## RECLAIMED ASPHALT PAVEMENT (rap) ASPHALT CEMENT CONTRIBUTION

### General

Alberta Transportation is considering improvements to the durability of asphalt mixes. One of the asphalt mix properties that can influence the asphalt mix durability is the assumed asphalt cement contribution from reclaimed asphalt pavement (RAP). Currently, asphalt concrete mix designs with RAP assume a 100% contribution of the asphalt cement from the RAP materials when added to the hot asphalt concrete mixture.

### Procedure

The Contractor is advised that for XX,XXX tonnes of top lift asphalt concrete mix on this project, that mix produced and placed will have an assumed asphalt cement contribution rate of 80% from the RAP materials. The reduction in the percent asphalt cement contribution from the RAP materials will increase the amount of virgin asphalt cement required in the mix. A separate mix design shall be required for this Reduced RAP AC mix. This mix design is considered incidental to the work and will not be paid for separately. All requirements of Specification 3.16 and 3.50 shall apply.

The Reduced RAP AC mix section shall be constructed from kilometer xx.xxx to kilometer xx.xxx or as directed by the Consultant.

#### 2.1.1.1 Sample Calculation

A sample calculation is presented below, showing the difference between 100% and 80% contribution assumptions.

Assuming 100% RAP Asphalt Cement Contribution:

Assuming 80% RAP Asphalt Cement Contribution:

### Payment

The Reduced RAP AC mix will be paid for using the separate bid item and unit price bid per tonne for “Asphalt Concrete Pavement – EPS (80% RAP Asphalt Cement Contribution)”.

NOTES TO THE DESIGNER (NOT TO BE INSERTED INTO TENDER):

* SEPARATE BID ITEM FOR MIX WITH 80% RAP ASPHALT CEMENT CONTRIBUTION (TONNES).
* FOR THIS PROJECT, A TRIAL SIDE BY SIDE SECTION SHOULD BE CONSTRUCTED WITH THE MIX WITH 80% RAP ASPHALT CEMENT CONTRIBUTION FOR ONE MAT AND MIX WITH 100% RAP ASPHALT CEMENT CONTRIBUTION FOR THE ADJACENT JOINING MAT. THIS SIDE BY SIDE SECTION APPLIES TO THE TOP LIFT ONLY.
* CONSULTANT TO DETERMINE LOCATION FOR TRIAL SECTION AND ESTIMATE QUANTITIES FOR 80% RAP ASPHALT CEMENT CONTRIBUTION FOR BIDDING PURPOSES (TARGET APPROXIMATELY 10,000 TONNES). THE LOCATION SHOULD BE SELECTED TO ENSURE CONTINUOUS PRODUCTION (I.E. ALL 10,000 TONNES PRODUCED ON SUCCESSIVE DAYS RATHER THAN SWITCHING BETWEEN MIX DESIGNS). ADJUST LOCATION AND WORKING SP AS REQUIRED.
* INCLUDE A DEPARTMENT PIT OPTION.