

REGIONAL MUNICIPALITY OF OTTAWA-CARLETON
MUNICIPALITÉ RÉGIONALE D'OTTAWA-CARLETON

REPORT
RAPPORT

Our File/N/Réf. **25 23-97-R016**
Your File/V/Réf.

DATE 15 April 1997

TO/DEST. Co-ordinator Transportation Committee

FROM/EXP. Director, Mobility Services and Corporate Fleet Services
Environment and Transportation Department

SUBJECT/OBJET **MODIFICATIONS TO CANADIAN TIRE ACCESS ON HERON
ROAD 155 M WEST OF BANK STREET**

DEPARTMENTAL RECOMMENDATIONS

That the Transportation Committee recommend Council approve the installation of traffic control signals and associated roadway modifications at the main access to the Canadian Tire store on Heron Road 155 m west of Bank Street as illustrated in Annex D and authorize the initiation of the public hearing process as required by Sections 297 and 300 of the Ontario Municipal Act, subject to the owner, Canadian Tire Real Estate Limited:

- 1. paying for the total cost of traffic signal installation and related road works, and;**
- 2. executing a legal agreement with respect to (1) above.**

BACKGROUND

The Canadian Tire Corporation (CTC) store on Heron Road is approximately 8,500 m² (90,000 ft²) with 285 parking spaces. The site location, in an area context, is shown on Annex A.

The store has three driveway connections to the adjacent roads. Its primary access is located at the westerly extent of the site onto Heron Road at which northbound left turns out of the site are currently physically prohibited. A secondary right-in/right-out access is provided to Heron Road at the northeast corner of the site adjacent to the ESSO Service Station. Another secondary all-movement connection is located on Bank Street at the southeast portion of the site via a laneway. This lane connects to Bank Street adjacent to the CTC Pit Stop gas bar. None of these three connections are traffic signal controlled. A drawing of the site and its accesses to Heron Road and to Bank Street is provided in Annex B.

Access to the site is available from all directions; however, the site's egress to the west is poor. Currently, because left turns out of the site are physically prohibited at the two Heron Road driveways, the only option for exiting customers to travel westbound on Heron Road is to use the site's southeast connection at Bank Street. These motorists are required to turn left across three lanes of traffic (2 southbound lanes and a two-way left-turn lane) to travel northbound on Bank Street and then turn left again onto Heron Road. This is a very circuitous and hazardous route frequently involving lengthy delays at both left-turn locations due to the high and continuous volume of north-south traffic on Bank Street.

The only safe and economical option to improving site egress for westbound traffic is to provide traffic signal control at the primary Heron Road access and redesign the site's main driveway to provide an outbound (northbound) left-turn lane at this "protected" location. In their endeavours to better serve their customers and maintain market share, Canadian Tire Real Estate Limited (CTREL), the owners of the site, wish to pursue this option to improve traffic safety and operations in the area. The existing geometry of the main access to Heron Road is shown in Annex C. The proposed access geometry to accommodate outbound left turns and traffic signal control is provided in Annex D.

EXISTING CONDITIONS

Pedestrians

Concrete sidewalks exist on both sides of Heron Road and on Bank Street in the vicinity of the Heron Road Canadian Tire store. Pedestrian volumes in this area are relatively low. Counts at the adjacent Heron/Bank intersection revealed the following.

1. Crossing Bank Street on the south side of Heron Road, 7 pedestrians per hour were recorded both in the morning and afternoon peak hours with a total of 86 pedestrians over an 11-hour period.
2. Crossing Heron Road on the west side of Bank Street, 20 pedestrians per hour were recorded both in the morning and afternoon peak hours with a total of 205 pedestrians over an 11-hour period (an average of 19 pedestrians per hour).

These are considered relatively low pedestrian volumes when compared to other signalized urban locations with similar geometry and entering volumes.

Bicycles

Bicycle lanes are not provided on either Heron Road or Bank Street adjacent to the CTC site.

Bicycle counts at the adjacent Bank/Heron intersection revealed the following.

1. Crossing Bank Street on the south side of Heron Road, 7 bicycles were recorded in the morning peak hour with 3 bicycles recorded during the afternoon peak hour. Thirty bicycles were recorded over an 11-hour period (an average of 3 bicycles per hour).

2. Crossing Heron Road on the west side of Bank Street, 6 bicycles per hour were recorded in the morning peak hour with 3 bicycles recorded during the afternoon peak hour. Eighteen bicycles were recorded over an 11-hour period (an average of 2 bicycles per hour).

Transit

Both peak period and all-day transit service travelling in both directions is provided on Heron Road adjacent to the site. Bus stops in the vicinity of the CTC store are located as follows:

1. eastbound on Heron immediately east of Kaladar;
2. eastbound on Heron in front of the CTC store; and
3. westbound on Heron across the street from the CTC store.

Automobiles

Heron Road adjacent to the CTC site, and over most of its length, is a four-lane divided arterial with a posted speed of 60 km/h. Traffic volumes recorded by the RMOC in 1996 at the intersection of Bank and Heron indicate an average 24 hour volume of 28,000 vehicles adjacent to the site, comprised of 13,000 vehicles per day eastbound and 15,000 vehicles per day westbound. Afternoon peak hour volumes total 2,600 and 2,700 vehicles per hour eastbound and westbound respectively.

A centre median, nominally 5 m in width, extends along Heron Road. Between Bank Street and Kaladar Street, the only break in the median is at the CTC main driveway where inbound (westbound) left turns are allowed.

As previously mentioned, the store has three driveway connections to the adjacent roads. Its primary access is located at the westerly extent of the site onto Heron Road at which northbound left-turning motorists are currently physically prevented from turning left. A secondary right-in/right-out access is provided to Heron Road at the northeast corner of the site adjacent to the ESSO Service Station. Another secondary all-movement connection is located on Bank Street at the southeast portion of the site via a laneway. This lane connects to Bank Street adjacent to the CTC Pit Stop gas bar. None of these three connections are controlled by traffic signals.

Access to the site is available from all directions; however, the site's egress to the west is poor. Currently, because left turns out of the site are physically prohibited at the two Heron Road driveways, the only option for exiting customers to travel westbound on Heron Road is to use the site's southeast connection at Bank Street. These motorists are required to turn left across three lanes of traffic (2 southbound lanes and a two-way left-turn lane) to travel northbound on Bank Street and then turn left again onto Heron Road. This is a very circuitous and hazardous route frequently involving lengthy delays at both left-turn locations due to the high and continuous volume of north-south traffic on Bank Street.

DESIGN PROPOSAL

To safely facilitate northbound left-turn movement out of the CTC site onto the westbound lanes of Heron Road will require:

1. modifications to the median;
2. modifications to the channellizing island;
3. widening the site's driveway and modifying the parking layout; and
4. the installation of traffic control signals.

To assess the potential impact of these proposed changes, Delcan Corporation (on behalf of CTREL), prepared a traffic report dated 13 January 1997. The purpose of this report was to find out and assess:

1. the traffic flow progression along Heron Road through the Kaladar, CTC and Bank Street intersections;
2. vehicular queuing on Heron Road on either side of the modified CTC intersection;
3. the vehicle storage capacity of the Heron Road westbound left-turn lane into the CTC site;
4. the potential improvement to the level of service at Bank and Heron due to the projected reduction in traffic exiting the CTC site at Bank Street (northbound to westbound left turns); and
5. on-site improvements.

Based on the following considerations, the Delcan report concluded that installation of traffic signals at the CTC access on Heron Road would have many benefits with virtually no adverse effects.

1. Current traffic flow progression can be maintained along Heron Road.
2. Vehicular queuing can be accommodated with no negative effects.
3. Undesirable vehicle circulation would be reduced and the level of service at the intersection of Bank and Heron would be improved.
4. Overall traffic safety in the area would be improved.
5. An actuated pedestrian crossing would be provided at the new signalized intersection.
6. The required geometric changes can be accommodated.

7. The proposed traffic signals would be easily seen from all directions since there is little horizontal or vertical curvature and a minimum of sign clutter along this section of Heron Road that would obscure and/or reduce visibility.

Automobiles

CTREL, the owner of the site, requests the Transportation Committee approve the proposed site intersection modifications as illustrated in Annex D. In conjunction with these proposed geometric changes, CTREL also requests approval for the installation of traffic control signals at the main CTC access at Heron Road subject to CTREL agreeing to pay all costs associated with the installation of the proposed traffic signals and all related on-site and off-site roadway modifications.

Pedestrians

The following considerations will enhance pedestrian safety and mobility at this intersection.

1. Pedestrians, protected by traffic control signals, will be given an additional opportunity to safely cross Heron Road. Pedestrian crossing will be restricted to the west side of the intersection due to the presence of a westbound bus lay-by lane on the north side of Heron Road at the east side of the intersection.
2. East-west pedestrian traffic on the south side of Heron Road will be protected from left-turning traffic by the proposed traffic signals and a pedestrian crosswalk.

Bicycles

The existing bicycle system will not be adversely affected by the proposed changes. Access to and egress from the CTC site will be improved for those customers that use their bicycles.

Transit

Transit service will not change with the proposal. Accessibility to the bus stops on Heron Road adjacent to the site will be significantly improved with the proposed signalization.

FINANCIAL STATEMENT

Should Regional Council approve the proposed intersection modifications and traffic signal installation, CTREL will be responsible for 100 percent of the costs.

COST ESTIMATE

The following cost estimates which have been developed by Delcan Corporation are at a conceptual stage and are provided solely for the information of the Transportation Committee and Regional Council.

<u>Item</u>	<u>Cost Estimate</u>
Construction	\$50,000
Traffic Control Signals	\$75,000
Engineering	\$10,000
<u>Contingencies</u>	<u>\$20,000</u>
TOTAL ESTIMATED COST	\$155,000

CONSULTATION

The opportunity for general public input will be provided via the public hearing process.

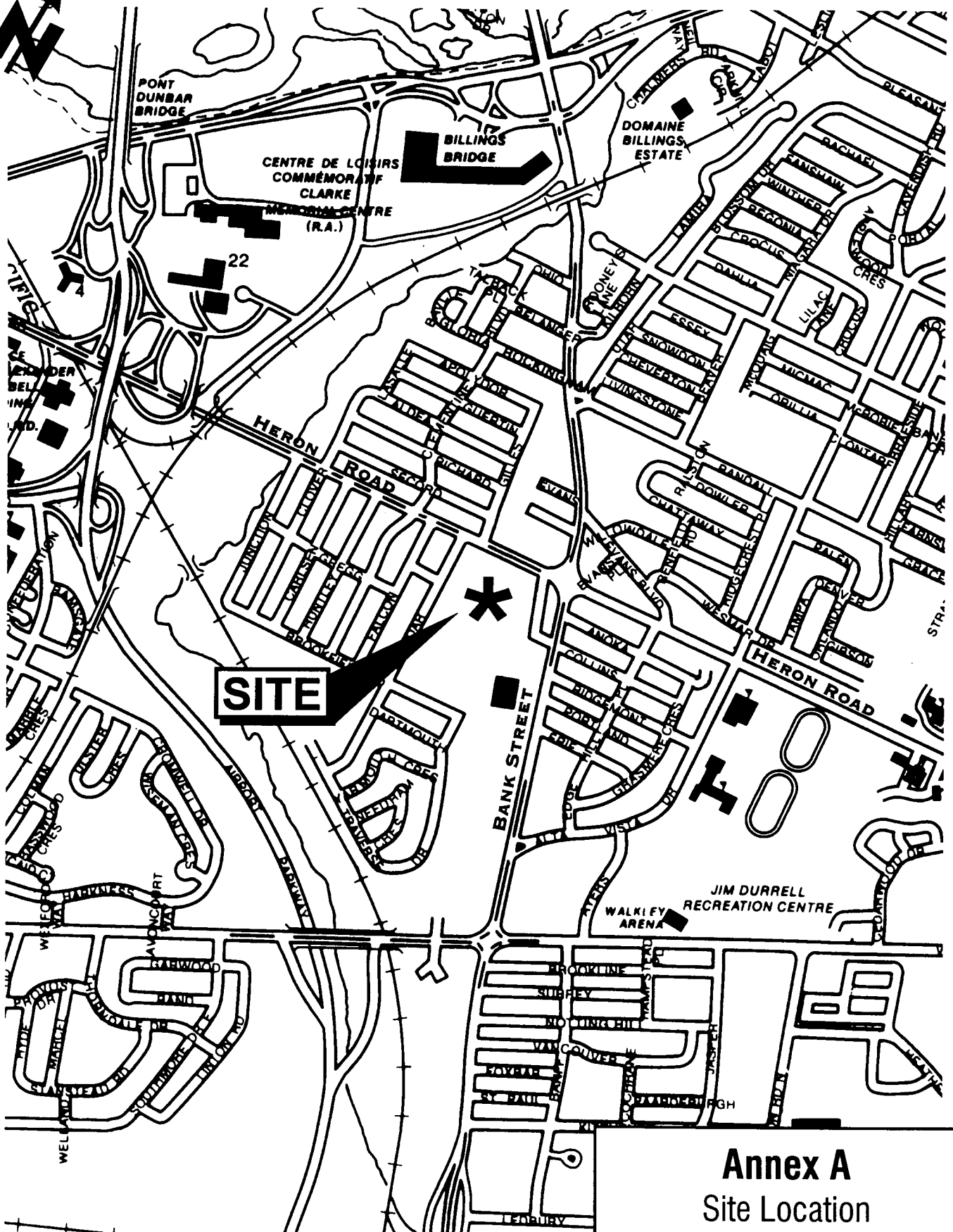
COMMENTS FROM THE REGIONAL CYCLING ADVISORY COMMITTEE

This report will be presented to the Regional Cycling Advisory Group at their meeting on Tuesday, 6 May 1997. Their comments will be available when this item is considered at Transportation Committee.

Approved by
Doug Brousseau

WJ/sc

Attach. (4)

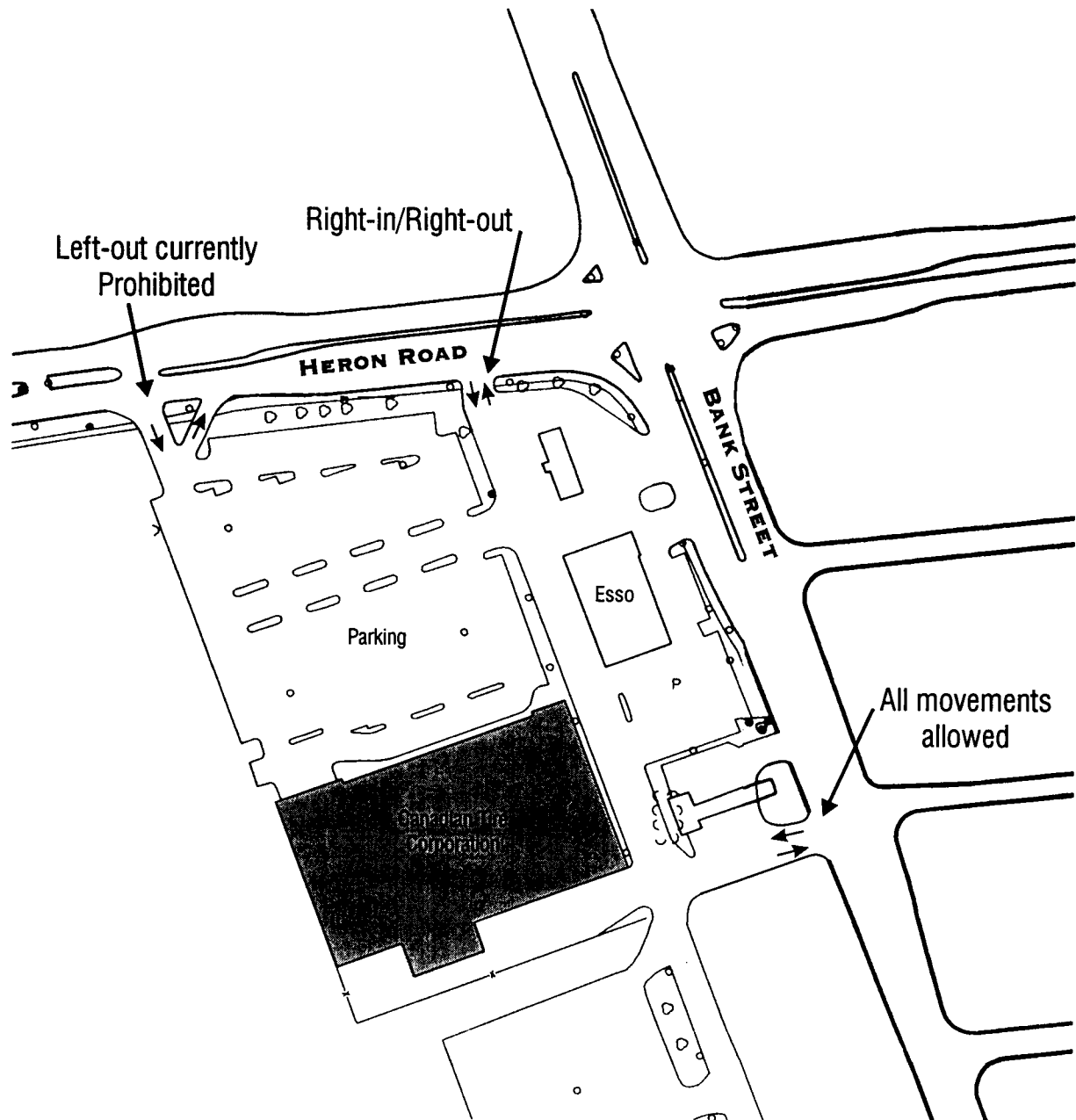


Annex A

Site Location

CTC Heron Road Store

DELCAN

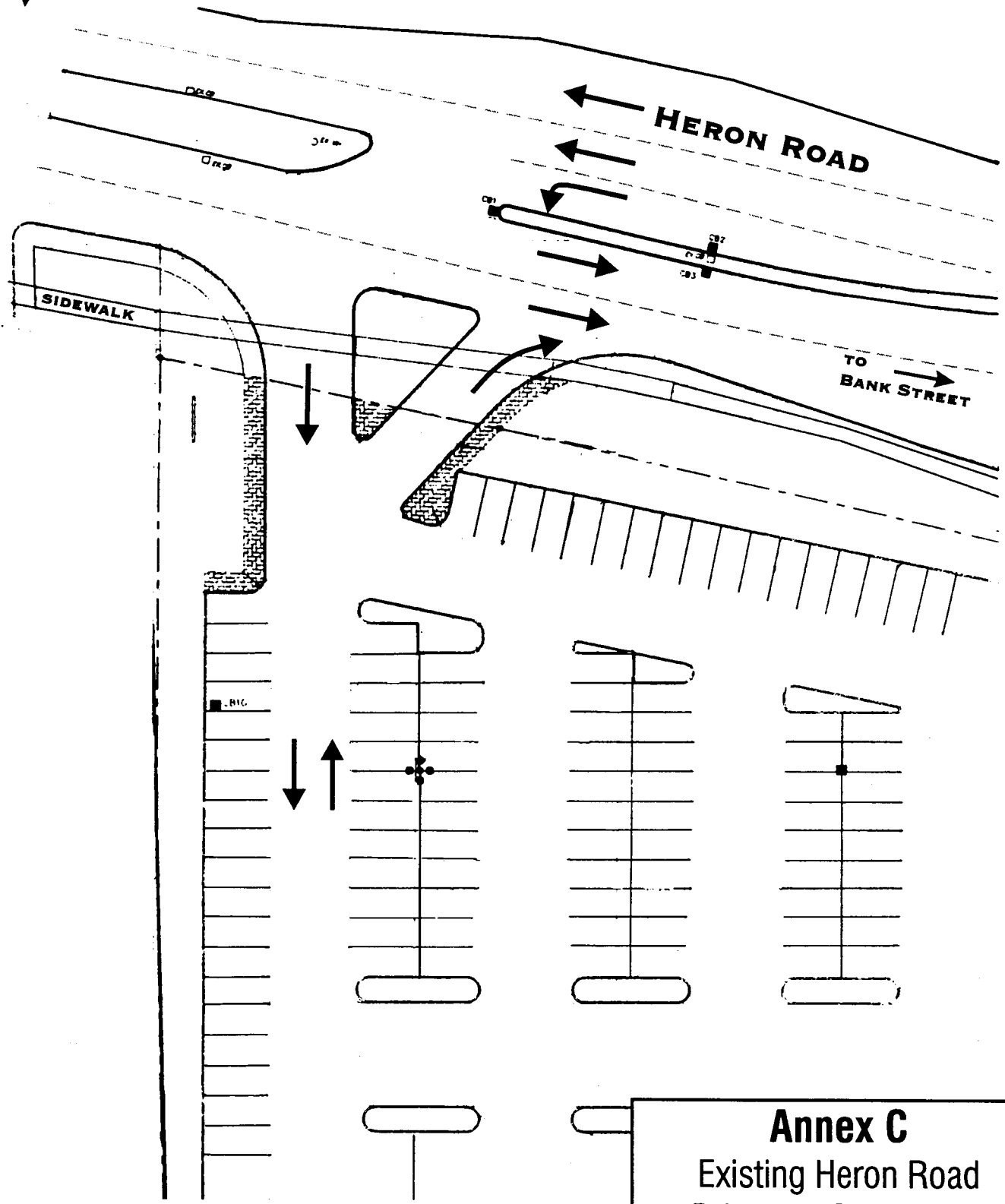


Note: For traffic to exit the site to go westbound on Heron, it currently has to use the Bank Street connection at the southeast corner of the site and turn left onto Bank Street and then left onto Heron Road.

DELCAN

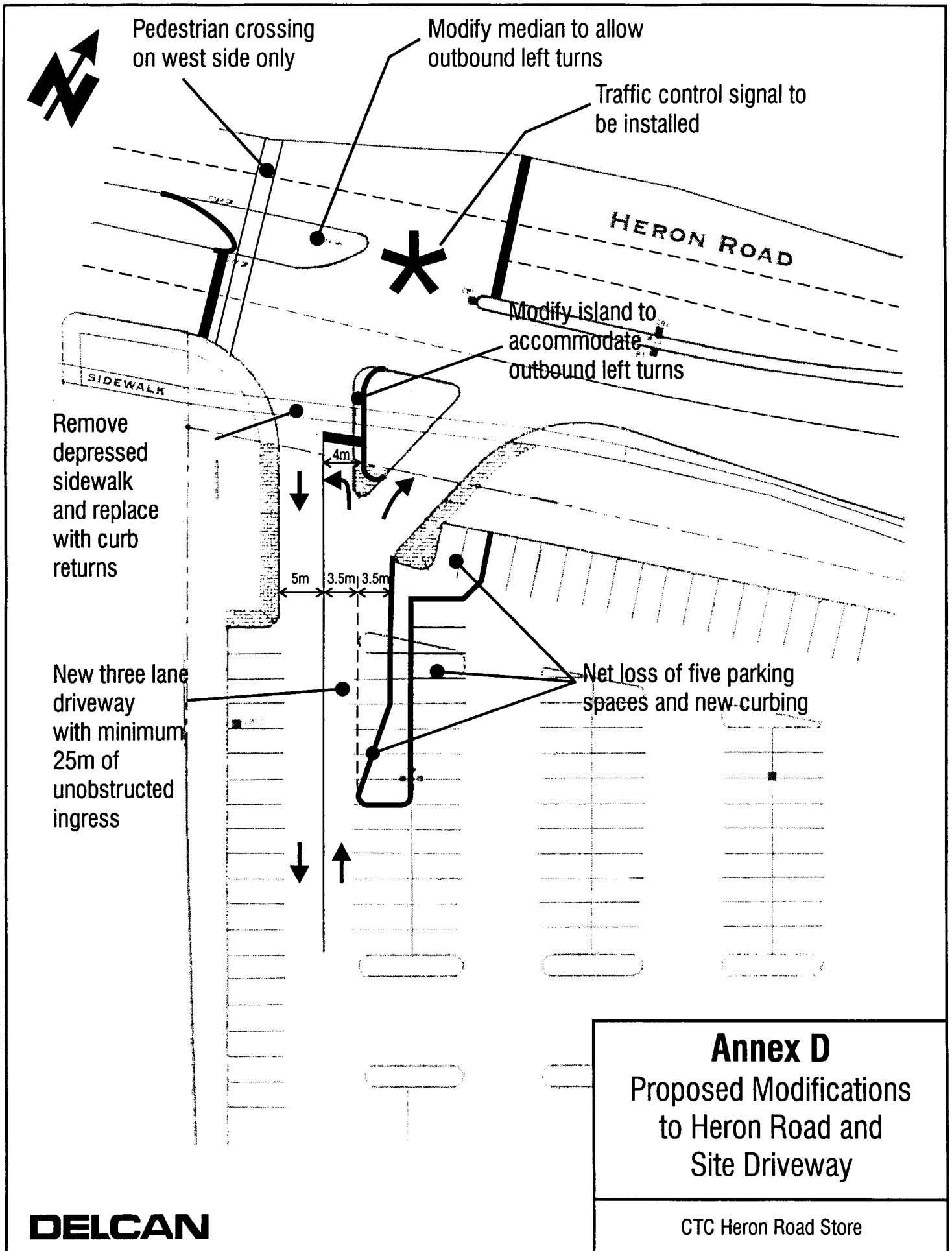
Annex B
Existing Site Access/Egress

CTC Heron Road Store



DELSCAN

Annex C Existing Heron Road Driveway Connection
CTC Heron Road Store



Annex D

Proposed Modifications to Heron Road and Site Driveway

CTC Heron Road Store