

```
'Lets redim the array to add 2 more columns for wind shear and moments
ReDim Preserve StemArray(counter, 6)

'Set up Some Variables to use in the loop
Dim POI_Stem(2) As Double
Dim PointX As Double

'Loop through all my wall points and calculate shear and moments due to wind load
For i = LBound(StemArray, 1) To UBound(StemArray, 1)

    PointX = StemArray(i, 4)

    POI_Stem = Stem_Wind(PointX, POI_Special, h_topfence, h_parapet, pressure_wind)
    StemArray(i, 5) = POI_Stem(1)
    StemArray(i, 6) = POI_Stem(2)
Next i
```

I get an error here... "can't assign to array"

POI_Special is a 7x4 variant matrix

```
Function Stem_Wind(PointX As Double, POI_Special() As Variant, h_topfence As Double, _
h_parapet As Double, pressure_wind As Double) As Double()
```

```
' This function will calculate shear and moments due to a uniform wind load
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```
' Written by JoelTxCIVE
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' Last Modified 07/10/2018
```

```
'INPUT:
```

```
'For each value sent into the function, we need to determine which region of the wall  
'we are in and then apply the proper equation to determine shear and moments.
```

```
'PointX - This is the point I am interested in.  
'POI_Special() - This is a (7x4) variant matrix with string and numeric columns  
'h_topfence - Height of top of fence above wall  
'h_parapet - Height of parapet region  
'pressure_wind - Uniform wind pressure
```

```
'OUTPUT:
```

```
'A (1x2) array containing two numeric values. Value 1 will be shear and Value 2 is moment.
```

```
'We are going to use a select case operation to compare the PointX value  
'to the special points of interest array.
```

```
Select Case PointX
```

```
Case Is < POI_Special(3, 4) 'in the top fence  
Stem_Wind(1) = 0 'shear  
Stem_Wind(2) = 0 'moment
```

```
Case Is = POI_Special(3, 4) 'at top of wall  
Stem_Wind(1) = h_topfence * pressure_wind 'shear  
Stem_Wind(2) = Stem_Wind(1) * h_topfence / 2 'moment
```

```
Case Is < POI_Special(4, 4) 'between top of wall and nat grade  
Stem_Wind(1) = (h_topfence + PointX - POI_Special(3, 4)) * pressure_wind 'shear  
Stem_Wind(2) = Stem_Wind(1) * PointX / 2 'moment
```

```
Case Is <= POI_Special(7, 4) 'below nat grade  
Stem_Wind(1) = (h_topfence + h_parapet) * pressure_wind 'shear  
Stem_Wind(2) = Stem_Wind(1) * (PointX - (h_topfence + h_parapet) / 2) 'moment
```

```
Case Else  
Stem_Wind(1) = 0 'nothing  
Stem_Wind(2) = 0 'nothing
```

```
End Select
```

```
End Function
```