Government of Alberta ■ Transportation	PIVOTING OF TRAFFIC SIGNAL STRUCTURES EQUIPPED WITH ROTATABLE BASES	*Issued: JUN 2012*
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RECOMMENDED PRACTICES	PART	TRAFFIC OPERATIONS
	SECTION	
	SUB-SECTION	

General

Alberta's Commercial Vehicle Dimension and Weight Regulation details the maximum size and weight of vehicles and loads allowed on Alberta's provincial highways and includes provisions for the accommodation of oversize and overweight loads. Oversize and overweight loads must have a permit to operate in Alberta, as they exceed the capacity of typical Alberta highways.

Alberta Transportation has designated portions of highways as a high load corridor to accommodate oversize vehicles generated by economic activity involving the movement of large equipment, structures and machinery from one location (often the place of fabrication) in the province to another (assembly location/final destination). Highways within the high load corridor are typically designed to accommodate loads up to 9 metres in height and 9 metres in width, although some only accommodate smaller sized loads. Traffic signals located within or near the high load corridor are generally equipped with rotatable pole bases which allow the signal mast arm to be pivoted out of the way to allow an oversize load to pass through the intersection.

A listing of highways designated as high load corridor can be found on the following website:

http://www.transportation.alberta.ca/3192.htm

This Recommended Practice presents a standard procedure for pivoting traffic signal structures equipped with rotatable bases to ensure that the following goals will be achieved:

- Protect worker and motorist safety;
- Protect against damage to traffic signal equipment; and
- Minimize the disruption to vehicular and pedestrian traffic.

Significant coordination between escort vehicles, the operator of the oversized load, flagpersons, signals technicians, etc. is needed to meet these goals. This Recommended Practice provides a procedure that will aid in facilitating this coordination.

While most traffic signals equipped with rotatable bases are located on or near the high load corridor, this procedure can be applied for any provincially owned and operated traffic signal equipped with rotatable bases.

Standard

As there are a number of companies operating within the province that may need to pivot traffic signals on occasion, traffic signal rotatable bases are left unlocked.

However, any operators wishing to transport an oversize load and/or wishing to pivot a traffic signal must apply for a permit through Alberta Transportation's Central Permit

Office. More details on the permitting process can be found on the following website:

http://www.transportation.alberta.ca/2737.htm

Where traffic signal poles need to be pivoted, the following details must be submitted as part of the permit application:

- An outline of the route and timeline for the transport of the oversize load;
- A list of which traffic signal poles will need to be pivoted and when this will occur; and
- A temporary traffic accommodation strategy covering each of the affected traffic signal locations.

When issuing a permit, Alberta Transportation will include a statement indicating that the applicant shall be responsible for any damages to the traffic signals, poles, road surface or other structures that may occur as a result of the signal pole pivoting operation. The applicant will also be responsible for all costs associated with traffic control and acquiring the necessary equipment/ expertise to pivot the signal pole(s).

Flagperson and Traffic Control Device Requirements

When a traffic signal pole is to be pivoted, all accesses to the intersection must be controlled by certified flagpersons. Flagpersons must meet the qualification and equipment requirements outlined in Section 4.2 of the Alberta Transportation Traffic Accommodation in Work Zones, 2008 Edition manual.

Flagperson warning signs (WD-A-45) must be placed on each intersection approach in advance of the flagperson, as outlined in the Traffic Accommodation in Work Zones manual. The placement of flagpersons and Flagperson signs for a temporary intersection closure (allowing traffic signal poles to be pivoted for passage of an oversize load) is detailed in drawing TCS-D1-100, attached.

Traffic signals may remain in operation during the pole pivoting procedure described below, or a signal technician may set the signals to flash mode (either flash red in all directions or flash red on the minor road and flash amber on the major road) for greater awareness at the intersection. Signal technicians must have an International Municipal Signals Association (IMSA) Traffic Signals – Level 2 certification or greater with at least 1 year of experience wiring/programming cabinets to enter a signal cabinet and adjust the signal operation.

If the signals remain in operation, flagpersons should only permit traffic to proceed during the designated green phase to avoid motorist confusion over which traffic control device takes precedence.

Signal Pole Pivoting Procedure

Prior to pivoting a signal pole, the operator must notify the Maintenance Contract Inspector (MCI) for the affected intersection of the upcoming traffic/equipment disruption. A list of Maintenance Contract Inspectors can be found at the following website:

http://www.transportation.alberta.ca/687.htm

The procedure for modifying traffic control at a signalized intersection to facilitate pole pivoting and the passage of an oversize load is as follows:

1. Flagperson (WD-A-45) signs must first be placed in advance of the intersection on all approaches as outlined in drawing TCS-D1-100.

2. Flagperson stations are placed on all approaches to control traffic. Flagpersons cannot direct traffic until Flagperson signs have been set up in advance of the flagging stations. As an additional safety measure, a traffic signal technician may also set the traffic signals to flash mode, prior to commencing flagperson activities.

3. Once traffic has been stopped in all directions, the necessary signal pole(s) are pivoted to allow the oversize load to pass through the intersection. To minimize the delay experienced by motorists, the pivoting of the signal pole(s) should be coordinated as closely as possible with the arrival of the oversize load.

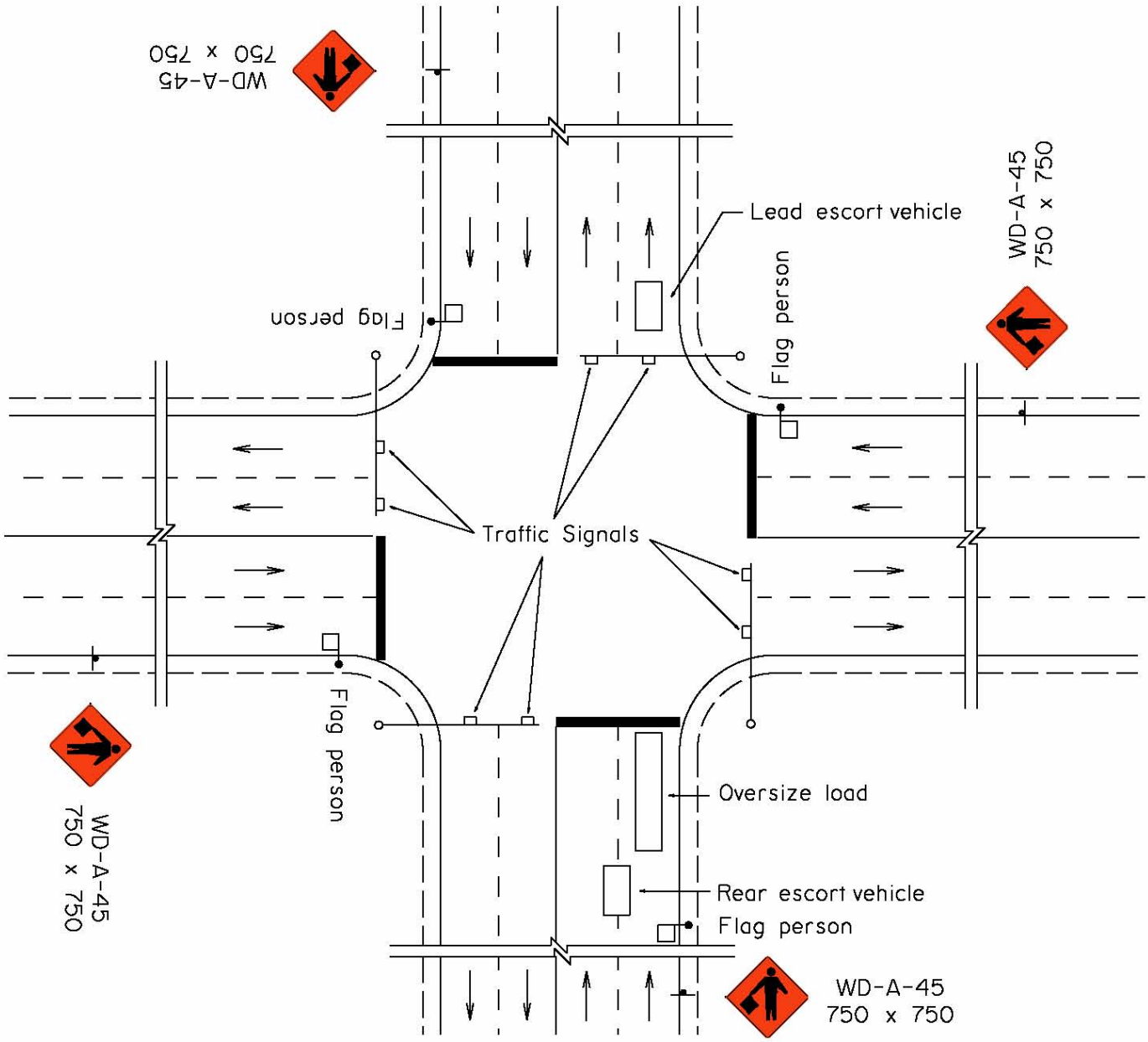
4. After the oversize load has passed through the intersection, the signal pole(s) should be returned to their original position and the signal returned to its normal mode of operation (if it was placed in flash mode).

5. Once the signal has been returned to its normal operation, it must be monitored to ensure that signal indications are functioning and the signals are cycling properly. The signal operation should be observed for a minimum of 3 cycles.

6. After normal signal operation has been confirmed, the flagperson stations can be shut down and the Flagperson signs can be removed. The Flagperson signs shall not be removed until the flagperson stations have been shut down.

References to Standards

Traffic Accommodation in Work Zones *Section I* *Section II*	 4.2 Flagpersons Standard Drawings
Traffic Safety Act *Commercial Vehicle Dimension and Weight Regulation*	 Part 4 – Overdimensional and Overweight Commercial Vehicles



NOTES:

1. Consideration must be given to traffic volume, sight distances, sign spacing, duration of intersection closure, night time conditions and other factors to ensure traffic control services are adequate in each instance.

2. The flag person on the oversize load approach should be located far enough from the intersection to allow the oversize load and the rear escort vehicle(s) to stop before entering the intersection.

3. All other flag persons should be located where they can safely stop all traffic including turning movements prior to the intersection.

4. WD-A-45 shall be mounted on a portable stand 0.3m above the road and 100m - 150m in advance of the flag person. The portable stand and any objects used to stabilize the portable stand must be an accepted industry standard and must not present a hazard to traffic.

No.	REVISIONS	BY	DATE
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Approved:

Original signed by
Moh Lali

Executive Director,
Technical Standards Branch

Date: JANUARY 2011

Government of Alberta
Transportation

INTERSECTION CLOSURE TO ACCOMODATE OVERSIZE LOAD

Prepared By: S.L.	Checked By: C.F.	Scale: N.T.S.	Dwg No.: TCS-DI-100