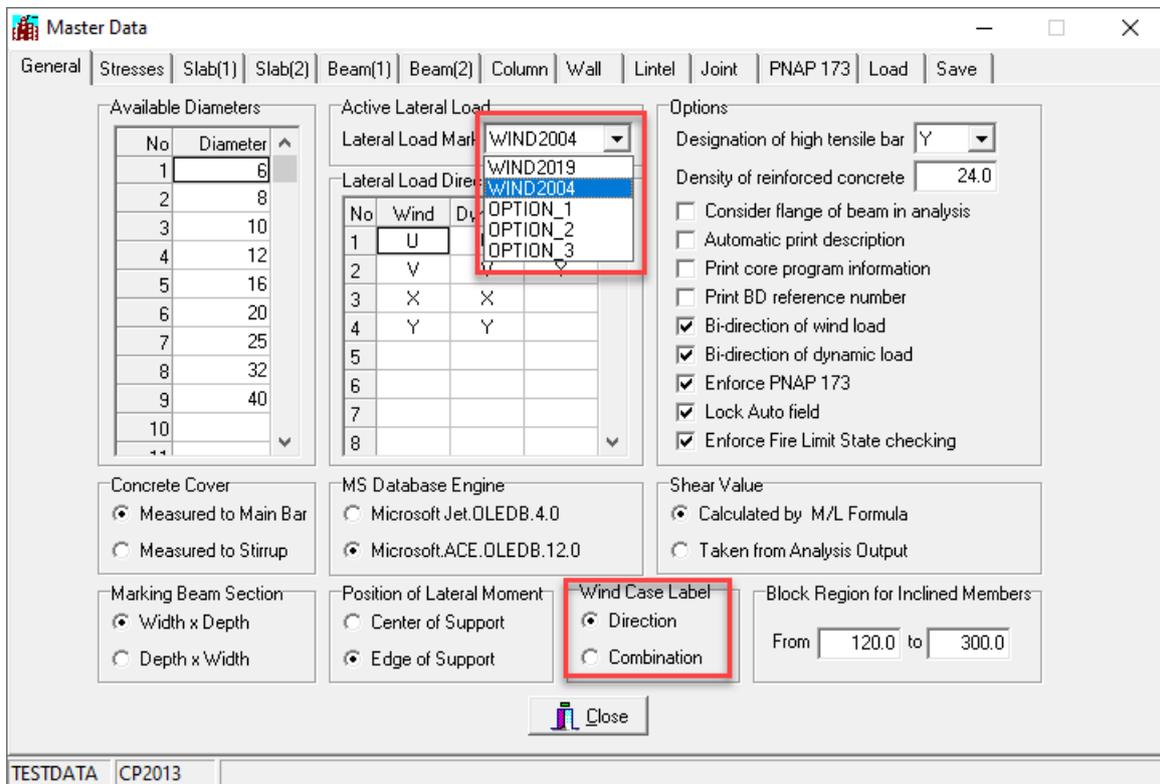


SADS V24 Wind Load Input

SADS 21.0.2.4 has implemented major improvements in the input of Lateral Wind Codes 2004 and 2019.

Lateral Load Marks

You can input Lateral Load Marks to Master Data as previous SADS version. The user can add, change and delete Lateral Load Marks as needed:



When using the Wind Code 2004, the user should select “Direction” for the Wind Case Label and input as many labels/directions as necessary. This is the same as the earlier versions of SADS.

When using the Wind Code 2019, the user should select “Combination” for the Wind Case Label. The user needs to input 24 Labels to represent these combinations. If the “Bi-direction of wind load” check box is selected, the wind load combinations 1 to 12 are symmetric to wind load combinations 13 to 24. As the result, only 12 labels (instead of 24) are necessary and SADS will compute combinations 13 to 24 accordingly.

Table 2-1 Load combination factors for buildings that may be treated as rectangular

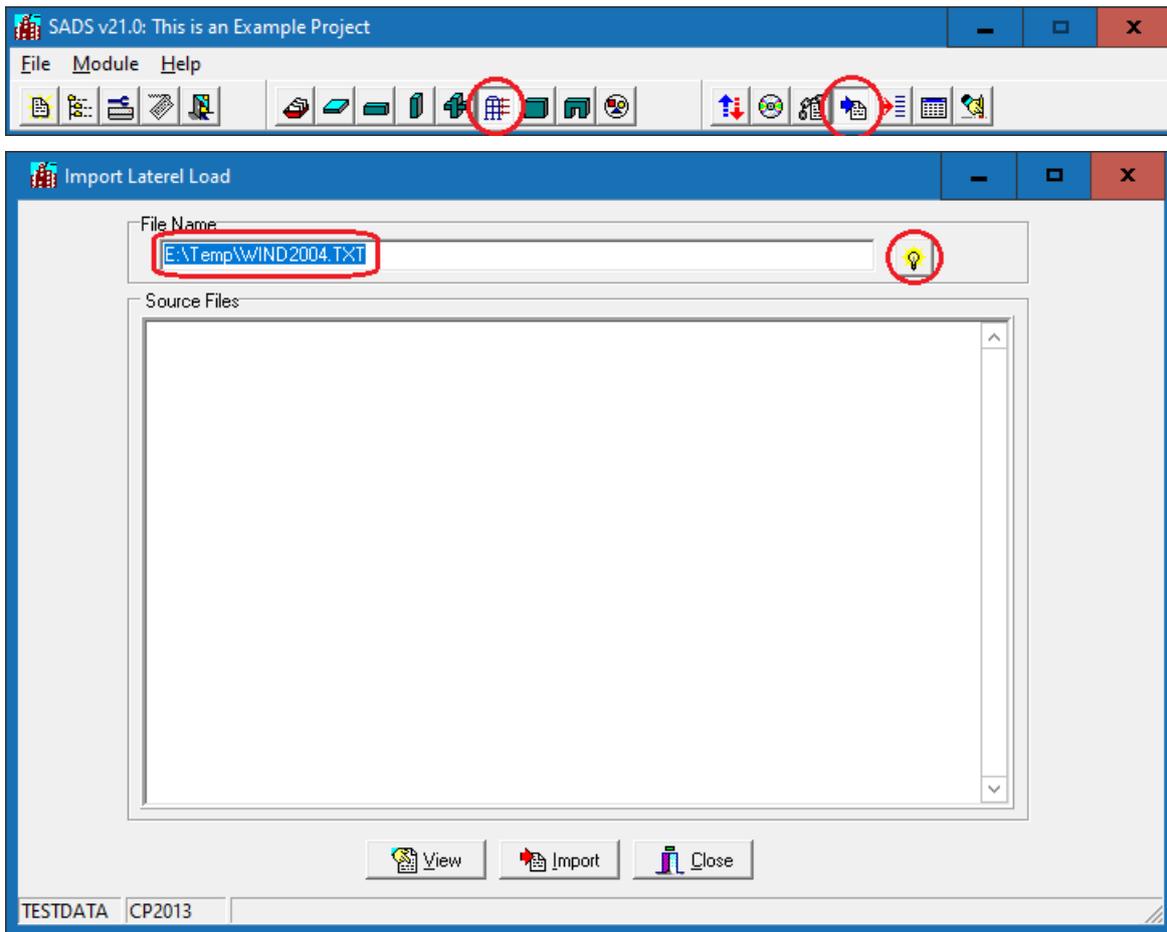
Case	$W_{z,x1}$ $= \text{Max}(W_{z,+x1}, W_{z,-x1})$	$W_{z,x2}$ $= \text{Max}(W_{z,+x2}, W_{z,-x2})$	ΔT_z
1	±1.00	±0.55	±0.55
2	±0.55	±1.00	±0.55
3	±0.55	±0.55	±1.00

Option_1, Option_2, and Option_3 are for the input of user-customized wind load for study or research purposes

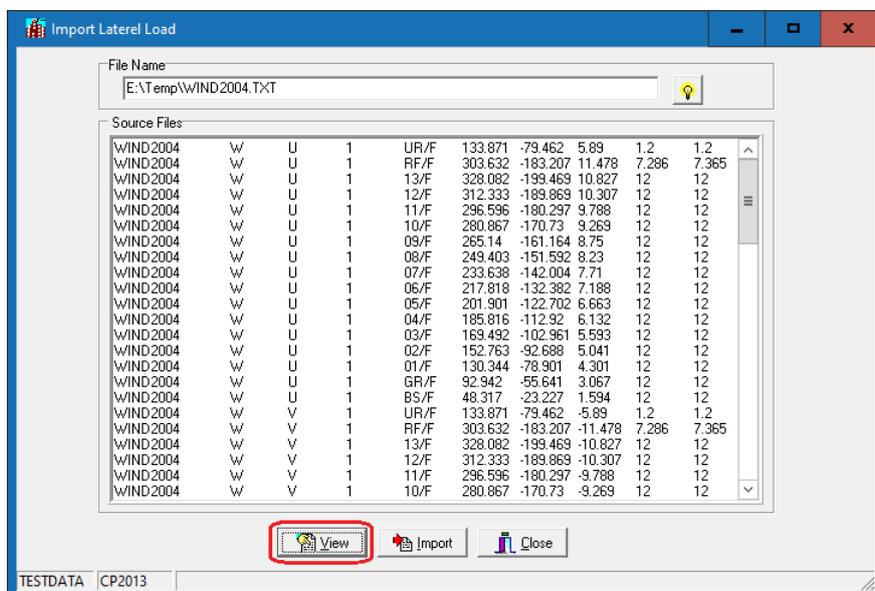
The user can then import the results from ETABS associated with these Wind Case Labels for design.

Import Lateral Loads

If users would like to import lateral loads based on Wind Codes 2004 or 2019, say calculated using Excel, into SADS for subsequent processing, it can be done using the Input Lateral Load (TAB delimited text file) module:



Use the Browse button to locate the text file.



Click the View button to see the format and content of the text file.

If it is correct, click the Import button to import the text file to generate lateral load data for SADS.

Run the Lateral Load Sub-command to see the generated lateral loads:

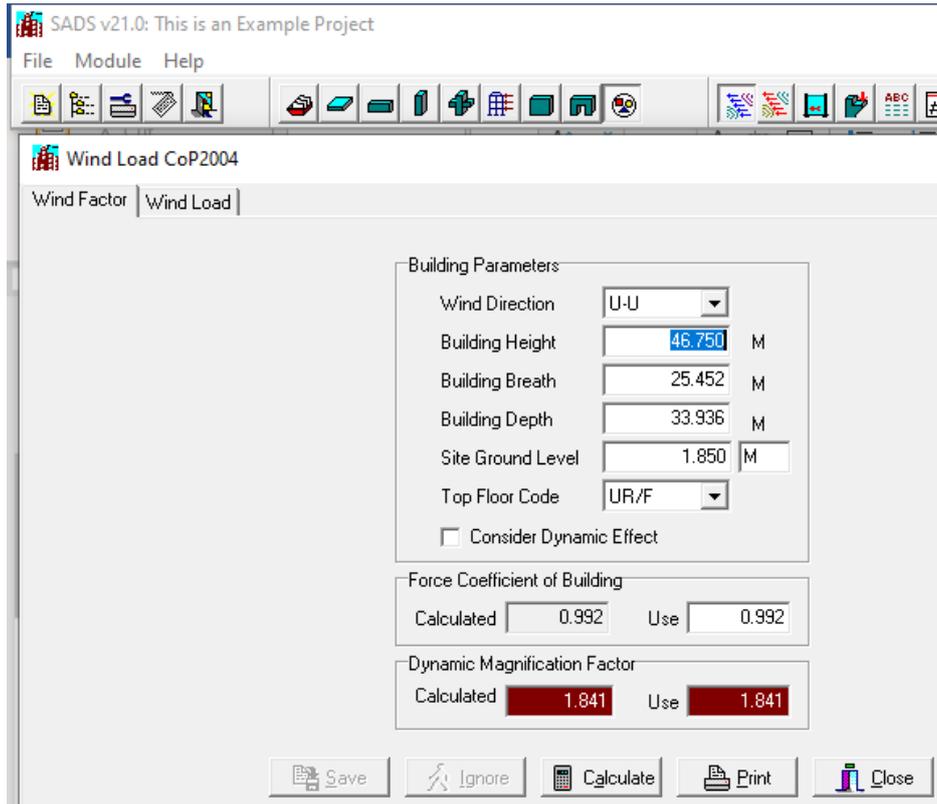
The screenshot shows the 'Enter Lateral Force' dialog box in SADS v21.0. The 'Active Lateral Load' is set to 'WIND2004'. The 'Header Data' section includes 'Lateral Load Mark' (WIND2004), 'Diaphragm No' (1), 'Load Type' (Wind Load), and 'Direction' (U-U). The 'Existing Data' table lists various load marks and their types/directions. The 'Wind Load on WIND2004 (Diaphragm: 1)' table provides detailed load values for each floor level.

Load Mark	Type	Direct.	Diaph.
WIND2004	S	X	1
WIND2004	S	Y	1
WIND2004	W	U	1
WIND2004	W	V	1
WIND2004	W	X	1
WIND2004	W	Y	1
WIND2004	Y	U	1
WIND2004	Y	V	1
WIND2004	Y	X	1
WIND2004	Y	Y	1

Floor	Px	Py	Mt	X	Y
UR/F	21.000	-21.000	-404.000	0.000	0.000
RF/F	-38.000	38.000	750.000	0.000	0.000
13/F	-88.000	88.000	1619.000	0.000	0.000
12/F	-147.000	147.000	2642.000	0.000	0.000
11/F	-147.000	147.000	2642.000	0.000	0.000
10/F	-147.000	147.000	2642.000	0.000	0.000
09/F	-147.000	147.000	2642.000	0.000	0.000
08/F	-147.000	147.000	2642.000	0.000	0.000
07/F	-136.000	136.000	2440.000	0.000	0.000
06/F	-135.000	135.000	2437.000	0.000	0.000
05/F	-135.000	135.000	2437.000	0.000	0.000
04/F	-129.000	129.000	2313.000	0.000	0.000
03/F	-127.000	127.000	2293.000	0.000	0.000
02/F	-143.000	143.000	2579.000	0.000	0.000

Calculate Wind Loads Based on Wind Codes 2004 and 2019

As in the previous version, SADS can calculate wind loads using the Wind Load 2004 module:



Or the Wind Load 2019 module:

