

Technical Circular T-6/00
File: 195.20/TCIR
Date: March 1, 2000

To: All HQ Directors: Operations, Planning and Major Projects
All Regional Directors
All District Highways Managers

Subject: **USE OF LED (LIGHT EMITTING DIODE) SIGNAL HEADS ON ALL NEW TRAFFIC SIGNALS**

Background:

LED signal heads are becoming an industry standard in the United States and overseas as well as within some jurisdictions in British Columbia. They offer the advantages of reduced power costs, increased reliability and potential maintenance savings.

LED signal heads have a much longer life (up to 10 years or 10 times as great) and significantly less power consumption (6 to 10%) compared to traditional incandescent signal heads.

The Ministry has determined that red and don't walk LED signal heads offer a cost effective alternative to traditional incandescent signal heads, based on capital costs and power savings. Green/yellow LED arrow heads (used in protective/permissive advance left turn applications) offer savings in capital costs as well as in operating costs over the current type of green/yellow arrow heads being used. In addition, when the greater reliability feature is taken into account, a case can be made for using green LED signal heads and yellow flashing beacon heads in outlying areas where callouts for lamp outages are expensive in manpower and equipment costs.

Green LED heads cost over twice the capital cost of red LED heads, therefore they are not being considered for all applications at this time, whereas yellow LED heads have a reasonable capital cost but are not energized enough to realize power cost savings. Don't walk LED signal heads have a reasonable capital cost and a good return on power costs as they are energized the majority of the time. Ministry electrical maintenance personnel have reported that nearly 50% of their callouts for incandescent lamp outages are done for don't walk signal heads.

Policy

THE MINISTRY WILL USE RED, DON'T WALK AND GREEN/YELLOW LIGHT ARROW EMITTING DIODE SIGNAL HEADS ON ALL NEW TRAFFIC SIGNALS EFFECTIVE JUNE 1, 2000. MINISTRY MAINTENANCE PERSONNEL MAY ALSO ELECT TO INSTALL LIGHT EMITTING DIODE SIGNAL HEADS (ALL TYPES) IN AREAS WHERE THE INCREASED CAPITAL COST IS OFFSET BY DECREASED POWER AND MAINTENANCE COSTS.

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