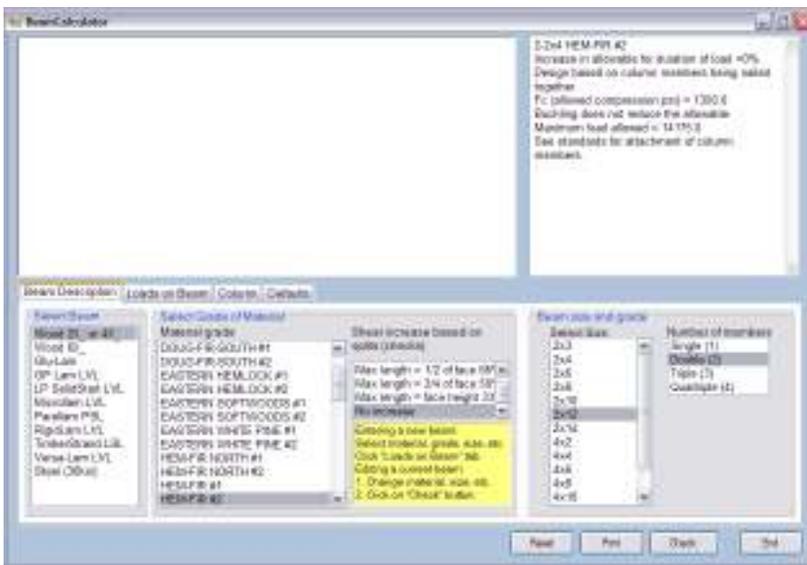


# HOW DO I CHECK A BEAM USING PLAN ANALYST?

- FIRST YOU SIMPLY FILL IN THE PLAN ANALYST FORMS TO COMPLETE THE BEAM OR COLUMN DESCRIPTION AS SHOWN BELOW.
- PLAN ANALYST WILL THEN COMPLETE ALL OF THE TIME CONSUMING CALCULATIONS AND CREATE A DETAILED DRAWING OF THIS BEAM OR COLUMN.
  1. IF YOU ARE IN THE DESIGN PROCESS, YOU CAN QUICKLY TRY DIFFERENT BEAM SIZES OR TYPES OF MATERIAL TO DETERMINE THE BEST BEAM OR COLUMN FOR THIS LOCATION. NOW YOU HAVE COMPLETE CONFIDENCE IN CODE COMPLIANCE, PREVENTING DELAYS WHEN THE PLANS ARE SUBMITTED FOR APPROVAL.
  2. IF YOU ARE CHECKING THE PLANS FOR CODE COMPLIANCE, YOU CAN QUICKLY CHECK BEAMS AND COLUMNS. PLAN ANALYST CONTAINS MANY DIFFERENT TYPES OF BEAMS SO THERE IS NO NEED TO CHANGE SOFTWARE OR THE PROCEDURE YOU USE WHEN THE PROJECT CONTAINS SEVERAL DIFFERENT TYPES OF BEAMS. THIS WILL MAKE THE PLAN REVIEW PROCESS FASTER, EASIER AND MORE ACCURATE.

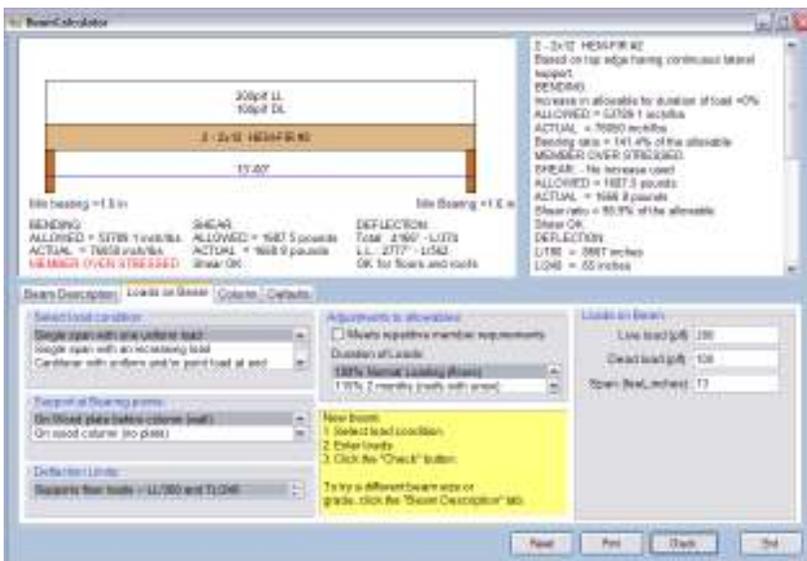
## USING THE BEAM DESCRIPTION TAB



SELECT BEAM MATERIAL FROM THE LIST BOX ON THE LEFT BOTTOM OF THE SCREEN. CLICK ON THE **NAME OF MATERIAL**

1. NOW SELECT THE GRADE OF MATERIAL. **NOTE:** THE MATERIALS GRADE BOX WILL CHANGE DEPENDING ON THE MATERIAL NAME YOU CHOOSE IN THE FIRST BOX AND WILL **ONLY** SHOW IF THERE IS MORE THAN ONE GRADE AVAILABLE. CLICK ON THE **DESIRED GRADE**. **NOTE:** GRADE WILL ALWAYS DEFAULT TO LAST ONE SELECTED.
2. SHEAR INCREASE WILL ONLY SHOW FOR 2X\_, 4X\_ AND 6X\_ MATERIAL.
3. SELECT THE SIZE OF THE BEAM BY CLICKING THE **SIZE** IN THE **SELECT SIZE** LIST BOX.
4. IF MULTIPLE MEMBERS ARE ALLOWED, CLICK THE **NUMBER OF MEMBERS**. IF MULTIPLE MEMBERS ARE NOT ALLOWED, THE BOX WILL NOT BE SHOWN.

## USING THE LOADS ON BEAM TAB



1. SELECT **LOAD CONDITION** **NOTE:** THE LOADS ON BEAM BOX WILL CHANGE TO MATCH LOAD CONDITION SELECTED.
2. SELECT **SUPPORT AT BEARING POINTS**
3. SELECT **DEFLECTION LIMITS**
4. SELECT **MEETS REPETITIVE MEMBER REQUIREMENTS** TO USE REPETITIVE MEMBER, CLICK BOX TO PLACE A ✓ IN THE BOX. **NOTE:** THIS WILL ONLY BE DISPLAYED WHEN YOU HAVE SELECTED VISUALLY GRADED WOOD.
5. SELECT **DURATION OF LOAD** THIS OPTION IS ONLY AVAILABLE FOR WOOD MEMBERS.

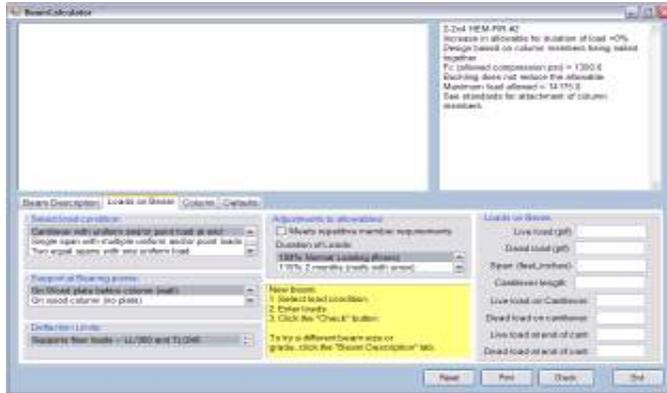
## **SELECT LOAD CONDITION**

### **1. SINGLE SPAN WITH ONE UNIFORM LOAD**

THIS IS THE MOST COMMON LOADING CONDITION FOR BEAMS AND HEADERS.

### **2. CANTILEVER WITH UNIFORM AND/OR POINT LOAD AT END**

THIS IS GREAT FOR CANTILEVERED JOIST SUPPORTING A WALL AT THE END.

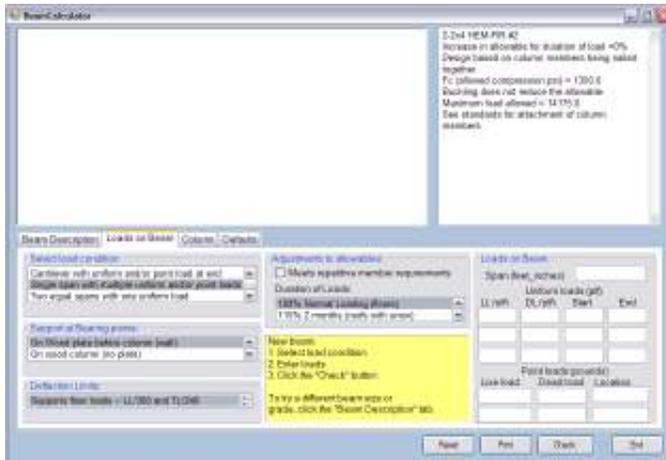


### **3. SINGLE SPAN WITH AN INCREASING LOAD**

THE MOST COMMON USE FOR THIS OPTION IS FOR THE CORNER RAFTER OF A HIP SYSTEM OR FOR A VALLEY RAFTER. THIS LOADING CONDITION STARTS AT ZERO AND INCREASES TO A MAXIMUM AT THE OTHER END.

### **4. MULTIPLE UNIFORM AND/OR POINT LOADS**

THIS IS GOOD FOR A BEAM THAT SUPPORTS ANOTHER BEAM PLUS RAFTERS AND/OR JOISTS. IT IS ALSO GOOD FOR BEAMS SUPPORTING JOISTS AND/OR RAFTERS THAT VARY IN LENGTH. ANOTHER USE IS FOR A BEAM THAT SUPPORTS RAFTERS ON PART OF THE BEAM AND SUPPORTS JOISTS ON THE OTHER PART OF THE BEAM.



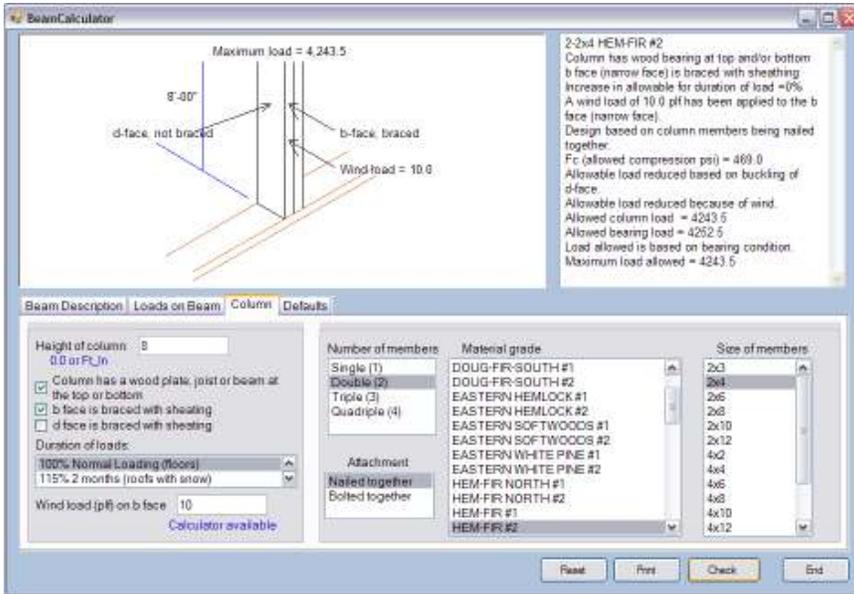
### **5. CONTINUOUS BEAM OVER TWO SPANS**

THIS IS FOR BEAMS WITH UNIFORM LOADS AND MULTIPLE SUPPORTS. A BEAM IN THE CENTER OF A BUILDING WOULD BE THE COMMON LOCATION FOR THIS TYPE OF BEAM.

## **CHECKING DIFFERENT BEAMS**

TO TRY A DIFFERENT BEAM SIZE OR TYPE, CLICK THE BEAM DESCRIPTION TAB, SELECT THE NEW SIZE AND/OR BEAM MATERIAL AND CLICK THE CHECK BUTTON. THE RESULTS FOR THE NEW BEAM WILL BE SHOWN INSTANTLY.

## CHECKING A COLUMN



1. ENTER THE COLUMN HEIGHT.
2. INDICATE IF COLUMN HAS A WOOD PLATE, JOIST OR BEAM AT THE TOP OR BOTTOM. NOTE: WOOD CANNOT SUPPORT AS MUCH WEIGHT ON SIDES AS IT CAN ON ENDS. IF YOU SELECT THIS, COMPRESSION PERPENDICULAR TO GRAIN WILL BE CHECKED AND ALLOWABLE BEARING WILL BE ADJUSTED IF NECESSARY.
3. IF COLUMN IS BRACED WITH SHEATHING, IT CONTROLS BUCKLING, THEREFORE INCREASING ALLOWABLE. NOTE: SOME SHEATHING IS NOT STRONG ENOUGH TO CONTROL BUCKLING. CHECK SHEATHING BEFORE SELECTING THIS.
4. THE REST OF INPUT IS SIMILAR TO THE BEAM INPUT DESCRIBED ABOVE.

THE COLUMN CALCULATOR IS INTERACTIVE. CURRENT RESULTS SHOW INSTANTLY EACH TIME YOU MAKE A CHANGE . THERE IS NO NEED TO CLICK THE CHECK BUTTON TO SEE THE RESULTS.

THE MAXIMUM LOAD THAT THE COLUMN CAN SUPPORT IS SHOWN ABOVE THE COLUMN IN THE PICTURE AND AT THE BOTTOM OF THE RESULTS.

## USING THE CALCULATOR

WHEN NUMBERS, SUCH AS DIMENSIONS AND SQUARE FOOTAGE, ARE REQUIRED, A FOUR-FUNCTION CALCULATOR IS BUILT INTO PLAN ANALYST. USE THE + FOR ADDITION - FOR SUBTRACTION X OR \* FOR MULTIPLICATION AND / FOR DIVISION. ALGEBRAIC LOGIC IS USED (I.E. DIVISION AND MULTIPLICATION ARE ALWAYS COMPLETED BEFORE ADDITION AND SUBTRACTION)

**THERE IS NO NEED TO REACH FOR YOUR CALCULATOR.**

WHEN ASKED FOR THE FLOOR AREA ENTER:  $100 \times 40 + 30 \times 38$  AND THE FLOOR AREA WILL BE CALCULATED FOR YOU.

