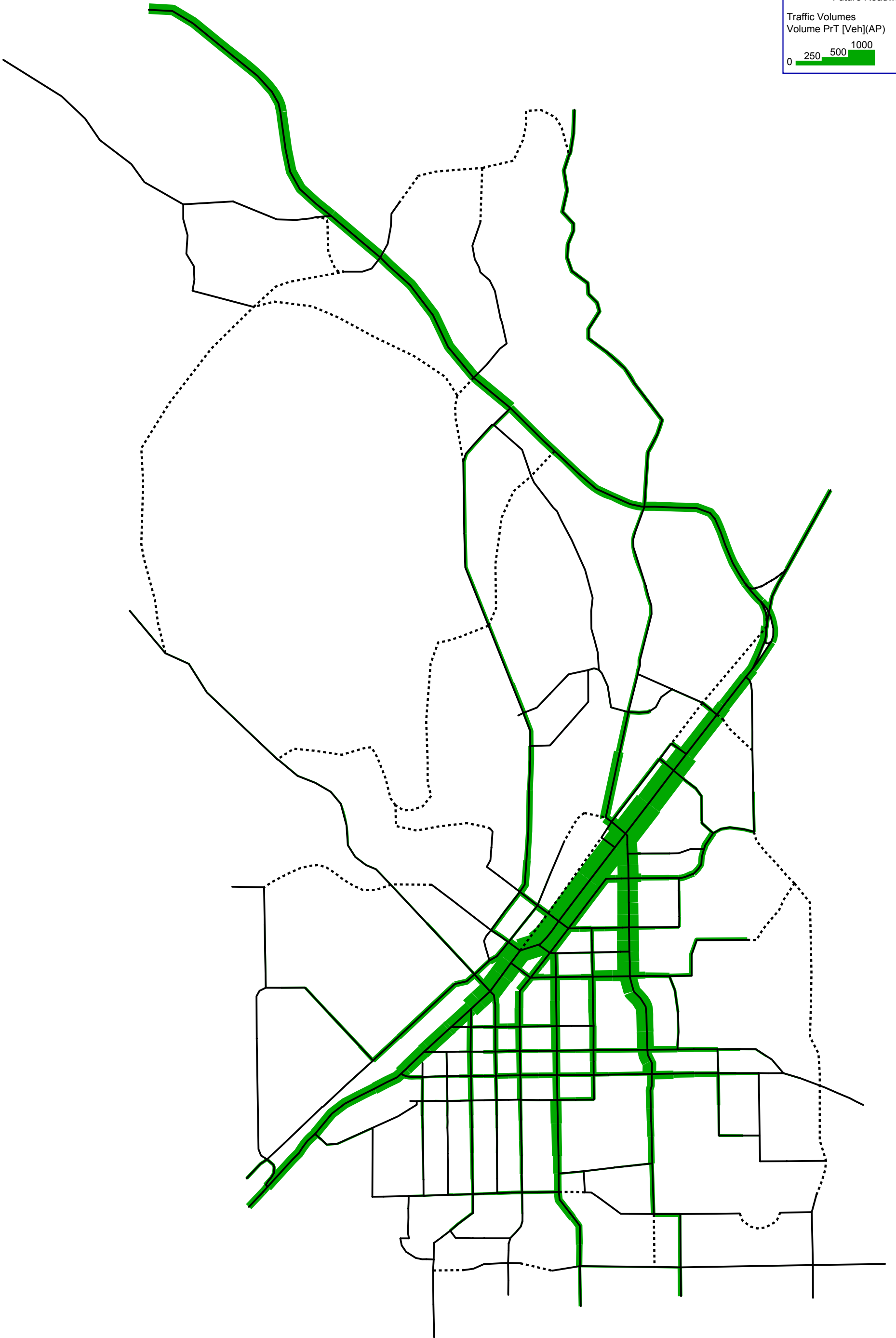
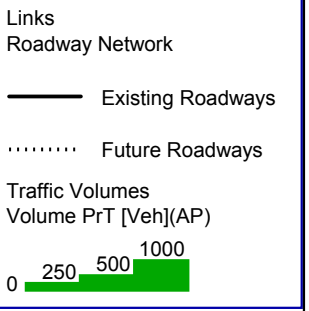
4.5 MODEL VALIDATION

The collected ground traffic counts were used to validate the calibrated base year model.

4.5.1 Screenline Analysis

As mentioned in Section 4.3.2, Highway 3/95 was selected for screenline analysis. Table 4.6 summarizes the analysis result. Based on the criteria adopted by the City of Edmonton², the calibration represents a strong correlation between observed volumes and predicted volumes, with both directions of the screenlines falling into the "good" range.

² The criteria originated with the City of Edmonton as applied in their regional travel modeling.



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Table 4.6
Screenline Analysis Summary

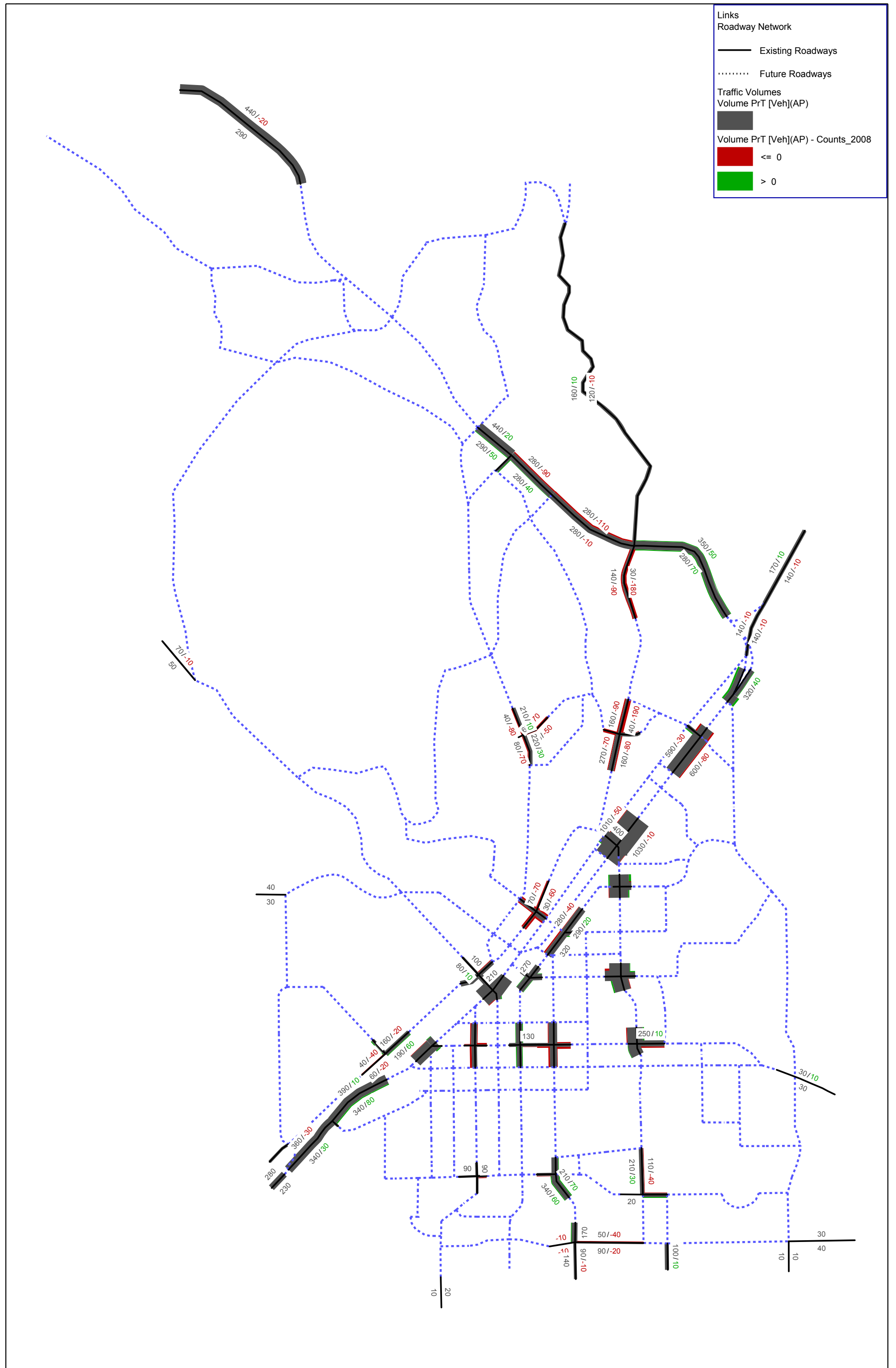
Screenline	Direction	Model Volumes	Ground Counts	Difference	Goodness of Fit
Highway 3/95	Entering the City southeast of Highway 3/95	1049	1058	-9	Good
Highway 3/95	Leaving the City southeast of Highway 3/95	1095	1010	85	Good

4.5.2 Goodness-of-Fit Analysis

To evaluate the quality of a travel model’s calibration, a common method is to compare the calibrated model link volumes with available link traffic counts. Figure 4.3 illustrates the traffic volumes simulated for the base year on the existing roadway network (gray bars) along with thin red or green bars depicting the magnitude of model under- or over-prediction relative to available ground counts.

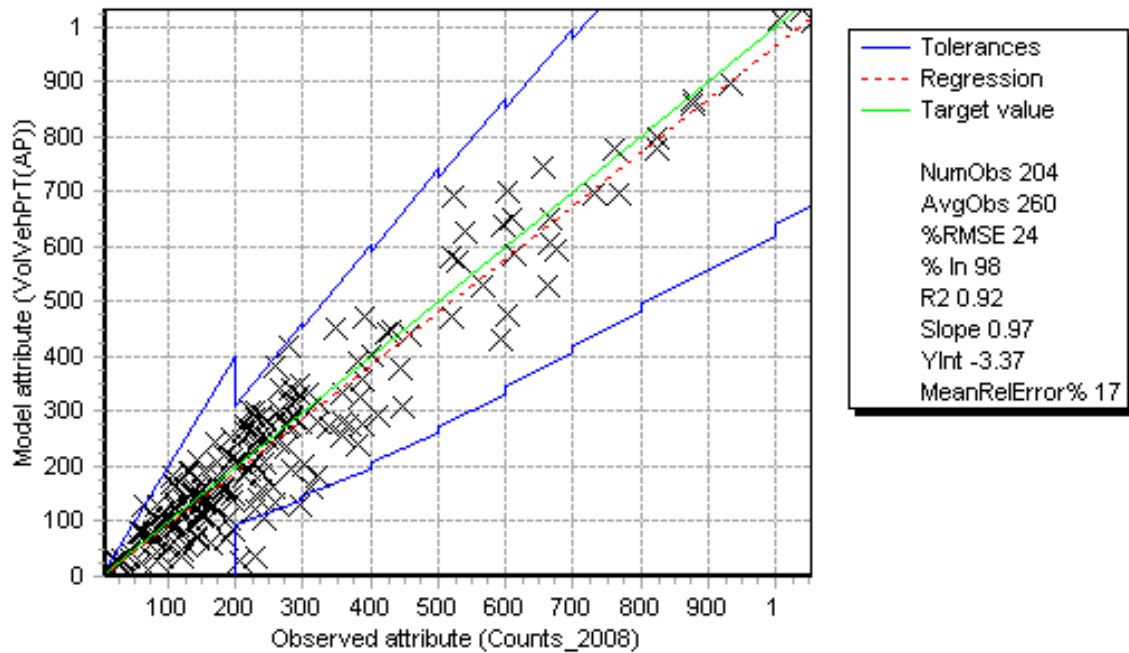
Figure 4.4 shows the overall model calibration results using a scatter diagram and a linear regression calculation based on tolerances suggested by NCHRP 255³. The R² (coefficient of determination) shows how well the regression line represents the assigned data. The closer this value is to 1.00, the better the statistical fit. The RMSE (root mean square error) shows the overall difference between traffic counts and model results. As the RMSE approaches 0.00, the model approaches perfect calibration. Generally a model with R² greater than 0.80 and RMSE less than 35% can be considered “good”.

³ National Cooperative Highway Research Program Report 255 - Highway Traffic Data for Urbanized Area Project Planning and Design



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Figure 4.4
Overall Base Year Model Calibration Results



The above figure indicates that this model has an R^2 of 0.92 and a RMSE of 24%. This is considered to be a 'very good' fit.

4.6 ROADWAY CAPACITY ANALYSIS

Typically, link volume-to-capacity (V/C) ratio and intersection level of service (LOS) indicators are used to identify traffic congestion at link and intersection levels, respectively. Given that Cranbrook is a relatively small community, low V/C ratios and good LOS will be acceptable to the City residents. However, with the City grows, it is anticipated that traffic will increase and people will likely get used to more congestion. As such, higher V/C ratios and worse LOS would be acceptable in future horizons. In consultation with the City, a set of critical values are suggested for Cranbrook at current and future horizons. If the model results are higher/worse than the critical values in Table 4.7, roadway improvements will be triggered to reduce the traffic congestion.

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Table 4.7
Capacity Analysis Indicator Critical Values

Horizon	Link V/C Ratio	Intersection LOS
Current (Base Year)	0.70	D
Short Term (Year 2016)	0.75	D
Long Term (Current City Boundary Full Build Out)	0.80	E

4.6.1 Link Capacity Analysis

Typically, link volume-to-capacity ratios are used to identify traffic congestion at the link level. The higher the value, the more congestion is experienced by motorists.

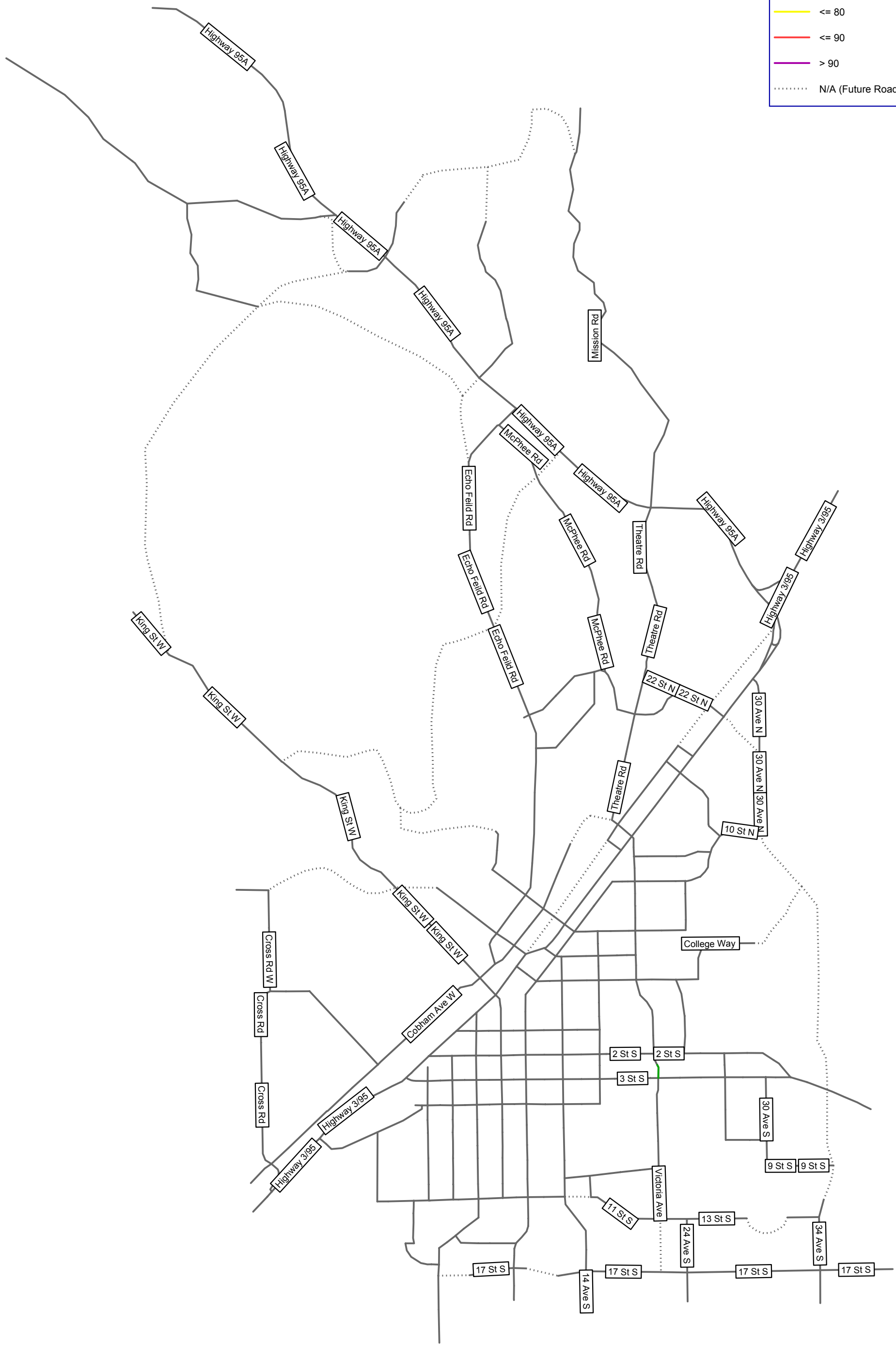
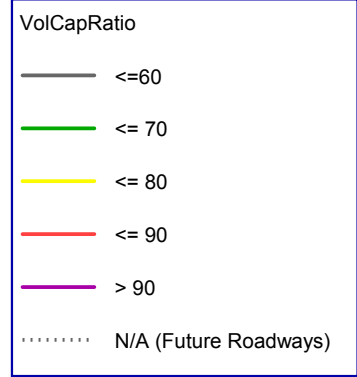
Figure 4.5 shows the existing link V/C ratios for Cranbrook. It indicates that the current roadway network works quite well. Except for Victoria Avenue S just north of 3rd Street S (which has a V/C ratio between 60 and 70%, shown in green color), all other roadways have V/C ratios below 60% (shown in grey color).

4.6.2 Intersection Capacity Analysis

At a planning level, VISUM can calculate intersection performance indicators (e.g. level of service) according to the procedures set out in the Highway Capacity Manual (HCM) 2000 edition. When an unsignalized intersection has LOS worse than the “critical values”, a traffic signal is added for further analysis.

Figures 4.6 illustrate the major intersections (major road intersecting highway / other major road) LOS in the City of Cranbrook, based on the ground traffic counts and existing lane geometry.

The model results in the above figures indicate that the intersection at Cranbrook Street (Highway 3/95) with Victoria Avenue North/Theatre Road has the worst LOS of “D”. All other intersections operate at LOS of “C” or better.

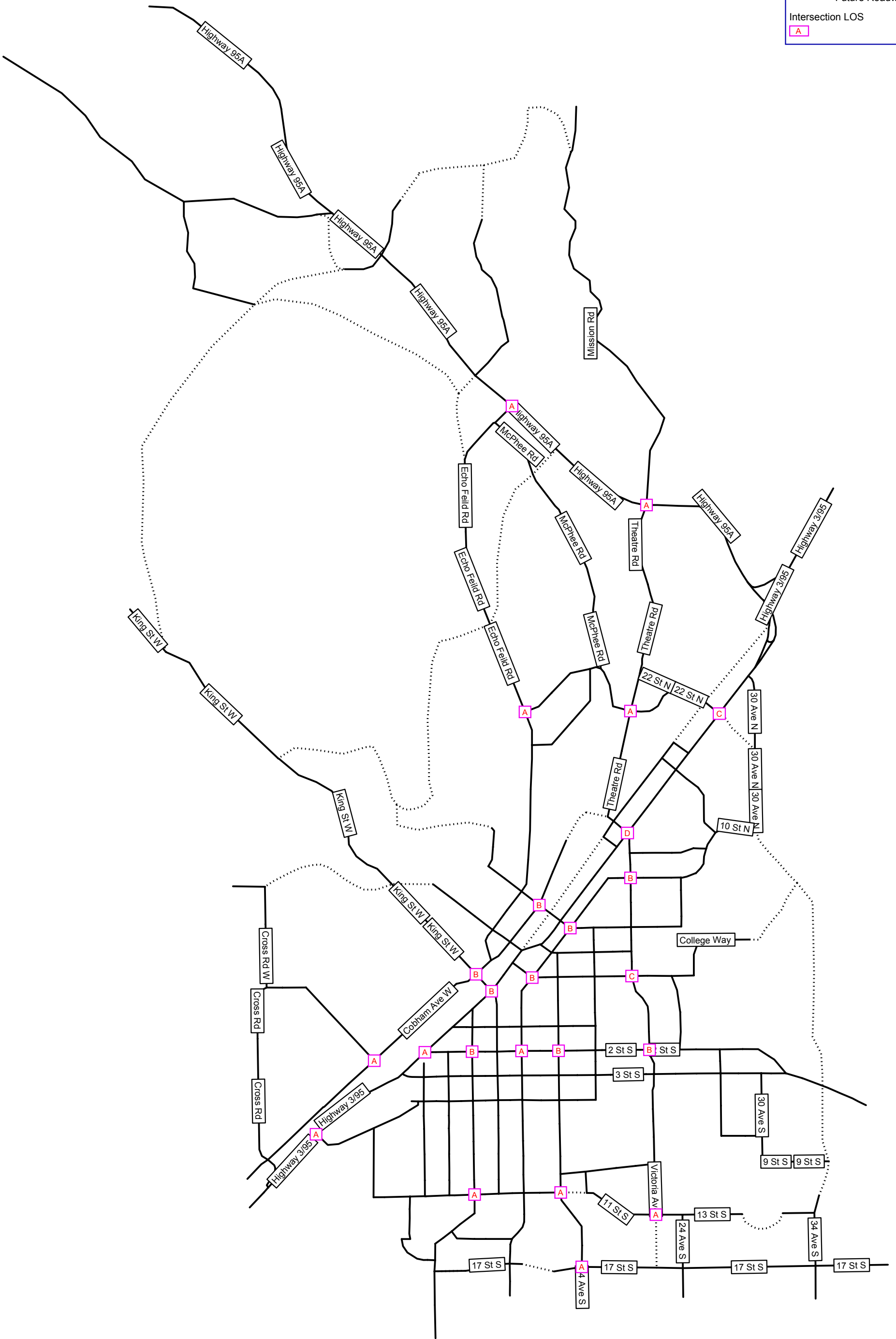


Roadway Network

- Existing Roadways
- Future Roadways

Intersection LOS

A



5.0 Year 2016 Horizon Model (Short Term)

This horizon is representing a short term (10 year) future timeline for the City of Cranbrook. The objective is to assess if and which improvements are required prior to the 10 year horizon. The horizon year is nominally 2016 (since the base data is from 2006), but it is the population level which best defines the horizon.

5.1 POPULATION AND EMPLOYMENT

Based on the City's Official Community Plan, and growth assumptions identified by Stantec Urban Planners in consultation with City, the proposed land use growth by 2016 is illustrated in Figure 5.1.

5.1.1 Population

Stantec Urban Planners, in consultation with the City, prepared population growth for the year 2016 at the dissemination area level. The distribution of the population to individual traffic analysis zones was estimated based on the future land use map shown in Figure 5.1.

Table 5.1 summarizes the population projections for the year 2016. A breakdown of population estimates by zone is contained in Appendix C.

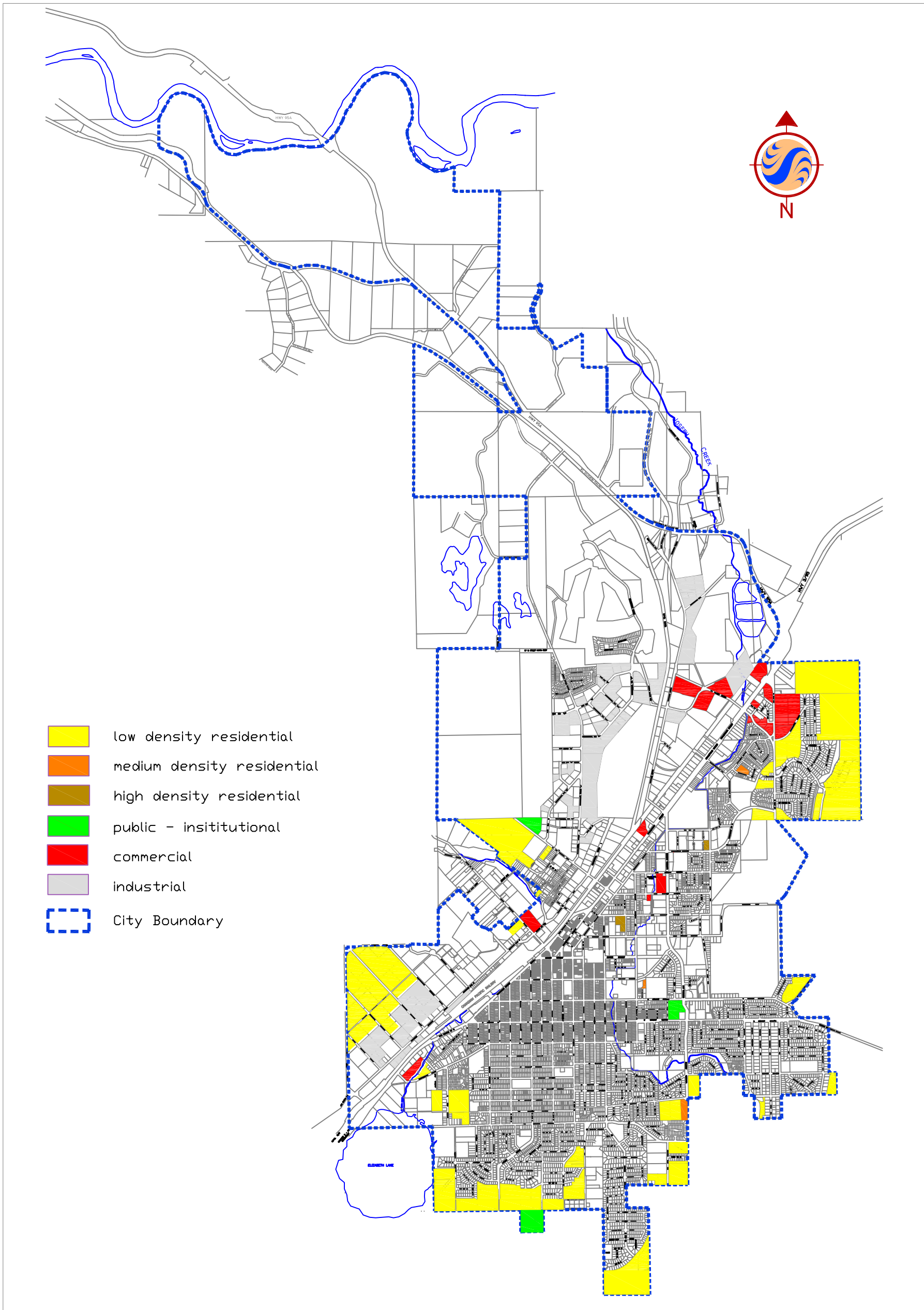
For the Year 2016 horizon, it is estimated that the population in the City will reach 20,606 people. The total population in the study area including the adjacent areas would be 21,489.

Table 5.1
2016 Horizon Population and Employment

Jurisdiction	Population	Non-home Based Employment Positions	Employment / Population Ratio
City of Cranbrook	20,606	10,730	0.52
Outside the City	883	128	0.14
Total Study Area	21,489	10,858	0.51

5.1.2 Employment

Estimates of future employment positions were based on the assumption that employment / population ratios remain at a similar level to current conditions. As such, the 2016 horizon will include approximately 1,140 additional employment positions within the study area relative to the base year horizon.



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Based on the employment densities as illustrated in Table 4.1 and future land use plan in Figure 5.1, Year 2016 employment positions were estimated for each traffic analysis zone for the same two categories used in the base year model: retail, and non-retail jobs.

Table 5.1 above also includes the 2016 employment position estimates. In total, there are about 10,858 non-home-based employment positions in the study area, among which 10,730 positions are located within the city.

The breakdown of employment positions by type and by zone is included in Appendix C.

5.1.3 College Students

The above 2016 population projection indicates about 12% increase as compared with the 2006 population.

Using the same percentage for the college student population growth, it is assumed the number of students attending the Cranbrook Main Campus will reach 1,120 by 2016.

5.2 EXTERNAL TRIPS

For estimating the external trips at the 2016 horizon, an average annual traffic growth rate of 3% (which is commonly used by BC Ministry of Transportation) was adopted. Therefore, it is assumed the external trips at the major gates to/from the study area will have a total of 30% increase by the 10 year horizon.

5.3 TRAVEL DEMAND FORECASTING

This section outlines the traffic volume projection for the 2016 horizon. Initially the existing road network was used to project traffic at this short-term horizon.

5.3.1 PM Peak Hour Link Volumes

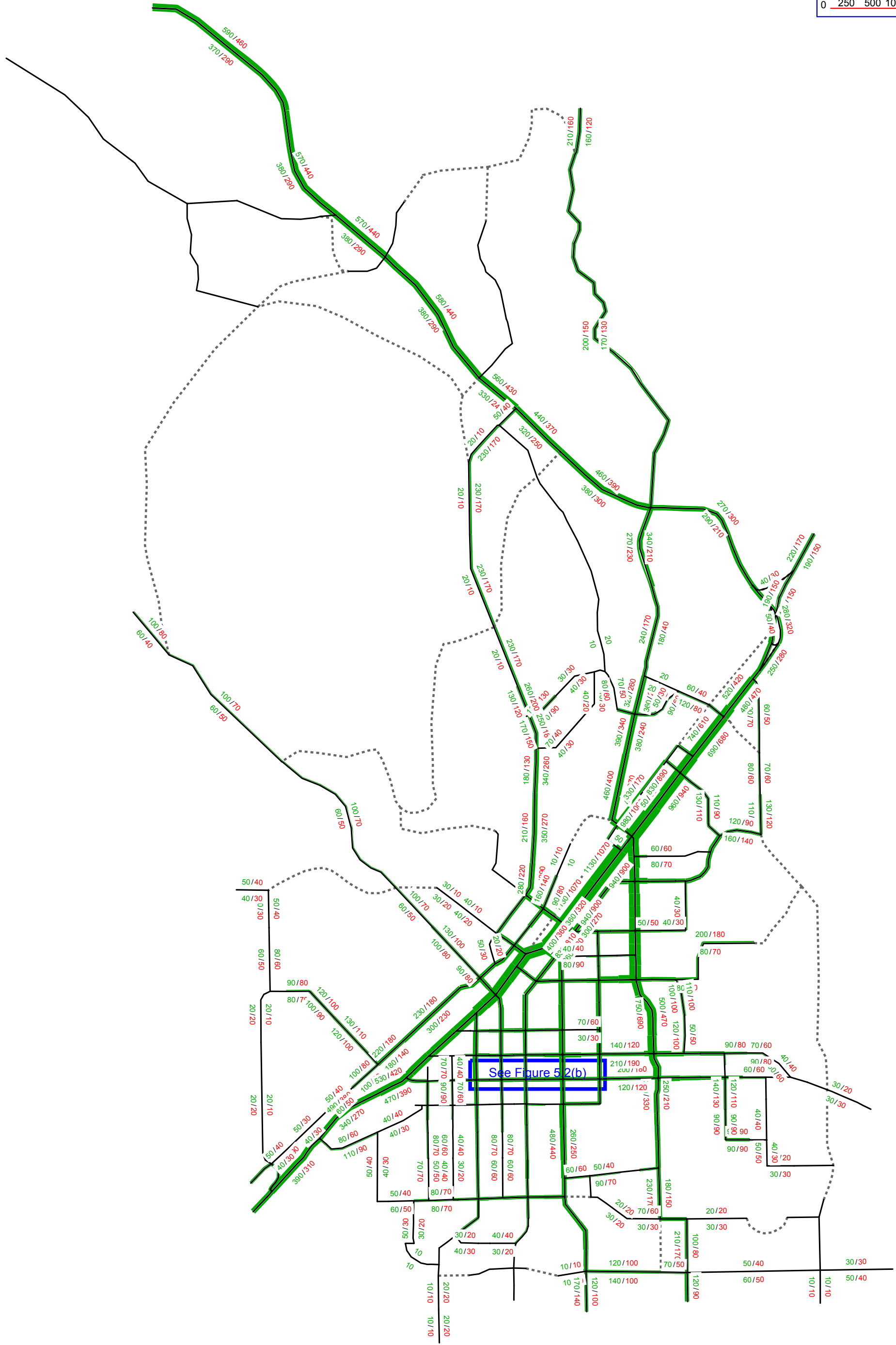
After loading the projected 2016 population and employment positions upon the current roadway network, the VISUM model projects corresponding PM Peak hour traffic volumes.

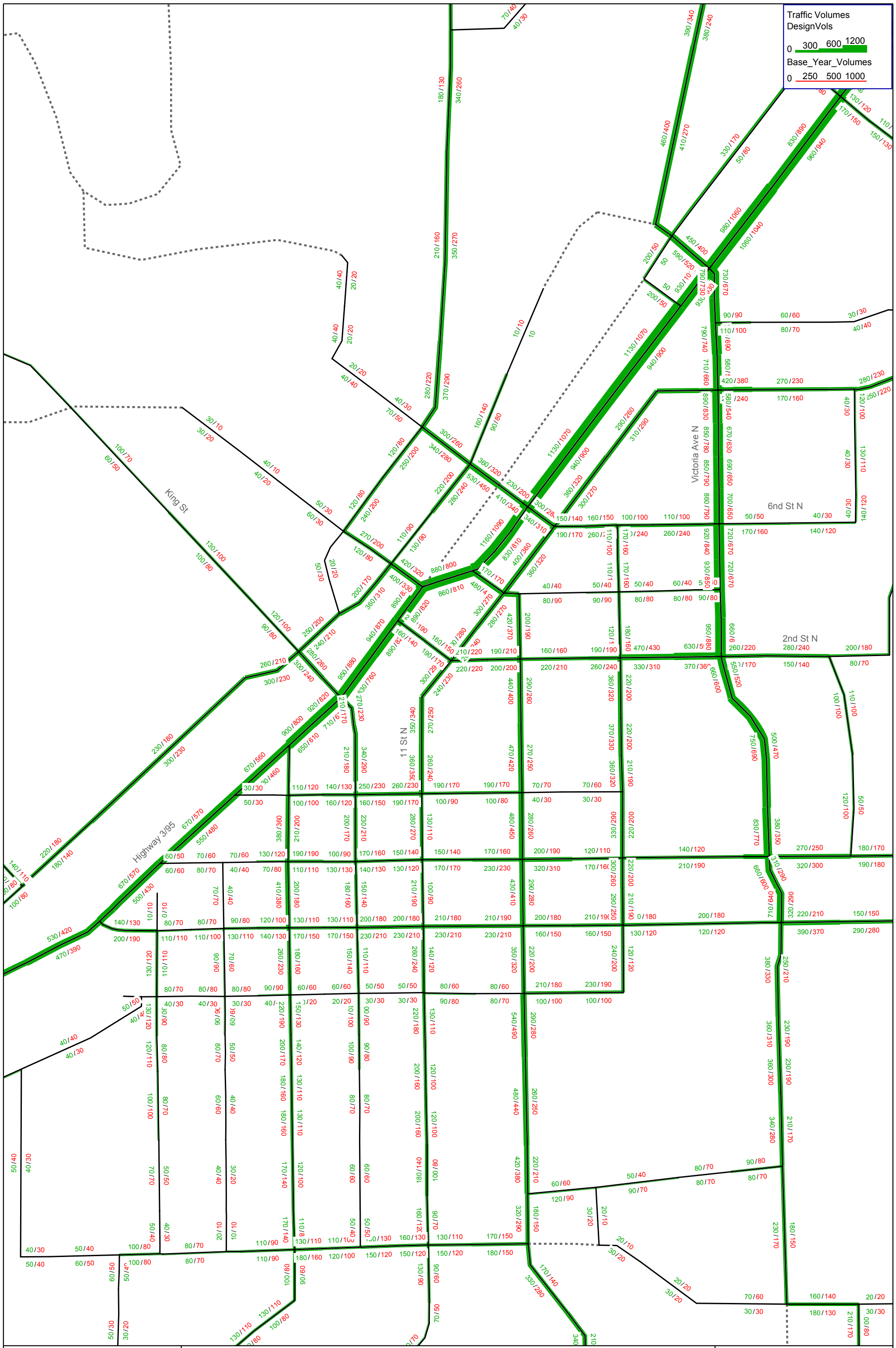
To minimize calibration error impacts on model forecasts, the model volume projections were calculated by adding the difference between 2016 model volumes and Base Year model volumes to ground traffic counts (where applicable), based on the methodology discussed in NCHRP Report 255.

Figures 5.2(a) and 5.2(b) show the projected peak hour traffic in 2016 for the whole study area and city centre, respectively. As a comparison, the base year peak hour volumes are shown in the figures in red beside the 2016-projected traffic.

Traffic Volumes
 DesignVols
 0 300 600 1200
 Base_Year_Volumes
 0 250 500 1000

590 / 460 : 2016 Traffic / Base Year Traffic





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5.3.2 Daily Link Volumes

As discussed in Section 2, the daily traffic was calculated by multiplying the PM peak hour traffic by 11.

The projected 2016 daily volumes are shown in Figure 5.3(a) and 5.3(b) for the whole study area and city centre, respectively. Beside the numbers are the estimated Base Year daily traffic volumes for comparison.

The figures indicate that the daily traffic will increase slightly in 2016 as compared with the Base Year Horizon. For example, Highway 3/95/95A will attract major traffic in the City with the daily traffic ranging from 6,900 to 22,800 veh/day in 2016, as compared with 5,600 to 23,100 veh/day in the Base Year. Another major road, Victoria Avenue N and S has daily traffic ranging from 4,400 to 18,100 veh/day in 2016, as compared with 3,500 to 16,500 veh/day in the Base Year.

5.4 ROADWAY CAPACITY ANALYSIS

5.4.1 Link Capacity Analysis

The projected link V/C ratios at the 2016 horizon are illustrated in Figure 5.4, which indicates that the link congestion level will be essentially the same as in the Base Year. Except for the segment of Victoria Avenue S. north of 3rd Street S. (shown in green color with V/C ratio between 65 and 75%), all other roadways will have V/C ratios below 65% (shown in grey color).

5.4.2 Intersection Capacity Analysis

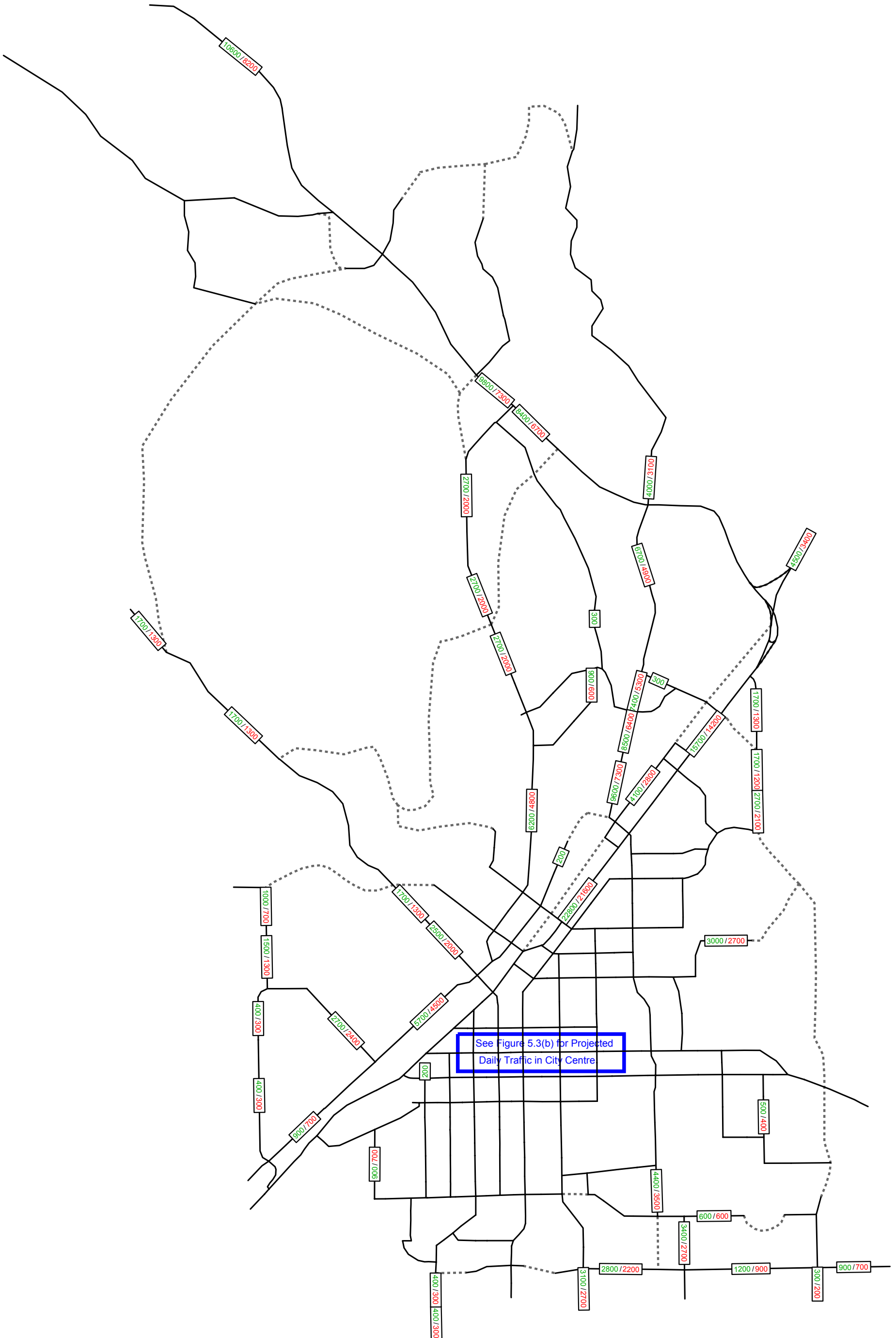
The Intersection Capacity Analysis (ICA) methodology in VISUM was used to again assess the major intersections. It should be noted that the intersection capacity analysis in this study is conducted at a conceptual planning level. Further detailed operation analysis will be required to determine the intersection lane geometry and traffic control types.

Figure 5.5 shows the LOS at major intersections. It indicates these intersections will operate at similar level of service as in Base Year. Except for LOS of "D" at Cranbrook Street (Highway 3/95) with Theatre Road / Victoria Avenue N, all other intersections have LOS of "C" or better.

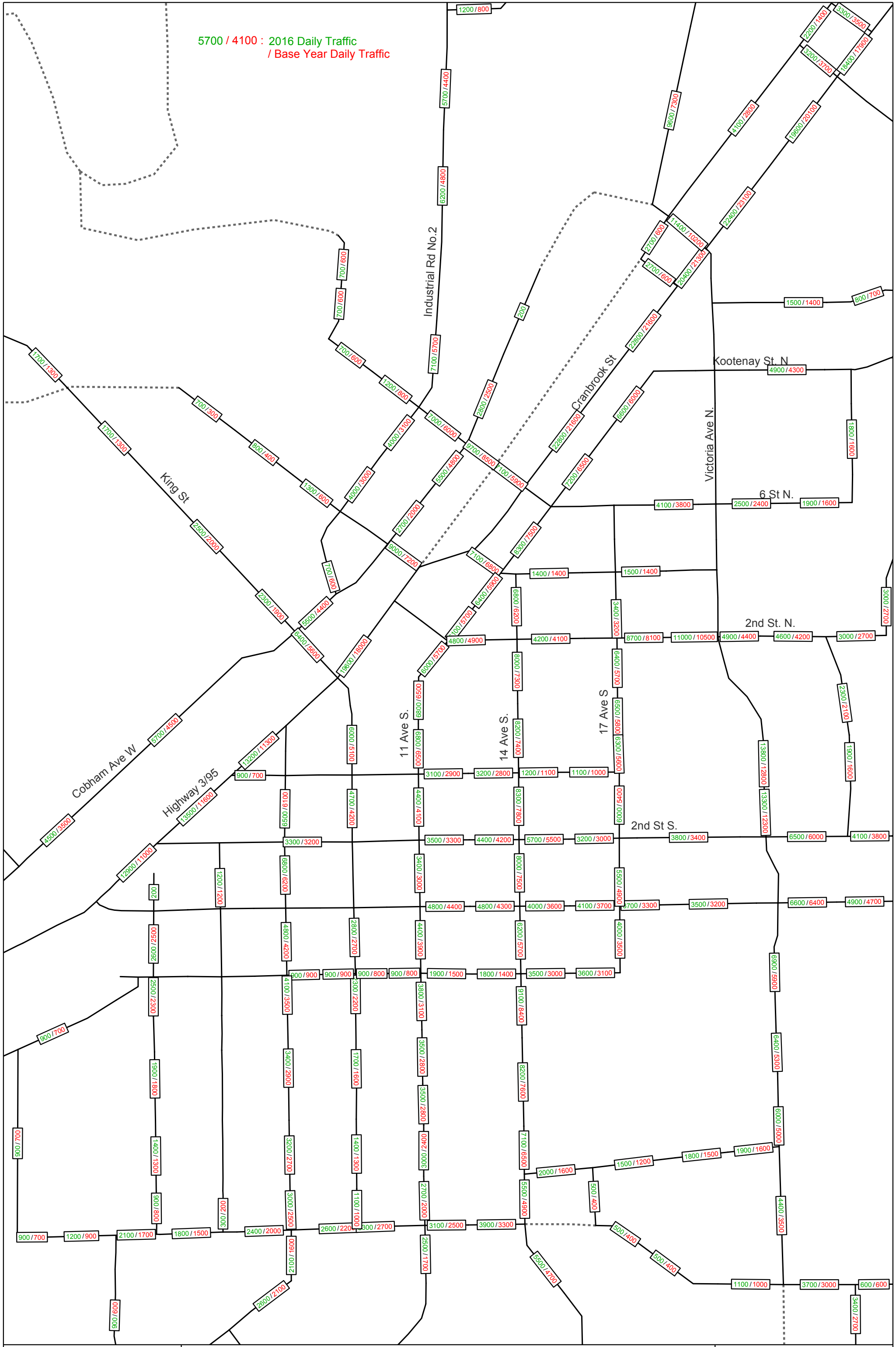
5.5 ROADWAY IMPROVEMENTS

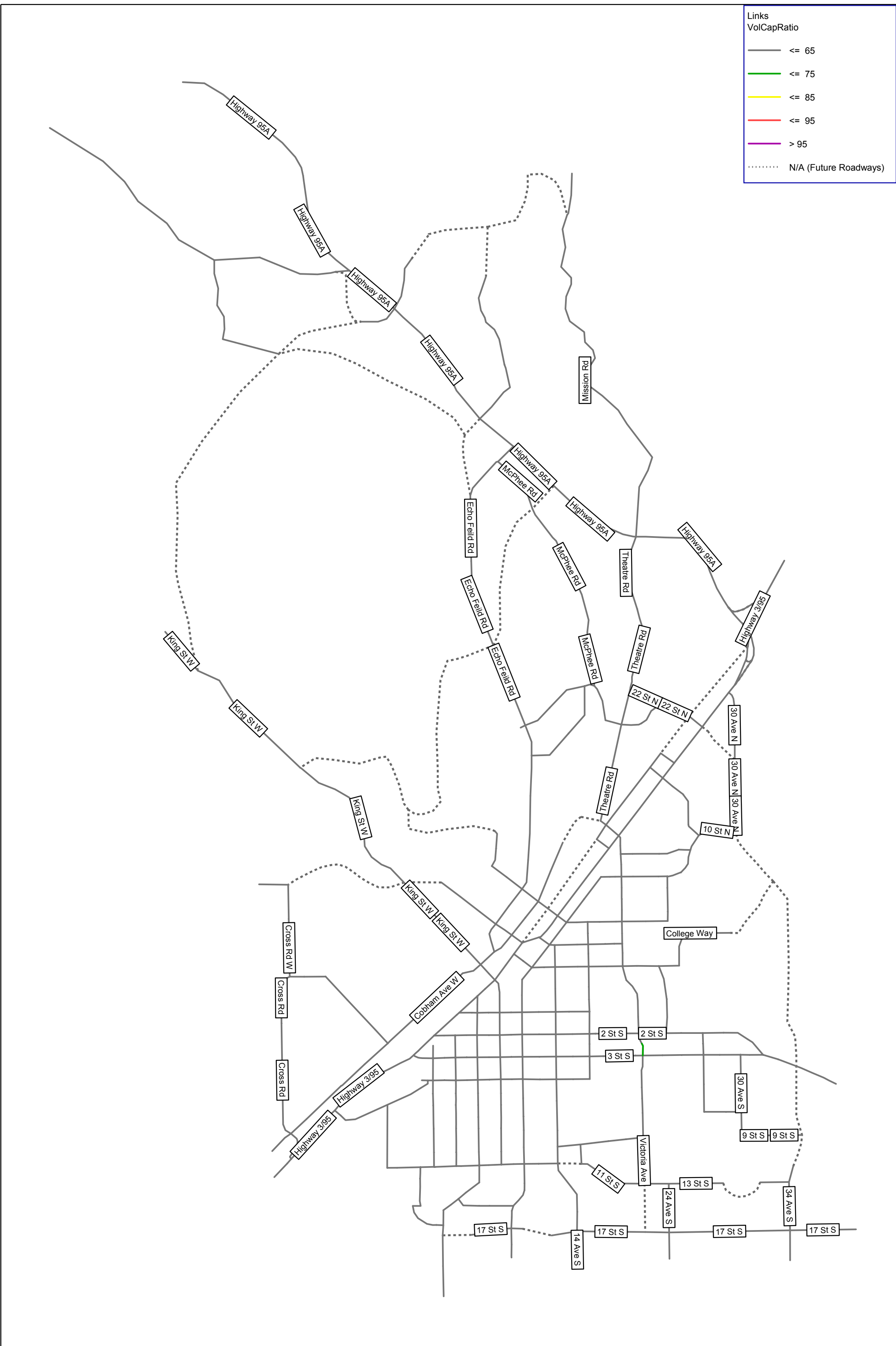
Based on the above capacity analysis, the current roadway network will likely accommodate the land use growth prior to Year 2016. As such, at a planning level no roadway improvements are recommended at this short term horizon. However, a traffic monitoring program is recommended to monitor the current road and traffic operations, and then to determine appropriate timing of roadway maintenance and upgrades.

10600 / 8200 : 2016 Daily Traffic / Base Year Daily Traffic

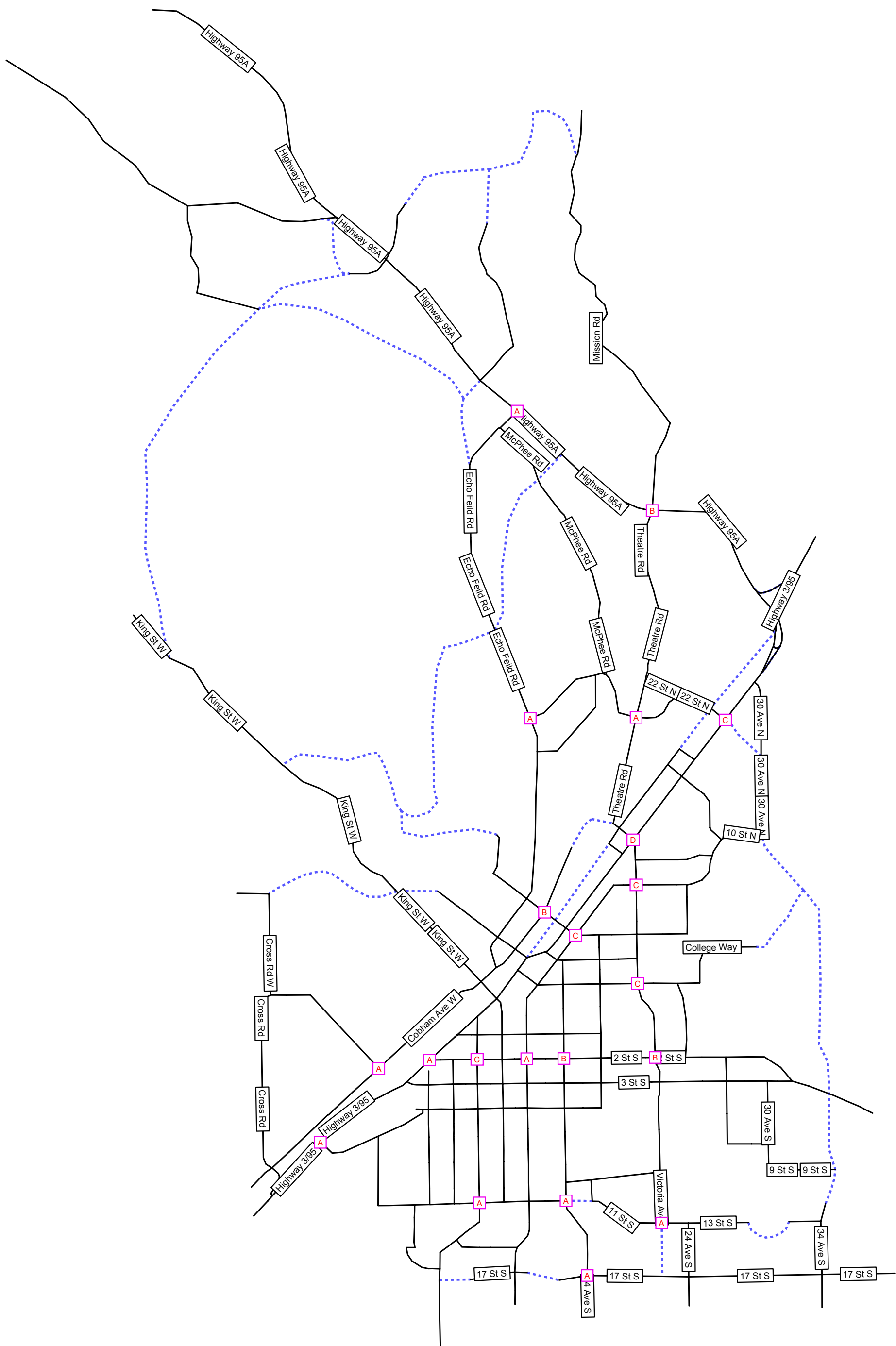


5700 / 4100 : 2016 Daily Traffic
 / Base Year Daily Traffic





Links	
VolCapRatio	
— (Grey)	<= 65
— (Green)	<= 75
— (Yellow)	<= 85
— (Red)	<= 95
— (Purple)	> 95
..... (Dotted)	N/A (Future Roadways)



6.0 Current City Boundary Full Build Out Model (Long Term)

6.1 POPULATION AND EMPLOYMENT

This horizon represents a long term for the City of Cranbrook. Using an annual population growth rate of 1.2%, this horizon will be likely beyond 50 to 60 years.

Based on the City’s Official Community Plan and growth assumptions identified by Stantec Urban Planners and the City, this horizon represents substantial growth in the current city boundary, to the point where population and employment growth is expected to infill all residential and employment lands available for development within the City, including St. Mary Neighborhood and Wildstone comprehensive area at the north.

The projected land use growth plan at the full build-out horizon of the current city boundary is shown in Figure 6.1.

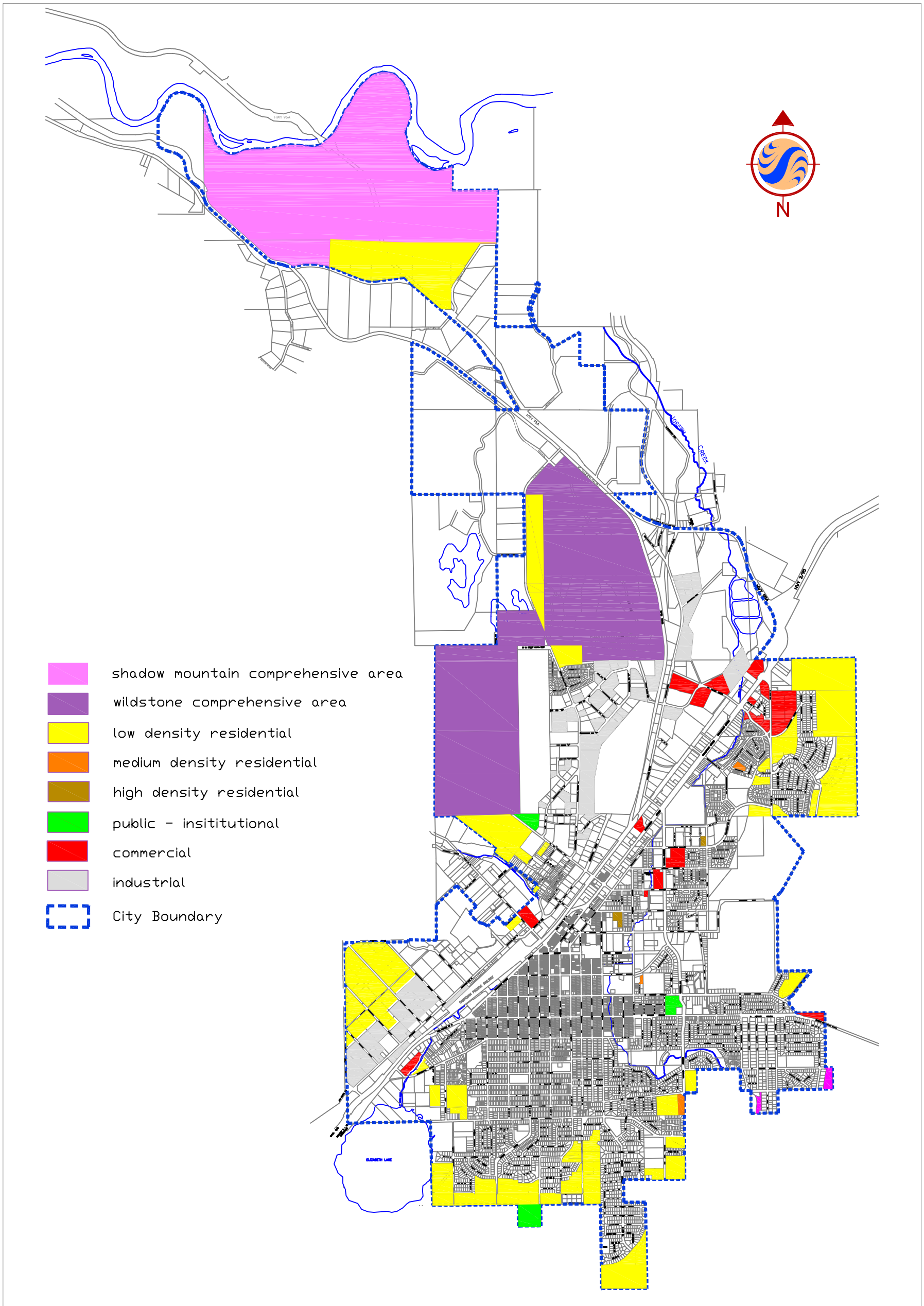
6.1.1 Population

Stantec Urban Planners, in consultation with the City, prepared population growth for this long term horizon at the dissemination area level. The distribution of the population to the individual traffic analysis zones was then estimated based on the future land use map shown in Figure 6.1.

Table 6.1 summarizes the population projections at this long term horizon. A breakdown of population estimates by zone is contained in Appendix D. It is estimated that the population in the City will reach 36,164 people when the available lands within the current city boundary are fully developed. The total population in the study area including the adjacent areas would be 37,162 by then.

Table 6.1
Current City Boundary Full Build Out Horizon Population and Employment

Jurisdiction	Population	Non-home Based Employment Positions	Employment / Population Ratio
City of Cranbrook	36,164	18,502	0.51
Outside the City	998	168	0.17
Total Study Area	37,162	18,670	0.50



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TRANSPORTATION PLANNING

Figure No.
6.1

Title
Land Use Growth
- Current City Full Build Out Horizon

April 2009
1127 20147

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6.1.2 Employment

Estimates of future employment positions were based on the assumption that employment / population ratios remain at a similar level to current conditions. As such, the long term horizon will include approximately 8,918 additional employment positions within the study area.

Based on the employment densities illustrated in Table 4.1 and future land use plan in Figure 6.1, the employment positions by zone at this horizon were estimated for the two categories: retail, and non-retail jobs.

Table 6.1 above includes the employment position estimates used for the long term horizon. In total, there are 18,670 non-home based employment positions in the study area, among which 18,502 positions are located in the current city boundary.

The breakdown of employment positions by type and by zone is included in Appendix D.

6.1.3 College Students

The population at this long term horizon was projected to be almost double of the base year population. Therefore, the number of students attending the Cranbrook Main Campus is assumed also to double, to about 2,000 for the long term horizon.

6.2 EXTERNAL TRIPS

Since this long term horizon is quite far away, using the annual growth rate of 3% for the whole growth period may be too conservative. Recognizing the population will almost double the base year, a total of 110% traffic increase is assumed for this horizon (i.e. 2% annual growth rate used for 55 years).

6.3 TRAVEL DEMAND FORECASTING AND CAPACITY ANALYSIS

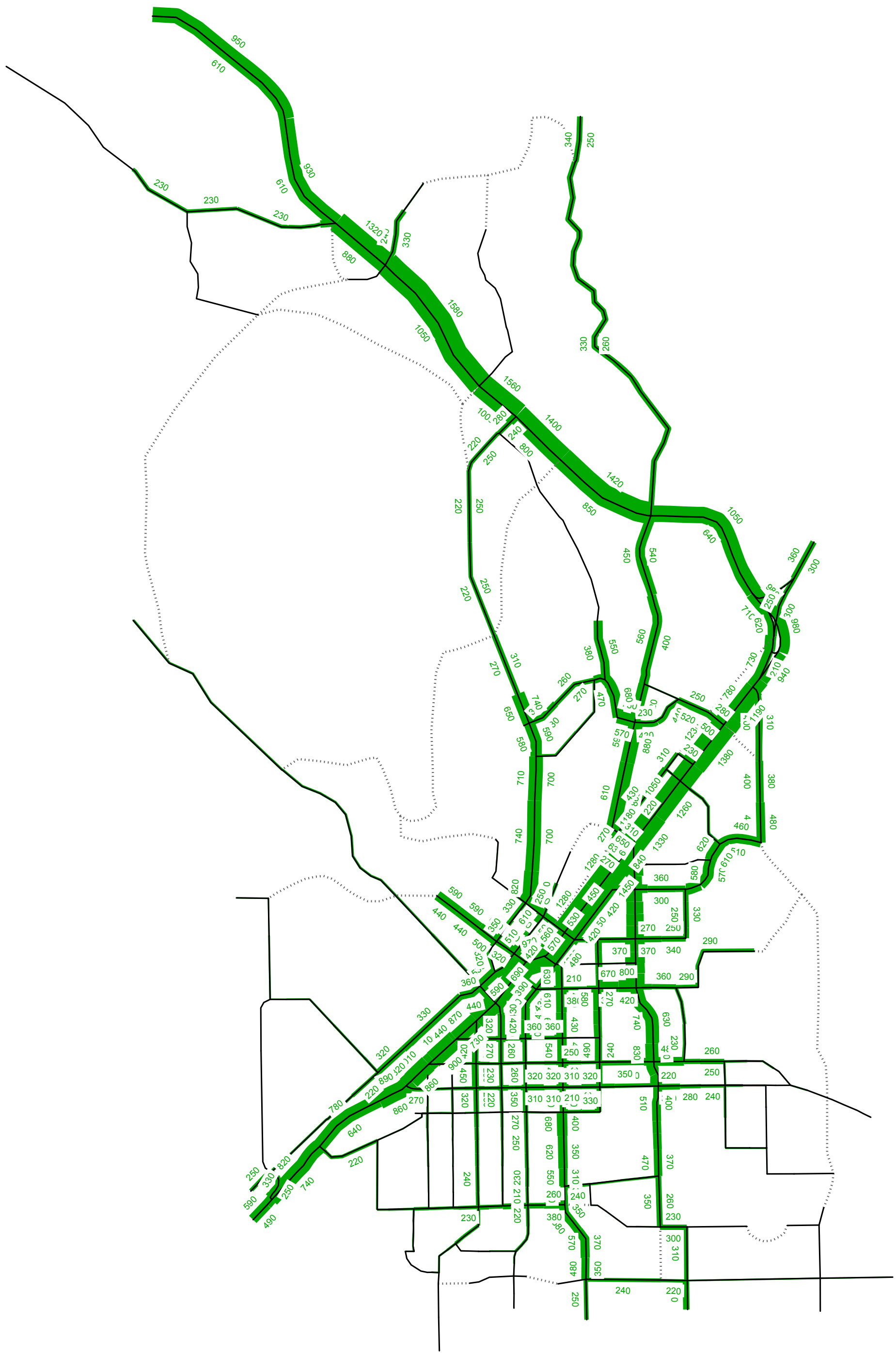
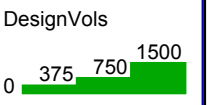
This section outlines traffic volume projections for this long term horizon. In order to illustrate roadway capacity constraints at this horizon, the base year road network was loaded with traffic projected from the full build out of current city land uses.

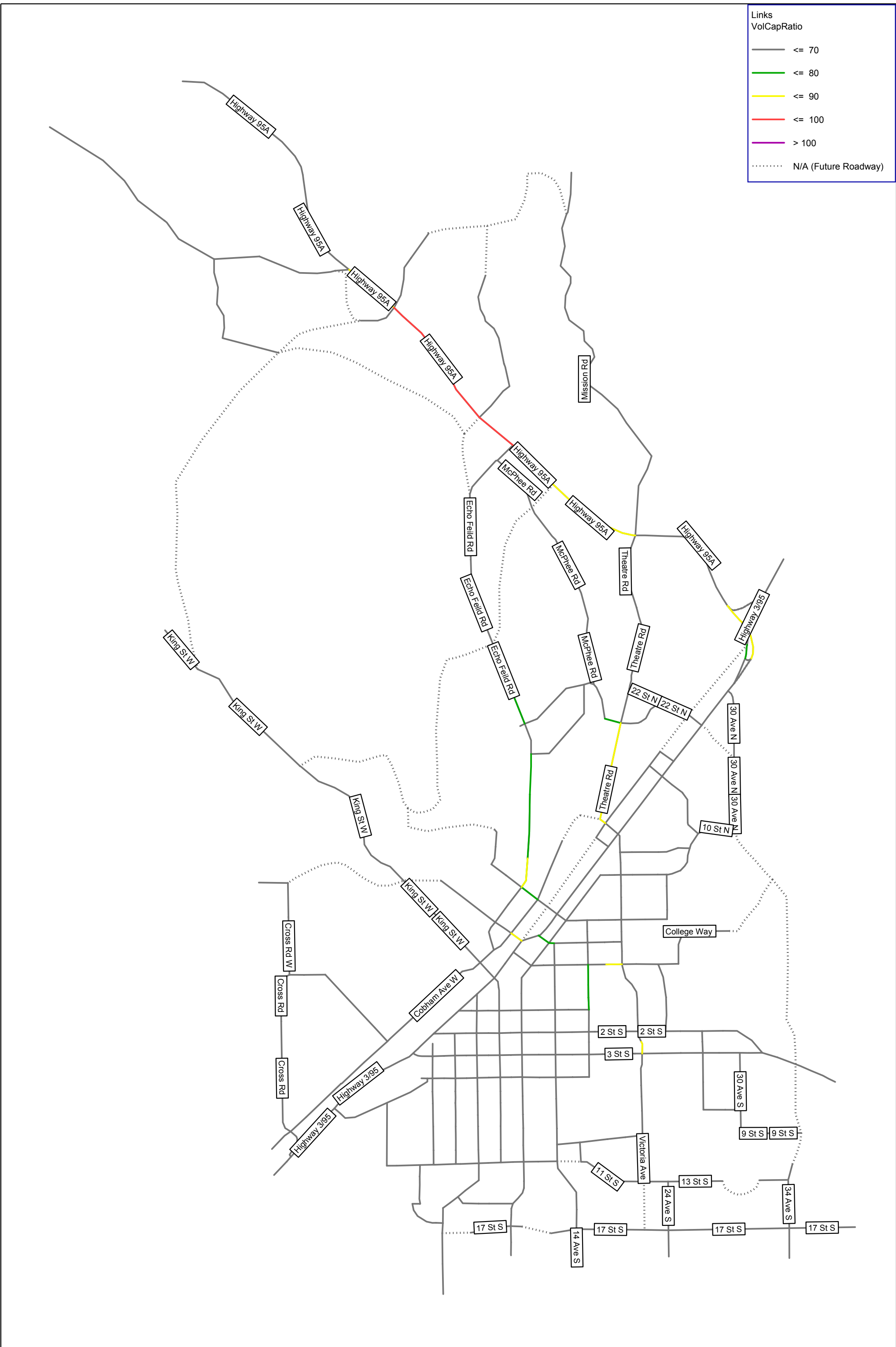
6.3.1 PM Peak Hour Link Volumes and Capacity Analysis _ Base Year Road Network

After loading the projected population and employment positions upon the current roadway network, the VISUM model projects corresponding PM Peak hour traffic volumes.

To minimize calibration error impacts on model forecasts, the model volume projections were calculated by adding the difference between this long term model volumes and Base Year model volumes to ground traffic counts (where applicable).

Figure 6.2 shows the projected peak hour traffic in the full build out of the current city boundary. Figure 6.3 shows the link V/C ratios in the study area. These figures indicate that a number of





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roadways will handle high traffic. Without improvement, these roadways will become very congested (shown in yellow or red colors in Figure 6.3). Specifically,

- ❖ Highway 95A between Wycliffe Park Road and Mission Road, as well as the Highway 95A ramp to Kimberley at Fort Steel Interchange.
- ❖ Theatre Road north of Cranbrook Street N
- ❖ Industrial Road No. 2 northwest of 6th Street N
- ❖ 3rd Street N between Slater Road and Cranbrook Street N
- ❖ 2nd Street N just west of Victoria Avenue N
- ❖ Victoria Avenue S just north of 3rd Street S

All the above road segments have projected V/C ratios exceeding 0.80 at this long term horizon. Roadway improvements will be required to mitigate the congestion issues.

6.3.2 PM Peak Hour Link Volumes and Capacity Analysis _ Recommended Road Network

In order to explore an ideal future roadway network, the Major Road Network Plan (shown as Schedule H in the City's Official Community Plan, and also contained in Appendix E) was first incorporated into the VISUM model. Thereafter iterative model operations and fine-tuning roadway improvements were conducted until all the roadways and intersections meet the standards shown in Table 4.7, and a maximum capacity of 10,000 veh/day assumed for a two-lane roadway in Cranbrook.

A recommended roadway network including signalized intersections is thereafter developed and shown in Figure 6.4.

PM Peak Hour Link Volumes

After loading the projected population and employment positions upon the recommended roadway network, the VISUM model projects corresponding PM Peak hour traffic volumes.

Similarly the model volume projections were calculated by adding the difference between the long term model volumes and the base year model volumes to ground traffic counts (where applicable), to minimize calibration error impacts on model forecasts.

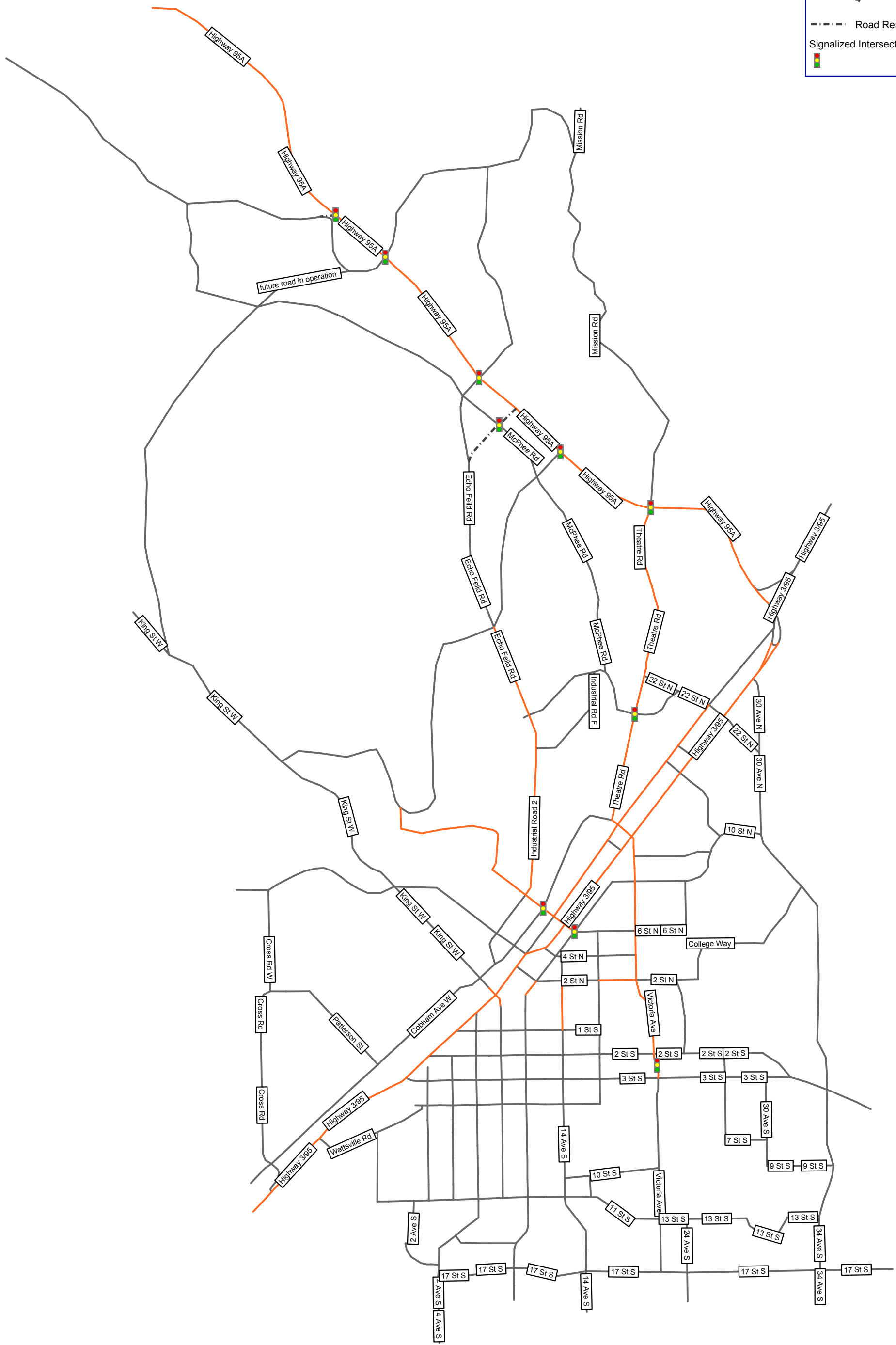
Figures 6.5(a) and 6.5(b) show the projected peak hour traffic at this horizon for the whole study area and city centre, respectively. As a comparison, the base year peak hour volumes are shown in the figures in red beside the projected traffic.

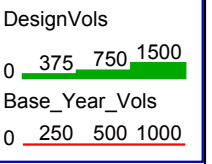
Link
NumberLanes

— 2
— 4

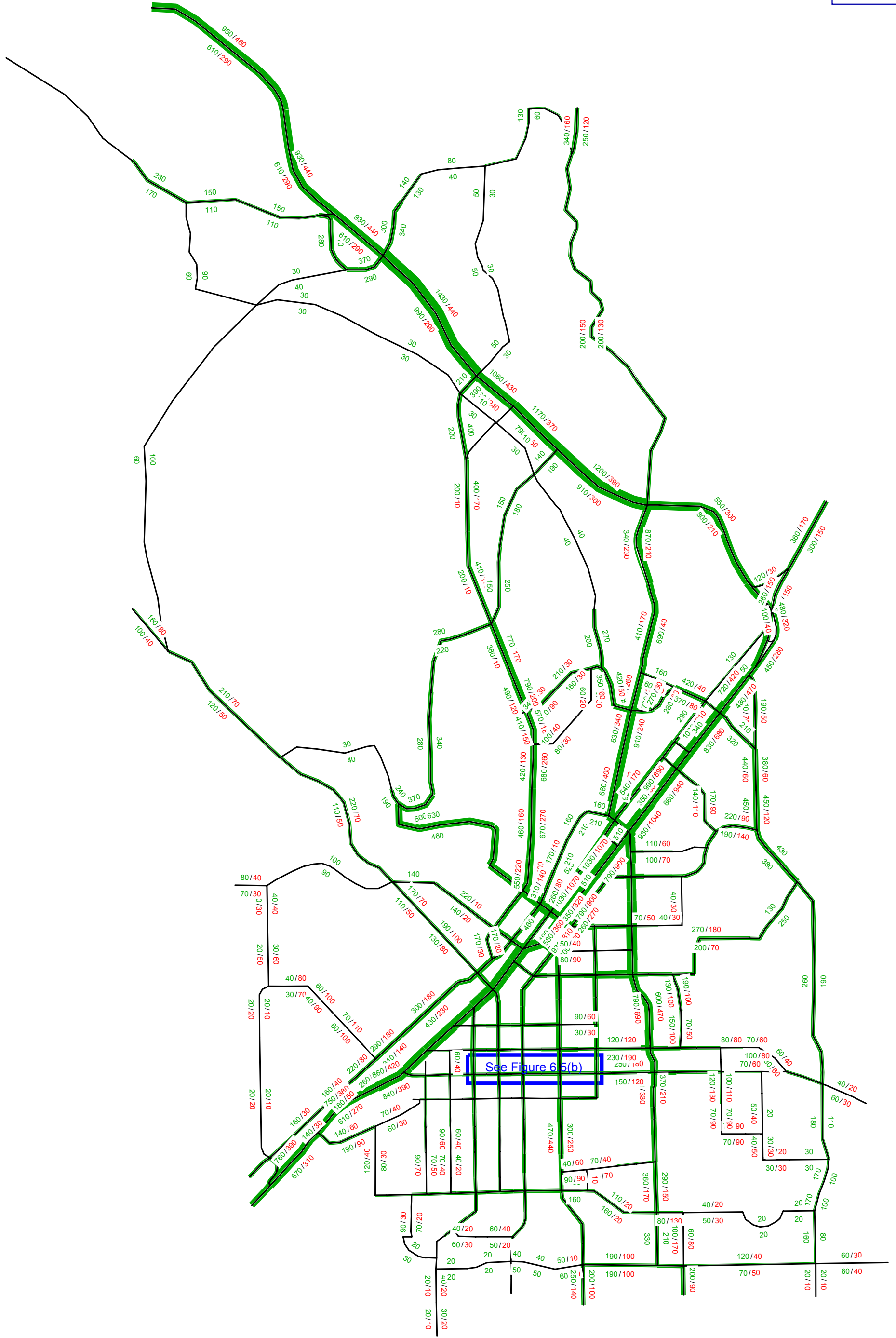
--- Road Removed

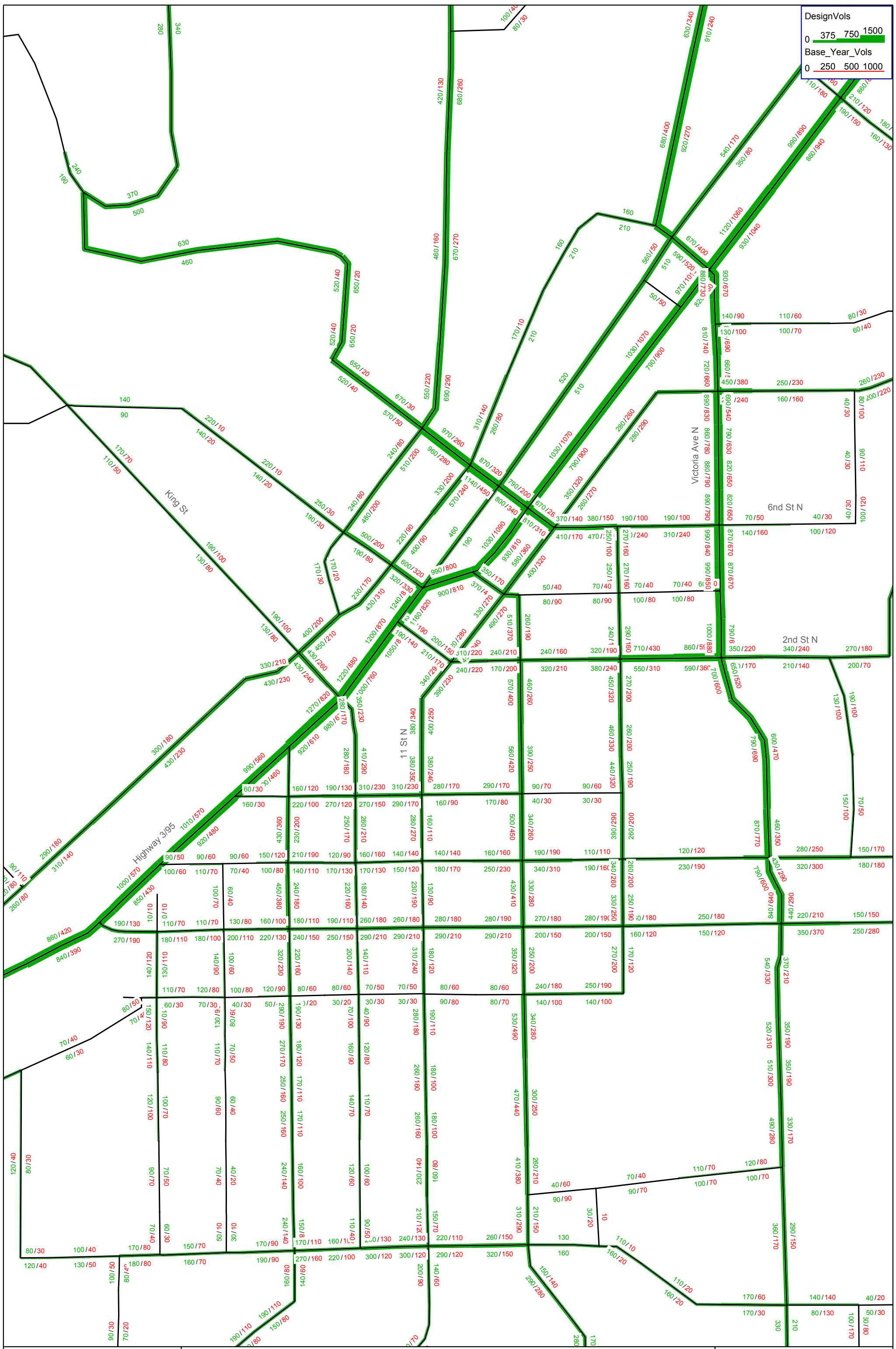
Signalized Intersection





950 / 460 : City Full Build Out Traffic / Base Year Traffic





DesignVols
 0 375 750 1500
 Base_Year_Vols
 0 250 500 1000

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Daily Link Volumes

Using the same scaling factor of 11 discussed in Section 5.3.2, the daily volumes at this long-term horizon were projected and shown in Figures 6.6(a) and 6.6(b) for the whole study area and city center, respectively. As a comparison, the base year daily traffic is also shown in these figures.

With the proposed roadway improvements illustrated in Figure 6.4, Highway 3/95 will still handle the major traffic in the City with the daily volumes ranging from 11,000 to 26,600 veh/day. Another major road, Victoria Avenue will attract daily traffic up to 20,000 veh/day.

Roadway Capacity Analysis

❖ Link Capacity Analysis

Figure 6.7 illustrates the link V/C ratios at this long term horizon. It indicates all the roadways will operate under acceptable level of service, with the highest V/C ratio of 0.74 at Highway 3/95 into Cranbrook at the Fort Steel Interchange.

❖ Intersection Capacity Analysis

Using the Intersection Capacity Analysis (ICA) methodology, the LOS at the major intersections was calculated and is shown in Figure 6.8. With appropriate intersection treatments (e.g. adding turning bays and/or installing traffic signals), all the major intersections will operate acceptably with LOS of "E" or better.

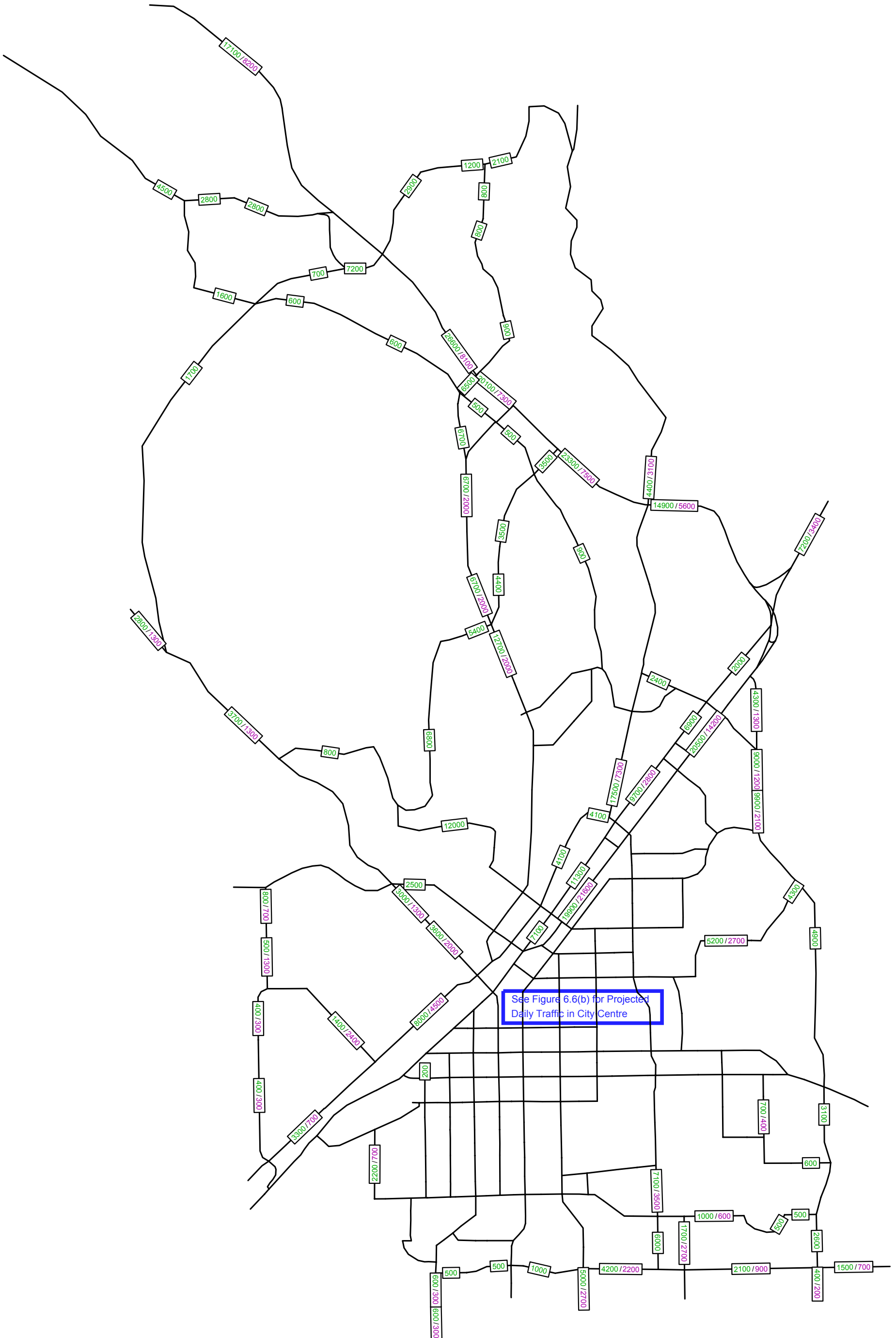
6.4 ROADWAY RECOMMENDED IMPROVEMENTS

The recommended roadway plan for this long term horizon should be developed in a staged manner as traffic volumes and levels of congestion warrant the individual improvement measures. According to the work scope of this project, the following only summarizes the recommended roadway improvements prior to the full build out of current city boundary.

Figure 6.9 illustrates the recommended improvements in the City to accommodate the projected traffic volumes prior to the long term horizon. Table 6.2 summarizes the specific recommended improvements. Please note the number in the figure and the following table is for index only and not for priority sequence.

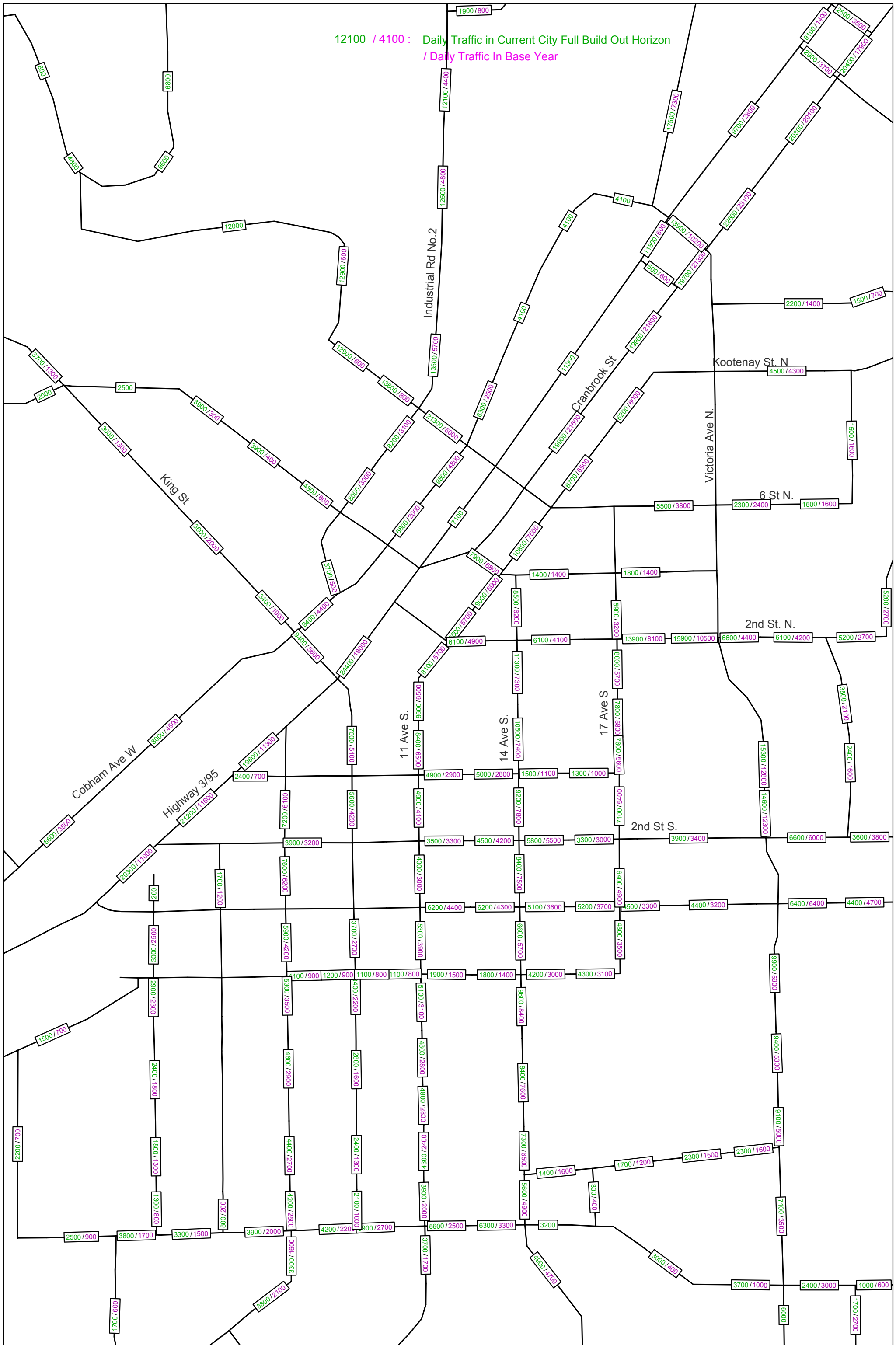
The approximate order of magnitude cost for each improvement is also included in the table. To develop the cost estimates for the recommended roadway network, unit prices per type of improvement were developed based on our previous projects in Okanagan area in BC. These costs include engineering and contingency, but do not include any allowance for major utility works, property acquisition or environmental measures to protected watercourses.

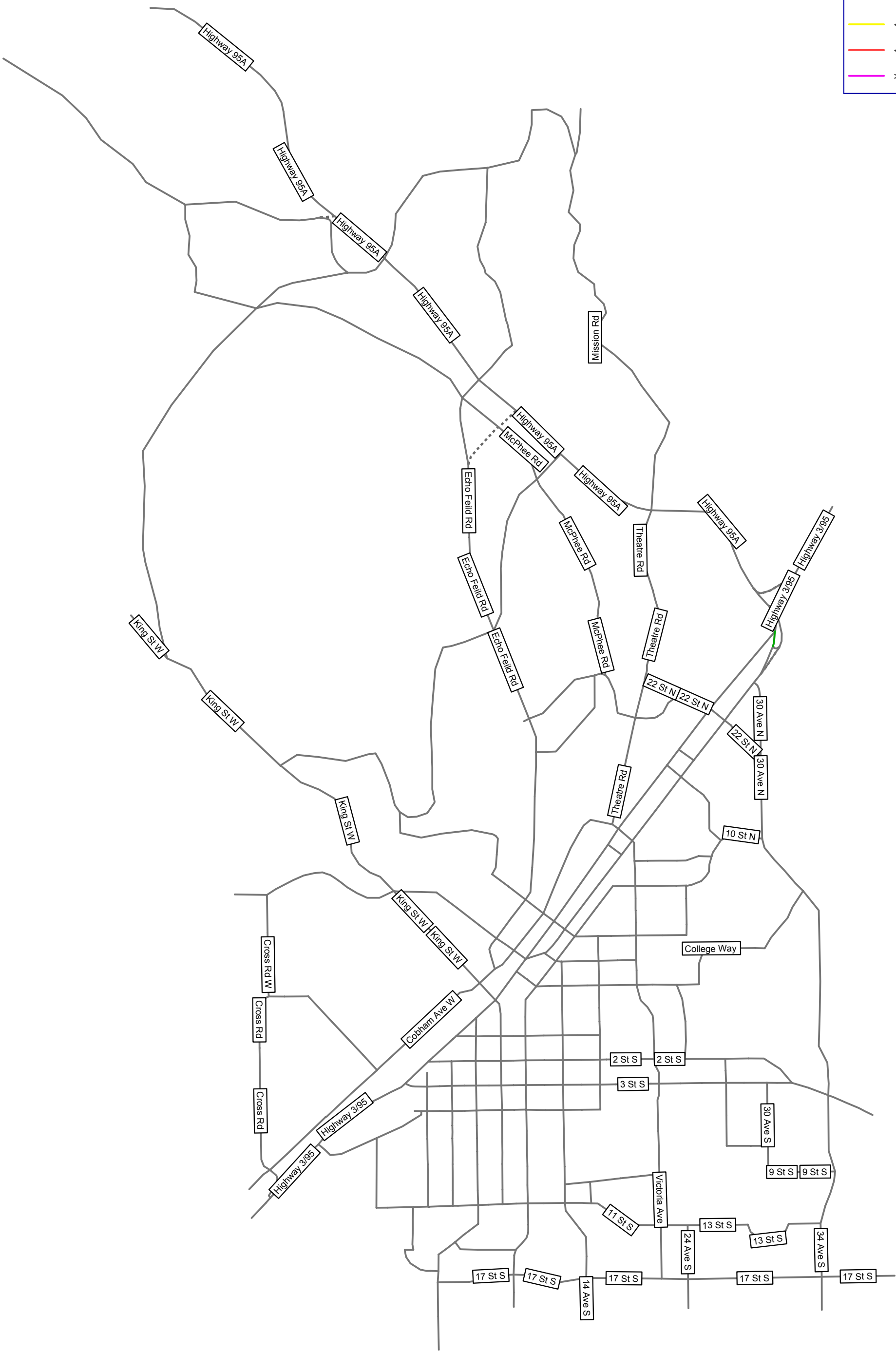
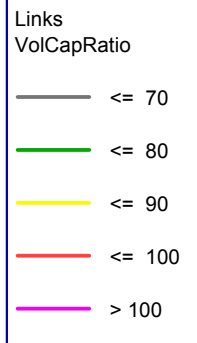
17100 / 8200 : Daily Traffic in Current City Full Build Out Horizon / Daily Traffic In Base Year

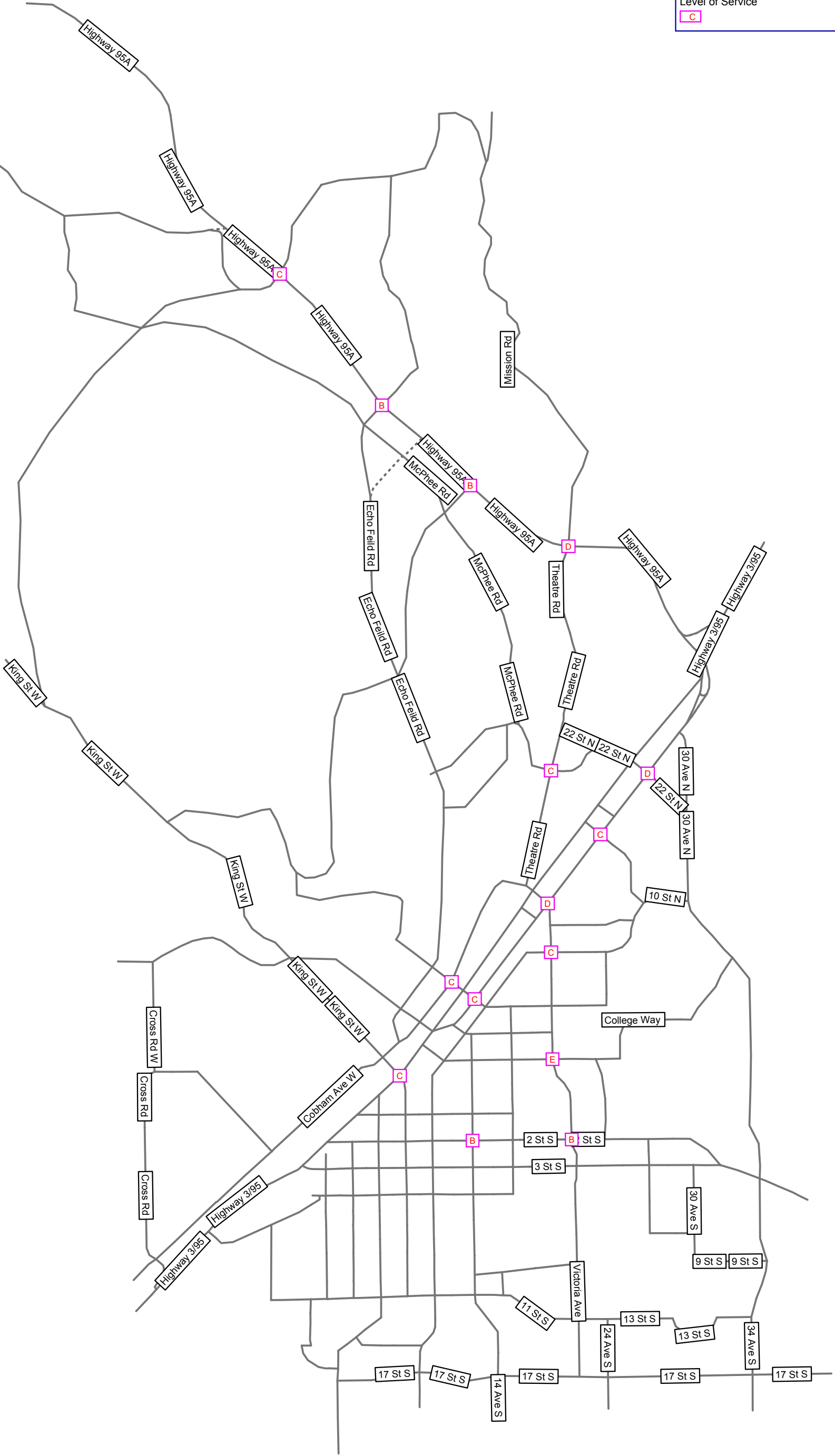


See Figure 6.6(b) for Projected Daily Traffic in City Centre

12100 / 4100 : Daily Traffic in Current City Full Build Out Horizon
 / Daily Traffic In Base Year

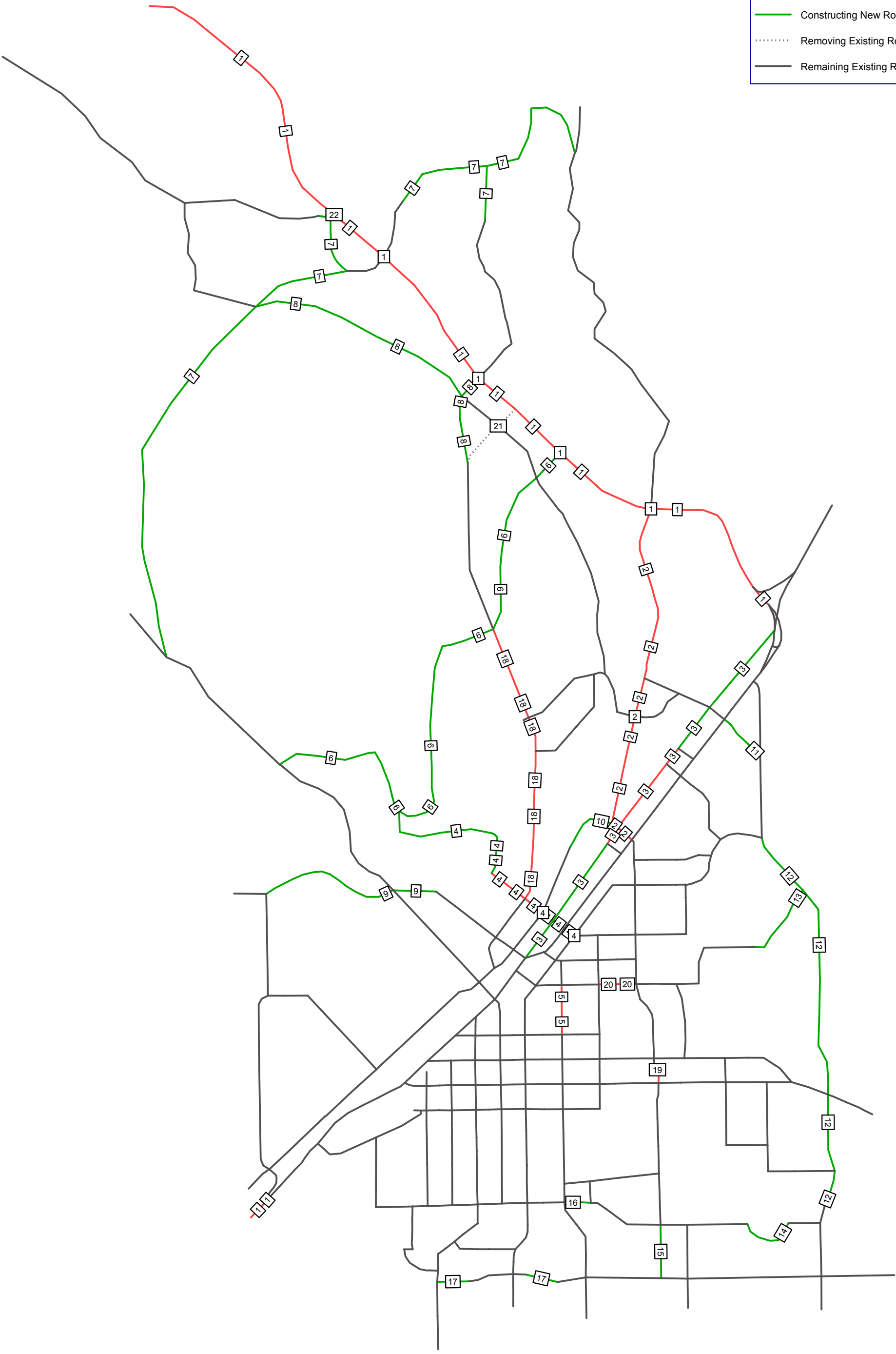






Roadway Improvements

- Twinning
- Constructing New Roads
- ⋯ Removing Existing Roads
- Remaining Existing Roads



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Table 6.2
Roadway Recommended Improvements (Current City Full Build Out Horizon)

Recommended Improvement	Unit Price (\$2008)	Quantity	Approx. Cost (\$2008)
1. Twin Highway 3/95 north of Fort Steel Interchange and south of Jim Smith Lake Road within the City Install traffic signals between Theatre Road/Mission Road and Mountain View Road/Parnoby Road	\$ 3,800 \$ 200,000	7,650 m 4	\$ 29.07 M \$ 0.8 M
2. Upgrade Theatre Road to be 4-lane undivided roadway from Cranbrook Street to Highway 3/95 Install a traffic signal at MCPhee Road	\$ 2,700 \$ 200,000	2,850 m 1	\$ 7.70 M \$ 0.20 M
3. Upgrade Van Horne Street to be 4-lane undivided roadway from 12 Street N to north of Willowbrook Drive Construct 4-lane undivided roadway for Van Horne Street from north of Willowbrook Drive to 22 Street N, and from 6 Street NW to 22 Street N Construct 2-lane undivided roadway for Van Horne Street from 22 Street N to Highway 3/95 Ramp, and from 3 Street S to 6 Street NW	\$ 2,700 \$ 2,900 \$ 1,900	840 m 1,290 m 1,200 m	\$ 2.27 M \$ 3.74 M \$ 2.28 M
4. Upgrade 6 Street NW to be 4-lane undivided roadway from Kootenay Street N to north of Industrial Road No.3 Construct 4-lane undivided roadway for 6 Street NW north of Industrial Road No.3 Install traffic signals at Industrial Road No.1 and Kootenay Street N with 6 Street NW	\$ 2,700 \$ 2,900 \$ 200,000	840 m 1,290 m 2	\$ 2.27 M \$ 3.74 M \$ 0.40 M
5. Upgrade 14 Avenue S. to be 4-lane undivided roadway from 2 nd Street N. to 1 Street S	\$ 2,700	400 m	\$ 1.08 M
6. Construct a new 2-lane undivided roadway north of 6 Street NW from King Street W. to Highway 3/95	\$ 1,900	5,020 m	\$ 9.54 M
7. Construct/extend existing 2-lane undivided roadway of Mountain View Road/Parnoby Road from King Street W to Mission Road	\$ 1,900	7,140 m	\$ 13.57 M

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8. Construct/extend existing 2-lane undivided roadway of Echo Field Road to connect Mountain View Road and Kennedy Road at Highway 3/95	\$ 1,900	2,660 m	\$ 5.05 M
9. Construct/extend existing 2-lane undivided roadway of 3 Street NW to connect Cross Road NW	\$ 1,900	1,470 m	\$ 2.79 M
10. Construct/extend existing 2-lane undivided roadway of Industrial Road No.1 to connect Theatre Road	\$ 1,900	470 m	\$ 0.89 M
11. Construct/extend existing 2-lane undivided roadway of 22 Street N to connect 30 Avenue N	\$ 1,900	420 m	\$ 0.80 M
12. Construct/extend existing 2-lane undivided roadway of 34 Avenue S to connect 30 Avenue N	\$ 1,900	3,200 m	\$ 6.08 M
13. Construct/extend existing 2-lane undivided roadway of College Way to connect 30 Avenue N	\$ 1,900	640 m	\$ 1.22 M
14. Construct/extend existing 2-lane undivided roadway of 13 Street S between 24 Avenue S and 34 Avenue S	\$ 1,900	450 m	\$ 0.86 M
15. Construct/extend existing 2-lane undivided roadway of Victoria Avenue S to connect to 17 Street S	\$ 1,900	430 m	\$ 0.82 M
16. Construct/extend existing 2-lane undivided roadway of 11 Street S between 14 Avenue S and 16 Avenue S	\$ 1,900	210 m	\$ 0.40 M
17. Construct/extend existing 2-lane undivided roadway of 17 Street S east of 4 Avenue S and west of 14 Ave S	\$ 1,900	520 m	\$ 0.99 M
18. Upgrade Industrial Road No.2 to be 4-lane undivided roadway from 6 St north to a new road (Item #6)	\$ 2,700	2,300 m	\$ 6.21 M
19. Upgrade Victoria Avenue S to be 4-lane divided roadway north of 3 Street S	\$ 3,000	110 m	\$ 0.33 M
20. Upgrade 2 Street N to be 4-lane undivided roadway from Victoria Avenue N to 17 Avenue N	\$ 2,700	300 m	\$ 0.81 M
21. Remove the connection of Echo Field Road with Highway 3/95	\$ 200	130 m	\$ 0.03 M
22. Remove the connection of Mycliffe Park Road with Highway 3/95	\$ 200	600 m	\$ 0.12 M

Total

\$104.04 M

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6.5 FUNDING FOR OTHER TRANSPORTATION SYSTEMS

The above section (Section 6.4) discusses the recommended roadway improvements and corresponding cost to accommodate auto vehicles only at the full build out of the current city boundary horizon. Funding for other transportation systems including transit, bicycle, pedestrian, rail and air transportation systems should be explored and allocated.

7.0 Beyond Current City Boundary Full Build Out (Longer Term)

Prior to a referendum in November 2009, the City of Cranbrook was considering expansion for future development beyond the full build out of the existing city boundary. As one potential option, the area east of the city boundary had been considered by the City and discussed with the public. This section, at a very general level, addresses a potential land use plan proposed during the course of this study and its traffic impacts.

7.1 LAND USE AND ROADWAY NETWORK CONCEPT PLAN

Due to the lack of information forthcoming from the expansion area landowners and urban planners/consultants at the time, Stantec was requested to prepare a very high and general level forecast of the potential development for the eastern boundary expansion area, based on Cranbrook Municipal Boundary Extension Application Report prepared by the City in December 2007.

The conceptual urban framework is included in Appendix F. The planned new expansion area would be mainly residential land use plus small amount of commercial, institutional, business office and resort/golf land uses.

A total of three external accesses would have been provided for the east expansion area: two transportation corridors connecting to the existing city plus one access to Highway 3/93 in the east.

7.2 TRAFFIC IMPACT DISCUSSION

Based on the conceptual urban framework for the east expansion area, a high- level traffic review was conducted. The key findings are summarized below:

- ❖ The significant residential development would have generated major population growth (as compared with the existing city). However, due to the lack of employment lands proposed in the east expansion area, a large portion of the population would have to work outside of the Area, including the existing city and adjacent municipalities. In other words, a large amount of external trips would have been generated by the east expansion area.
- ❖ Since only three external accesses/corridors (two connecting to the existing city plus one connecting to Highway 3/93) were proposed for the east expansion area development, the projected traffic along the two transportation corridors would have been very high, about double of the existing traffic along the Highway 3/95 corridor within the City.
- ❖ Based on the principles of sustainable growth development, the reviewed land use and roadway conceptual plan for the east expansion area may be not a good approach, since less proportional employment development will encourage more and long-journey external trips. The limited external accesses also reduce roadway connectivity and limit traffic mobility.

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For a more sustainable development, the following recommendations could be made relative to any future expansion area:

- ❖ Appropriately plan residential and employment land uses in the expansion area to a similar level of the employment and population proportion in the existing city. More commuting trips staying in the expansion area is preferred.
- ❖ Add more accesses/corridors to the existing city and the adjacent highways to increase roadway connectivity and improve traffic mobility.

Appendix A – Existing Traffic Counts

TRANSTECH DATA SERVICES
 Vehicle Turning Movement Survey
 Without Classification

Major Route: Kootenay Street
Minor Route: 2nd St North
Municipality: Cranbrook
Filename: Kootenay@2ndStNorth.xls
Location #: 11

Date: June 25, 2008
Day-of-week: Wednesday

East/West Route: 2nd St North
Intersection Type: Five approach intersection
Signalized?: No
Weather: Clear and dry

Vehicle Classifications: All Vehicles **This data is for All Vehicles**

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
 start time: 24 hr clock (15 min increments)

Notes: North Approach - southbound vehicles approaching intersection from the north
 15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
 Pedestrians - N indicates pedestrians crossing north approach (east/west)

Comments:

AM Peak Period

Location: Kootenay Street @ 2nd St North
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period	Kootenay Approach A (N)					Kootenay Approach B (S)					2nd St North Approach C (W)					2nd St North Approach D (NE)					12th Ave South Approach E (SE)					Total Volume	Pedestrians						
	A-B	A-C	A-D	A-E	Total	B-A	B-C	B-D	B-E	Total	C-A	C-B	C-D	C-E	Total	D-A	D-B	D-C	D-E	Total	E-A	E-B	E-C	E-D	Total			15-min	Hour	N	S	W	E
07:00	7	1	1	0	9	16	1	1	0	18	0	2	6	1	9	2	1	2	0	5	0	0	0	0	41		0	0	0	1	0		
07:15	5	2	3	0	10	14	0	2	1	17	1	2	11	0	14	0	1	12	0	13	0	0	0	0	54		0	0	1	3	4		
07:30	10	4	2	0	16	15	1	5	3	24	2	3	9	0	14	2	6	11	0	19	0	0	0	1	74		0	0	0	1	1		
07:45	21	5	2	0	28	18	3	5	2	28	1	3	15	0	19	0	8	12	2	22	0	0	0	0	97	266	0	1	1	0	0		
08:00	19	5	4	0	28	15	2	5	6	28	0	4	18	1	23	7	14	23	0	44	0	0	0	0	123	348	*	1	1	2	1	0	
08:15	37	4	7	0	48	23	3	8	2	36	2	5	16	2	25	7	16	22	3	48	0	0	0	1	158	452	*	0	1	1	1	2	
08:30	25	2	7	0	34	25	9	10	2	46	0	6	25	0	31	9	17	10	1	37	0	0	0	0	148	526	*	0	1	2	1	1	
08:45	19	4	10	1	34	26	4	10	3	43	2	6	27	9	44	5	18	16	0	39	0	0	0	0	160	589	+	1	3	0	2	0	
n/a					0					0					0					0				0									
n/a					0					0					0					0				0									
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Total	143	27	36	1	207	152	23	46	19	240	8	31	127	13	179	32	81	108	6	227	0	0	0	2	2	855		2	7	7	10	8	
Avg Hr	72	14	18	1	104	76	12	23	10	120	4	16	64	7	90	16	41	54	3	114	0	0	0	1	1	428		1	4	4	5	4	
Peak hour of the intersection																																	
PK Hr	100	15	28	1	144	89	18	33	13	153	4	21	86	12	123	28	65	71	4	168	0	0	0	1	1	589	*	2	6	5	5	3	
15x4	148	20	40	4	192	104	36	40	24	184	8	24	108	36	176	36	72	92	12	192	0	0	0	4	4	640	+	4	12	8	8	8	
PHF	0.68	0.75	0.70	0.25	0.75	0.86	0.50	0.83	0.54	0.83	0.50	0.88	0.80	0.33	0.70	0.78	0.90	0.77	0.33	0.88	n/a	n/a	n/a	0.25	0.25	0.92		0.50	0.50	0.63	0.63	0.38	

** Calculated peak hour occurs in first or last hour of shift. Calculated peak hour may be invalid. **

Noon Peak Period

Location: Kootenay Street @ 2nd St North
 Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period	Kootenay					Kootenay					2nd St North					2nd St North					12th Ave South					Total Volume		Pedestrians																														
	Approach A (N)					Approach B (S)					Approach C (W)					Approach D (NE)					Approach E (SE)					15-min	Hour	N	S	W	E																											
	A-B	A-C	A-D	A-E	Total	B-A	B-C	B-D	B-E	Total	C-A	C-B	C-D	C-E	Total	D-A	D-B	D-C	D-E	Total	E-A	E-B	E-C	E-D	Total																																	
Begins																																																										
n/a					0					0					0					0					0					0					0																							
n/a					0					0					0					0					0					0					0																							
n/a					0					0					0					0					0					0					0																							
n/a					0					0					0					0					0					0					0																							
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n/a					0					0					0					0					0					0					0																							
n/a					0					0					0					0					0					0					0																							
n/a					0					0					0					0					0					0					0																							
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																							
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a																							

Peak hour of the intersection

PK Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

** Calculated peak hour occurs in first or last hour of shift. Calculated peak hour may be invalid. **

PM Peak Period

Location: Kootenay Street @ 2nd St North
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period	Kootenay Approach A (N)				Total	Kootenay Approach B (S)				Total	2nd St North Approach C (W)				Total	2nd St North Approach D (NE)				Total	12th Ave South Approach E (SE)				Total	15-min Hour	Pedestrians	N	S	W	E				
	A-B	A-C	A-D	A-E		B-A	B-C	B-D	B-E		C-A	C-B	C-D	C-E		D-A	D-B	D-C	D-E		E-A	E-B	E-C	E-D											
16:00	57	4	7	0	68	34	8	12	3	57	7	2	36	2	47	14	15	19	0	48	0	0	0	0	0	220		2	3	2	4	7			
16:15	46	8	8	0	62	38	6	7	8	59	5	3	30	3	41	13	20	22	0	55	0	0	0	0	217	*	1	0	1	2	2				
16:30	54	10	12	1	77	50	6	6	5	67	8	6	40	1	55	17	18	23	1	59	0	0	0	0	258	+	2	1	2	2	2				
16:45	52	6	17	0	75	30	8	12	3	53	5	3	28	0	36	15	20	20	0	55	0	0	0	0	219	914	*	2	0	1	3	0			
17:00	44	11	7	0	62	46	3	15	2	66	4	5	37	1	47	9	23	22	0	54	0	0	0	0	229	923	*	4	2	1	3	2			
17:15	44	7	12	0	63	39	3	9	2	53	3	4	28	2	37	10	16	19	0	45	0	0	0	0	198	904		0	3	0	2	1			
17:30	33	5	11	0	49	31	3	6	5	45	4	3	26	3	36	9	5	13	0	27	0	0	0	0	157	803		5	2	2	4	0			
17:45	29	12	8	0	49	22	1	4	1	28	3	2	22	2	29	7	12	19	1	39	0	0	0	1	1	146	730		1	0	1	2	1		
n/a																																			
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n/a																																			
n/a																																			
Total	359	63	82	1	505	290	38	71	29	428	39	28	247	14	328	94	129	157	2	382	0	0	0	1	1	1644		17	11	10	22	15			
Avg Hr	180	32	41	1	253	145	19	36	15	214	20	14	124	7	164	47	65	79	1	191	0	0	0	1	1	822		9	6	5	11	8			
Peak hour of the intersection																																			
PK Hr	196	35	44	1	276	164	23	40	18	245	22	17	135	5	179	54	81	87	1	223	0	0	0	0	0	923	*	9	3	5	10	6			
15x4	216	44	68	4	308	200	32	60	32	268	32	24	160	12	220	68	92	92	4	236	0	0	0	0	0	1032	+	16	8	8	12	8			
PHF	0.91	0.80	0.65	0.25	0.90	0.82	0.72	0.67	0.56	0.91	0.69	0.71	0.84	0.42	0.81	0.79	0.88	0.95	0.25	0.94	n/a	n/a	n/a	n/a	n/a	0.89		0.56	0.38	0.63	0.83	0.75			

Average Hour

Location: Kootenay Street @ 2nd St North
 Date: Wednesday, June 25, 2008

This data is for All Vehicles

Survey	Kootenay					Kootenay					2nd St North					2nd St North					12th Ave South					
	Approach A (N)					Approach B (S)					Approach C (W)					Approach D (NE)					Approach E (SE)					
	A-B	A-C	A-D	A-E	Total	B-A	B-C	B-D	B-E	Total	C-A	C-B	C-D	C-E	Total	D-A	D-B	D-C	D-E	Total	E-A	E-B	E-C	E-D	Total	
Total	502	90	118	2	712	442	61	117	48	668	47	59	374	27	507	126	210	265	8	609	0	0	0	0	3	3
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	126	23	30	1	178	111	15	29	12	167	12	15	94	7	127	32	53	66	2	152	0	0	0	0	1	1

Total Volume	Pedestrians				
	N	S	W	W	E
2499	19	18	17	32	23
4	4	4	4	4	4
625	5	5	4	8	6

AM Period

Total	143	27	36	1	207	152	23	46	19	240	8	31	127	13	179	32	81	108	6	227	0	0	0	0	2	2
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	72	14	18	1	104	76	12	23	10	120	4	16	64	7	90	16	41	54	3	114	0	0	0	0	1	1

855	2	7	7	10	8
2	2	2	2	2	2
428	1	4	4	5	4

Noon Period

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

0	0	0	0	0	0
0	0	0	0	0	0
n/a	n/a	n/a	n/a	n/a	n/a

PM Period

Total	359	63	82	1	505	290	38	71	29	428	39	28	247	14	328	94	129	157	2	382	0	0	0	0	1	1
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	180	32	41	1	253	145	19	36	15	214	20	14	124	7	164	47	65	79	1	191	0	0	0	0	1	1

1644	17	11	10	22	15
2	2	2	2	2	2
822	9	6	5	11	8

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Kootenay Street
Minor Route: 6th St North
Municipality: Cranbrook
Filename: Kootenay@6thStNorth.xls
Location #: 12

Date: June 26, 2008
Day-of-week: Thursday

East/West Route: 6th St North
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles **This data is for All Vehicles**

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments: 7:49 to 7:58 Traffic backed up on all Legs (vehicles passing stopped vehicles and proceeding into the wrong lane) 8:25 to 8:32 Setup construction site on Kootenay NL with flagger. 2 peds almost hit. 4 near-miss accidents. Many 2nd car follow-thrus . Road markings very poor.

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

AM Peak Period

Location: Kootenay Street @ 6th St North
 Date: Thursday, June 26, 2008

This data is for All Vehicles

Time Period	Kootenay NORTH Approach				Kootenay SOUTH Approach				6th St North WEST Approach				6th St North EAST Approach				Total Volume		Pedestrians	Conflict				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min
07:00	0	10	8	18	19	9	1	29	5	6	2	13	1	16	0	17	77		1	0	0	0	58	
07:15	3	9	6	18	20	8	2	30	6	11	10	27	3	20	1	24	99		0	0	0	1	62	
07:30	2	12	12	26	21	14	3	38	11	8	8	27	4	21	3	28	119		0	0	0	0	80	
07:45	2	30	14	46	25	26	1	52	11	11	4	26	2	27	2	31	155	450	1	0	0	1	109	309
08:00	2	22	13	37	21	20	0	41	10	9	17	36	3	20	2	25	139	512	3	0	0	1	88	339
08:15	4	36	20	60	23	29	2	54	14	18	15	47	10	25	2	37	198	611	0	1	0	1	122	399
08:30	5	26	11	42	20	25	5	50	12	14	9	35	6	30	1	37	164	656	0	1	0	0	100	419
08:45	3	29	19	51	28	30	6	64	11	14	14	39	8	19	1	28	182	683	1	1	1	1	112	422
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
Total	21	174	103	298	177	161	20	358	80	91	79	250	37	178	12	227	1133		6	3	1	5		724
Avg Hr	11	87	52	149	89	81	10	179	40	46	40	125	19	89	6	114	567		3	2	1	3		n/a

Peak hour of the intersection

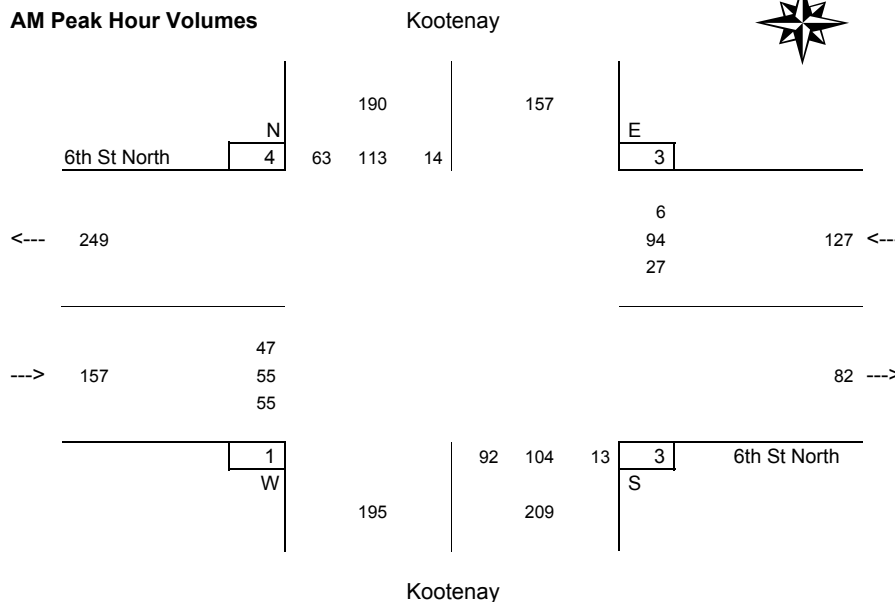
Pk Hr	14	113	63	190	92	104	13	209	47	55	55	157	27	94	6	127	683	*	4	3	1	3	415
15x4	20	144	80	240	112	120	24	256	56	72	68	188	40	120	8	148	792	+	12	4	4	4	520
PHF	0.70	0.78	0.79	0.79	0.82	0.87	0.54	0.82	0.84	0.76	0.81	0.84	0.68	0.78	0.75	0.86	0.86	0.33	0.75	0.25	0.75	0.80	

Peak hour of conflicting volumes for the intersection

Pk Hr	14	113	63	190	92	104	13	209	47	55	55	157	27	94	6	127	683	*	4	3	1	3	415
15x4	20	144	80	240	112	120	24	256	56	72	68	188	40	120	8	148	792	+	12	4	4	4	520
PHF	0.70	0.78	0.79	0.79	0.82	0.87	0.54	0.82	0.84	0.76	0.81	0.84	0.68	0.78	0.75	0.86	0.86	0.33	0.75	0.25	0.75	0.80	

** Peak hour in first or last hour, peak hour may be invalid. **

AM Peak Hour Volumes



Noon Peak Period

Location: Kootenay Street @ 6th St North
Date: Thursday, June 26, 2008

This data is for All Vehicles

Time Period Begins	Kootenay NORTH Approach				Kootenay SOUTH Approach				6th St North WEST Approach				6th St North EAST Approach				Total Volume		% Sat	Pedestrians				Conflict	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

0	0	0	0	0
n/a	n/a	n/a	n/a	n/a

0
n/a

Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

0	0	0	0	0
0	0	0	0	0
n/a	n/a	n/a	n/a	n/a

0
0
n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

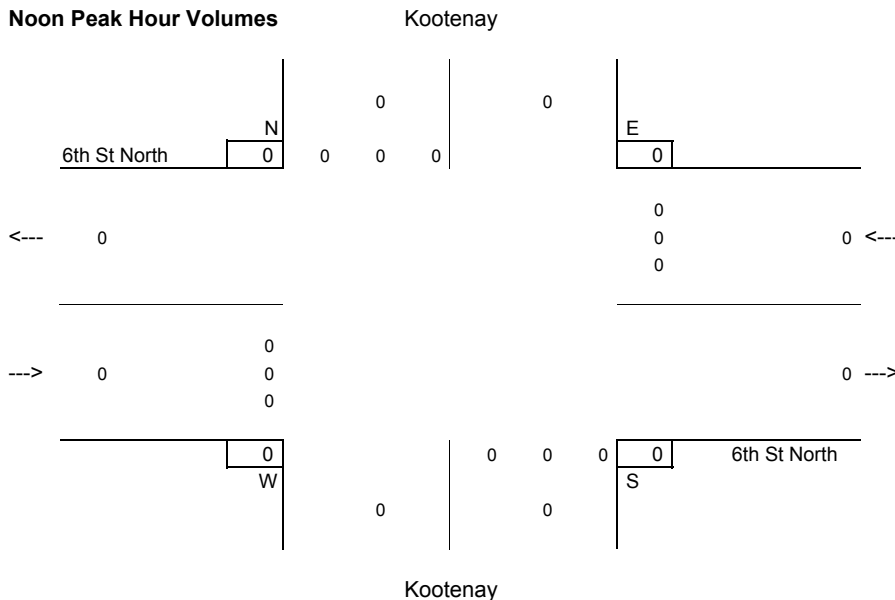
0	0	0	0	0
0	0	0	0	0
n/a	n/a	n/a	n/a	n/a

0
0
#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Hour Volumes



Average Hour

Location: Kootenay Street @ 6th St North
 Date: Thursday, June 26, 2008

This data is for All Vehicles

	Kootenay				Kootenay				6th St North				6th St North				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	72	569	249	890	412	482	63	957	217	316	272	805	101	330	35	466	3118	##	13	4	23
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	18	142	62	223	103	121	16	239	54	79	68	201	25	83	9	117	780	5	3	1	6

AM Period																					
Total	21	174	103	298	177	161	20	358	80	91	79	250	37	178	12	227	1133	6	3	1	5
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	11	87	52	149	89	81	10	179	40	46	40	125	19	89	6	114	567	3	2	1	3

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	51	395	146	592	235	321	43	599	137	225	193	555	64	152	23	239	1985	##	10	3	18
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	26	198	73	296	118	161	22	300	69	113	97	278	32	76	12	120	993	7	5	2	9

Average Hour Volumes

Kootenay

			223
Total	62	142	18
AM	52	87	11
Noon	n/a	n/a	n/a
PM	73	198	26

PM	Noon	AM	Total
----	------	----	--------------

6th St North

<---	12	n/a	6	9
<---	76	n/a	89	83
<---	32	n/a	19	25

54	40	n/a	69
201	79	46	n/a
68	40	n/a	97

6th St North

Total	AM	Noon	PM
--------------	----	------	----

118	161	22	PM
n/a	n/a	n/a	Noon
89	81	10	AM
103	121	16	Total
239			

Kootenay

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Route 3-95
Minor Route: 2nd St South
Municipality: Cranbrook
Filename: Route3-95@2ndStSouth.xls
Location #: 22

Date: June 25, 2008
Day-of-week: Wednesday

East/West Route: 2nd St South
Intersection Type: Three approach intersection - East Tee
Signalized?: No
Weather: Clear and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

AM Peak Period

Location: Route 3-95 @ 2nd St South
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Table with 25 columns: Time, Route 3-95 (North/South Approaches), 2nd St South (West/East Approaches), Total Volume, Pedestrians, Conflict. Rows show 15-minute intervals from 07:00 to 08:45, followed by n/a rows, and summary totals for Total and Avg Hr.

Peak hour of the intersection

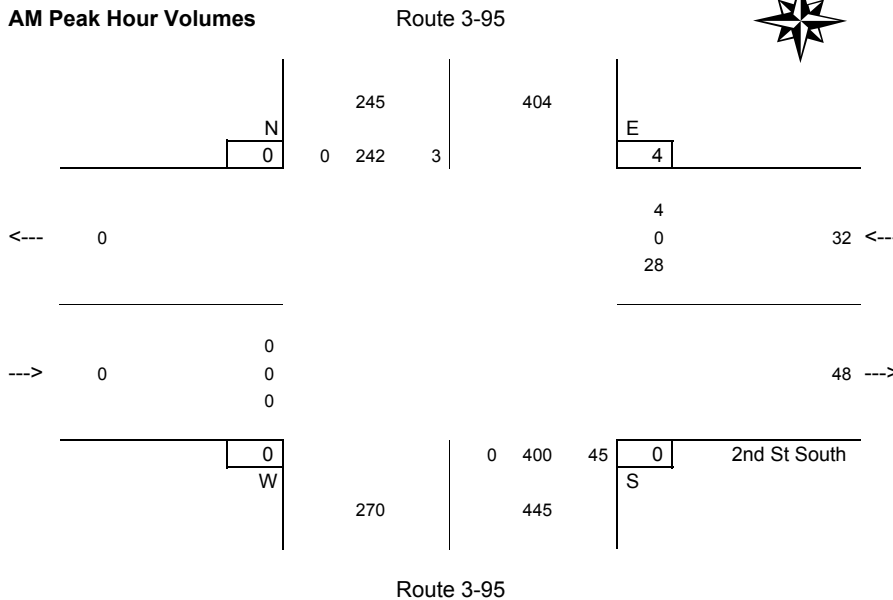
Table with 25 columns: Pk Hr, Route 3-95 (North/South Approaches), 2nd St South (West/East Approaches), Total Volume, Pedestrians, Conflict. Rows for Pk Hr, 15x4, and PHF.

Peak hour of conflicting volumes for the intersection

Table with 25 columns: Pk Hr, Route 3-95 (North/South Approaches), 2nd St South (West/East Approaches), Total Volume, Pedestrians, Conflict. Rows for Pk Hr, 15x4, and PHF.

** Peak hour in first or last hour, peak hour may be invalid. **

AM Peak Hour Volumes



PM Peak Period

Location: Route 3-95 @ 2nd St South
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time	Route 3-95				Route 3-95				2nd St South				Total Volume		Pedestrians				Conflict						
	NORTH Approach				SOUTH Approach				WEST Approach						EAST Approach				N	S	W	E	15 min	Hr	
Period	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour	N	S	W	E	15 min	Hr	
16:00	4	142	0	146	0	98	10	108	0	0	0	0	13	0	3	16	270		0	0	0	0	155		
16:15	3	117	0	120	0	107	10	117	0	0	0	0	9	0	2	11	248		0	0	0	0	129		
16:30	2	104	0	106	0	87	14	101	0	0	0	0	8	0	2	10	217	*	0	0	0	0	112		
16:45	3	136	0	139	0	94	15	109	0	0	0	0	12	0	1	13	261	996	*	0	0	0	1	148	544
17:00	2	154	0	156	0	101	8	109	0	0	0	0	14	0	1	15	280	1006	+	0	0	0	0	168	557
17:15	1	127	0	128	0	100	12	112	0	0	0	0	12	0	4	16	256	1014	*	0	0	0	2	139	567
17:30	3	114	0	117	0	79	7	86	0	0	0	0	7	0	2	9	212	1009		0	0	0	0	121	576
17:45	2	138	0	140	0	89	12	101	0	0	0	0	11	0	3	14	255	1003		0	0	0	2	149	577
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	20	1032	0	1052	0	755	88	843	0	0	0	0	86	0	18	104	1999		0	0	0	5		1118	
Avg Hr	10	516	0	526	0	378	44	422	0	0	0	0	43	0	9	52	1000		0	0	0	3		n/a	

Peak hour of the intersection

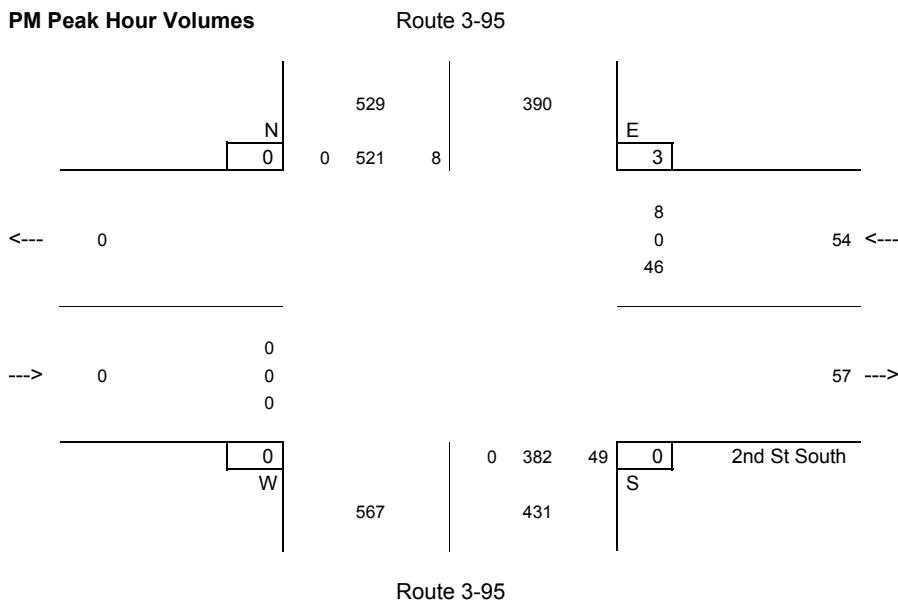
Pk Hr	8	521	0	529	0	382	49	431	0	0	0	0	46	0	8	54	1014	*	0	0	0	3		567
15x4	12	616	0	624	0	404	60	448	0	0	0	0	56	0	16	64	1120	+	0	0	0	8		672
PHF	0.67	0.85	n/a	0.85	n/a	0.95	0.82	0.96	n/a	n/a	n/a	n/a	0.82	n/a	0.50	0.84	0.91	n/a	n/a	n/a	0.38		0.84	

Peak hour of conflicting volumes for the intersection

Pk Hr	8	533	0	541	0	369	39	408	0	0	0	0	44	0	10	54	1003	*	0	0	0	4		577
15x4	12	616	0	624	0	404	48	448	0	0	0	0	56	0	16	64	1120	+	0	0	0	8		672
PHF	0.67	0.87	n/a	0.87	n/a	0.91	0.81	0.91	n/a	n/a	n/a	n/a	0.79	n/a	0.63	0.84	0.90	n/a	n/a	n/a	0.50		0.86	



PM Peak Hour Volumes



Average Hour

Location: Route 3-95 @ 2nd St South
Date: Wednesday, June 25, 2008

This data is for All Vehicles

	Route 3-95				Route 3-95				WEST Approach				2nd St South				Total Volume	Pedestrians				
	NORTH Approach				SOUTH Approach				EAST Approach				N	S	W	E						
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total						Left	Thru	Right	Total	
Survey																						
Total	25	1437	0	1462	0	1470	163	1633	0	0	0	0	139	0	28	167	3262	0	0	0	10	
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Avg Hr	6	359	0	366	0	368	41	408	0	0	0	0	35	0	7	42	816	0	0	0	3	

AM Period																					
Total	5	405	0	410	0	715	75	790	0	0	0	0	53	0	10	63	1263	0	0	0	5
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	3	203	0	205	0	358	38	395	0	0	0	0	27	0	5	32	632	0	0	0	3

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	20	1032	0	1052	0	755	88	843	0	0	0	0	86	0	18	104	1999	0	0	0	5
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	10	516	0	526	0	378	44	422	0	0	0	0	43	0	9	52	1000	0	0	0	3

Average Hour Volumes

Route 3-95

				366
Total	0	359	6	
AM	0	203	3	
Noon	n/a	n/a	n/a	
PM	0	516	10	

	PM	Noon	AM	Total
	9	n/a	5	7
<---	0	n/a	0	0
	43	n/a	27	35

0	0	n/a	0
0	0	0	n/a
0	0	n/a	0

2nd St South

Total	AM	Noon	PM
0	378	44	PM
n/a	n/a	n/a	Noon
0	358	38	AM
0	368	41	Total
408			

Route 3-95

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Route 3-95
Minor Route: 22nd Street
Municipality: Cranbrook
Filename: Route3-95@22nd.xls
Location #: 4

Date: June 25, 2008
Day-of-week: Wednesday

East/West Route: 22nd Street
Intersection Type: Three approach intersection - West Tee
Signalized?: Yes
Weather: Clear and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Survey Data

Location: Route 3-95 @ 22nd Street
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Table with columns: Time, Period, Route 3-95 (NORTH/SOUTH Approach), 22nd (WEST/EAST Approach), Total Volume (15-min/Hour), Pedestrians (N/S/W/E). Rows include times from 7:00 to 8:45 and a Total row.

Table with columns: Time, Period, Route 3-95 (NORTH/SOUTH Approach), 22nd (WEST/EAST Approach), Total Volume (15-min/Hour), Pedestrians (N/S/W/E). Rows include times from 9:00 to 9:45 and a Total row.

Table with columns: Time, Period, Route 3-95 (NORTH/SOUTH Approach), 22nd (WEST/EAST Approach), Total Volume (15-min/Hour), Pedestrians (N/S/W/E). Rows include times from 16:00 to 17:45 and a Total row.

Noon Peak Period

Location: Route 3-95 @ 22nd Street
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period Begins	Route 3-95 NORTH Approach				Route 3-95 SOUTH Approach				22nd WEST Approach				22nd EAST Approach				Total Volume		Pedestrians	Conflict				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of conflicting volumes for the intersection

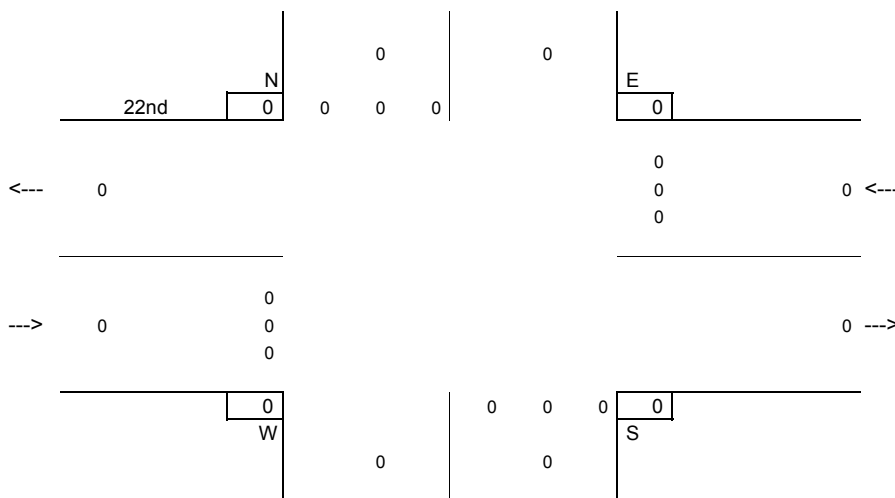
Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Hour Volumes

Route 3-95



Route 3-95

Time Period Begins	Route 3-95 NORTH Approach				Route 3-95 SOUTH Approach				22nd WEST Approach				22nd EAST Approach				Total Volume		Pedestrians				Conflict		
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour	N	S	W	E	15 min	Hr	
16:00	0	148	19	167	11	136	0	147	16	0	20	36	0	0	0	0	350		0	0	0	0	198		
16:15	0	131	17	148	11	169	0	180	10	0	19	29	0	0	0	0	357	*	0	0	0	0	188		
16:30	0	138	16	154	11	165	0	176	7	0	20	27	0	0	0	0	357	*	0	0	0	0	185		
16:45	0	119	13	132	20	130	0	150	11	0	18	29	0	0	0	0	311	1375	*	0	0	0	0	170	741
17:00	0	158	12	170	11	159	0	170	11	0	11	22	0	0	0	0	362	1387	+	0	0	0	0	192	735
17:15	0	132	14	146	10	140	0	150	12	0	9	21	0	0	0	0	317	1347		0	0	0	0	168	715
17:30	0	111	10	121	6	162	0	168	13	0	10	23	0	0	0	0	312	1302		0	0	0	0	175	705
17:45	0	128	8	136	2	138	0	140	10	0	5	15	0	0	0	0	291	1282		0	0	0	0	148	683
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total	0	1065	109	1174	82	1199	0	1281	90	0	112	202	0	0	0	0	2657			0	0	0	0		1368
Avg Hr	0	533	55	587	41	600	0	641	45	0	56	101	0	0	0	0	1329			0	0	0	0		n/a

Peak hour of the intersection

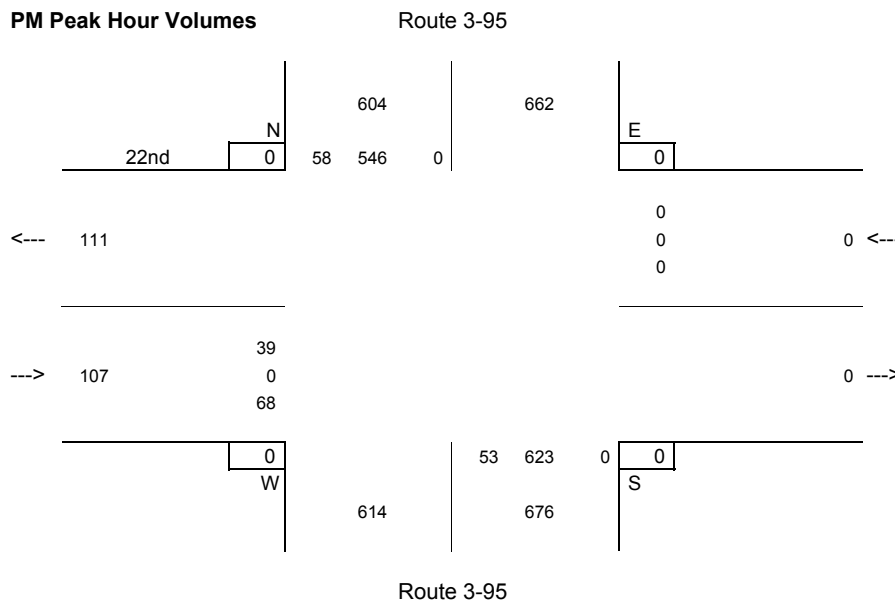
Pk Hr	0	546	58	604	53	623	0	676	39	0	68	107	0	0	0	0	1387	*		0	0	0	0		725
15x4	0	632	68	680	80	676	0	720	44	0	80	116	0	0	0	0	1448	+		0	0	0	0		860
PHF	n/a	0.86	0.85	0.89	0.66	0.92	n/a	0.94	0.89	n/a	0.85	0.92	n/a	n/a	n/a	n/a	0.96			n/a	n/a	n/a	n/a		0.84

Peak hour of conflicting volumes for the intersection

Pk Hr	0	536	65	601	53	600	0	653	44	0	77	121	0	0	0	0	1375	*		0	0	0	0		731
15x4	0	592	76	668	80	676	0	720	64	0	80	144	0	0	0	0	1428	+		0	0	0	0		828
PHF	n/a	0.91	0.86	0.90	0.66	0.89	n/a	0.91	0.69	n/a	0.96	0.84	n/a	n/a	n/a	n/a	0.96			n/a	n/a	n/a	n/a		0.88



PM Peak Hour Volumes



Average Hour

Location: Route 3-95 @ 22nd Street
 Date: Wednesday, June 25, 2008

This data is for All Vehicles

Survey	Route 3-95				Route 3-95				22nd				EAST Approach				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Total	0	1733	167	1900	151	1855	0	2006	160	0	156	316	0	0	0	0	4222	1	0	0	0
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	0	433	42	475	38	464	0	502	40	0	39	79	0	0	0	0	1056	0	0	0	0

AM Period																					
Total	0	668	58	726	69	656	0	725	70	0	44	114	0	0	0	0	1565	1	0	0	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	0	334	29	363	35	328	0	363	35	0	22	57	0	0	0	0	783	1	0	0	0

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	0	1065	109	1174	82	1199	0	1281	90	0	112	202	0	0	0	0	2657	0	0	0	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	0	533	55	587	41	600	0	641	45	0	56	101	0	0	0	0	1329	0	0	0	0

Average Hour Volumes

Route 3-95

				475									
Total				42	433	0							
AM				29	334	0							
Noon				n/a	n/a	n/a							
PM				55	533	0							
							PM	Noon	AM	Total			
							0	n/a	0	0			
22nd				<---	0	n/a	0	0	0	0			
							0	n/a	0	0			
							0	n/a	0	0			
				40	35	n/a	45						
				79	0	0	n/a	0	---				
				39	22	n/a	56						
Total							41	600	0	PM			
							n/a	n/a	n/a	Noon			
							35	328	0	AM			
							38	464	0	Total			
							502						

Route 3-95

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Route 3-95
Minor Route: King Street
Municipality: Cranbrook
Filename: Route3-95@King.xls
Location #: 18

Date: June 26, 2008
Day-of-week: Thursday

East/West Route: Route 3-95
Intersection Type: Four approach intersection
Signalized?: Yes
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments: There were 6 red lights run on the Hwy, 3 in the AM, 3 in the PM and 4 of them where semi's.
Train crossing at 7:49 to 7:55, 16:38 to 16:48, 16:57 to 17:06 and 17:12 to 17:19.

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Average Hour

Location: Route 3-95 @ King Street

This data is for All Vehicles

Date: Thursday, June 26, 2008

	King				9th Ave South				Route 3-95				Route 3-95				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	308	256	218	782	53	270	330	653	342	1862	131	2335	145	1850	269	2264	6034	9	11	26	1
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	77	64	55	196	13	68	83	163	86	466	33	584	36	463	67	566	1509	2	3	7	0

AM Period																					
Total	163	120	91	374	16	134	84	234	217	830	60	1107	49	481	119	649	2364	5	2	16	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	82	60	46	187	8	67	42	117	109	415	30	554	25	241	60	325	1182	3	1	8	0

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	145	136	127	408	37	136	246	419	125	1032	71	1228	96	1369	150	1615	3670	4	9	10	1
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	73	68	64	204	19	68	123	210	63	516	36	614	48	685	75	808	1835	2	5	5	1

Average Hour Volumes		King							
	Total	55	64	77					
	AM	46	60	82					
	Noon	n/a	n/a	n/a					
	PM	64	68	73					
<hr/>									
Route 3-95					75	n/a	60	67	
	<---	685	n/a	241	463	566			
		48	n/a	25	36				
<hr/>									
	86	109	n/a	63					
	584	466	415	n/a	516	---	Route 3-95		
	33	30	n/a	36					
<hr/>									
Total	AM	Noon	PM	19	68	123	PM		
				n/a	n/a	n/a	Noon		
				8	67	42	AM		
				13	68	83	Total		
				163					
<hr/>									
9th Ave South									

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Route 3-95
Minor Route: Theatre Road
Municipality: Cranbrook
Filename: Route3-95@Theatre.xls
Location #: 6

Date: June 25, 2008
Day-of-week: Wednesday

East/West Route: Route 3-95
Intersection Type: Four approach intersection
Signalized?: Yes
Weather: Clear and Dry

Vehicle Classifications: All Vehicles **This data is for All Vehicles**

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments: Between 16:00 to 17:15 south approach left turn lane had a 2 to 4 light queue.

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Table with columns: Time, Theatre, Victoria, Route 3-95, Route 3-95, Total Volume, Pedestrians, Conflict. Rows include time intervals from 07:00 to 08:45, followed by n/a rows, and summary rows for Total and Avg Hr.

Summary table with columns: Total, Avg Hr, Pedestrians (N, S, W, E), Conflict (15 min, Hr). Rows show total volume and average hourly volume.

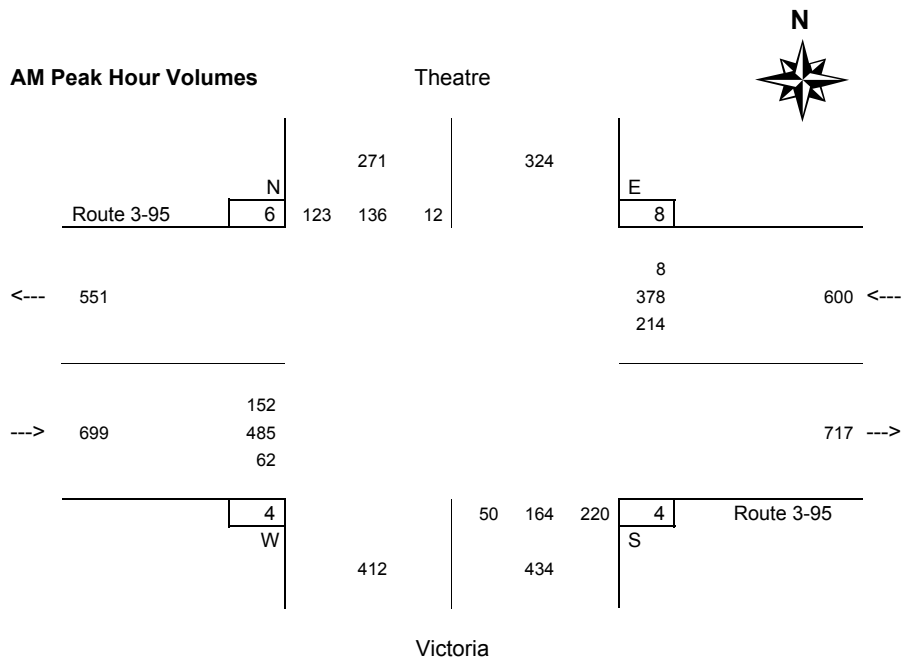
Peak hour of the intersection

Table showing peak hour data for the intersection, including Pk Hr, 15x4, and PHF values for Theatre and Route 3-95 directions, along with pedestrian counts.

Peak hour of conflicting volumes for the intersection

Table showing peak hour data for conflicting volumes, including Pk Hr, 15x4, and PHF values for Theatre and Route 3-95 directions, along with pedestrian counts.

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Period

Location: Route 3-95 @ Theatre Road
 Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period Begins	Theatre				Victoria				Route 3-95				Route 3-95				Total Volume		Pedestrians	Conflict							
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach				15-min	Hour		N	S	W	E	15 min	Hr		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

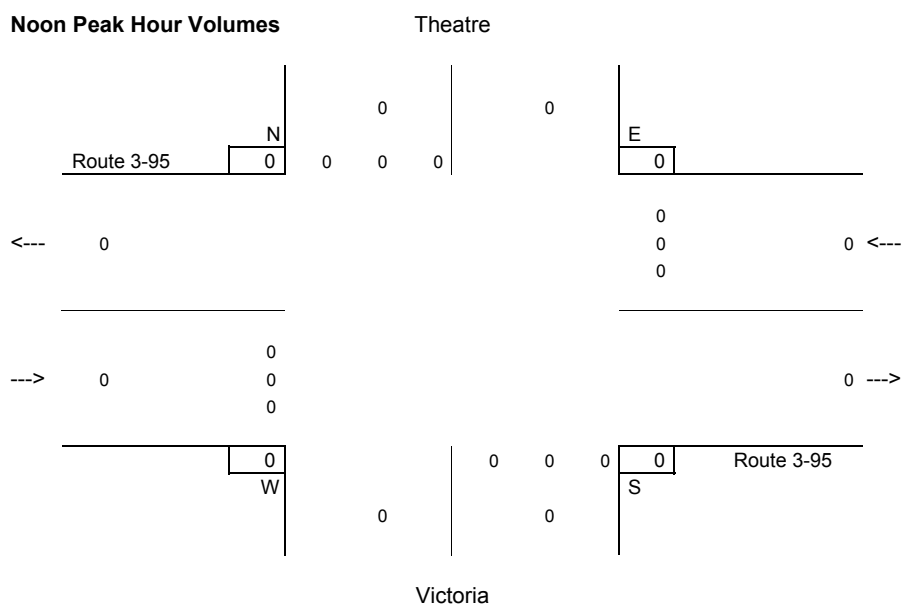
Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Average Hour

Location: Route 3-95 @ Theatre Road

This data is for All Vehicles

Date: Wednesday, June 25, 2008

	Theatre				Victoria				Route 3-95				Route 3-95				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	79	711	619	1409	282	664	1060	2006	627	2051	266	2944	1035	1915	58	3008	9367	##	26	18	44
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	20	178	155	352	71	166	265	502	157	513	67	736	259	479	15	752	2342	3	7	5	11

AM Period																					
Total	27	215	205	447	83	295	419	797	296	822	84	1202	326	622	20	968	3414	8	6	6	12
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	14	108	103	224	42	148	210	399	148	411	42	601	163	311	10	484	1707	4	3	3	6

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	52	496	414	962	199	369	641	1209	331	1229	182	1742	709	1293	38	2040	5953	4	20	12	32
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	26	248	207	481	100	185	321	605	166	615	91	871	355	647	19	1020	2977	2	10	6	16

Average Hour Volumes

Theatre

			352
Total	155	178	20
AM	103	108	14
Noon	n/a	n/a	n/a
PM	207	248	26

PM	Noon	AM	Total
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Route 3-95

	19	n/a	10	15
<---	647	n/a	311	479
	355	n/a	163	259

157	148	n/a	166
736	513	411	n/a
67	42	n/a	91

Route 3-95

Total	AM	Noon	PM
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100	185	321	PM
n/a	n/a	n/a	Noon
42	148	210	AM
71	166	265	Total
502			

Victoria

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Route 3-95
Minor Route: Wattsville Road
Municipality: Cranbrook
Filename: Route3-95@Wattsville.xls
Location #: 24

Date: June 25, 2008
Day-of-week: Wednesday

East/West Route: Wattsville Road
Intersection Type: Three approach intersection - East Tee
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

AM Peak Period

Location: Route 3-95 @ Wattsville Road
 Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period	Route 3-95				Route 3-95				Wattsville				Total Volume		Pedestrians	Conflict								
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach				15-min	Hour	N	S	W	E	15 min	Hr
Begins	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour					15 min	Hr
07:00	0	33	0	33	0	23	2	25	0	0	0	0	3	0	1	4	62		0	0	0	0	36	
07:15	5	22	0	27	0	29	4	33	0	0	0	0	7	0	2	9	69		0	0	0	0	45	
07:30	3	31	0	34	0	49	6	55	0	0	0	0	8	0	2	10	99		0	0	0	0	66	
07:45	0	34	0	34	0	70	5	75	0	0	0	0	9	0	3	12	121	351	0	0	0	0	84	231
08:00	2	33	0	35	0	45	9	54	0	0	0	0	7	0	3	10	99	388*	0	0	0	0	63	258
08:15	4	34	0	38	0	56	22	78	0	0	0	0	11	0	7	18	134	453*	0	0	0	0	93	306
08:30	3	35	0	38	0	56	22	78	0	0	0	0	10	0	12	22	138	492*	0	0	0	0	93	333
08:45	7	54	0	61	0	63	6	69	0	0	0	0	13	0	5	18	148	519+	0	1	0	0	89	338
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
Total	24	276	0	300	0	391	76	467	0	0	0	0	68	0	35	103	870		0	1	0	0	559	
Avg Hr	12	138	0	150	0	196	38	234	0	0	0	0	34	0	18	52	435		0	1	0	0	n/a	

Total	24	276	0	300	0	391	76	467	0	0	0	0	68	0	35	103	870		0	1	0	0	559	
Avg Hr	12	138	0	150	0	196	38	234	0	0	0	0	34	0	18	52	435		0	1	0	0	n/a	

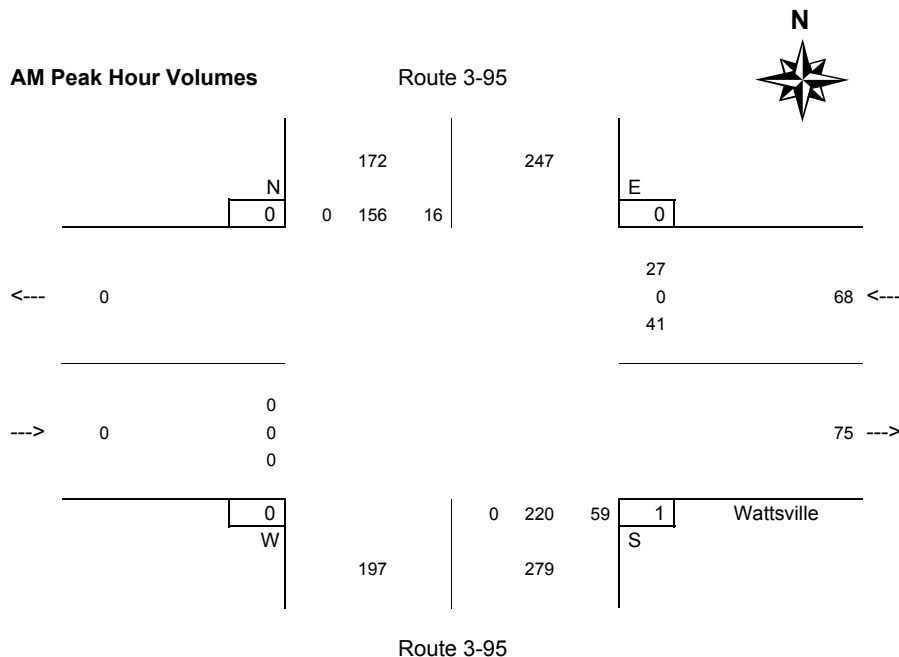
Peak hour of the intersection

Pk Hr	16	156	0	172	0	220	59	279	0	0	0	0	41	0	27	68	519*		0	1	0	0	336	
15x4	28	216	0	244	0	252	88	312	0	0	0	0	52	0	48	88	592+		0	4	0	0	420	
PHF	0.57	0.72	n/a	0.70	n/a	0.87	0.67	0.89	n/a	n/a	n/a	n/a	0.79	n/a	0.56	0.77	0.88		n/a	0.25	n/a	n/a	0.80	

Peak hour of conflicting volumes for the intersection

Pk Hr	16	156	0	172	0	220	59	279	0	0	0	0	41	0	27	68	519*		0	1	0	0	336	
15x4	28	216	0	244	0	252	88	312	0	0	0	0	52	0	48	88	592+		0	4	0	0	420	
PHF	0.57	0.72	n/a	0.70	n/a	0.87	0.67	0.89	n/a	n/a	n/a	n/a	0.79	n/a	0.56	0.77	0.88		n/a	0.25	n/a	n/a	0.80	

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Period

Location: Route 3-95 @ Wattsville Road
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period Begins	Route 3-95 NORTH Approach				Route 3-95 SOUTH Approach				WEST Approach				EAST Approach				Total Volume		Pedestrians	Conflict			
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

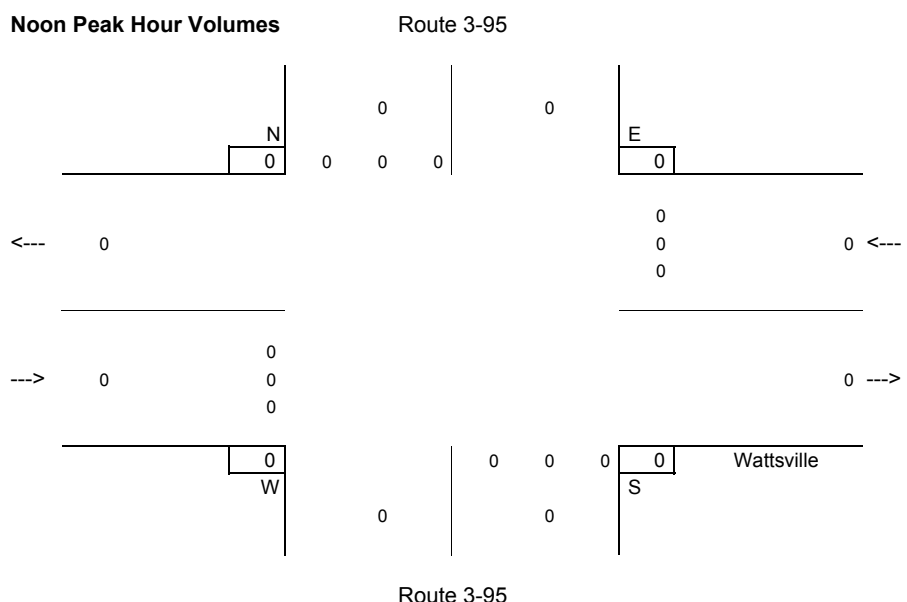
Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



PM Peak Period

Location: Route 3-95 @ Wattsville Road
 Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period Begins	Route 3-95				Route 3-95				Wattsville								Total Volume		Pedestrians				Conflict		
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach				15-min	Hour	N	S	W	E	15 min	Hr	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total									
16:00	4	84	0	88	0	61	11	72	0	0	0	0	7	0	4	11	171		0	0	0	0	91		
16:15	8	74	0	82	0	72	14	86	0	0	0	0	18	0	5	23	191		0	0	0	0	112		
16:30	7	67	0	74	0	61	10	71	0	0	0	0	5	0	2	7	152		0	0	0	0	83		
16:45	6	71	0	77	0	55	9	64	0	0	0	0	14	0	2	16	157	671		0	0	0	1	85	371
17:00	12	102	0	114	0	57	10	67	0	0	0	0	9	0	4	13	194	694	*	0	0	0	0	111	391
17:15	10	93	0	103	0	60	13	73	0	0	0	0	14	0	2	16	192	695	*	0	0	0	0	107	386
17:30	7	62	0	69	0	62	16	78	0	0	0	0	9	0	7	16	163	706	*	0	0	0	0	94	397
17:45	9	86	0	95	0	71	19	90	0	0	0	0	13	0	2	15	200	749	+	0	0	0	0	112	424
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	63	639	0	702	0	499	102	601	0	0	0	0	89	0	28	117	1420		0	0	0	1		753	
Avg Hr	32	320	0	351	0	250	51	301	0	0	0	0	45	0	14	59	710		0	0	0	1		n/a	

Peak hour of the intersection

Pk Hr	38	343	0	381	0	250	58	308	0	0	0	0	45	0	15	60	749	*	0	0	0	0		391
15x4	48	408	0	456	0	284	76	360	0	0	0	0	56	0	28	64	800	+	0	0	0	0		464
PHF	0.79	0.84	n/a	0.84	n/a	0.88	0.76	0.86	n/a	n/a	n/a	n/a	0.80	n/a	0.54	0.94	0.94		n/a	n/a	n/a	n/a		0.84

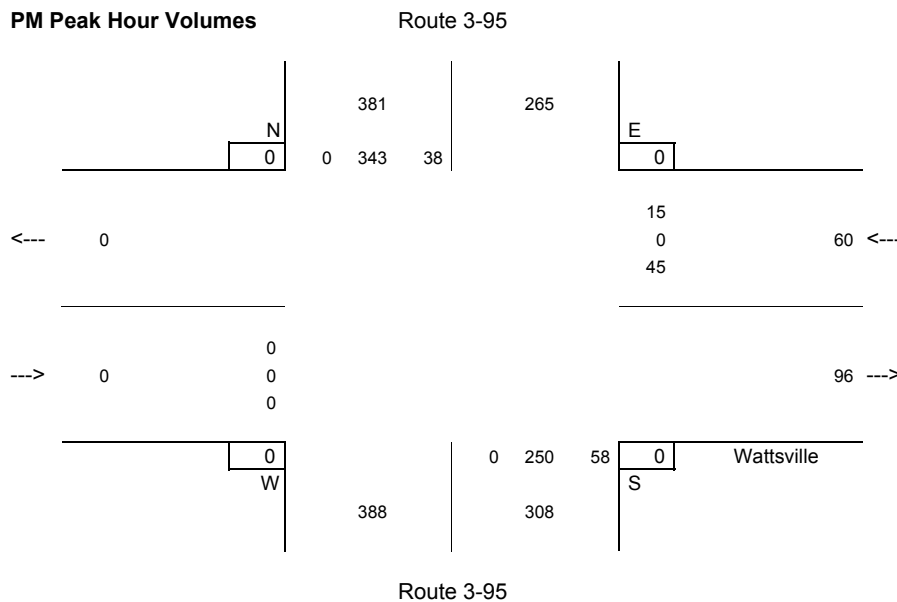
Peak hour of conflicting volumes for the intersection

Pk Hr	38	343	0	381	0	250	58	308	0	0	0	0	45	0	15	60	749	*	0	0	0	0		391
15x4	48	408	0	456	0	284	76	360	0	0	0	0	56	0	28	64	800	+	0	0	0	0		464
PHF	0.79	0.84	n/a	0.84	n/a	0.88	0.76	0.86	n/a	n/a	n/a	n/a	0.80	n/a	0.54	0.94	0.94		n/a	n/a	n/a	n/a		0.84

** Peak hour in first or last hour, peak hour may be invalid. **



PM Peak Hour Volumes



Average Hour

Location: Route 3-95 @ Wattsville Road
 Date: Wednesday, June 25, 2008

This data is for All Vehicles

	Route 3-95				Route 3-95				WEST Approach				Wattsville				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	87	915	0	1002	0	890	178	1068	0	0	0	0	157	0	63	220	2290	0	1	0	1
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	22	229	0	251	0	223	45	267	0	0	0	0	39	0	16	55	573	0	0	0	0

AM Period																					
Total	24	276	0	300	0	391	76	467	0	0	0	0	68	0	35	103	870	0	1	0	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	12	138	0	150	0	196	38	234	0	0	0	0	34	0	18	52	435	0	1	0	0

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	63	639	0	702	0	499	102	601	0	0	0	0	89	0	28	117	1420	0	0	0	1
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	32	320	0	351	0	250	51	301	0	0	0	0	45	0	14	59	710	0	0	0	1

Average Hour Volumes

Route 3-95

	251	
Total	0 229 22	
AM	0 138 12	
Noon	n/a n/a n/a	
PM	0 320 32	

	PM Noon	AM	Total
	14	n/a	18
<---	0	n/a	0
	45	n/a	34
			16
			0 55
			39

0	0	n/a	0
0	0	0	n/a
0	0	n/a	0

Total	AM	Noon	PM

Route 3-95

0	250	51	PM
n/a	n/a	n/a	Noon
0	196	38	AM
0	223	45	Total
	267		

Wattsville

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Route 95A
Minor Route: Echo Field Road
Municipality: Cranbrook
Filename: Route95A@EchoField.xls
Location #: 1

Date: June 24, 2008
Day-of-week: Tuesday

East/West Route: Route 95A
Intersection Type: Three approach intersection - South Tee
Signalized?: No
Weather: Clear and dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Survey Data

Location: Route 95A @ Echo Field Road
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Table with columns: Time Period Begins, NORTH Approach (Left, Thru, Right, Total), SOUTH Approach (Left, Thru, Right, Total), WEST Approach (Left, Thru, Right, Total), EAST Approach (Left, Thru, Right, Total), Total Volume (15-min, Hour), Pedestrians (N, S, W, E). Rows include times from 7:00 to 8:45 and a Total row.

Table with columns: Time Period Begins, NORTH Approach (Left, Thru, Right, Total), SOUTH Approach (Left, Thru, Right, Total), WEST Approach (Left, Thru, Right, Total), EAST Approach (Left, Thru, Right, Total), Total Volume (15-min, Hour), Pedestrians (N, S, W, E). Rows include times from 9:00 to 9:45 and a Total row.

Table with columns: Time Period Begins, NORTH Approach (Left, Thru, Right, Total), SOUTH Approach (Left, Thru, Right, Total), WEST Approach (Left, Thru, Right, Total), EAST Approach (Left, Thru, Right, Total), Total Volume (15-min, Hour), Pedestrians (N, S, W, E). Rows include times from 16:00 to 17:45 and a Total row.

Noon Peak Period

Location: Route 95A @ Echo Field Road
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	Echo Field NORTH Approach				Echo Field SOUTH Approach				Route 95A WEST Approach				Route 95A EAST Approach				Total Volume		Pedestrians	Conflict				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		

Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

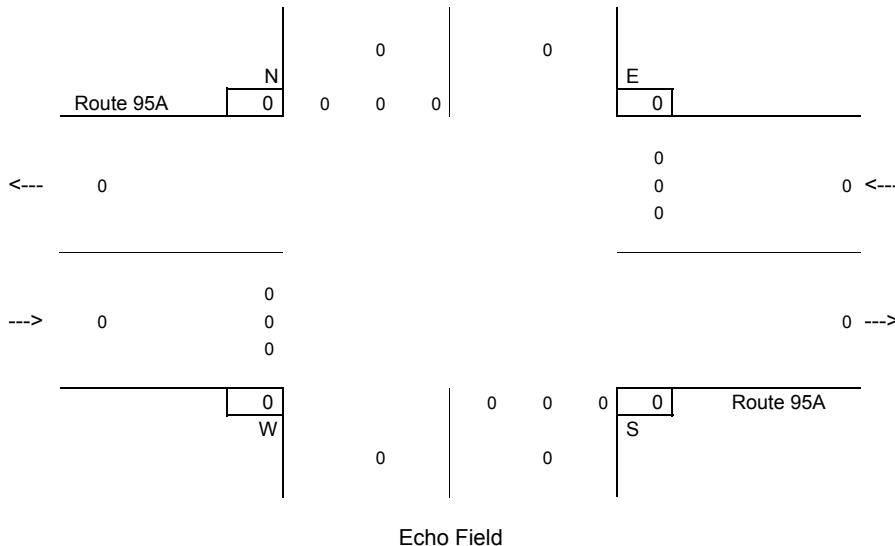
Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Hour Volumes



PM Peak Period

Location: Route 95A @ Echo Field Road
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	NORTH Approach				ECHO FIELD				ROUTE 95A WEST Approach				ROUTE 95A EAST Approach				Total Volume		Pedestrians				Conflict		
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour	N	S	W	E	15 min	Hr	
	16:00	0	0	0	0	21	0	9	30	0	46	8	54	8	70	0	78	162		0	0	0	0	91	
16:15	0	0	0	0	18	0	3	21	0	42	10	52	6	74	0	80	153		0	0	0	0	92		
16:30	0	0	0	0	25	0	6	31	0	43	5	48	6	86	0	92	171	*	0	0	0	0	111		
16:45	0	0	0	0	14	0	6	20	0	61	8	69	9	83	0	92	181	667	*	0	0	0	0	97	391
17:00	0	0	0	0	25	0	10	35	0	46	4	50	1	85	0	86	171	676	*	0	0	0	0	110	410
17:15	0	0	0	0	14	0	8	22	0	65	6	71	4	94	0	98	191	714	+	0	0	0	0	108	426
17:30	0	0	0	0	10	0	2	12	0	49	4	53	2	91	0	93	158	701		0	0	0	0	101	416
17:45	0	0	0	0	18	0	5	23	0	44	11	55	2	75	0	77	155	675		0	0	0	0	93	412
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total	0	0	0	0	145	0	49	194	0	396	56	452	38	658	0	696	1342								803
Avg Hr	0	0	0	0	73	0	25	97	0	198	28	226	19	329	0	348	671								n/a

Peak hour of the intersection

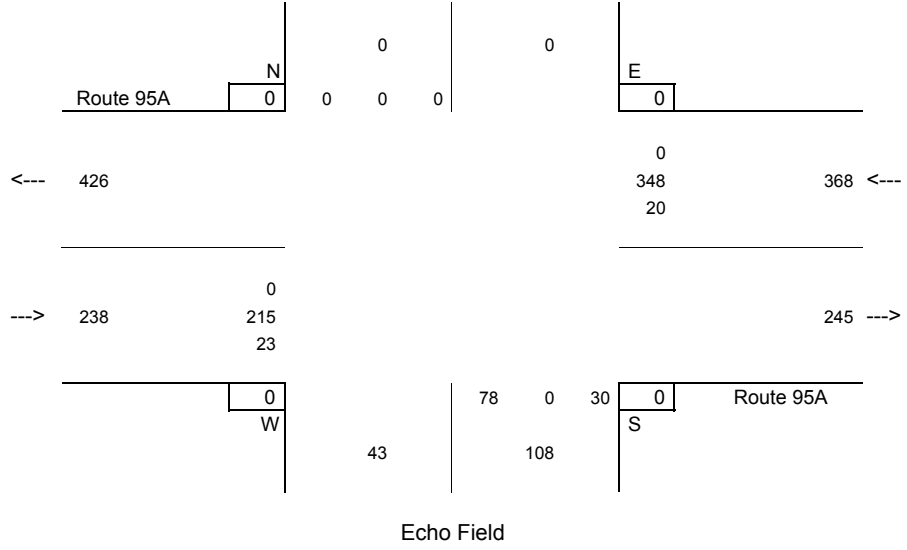
Pk Hr	0	0	0	0	78	0	30	108	0	215	23	238	20	348	0	368	714	*								426
15x4	0	0	0	0	100	0	40	140	0	260	32	284	36	376	0	392	764	+								476
PHF	n/a	n/a	n/a	n/a	0.78	n/a	0.75	0.77	n/a	0.83	0.72	0.84	0.56	0.93	n/a	0.94	0.93		n/a	n/a	n/a	n/a	n/a			0.89

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	78	0	30	108	0	215	23	238	20	348	0	368	714	*								426
15x4	0	0	0	0	100	0	40	140	0	260	32	284	36	376	0	392	764	+								476
PHF	n/a	n/a	n/a	n/a	0.78	n/a	0.75	0.77	n/a	0.83	0.72	0.84	0.56	0.93	n/a	0.94	0.93		n/a	n/a	n/a	n/a	n/a			0.89



PM Peak Hour Volumes



Average Hour

Location: Route 95A @ Echo Field Road
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Survey	NORTH Approach				ECHO FIELD				ROUTE 95A WEST Approach				ROUTE 95A EAST Approach				Total Volume	Pedestrians			
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total		N	S	W	E
	Total	0	0	0	0	214	0	74	288	0	912	183	1095	59	888	0	947	2330	0	0	0
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	0	0	0	0	54	0	19	72	0	228	46	274	15	222	0	237	583	0	0	0	0

AM Period																					
Total	0	0	0	0	69	0	25	94	0	516	127	643	21	230	0	251	988	0	0	0	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	0	0	0	0	35	0	13	47	0	258	64	322	11	115	0	126	494	0	0	0	0

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	0	0	0	0	145	0	49	194	0	396	56	452	38	658	0	696	1342	0	0	0	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	0	0	0	0	73	0	25	97	0	198	28	226	19	329	0	348	671	0	0	0	0

Average Hour Volumes

	Total	AM	Noon	PM
Route 95A	237	222	15	0
Echo Field	72	19	35	23
Route 95A	671	494	671	671

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Route 95A
Minor Route: Theatre Road
Municipality: Cranbrook
Filename: Route95A@Theatre.xls
Location #: 2

Date: June 26, 2008
Day-of-week: Thursday

East/West Route: Route 95A
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

AM Peak Period

Location: Route 95A @ Theatre Road
Date: Thursday, June 26, 2008

This data is for All Vehicles

Time Period Begins	Mission				Theatre				Route 95A				Route 95A				Total Volume		%	Pedestrians				Conflict	
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach				15-min	Hour		N	S	W	E	15 min	Hr
07:00	1	4	0	5	13	3	0	16	0	14	15	29	1	14	0	15	65		0	0	0	0	47		
07:15	1	0	0	1	8	5	0	13	1	22	30	53	0	25	0	25	92		0	0	0	0	60		
07:30	1	2	0	3	13	6	1	20	0	43	32	75	4	27	1	32	130		0	0	0	0	94		
07:45	4	5	1	10	20	6	1	27	0	37	41	78	1	31	3	35	150	437	+	0	0	0	0	105	306
08:00	2	3	1	6	11	6	2	19	0	32	49	81	2	32	6	40	146	518	*	0	0	0	0	98	357
08:15	3	9	0	12	11	10	1	22	1	46	41	88	3	15	8	26	148	574	*	0	0	0	0	110	407
08:30	0	5	0	5	13	7	5	25	2	38	40	80	2	23	9	34	144	588	*	0	0	0	0	98	411
08:45	3	5	1	9	10	9	1	20	2	40	29	71	2	26	2	30	130	568		0	0	0	0	87	393
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0
n/a				0				0				0				0	0	0		0	0	0	0	0	0

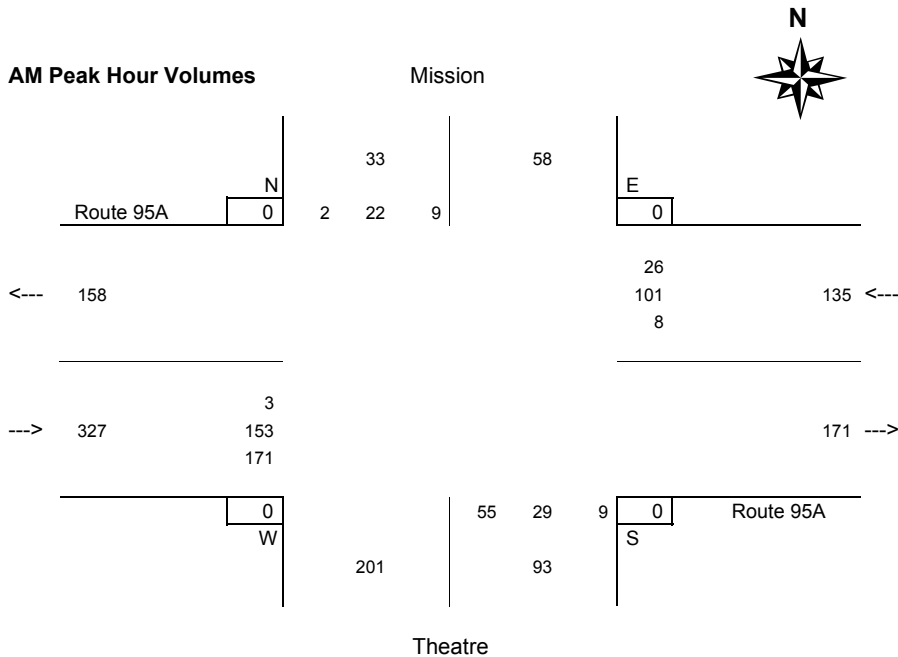
Total	15	33	3	51	99	52	11	162	6	272	277	555	15	193	29	237	1005			0	0	0	0	699
Avg Hr	8	17	2	26	50	26	6	81	3	136	139	278	8	97	15	119	503			0	0	0	0	n/a

Peak hour of the intersection

Pk Hr	9	22	2	33	55	29	9	93	3	153	171	327	8	101	26	135	588	*	0	0	0	0	411
15x4	16	36	4	48	80	40	20	108	8	184	196	352	12	128	36	160	600	+	0	0	0	0	512
PHF	0.56	0.61	0.50	0.69	0.69	0.73	0.45	0.86	0.38	0.83	0.87	0.93	0.67	0.79	0.72	0.84	0.98	n/a	n/a	n/a	n/a	0.80	

Peak hour of conflicting volumes for the intersection

Pk Hr	9	22	2	33	55	29	9	93	3	153	171	327	8	101	26	135	588	*	0	0	0	0	411
15x4	16	36	4	48	80	40	20	108	8	184	196	352	12	128	36	160	600	+	0	0	0	0	512
PHF	0.56	0.61	0.50	0.69	0.69	0.73	0.45	0.86	0.38	0.83	0.87	0.93	0.67	0.79	0.72	0.84	0.98	n/a	n/a	n/a	n/a	0.80	



Noon Peak Period

Location: Route 95A @ Theatre Road
Date: Thursday, June 26, 2008

This data is for All Vehicles

Time Period Begins	Mission				Theatre				Route 95A				Route 95A				Total Volume		% Sat	Pedestrians				Conflict	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

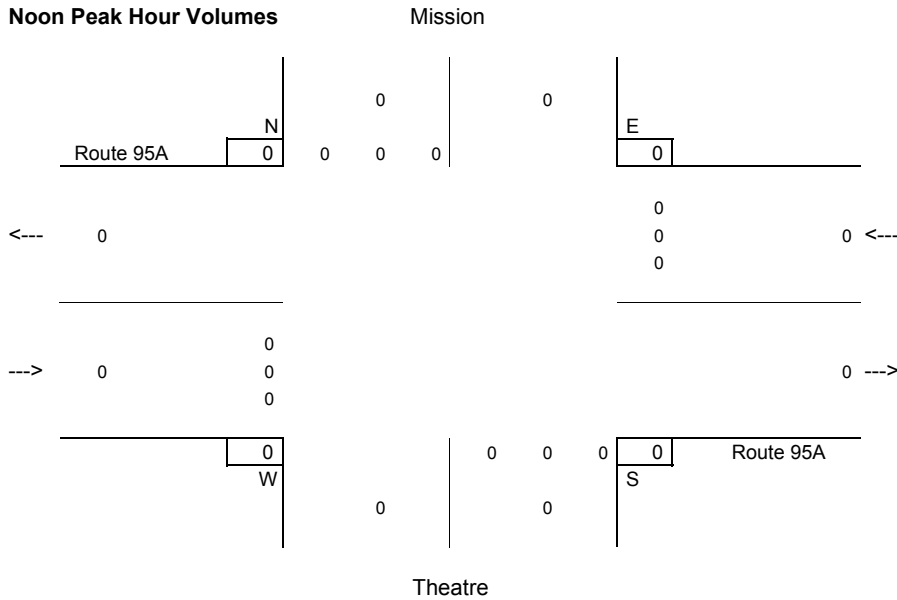
Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Hour Volumes



Time Period	Mission				Theatre				Route 95A				Route 95A				Total Volume		Pedestrians				Conflict		
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach				15-min	Hour	N	S	W	E	15 min	Hr	
Begins	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total									
16:00	9	19	1	29	39	6	2	47	3	44	33	80	8	48	8	64	220		0	0	0	0	144		
16:15	9	18	0	27	31	12	7	50	0	41	38	79	7	58	10	75	231	*	0	0	0	0	135		
16:30	5	27	3	35	27	8	3	38	3	31	35	69	3	56	11	70	212		0	0	0	0	127		
16:45	12	24	1	37	38	12	1	51	3	52	31	86	8	51	8	67	241	904	+	0	0	0	0	154	560
17:00	7	11	3	21	47	11	11	69	3	33	26	62	5	72	8	85	237	921	*	0	0	0	0	144	560
17:15	6	13	1	20	37	15	9	61	1	36	30	67	8	57	8	73	221	911		0	0	0	0	125	550
17:30	7	17	2	26	45	8	3	56	1	31	11	43	1	69	11	81	206	905		0	0	0	0	145	568
17:45	2	14	2	18	39	5	0	44	0	29	21	50	3	46	5	54	166	830		0	0	0	0	108	522
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	57	143	13	213	303	77	36	416	14	297	225	536	43	457	69	569	1734		0	0	0	0	1024		
Avg Hr	29	72	7	107	152	39	18	208	7	149	113	268	22	229	35	285	867		0	0	0	0	n/a		

Peak hour of the intersection

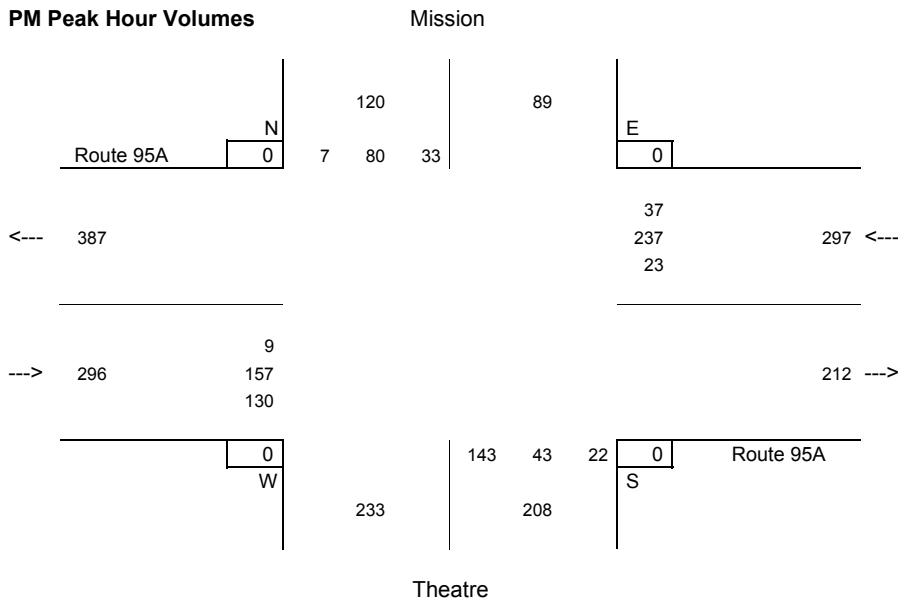
Pk Hr	33	80	7	120	143	43	22	208	9	157	130	296	23	237	37	297	921	*	0	0	0	0	540
15x4	48	108	12	148	188	48	44	276	12	208	152	344	32	288	44	340	964	+	0	0	0	0	700
PHF	0.69	0.74	0.58	0.81	0.76	0.90	0.50	0.75	0.75	0.75	0.86	0.86	0.72	0.82	0.84	0.87	0.96		n/a	n/a	n/a	n/a	0.77

Peak hour of conflicting volumes for the intersection

Pk Hr	32	65	7	104	167	46	24	237	8	152	98	258	22	249	35	306	905	*	0	0	0	0	531
15x4	48	96	12	148	188	60	44	276	12	208	124	344	32	288	44	340	964	+	0	0	0	0	660
PHF	0.67	0.68	0.58	0.70	0.89	0.77	0.55	0.86	0.67	0.73	0.79	0.75	0.69	0.86	0.80	0.90	0.94		n/a	n/a	n/a	n/a	0.80



PM Peak Hour Volumes



Average Hour

Location: Route 95A @ Theatre Road
Date: Thursday, June 26, 2008

This data is for All Vehicles

	Mission				Theatre				Route 95A				Route 95A				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	72	176	16	264	402	129	47	578	20	569	502	1091	58	650	98	806	2739	0	0	0	0
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	18	44	4	66	101	32	12	145	5	142	126	273	15	163	25	202	685	0	0	0	0

AM Period																					
Total	15	33	3	51	99	52	11	162	6	272	277	555	15	193	29	237	1005	0	0	0	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	8	17	2	26	50	26	6	81	3	136	139	278	8	97	15	119	503	0	0	0	0

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	57	143	13	213	303	77	36	416	14	297	225	536	43	457	69	569	1734	0	0	0	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	29	72	7	107	152	39	18	208	7	149	113	268	22	229	35	285	867	0	0	0	0

Average Hour Volumes

Mission

Total	4	44	18	66											
AM	2	17	8												
Noon	n/a	n/a	n/a												
PM	7	72	29												
Route 95A				5	3	n/a	7	273	142	136	n/a	149	--->		
				126	139	n/a	113								
Total	AM	Noon	PM	152	39	18	PM								
				n/a	n/a	n/a	Noon								
				50	26	6	AM								
				101	32	12	Total								
				145											

Theatre

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Slater Road
Minor Route: 6th St North
Municipality: Cranbrook
Filename: Slater@6thStNorth.xls
Location #: 13

Date: June 24, 2008
Day-of-week: Tuesday

East/West Route: 6th St North
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments: During day a lot of cars made rolling stops and some made no stop at all. Many do not observe 4-way procedure.

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

AM Peak Period

Location: Slater Road @ 6th St North
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	Industrial No.1				Slater				6th St North				6th St North				Total Volume		Pedestrians	Conflict				
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach				15-min	Hour		N	S	W	E	15 min
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total								
07:00	10	2	7	19	17	3	0	20	16	23	5	44	1	11	3	15	98		0	0	0	0	56	
07:15	24	3	11	38	10	3	1	14	10	35	12	57	4	26	9	39	148		0	0	0	0	79	
07:30	19	12	5	36	5	6	0	11	9	32	18	59	0	23	14	37	143		0	0	1	1	75	
07:45	36	24	18	78	9	5	4	18	13	57	31	101	3	23	12	38	235	624 +	0	0	0	1	142	352
08:00	22	16	23	61	12	4	3	19	23	35	20	78	0	35	10	45	203	729 *	0	0	0	0	119	415
08:15	22	12	19	53	5	6	4	15	18	30	18	66	4	42	15	61	195	776 *	0	0	0	0	111	447
08:30	22	12	29	63	17	8	2	27	34	33	19	86	5	35	17	57	233	866 *	0	0	0	1	144	516
08:45	12	5	22	39	14	8	4	26	27	35	11	73	2	45	7	54	192	823	0	0	1	1	120	494
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
n/a				0				0				0				0	0	0	0	0	0	0	0	0
Total	167	86	134	387	89	43	18	150	150	280	134	564	19	240	87	346	1447		0	0	2	4		786
Avg Hr	84	43	67	194	45	22	9	75	75	140	67	282	10	120	44	173	724		0	0	1	2		n/a

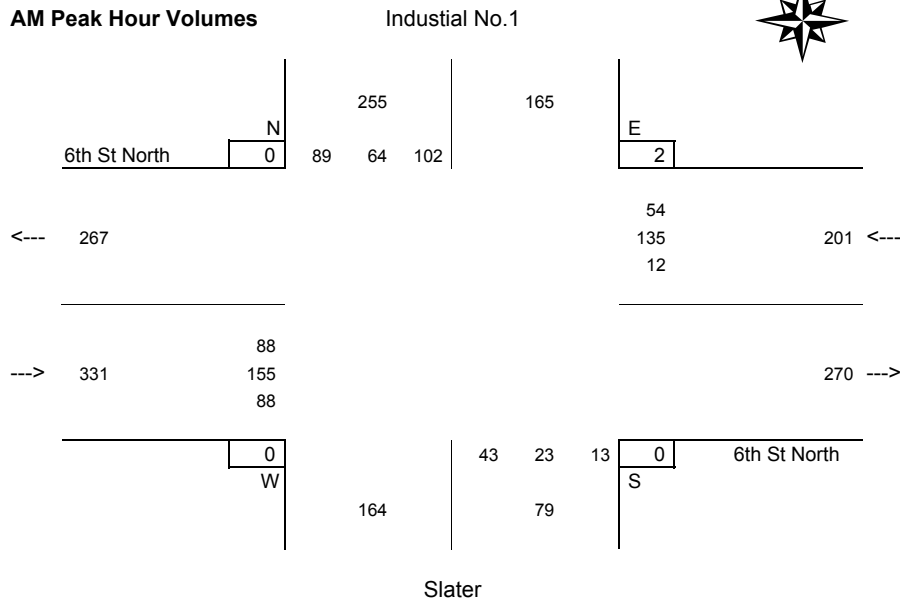
Peak hour of the intersection

Pk Hr	102	64	89	255	43	23	13	79	88	155	88	331	12	135	54	201	866 *		0	0	0	2		473
15x4	144	96	116	312	68	32	16	108	136	228	124	404	20	168	68	244	940 +		0	0	0	4		652
PHF	0.71	0.67	0.77	0.82	0.63	0.72	0.81	0.73	0.65	0.68	0.71	0.82	0.60	0.80	0.79	0.82	0.92		n/a	n/a	n/a	0.50		0.73

Peak hour of conflicting volumes for the intersection

Pk Hr	102	64	89	255	43	23	13	79	88	155	88	331	12	135	54	201	866 *		0	0	0	2		473
15x4	144	96	116	312	68	32	16	108	136	228	124	404	20	168	68	244	940 +		0	0	0	4		652
PHF	0.71	0.67	0.77	0.82	0.63	0.72	0.81	0.73	0.65	0.68	0.71	0.82	0.60	0.80	0.79	0.82	0.92		n/a	n/a	n/a	0.50		0.73

AM Peak Hour Volumes



PM Peak Period

Location: Slater Road @ 6th St North
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	Industrial No. 1				Slater				6th St North				6th St North				Total Volume		Pedestrians				Conflict		
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach				15-min	Hour	N	S	W	E	15 min	Hr	
16:00	21	8	39	68	13	7	7	27	19	42	12	73	2	52	16	70	238		*	0	1	0	0	147	
16:15	27	7	34	68	26	9	3	38	32	48	16	96	3	53	13	69	271		*	2	0	1	1	165	
16:30	20	6	34	60	32	9	5	46	37	34	15	86	2	65	13	80	272		+	1	0	0	0	187	
16:45	15	5	26	46	23	7	1	31	26	36	5	67	3	52	10	65	209	990	*	0	0	0	0	142	641
17:00	16	4	33	53	21	12	8	41	26	34	5	65	2	65	9	76	235	987		0	1	0	0	158	652
17:15	7	4	25	36	10	3	1	14	29	27	4	60	2	37	13	52	162	878		0	0	1	0	118	605
17:30	12	1	19	32	11	3	2	16	24	33	8	65	1	42	12	55	168	774		0	0	0	0	109	527
17:45	16	0	17	33	7	2	1	10	22	75	4	101	1	40	7	48	192	757		1	0	0	0	104	489
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Total	134	35	227	396	143	52	28	223	215	329	69	613	16	406	93	515	1747			4	2	2	1	1119	
Avg Hr	67	18	114	198	72	26	14	112	108	165	35	307	8	203	47	258	874			2	1	1	1	n/a	

Peak hour of the intersection

Pk Hr	83	26	133	242	94	32	16	142	114	160	48	322	10	222	52	284	990	*	3	1	1	1	641	
15x4	108	32	156	272	128	36	28	184	148	192	64	384	12	260	64	320	1088	+	8	4	4	4	788	
PHF	0.77	0.81	0.85	0.89	0.73	0.89	0.57	0.77	0.77	0.83	0.75	0.84	0.83	0.85	0.81	0.89	0.91		0.38	0.25	0.25	0.25	0.81	

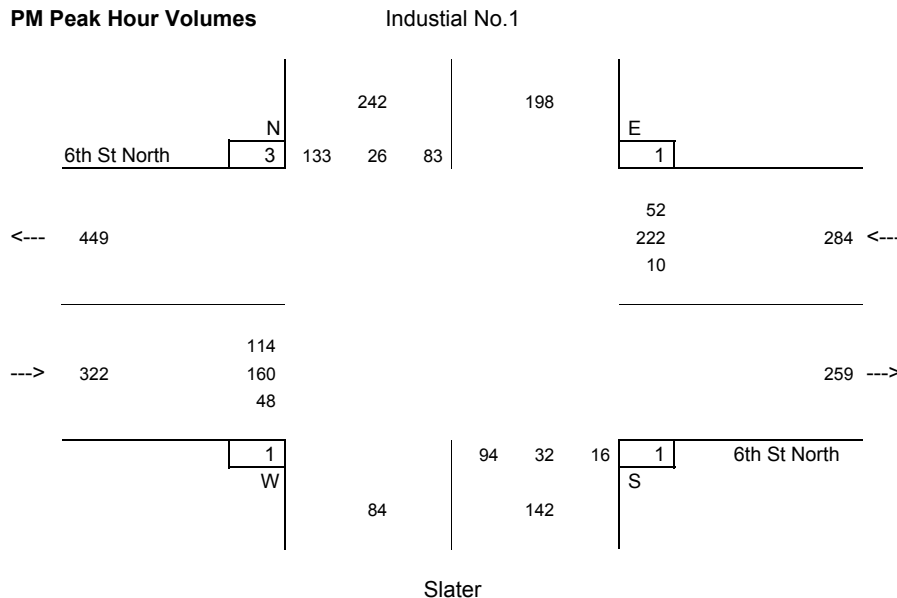
Peak hour of conflicting volumes for the intersection

Pk Hr	78	22	127	227	102	37	17	156	121	152	41	314	10	235	45	290	987	*	3	1	1	1	652	
15x4	108	28	136	272	128	48	32	184	148	192	64	384	12	260	52	320	1088	+	8	4	4	4	752	
PHF	0.72	0.79	0.93	0.83	0.80	0.77	0.53	0.85	0.82	0.79	0.64	0.82	0.83	0.90	0.87	0.91	0.91		0.38	0.25	0.25	0.25	0.87	

** Peak hour in first or last hour, peak hour may be invalid. **



PM Peak Hour Volumes



Average Hour

Location: Slater Road @ 6th St North
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

	Industrial No.1				Slater				6th St North				6th St North				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	301	121	361	783	232	95	46	373	365	609	203	1177	35	646	180	861	3194	4	2	4	5
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	75	30	90	196	58	24	12	93	91	152	51	294	9	162	45	215	799	1	1	1	1

AM Period																					
Total	167	86	134	387	89	43	18	150	150	280	134	564	19	240	87	346	1447	0	0	2	4
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	84	43	67	194	45	22	9	75	75	140	67	282	10	120	44	173	724	0	0	1	2

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	134	35	227	396	143	52	28	223	215	329	69	613	16	406	93	515	1747	4	2	2	1
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	67	18	114	198	72	26	14	112	108	165	35	307	8	203	47	258	874	2	1	1	1

Average Hour Volumes

Industrial No.1

	196		
Total	90	30	75
AM	67	43	84
Noon	n/a	n/a	n/a
PM	114	18	67

PM	Noon	AM	Total
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6th St North

47	n/a	44	45		
<---	203	n/a	120	162	215
8	n/a	10	9		

91	75	n/a	108		
294	152	140	n/a	165	---
51	67	n/a	35		

6th St North

Total	AM	Noon	PM
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72	26	14	PM
n/a	n/a	n/a	Noon
45	22	9	AM
58	24	12	Total
	93		

Slater

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Theatre Road
Minor Route: McPhee Road
Municipality: Cranbrook
Filename: Theatre@McPhee.xls
Location #: 3

Date: June 24, 2008
Day-of-week: Tuesday

East/West Route: McPhee Road
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments: Traffic travelling from south to west have a difficult time turning left. Most traffic turning left onto McPhee cut into the left turning lane. Heavy Trucks proceed out of Esso Card Lock onto Theatre making left turns for those turning left from McPhee tricky.

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Noon Peak Period

Location: Theatre Road @ McPhee Road
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	Theatre NORTH Approach				Theatre SOUTH Approach				McPhee WEST Approach				McPhee EAST Approach				Total Volume		Pedestrians	Conflict				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

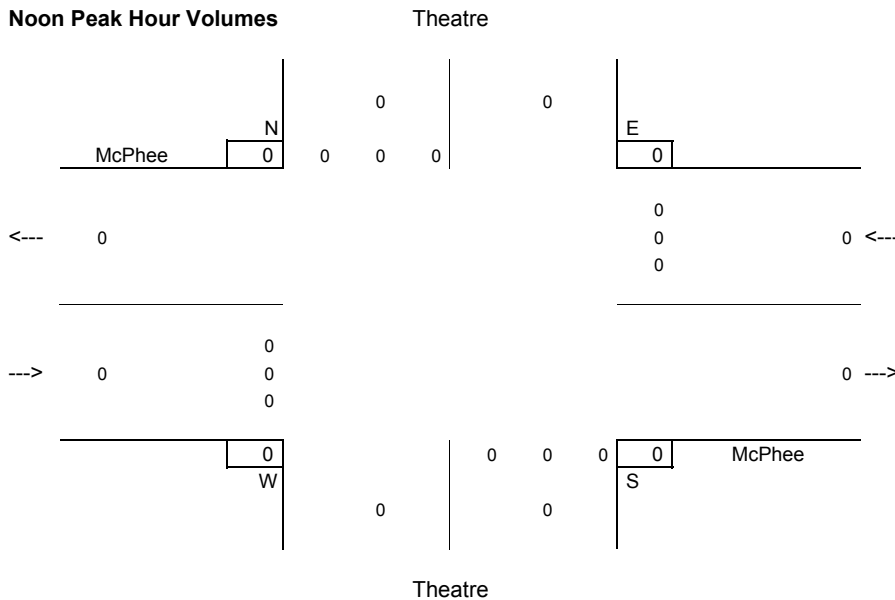
Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Hour Volumes



Average Hour

Location: Theatre Road @ McPhee Road
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

	Theatre				Theatre				McPhee				McPhee				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	106	688	54	848	208	490	147	845	35	208	198	441	130	178	143	451	2585	0	2	1	0
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	27	172	14	212	52	123	37	211	9	52	50	110	33	45	36	113	646	0	1	0	0

AM Period																					
Total	46	312	22	380	102	198	73	373	12	83	61	156	42	56	33	131	1040	0	1	1	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	23	156	11	190	51	99	37	187	6	42	31	78	21	28	17	66	520	0	1	1	0

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	60	376	32	468	106	292	74	472	23	125	137	285	88	122	110	320	1545	0	1	0	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	30	188	16	234	53	146	37	236	12	63	69	143	44	61	55	160	773	0	1	0	0

Average Hour Volumes

				Theatre										
				212										
				Total	14	172	27							
				AM	11	156	23							
				Noon	n/a	n/a	n/a							
				PM	16	188	30							
								PM Noon	AM	Total				
								55	n/a	17	36			
								61	n/a	28	45	113		
								44	n/a	21	33			
													McPhee	
				9	6	n/a	12							
				110	52	42	n/a	63						
				50	31	n/a	69							
				Total	AM	Noon	PM	53	146	37	PM			
								n/a	n/a	n/a	Noon			
								51	99	37	AM			
								52	123	37	Total			
								211						
													Theatre	

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Victoria Avenue
Minor Route: 2nd St North
Municipality: Cranbrook
Filename: Victoria@2ndStNorth.xls
Location #: 8

Date: June 26, 2008
Day-of-week: Thursday

East/West Route: 2nd St North
Intersection Type: Four approach intersection
Signalized?: Yes
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Noon Peak Period

Location: Victoria Avenue @ 2nd St North
Date: Thursday, June 26, 2008

This data is for All Vehicles

Time Period Begins	Victoria NORTH Approach				Victoria SOUTH Approach				2nd St North WEST Approach				2nd St North EAST Approach				Total Volume		% Sat	Pedestrians				Conflict	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

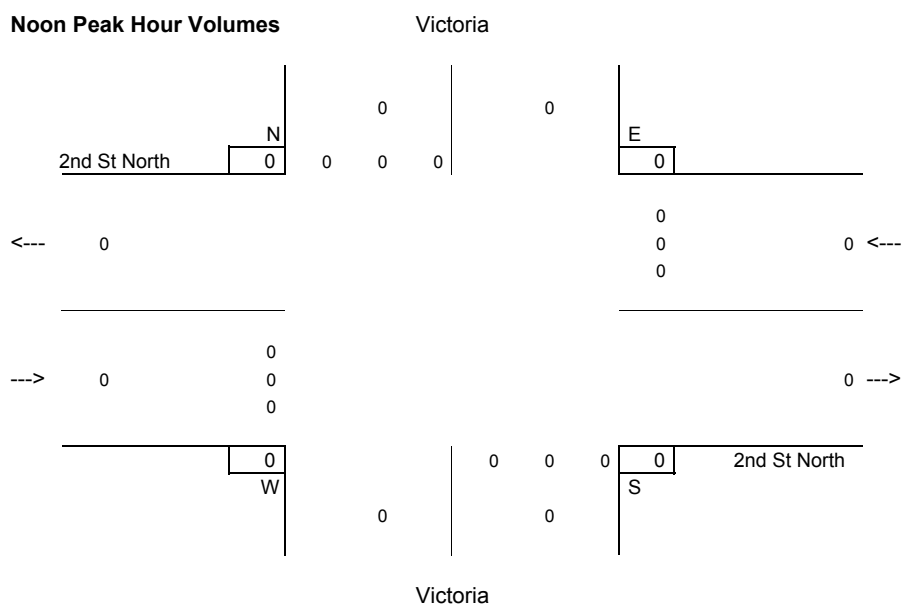
Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



PM Peak Period

Location: Victoria Avenue @ 2nd St North
Date: Thursday, June 26, 2008

This data is for All Vehicles

Time Period	Victoria				Victoria				2nd St North				2nd St North				Total Volume		Pedestrians				Conflict		
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach				15-min	Hour	N	S	W	E	15 min	Hr	
16:00	14	134	57	205	22	81	3	106	44	11	25	80	5	26	17	48	439		6	5	0	0	300		
16:15	23	108	70	201	55	72	7	134	59	13	15	87	5	31	21	57	479	*	5	8	6	1	344		
16:30	22	106	89	217	66	77	4	147	48	19	22	89	7	37	33	77	530	+	5	1	7	2	379		
16:45	18	129	80	227	49	90	4	143	49	20	30	99	2	21	27	50	519	1967	*	4	3	5	2	355	1378
17:00	21	163	47	231	25	68	3	96	49	18	16	83	1	23	16	40	450	1978	*	0	7	6	0	323	1401
17:15	17	147	49	213	16	78	2	96	46	12	23	81	3	17	13	33	423	1922		2	2	0	1	288	1345
17:30	17	134	41	192	16	83	3	102	34	16	17	67	2	6	10	18	379	1771		5	2	3	0	241	1207
17:45	15	129	39	183	9	106	6	121	35	9	21	65	6	5	9	20	389	1641		4	2	2	4	226	1078
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	147	1050	472	1669	258	655	32	945	364	118	169	651	31	166	146	343	3608		31	30	29	10	2456		
Avg Hr	74	525	236	835	129	328	16	473	182	59	85	326	16	83	73	172	1804		16	15	15	5	n/a		

Peak hour of the intersection

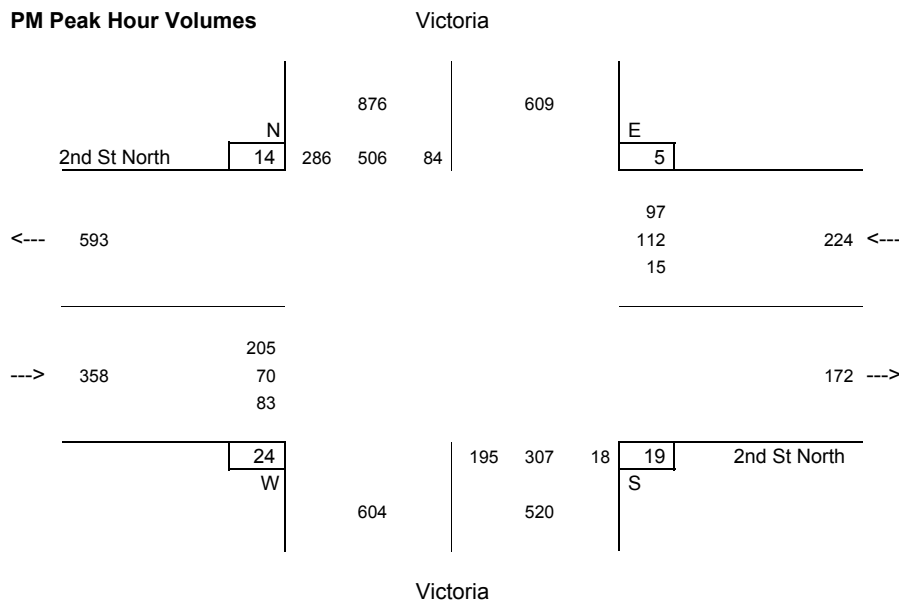
Pk Hr	84	506	286	876	195	307	18	520	205	70	83	358	15	112	97	224	1978	*	14	19	24	5	1401	
15x4	92	652	356	924	264	360	28	588	236	80	120	396	28	148	132	308	2120	+	20	32	28	8	1788	
PHF	0.91	0.78	0.80	0.95	0.74	0.85	0.64	0.88	0.87	0.88	0.69	0.90	0.54	0.76	0.73	0.73	0.93		0.70	0.59	0.86	0.63	0.78	

Peak hour of conflicting volumes for the intersection

Pk Hr	84	506	286	876	195	307	18	520	205	70	83	358	15	112	97	224	1978	*	14	19	24	5	1401	
15x4	92	652	356	924	264	360	28	588	236	80	120	396	28	148	132	308	2120	+	20	32	28	8	1788	
PHF	0.91	0.78	0.80	0.95	0.74	0.85	0.64	0.88	0.87	0.88	0.69	0.90	0.54	0.76	0.73	0.73	0.93		0.70	0.59	0.86	0.63	0.78	



PM Peak Hour Volumes



Average Hour

Location: Victoria Avenue @ 2nd St North
Date: Thursday, June 26, 2008

This data is for All Vehicles

	Victoria				Victoria				2nd St North				2nd St North				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	276	1433	613	2322	392	1387	56	1835	541	229	215	985	40	254	242	536	5678	##	50	54	18
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	69	358	153	581	98	347	14	459	135	57	54	246	10	64	61	134	1420	##	13	14	5

AM Period																					
Total	129	383	141	653	134	732	24	890	177	111	46	334	9	88	96	193	2070	##	20	25	8
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Avg Hr	65	192	71	327	67	366	12	445	89	56	23	167	5	44	48	97	1035	##	10	13	4

Noon Period																				
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	147	1050	472	1669	258	655	32	945	364	118	169	651	31	166	146	343	3608	##	30	29	10
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Avg Hr	74	525	236	835	129	328	16	473	182	59	85	326	16	83	73	172	1804	##	15	15	5

Average Hour Volumes

Victoria

Total	153	358	69
AM	71	192	65
Noon	n/a	n/a	n/a
PM	236	525	74

	PM	Noon	AM	Total
Victoria	73	n/a	48	61
2nd St North	83	n/a	44	64
	16	n/a	5	10

2nd St North

<---

135	89	n/a	182
246	57	56	n/a
54	23	n/a	85

--->

2nd St North

Total	AM	Noon	PM
129	328	16	PM
n/a	n/a	n/a	Noon
67	366	12	AM
98	347	14	Total
	459		

Victoria

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Victoria Avenue
Minor Route: 2nd St South
Municipality: Cranbrook
Filename: Victoria@2ndStSouth.xls
Location #: 9

Date: June 24, 2008
Day-of-week: Tuesday

East/West Route: 2nd St South
Intersection Type: Four approach intersection
Signalized?: Yes
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Survey Data

Location: Victoria Avenue @ 2nd St South
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Table with columns: Time, Period, Victoria (NORTH/SOUTH Approach), 2nd St South (WEST/EAST Approach), Total Volume (15-min, Hour), % Sat, Pedestrians (N, S, W, E). Rows include time intervals from 7:00 to 8:45 and a Total row.

Table with columns: n/a, 0. Rows include n/a entries and a Total row.

Table with columns: Time, Victoria (NORTH/SOUTH Approach), 2nd St South (WEST/EAST Approach), Total Volume (15-min, Hour), % Sat, Pedestrians (N, S, W, E). Rows include time intervals from 16:00 to 17:45 and a Total row.

AM Peak Period

Location: Victoria Avenue @ 2nd St South
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	Victoria NORTH Approach				Victoria SOUTH Approach				2nd St South WEST Approach				2nd St South EAST Approach				Total Volume		% Sat	Pedestrians				Conflict	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
07:00	7	19	3	29	3	35	1	39	10	6	2	18	0	9	17	26	112		0	0	0	0	79		
07:15	10	17	6	33	6	46	6	58	7	10	3	20	0	15	24	39	150		2	0	0	1	108		
07:30	13	20	4	37	14	74	7	95	12	9	6	27	1	10	27	38	197		2	0	2	3	143		
07:45	16	39	7	62	11	89	9	109	25	29	5	59	5	22	41	68	298	757	0	2	3	2	202	532	
08:00	16	31	7	54	12	57	12	81	11	18	8	37	2	23	29	54	226	871	*	2	3	5	3	148	601
08:15	22	39	9	70	13	52	15	80	20	34	5	59	4	43	35	82	291	1012	*	4	0	0	2	187	680
08:30	26	39	17	82	14	63	7	84	13	39	3	55	7	25	35	67	288	1103	*	3	2	3	1	169	706
08:45	23	42	14	79	26	71	6	103	24	26	9	59	3	27	49	79	320	1125	+	5	0	0	1	200	704
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	

Total	133	246	67	446	99	487	63	649	122	171	41	334	22	174	257	453	1882		18	7	13	13	1236
Avg Hr	67	123	34	223	50	244	32	325	61	86	21	167	11	87	129	227	941		9	4	7	7	n/a

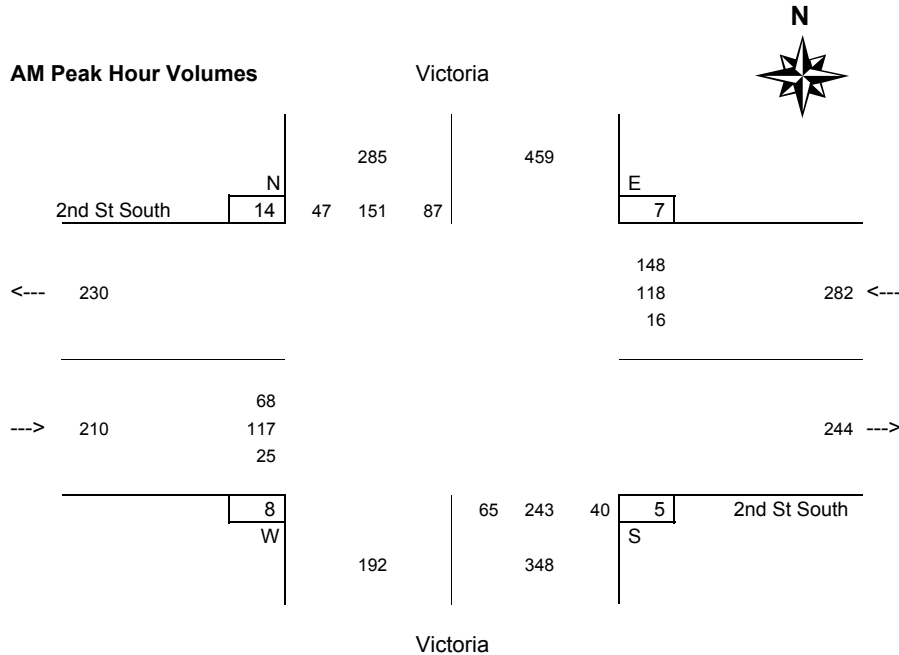
Peak hour of the intersection

Pk Hr	87	151	47	285	65	243	40	348	68	117	25	210	16	118	148	282	1125	*	14	5	8	7	704
15x4	104	168	68	328	104	284	60	412	96	156	36	236	28	172	196	328	1280	+	20	12	20	12	912
PHF	0.84	0.90	0.69	0.87	0.63	0.86	0.67	0.84	0.71	0.75	0.69	0.89	0.57	0.69	0.76	0.86	0.88		0.70	0.42	0.40	0.58	0.77

Peak hour of conflicting volumes for the intersection

Pk Hr	80	148	40	268	50	261	43	354	69	120	21	210	18	113	140	271	1103	*	9	7	11	8	706
15x4	104	156	68	328	56	356	60	436	100	156	32	236	28	172	164	328	1192	+	16	12	20	12	956
PHF	0.77	0.95	0.59	0.82	0.89	0.73	0.72	0.81	0.69	0.77	0.66	0.89	0.64	0.66	0.85	0.83	0.93		0.56	0.58	0.55	0.67	0.74

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Period

Location: Victoria Avenue @ 2nd St South
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	Victoria NORTH Approach				Victoria SOUTH Approach				2nd St South WEST Approach				2nd St South EAST Approach				Total Volume		Pedestrians	Conflict				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

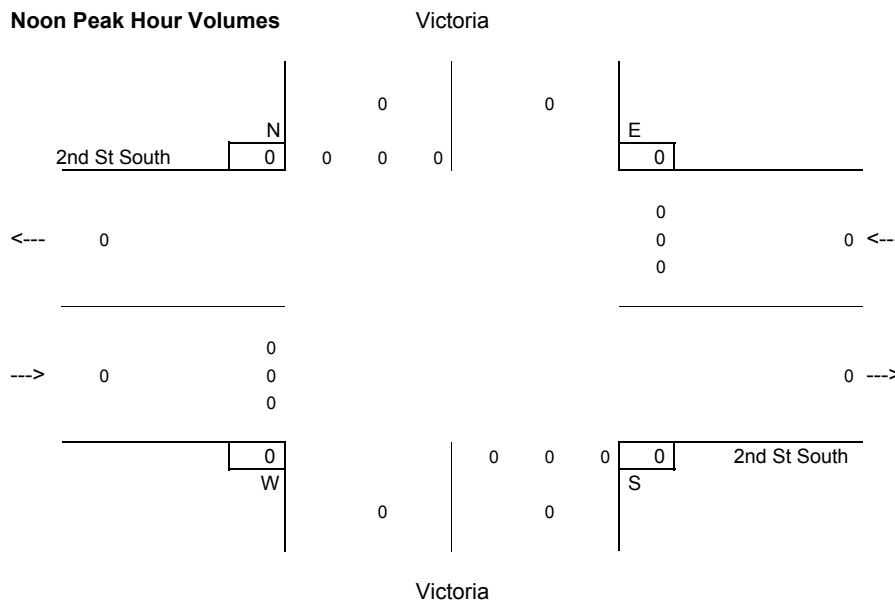
Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Hour Volumes



PM Peak Period

Location: Victoria Avenue @ 2nd St South
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	Victoria NORTH Approach				Victoria SOUTH Approach				2nd St South WEST Approach				2nd St South EAST Approach				Total Volume		Pedestrians				Conflict		
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour	N	S	W	E	15 min	Hr	
16:00	31	107	25	163	14	72	2	88	17	29	12	58	9	26	21	56	365		8	0	3	5	210		
16:15	43	99	14	156	10	64	1	75	11	25	17	53	10	25	27	62	346		6	0	4	1	186		
16:30	32	94	35	161	9	56	3	68	17	27	17	61	14	37	17	68	358	*	9	1	4	0	209		
16:45	38	110	32	180	25	47	3	75	7	32	29	68	15	30	25	70	393	1462	*	3	1	4	0	243	848
17:00	60	142	31	233	9	59	3	71	13	32	13	58	12	29	22	63	425	1522	+	2	0	6	1	246	884
17:15	51	118	25	194	14	57	0	71	11	21	22	54	9	18	17	44	363	1539	*	0	0	2	0	209	907
17:30	39	81	19	139	13	53	3	69	14	31	20	65	5	20	30	55	328	1509		4	0	5	2	177	875
17:45	41	86	16	143	16	51	3	70	17	26	20	63	2	18	22	42	318	1434		2	0	2	1	175	807
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	335	837	197	1369	110	459	18	587	107	223	150	480	76	203	181	460	2896		34	2	30	10		1635	
Avg Hr	168	419	99	685	55	230	9	294	54	112	75	240	38	102	91	230	1448		17	1	15	5		n/a	

Peak hour of the intersection

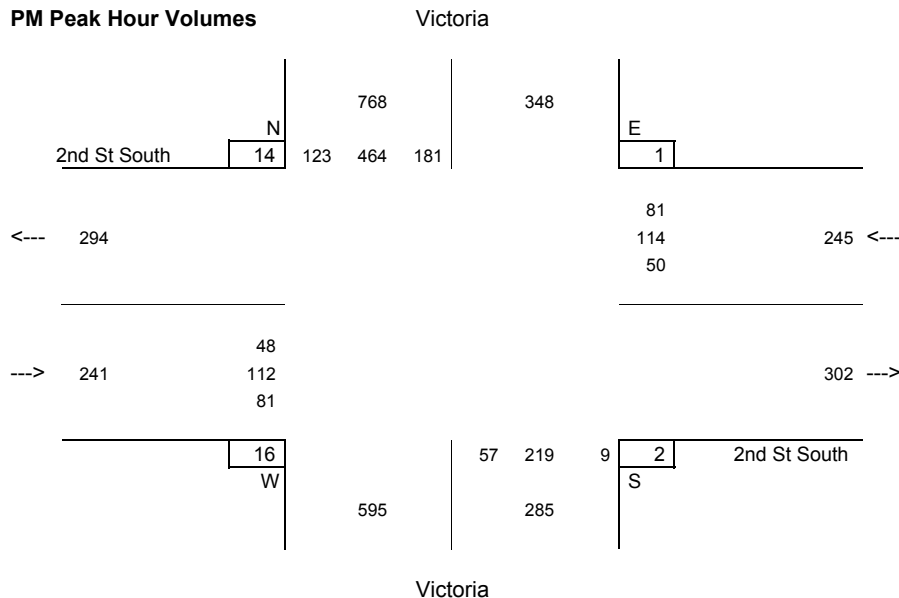
Pk Hr	181	464	123	768	57	219	9	285	48	112	81	241	50	114	81	245	1539	*	14	2	16	1		887
15x4	240	568	140	932	100	236	12	300	68	128	116	272	60	148	100	280	1700	+	36	4	24	4		1124
PHF	0.75	0.82	0.88	0.82	0.57	0.93	0.75	0.95	0.71	0.88	0.70	0.89	0.83	0.77	0.81	0.88	0.91	0.39	0.50	0.67	0.25		0.79	

Peak hour of conflicting volumes for the intersection

Pk Hr	181	464	123	768	57	219	9	285	48	112	81	241	50	114	81	245	1539	*	14	2	16	1		887
15x4	240	568	140	932	100	236	12	300	68	128	116	272	60	148	100	280	1700	+	36	4	24	4		1124
PHF	0.75	0.82	0.88	0.82	0.57	0.93	0.75	0.95	0.71	0.88	0.70	0.89	0.83	0.77	0.81	0.88	0.91	0.39	0.50	0.67	0.25		0.79	



PM Peak Hour Volumes



Average Hour

Location: Victoria Avenue @ 2nd St South
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Survey	Victoria				Victoria				2nd St South				2nd St South				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Total	468	1083	264	1815	209	946	81	1236	229	394	191	814	98	377	438	913	4778	##	9	43	23
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	117	271	66	454	52	237	20	309	57	99	48	204	25	94	110	228	1195	##	2	11	6

AM Period																					
Total	133	246	67	446	99	487	63	649	122	171	41	334	22	174	257	453	1882	##	7	13	13
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Avg Hr	67	123	34	223	50	244	32	325	61	86	21	167	11	87	129	227	941	9	4	7	7

Noon Period																				
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	335	837	197	1369	110	459	18	587	107	223	150	480	76	203	181	460	2896	##	2	30	10
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Avg Hr	168	419	99	685	55	230	9	294	54	112	75	240	38	102	91	230	1448	##	1	15	5

Average Hour Volumes

Victoria

	Total	66	271	117
	AM	34	123	67
	Noon	n/a	n/a	n/a
	PM	99	419	168

PM	Noon	AM	Total
----	------	----	--------------

2nd St South

<---	91	n/a	129	110
	102	n/a	87	94
	38	n/a	11	25

57	61	n/a	54
204	99	86	n/a
48	21	n/a	75

2nd St South

Total	AM	Noon	PM
--------------	----	------	----

55	230	9	PM
n/a	n/a	n/a	Noon
50	244	32	AM
52	237	20	Total
309			

Victoria

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Victoria Avenue
Minor Route: 13th St South
Municipality: Cranbrook
Filename: Victoria@13thStSouth.xls
Location #: 10

Date: June 26, 2008
Day-of-week: Thursday

East/West Route: 13th St South
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments: 80% vehicles on West approach run the stop sign.

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Noon Peak Period

Location: Victoria Avenue @ 13th St South
 Date: Thursday, June 26, 2008

This data is for All Vehicles

Time Period Begins	Victoria				Driveway				13th St South				13th St South				Total Volume		% Sat	Pedestrians				Conflict						
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach				15-min	Hour		N	S	W	E	15 min	Hr					
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **

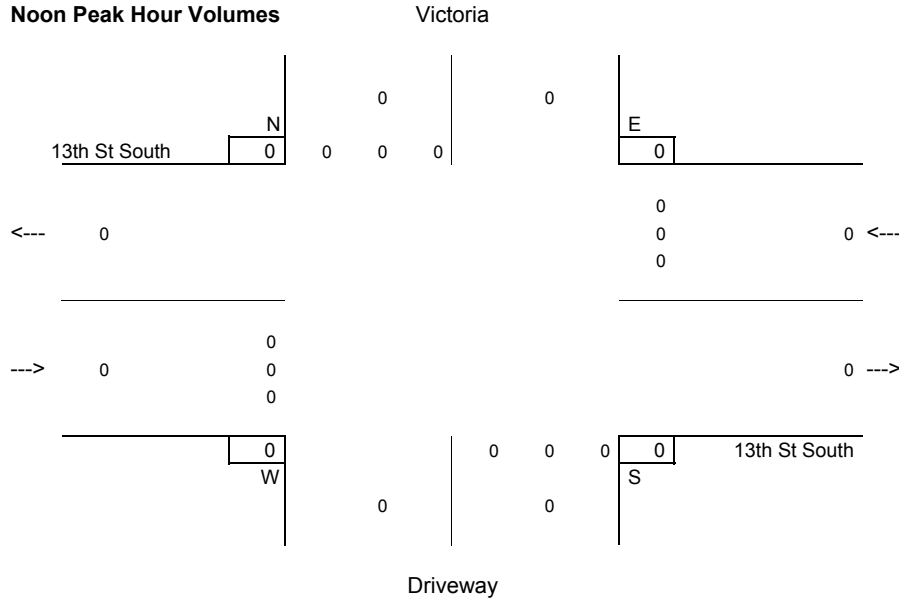


Table with columns: Time, Victoria (NORTH Approach), Driveway (SOUTH Approach), 13th St South (WEST Approach), 13th St South (EAST Approach), Total Volume (15-min, Hour), Pedestrians (N, S, W, E), Conflict (15 min, Hr). Rows represent time intervals from 16:00 to 17:45.

Summary table for total and average hourly volumes and pedestrian counts across all approaches.

Peak hour of the intersection

Table showing peak hour data for the intersection, including Pk Hr, 15x4, PHF, and pedestrian counts.

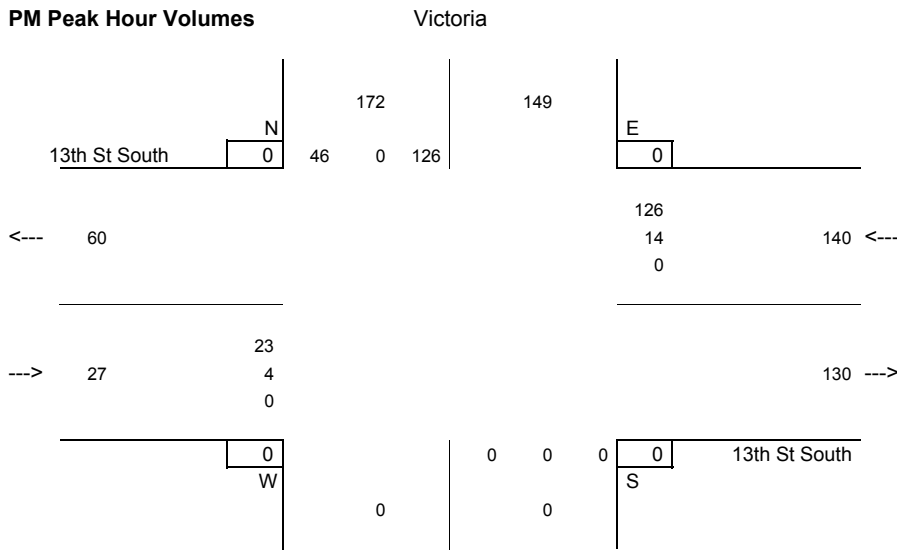
Peak hour of conflicting volumes for the intersection

Table showing peak hour data for conflicting volumes, including Pk Hr, 15x4, PHF, and pedestrian counts.

** Peak hour in first or last hour, peak hour may be invalid. **



PM Peak Hour Volumes



Driveway

Average Hour

Location: Victoria Avenue @ 13th St South
 Date: Thursday, June 26, 2008

This data is for All Vehicles

Survey	Victoria				Driveway				13th St South				13th St South				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Total	333	1	158	492	1	1	0	2	111	31	0	142	0	35	412	447	1083	2	0	0	1
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	83	0	40	123	0	0	0	1	28	8	0	36	0	9	103	112	271	1	0	0	0

AM Period																					
Total	87	0	68	155	1	0	0	1	66	23	0	89	0	16	206	222	467	0	0	0	1
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	44	0	34	78	1	0	0	1	33	12	0	45	0	8	103	111	234	0	0	0	1

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	246	1	90	337	0	1	0	1	45	8	0	53	0	19	206	225	616	2	0	0	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	123	1	45	169	0	1	0	1	23	4	0	27	0	10	103	113	308	1	0	0	0

Average Hour Volumes

Victoria

Total			123		
	40	0	83		
	AM	34	0	44	
	Noon	n/a	n/a	n/a	
13th St South					
				103	103
	28	33	n/a	23	
	36	8	12	n/a	4
Total					
	AM	123	1	123	
	Noon	0	0	0	
	PM	45	1	123	

PM	Noon	AM	Total
103	n/a	103	103
<---	10	n/a	8
	0	n/a	0
112			
0			

13th St South

Driveway

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Victoria Avenue
Minor Route: Kootenay Street
Municipality: Cranbrook
Filename: Victoria@Kootenay.xls
Location #: 7

Date: June 24, 2008
Day-of-week: Tuesday

East/West Route: Kootenay Street
Intersection Type: Four approach intersection
Signalized?: Yes
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Average Hour

Location: Victoria Avenue @ Kootenay Street
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

	Victoria				Victoria				Kootenay				Kootenay				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	68	1588	167	1823	104	1568	271	1943	225	277	77	579	504	441	89	1034	5379	##	14	29	36
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	17	397	42	456	26	392	68	486	56	69	19	145	126	110	22	259	1345	8	4	7	9

AM Period																					
Total	13	506	71	590	45	701	94	840	75	93	10	178	137	160	40	337	1945	8	6	8	13
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	7	253	36	295	23	351	47	420	38	47	5	89	69	80	20	169	973	4	3	4	7

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	55	1082	96	1233	59	867	177	1103	150	184	67	401	367	281	49	697	3434	##	8	21	23
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	28	541	48	617	30	434	89	552	75	92	34	201	184	141	25	349	1717	##	4	11	12

Average Hour Volumes

Victoria

				456
Total	42	397	17	
AM	36	253	7	
Noon	n/a	n/a	n/a	
PM	48	541	28	

	PM	Noon	AM	Total
	25	n/a	20	22
<---	141	n/a	80	110
	184	n/a	69	126

Kootenay

56	38	n/a	75
145	69	47	n/a
19	5	n/a	34

Kootenay

	Total	AM	Noon	PM
	30	434	89	PM
	n/a	n/a	n/a	Noon
	23	351	47	AM
	26	392	68	Total
		486		

Victoria

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: 7th Ave South
Minor Route: 2nd St South
Municipality: Cranbrook
Filename: 7thAveSouth@2ndStSouth.xls
Location #: 20

Date: June 24, 2008
Day-of-week: Tuesday

East/West Route: 2nd St South
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments: Speeding each way on 7th Ave and queuing on 2nd in the PM. Pedestrians have hard time crossing 7th as cars do not stop without a crosswalk.

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Survey Data

Location: 7th Ave South @ 2nd St South
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Table with columns: Time, Period, Approach (North, South, West, East), Total Volume (15-min, Hour), Pedestrians (N, S, W, E). Rows include time intervals from 7:00 to 8:45 and a Total row.

Table with columns: Time, Period, Approach (North, South, West, East), Total Volume (15-min, Hour), Pedestrians (N, S, W, E). Rows include time intervals from 9:00 to 9:45 and a Total row.

Table with columns: Time, Period, Approach (North, South, West, East), Total Volume (15-min, Hour), Pedestrians (N, S, W, E). Rows include time intervals from 16:00 to 17:45 and a Total row.

Noon Peak Period

Location: 7th Ave South @ 2nd St South
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	7th Ave South NORTH Approach				7th Ave South SOUTH Approach				2nd St South WEST Approach				2nd St South EAST Approach				Total Volume		%	Pedestrians				Conflict	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

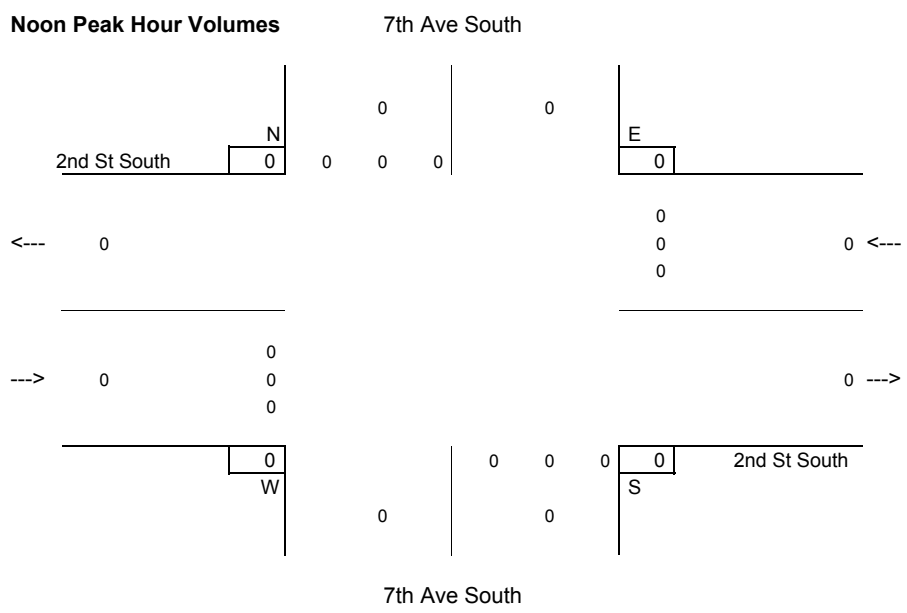
Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Average Hour

Location: 7th Ave South @ 2nd St South
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

7th Ave South				7th Ave South				2nd St South				2nd St South				Total Volume	Pedestrians				
NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E	
Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total						
Survey																					
Total	55	722	43	820	22	743	134	899	26	193	18	237	130	236	97	463	2419	##	9	4	23
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	14	181	11	205	6	186	34	225	7	48	5	59	33	59	24	116	605	3	2	1	6

AM Period																					
Total	18	154	8	180	13	433	86	532	6	83	6	95	36	65	26	127	934	4	1	3	12
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	9	77	4	90	7	217	43	266	3	42	3	48	18	33	13	64	467	2	1	2	6

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	37	568	35	640	9	310	48	367	20	110	12	142	94	171	71	336	1485	6	8	1	11
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	19	284	18	320	5	155	24	184	10	55	6	71	47	86	36	168	743	3	4	1	6

Average Hour Volumes

7th Ave South

				205											
				Total	11	181	14								
				AM	4	77	9								
				Noon	n/a	n/a	n/a								
				PM	18	284	19								
							PM Noon	AM	Total						
							36	n/a	13	24					
				2nd St South			<---	86	n/a	33	59		116		
							47	n/a	18	33					
													2nd St South		
				7	3	n/a	10								
				59	48	42	n/a	55							---->
				5	3	n/a	6								
				Total	AM	Noon	PM								
					5	155	24							PM	
					n/a	n/a	n/a							Noon	
					7	217	43							AM	
					6	186	34							Total	
					225										

7th Ave South

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: 7th Ave South
Minor Route: 11th St South
Municipality: Cranbrook
Filename: 7thAveSouth@11thStSouth.xls
Location #: 21

Date: June 26, 2008
Day-of-week: Thursday

East/West Route: 11th St South
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

AM Peak Period

Location: 7th Ave South @ 11th St South
Date: Thursday, June 26, 2008

This data is for All Vehicles

Time Period	7th Ave South				7th Ave South				11th St South				11th St South				Total Volume		ped	Pedestrians				Conflict	
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach				15-min	Hour		N	S	W	E	15 min	Hr
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total									
07:00	4	1	2	7	0	5	0	5	3	4	0	7	1	7	7	15	34		0	1	0	0	26		
07:15	5	5	3	13	0	14	2	16	4	6	0	10	2	8	13	23	62		1	0	0	1	46		
07:30	1	2	1	4	1	10	1	12	5	6	0	11	1	12	12	25	52		2	3	0	0	41		
07:45	1	1	1	3	0	12	7	19	12	7	0	19	0	11	17	28	69	217	1	0	0	0	60	173	
08:00	2	5	3	10	0	12	4	16	7	17	2	26	1	10	9	20	72	255*	0	2	0	0	44	191	
08:15	13	3	2	18	0	12	0	12	9	13	0	22	4	14	12	30	82	275*	1	0	0	2	60	205	
08:30	7	5	3	15	0	8	2	10	5	10	1	16	5	10	18	33	74	297*	0	0	0	1	50	214	
08:45	6	5	3	14	3	17	5	25	6	15	0	21	1	16	14	31	91	319+	2	1	1	1	64	218	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
Total	39	27	18	84	4	90	21	115	51	78	3	132	15	88	102	205	536		7	7	1	5	391		
Avg Hr	20	14	9	42	2	45	11	58	26	39	2	66	8	44	51	103	268		4	4	1	3	n/a		

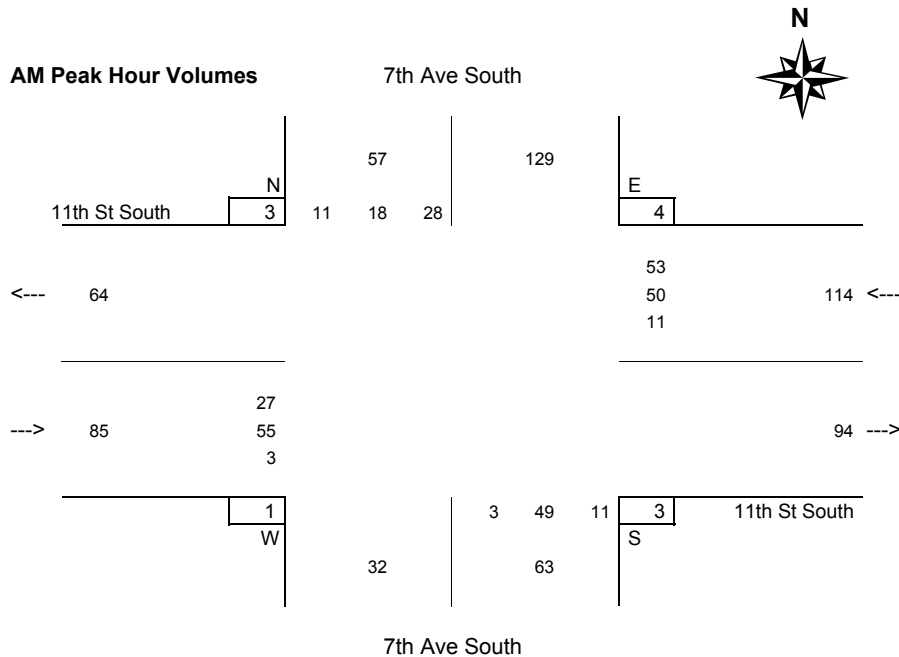
Peak hour of the intersection

Pk Hr	28	18	11	57	3	49	11	63	27	55	3	85	11	50	53	114	319*		3	3	1	4	218	
15x4	52	20	12	72	12	68	20	100	36	68	8	104	20	64	72	132	364+		8	8	4	8	312	
PHF	0.54	0.90	0.92	0.79	0.25	0.72	0.55	0.63	0.75	0.81	0.38	0.82	0.55	0.78	0.74	0.86	0.88		0.38	0.38	0.25	0.50	0.70	

Peak hour of conflicting volumes for the intersection

Pk Hr	28	18	11	57	3	49	11	63	27	55	3	85	11	50	53	114	319*		3	3	1	4	218	
15x4	52	20	12	72	12	68	20	100	36	68	8	104	20	64	72	132	364+		8	8	4	8	312	
PHF	0.54	0.90	0.92	0.79	0.25	0.72	0.55	0.63	0.75	0.81	0.38	0.82	0.55	0.78	0.74	0.86	0.88		0.38	0.38	0.25	0.50	0.70	

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Period

Location: 7th Ave South @ 11th St South
 Date: Thursday, June 26, 2008

This data is for All Vehicles

Time Period Begins	7th Ave South NORTH Approach				7th Ave South SOUTH Approach				11th St South WEST Approach				11th St South EAST Approach				Total Volume		% of Sat	Pedestrians				Conflict	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

0	0	0	0	0
n/a	n/a	n/a	n/a	n/a

0
n/a

Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

0	0	0	0	0
0	0	0	0	0
n/a	n/a	n/a	n/a	n/a

0
0
n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

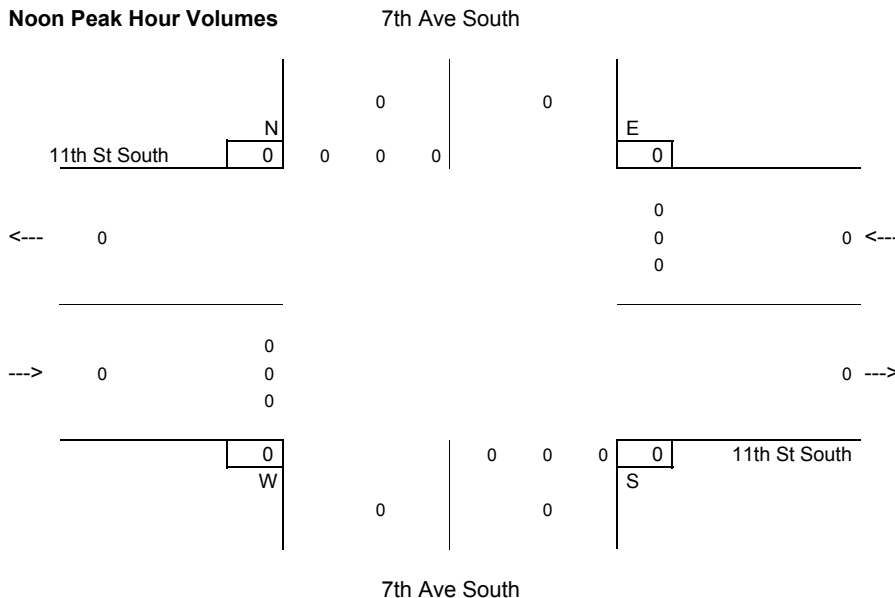
0	0	0	0	0
0	0	0	0	0
n/a	n/a	n/a	n/a	n/a

0
0
#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Hour Volumes



Average Hour

Location: 7th Ave South @ 11th St South
Date: Thursday, June 26, 2008

This data is for All Vehicles

7th Ave South				7th Ave South				11th St South				11th St South				Total Volume	Pedestrians				
NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E	
Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total						
Survey																					
Total	169	150	61	380	9	169	51	229	71	223	11	305	52	221	152	425	1339	##	8	3	6
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	42	38	15	95	2	42	13	57	18	56	3	76	13	55	38	106	335	3	2	1	2

AM Period																					
Total	39	27	18	84	4	90	21	115	51	78	3	132	15	88	102	205	536	7	7	1	5
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	20	14	9	42	2	45	11	58	26	39	2	66	8	44	51	103	268	4	4	1	3

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	130	123	43	296	5	79	30	114	20	145	8	173	37	133	50	220	803	3	1	2	1
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	65	62	22	148	3	40	15	57	10	73	4	87	19	67	25	110	402	2	1	1	1

Average Hour Volumes

7th Ave South

				95											
				Total	15	38	42								
				AM	9	14	20								
				Noon	n/a	n/a	n/a								
				PM	22	62	65								
								PM Noon	AM	Total					
								25	n/a	51	38				
								<---	67	n/a	44	55	106		
								19	n/a	8	13				
													11th St South		
				18	26	n/a	10								
				76	56	39	n/a	73						---	
				3	2	n/a	4								
				Total	AM	Noon	PM								
								3	40	15	PM				
								n/a	n/a	n/a	Noon				
								2	45	11	AM				
								2	42	13	Total				
								57							

7th Ave South

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: 11th Ave South
Minor Route: 2nd St South
Municipality: Cranbrook
Filename: 11thAveSouth@2ndStSouth.xls
Location #: 16

Date: June 25, 2008
Day-of-week: Wednesday

East/West Route: 2nd St South
Intersection Type: Four approach intersection
Signalized?: No
Weather: Clear and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

AM Peak Period

Location: 11th Ave South @ 2nd St South
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period Begins	11th Ave South NORTH Approach				11th Ave South SOUTH Approach				2nd St South WEST Approach				2nd St South EAST Approach				Total Volume		% Sat	Pedestrians				Conflict	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
07:00	0	5	0	5	1	15	0	16	3	7	1	11	1	22	4	27	59		0	0	0	0	44		
07:15	1	2	1	4	3	8	2	13	1	10	2	13	1	25	4	30	60		0	0	0	1	41		
07:30	2	4	2	8	10	25	1	36	1	13	1	15	2	14	9	25	84		1	0	2	0	52		
07:45	4	8	0	12	9	23	3	35	1	23	1	25	0	25	11	36	108	311	2	1	3	0	67	204	
08:00	1	19	2	22	3	33	5	41	1	19	4	24	1	27	12	40	127	379*	0	0	0	0	79	239	
08:15	8	13	4	25	6	34	3	43	3	27	1	31	1	27	19	47	146	465+	4	1	1	1	94	292	
08:30	5	11	4	20	9	41	3	53	2	19	1	22	1	31	11	43	138	519*	0	0	0	0	93	333	
08:45	7	7	1	15	2	32	1	35	8	20	5	33	1	31	14	46	129	540*	1	0	1	1	93	359	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	
n/a				0				0				0				0	0	0	0	0	0	0	0	0	

Total	28	69	14	111	43	211	18	272	20	138	16	174	8	202	84	294	851		8	2	7	3	563
Avg Hr	14	35	7	56	22	106	9	136	10	69	8	87	4	101	42	147	426		4	1	4	2	n/a

Peak hour of the intersection

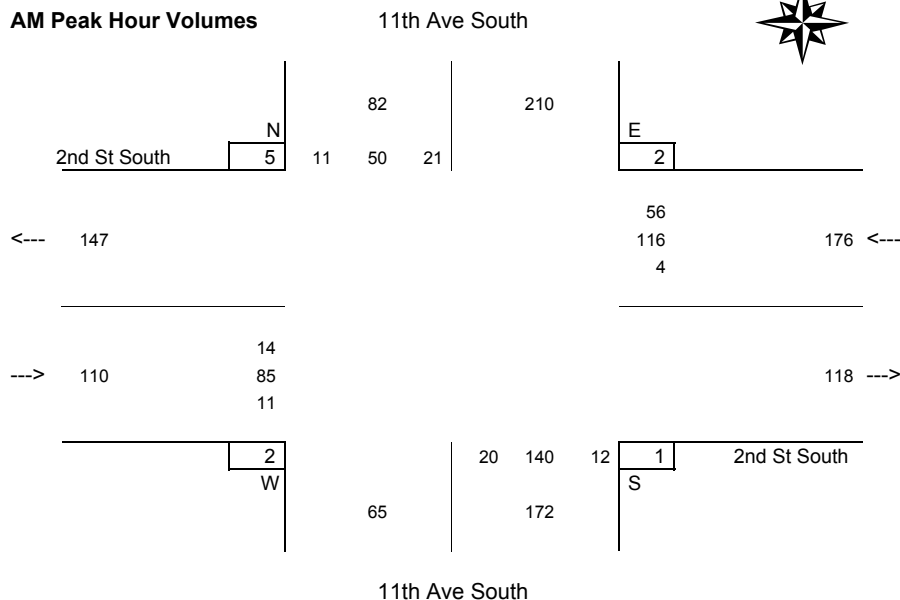
Pk Hr	21	50	11	82	20	140	12	172	14	85	11	110	4	116	56	176	540*	5	1	2	2	359
15x4	32	76	16	100	36	164	20	212	32	108	20	132	4	124	76	188	584+	16	4	4	4	448
PHF	0.66	0.66	0.69	0.82	0.56	0.85	0.60	0.81	0.44	0.79	0.55	0.83	1.00	0.94	0.74	0.94	0.92	0.31	0.25	0.50	0.50	0.80

Peak hour of conflicting volumes for the intersection

Pk Hr	21	50	11	82	20	140	12	172	14	85	11	110	4	116	56	176	540*	5	1	2	2	359
15x4	32	76	16	100	36	164	20	212	32	108	20	132	4	124	76	188	584+	16	4	4	4	448
PHF	0.66	0.66	0.69	0.82	0.56	0.85	0.60	0.81	0.44	0.79	0.55	0.83	1.00	0.94	0.74	0.94	0.92	0.31	0.25	0.50	0.50	0.80

** Peak hour in first or last hour, peak hour may be invalid. **

AM Peak Hour Volumes



Noon Peak Period

Location: 11th Ave South @ 2nd St South
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period Begins	11th Ave South NORTH Approach				11th Ave South SOUTH Approach				2nd St South WEST Approach				2nd St South EAST Approach				Total Volume		Pedestrians	Conflict				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

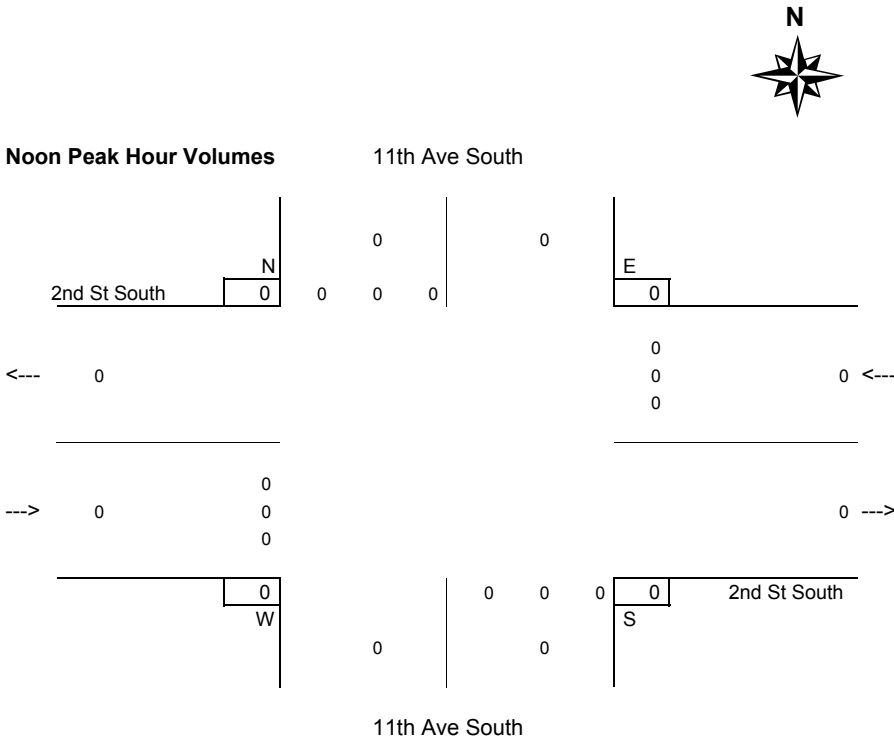
Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Average Hour

Location: 11th Ave South @ 2nd St South
 Date: Wednesday, June 25, 2008

This data is for All Vehicles

11th Ave South				11th Ave South				2nd St South				2nd St South				Total Volume	Pedestrians				
NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E	
Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total						
Survey																					
Total	153	380	74	607	62	336	38	436	42	308	48	398	28	381	130	539	1980	##	4	15	12
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	38	95	19	152	16	84	10	109	11	77	12	100	7	95	33	135	495	3	1	4	3

AM Period																					
Total	28	69	14	111	43	211	18	272	20	138	16	174	8	202	84	294	851	8	2	7	3
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	14	35	7	56	22	106	9	136	10	69	8	87	4	101	42	147	426	4	1	4	2

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	125	311	60	496	19	125	20	164	22	170	32	224	20	179	46	245	1129	5	2	8	9
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	63	156	30	248	10	63	10	82	11	85	16	112	10	90	23	123	565	3	1	4	5

Average Hour Volumes

11th Ave South

	Total	19	95	38
	AM	7	35	14
	Noon	n/a	n/a	n/a
	PM	30	156	63

PM	Noon	AM	Total
----	------	----	--------------

2nd St South

<---	23	n/a	42	33
	90	n/a	101	95
	10	n/a	4	7

	11	10	n/a	11
100	77	69	n/a	85
	12	8	n/a	16

2nd St South

Total	AM	Noon	PM
--------------	----	------	----

10	63	10	PM
n/a	n/a	n/a	Noon
22	106	9	AM
16	84	10	Total
	109		

11th Ave South

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: 14th Ave South
Minor Route: 2nd St South
Municipality: Cranbrook
Filename: 14thAveSouth@2ndStSouth.xls
Location #: 14

Date: June 25, 2008
Day-of-week: Wednesday

East/West Route: 2nd St South
Intersection Type: Four approach intersection
Signalized?: Yes
Weather: Clear and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Noon Peak Period

Location: 14th Ave South @ 2nd St South
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Time Period Begins	14th Ave South NORTH Approach				14th Ave South SOUTH Approach				2nd St South WEST Approach				2nd St South EAST Approach				Total Volume		Pedestrians	Conflict					
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

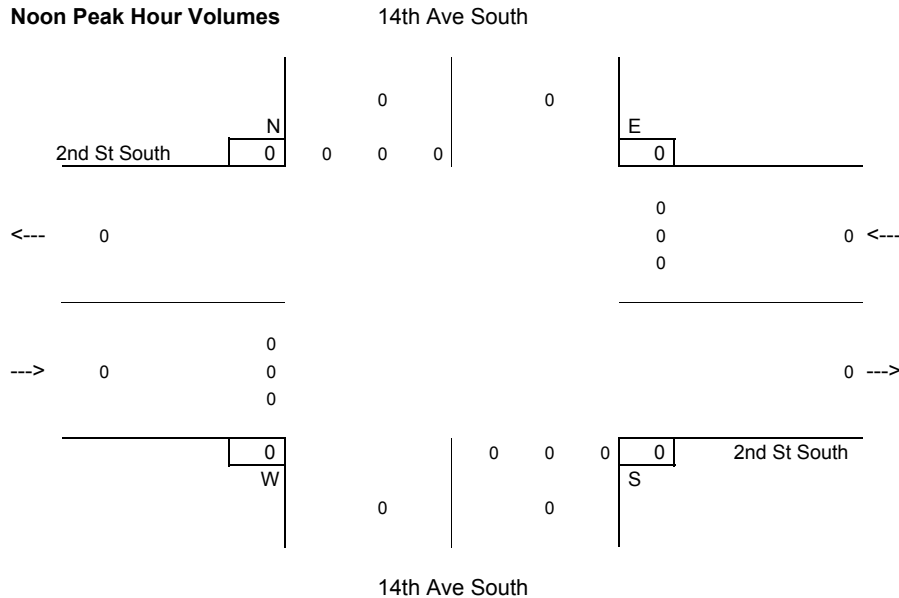
Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Average Hour

Location: 14th Ave South @ 2nd St South
Date: Wednesday, June 25, 2008

This data is for All Vehicles

14th Ave South				14th Ave South				2nd St South				2nd St South				Total Volume	Pedestrians				
NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E	
Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total						
Survey																					
Total	241	746	56	1043	118	882	155	1155	53	489	91	633	108	456	198	762	3593	##	12	31	26
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	60	187	14	261	30	221	39	289	13	122	23	158	27	114	50	191	898	7	3	8	7

AM Period																					
Total	40	133	11	184	66	448	78	592	23	169	24	216	32	237	106	375	1367	##	4	9	11
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	20	67	6	92	33	224	39	296	12	85	12	108	16	119	53	188	684	8	2	5	6

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	201	613	45	859	52	434	77	563	30	320	67	417	76	219	92	387	2226	##	8	22	15
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	101	307	23	430	26	217	39	282	15	160	34	209	38	110	46	194	1113	5	4	11	8

Average Hour Volumes

14th Ave South

	Total	14	187	60
	AM	6	67	20
	Noon	n/a	n/a	n/a
	PM	23	307	101

	PM	Noon	AM	Total
	46	n/a	53	50
	110	n/a	119	114
	38	n/a	16	27

2nd St South

<---	110	n/a	119	114	191
	38	n/a	16	27	

13	12	n/a	15
158	122	85	n/a 160 --->
23	12	n/a	34

2nd St South

Total	AM	Noon	PM

26	217	39	PM
n/a	n/a	n/a	Noon
33	224	39	AM
30	221	39	Total
	289		

14th Ave South

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: 14th Ave South
Minor Route: 11th St South
Municipality: Cranbrook
Filename: 14thAveSouth@11thStSouth.xls
Location #: 15

Date: June 24, 2008
Day-of-week: Tuesday

East/West Route: 11th St South
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Noon Peak Period

Location: 14th Ave South @ 11th St South
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Table with columns: Time, Period, 14th Ave South (North/South Approach), 11th St South (West/East Approach), Gravel Church Entrance (East Approach), Total Volume (15-min, Hour), Pedestrians (N, S, W, E), Conflict (15 min, Hr). Rows show time periods from n/a to n/a with traffic volume data.

Summary table for Total and Avg Hr across various approaches.

Summary table for Pedestrians (N, S, W, E).

Summary table for Conflict (15 min, Hr).

Peak hour of the intersection

Table for Peak hour of the intersection with rows: Pk Hr, 15x4, PHF.

Table for Pedestrians during peak hour.

Table for Conflict during peak hour.

Peak hour of conflicting volumes for the intersection

Table for Peak hour of conflicting volumes with rows: Pk Hr, 15x4, PHF.

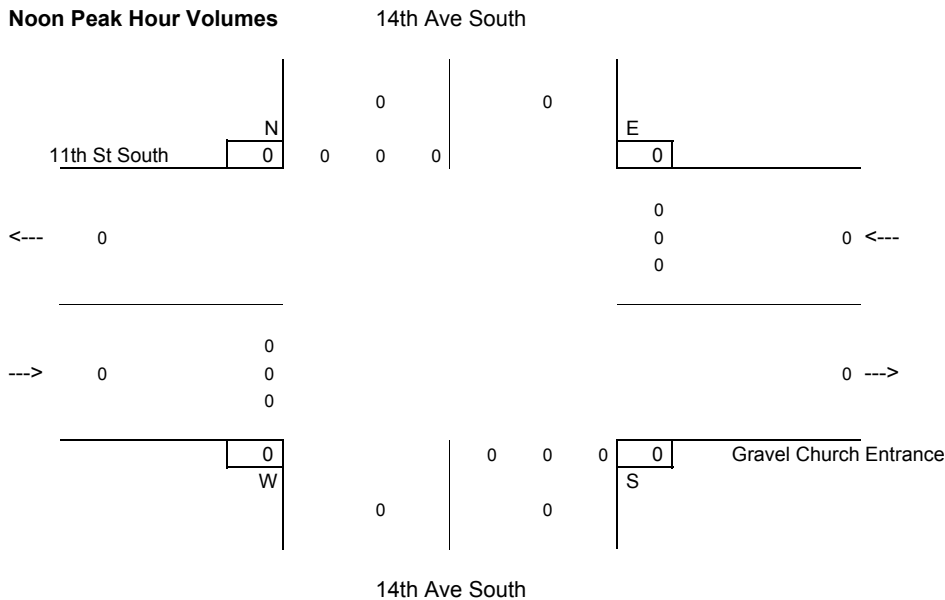
Table for Pedestrians during conflicting peak hour.

Table for Conflict during conflicting peak hour.

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Hour Volumes



PM Peak Period

Location: 14th Ave South @ 11th St South
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	14th Ave South NORTH Approach				14th Ave South SOUTH Approach				11th St South WEST Approach				Gravel Church Entrance EAST Approach				Total Volume		Pedestrians				Conflict	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour	N	S	W	E	15 min	Hr
16:00	0	48	25	73	8	26	0	34	8	0	14	22	0	0	1	1	130		0	0	1	0	95	
16:15	0	39	25	64	14	25	0	39	14	0	14	28	0	0	0	0	131		0	0	1	0	92	
16:30	0	43	15	58	9	26	0	35	14	0	18	32	0	0	0	0	125		0	0	3	0	85	
16:45	0	48	23	71	9	30	0	39	12	0	18	30	0	0	0	0	140	526 *	0	1	2	0	98	370
17:00	0	46	17	63	10	19	0	29	13	0	26	39	0	0	0	0	131	527 *	0	2	4	0	99	374
17:15	0	44	29	73	17	18	0	35	18	0	23	41	0	0	0	0	149	545 *	0	0	1	0	113	395
17:30	1	53	28	82	13	27	0	40	17	0	23	40	0	0	0	0	162	582 +	0	0	2	0	117	427
17:45	0	27	12	39	18	34	0	52	17	0	20	37	0	0	0	0	128	570	1	0	0	0	77	406
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	348	174	523	98	205	0	303	113	0	156	269	0	0	1	1	1096		1	3	14	0		776
Avg Hr	1	174	87	262	49	103	0	152	57	0	78	135	0	0	1	1	548		1	2	7	0		n/a

Peak hour of the intersection

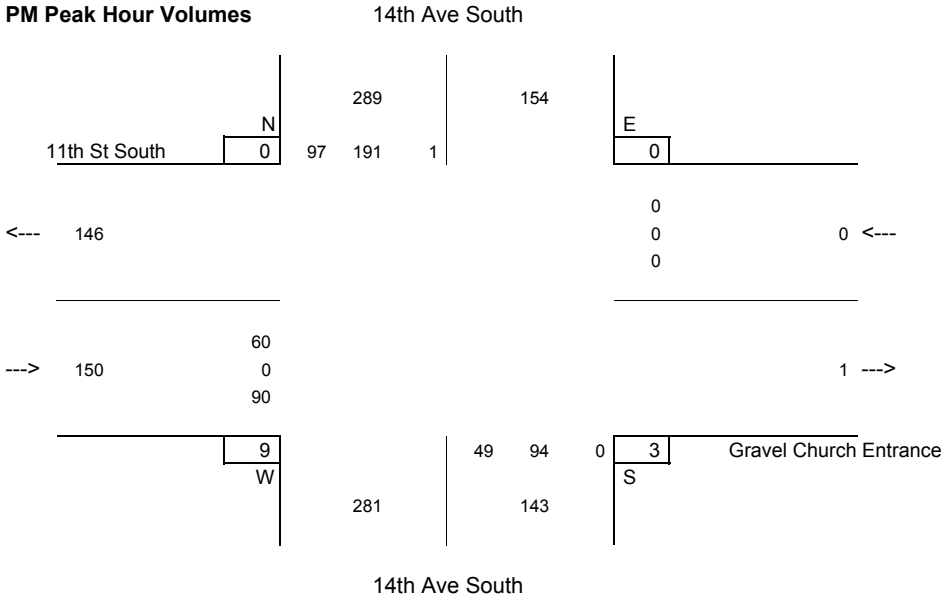
Pk Hr	1	191	97	289	49	94	0	143	60	0	90	150	0	0	0	0	582 *		0	3	9	0		427
15x4	4	212	116	328	68	120	0	160	72	0	104	164	0	0	0	0	648 +		0	8	16	0		500
PHF	0.25	0.90	0.84	0.88	0.72	0.78	n/a	0.89	0.83	n/a	0.87	0.91	n/a	n/a	n/a	n/a	0.90		n/a	0.38	0.56	n/a		0.85

Peak hour of conflicting volumes for the intersection

Pk Hr	1	191	97	289	49	94	0	143	60	0	90	150	0	0	0	0	582 *		0	3	9	0		427
15x4	4	212	116	328	68	120	0	160	72	0	104	164	0	0	0	0	648 +		0	8	16	0		500
PHF	0.25	0.90	0.84	0.88	0.72	0.78	n/a	0.89	0.83	n/a	0.87	0.91	n/a	n/a	n/a	n/a	0.90		n/a	0.38	0.56	n/a		0.85



PM Peak Hour Volumes



Average Hour

Location: 14th Ave South @ 11th St South
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

	14th Ave South				14th Ave South				11th St South				Gravel Church Entrance				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	1	436	222	659	200	495	0	695	204	0	228	432	1	0	1	2	1788	5	3	22	0
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	0	109	56	165	50	124	0	174	51	0	57	108	0	0	0	1	447	1	1	6	0

AM Period																					
Total	0	88	48	136	102	290	0	392	91	0	72	163	1	0	0	1	692	4	0	8	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	0	44	24	68	51	145	0	196	46	0	36	82	1	0	0	1	346	2	0	4	0

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	1	348	174	523	98	205	0	303	113	0	156	269	0	0	1	1	1096	1	3	14	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	1	174	87	262	49	103	0	152	57	0	78	135	0	0	1	1	548	1	2	7	0

Average Hour Volumes

14th Ave South

				165											
Total				56	109	0									
AM				24	44	0									
Noon				n/a	n/a	n/a									
PM				87	174	1									
										PM Noon	AM	Total			
										1	n/a	0	0		
11th St South										<---	0	n/a	0	0	1
										0	n/a	1	0		
										Gravel Church Entrance					
				51	46	n/a	57								
108				0	0	n/a	0	---							
				57	36	n/a	78								
Total				AM	Noon	PM									
				49	103	0	PM								
				n/a	n/a	n/a	Noon								
				51	145	0	AM								
				50	124	0	Total								
				174											

14th Ave South

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: 14th Ave South
Minor Route: 17th St South
Municipality: Cranbrook
Filename: 14thAveSouth@17thStSouth.xls
Location #: 19

Date: June 26, 2008
Day-of-week: Thursday

East/West Route: 17th St South
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Time Period Begins	14th Ave South NORTH Approach				14th Ave South SOUTH Approach				17th St South WEST Approach				17th St South EAST Approach				Total Volume		% Sat	Pedestrians				Conflict	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		

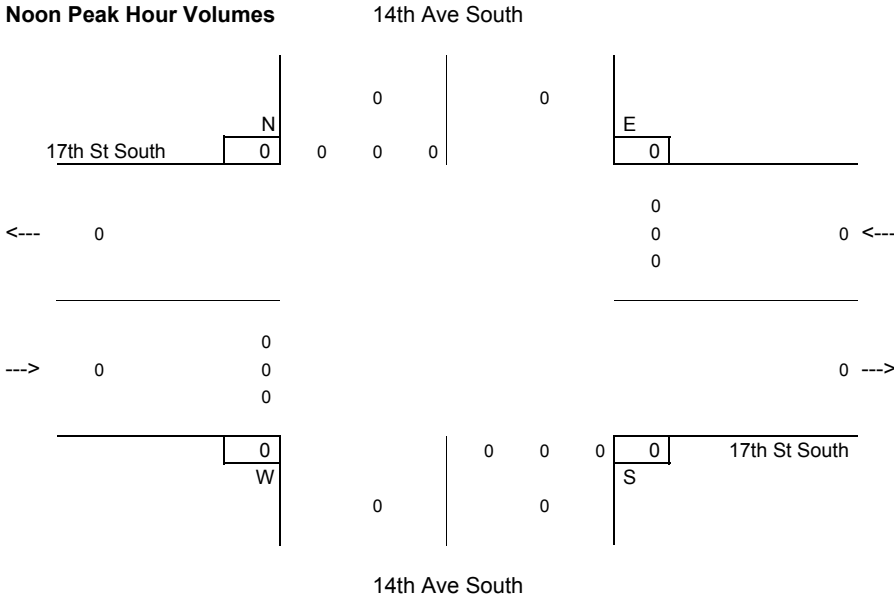
Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Average Hour

Location: 14th Ave South @ 17th St South
Date: Thursday, June 26, 2008

This data is for All Vehicles

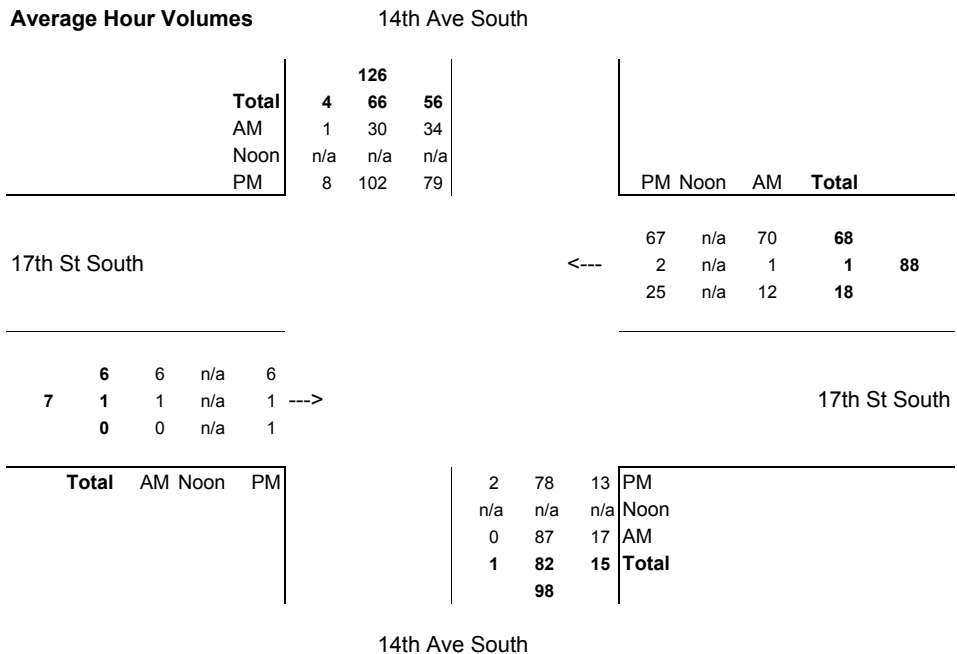
	14th Ave South				14th Ave South				17th St South				17th St South				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	225	263	17	505	3	329	60	392	22	3	1	26	73	4	273	350	1273				
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	56	66	4	126	1	82	15	98	6	1	0	7	18	1	68	88	318	1	1	3	1

AM Period																					
Total	68	59	2	129	0	173	34	207	11	2	0	13	23	1	139	163	512	5	2	6	4
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	34	30	1	65	0	87	17	104	6	1	0	7	12	1	70	82	256	3	1	3	2

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	157	204	15	376	3	156	26	185	11	1	1	13	50	3	134	187	761	0	0	7	1
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	79	102	8	188	2	78	13	93	6	1	1	7	25	2	67	94	381	0	0	4	1

Average Hour Volumes



TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Cobham Avenue
Minor Route: King Street
Municipality: Cranbrook
Filename: Cobham@King.xls
Location #: 17

Date: June 24, 2008
Day-of-week: Tuesday

East/West Route: Cobham Avenue
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Noon Peak Period

Location: Cobham Avenue @ King Street
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	King NORTH Approach				King SOUTH Approach				Cobham WEST Approach				Slater EAST Approach				Total Volume		% Sat	Pedestrians				Conflict	
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		

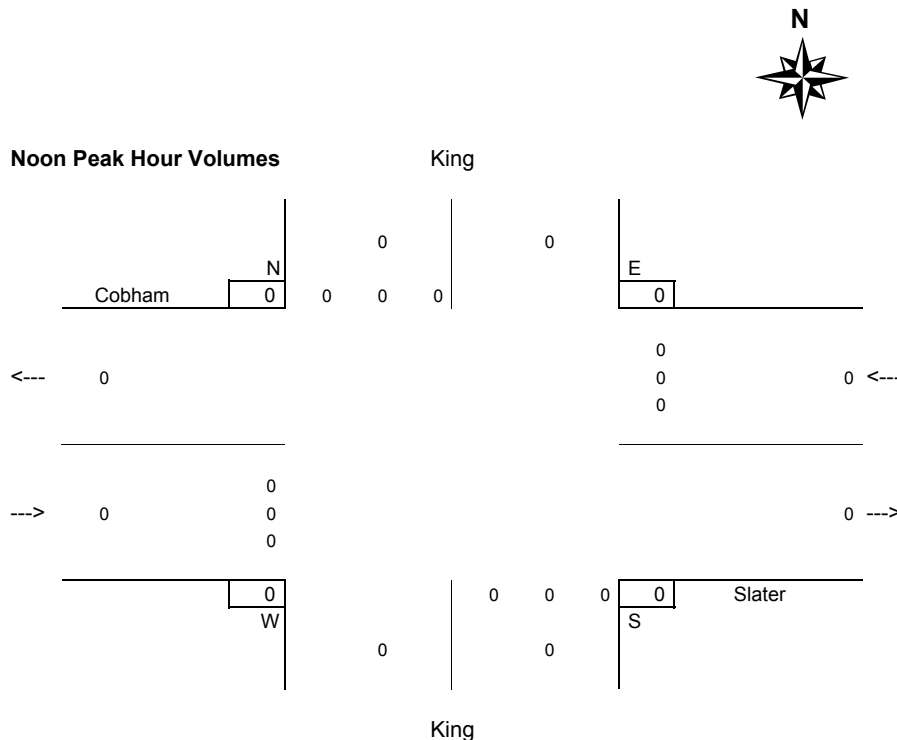
Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Average Hour

Location: Cobham Avenue @ King Street
Date: Tuesday, June 24, 2008

This data is for All Vehicles

	King				King				Cobham				Slater				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	97	229	13	339	358	183	405	946	16	312	415	743	144	303	106	553	2581	2	4	19	12
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	24	57	3	85	90	46	101	237	4	78	104	186	36	76	27	138	645	1	1	5	3

AM Period																					
Total	66	133	8	207	178	59	237	474	4	166	187	357	35	123	37	195	1233	2	1	12	5
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	33	67	4	104	89	30	119	237	2	83	94	179	18	62	19	98	617	1	1	6	3

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	31	96	5	132	180	124	168	472	12	146	228	386	109	180	69	358	1348	0	3	7	7
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	16	48	3	66	90	62	84	236	6	73	114	193	55	90	35	179	674	0	2	4	4

Average Hour Volumes

				King										
				Total	3	57	24							
				AM	4	67	33							
				Noon	n/a	n/a	n/a							
				PM	3	48	16							
								PM	Noon	AM	Total			
								35	n/a	19	27			
								90	n/a	62	76	138		
								55	n/a	18	36			
												Slater		
				4	2	n/a	6							
				186	78	83	n/a	73						
				104	94	n/a	114							
				Total	AM	Noon	PM	90	62	84	PM			
								n/a	n/a	n/a	Noon			
								89	30	119	AM			
								90	46	101	Total			
								237						

King

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Cobham Avenue
Minor Route: Patterson Street
Municipality: Cranbrook
Filename: Cobham@Patterson.xls
Location #: 23

Date: June 25, 2008
Day-of-week: Wednesday

East/West Route: Patterson Street
Intersection Type: Three approach intersection - West Tee
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments:

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

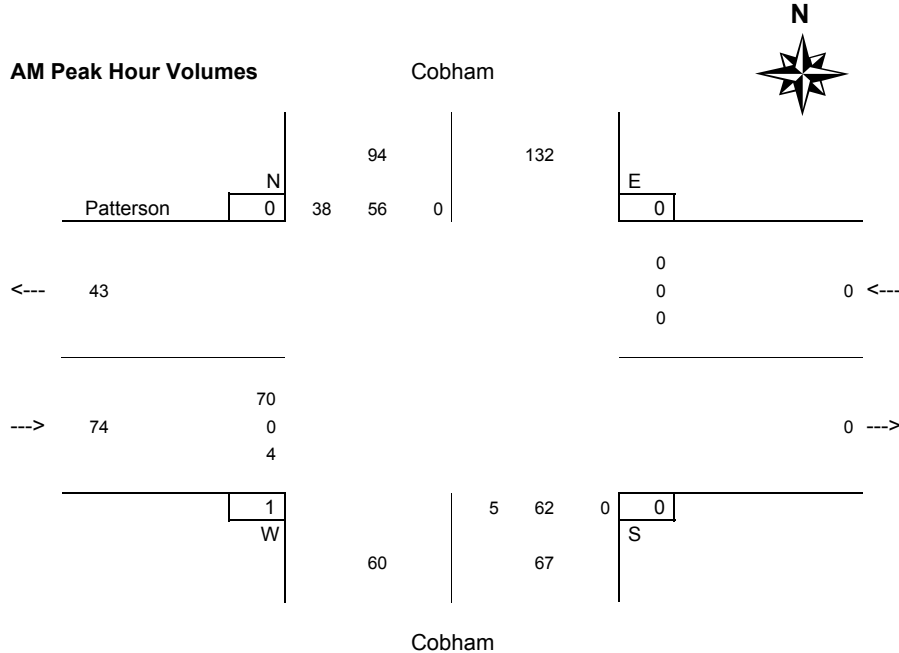
Time Period Begins	Cobham NORTH Approach				Cobham SOUTH Approach				Patterson WEST Approach				Patterson EAST Approach				Total Volume		Pedestrians	Conflict					
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min	Hr
07:00	0	8	4	12	0	8	0	8	9	0	1	10	0	0	0	0	30		0	0	0	0	21		
07:15	0	13	3	16	1	11	0	12	14	0	0	14	0	0	0	0	42		0	0	0	0	31		
07:30	0	16	11	27	2	13	0	15	16	0	0	16	0	0	0	0	58	*	0	0	0	0	45		
07:45	0	10	6	16	2	15	0	17	14	0	1	15	0	0	0	0	48	178	*	0	0	1	0	32	129
08:00	0	17	13	30	1	16	0	17	18	0	2	20	0	0	0	0	67	215	+	0	0	0	0	49	157
08:15	0	13	8	21	0	18	0	18	22	0	1	23	0	0	0	0	62	235	*	0	0	0	0	43	169
08:30	0	9	10	19	0	15	0	15	19	0	1	20	0	0	0	0	54	231		0	0	0	0	38	162
08:45	0	12	9	21	1	8	0	9	18	0	0	18	0	0	0	0	48	231		0	0	0	0	40	170
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
n/a				0				0				0				0	0		0	0	0	0	0	0	
Total	0	98	64	162	7	104	0	111	130	0	6	136	0	0	0	0	409		0	0	1	0		299	
Avg Hr	0	49	32	81	4	52	0	56	65	0	3	68	0	0	0	0	205		0	0	1	0		n/a	

Peak hour of the intersection

Pk Hr	0	56	38	94	5	62	0	67	70	0	4	74	0	0	0	0	235	*	0	0	1	0	169
15x4	0	68	52	120	8	72	0	72	88	0	8	92	0	0	0	0	268	+	0	0	4	0	216
PHF	n/a	0.82	0.73	0.78	0.63	0.86	n/a	0.93	0.80	n/a	0.50	0.80	n/a	n/a	n/a	n/a	0.88		n/a	n/a	0.25	n/a	0.78

Peak hour of conflicting volumes for the intersection

Pk Hr	0	51	40	91	2	57	0	59	77	0	4	81	0	0	0	0	231	*	0	0	0	0	170
15x4	0	68	52	120	4	72	0	72	88	0	8	92	0	0	0	0	268	+	0	0	0	0	212
PHF	n/a	0.75	0.77	0.76	0.50	0.79	n/a	0.82	0.88	n/a	0.50	0.88	n/a	n/a	n/a	n/a	0.86		n/a	n/a	n/a	n/a	0.80



Noon Peak Period

Location: Cobham Avenue @ Patterson Street
Date: Wednesday, June 25, 2008

This data is for All Vehicles

Table with columns: Time, Period, Cobham (NORTH, SOUTH), Patterson (WEST, EAST), Total Volume (15-min, Hour), Pedestrians (N, S, W, E), Conflict (15 min, Hr). Rows show traffic volume data for various time periods.

Summary table for total and average hourly volumes for each approach and direction.

Peak hour of the intersection

Table showing peak hour (Pk Hr), 15x4, and PHF for the intersection.

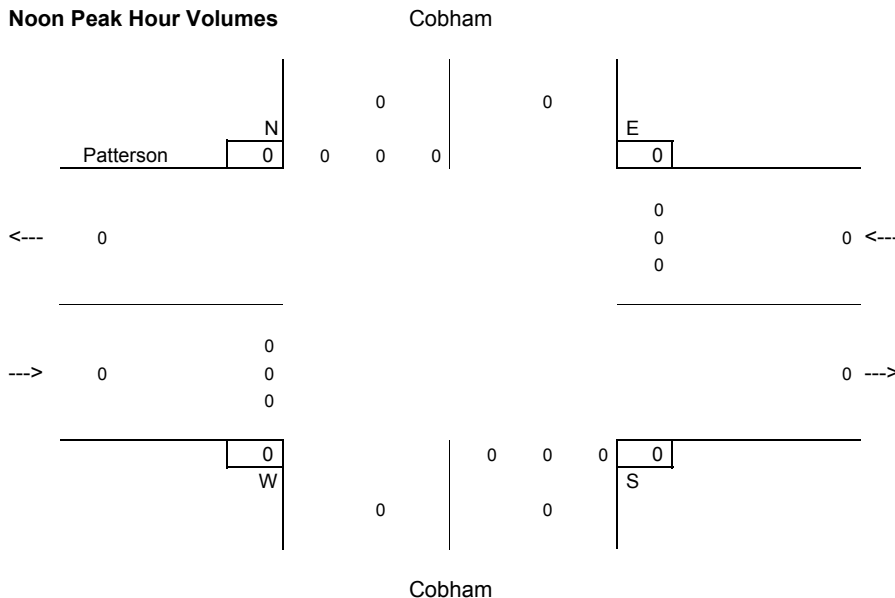
Peak hour of conflicting volumes for the intersection

Table showing peak hour (Pk Hr), 15x4, and PHF for conflicting volumes.

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Hour Volumes



Average Hour

Location: Cobham Avenue @ Patterson Street
 Date: Wednesday, June 25, 2008

This data is for All Vehicles

	Cobham				Cobham				Patterson				EAST Approach				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	0	225	262	487	16	226	0	242	259	0	15	274	0	0	0	0	1003	0	0	1	0
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	0	56	66	122	4	57	0	61	65	0	4	69	0	0	0	0	251	0	0	0	0

AM Period																					
Total	0	98	64	162	7	104	0	111	130	0	6	136	0	0	0	0	409	0	0	1	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	0	49	32	81	4	52	0	56	65	0	3	68	0	0	0	0	205	0	0	1	0

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	0	127	198	325	9	122	0	131	129	0	9	138	0	0	0	0	594	0	0	0	0
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	0	64	99	163	5	61	0	66	65	0	5	69	0	0	0	0	297	0	0	0	0

Average Hour Volumes

Cobham

	122					
Total	66	56	0			
AM	32	49	0			
Noon	n/a	n/a	n/a			
PM	99	64	0			

		PM	AM	Total	
	0	n/a	0	0	
Patterson	<---	0	n/a	0	0
		0	n/a	0	0

	65	65	n/a	65	
69	0	0	n/a	0	--->
	4	3	n/a	5	

Total	AM	Noon	PM	
	5	61	0	PM
	n/a	n/a	n/a	Noon
	4	52	0	AM
	4	57	0	Total
		61		

Cobham

TRANSTECH DATA SERVICES
Vehicle Turning Movement Survey
Without Classification

Major Route: Industrial No.2 Road
Minor Route: Industrial No.G Road
Municipality: Cranbrook
Filename: IndustrialNo.2@IndustrialNo.G.xls
Location #: 5

Date: June 24, 2008
Day-of-week: Tuesday

East/West Route: Industrial No.G Road
Intersection Type: Four approach intersection
Signalized?: No
Weather: Overcast and Dry

Vehicle Classifications: All Vehicles

This data is for All Vehicles

Shift	Start	Duration	End
AM	7:00	2.00	9:00
Noon			
PM	16:00	2.00	18:00
Total		4.00	

Note: duration: decimal hours
start time: 24 hr clock (15 min increments)

Comments: Many rolling stops ERT and WRT. Last interval many cars going into Moir Park Sports Fields.

Notes: North Approach - southbound vehicles approaching intersection from the north
15x4 - 15 min volume (from maximum 15 minute period of movement/approach in peak hour period [*]) x 4
Pedestrians - N indicates pedestrians crossing north approach (east/west)

Noon Peak Period

Location: Industrial No.2 Road @ Industrial No.G Road
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

Time Period Begins	Industrial No.2 NORTH Approach				Industrial No.2 SOUTH Approach				Moir Park Entrance WEST Approach				Industrial No.G EAST Approach				Total Volume		Pedestrians	Conflict				
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	15-min	Hour		N	S	W	E	15 min
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Peak hour of the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

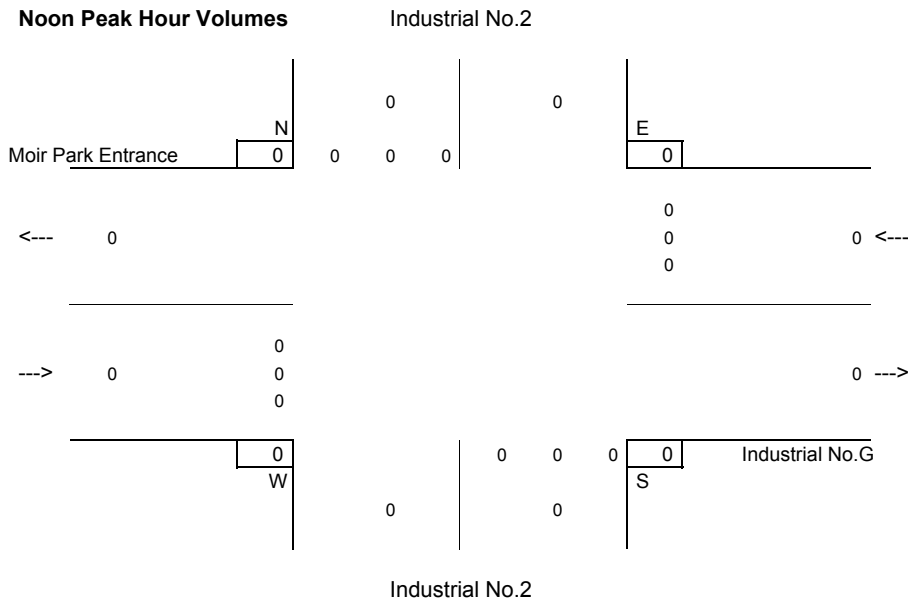
Peak hour of conflicting volumes for the intersection

Pk Hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15x4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!

** Peak hour in first or last hour, peak hour may be invalid. **



Noon Peak Hour Volumes



PM Peak Period

Location: Industrial No.2 Road @ Industrial No.G Road
Date: Tuesday, June 24, 2008

This data is for All Vehicles

Table with columns: Time, Industrial No.2 (North/South Approaches), Moir Park Entrance, Industrial No.G (East Approach), Total Volume (15-min/Hour), Pedestrians (N/S/W/E), Conflict (15 min/Hr). Rows include time intervals from 16:00 to 17:45 and summary rows for Total and Avg Hr.

Peak hour of the intersection

Table showing peak hour data for the intersection, including Pk Hr, 15x4, and PHF values for various approaches and pedestrian counts.

Peak hour of conflicting volumes for the intersection

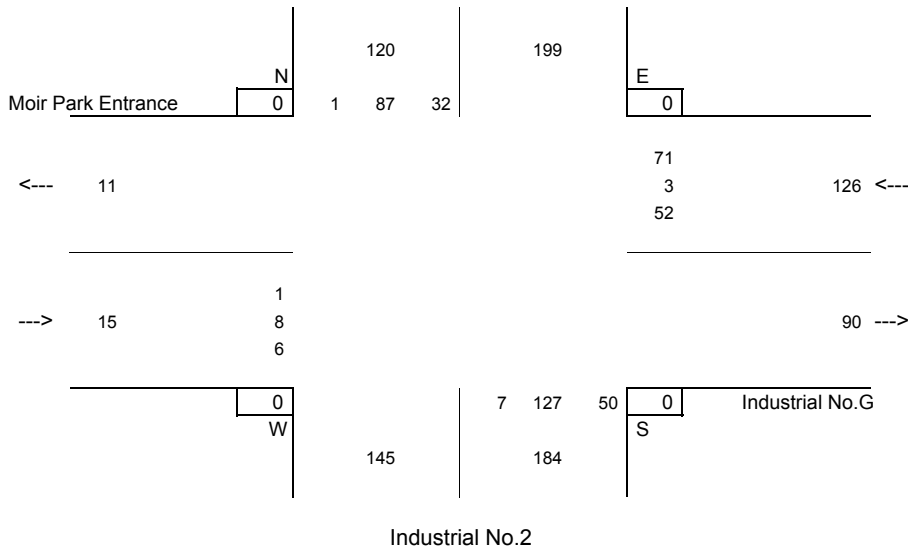
Table showing peak hour data for conflicting volumes, including Pk Hr, 15x4, and PHF values for various approaches and pedestrian counts.

** Peak hour in first or last hour, peak hour may be invalid. **



PM Peak Hour Volumes

Industrial No.2



Average Hour

Location: Industrial No.2 Road @ Industrial No.G Road
 Date: Tuesday, June 24, 2008

This data is for All Vehicles

	Industrial No.2				Industrial No.2				Moir Park Entrance				Industrial No.G				Total Volume	Pedestrians			
	NORTH Approach				SOUTH Approach				WEST Approach				EAST Approach					N	S	W	E
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total					
Survey																					
Total	134	324	5	463	79	309	159	547	3	25	29	57	153	40	164	357	1424	0	0	0	5
Hours	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Avg Hr	34	81	1	116	20	77	40	137	1	6	7	14	38	10	41	89	356	0	0	0	1

AM Period																					
Total	67	173	1	241	11	90	82	183	1	5	4	10	78	5	24	107	541	0	0	0	4
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	34	87	1	121	6	45	41	92	1	3	2	5	39	3	12	54	271	0	0	0	2

Noon Period																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

PM Period																					
Total	67	151	4	222	68	219	77	364	2	20	25	47	75	35	140	250	883	0	0	0	1
Hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Avg Hr	34	76	2	111	34	110	39	182	1	10	13	24	38	18	70	125	442	0	0	0	1

Average Hour Volumes

Industrial No.2

	Total	116	
	AM	81	34
	Noon	n/a	n/a
	PM	2	76

PM	Noon	AM	Total
----	------	----	--------------

Moir Park Entrance

70	n/a	12	41
<---	18	n/a	3
	38	n/a	39
			10
			89
			38

1	1	n/a	1
14	6	3	n/a
	7	2	n/a
			10
			13

Industrial No.G

Total	AM	Noon	PM
--------------	----	------	----

34	110	39	PM
n/a	n/a	n/a	Noon
6	45	41	AM
20	77	40	Total
	137		

Industrial No.2

24th Avenue north of 21st Street, Cranbrook

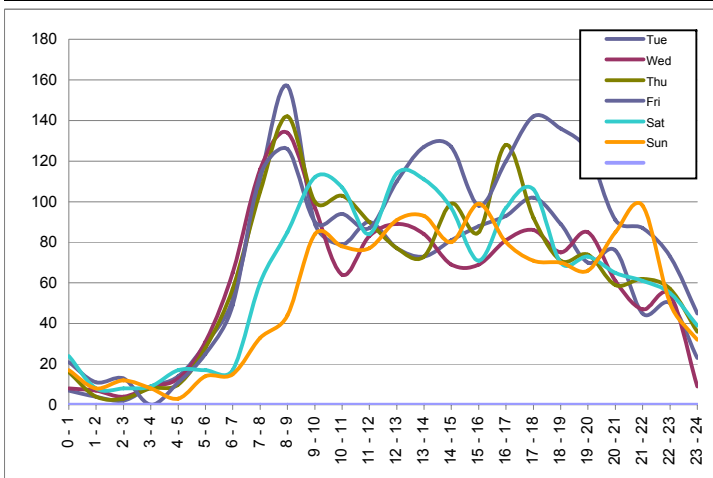
Northbound

Jun. 24, 2008 to Jun. 29, 2008



Hourly Volumes

Time Period	Tue Jun 24	Wed Jun 25	Thu Jun 26	Fri Jun 27	Sat Jun 28	Sun Jun 29
0 - 1	7	8	16	21	24	17
1 - 2	4	7	4	11	8	8
2 - 3	2	4	3	13	8	12
3 - 4	9	9	8	0	9	8
4 - 5	14	13	10	11	17	3
5 - 6	30	31	28	25	17	14
6 - 7	52	65	57	49	17	15
7 - 8	111	116	105	113	60	33
8 - 9	157	134	142	126	85	44
9 - 10	89	97	100	90	112	84
10 - 11	79	64	103	94	107	78
11 - 12	90	83	90	87	84	77
12 - 13	77	89	77	110	114	91
13 - 14	73	84	73	127	111	93
14 - 15	81	69	99	127	97	80
15 - 16	88	69	85	98	71	99
16 - 17	93	81	128	120	97	80
17 - 18	102	86	92	142	106	71
18 - 19	89	75	71	136	70	70
19 - 20	70	85	74	125	73	66
20 - 21	76	61	59	91	65	85
21 - 22	45	47	62	87	61	98
22 - 23	50	54	57	73	55	50
23 - 24	23	9	36	45	39	32
Day Total	1511	1440	1579	1921	1507	1308



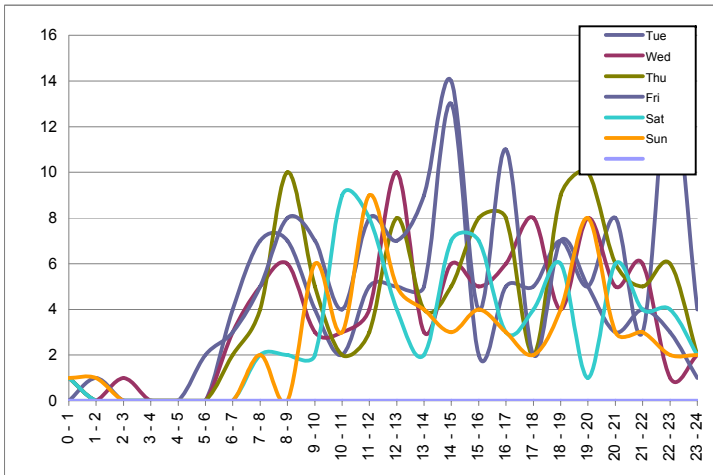
Site notes:

15-Minute Volumes

Time Ending	Tue Jun 24	Wed Jun 25	Thu Jun 26	Fri Jun 27	Sat Jun 28	Sun Jun 29
0:15	1	3	1	6	7	3
0:30	2	2	5	9	5	5
0:45	2	0	3	3	5	5
1:00	2	3	7	3	7	4
1:15	2	2	3	4	3	2
1:30	1	1	1	4	2	3
1:45	0	2	0	1	3	2
2:00	1	2	0	2	0	1
2:15	0	1	0	2	3	2
2:30	0	1	1	2	2	4
2:45	1	0	0	1	2	2
3:00	1	2	2	8	1	4
3:15	4	5	2	0	1	1
3:30	0	0	1	0	1	2
3:45	4	3	3	0	4	4
4:00	1	1	2	0	3	1
4:15	6	0	0	2	4	0
4:30	4	6	2	4	3	2
4:45	1	3	3	3	3	0
5:00	3	4	5	2	7	1
5:15	5	6	5	1	3	1
5:30	4	4	4	5	3	3
5:45	8	6	8	12	4	2
6:00	13	15	11	7	7	8
6:15	7	9	12	6	3	1
6:30	11	16	5	10	1	0
6:45	15	14	19	14	7	7
7:00	19	26	21	19	6	7
7:15	16	23	7	24	6	5
7:30	24	18	30	27	17	5
7:45	28	30	29	22	13	17
8:00	43	45	39	40	24	6
8:15	36	35	36	32	22	8
8:30	57	38	40	29	20	10
8:45	31	31	29	30	15	6
9:00	33	30	37	35	28	20
9:15	14	31	26	20	28	11
9:30	30	23	24	22	30	19
9:45	25	19	26	27	29	18
10:00	20	24	24	21	25	36
10:15	20	19	28	27	34	23
10:30	19	9	22	23	26	26
10:45	22	22	19	29	29	16
11:00	18	14	34	15	18	13
11:15	20	23	24	17	22	20
11:30	20	23	32	19	17	23
11:45	23	19	12	28	27	18
12:00	27	18	22	23	18	16
12:15	15	16	12	21	26	18
12:30	23	26	24	24	25	20
12:45	11	17	17	32	35	30
13:00	28	30	24	33	28	23
13:15	19	19	16	22	36	24
13:30	15	19	19	29	28	19
13:45	19	21	17	32	27	15
14:00	20	25	21	44	20	35
14:15	17	22	22	33	18	19
14:30	13	15	19	22	22	21
14:45	28	20	33	36	26	14
15:00	23	12	25	36	31	26
15:15	23	21	23	26	20	26
15:30	19	22	13	23	10	21
15:45	26	13	19	20	19	29
16:00	20	13	30	29	22	23
16:15	27	21	28	31	20	15
16:30	25	14	31	24	33	21
16:45	16	22	40	35	19	18
17:00	25	24	29	30	25	26
17:15	26	22	30	35	28	15
17:30	28	18	24	30	20	19
17:45	24	18	20	36	37	22
18:00	24	28	18	41	21	15
18:15	23	18	16	40	21	9
18:30	21	23	21	38	15	22
18:45	25	15	19	24	18	20
19:00	20	19	15	34	16	19
19:15	16	18	20	36	14	13
19:30	20	27	15	42	26	18
19:45	18	15	24	17	14	21
20:00	16	25	15	30	19	14
20:15	20	10	20	31	21	18
20:30	15	18	10	20	19	22
20:45	23	22	20	20	15	17
21:00	18	11	9	20	10	28
21:15	16	19	13	19	13	23
21:30	13	14	13	23	19	36
21:45	7	10	12	22	14	21
22:00	9	4	24	23	15	18
22:15	16	14	13	28	19	15
22:30	12	13	17	14	14	16
22:45	15	18	20	12	14	14
23:00	7	9	7	19	8	5
23:15	10	3	5	18	12	9
23:30	5	1	11	10	12	16
23:45	3	3	11	9	11	4
24:00	5	2	9	8	4	3

Hourly Volumes

Time Period	Tue Jun 24	Wed Jun 25	Thu Jun 26	Fri Jun 27	Sat Jun 28	Sun Jun 29
0 - 1	1	0	1	0	1	1
1 - 2	0	0	0	1	0	1
2 - 3	0	1	0	0	0	0
3 - 4	0	0	0	0	0	0
4 - 5	0	0	0	0	0	0
5 - 6	0	0	0	2	0	0
6 - 7	4	3	2	3	0	0
7 - 8	7	5	4	5	2	2
8 - 9	7	6	10	8	2	0
9 - 10	4	3	5	7	2	6
10 - 11	2	3	2	4	9	3
11 - 12	5	4	3	8	8	9
12 - 13	5	10	8	7	4	5
13 - 14	5	3	4	9	2	4
14 - 15	13	6	5	14	7	3
15 - 16	2	5	8	4	7	4
16 - 17	5	6	8	11	3	3
17 - 18	5	8	2	2	4	2
18 - 19	7	4	9	7	6	4
19 - 20	5	8	10	5	1	8
20 - 21	8	5	6	3	6	3
21 - 22	3	6	5	4	4	3
22 - 23	14	1	6	3	4	2
23 - 24	4	2	2	1	2	2
Day Total	106	89	100	108	74	65



Site notes:

15-Minute Volumes

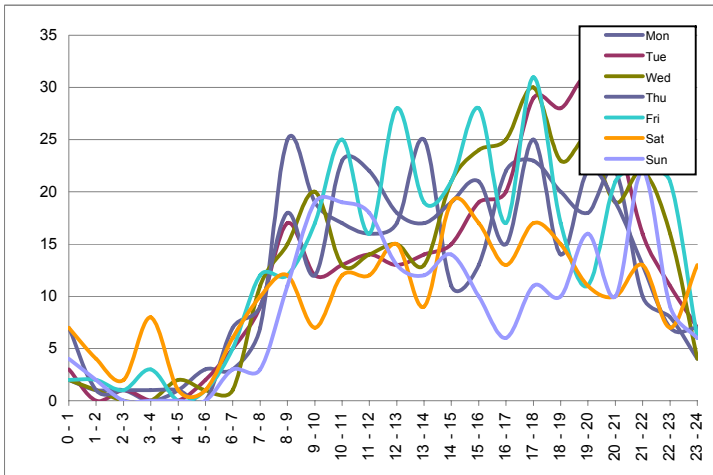
Time Ending	Tue Jun 24	Wed Jun 25	Thu Jun 26	Fri Jun 27	Sat Jun 28	Sun Jun 29
0:15	1	0	1	0	1	1
0:30	0	0	0	0	0	0
0:45	0	0	0	0	0	0
1:00	0	0	0	0	0	0
1:15	0	0	0	0	0	0
1:30	0	0	0	0	0	0
1:45	0	0	0	1	0	1
2:00	0	0	0	0	0	0
2:15	0	0	0	0	0	0
2:30	0	0	0	0	0	0
2:45	0	1	0	0	0	0
3:00	0	0	0	0	0	0
3:15	0	0	0	0	0	0
3:30	0	0	0	0	0	0
3:45	0	0	0	0	0	0
4:00	0	0	0	0	0	0
4:15	0	0	0	0	0	0
4:30	0	0	0	0	0	0
4:45	0	0	0	0	0	0
5:00	0	0	0	0	0	0
5:15	0	0	0	0	0	0
5:30	0	0	0	0	0	0
5:45	0	0	0	1	0	0
6:00	0	0	0	1	0	0
6:15	0	1	0	1	0	0
6:30	3	1	1	1	0	0
6:45	1	1	1	1	0	0
7:00	0	0	0	0	0	0
7:15	0	0	0	0	0	0
7:30	2	0	1	0	0	0
7:45	1	4	2	4	1	0
8:00	4	1	1	1	1	2
8:15	2	3	4	3	1	0
8:30	3	1	2	3	0	0
8:45	1	0	1	2	0	0
9:00	1	2	3	0	1	0
9:15	1	1	1	2	1	1
9:30	0	1	3	4	1	0
9:45	1	0	1	1	0	1
10:00	2	1	0	0	0	4
10:15	0	0	0	0	4	1
10:30	0	1	1	0	0	2
10:45	0	1	1	2	1	0
11:00	2	1	0	2	4	0
11:15	1	1	1	3	1	1
11:30	2	0	0	2	3	1
11:45	1	2	1	0	4	4
12:00	1	1	1	3	0	3
12:15	0	1	0	4	1	1
12:30	1	2	0	0	1	1
12:45	2	4	4	1	1	2
13:00	2	3	4	2	1	1
13:15	1	0	2	0	0	0
13:30	3	1	2	7	2	2
13:45	0	0	0	2	0	0
14:00	1	2	0	0	0	2
14:15	6	2	1	3	2	0
14:30	0	2	2	5	3	2
14:45	4	2	1	3	0	0
15:00	3	0	1	3	2	1
15:15	1	2	3	2	1	2
15:30	0	1	2	1	3	1
15:45	0	2	3	0	3	1
16:00	1	0	0	1	0	0
16:15	1	2	2	1	0	0
16:30	0	1	4	3	0	1
16:45	1	0	1	5	1	1
17:00	3	3	1	2	2	1
17:15	0	1	0	0	0	1
17:30	1	0	0	0	2	0
17:45	1	1	0	2	1	0
18:00	3	6	2	0	1	1
18:15	1	0	1	2	2	1
18:30	2	2	4	2	0	3
18:45	0	2	4	2	2	0
19:00	4	0	0	1	2	0
19:15	3	0	6	2	1	2
19:30	2	4	1	2	0	2
19:45	0	1	1	0	0	1
20:00	0	3	2	1	0	3
20:15	1	3	1	0	1	0
20:30	4	1	2	0	3	1
20:45	1	0	1	2	0	1
21:00	2	1	2	1	2	1
21:15	0	1	2	0	1	1
21:30	3	4	0	0	0	1
21:45	0	0	3	2	1	0
22:00	0	1	0	2	2	1
22:15	7	0	2	1	1	1
22:30	5	0	3	2	1	1
22:45	1	0	1	0	2	0
23:00	1	1	0	0	0	0
23:15	1	1	1	0	0	0
23:30	2	1	0	1	1	0
23:45	1	0	1	0	0	2
24:00	0	0	0	0	1	0

Baker Mountain East of 33rd Avenue, Cranbrook
Eastbound
Jun. 23, 2008 to Jun. 29, 2008



Hourly Volumes

Time Period	Mon Jun 23	Tue Jun 24	Wed Jun 25	Thu Jun 26	Fri Jun 27	Sat Jun 28	Sun Jun 29
0 - 1	2	3	2	7	2	7	4
1 - 2	1	0	1	1	2	4	2
2 - 3	1	1	0	1	1	2	0
3 - 4	0	0	0	1	3	8	0
4 - 5	1	0	2	1	0	1	0
5 - 6	3	2	1	0	1	1	0
6 - 7	3	5	1	7	5	6	3
7 - 8	7	9	11	9	12	10	3
8 - 9	25	17	15	18	12	12	11
9 - 10	19	12	20	12	17	7	19
10 - 11	17	13	13	23	25	12	19
11 - 12	16	14	14	22	16	12	18
12 - 13	17	13	15	18	28	15	13
13 - 14	25	14	13	17	19	9	12
14 - 15	11	15	21	19	21	19	14
15 - 16	13	19	24	21	28	17	10
16 - 17	22	20	25	15	17	13	6
17 - 18	23	29	30	25	31	17	11
18 - 19	20	28	23	14	17	15	10
19 - 20	18	31	25	22	11	11	16
20 - 21	22	26	19	19	21	10	10
21 - 22	10	16	22	13	22	13	22
22 - 23	8	11	16	7	21	7	9
23 - 24	4	7	4	7	6	13	6
Day Total	288	305	317	299	338	241	218



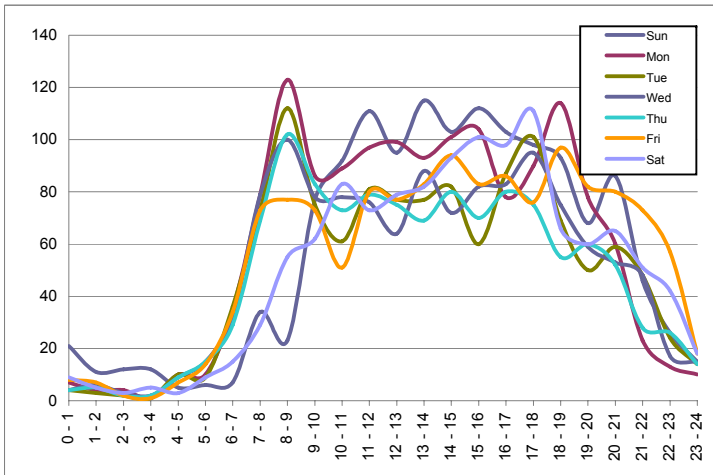
Site notes:

15-Minute Volumes

Time Ending	Mon Jun 23	Tue Jun 24	Wed Jun 25	Thu Jun 26	Fri Jun 27	Sat Jun 28	Sun Jun 29
0:15	1	0	1	1	1	0	2
0:30	1	1	1	1	1	2	1
0:45	0	2	0	2	0	2	1
1:00	0	0	0	3	0	3	0
1:15	0	0	0	1	0	0	1
1:30	0	0	0	0	2	0	0
1:45	0	0	1	0	0	1	0
2:00	1	0	0	0	0	3	1
2:15	1	1	0	0	1	0	0
2:30	0	0	0	0	0	1	0
2:45	0	0	0	1	0	0	0
3:00	0	0	0	0	0	1	0
3:15	0	0	0	0	2	5	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	1	1	0	0
4:00	0	0	0	0	0	3	0
4:15	1	0	1	0	0	1	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	0	0	1	1	0	0	0
5:15	0	1	1	0	1	0	0
5:30	1	1	0	0	0	0	0
5:45	0	0	0	0	0	1	0
6:00	2	0	0	0	0	0	0
6:15	0	1	0	1	0	0	0
6:30	2	1	0	2	2	1	0
6:45	0	2	0	0	3	3	2
7:00	1	1	1	4	0	2	1
7:15	2	3	6	2	1	2	0
7:30	2	3	1	3	3	4	0
7:45	3	2	2	2	4	2	1
8:00	0	1	2	2	4	2	2
8:15	4	2	4	1	3	2	2
8:30	7	6	2	7	3	1	3
8:45	9	6	4	5	0	1	6
9:00	5	3	5	5	6	8	0
9:15	5	2	3	6	3	0	3
9:30	3	5	6	0	5	1	4
9:45	7	2	4	5	1	3	5
10:00	4	3	7	1	8	3	7
10:15	7	2	6	8	6	1	11
10:30	5	6	1	7	5	5	5
10:45	1	3	4	4	10	5	2
11:00	4	2	2	4	4	1	1
11:15	5	3	3	4	4	2	7
11:30	5	2	0	6	2	5	4
11:45	3	5	6	6	5	2	3
12:00	3	4	5	6	5	3	4
12:15	3	6	5	6	4	3	3
12:30	7	1	7	4	11	5	6
12:45	3	3	1	4	5	5	3
13:00	4	3	2	4	8	2	1
13:15	4	5	8	4	5	1	4
13:30	5	2	2	4	3	2	5
13:45	8	4	0	5	3	3	1
14:00	8	3	3	4	8	3	2
14:15	2	2	6	4	2	4	3
14:30	2	6	6	3	6	4	4
14:45	5	4	3	9	6	5	5
15:00	2	3	6	3	7	6	2
15:15	2	5	1	5	6	3	4
15:30	2	8	8	6	9	8	1
15:45	5	4	10	5	6	3	3
16:00	4	2	5	5	7	3	2
16:15	6	6	8	4	4	4	0
16:30	4	6	5	2	3	6	1
16:45	8	4	4	4	4	3	4
17:00	4	4	8	5	6	0	1
17:15	4	11	6	9	9	3	4
17:30	4	8	5	4	9	8	2
17:45	7	4	10	6	13	5	4
18:00	8	6	9	6	0	1	1
18:15	4	6	9	3	1	2	2
18:30	3	7	4	3	6	5	5
18:45	7	5	7	3	5	4	1
19:00	6	10	3	5	5	4	2
19:15	6	6	4	6	2	3	2
19:30	5	8	8	3	3	4	7
19:45	5	9	7	7	1	4	3
20:00	2	8	6	6	5	0	4
20:15	5	6	3	7	5	2	1
20:30	6	9	8	7	4	3	2
20:45	5	6	5	2	5	1	2
21:00	6	5	3	3	7	4	5
21:15	1	7	5	2	2	2	8
21:30	3	4	6	5	6	6	2
21:45	4	4	7	2	4	1	4
22:00	2	1	4	4	10	4	8
22:15	2	3	6	2	5	3	2
22:30	1	4	3	0	8	2	3
22:45	3	3	1	3	2	2	1
23:00	2	1	6	2	6	0	3
23:15	4	2	2	2	1	4	2
23:30	0	4	1	1	1	3	1
23:45	0	0	0	3	0	1	3
24:00	0	1	1	1	4	5	0

Hourly Volumes

Time Period	Sun Jun 22	Mon Jun 23	Tue Jun 24	Wed Jun 25	Thu Jun 26	Fri Jun 27	Sat Jun 28
0 - 1	21	7	4	4	4	8	9
1 - 2	11	4	3	6	5	7	5
2 - 3	12	4	2	3	2	2	3
3 - 4	12	1	1	2	2	1	5
4 - 5	5	10	10	9	9	7	3
5 - 6	6	10	9	15	15	14	9
6 - 7	7	35	36	32	29	34	15
7 - 8	34	79	73	79	69	73	29
8 - 9	23	123	112	100	102	77	55
9 - 10	77	86	75	78	83	73	62
10 - 11	92	89	61	78	73	51	83
11 - 12	111	97	81	76	79	80	73
12 - 13	95	99	77	64	75	77	79
13 - 14	115	93	77	88	69	83	82
14 - 15	103	101	82	72	80	94	93
15 - 16	112	104	60	82	70	83	101
16 - 17	103	78	87	83	80	86	98
17 - 18	98	90	101	95	75	76	111
18 - 19	93	114	69	75	55	97	66
19 - 20	68	78	50	59	60	82	60
20 - 21	86	60	59	53	52	80	65
21 - 22	46	23	48	48	28	73	51
22 - 23	26	13	24	17	26	57	42
23 - 24	15	10	14	15	14	18	18
Day Total	1371	1408	1215	1233	1156	1333	1217



Site notes:

15-Minute Volumes

Time Ending	Sun Jun 22	Mon Jun 23	Tue Jun 24	Wed Jun 25	Thu Jun 26	Fri Jun 27	Sat Jun 28
0:15	6	1	0	2	0	0	3
0:30	3	3	1	0	2	2	4
0:45	3	2	1	2	0	5	1
1:00	9	1	2	0	2	1	1
1:15	1	1	0	0	4	2	0
1:30	4	2	3	1	0	1	3
1:45	1	1	0	4	1	2	1
2:00	5	0	0	1	0	2	1
2:15	2	0	0	1	1	1	1
2:30	6	0	0	0	0	0	1
2:45	3	3	2	1	1	1	1
3:00	1	1	0	1	0	0	0
3:15	4	0	1	0	1	0	0
3:30	3	0	0	0	0	1	1
3:45	1	1	0	0	1	0	2
4:00	4	0	0	2	0	0	2
4:15	4	0	3	4	3	0	1
4:30	0	1	1	0	3	5	0
4:45	1	4	4	4	1	1	0
5:00	0	5	2	1	2	1	2
5:15	1	1	1	1	4	1	2
5:30	3	1	0	7	1	1	2
5:45	1	4	4	4	7	7	2
6:00	1	4	4	3	3	5	3
6:15	0	4	3	4	0	3	4
6:30	2	7	5	11	8	6	4
6:45	2	13	19	9	10	15	3
7:00	3	11	9	8	11	10	4
7:15	11	11	13	7	6	7	9
7:30	7	14	13	18	19	17	3
7:45	5	18	17	25	18	17	4
8:00	11	36	30	29	26	32	13
8:15	4	23	30	16	19	17	10
8:30	3	37	30	36	39	25	15
8:45	10	25	25	25	22	17	13
9:00	6	38	27	23	22	18	17
9:15	14	24	15	15	22	21	14
9:30	16	19	28	24	23	18	17
9:45	24	21	18	11	16	16	15
10:00	23	22	14	28	22	18	16
10:15	18	17	9	28	20	14	17
10:30	24	27	24	16	18	12	18
10:45	26	21	11	22	17	11	17
11:00	24	24	17	12	18	14	31
11:15	23	29	18	19	7	24	19
11:30	38	20	19	12	18	21	13
11:45	21	18	16	26	20	17	17
12:00	29	30	28	19	34	18	24
12:15	23	30	13	17	13	24	16
12:30	17	19	16	17	17	18	22
12:45	25	20	26	9	24	20	22
13:00	30	30	22	21	21	15	19
13:15	23	25	22	15	13	22	19
13:30	33	23	11	21	14	17	18
13:45	22	24	14	25	21	19	20
14:00	37	21	30	27	21	25	25
14:15	21	25	17	18	22	20	20
14:30	23	31	22	14	15	23	25
14:45	32	20	17	18	17	26	26
15:00	27	25	26	22	26	25	22
15:15	29	30	14	15	20	19	29
15:30	23	28	13	13	17	23	30
15:45	26	22	14	25	18	24	22
16:00	34	24	19	29	15	17	20
16:15	21	17	18	18	19	19	30
16:30	27	19	16	21	24	19	22
16:45	23	23	20	27	26	20	23
17:00	32	19	33	17	11	28	23
17:15	30	17	29	23	16	21	25
17:30	23	14	24	25	23	18	24
17:45	23	28	22	24	14	16	36
18:00	22	31	26	23	22	21	26
18:15	22	23	16	15	15	26	22
18:30	26	30	21	24	10	24	11
18:45	21	30	15	16	14	28	19
19:00	24	31	17	20	16	19	14
19:15	18	26	14	9	17	26	20
19:30	16	24	13	10	9	20	13
19:45	18	16	8	18	19	24	15
20:00	16	12	15	22	15	12	12
20:15	19	20	18	9	18	19	18
20:30	19	12	14	16	11	16	16
20:45	20	16	17	11	14	27	16
21:00	28	12	10	17	9	18	15
21:15	15	7	15	14	11	17	12
21:30	16	6	16	12	3	26	16
21:45	13	5	8	17	8	20	7
22:00	2	5	9	5	6	10	16
22:15	12	2	6	4	12	19	8
22:30	6	6	3	5	2	14	14
22:45	6	3	4	2	7	12	13
23:00	2	2	11	6	5	12	7
23:15	5	4	3	5	5	8	1
23:30	4	3	3	4	5	4	9
23:45	5	1	6	3	4	2	3
24:00	1	2	2	3	0	4	5

King Road SW 1 KM west of Armour Road, Cranbrook

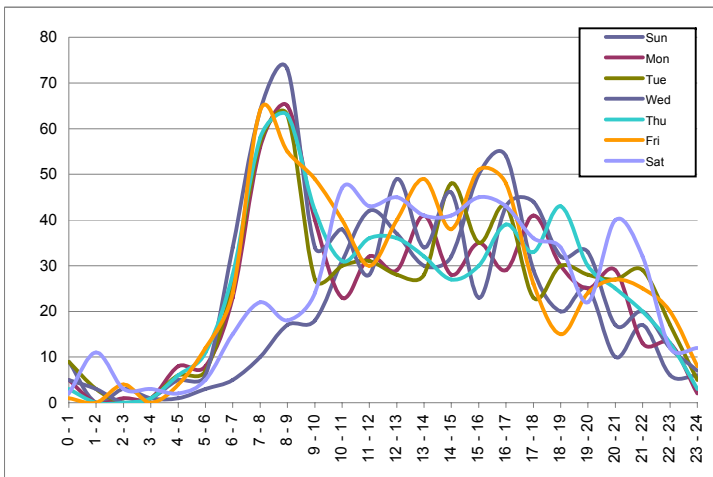
Eastbound

Jun. 22, 2008 to Jun. 28, 2008



Hourly Volumes

Time Period	Sun Jun 22	Mon Jun 23	Tue Jun 24	Wed Jun 25	Thu Jun 26	Fri Jun 27	Sat Jun 28
0 - 1	9	5	9	5	3	1	2
1 - 2	0	0	3	3	0	0	11
2 - 3	3	1	0	0	0	4	3
3 - 4	1	1	1	1	1	0	3
4 - 5	1	8	6	5	6	4	2
5 - 6	3	8	7	6	11	12	5
6 - 7	5	23	26	34	28	24	15
7 - 8	10	56	57	64	58	64	22
8 - 9	17	65	63	73	63	55	18
9 - 10	18	40	27	34	42	49	24
10 - 11	31	23	30	38	31	40	47
11 - 12	42	32	31	28	36	30	43
12 - 13	37	29	28	49	36	40	45
13 - 14	30	41	28	34	32	49	41
14 - 15	32	28	48	46	27	38	41
15 - 16	50	35	35	23	30	51	45
16 - 17	54	29	43	43	39	48	43
17 - 18	29	41	23	44	33	26	36
18 - 19	20	30	30	32	43	15	34
19 - 20	25	25	28	33	30	24	22
20 - 21	10	29	27	17	25	27	40
21 - 22	17	13	29	20	20	25	32
22 - 23	6	13	17	12	13	20	12
23 - 24	6	2	5	7	3	8	12
Day Total	456	577	601	651	610	654	598



Site notes:

15-Minute Volumes

Time Ending	Sun Jun 22	Mon Jun 23	Tue Jun 24	Wed Jun 25	Thu Jun 26	Fri Jun 27	Sat Jun 28
0:15	2	1	4	1	1	0	1
0:30	4	1	2	3	0	0	1
0:45	3	2	3	0	2	0	0
1:00	0	1	0	1	0	1	0
1:15	0	0	1	0	0	0	5
1:30	0	0	0	1	0	0	2
1:45	0	0	1	1	0	0	2
2:00	0	0	1	1	0	0	2
2:15	1	0	0	0	0	3	0
2:30	2	1	0	0	0	0	0
2:45	0	0	0	0	0	0	2
3:00	0	0	0	0	0	1	1
3:15	0	0	0	0	0	0	1
3:30	0	0	0	0	0	0	2
3:45	0	0	0	0	1	0	0
4:00	1	1	1	1	0	0	0
4:15	1	5	2	1	1	1	1
4:30	0	1	4	3	3	2	0
4:45	0	1	0	0	1	1	0
5:00	0	1	0	1	1	0	1
5:15	0	0	2	2	1	1	0
5:30	0	0	0	0	0	2	0
5:45	2	5	4	2	5	5	1
6:00	1	3	1	2	5	4	4
6:15	0	3	1	6	5	2	0
6:30	1	4	11	9	4	3	5
6:45	1	6	6	11	11	10	3
7:00	3	10	8	8	8	9	7
7:15	4	10	10	8	7	14	4
7:30	2	9	17	19	14	11	2
7:45	1	18	14	13	20	20	9
8:00	3	19	16	24	17	19	7
8:15	0	17	15	10	17	12	4
8:30	7	17	22	17	12	13	4
8:45	4	13	15	23	21	17	4
9:00	6	18	11	23	13	13	6
9:15	4	6	9	10	17	10	6
9:30	2	8	3	7	9	13	7
9:45	4	15	6	12	6	9	4
10:00	8	11	9	5	10	17	7
10:15	6	6	6	12	11	9	13
10:30	9	4	10	5	5	11	9
10:45	11	7	10	11	8	14	9
11:00	5	6	4	10	7	6	16
11:15	11	9	5	14	13	7	9
11:30	11	7	7	3	7	8	10
11:45	9	8	5	8	9	9	5
12:00	11	8	14	3	7	6	19
12:15	14	7	9	12	10	11	9
12:30	6	5	8	10	10	9	21
12:45	11	8	2	15	7	10	4
13:00	6	9	9	12	9	10	11
13:15	9	6	10	11	13	12	7
13:30	7	15	2	11	5	12	11
13:45	7	13	8	2	5	13	12
14:00	7	7	8	10	9	12	11
14:15	14	9	7	13	7	8	8
14:30	5	6	18	11	3	14	8
14:45	5	2	13	13	6	9	11
15:00	8	11	10	9	11	7	14
15:15	10	9	7	7	8	13	14
15:30	15	10	10	5	10	10	11
15:45	17	10	9	6	5	16	12
16:00	8	6	9	5	7	12	8
16:15	11	8	8	16	6	12	6
16:30	18	7	10	8	13	14	10
16:45	12	7	12	8	6	11	8
17:00	13	7	13	11	14	11	19
17:15	9	11	5	12	8	9	9
17:30	4	8	7	9	5	4	14
17:45	6	6	3	11	7	9	2
18:00	10	16	8	12	13	4	11
18:15	6	9	6	11	10	1	10
18:30	3	9	8	9	9	6	5
18:45	5	7	8	2	12	6	7
19:00	6	5	8	10	12	2	12
19:15	5	6	8	12	8	8	9
19:30	10	5	9	9	7	6	5
19:45	7	2	7	7	5	4	5
20:00	3	12	4	5	10	6	3
20:15	0	6	6	5	4	8	5
20:30	5	9	6	6	10	5	11
20:45	2	7	9	2	6	5	12
21:00	3	7	6	4	5	9	12
21:15	3	4	7	4	7	8	9
21:30	6	3	6	5	6	8	7
21:45	5	3	8	5	3	5	8
22:00	3	3	8	6	4	4	8
22:15	2	4	1	2	3	5	2
22:30	0	0	8	1	4	6	3
22:45	3	7	6	3	2	6	5
23:00	1	2	2	6	4	3	2
23:15	0	1	2	3	1	4	6
23:30	1	1	2	1	0	1	1
23:45	0	0	0	2	1	2	1
24:00	5	0	1	1	1	1	4

Appendix B - Population and Employment (Existing)

Population and Employment Positions by Zone (Base Year)

TAZ	Jurisdiction	Population	Dwelling Units	Employment			College Students
				Retail	Non-Retail	Total	
1	Cranbrook	0	0	0	0	0	
2		267	95	2	4	6	
3		259	85	0	0	0	
4		39	14	5	27	32	
5		308	127	2	13	15	
6		0	0	0	0	0	
7		75	24	1	3	4	
8		204	60	3	8	11	
9		109	39	1	2	2	
10		252	98	2	4	6	
11		164	62	3	9	13	
12		71	25	1	4	5	
13		55	19	1	3	4	
14		247	90	1	3	4	
15		139	55	1	3	4	
16		298	109	2	5	7	
17		0	0	2	17	19	
18		177	72	1	3	4	
19		365	140	2	6	8	
20		137	60	4	11	15	
21		321	118	4	10	14	
22		61	26	3	25	28	
23		240	98	3	8	11	
24		389	154	5	10	15	
25		181	78	4	10	14	
26		166	64	3	9	13	
27		152	70	5	12	17	
28		311	140	7	20	27	
29		245	95	4	10	13	
30		256	110	6	16	23	
31		56	25	0	0	0	
32		0	0	34	65	99	
33		228	93	3	7	10	
34		149	63	4	10	13	
35		163	64	4	10	14	
36		166	73	4	11	15	
37		100	49	2	22	24	
38		251	116	3	8	11	
39		55	24	2	3	5	
40		712	270	5	12	17	
41		208	74	2	7	9	
42		159	55	2	6	9	
43		235	66	5	14	19	
44		526	158	11	29	41	
45		289	99	3	9	13	
46		282	120	3	5	8	
47		260	101	8	21	29	
48		186	48	25	103	128	
49		94	43	2	6	8	
50		123	66	4	10	14	
51		57	28	2	5	6	
52		86	39	3	7	9	
53		113	45	3	9	12	
54		105	52	3	7	9	
55		97	48	2	6	9	
56		111	50	3	7	10	
57		109	47	3	9	12	
58		119	54	4	10	13	
59		116	58	3	9	13	
60		167	76	5	13	18	
61		142	67	3	9	12	
62		154	66	1	4	5	

Population and Employment Positions by Zone (Base Year)

TAZ	Jurisdiction	Population	Dwelling Units	Employment			College Students
				Retail	Non-Retail	Total	
63	Cranbrook	0	0	2	18	20	
64		70	40	1	4	5	
65		0	0	0	0	0	
66		664	360	0	622	622	
67		302	151	3	28	31	
68		0	0	350	235	585	
69		323	168	10	26	36	
70		0	0	10	20	30	
71		173	101	5	14	19	
72		49	19	49	93	142	
73		114	48	49	95	144	
74		120	56	15	25	40	
75		39	15	55	156	211	
76		24	5	58	342	399	
77		39	24	91	18	109	
78		21	12	247	421	668	
79		10	4	49	95	144	
80		21	9	76	146	223	
81		38	22	5	60	65	
82		192	92	25	34	59	
83		431	243	86	17	104	
84		442	173	5	14	19	
85		130	63	10	221	231	1,000
86		157	62	2	6	9	
87		381	171	5	12	17	
88		155	70	2	6	9	
89		93	48	45	18	63	
90		0	0	31	59	90	
91		106	64	3	8	12	
92		58	30	34	66	100	
93		11	3	73	139	211	
94		43	26	94	38	132	
95		499	327	15	40	55	
96		0	0	414	166	580	
97		351	130	2	6	8	
98		431	218	3	7	9	
99		508	238	6	16	22	
100		188	77	2	6	8	
101		10	7	80	5	85	
102		0	0	263	105	368	
103		8	2	2	29	30	
104		48	23	44	85	129	
105		97	49	5	86	91	
106		28	12	7	123	130	
107		15	6	0	71	71	
108		25	13	5	91	96	
109		73	36	140	269	409	
110		25	13	4	70	74	
111	154	72	2	39	42		
112	23	8	2	32	34		
113	Wild Stone	1	0	0	0	0	
114	Wild Stone	0	0	0	0	0	
115	Cranbrook	126	53	3	8	11	
116		241	106	6	15	21	
117		29	12	4	64	68	
118		12	4	10	167	176	
119		2	1	8	144	153	
120		1	0	8	144	152	
121		4	1	0	68	68	
122		15	7	12	210	222	
123		0	0	775	97	872	
124		2	1	2	30	32	

Population and Employment Positions by Zone (Base Year)

TAZ	Jurisdiction	Population	Dwelling Units	Employment			College Students
				Retail	Non-Retail	Total	
125	Cranbrook	4	2	2	41	43	
126		21	9	0	30	30	
127	Wild Stone	0	0	0	0	0	
128	Wild Stone	14	6	0	0	0	
129		4	2	0	0	0	
130		2	1	0	0	0	
131	Cranbrook	4	2	0	0	0	
132		0	0	0	0	0	
133		11	5	0	0	0	
134	St Mary	18	8	0	0	0	
135	Neighborhood	0	0	0	0	0	
136		112	61	5	65	70	
137	Outside	240	87	5	25	30	
138	Cranbrook	131	55	3	7	10	
139		400	174	8	10	18	
SubTotal_	Cranbrook	18,306	7,894	3,561	6,028	9,589	1,000
SubTotal_	Outside	883	377	21	107	128	0
Total		19,189	8,271	3,581	6,136	9,717	1,000

Appendix C – Population and Employment (2016 Horizon)

Population and Employment Positions by Zone (Year 2016)

TAZ	Jurisdiction	Population	Dwelling Units	Employment			College Students
				Retail	Non-Retail	Total	
1	Cranbrook	127	55	4	10	14	
2		267	95	2	4	6	
3		402	147	6	16	22	
4		39	14	5	27	32	
5		308	127	2	13	15	
6		0	0	0	0	0	
7		204	80	3	8	11	
8		204	60	3	8	11	
9		109	39	1	2	2	
10		252	98	2	4	6	
11		164	62	3	9	13	
12		168	67	1	4	5	
13		101	39	1	3	4	
14		247	90	1	3	4	
15		139	55	1	3	4	
16		298	109	2	5	7	
17		75	32	2	17	19	
18		177	72	1	3	4	
19		415	162	2	6	8	
20		137	60	4	11	15	
21		335	124	4	10	14	
22		61	26	3	25	28	
23		323	134	3	8	11	
24		403	160	5	10	15	
25		188	81	4	10	14	
26		173	67	3	9	13	
27		152	70	5	12	17	
28		325	146	7	20	27	
29		245	95	4	10	13	
30		364	157	6	16	23	
31		56	25	0	0	0	
32		0	0	34	65	99	
33		228	93	3	7	10	
34		156	66	4	10	13	
35		170	67	4	10	14	
36		171	75	4	11	15	
37		107	52	2	22	24	
38		258	119	3	8	11	
39		62	27	2	3	5	
40		744	284	5	12	17	
41		213	76	2	7	9	
42		164	57	2	6	9	
43		260	77	5	14	19	
44		526	158	11	29	41	
45		294	101	3	9	13	
46		305	130	3	5	8	
47		260	101	8	21	29	
48		193	51	25	103	128	
49		101	46	2	6	8	
50		137	72	4	10	14	
51		69	33	2	5	6	
52		93	42	3	7	9	
53		120	48	3	9	12	
54		110	54	3	7	9	
55		97	48	2	6	9	
56		111	50	3	7	10	
57		114	49	3	9	12	
58		119	54	4	10	13	
59		123	61	3	9	13	
60		167	76	5	13	18	
61		149	70	3	9	12	
62		154	66	1	4	5	

Population and Employment Positions by Zone (Year 2016)

TAZ	Jurisdiction	Population	Dwelling Units	Employment			College Students
				Retail	Non-Retail	Total	
63	Cranbrook	0	0	2	18	20	
64		125	64	1	4	5	
65		0	0	0	0	0	
66		671	363	0	622	622	
67		327	162	3	28	31	
68		0	0	385	259	644	
69		396	200	10	26	36	
70		0	0	10	20	30	
71		173	101	5	14	19	
72		56	22	49	93	142	
73		121	51	49	95	144	
74		127	59	15	25	40	
75		39	15	55	156	211	
76		38	11	58	342	399	
77		39	24	101	20	121	
78		28	15	247	421	668	
79		17	7	55	105	160	
80		21	9	85	163	248	
81		38	22	5	60	65	
82		301	139	25	34	59	
83		484	266	86	17	104	
84		451	177	5	14	19	
85		130	63	10	221	231	1,120
86		164	65	2	6	9	
87		381	171	5	12	17	
88		162	73	2	6	9	
89		100	51	45	18	63	
90		0	0	31	59	90	
91		106	64	3	8	12	
92		58	30	38	73	111	
93		11	3	84	143	227	
94		43	26	105	42	147	
95		561	354	15	40	55	
96		0	0	414	166	580	
97		351	130	2	6	8	
98		564	276	3	7	9	
99		577	268	6	16	22	
100		257	107	2	6	8	
101		10	7	147	32	178	
102		0	0	263	105	368	
103		8	2	2	29	30	
104		48	23	44	85	129	
105		164	78	5	86	91	
106		28	12	11	194	205	
107		15	6	1	88	89	
108		25	13	11	182	192	
109		73	36	156	299	455	
110		25	13	4	70	74	
111	154	72	12	197	208		
112	138	58	2	32	34		
113	Wild Stone	1	0	0	0	0	
114	Wild Stone	0	0	0	0	0	
115	Cranbrook	126	53	3	8	11	
116		241	106	6	15	21	
117		29	12	6	98	104	
118		12	4	10	167	176	
119		2	1	8	144	153	
120		1	0	8	144	152	
121		50	21	3	121	124	
122		15	7	16	267	283	
123		124	54	845	141	986	
124	2	1	34	88	122		

Population and Employment Positions by Zone (Year 2016)

TAZ	Jurisdiction	Population	Dwelling Units	Employment			College Students
				Retail	Non-Retail	Total	
125	Cranbrook	4	2	5	82	87	
126		53	23	3	73	75	
127	Wild Stone	0	0	0	0	0	
128	Wild Stone	69	30	0	0	0	
129		4	2	0	0	0	
130		2	1	0	0	0	
131	Cranbrook	4	3	0	0	0	
132		0	0	0	0	0	
133		11	5	0	1	1	
134	St Mary	25	11	1	2	3	
135	Neighborhood	0	0	0	0	0	
136		112	61	5	65	70	
137	Outside	240	87	5	25	30	
138	Cranbrook	131	55	3	7	10	
139		400	174	8	10	18	
SubTotal_Cranbrook		20,606	8,895	3,876	6,853	10,730	1,120
SubTotal_Outside		883	377	21	107	128	0
Total		21,489	9,272	3,897	6,961	10,858	1,120

**Appendix D – Population and Employment
(Full Build Out of Current City Boundary)**

Population and Employment Positions by Zone (Full Build out of Current City Boundary)

TAZ	Jurisdiction	Population	Dwelling Units	Employment			College Students
				Retail	Non-Retail	Total	
1	Cranbrook	436	190	13	35	48	
2		267	95	8	21	29	
3		740	294	22	59	81	
4		39	14	5	27	32	
5		308	127	9	25	34	
6		0	0	0	0	0	
7		445	185	13	36	49	
8		208	62	6	17	23	
9		109	39	3	9	12	
10		261	102	8	21	29	
11		164	62	5	13	18	
12		237	97	7	19	26	
13		157	69	5	13	17	
14		439	173	13	35	48	
15		288	120	9	23	32	
16		303	111	9	24	33	
17		302	131	9	24	33	
18		177	72	5	14	19	
19		566	228	17	45	62	
20		137	60	4	11	15	
21		335	124	10	27	37	
22		61	26	3	25	28	
23		396	166	12	32	44	
24		403	160	12	32	44	
25		188	81	6	15	21	
26		173	67	5	14	19	
27		159	73	5	13	17	
28		325	146	10	26	36	
29		254	100	8	20	28	
30		523	226	16	42	58	
31		102	45	0	0	0	
32		0	0	113	217	330	
33		274	113	8	22	30	
34		167	71	5	13	18	
35		181	72	5	15	20	
36		184	81	6	15	20	
37		125	60	4	26	30	
38		256	118	8	20	28	
39		62	27	2	5	7	
40		742	283	22	59	82	
41		213	76	6	17	23	
42		164	57	5	13	18	
43		279	85	8	22	31	
44		526	163	39	41	79	
45		294	101	9	23	32	
46		305	130	9	24	34	
47		260	101	8	21	29	
48		195	52	25	103	128	
49		103	47	3	8	11	
50		139	73	4	11	15	
51		57	0	2	5	6	
52		106	48	3	8	12	
53		133	54	4	11	15	
54		123	60	4	10	14	
55		97	48	3	8	11	
56		111	50	3	9	12	
57		129	56	4	10	14	
58		131	59	4	10	14	
59		139	68	4	11	15	
60		167	78	5	13	18	
61		151	71	5	12	17	
62		154	67	5	12	17	

Population and Employment Positions by Zone (Full Build out of Current City Boundary)

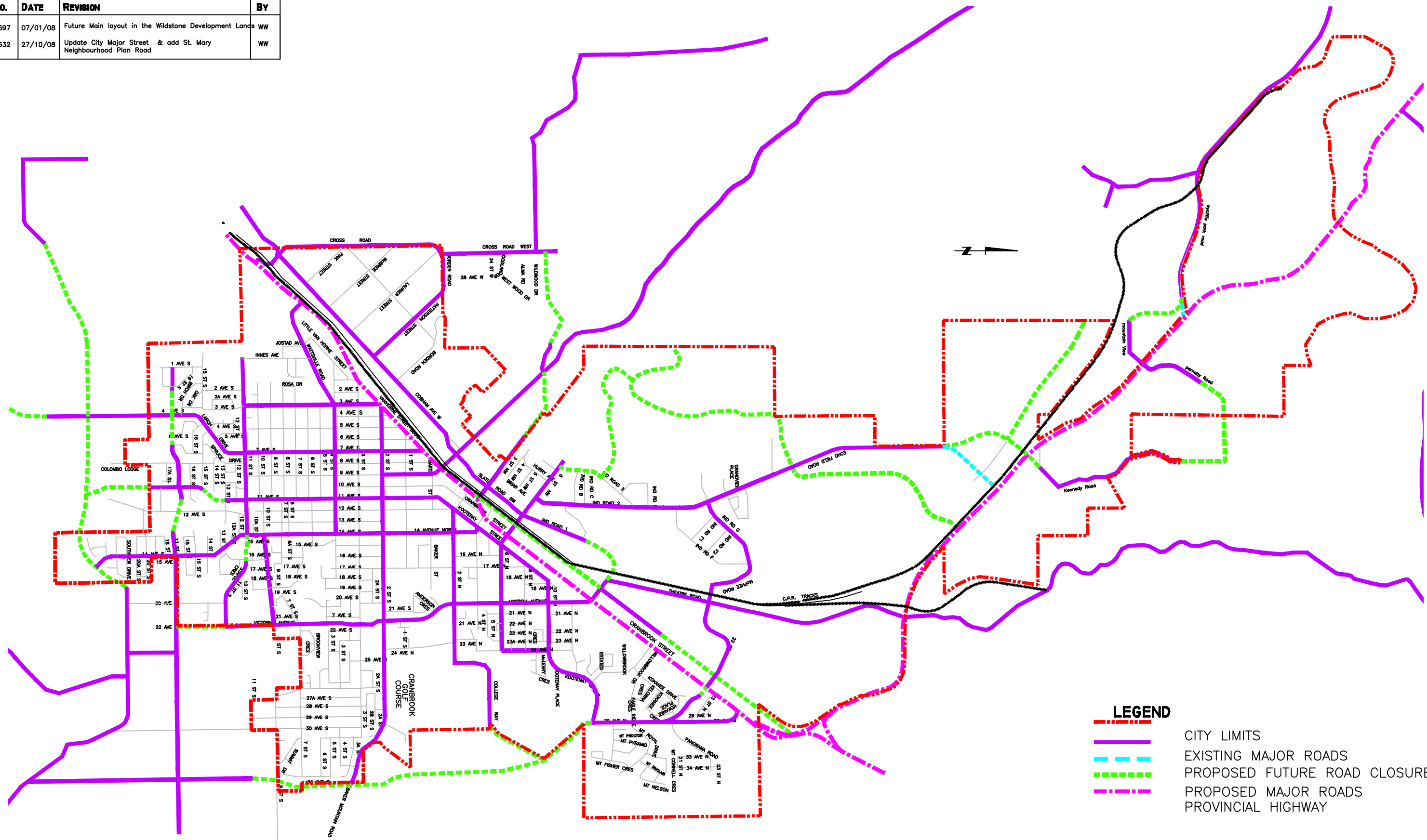
TAZ	Jurisdiction	Population	Dwelling Units	Employment			College Students
				Retail	Non-Retail	Total	
63	Cranbrook	0	0	2	18	20	
64		128	65	4	10	14	
65		0	0	0	0	0	
66		669	362	0	1,244	1,244	
67		332	164	10	27	37	
68		0	0	700	470	1,170	
69		586	282	18	47	64	
70		0	0	10	20	30	
71		173	103	5	14	19	
72		61	24	49	93	142	
73		137	58	49	95	144	
74		140	65	15	25	40	
75		39	15	55	156	211	
76		65	23	58	342	399	
77		39	24	114	23	136	
78		49	24	297	505	802	
79		26	11	62	118	180	
80		21	9	96	183	279	
81		38	22	5	60	65	
82		587	264	37	47	84	
83		670	347	86	17	104	
84		451	177	14	36	50	
85		130	63	10	221	231	2,000
86		163	65	5	13	18	
87		387	174	12	31	43	
88		167	75	5	13	18	
89		93	48	162	65	227	
90		0	0	62	118	180	
91		106	64	3	8	12	
92		58	30	43	82	125	
93		11	3	95	148	243	
94		41	25	118	47	165	
95		559	353	17	45	61	
96		0	0	497	199	696	
97		351	130	11	28	39	
98		518	256	16	41	57	
99		1,095	493	33	88	120	
100		1,048	451	31	84	115	
101		33	17	413	138	551	
102		0	0	263	105	368	
103		8	2	17	288	305	
104		48	23	111	212	323	
105		189	89	5	86	91	
106		28	12	28	483	512	
107		15	6	1	91	92	
108		25	13	11	182	192	
109		73	36	200	384	585	
110		25	13	8	140	149	
111	154	72	23	394	417		
112	492	212	15	39	54		
113	Wild Stone	2,085	906	63	167	229	
114	Wild Stone	2,086	907	63	167	229	
115	Cranbrook	126	53	3	8	11	
116		241	106	7	19	27	
117		29	12	8	132	140	
118		12	4	20	333	353	
119		2	1	17	289	306	
120		1	0	17	287	304	
121		545	236	16	333	349	
122		15	7	29	496	525	
123		69	30	915	185	1,100	
124		2	1	67	145	212	

Population and Employment Positions by Zone (Full Build out of Current City Boundary)

TAZ	Jurisdiction	Population	Dwelling Units	Employment			College Students
				Retail	Non-Retail	Total	
125	Cranbrook	4	2	24	410	434	
126		44	19	13	244	257	
127	Wild Stone	0	0	0	0	0	
128	Wild Stone	2,429	1,056	73	194	267	
129		4	2	0	0	0	
130		2	1	0	0	0	
131	Cranbrook	4	2	0	0	0	
132		345	150	10	28	38	
133		14	6	0	1	2	
134	St Mary	2,167	942	65	173	238	
135	Neighborhood	1,444	628	43	116	159	
136		112	61	5	65	70	
137	Outside	240	87	7	19	26	
138	Cranbrook	246	105	7	20	27	
139		400	174	12	32	44	
SubTotal_Cranbrook		36,164	15,646	5,941	12,561	18,502	2,000
SubTotal_Outside		998	427	32	136	168	0
Total		37,162	16,073	5,972	12,697	18,670	2,000

Appendix E – Major Road Network Plan

No.	DATE	REVISION	BY
3597	07/01/08	Future Main layout in the Wildstone Development Lands WW	
3632	27/10/08	Update City Major Street & add St. Mary Neighbourhood Plan Road	WW



LEGEND

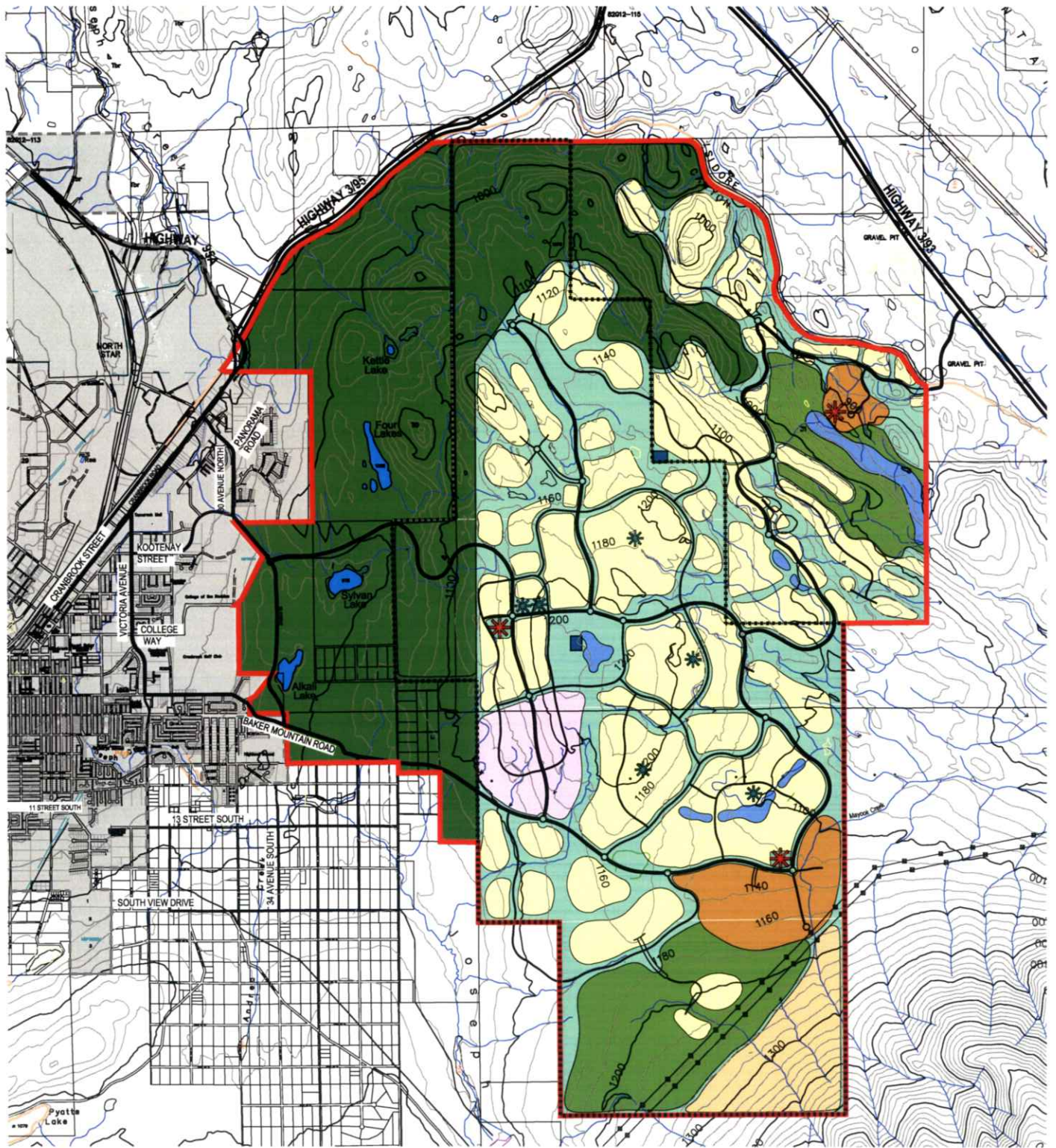
- CITY LIMITS
- EXISTING MAJOR ROADS
- PROPOSED FUTURE ROAD CLOSURE
- PROPOSED MAJOR ROADS
- PROVINCIAL HIGHWAY

THE CORPORATION OF THE CITY OF CRANBROOK
 OFFICIAL COMMUNITY PLAN - **SCHEDULE H**
MAJOR ROAD NETWORK PLAN

REVISION DATE OCTOBER 27, 2008

SCALE: N.T.S.

Appendix F – Conceptual Urban Framework



Legend:

- City of Cranbrook Municipal Boundary
- - - Proposed Municipal Boundary Extension
- Ownership Areas
- Yellow Residential
- Pink Business Park
- Brown Resort
- Orange Ski Hill

- Green Golf Courses
- Dark Green Future Cranbrook Nature Park
- Light Green Neighbourhood Open Space
- Blue Lakes
- Dark Blue Reservoirs
- * Possible School Site
- * Commercial



December 2007

Novak / Ramparts Lands (East of Cranbrook)

Municipal Boundary Extension

Figure 3 - Conceptual Urban Framework