REPORT
2000 June 26

CITY OF BURNABY

TRAFFIC AND TRANSPORTATION COMMITTEE
(TRAFFIC SAFETY DIVISION)

HIS WORSHIP, THE MAYOR
AND COUNCILLORS

RE: GRIFFITHS DRIVE (FORMERLY 19TH STREET) SIGNAL TIMINGS

RECOMMENDATION:

1. **THAT** this report be received for information.

REPORT

The Traffic and Transportation Committee (Traffic Safety Division), at its meeting held on 2000 June 20, received and adopted the *attached* report on current timing and future signal timing plans including how they impact pedestrians in the Griffiths and Southpoint drive area.

Respectfully submitted,

Councillor D. Evans
Chair

Councillor B. Der
Vice Chair

Councillor G. Begin
Member

COPY: - CITY MANAGER
- DIRECTOR ENGINEERING

City of Burnaby

INTER-OFFICE COMMUNICATION

TO: TRAFFIC SAFETY COMMITTEE DATE: 2000 05 01

FROM: ASST. DIRECTOR ENGINEERING, TRAFFIC & ENGINEERING SYSTEMS **FILE:** 55-11-01

SUBJECT: Griffiths Drive (formerly 19th Street) Signal Timings

PURPOSE: To report on current timing and future signal timing plans including how they impact pedestrians in the Griffiths & Southpoint drive area.

RECOMMENDATION:

1. **THAT** this report be received for information.

REPORT

1.0 BACKGROUND

At the request of the Traffic Safety Committee, Staff have reviewed the traffic signal timings along Griffiths Drive from Edmonds Street to 14th Avenue to see whether changes might reduce the occurrence of pedestrians jay-walking and crossing against the light. The length of the traffic signal cycle lengths along the corridor are perceived to be a contributing factor.

2.0 CURRENT TIMING PLANS

Griffiths Drive (formerly Griffiths\19th\20th Streets) is classified as a Secondary Arterial and Truck Route from Kingsway through to Tenth Avenue. Daily traffic volumes range from 20,000 to 22,000 vehicles. Pedestrian traffic is primarily generated by the Skytrain station

located at 18th Avenue & Griffiths, Stride Community School at Southpoint Drive & Griffiths, and the BC Hydro office tower. There are traffic signals located at the intersection of 14th Avenue, Southpoint Drive, 18th Avenue and Edmonds Street along Griffiths Drive as well as a near adjacent one at 20th Street & Southpoint Drive. The four signals along Griffiths are coordinated during the morning (6-9 am) and afternoon (3-6 pm) peak hours. The fixed time it takes to complete all phases, or the cycle length, during the morning is 100 seconds and in the afternoon is 110 seconds.

During off-peak hours the signals operate in a fully actuated manner where the length of the green interval for each phase varies with demand as determined by vehicle detectors placed in the roadway. Each green interval has a preset minimum to provide starting time for standing vehicles. The interval is extended by three seconds for each actuation registered by the detector after the minimum time expires, unless a gap greater than three seconds occurs. Extension of the green time interval is limited to a preset maximum.

When a pedestrian button is triggered the associated phase will supply a seven second walk period to allow the pedestrian time to notice the change of signal indication and begin crossing, this is followed by the clearance time which is determined by the road width divided by the average speed for the slowest walking pedestrian. The minimum green interval is extended to reflect this.

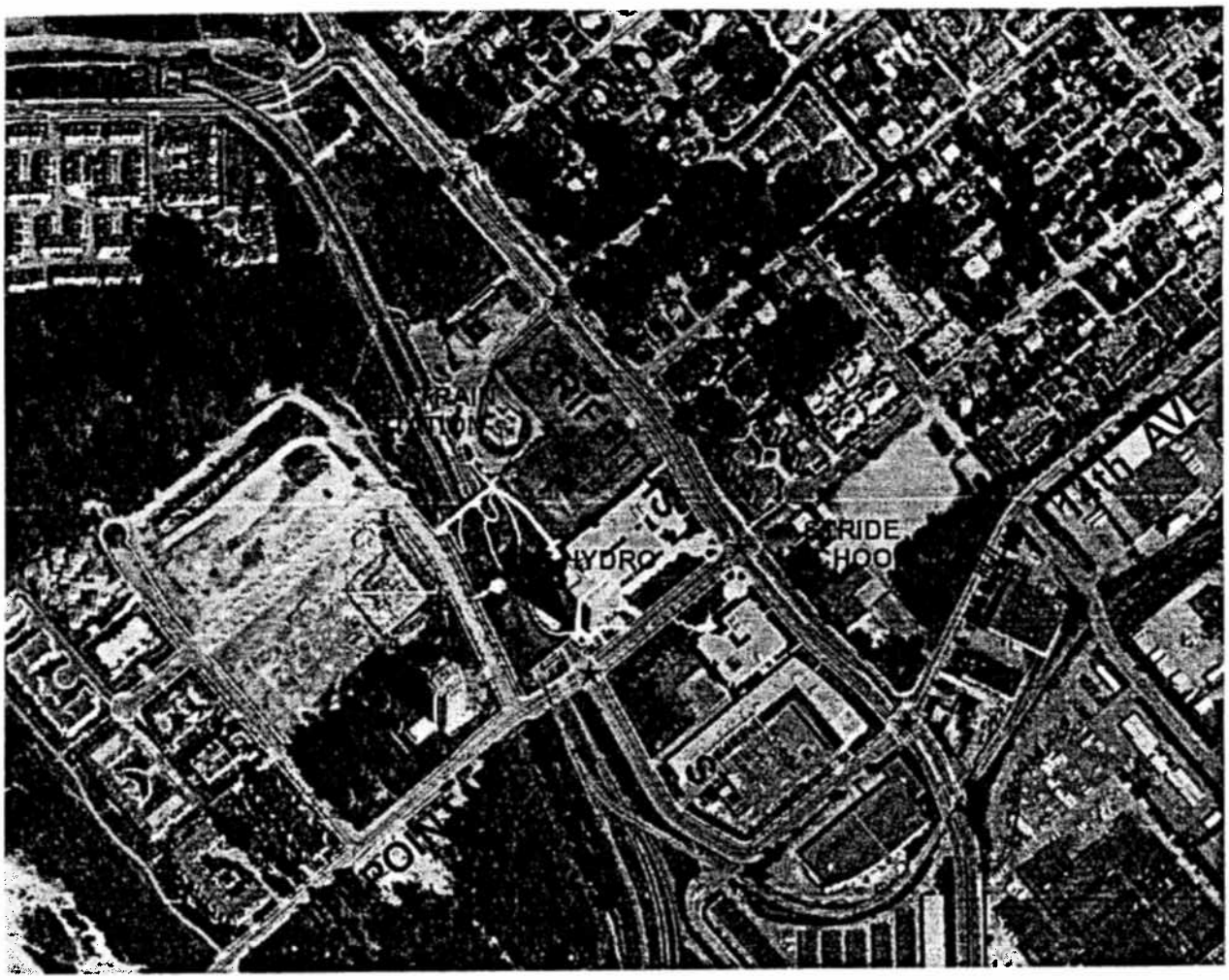
Each green phase is separated by a four second amber and one second all-red interval. During a coordinated cycle every phase must be serviced. However, during fully actuated operation if there is no demand for a phase that phase is omitted from the cycle. If no demand is detected at all, the signal will "rest" green on the "main street" in this case Griffiths Drive.

The traffic signal at 20th Street & Southpoint Drive is not coordinated with other signals and operates as a fully actuated two phase signal 24 hours a day. If there is no demand detected the signal rests green on Southpoint. The maximum cycle length is 55 seconds and the minimum is 24 seconds.

3.1 ALTERNATE TIMING PLAN

Due to the close proximity of the traffic signals along Griffiths, and the classification of this road as an Arterial and Truck Route, maintaining coordination during the morning and afternoon peaks is desirable.

We are reviewing all aspects of the current timing plans using new synchronization software to calculate and refine offset times and cycle lengths with the intent to minimize delay for all users but especially pedestrians. Implementation of the new plan is anticipated for early June.



ASST. DIRECTOR ENGINEERING,
TRAFFIC & ENG. SYSTEMS

MDS:
cc: City Manager