# Definitions > NamedSets

the syntax & example use the namespace **NamedSets** when it is actually **NamedSet**.

# Analysis Model > Link Element > GetProperty

**Remarks**

This function retrieves the property assignment to a link element.

The function returns zero if the property data is successfully retrieved; otherwise it returns a nonzero value.

~~The sVarTotalLength and sVarRelStartLoc items apply only when the Var item is True.~~

# ObjectModel>ExternalAnalysisResults>

* Get/SetFrameStations
* DeleteFrameForces
* PresetFrameCases

Name as String should be passed ByRef.

# Definitons > GeneralReferenceLine>Set/GetLineElevPoints

Under **Paramaters** definitions, **x** & **y** should be **s** & **z**.

# Analysis Model>Plane>GetLoadRotate

Method signature and parameters description incorrectly states that joint patters are used. This is ByRef PatternName() As String. This should be removed.

# Analysis Model>Line>GetLoadGravity/Point/Strain/TargetForce/Temperature

Optional ItemType Parameter is listed as having Object as default. It is actually Element as the default in all Analysis Model cases.

# Analysis Model > Line/Link/Plane/Solid Element>GetProperty

Syntax uses Sap2000, as in the following case:

Sap2000...

but should be

SapObject.SapModel...

Also in:

* Object Model
  + Area Object
    - GetSelected
    - GetSelectedEdge
    - GetTransformationMatrix
    - SetSelected
    - SetSelectedEdge
  + Cable Object
    - GetSelected
    - GetTransformationMatrix
    - SetSelected
  + Frame Object
    - GetSelected
    - GetTransformationMatrix
    - SetSelected
  + Link Object
    - GetSelected
    - GetTransformationMatrix
    - SetSelected
  + Solid Object
    - GetSelected
    - GetTransformationMatrix
    - SetSelected
  + Tendon Object
    - GetSelected
    - GetTransformationMatrix
    - SetSelected
  + PointObject
    - SetMassByVolume
    - SetMassByWeight

# Object Model > TendonObject>Get/Set TendonData

**Parameters**: MyType, 9 seems like it should be an "intermediate point on a circle" rather than an " intermediate point on a parabola".

# SetAutoMesh

Lacks the ItemType objet in the signature definition and parameters list

**RestraintsOnEdge**

If this item is True, and if both points along an edge of the original solid object have the same restraint/constraint, then, if **~~the~~** an added point on that edge and the original corner points have the same local axes definition, the program assigns the restraint/constraint to the added point.

# AreaObject/SolidObject>GetSpring

**VecZ**

Each value in this array is the **X**-axis or solid object local 3-axis component (depending on the CSys specified) of the user specified direction vector for the spring local 1-axis. The direction vector is in the coordinate system specified by the CSys item. This item applies only when the corresponding SpringLocalOneType = 3.

(should be Z-axis)

# SetMass

**Replace**

If this item is True, all existing mass assignments to the area object are removed before assigning the specified **mas**.

# GetLateralBracing

**Parameters**

**RD2**

This is an array that includes the relative location of the start of the uniform bracing (when MyType = 2).

This item does not apply for point bracing (when MyType = 1).

**Dist2**

This is an array that includes the actual location of the start of the uniform bracing (when MyType = 2). [L]

This item does not apply for point bracing (when MyType = 1).

# ObjectModel > FrameObject > GetCurved\_1

**Parameters: MyType**

MyType 3 defines a circular curved frame by it**'s** end points,

# ObjectModel > AreaObject > Get/SetLoadWindPressure

MyType should not be double, but long.

ItemType is not listed in the **Parameters** descriptions.

# ObjectModel > Frame > GetLoadTargetForce

**Parameters**

P, V2, V3, T, M2, M3 description is incorrect. See 'SetLoadTargetForce' for the correct documentation.

# PointElement/Object>IsSpringCoupled

Method signature wrong:

Function IsSpringCoupled(ByVal Name As String, **ByVal** IsCoupled As Boolean) As Long

Should be:

Function IsSpringCoupled(ByVal Name As String, **ByRef** IsCoupled As Boolean) As Long

# PointObject>SetConstraint

Method signature is wrong:

Function SetConstraint(ByVal Name As String, **ConstraintName As String**, Optional ByVal ItemType As eItemType = Object, Optional ByVal Replace As Boolean = True) As Long

should be

Function SetConstraint(ByVal Name As String, **ByRef ConstraintName As String**, Optional ByVal ItemType As eItemType = Object, Optional ByVal Replace As Boolean = True) As Long

# PointObject>GetCommonTo

**Parameters**

Name: The name of a point object or a group depending on the value selected for ItemType item.

Incorrect. There is no ItemType parameter.

# PointObject>GetSpecialPoint

Method signature is wrong:

Function GetSpecialPoint(ByVal Name As String, **ByVal** SpecialPoint As Boolean) As Long

should be

Function GetSpecialPoint(ByVal Name As String, **ByRef** SpecialPoint As Boolean) As Long

# PointObject>SetPatternByPressure

Method signature is incomplete and not all parameters are ByVal:

Function SetPatternByPressure(ByVal Name As String, ByVal PatternName As String, ByVal Z As Double, ByVal w As Double**, u As Double, r As Long**, Optional ByVal ItemType As eItemType = Object, Optional ByVal Restriction As Long = 0, Optional ByVal Replace As Boolean = False) As Long

should be

Function SetPatternByPressure(ByVal Name As String, ByVal PatternName As String, ByVal Z As Double, ByVal w As Double, **ByRef** u As Double, **ByRef** r As Long, Optional ByVal ItemType As eItemType = Object, Optional ByVal Restriction As Long = 0, Optional ByVal Replace As Boolean = False) As Long

# Edit>EditFrame>Extend

Item1

The name of an existing straight frame object used as a**n** extension line.

Item2

The name of an existing straight frame object used as a**n** extension line.

# Edit>EditFrame>DivideAtIntersections

Function DivideAtIntersections(ByVal Name As String, ByRef Num As **Double**, ByRef NewName() As String) As Long

should be

Function DivideAtIntersections(ByVal Name As String, ByRef Num As **Long**, ByRef NewName() As String) As Long

# Edit>EditFrame>DivideAtDistance

**Parameters**

Parameter **Num** is not used by the method and should be removed from documentation.

# Edit>EditArea>ChangeConnectivity

**NumberPoints**

The number of points in the area **a**bject.

# Edit>GeneralEdit>ReplicateRadial

**Parameters**

**Number** and **Ang** descriptions are flipped.

**Syntax**

Wrong namespace/object is specified.

SapObject.SapModel.EditSolid. should be SapObject.SapModel.EditGeneral.

This also occurs on:

* ReplicateMirror
* ReplicateLinear
* ExtrudeAreaToSolidLinearNormal
* ExtrudeAreaToSolidUser
* ExtrudeAreaToSolidRadial
* ExtrudeFrameToAreaLinear
* ExtrudeFrameToAreaRadial
* ExtrudePointToFrameLinear
* ExtrudePointToFrameRadial

# GeneralFunctions>Get/Set NotionalSize

This method is already listed in ObjectModel>AreaObject, and is more appropriate there. These entries should be removed.

# AnalysisResults>AnalysisResultsSetup>SetCaseSelectedForOutput

This function sets an load case selected for output flag

# Properties>Area>SetShellLayer\_1

ByVal NumberLayers As Long

should be

ByRef NumberLayers As Long

# Properties>Frame>TimeDependent>GetConcreteScaleFactors

Function GetConcreteScaleFactors(ByVal Name As String, **ByVal** ScaleFactorAge As Double, **ByVal** ScaleFactorCreep As Double, **ByVal** ScaleFactorShrinkage As Double, Optional ByVal Temp As Double = 0) As Long

should be

Function GetConcreteScaleFactors(ByVal Name As String, **ByRef** ScaleFactorAge As Double, **ByRef** ScaleFactorCreep As Double, **ByRef** ScaleFactorShrinkage As Double, Optional ByVal Temp As Double = 0) As Long

# AnalysisResults>Results>AreaForceShell

**Parameters**

**F11**

The area element internal F22 membrane direct force per length reported in the area element local coordinate system. [F/L]

**M11**

Unit [FL/L] is not included at the end of the description.

# AnalysisResults>Results>JointRespSpec

Signature ByVal **edSet** As String should be ByVal **NamedSet** As String

# Properties>Material>GetOAluminum

Function GetOAluminum(ByVal Name As String, **ByVal** MyType As Long, ByRef Alloy As String, ByRef Fcy As Double, ByRef Fty As Double, ByRef Ftu As Double, ByRef Fsu As Double, ByRef SSHysType As Long, Optional ByVal Temp As Double = 0) As Long

should be

Function GetOAluminum(ByVal Name As String, **ByRef** MyType As Long, ByRef Alloy As String, ByRef Fcy As Double, ByRef Fty As Double, ByRef Ftu As Double, ByRef Fsu As Double, ByRef SSHysType As Long, Optional ByVal Temp As Double = 0) As Long

# Properties>Link>GetPDelta

Function GetPDelta(ByVal Name As String, **ByRef DefinedForThisLength As Double, ByRef DefinedForThisArea As Double**) As Long

should be

Function GetPDelta(ByVal Name As String, **ByRef Value() As Double**) As Long

# Properties>Link>Get/SetDamperFrictionSpring

**Parameter**

dir() is never defined, but it is in the method signature.

# Properties>Link>Get/SetMultiLinearPoints

**Parameters**

**NumberPoints**

The number of foce-defomation points for the specified degree of freedom.

**F**

[FL} = [FL]

# Properties>Frame>GetNonPrismatic

**Parameters**

Name parameter is not defined.

# Properties>Frame>Get/Set ColdC/Hat/Z

**Remarks**

"an cold formed" should be "a cold formed ".

# Properties>Frame>GetCoverPlatedI

**Remarks**

This function retrieves frame section property data for a tube-type frame section.

# Properties>Frame>SectionDesigner>Delete

Function Delete(ByVal Name As String, **ByRef** ShapeName As String, Optional ByVal All As Boolean = False) As Long

should be

Function Delete(ByVal Name As String, **ByVal** ShapeName As String, Optional ByVal All As Boolean = False) As Long

# Properties>Frame>SectionDesigner>Get/SetRefLine

**Parameters**

For X1, Y1, X2, Y2:

"of the line pattern reinforcing."

should be?

"of the reference line."

# Properties>Frame>SectionDesigner>GetRefCircle

**Parameters**

The definition for **ShapeName** appears to be that for SetRefCircle, as in this method it should not be changing anything in the program.

# Properties>Frame>SectionDesigner>GetReinfCorner

**Parameters:**

**ShapeName** is different from "Set" method, but I believe the "Set" method is the correct definition

Get: The name of an existing solid rectangle shape in the specified frame section property.

Set: The name of an existing solid rectangle, circle or polygon shape in the specified section.

# Properties>Frame>SectionDesigner>Get/SetReinfRectangular

**Parameters:**

**w**

"The top flange width. [L]"

should be?

"The section width. [L]"

# Properties>Frame>SectionDesigner>GetReinfEdge

**Remarks:**

"This function retrieves edge reinforcing data for solid rectangle, circle, polygon, and rectangular reinforcing shapes in a section designer property."

Should be:

"This function retrieves edge reinforcing data for solid rectangle, circle, and polygon reinforcing shapes in a section designer property."

Rectangular is mentioned twice. The correction follows the pattern of similar methods.

**Parameters:**

**ShapeName** is different from "Set" method, but I believe the "Set" method is the correct definition

Get: The name of an existing solid rectangle shape in the specified frame section property.

Set: The name of an existing solid rectangle, circle or polygon shape in the specified section.

# Properties>Frame>SectionDesigner>Get/SetSolidCircle

Parameter names in the **Parameters** section do not precisely match those listed in the method signature.

~~Other methods where this occurs:~~

# Properties>Frame>SectionDesigner>Get/SetSolidSector/Segment

Method signatures have ByRef or ByVal merged with the parameter name.

# Properties>Frame>SectionDesigner>SetSolidRect

**Parameters:**

Rotation and Color are listed twice.

# Definitions>LoadCases>SteadyState/PSD>GetFreqData

**ModalCase** parameter is missing from the method signature.

**Parameters:**

FreqSpecified

This is an array that includes the added specified frequencies. This item applies only when FreqAddModalDev = True.

# Definitions>LoadCases>ModalEigen>Get/SetLoads

**Parameters:**

**StaticCorrect**: The definition is out of date as the array returned is a boolean, rather than 0s & 1s.

# Definitions>LoadCases>DirectTHNonlinear/StaticNonlinear/StaticNonlinearStaged>GetMassSource

**Remarks** is for 'set' rather than 'get' method.

# Definitions>LoadCases>MovingLoad>SetDirectionalFactors

**Remarks:** "... when the moving load case is defied or re-defined."

# GeneralFunctions>ExtendedEntityData>GetKeyStringsExtendedEntityData

**Parameters**

**Values** & **Dim Vaues() as String** are redundant. Combine listings and definitions.

Also no Remarks.

# Definitions>BridgeObjects>SetBridgeUpdateForAnalysisFlag

Method signature does not indicate that the parameter should be passed ByRef.

Function GetBridgeUpdateForAnalysisFlag(Value As Boolean) As Long

should be:

Function GetBridgeUpdateForAnalysisFlag(ByRef Value As Boolean) As Long

# BridgeAdvanced>SuperStructure>GetSuperCutLocation

**Parameters:**

**CutIndex**

The index number of section cut in this bridge object. This must be from 0 to Count-1, where Count is the value returned by function CountSuperCut. Section cuts will be in order of increasing Station and increasing SuperCutType.

# BridgeAdvanced>SuperStructure>ConcreteBoxGirder>GetSuperCutSectionPropsAtY

**Parameters: CutIndex**

Definition appears to be identical to that of Superstructure.GetSuperCutLocation, but without other parameters in the method to refer to. So this definition needs rewriting for the terms to make sense.

Other methods with this issue:

* GetSuperCutWebCoordsAtY
* GetSuperCutSlabCoordinatesAtX
* GetSuperCutTendonNames
* GetSuperstructureCutWebValues

# Definitions>Function> ResponseSpectrum >Get/SetAASHTO2007

The name of an AASHTO 20-07 response spectrum function.

Error is also in the method **Remarks**.

# Definitions>Function>ResponseSpectrum>Get/SetNCHRP2007

The name of an NCHRP 20-07 response spectrum function.

Error is also in the method **Remarks**.

# Definitions>Function>ResponseSpectrum> SetAS11702007

**Remarks**

This function defines an AS 1170.4 2007 response spectrum function.

# Definitions>Function>ResponseSpectrum> SetNZS11702004

**Remarks**

This function defines an NZS 1170.5 2004 response spectrum function.

# Definitions>Function>ResponseSpectrum> Get/SetSP14133302014

**Parameters**

**ASoil**

The nonlinear soil deformation factor, 0 > a\_soil <= 1.0.

# Definitions>Function>ResponseSpectrum>Get/Set[Various]

Many entries should use "an" instead of "a" when referring to the function name in the **Remarks** and **Parameter: Name** sections. If the word pronounced starts with an audible vowel, or if the letter is pronounced and starts the same (such as **an** "n"), "an" should be used. This is in a lot of functions starting with "A" & "N".

# Design>Steel>Eurocode 3-2005>Get/SetOverwrite

**Parameters: Item**

|  |
| --- |
| 42 = Effective length factor braced, K1 Major |
| 43 = Effective length factor braced, K1 Major |

should be?

|  |
| --- |
| 42 = Effective length factor braced, K1 Major |
| 43 = Effective length factor braced, K1 Minor |

# Design>Concrete>TS 500-2000

There is no SetPreference listing!

# Design>Concrete>TS 500-2000>GetPreference

**Parameters:**

**Item**

3 = Consider maximum eccentricity

# Design>Concrete>IS8002007

7 = Ignore **ss**eismic code

# Design>Concrete>Indian\_IS\_456\_2000>Get/SetPreference

Syntax uses " Indian\_IS\_456\_2003" when it should use " Indian\_IS\_456\_2000"

# Design>Steel>NSZ\_3403\_1997>All Methods

In the **Syntax** and demonstrative examples, the following name is used:

NewZealand\_NZS3404\_1997

but it should be:

NewZealand\_NZS3404\_97

# Design>Steel>AS\_4100\_1999>All Methods

In the **Syntax** and demonstrative examples, the following name is used:

Australian\_AS4100\_1998

but it should be:

Australian\_AS4100\_98

# Design>Concrete> AASHTO\_LRFD\_2012/ AASHTO\_LRFD\_2014>All Methods

In the **Syntax** and demonstrative examples, the following name is used:

AASHTO\_LRFD\_2012/2014

but it should be:

AASHTO\_Concrete\_12/14

# Design>Steel>Eurocode\_3\_2005

**Parameters:**

**Item**

43 = Effective length factor braced, K1 Major

# Design>Steel>NZS\_3404\_1997

In the table of contents, this is listed as NSZ 3404-1997. It should be NZS 3404-1997.

# Design>Steel>AISC\_350\_05/10>Get/SetPreference

11 = Phi shear sort webbed rolled I

# Design>Steel>Eurocode\_3\_2005/Norsok\_N\_004/Norsok\_N\_004\_2013

6 = GammeM1

# Missing Codes

These appear in IntelliSense but are not documented in the CHM file:

* Concrete
  + ACI318\_11
  + Chinese\_2002
  + Italian\_NTC\_2008
  + Mexican\_RCDF\_2004
  + NZS\_3101\_2006
* Steel
  + Chinese\_2002
  + Italian\_NTC\_2008

# Deprecated Codes

The following codes appear to be deprecated as they do not appear in IntelliSense, but they are still documented in the CHM file:

* Steel
  + Norsok\_N004

=========================================================================

# LoadPatterns.AutoWind

## SetNTC2008

Function SetNTC2008(ByVal Name As String, ByRef ExposureFrom As Long, ByRef DirAngle As Double, ByRef Cpw As Double, ByRef Cpl As Double, ByRef UserZ As Boolean, ByRef TopZ As Double, ByRef BottomZ As Double, ByRef Vb As Double, ByRef ExposureCategory As Long, ByRef ct As Double, ByRef cd As Double, ByRef cp As Double, ByRef UserExposure As Boolean = False) As Long

## GetASNZS117022002

Function GetASNZS117022002(ByVal Name As String, ByRef ExposureFrom As Long, ByRef DirAngle As Double, ByVal Cpw As Double, ByVal Cpl As Double, ByRef  Ka As Double, ByRef  Kc As Double, ByRef  Kl As Double, ByRef  Kp As Double, ByRef  UserZ As Boolean, ByRef  TopZ As Double, ByRef  BottomZ As Double, ByRef  WindSpeed As Double, ByRef  Cat As Long, ByRef  CycloneRegion As Boolean, ByRef  Md As Double, ByRef  Ms As Double, ByRef  Mt As Double, ByRef  Cdyn As Double, ByRef  UserExposure As Boolean) As Long

## GetNBCC2015

Function GetNBCC2015(ByVal Name As String, ByVal ExposureFrom As Long, ByRef DirAngle As Double, ByRef Cpw As Double, ByRef Cpl As Double, ByVal NBCCCase As Long, ByVal e1 As Double, ByVal e2 As Double, ByVal UserZ As Boolean, ByVal TopZ As Double, ByVal BottomZ As Double, ByRef q As Double, ByRef GustFactor As Double, ByVal TopographicFactor As Double, ByRef ImportanceFactor As Double, ByRef TerrainType As Long, ByRef CeWindward As Double, ByRef CeLeeward As Double, ByRef UserExposure As Boolean) As Long

## GetChinese2010

Function incorrectly named as **GetChinese2010\_1**.

# LoadPatterns.AutoSeismic

## GetUBC97

Function GetUBC97(ByVal Name As String, ByRef DirFlag As Long, ByRef Eccen As Double, ByRef PeriodFlag As Long, ByRef CT As Double, ByRef UserT As Double, ByRef UserZ As Boolean, ByRef TopZ As Double, ByRef BottomZ As Double, ByRef UBC97SeismicCoeffFlag As Long, ByRef UBC97SoilProfileType As Long, ByRef UBC97Z As Double, ByRef UBC97Ca As Double, ByRef UBC97Cv As Double, ByRef UBC97NearSourceFlag As Long, ByRef UBC97SourceType As Long, ByRef UBC97Dist As Double, ByRef UBC97Na As Double, ByRef UBC97Nv As Double, ByRef UBC97I As Double, ByRef UBC97R As Double) As Long

## GetAS11702007

CT

The code-specified kt factor. This item applies when the PeriodFlag item is 1

## GetIS1893\_2002INZ

The seismic zone factor, Z.

If the seismic zone factor is per code (INZFlag = 1), this item should be one of the following: 0.10, 0.16, 0.24, 0.36.

INS

This is 1, 2 or 3, indicating the soil type.

1 = I

2 = II

3 = III

BOCA96R

The response modification factor.

INR

The importance factor.

INR

The response modification factor.

## GetNBCC2005

NBCC2005S05

The spectral acceleration at a 0.52 second period.

# LoadPatterns.AutoWind

**Terrain**

This is 1, 2, 3 or 4, indicating the terrain category.

**Class**

This is 1, 2 or 3, indicating the terrain category.

1 = A

2 = B

3 = C