

REMARKS:

I

Map the portfolio construction type to the ISO classification and select the corresponding vulnerability matrix

II

The structure limit LM_S is applied based on the portfolio type (replacement cost or actual cash value) to obtain V_i , V_C , and V_{AP}

III

The deductibles applied to **structure**, **content** and **appurtenant** (D_S , D_C , and D_{AP}) are calculated based on the mean damages obtained from the vulnerability matrices

IV

The damages of **structure**, **content**, **appurtenant** and **ALE** (DM_S , C , AP and ALE) are calculated at different damage ratio intervals. Here, DM_S , C and AP are calculated based on V_i , V_C , and V_{AP} , respectively. Then the losses of **structure**, **content** and **appurtenant** (L_S , L_C and L_{AP}) are computed by applying the deductibles. Two exceptions are handled as follows:

1. If L_S (L_C or L_{AP}) < 0 , set it to 0
2. If L_S (L_C or L_{AP}) $> LM_S$ (LM_C or LM_{AP}), set it to LM_S (LM_C or LM_{AP})

The loss of ALE (L_{ALE}) is set to ALE , which is calculated based on the ALE limit (LM_{ALE})

V

The structure loss L_S is compared to the structure limit LM_S . Two situations are handled:

1. For mobile home, if $L_S > 0.5 * LM_S$, L_S is set to LM_S
2. For other construction type, if $L_S > 0.8 * LM_S$, L_S is set to LM_S

NOTE: It will be implemented. However, at this stage, it will be commented out for later use.

VI

SumL ($SumL_S$, $SumL_C$, $SumL_{APP}$ or $SumL_{ALE}$) is expected loss of the property for a given wind speed, which is calculated by aggregating the losses at different damage intervals with respect to the corresponding damage probabilities.

VII

SumEL is across all wind speeds, which is obtained by aggregating all the expected losses at different wind speed with respect to the corresponding probability for the wind speed.

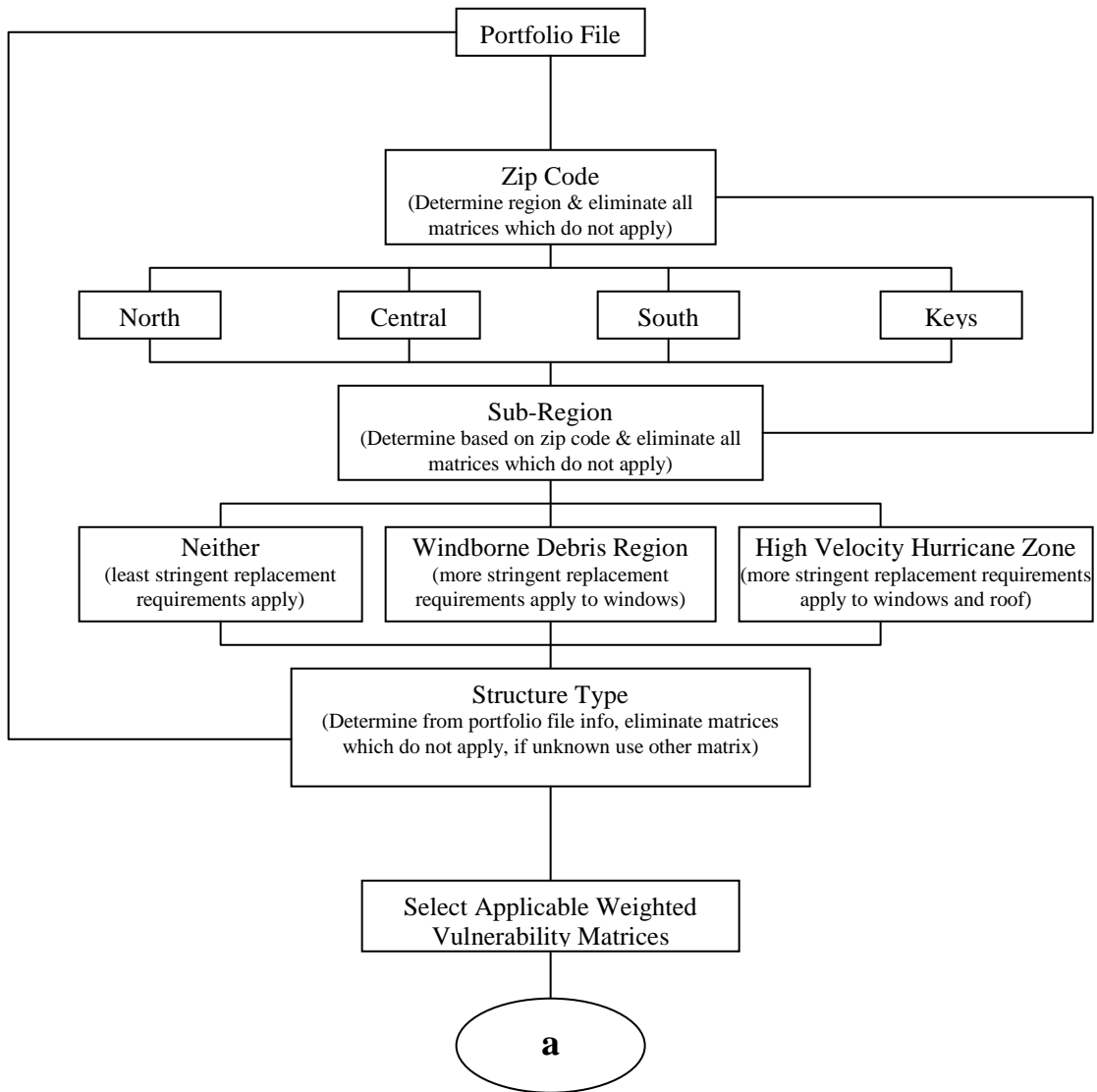
VIII

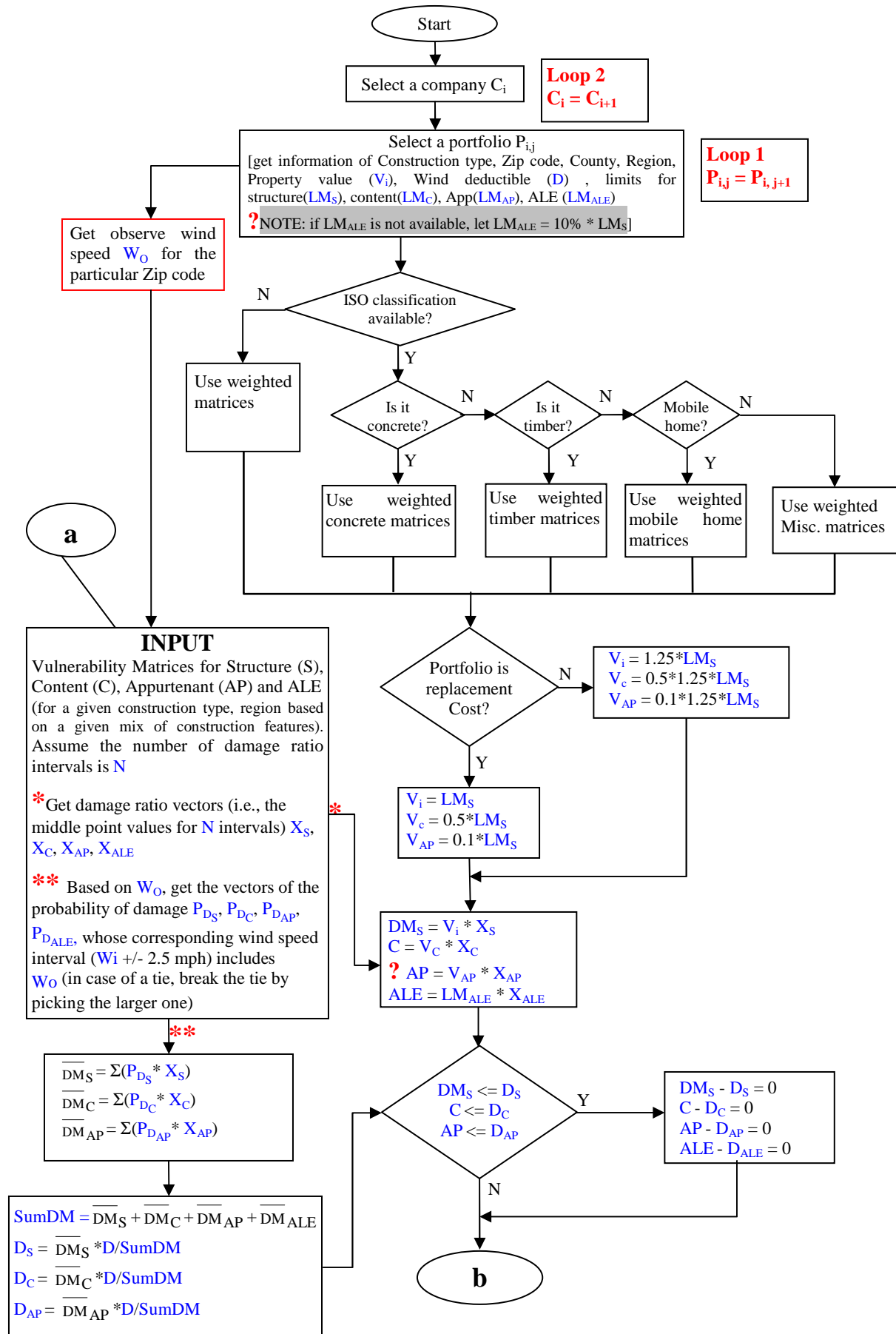
SumAEL aggregates all expected losses for one company.

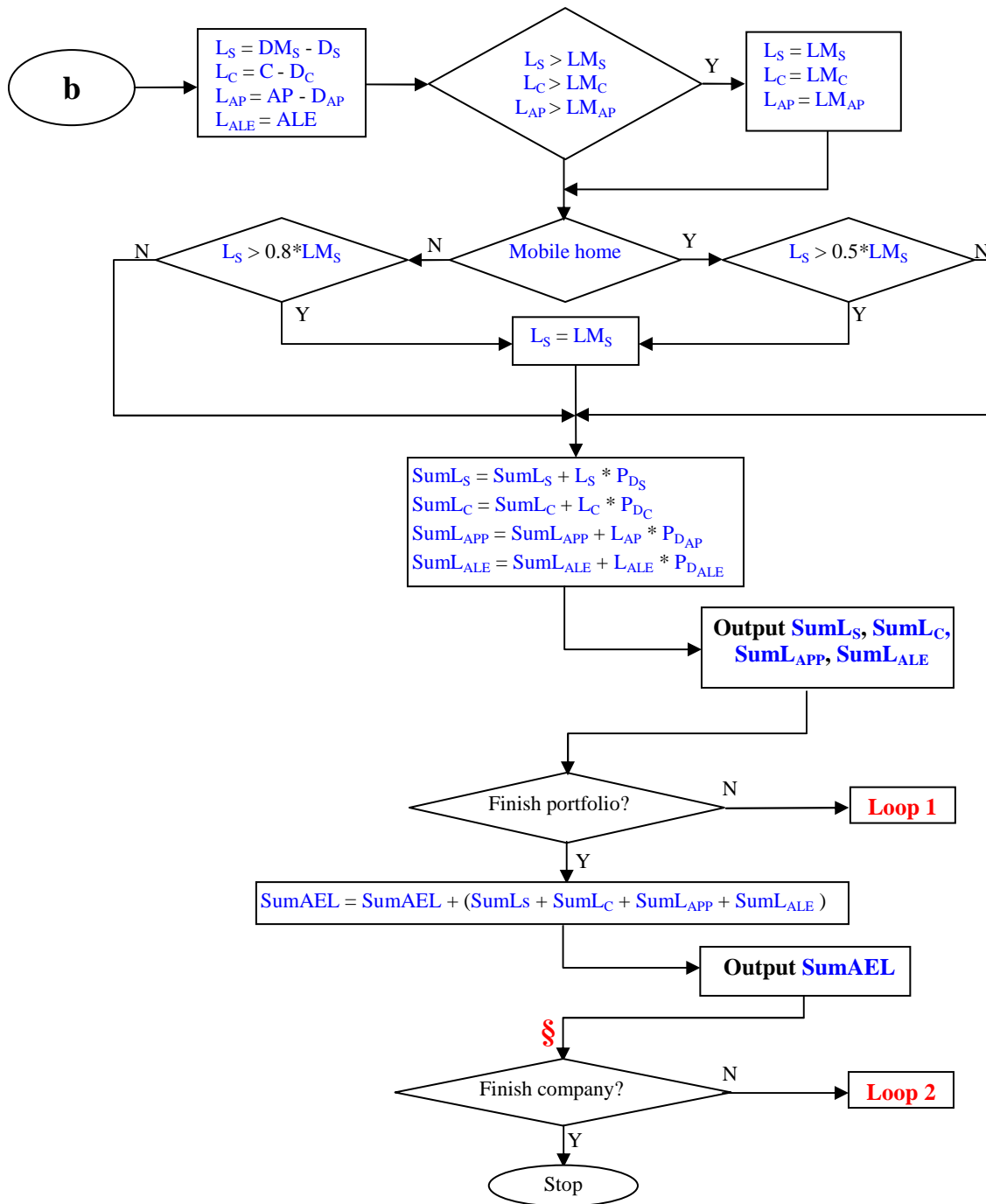
NOTE: Save information (zip code, county, region, construction type, 4 types of coverages, property value, company) for **SumL_S**, **SumL_C**, **SumL_{APP}**, **SumL_{ALE}** and **SumEL**. For **SumL_S**, **SumL_C**, **SumL_{APP}** and **SumL_{ALE}**, save wind speed too and for **SumEL**, save ($V_i / \text{sum of } V_i$) where sum of V_i is for each construction type (Masonry, Timber, Mobile home) and is calculated offline.

§ Variance of **SumAEL** can be calculated for a company, for a Zipcode or for a construction type.

Scenario Based Procedures







REMARKS:

The steps in scenario-based ILM are similar to the general ILM except that the wind speed for a certain portfolio is given. **SumL** is expected loss of the property for a given wind speed, **SumAEL** aggregates all expected losses for one company. Save information (zip code, county, region, construction type, 4 types of coverages, property value, company) for **SumL_S**, **SumL_{APP}**, **SumL_{ALE}**.

§ Variance of **SumAEL** can be calculated for a company, for a Zipcode or for a construction type.