

Metsälinnunreitti 2 L121, 02660 Espoo

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MODEL

 Project:
 Assignment Week 6
 Model:
 B3\_Frame
 Date:
 18/10/2021

: 10.00 m/s<sup>2</sup>

### **■ MODEL - GENERAL DATA**

General Model name : B3\_Frame
Project name : Assignment Week 6
Type of model : 3D
Positive direction of global axis Z : Downward
Classification of load cases and combinations : According to Standard: EN 1990
National Annex: SFS - Finland

Options

RF-FORM-FINDING - Find initial equilibrium shapes of membrane and cable structures

RF-CUTTING-PATTERN

Piping analysis

Use CQC Rule

Enable CAD/BIM model
Standard Gravity

### FE MESH SETTINGS

Target length of finite elements 0.500 m Maximum distance between a node and a line 0.001 m to integrate it into the line Maximum number of mesh nodes (in thousands) : 500 Members : 10 Number of divisions of members with cable, elastic foundation, taper, or plastic characteristic

Activate member divisions for large deformations Activate member divisions for large deformation or post-critical analysis Use division for members with node lying on them Surfaces Maximum ratio of FE rectangle diagonals 1.800  $\Delta_{\mathsf{D}}$ 0.50° Maximum out-of-plane inclination of two finite

Maximum out-of-plane inclination of two finite elements

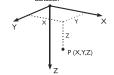
Shape direction of finite elements

∴ Triangles and quadrangles

Same squares where possible

### 1 1 NODES

T	I. I NOL	JES			
	Node		Reference	Coordinate	/ Node Coordinates
	No.	Node Type	Node	System	X [m] Y [m] ( Z [m] ) Comment
	1	Standard	-	Cartesian	0.000 0.000 0.000
	2	Standard	-	Cartesian	0.000
	3	Standard	-	Cartesian	12.000 / \( \sqrt{6.000} \) \ 0.000
	4	Standard	-	Cartesian	12.000
	5	Standard	-	Cartesian	1.000 -6.000 0.000
	6	Standard	-	Cartesian	2.000 -6.000 -0.000
	7	Standard	-	Cartesian	3.000 -6.000 0.000
	8	Standard	-	Cartesian	4.000 -6.000 / 0.000
	9	Standard	-	Cartesian	5.000 -6.000 / 0.000
	10	Standard	-	Cartesian	6.000 -6.000 / 0.000/
	11	Standard	-	Cartesian	7.000 -6.000 0.000
	12	Standard	-	Cartesian	8.000   -6.000   0.000   / /



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**MODEL** 

Project: Assignment Week 6 Model: B3\_Frame 18/10/2021 Date:

### ■ 1<sub>0</sub>1 NODES

L	<i>)-</i> /1 110 E							
	Node		Reference	Coordinate		Node Coordinates		
No.		Node Type	Node	System	X [m]	Y [m]	Z [m]	Comment
-1	V(1,3	Standard	-	Cartesian	9.000	-6.000	0.000	
/	14	Standard	-	Cartesian	10.000	-6.000	0.000	
	/15 /	Standard	-	Cartesian	11.000	-6.000	0.000	
	/ 16/	Standard	-	Cartesian	0.000	-1.000	0.000	
	/ 1/7	Standard	-	Cartesian	0.000	-2.000	0.000	
	/ /18	/Standard	-	Cartesian	0.000	-3.000	0.000	
- 1	/ 19 /	Standard	-	Cartesian	0.000	-4.000	0.000	
-/1	/ 20 /	Standard /	-	Cartesian	0.000	-5.000	0.000	
	21 /	Standard	-	Cartesian	12.000	-1.000	0.000	
1	22 /	Standard \ \ / /	-	Cartesian	12.000	-2.000	0.000	
	23	Standard /	-	Cartesian	12.000	-3.000	0.000	
	24	Standard / /	-	Cartesian	12.000	-4.000	0.000	
	25	Standard /	-	Cartesian	12.000	-5.000	0.000	

Line			Line Length		
No.	Line Type	Nodes No.	L [m]		Comment
1	Polyline	16,1	1.000	Υ	
2	Polyline	5,2 / / / /	1.000	X	
3	Polyline	4,21	1.000	Υ	
4	Polyline	5,2 4,2/1 6,5 7,6 8,7 9,8 10,9	1.000	X	
5	Polyline	7,6	1.000	X	
6	Polyline	8,7	1.000	X	
7	Polyline	9,8	1.000	X	
8	Polyline	10,9	1.000	X	
9	Polyline	11,10 \> / /	1.000	X	
10	Polyline	12,11	1.000	X	
11	Polyline	13,12	1.000	X	
12	Polyline	14,13	1.000	X	
13	Polyline	15,14	1.000	X	
14	Polyline	3,15	1.000	X	
15	Polyline	17,16	1.000	Y	
16	Polyline	18,17	1.000	Y	
17	Polyline	19,18	1.000	Y	
18	Polyline	20,19	1.000	Y	
19	Polyline	2,20 21,22	1.000	Y	
20	Polyline	21,22	1.000	Y	
21	Polyline	22,23	1.000		
22 23	Polyline	23,24	1.000	Y	
23	Polyline	24,25 25,3	1,000	Y	
24	Polyline	25,3	1.000	Y	
1.3 MAT	ΓERIALS				

### **■** 1.3 MATERIALS

					V // \ \	. )	
Matl.	Modulus	Modulus	Poisson's Ratio	Spec. Weight	Coeff. of Th. Exp.	Partial Factor	Material
No.	E [MN/m <sup>2</sup> ]	G [MN/m <sup>2</sup> ]	ν [-]	$\gamma$ [kN/m <sup>3</sup> ]	α [17°C]	/ /ум [-]	Model
1	Steel S 235   SFS EN 1993-	1-1:2005					
	210000.000	80769.200	0.300	78.50	1.20E-05	1.00	Isotropic Linear Elastic
2	Steel A992   ANSI/AISC 360				<		
	199948.000	77221.300	0.295	78.49	1.20E-05	1.00	Isotropic Linear Elastic
3	Beam & Column Material						
	36000.000	15000.000	0.200	25.00	0.00E+00	1/.00	/ Isotropic Linear Elastic

# Binh Ng Metsälinnunreitti 2

**Binh Nguyen Xuan** Metsälinnunreitti 2 L121, 02660 Espoo

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### **■ 1.7 NODAL SUPPORTS**

7	Support			Column			Support C	Conditions		
	No.	Nodes No.	Axis System	in Z	u <sub>X'</sub>	$u_{Y'}$	$u_{Z'}$	φх	φγ	φΖ'
Λ	V(1)	1	User Defined X',Y',Z'		⋈	$\boxtimes$	$\boxtimes$	$\boxtimes$	$\boxtimes$	⊠
	2	4	User Defined X',Y',Z'		⋈	⋈	⊠	⊠	⊠	$\boxtimes$

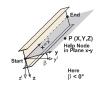
## 1.7.10 NODAL SUPPORTS - USER-DEFINED AXIS SYSTEM

Support	Direction	V			Rotation [°]		Coordinate	1st	Node 1	Node 2	2nd	Reference	Member/Line
Ŋ6. (	/ Type	/	Sequence	about X	about Y	about Z	System	axis	No.	No.	axis	Node	No.
1	Rotated		ZYX	0.00	0.00	-90.00							
2	Rotated		ZYX	0.00	0.00	90.00							

## T-Rectangle 0.6/0.2 T-Rectangle 0.2/0.2

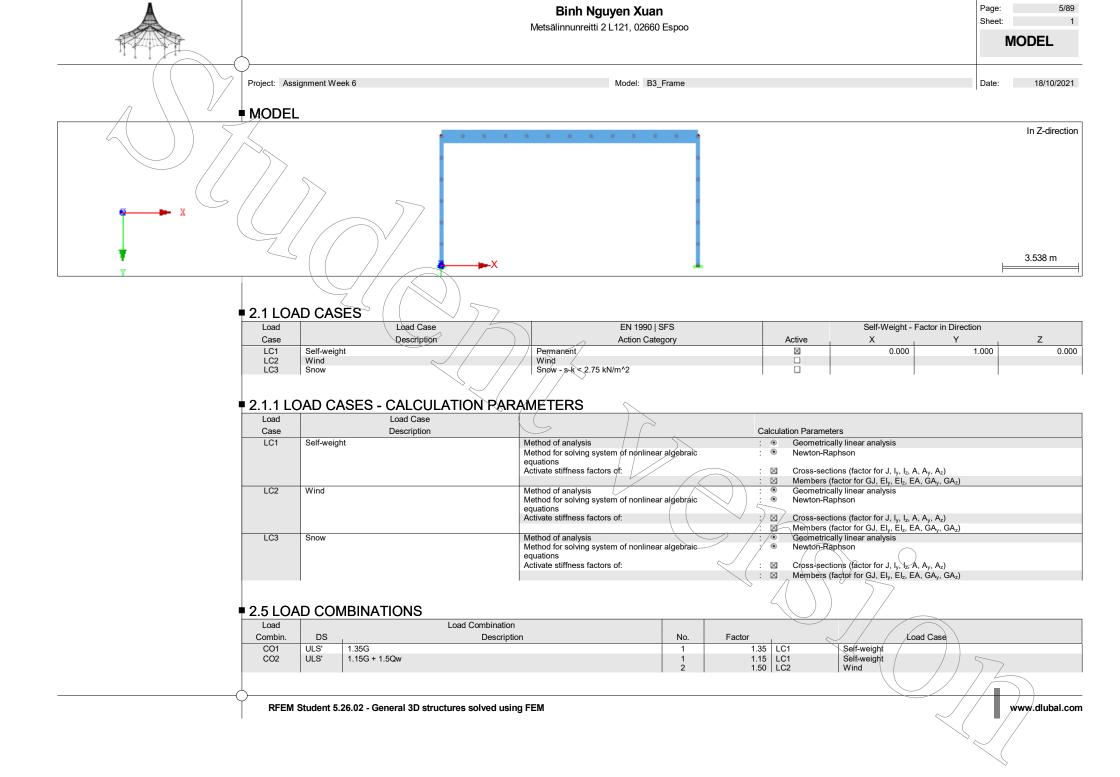
## ■ 1.13 CROSS-SECTIONS

	-	_ 1   \ / /						
Section	Matl.	J [cm⁴]	/ L <sub>y</sub> [cm⁴]	I <sub>z</sub> [cm <sup>4</sup> ]	Principal Axes	Rotation	Overall Dim	ensions [m]
No.	No.	A [cm²]	A <sub>y</sub> [cm <sup>2</sup> ]	A <sub>z</sub> [cm <sup>2</sup> ]	α[°]	α' [°]	Width b	Height h
1	T-Rectangle 0.6	5/0.2 126434.23 1200.00	40000.00 1000.00		0.00	0.00	0.600	0.200
2	T-Rectangle 0.2	2/0.2 22506.67 400.00	13333.33 333.33		0.00	0.00	0.200	0.200



### **■** 1 17 MEMBERS

■ 1.17 ME	MBERS			$\supset$	/ ~							
Mbr.	Line		Rota	ation	Cross-	-Section	Hing	e No.	Ecc.	Div.	Length	
No.	No.	Member	Туре	β[ϊ¿½]	Start	End	Start	End	No.	No.	L [m]	
1	1	Beam	Angle	0.00	2	2	-	-	-	-	1.000	Y
2	2	Beam	Angle	0.00	1//	1	-	-	-	-	1.000	X
3	3	Beam	Angle	0.00	2	2<	\ \ -	-	-	-	1.000	Υ
4	4	Beam	Angle	0.00	✓1	/ /1	) \ -	-	-	-	1.000	X
5	5	Beam	Angle	0.00	1	/ / 1	/ / ~	-	-	-	1.000	X
6	6	Beam	Angle	0.00	1	1	$\langle (-, -) \rangle$	-	-	-	1.000	X
7	7	Beam	Angle	0.00	1	\ \ 1	-/ /-		-	-	1.000	X
8	8	Beam	Angle	0.00	1	\ \1	. /- /-	\ \ \ -	-	-	1.000	X
9	9	Beam	Angle	0.00	1		/ - /	U	-	-	1.000	X
10	10	Beam	Angle	0.00	1	1	/ -/	-	- /	-	1.000	X
11	11	Beam	Angle	0.00	1	1	/ /-	(-	(	) -	1.000	X
12	12	Beam	Angle	0.00	1	1 <	/ / -	[ ( /- )]	/ -	r - 1	1.000	Χ
13	13	Beam	Angle	0.00	1	1	<b>\</b> (	\ -\ /,	-	-	1.000	X
14	14	Beam	Angle	0.00	1	1	\\ \ - \/	\ - \	5=	-	1.000	X
15	15	Beam	Angle	0.00	2	2	- /	\-\	)- /	-	1.000	Υ
16	16	Beam	Angle	0.00	2	2	- 4		/ - /	-	1.000	Υ
17	17	Beam	Angle	0.00	2	2	- \	\ <i>\ \ \ \</i>	/ -/	-	1.000	Υ
18	18	Beam	Angle	0.00	2	2	-	<u> </u>	/ /- /	-	1.000	Υ
19	19	Beam	Angle	0.00	2	2	-	- /	/ / - /	- \ \	1.000	Υ
20	20	Beam	Angle	0.00	2	2	-	- <	/ - / ,	-	1.000	Υ
21	21	Beam	Angle	0.00	2	2	-	- \	( -/ /	- / \	1.000	Υ
22	22	Beam	Angle	0.00	2	2	-	- ]	S - /	- /	1.000	Υ
23	23	Beam	Angle	0.00	2	2	-	-	-\	-//	1.000	Υ
24	24	Beam	Angle	0.00	2	2	-	-	-\(	/ /	1.000	Υ
1									( )	/ /		



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### **■ 2.5 LOAD COMBINATIONS**

_ <u></u>	ND CON	MDINATIONS					
Load		Load Combination					
Combin.	DS	Description		No.	Factor		Load Case
CO3	ULS'	1.15G + 1.5Qw + 1.05Qs		1	1.15	LC1	Self-weight
				2	1.50	LC2	Wind
′   / /				3	1.05	LC3	Snow
/CO4	(ULS'	1.15G + 1.5Qs		1	1.15	LC1	Self-weight
				2	1.50		Snow
, CO5	/ULS!/	1.15G + 0.9Qw + 1.5Qs		1	1.15	LC1	Self-weight
X /	/ /			2	0.90	LC2	Wind
				3	1.50	LC3	Snow
CO6 /	S Ch	G / /		1	1.00	LC1	Self-weight
C07	S Ch	G + Qw\		1	1.00	LC1	Self-weight
				2	1.00	LC2	Wind
CO8_	_   S/Ch /	G + Qw/+ 0.7Qs		1	1.00	LC1	Self-weight
	~			2	1.00	LC2	Wind
				3	0.70	LC3	Snow
CO9	S\Ch\	G/+ Qs/		1	1.00	LC1	Self-weight
	0.01			2	1.00	LC3	Snow
CO10	S Ch	G + 0.6Qw/+ Qs	ļ.	1	1.00	LC1	Self-weight
				2	0.60	LC2	Wind
2011	0.5			3	1.00	LC3	Snow
CO11	S Fr	G		1	1.00	LC1	Self-weight
CO12	S Fr	G + 0.2Qw		2	1.00	LC1 LC2	Self-weight Wind
CO13	S Fr	G + 0.2Qw + 0.2Qs		2		LC2 LC1	Self-weight
COIS	SFI	G + 0.2QW + 0.2QS	-	2	1.00 0.20	LC2	Wind
			-	3			Snow
CO14	S Fr	G + 0.4Qs		3	0.20 1.00	LC3 LC1	Silow Self-weight
CO14	SFI	G + 0.4Q8		2	0.40		Snow
CO15	S Qp	G		1	1.00	LC1	Silow
CO15	S Qp	G + 0.2Qs		1			Self-weight
0010	C Qp	0 1 0.200		2			Snow
CO17		1.35G + 1.5Qw + 1.05Qs		1	1.35	LC1	Self-weight
0017		1.000 · 1.0000	/	. 2	1.50	LC2	Wind
			/	\sqrt{3}	1.05	1.02	Snow
			/ 1	) •	1.03	100	Onow

### **■** 2.5.2 LOAD COMBINATIONS - CALCULATION PARAMETERS

Load				
Combin.	Description		Calcul	ation Parameters
CO1	1.35G	Method of analysis	:) •	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic	/: 0	Picard
		equations	/_/_	
		Options	:/ ⊠	Consider favorable effects due to tension
			/: ⊠	Refer internal forces to deformed system for:
		$\sim$ /		Normal forces N
		\(		Shear forces V <sub>y</sub> and V <sub>z</sub>
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	/	Moments M <sub>y</sub> , M <sub>z</sub> and M <sub>T</sub>
		Activate stiffness factors of:	: 🔯	Materials (partial factor γM)
			: 🛛	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
			: 🗵	Members (factor for GJ/El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
CO2	1.15G + 1.5Qw	Method of analysis	: ⊙	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic	: •	Picard
		equations	5.78	
		Options	: 🗵	Consider favorable effects due to tension
			: ⊠	Refer internal forces to deformed system for:  Normal forces N
				Normal forces in

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### **‡** 2,5.2 LOAD COMBINATIONS - CALCULATION PARAMETERS

Load				
Combin.	Description		Calcula	ation Parameters
				Shear forces V <sub>v</sub> and V <sub>z</sub>
) \				Moments M <sub>v</sub> , M <sub>z</sub> and M <sub>T</sub>
/ /		Activate stiffness factors of:	: 🗵	Materials (partial factor γM)
			: 🖂	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
/ /			: 🖂	Members (factor for GJ, El <sub>v</sub> , El <sub>z</sub> , EA, GA <sub>v</sub> , GA <sub>z</sub> )
/CO3	/1.15G + 1.5Qw + 1.05Qs	Method of analysis	· •	Second order analysis (P-Delta)
/005	1.130 · 1.300 · 1.0303	Method for solving system of nonlinear algebraic		Picard
/		equations		i idalu
		Options	: 🗵	Consider favorable effects due to tension
		Options	: 🗵	Refer internal forces to deformed system for:
				Normal forces N
				Shear forces V <sub>v</sub> and V <sub>z</sub>
7				Moments M <sub>v</sub> , M <sub>z</sub> and M <sub>T</sub>
		Activate stiffness factors of:	: 🛛	Materials (partial factor γM)
		Activate stillless factors of.	. ⊠	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
			. 🖂	
004	1.150 . 1/50	N. H. J. C. J. J.		Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
CO4	1.15G + 1.5Qs	Method of analysis	. 0	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic	•	Picard
		equations	. [7]	Consider favorable effects due to tension
		Options	: ⊠	Refer internal forces to deformed system for:
			: 🖂	Normal forces N     Normal forces N     Normal forces N
				<ul> <li>Shear forces V<sub>v</sub> and V<sub>z</sub></li> </ul>
	$\sim$ /			Moments M <sub>v</sub> , M <sub>z</sub> and M <sub>T</sub>
			5.78	
		Activate stiffness factors of:	: 🗵	Materials (partial factor γM)
	$\sim$ /		: 🗵	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
			: 🗵	Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
CO5	1.15G + 0.9Qw + 1.5Qs	Method of analysis	: •	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic		Picard
		equations	: X	0
		Options	. ⊠	Consider favorable effects due to tension
			: 🖂	Refer internal forces to deformed system for:  Normal forces N
				Shear forces V <sub>y</sub> and V <sub>z</sub>
			-	Moments M <sub>y</sub> , M <sub>z</sub> and M <sub>T</sub>
		Activate stiffness factors of:	: ⊠	Materials (partial factor γM)
			$\bowtie$	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
			. ×	Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
CO6	G	Method of analysis	.) •	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic	/ •/	Picard
		equations	'	<u></u>
		Options	: ∕⊠	Consider favorable effects due to tension
			<i>:</i> / ⊠	Refer internal forces to deformed system for:
		_ / /		☑ / Normal forces N ( )
				Shear forces V <sub>y</sub> and V <sub>z</sub>
				Moments M <sub>y</sub> , M <sub>z</sub> and M <sub>T</sub>
		Activate stiffness factors of:	: ⊠/	Materials (partial factor γM)
			: ⊠	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
			: ⊠∖	Members (factor for GJ, El <sub>v</sub> , Él <sub>z</sub> , EA, GA <sub>v</sub> , GA <sub>z</sub> )
CO7	G + Qw	Method of analysis	: •	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic	. •	Picard
		equations		
		Options	: 🗵	Consider favorable effects due to tension
		·	: 🗵	Refer internal forces to deformed system for:
				■ Normal forces N     ■ Normal forc
				Shear forces V <sub>v</sub> and V <sub>v</sub>

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### **‡** 2,5.2 LOAD COMBINATIONS - CALCULATION PARAMETERS

Cambin	Description		Calauda	tion Doromotoro
Combin.	Description		Calcula	ntion Parameters
				Moments M <sub>y</sub> , M <sub>z</sub> and M <sub>T</sub>
) >			· 🖂	Materials (partial factor γM)
/ /			: ⊠	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
/ /			· 🗵	Members (factor for GJ, El <sub>v</sub> , El <sub>z</sub> , EA, GA <sub>v</sub> , GA <sub>z</sub> )
CÓ8	G + Qw + 0.7Qs	Method of analysis	: •	Second order analysis (P-Delta)
/ /		Method for solving system of nonlinear algebraic	. •	Picard
/ /		equations		
/			: 🗵	Consider favorable effects due to tension
		•	: 🗵	Refer internal forces to deformed system for:
				■ Normal forces N     ■ Normal forc
_//				Shear forces V₂ and V₂
				Moments M <sub>v</sub> , M <sub>z</sub> and M <sub>T</sub>
7		Activate stiffness factors of:	: 🗵	Materials (partial factor γM)
			· 🗵	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
			: 🖂	Members (factor for GJ, El <sub>v</sub> , El <sub>z</sub> , EA, GA <sub>v</sub> , GA <sub>z</sub> )
000				
CO9	G + Qs			Second order analysis (P-Delta)
			•	Picard
		equations Options	: 🗵	Consider favorable effects due to tension
		Options	. M	Refer internal forces to deformed system for:
			. 🖂	Normal forces N
				Shear forces V <sub>y</sub> and V <sub>z</sub>
	$\sim$ /	/		Moments M <sub>y</sub> , M <sub>z</sub> and M <sub>T</sub>
			: ⊠	Materials (partial factor γM)
			: ⊠	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
	· ~ /		: ⊠	Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
CO10	G + 0.6Qw + Qs	Method of analysis	: ●	Second order analysis (P-Delta)
			. •	Picard
		equations		
			: ⊠	Consider favorable effects due to tension
			: ⊠	Refer internal forces to deformed system for:
				□ Normal forces N
				Shear forces V <sub>y</sub> and V <sub>z</sub>
				Moments M <sub>v</sub> , M
		Activate stiffness factors of:	: 🗵	Materials (partial factor γM)
			×	Cross-sections (factor for J, I <sub>v</sub> , I <sub>z</sub> , A, A <sub>v</sub> , A <sub>z</sub> )
			: 🗵	Members (factor for GJ, El <sub>v</sub> , El <sub>z</sub> , EA, GA <sub>v</sub> , GA <sub>z</sub> )
CO11	G	Method of analysis	. •	Second order analysis (P-Delta)
00	-	Method for solving system of nonlinear algebraic	50	Picard
		equations	) -/	, i ioui u
		Options	: X	Consider favorable effects due to tension
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	: 🛭	Refer internal forces to deformed system for:
			/	Normal forces N
		/_/	/	Shear forces V <sub>v</sub> and V <sub>z</sub>
		$\sim$ /		Moments M <sub>v</sub> , M <sub>z</sub> and M <sub>T</sub>
		Activate stiffness factors of:	· 🗵	Materials (partial factor vM)
		Activate stilliess lactors of.	: 🛛	Cross-sections (factor for J, J <sub>v</sub> , I <sub>z</sub> , A, A <sub>v</sub> , A <sub>z</sub> )
		_		Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
0010	C + 0.20**		: 🔯	Personal enter analysis (D/Delta)
CO12	G + 0.2Qw	Method of analysis		Second order analysis (P-Delta)
			. •	Ricard
		equations	D)	
			: 🗵	Consider favorable effects due to tension
			: 🛛	Refer internal forces to deformed system for:
				■ Normal forces N /
				Shear forces V <sub>y</sub> and V <sub>z</sub>



Sheet:	1
L	.OADS

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### **■** 2.5.2 LOAD COMBINATIONS - CALCULATION PARAMETERS

Load	D			" D .
Combin.	Description	1		ation Parameters
1		Activate stiffness factors of:	: ⊠	Materials (partial factor $\gamma$ M)
)			$\times$	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
			: 🗵	Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
/CO1/3	G+ 0.2Qw + 0.2Qs	Method of analysis	: ⊙	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic	. •	Picard
		equations		
/ /	1 / ) >	Options	: ⊠	Consider favorable effects due to tension
/			: ⊠	Refer internal forces to deformed system for:
$\overline{}$ /				Shear forces V <sub>y</sub> and V <sub>z</sub>
/ (				Moments M <sub>y</sub> , M <sub>z</sub> and M <sub>T</sub>
		Activate stiffness factors of:	: 🛛	Materials (partial factor γM)
			$\simeq$	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
			: ⊠	Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
CO14	G + 0.4Qs	Method of analysis	: ⊙	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic	. •	Picard
		equations		
		Options	: ⊠	Consider favorable effects due to tension
			: ⊠	Refer internal forces to deformed system for:
				Normal forces N
				Shear forces V <sub>y</sub> and V <sub>z</sub>
			57	Moments M <sub>y</sub> , M <sub>z</sub> and M <sub>T</sub>
	$\sim$ / /	Activate stiffness factors of:	: ⊠	Materials (partial factor γM)
			: ⊠	Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
0015		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	: 🛛	Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
CO15	G	Method of analysis		Second order analysis (P-Delta) Picard
	\(	Method for solving system of nonlinear algebraic equations		Picaru
		equations Options	: ⊠	Consider favorable effects due to tension
		Opuono	: 🗵	Refer internal forces to deformed system for:
			. 63	Normal forces N
				Shear forces V <sub>y</sub> and V <sub>z</sub>
				Moments M <sub>v</sub> , M <sub>z</sub> and M <sub>T</sub>
		Activate stiffness factors of:	: ⊠	Materials (partial factor $\gamma M$ )
		/ Notivate Still 1033 lactors of.	: 🖂	Cross-sections (factor for J, I <sub>v</sub> , I <sub>z</sub> , A, A <sub>v</sub> , A <sub>z</sub> )
			: 🗵	Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
CO16	G + 0.2Qs	Method of analysis	: 💿	Second order analysis (P-Delta)
5010	0.0.200	Method for solving system of nonlinear algebraic	. 0	Picard
		equations	-	1 IOUIG
		Options	:) ×/	_Consider favorable effects due to tension
			/: 🔯	Refer internal forces to deformed system for:
			/ /	☑ Normal forces N
				Shear forces V <sub>y</sub> and V <sub>z</sub>
			/	Moments M <sub>v</sub> , M <sub>z</sub> and M <sub>T</sub>
		Activate stiffness factors of:	: ⊠	Materials (partial factor γM)
		(	· 🖂	Cross-sections (factor for J. Iv. Iz. A. Av. Az)
			: 🗵 /	Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )
CO17	1.35G + 1.5Qw + 1.05Qs	Method of analysis	: 9	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic	. 6	Picard
		equations		
		Options	: 🗵	Consider favorable effects due to tension
			: ⊠	Refer internal forces to deformed system for:
				☑ Normal forces N / / □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
				Shear forces V <sub>y</sub> and V <sub>z</sub>
				Moments M <sub>y</sub> , M <sub>z</sub> and M <sub>T</sub>
		Activate stiffness factors of:	: 🗵	Materials (partial factor γM)

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LOADS

 Project:
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### **\$\dagger\$ 2.5.2 LOAD COMBINATIONS - CALCULATION PARAMETERS**

1	Load		
	Combin.	Description	Calculation Parameters
Λ	70		: 🛛 Cross-sections (factor for J, I <sub>y</sub> , I <sub>z</sub> , A, A <sub>y</sub> , A <sub>z</sub> )
	) \		: Members (factor for GJ, El <sub>y</sub> , El <sub>z</sub> , EA, GA <sub>y</sub> , GA <sub>z</sub> )

### **♦**2.7 RESULT COMBINATIONS

Result Combin	Description	Loading
RC1	ULS (STR/GEO) - Permanent / transient - Eq. 6.10a and 6.10b	CO1/p or to CO5
RC2	SLS - Characteristic	CO6/p or to CO10
RC3	SLS Frequent /	CO11/p or to CO14
RC4	SLS - Quasi-permanent	CO15/p or CO16/p

LC2 Wind \$\Pi\$ 3.2 MEMBER LOADS

LC2: Wind

	Reference	On Members	Load	Load	Load	Reference		Load Parameters	
No.	to	No.	Туре	Distribution	Direction	Length	Symbol	Value	Unit
1	Members	1,15-19	Force	Uniform	XP	Projected Length	р	1.000	kN/m

### ■ 3.2/1 MEMBER LOADS - LOAD ECCENTRICITY

LC2: Wind

0.2, .		LO, IDO LO	10 00511	101/11/						LOZ. VVIIIG
	Reference	On Members	Absolute	Offset /	Absolute	Offset	Relativ	e Offset	Relativ	e Offset
No.	to	No.	Mbr. Start	Mbr. Start	Mbr. End	Mbr. End	Mbr. Start	Mbr. Start	Mbr. End	Mbr. End
			e <sub>Y</sub> [m]	e <sub>Z</sub> [m]	e <sub>Y</sub> [m]	e <sub>Z</sub> [m]	y-Axis	z-Axis	y-Axis	z-Axis
1	Members	1,15-19	0.000	0.000	0.000	0.000	Middle	Middle	Middle	Middle

LC3 Snow **■** 3.2 MEMBER LOADS

LC3: Snow

	Reference	On Members	Load	Load	K	pad	Reference		Load Parameters	
No.	to	No.	Туре	Distribution	Qir	ction	Length	Symbol	Value	Unit
1	Members	2,4-14	Force	Uniform		YP / 🧠	Projected Length	р	4.000	kN/m

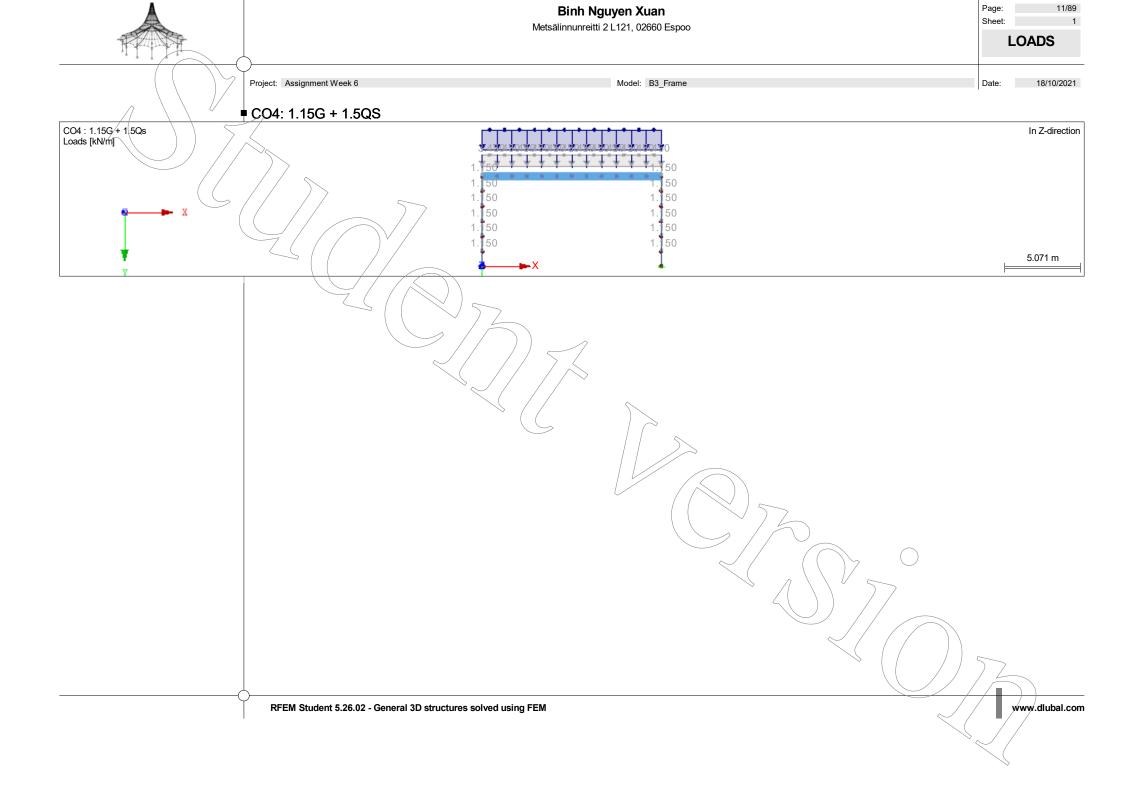
### **■** 3.2/1 MEMBER LOADS - LOAD ECCENTRICITY

LC3: Snow

	Reference	On Members	Absolute	e Offset	Absolute	e Offset	1	Relativ	e Offset	Relativ	e Offset
No.	to	No.	Mbr. Start	Mbr. Start	Mbr. End	Mbr. End	/	Mbr. \$tart∖	Mbr. Start	Mbr. End	Mbr. End
			e <sub>Y</sub> [m]	e <sub>Z</sub> [m]	e <sub>Y</sub> [m]	e <sub>Z</sub> [m]	\$	ŷ-Axis	z-Axis	y-Axis	z-Axis
1	Members	2,4-14	0.000	0.000	0.000	0.00	0	Middle	Middle	Middle	Middle

RFEM Student 5.26.02 - General 3D structures solved using FEM

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Project: Assignment Week 6

## **Binh Nguyen Xuan** Metsälinnunreitti 2 L121, 02660 Espoo

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Model: B3\_Frame Date: 18/10/2021

■ 4.0 RESULTS - SUMMARY

/ /				
\chi_	Description	Value	Unit	Comment
Case LC1	- Self-weight /			
	Sum of loads in X	0.00	kN	
ļ	Sum of support reactions in X	0.00	kN	
	Sum of loads in Y	48.00	kN	
	Sum of support reactions in Y	48.00	kN	Deviation 0.00%
	Sum of loads in Z	0.00	kN	
	Sum of support reactions in Z	0.00	kN	
	Resultant of reactions about X	0.000		At center of gravity of model (X:6.000, Y:-5.250, Z:0.000 m)
ļ	Resultant of reactions about Y	0.000		At center of gravity of model
	Resultant of reactions about Z	0.000		At center of gravity of model
}	Max. displacement in X	-1.29		Member No. 17, x: 0.000 m
	Max. displacement in Y	5.73		Member No. 8, x: 0.000 m
	Max. displacement in Z	0.00	mm	M. J. N. O. 1000
	Max. vector displacement	5.73	mm	Member No. 8, x: 0.000 m
ļ.	Max. rotation about X	0.0	mrad	
	Max. rotation about Y Max. rotation about Z	0.0		Marchan No. 0, m 0.700 m
		1.5		Member No. 2, x 0.700 m
	Maximum member strain Method of analysis	0.00000 Linear		Member No. 0, x 0.000 m
	Reduction of stiffness	Linear		Geometrically linear analysis Cross-sections, Members, Surfaces
	Number of load increments			Cross-sections, weimbers, Surfaces
	Number of iterations			
	Maximum value of element of stiffness matrix on diagonal	8.64E+09	1/ _	
}	Minimum value of element of stiffness matrix on diagonal	6.752E+06	1/ <	
-	Stiffness matrix determinant	2.522E+1095/	X /	
	Infinity Norm	1.728E+10		V >
	minity (Cont	1 5 1.1202.70	' / /	/
Case LC2	- Wind			
Ι.	Sum of loads in X	6.00	/kN /	
	Sum of support reactions in X	6.00	kN/	Deviation 0.00%
Ì	Sum of loads in Y	0.00	kN .	
	Sum of support reactions in Y	0.00	kN	
	Sum of loads in Z	0.00	kN	
	Sum of support reactions in Z	0.00		
	Resultant of reactions about X	0.000		At center of gravity of model (X:6.000, Y:-5.250, Z:0.000 m)
	Resultant of reactions about Y	0.000		At center of gravity/of model
	Resultant of reactions about Z	-13.500		At center of gravity of model
	Max. displacement in X		mm	Member No. 2, x:1.000 m
	Max. displacement in Y	-0.20	mm	Member No. 10, x: 0.300 m
	Max. displacement in Z	0.00		
	Max. vector displacement	5.79		Member No. 10, x: 0.900 m
	Max. rotation about X	0.0		
	Max. rotation about Y	0.0		
	Max. rotation about Z	1.6		Member No. 16, x: 0.800 m
	Maximum member strain	0.00000	-	Member No. 0, x: 0.000 m
	Method of analysis	Linear		Geometrically linear analysis
	Reduction of stiffness			Cross-sections, Members, Surfaces
	Number of load increments	1		
	Number of iterations	1		~ // \ \ ) >
	Maximum value of element of stiffness matrix on diagonal	8.64E+09		
	Minimum value of element of stiffness matrix on diagonal	6.752E+06		
	Stiffness matrix determinant	2.522E+1095		
	Infinity Norm	1.728E+10		
Case LC3				
	Sum of loads in X	0.00	kN	
	Sum of support reactions in X	0.00		
	Sum of loads in Y	48.00	KN	

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Model: B3\_Frame

	6			
	Description	Value	Unit	Comment
Sum of support reactions in Y		48.00	kN	Deviation 0.00%
Sum of loads in Z		0.00	kN kN	
Sum of support reactions in Z		0.00	kN	
Resultant of reactions about X		0.000	kNm	At center of gravity of model (X:6.000, Y:-5.250, Z:0.000 m)
Resultant of reactions about Y				At center of gravity of model
Resultant of reactions about Z		0.000		At center of gravity of model
Max. displacement in X		-1.72		Member No. 17, x: 0.000 m
Max. displacement in Y		7.62	mm	Member No. 8, x: 0.000 m
Max. displacement in Z		0.00	mm	
Max. vector displacement		7.62	mm	Member No. 8, x: 0.000 m
Max. rotation about X		0.0		
Max. rotation about Y		0.0		
Max. rotation about Z		1.9	mrad	Member No. 2, x: 0.700 m
Maximum member strain		0.00000	-	Member No. 0, x: 0.000 m
Method of analysis		Linear		Geometrically linear analysis
Reduction of stiffness		1 ) /		Cross-sections, Members, Surfaces
Number of load increments	7 ( / / \	1		
Number of iterations		1		
Maximum value of element of s		8.64E+09		
Minimum value of element of st	ffness matrix on diagonal	/6.752E+06		
Stiffness matrix determinant		2.522E+1095		
Infinity Norm		1.728E+10	1 )	
: :: 001 1050			/ <	<u> </u>
oination CO1 - 1.35G Sum of loads in X		0.00/	1 601	
Sum of support reactions in X		0.00	kN	
Sum of loads in Y		64.80	KN /	4 - 1
Sum of support reactions in Y		64.80	kN/ kN	Deviation 0.00%
Sum of loads in Z		0.00	kN /	Deviation 0.00%
Sum of support reactions in Z		0.00	KIN	
Resultant of reactions about X		0.00	kNm _	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions about X		0.0		At center of gravity of model At center of gravity of model
Resultant of reactions about Y		0.0		At center of gravity of model
		-1.75		At center of graying of moder Member No. 17 / x: 0.000 m
Max. displacement in X Max. displacement in Y		7.74		Member No. 8, /x 0.000 m
Max. displacement in Z		0.00		Member No. 6, X. 0.000 tr
Max. vector displacement		7.74		Member No. 8, x: 0.000 m
Max. rotation about X				Member No. 6, X. 0,000 III
Max. rotation about Y		0.0		
Max. rotation about Y		2.0		Member No. 2, x: 0.700 m
Maximum member strain		0.00000	mad	Member No. 0, x: 0.000 m
Method of analysis		2nd Order	-	Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to defor	and system for	2nd Order ⊠		N, V <sub>V</sub> , V <sub>z</sub> , M <sub>y</sub> , M <sub>z</sub> , M <sub>T</sub>
	icu əyəldiri ivi			18, Vy, Vz, Wi, Wiz, Wi 1
Reduction of stiffness	aile ferene	Ea		Materials, Cross-sections, Members, Surfaces
Consider favorable effects of te	sile forces			
Divide results by CO factor				
Number of load increments		1		
Number of iterations	er	2		
Maximum value of element of s	mness matrix on diagonal	8.64E+09		
Minimum value of element of s	riness matrix on diagonal	6.752E+06		
Stiffness matrix determinant		2.067E+1095		
Infinity Norm		1.728E+10		
oination CO2 - 1.15G + 1.5Qw				
Sum of loads in X		9.00	kN	
Sum of support reactions in X		9.00	kN	Deviation 0.00%
Sum of loads in Y		55.20	kN	
Sum of support reactions in Y		55.20		Deviation 0.00%

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Model: B3\_Frame

Description	Value	Unit	Comment
Sum of loads/in Z	0.00		- Comment
Sum of support reactions in Z	0.00		
Resultant of reactions about X		kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions about Y	0.0	kNm	At center of gravity of model
Resultant of reactions about Z		kNm	At center of gravity of model
Max. displacement in X	9.32		Member No. 24, x: 0.300 m
Max. displacement in Y	6.32		Member No. 8. x: 0.100 m
Max. displacement in Z		mm	
Max. vector displacement	10.87		Member No. 8, x: 0.100 m
Max. rotation about X		mrad	
Max. rotation about Y		mrad	
Max. rotation about Z	2.6		Member No. 21, x: 0.700 m
Maximum member strain	0.00000		Member No. 0, x: 0.000 m
Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to deformed system for			N, V <sub>y</sub> , V <sub>z</sub> , M <sub>y</sub> , M <sub>z</sub> , M <sub>T</sub>
Reduction of stiffness	X ) \ _		Materials, Cross-sections, Members, Surfaces
Consider favorable effects of tensile forces			
Divide results by CO factor  Number of load increments	5 1		
Number of iterations	1 / / 2		
Maximum value of element of stiffness matrix on diagonal	8.64E+09		
Minimum value of element of stiffness matrix on diagonal	6.752E+06		
Stiffness matrix determinant	2.118E+1095	1/ ~	
Infinity Norm	1.728E+10		
· · ·		/	
ination CO3 - 1.15G + 1.5Qw + 1.05Qs			<u>/ ~ </u>
Sum of loads in X	9.00	kN/	D : 11 - 0.00%
Sum of support reactions in X	9.00		Deviation 0.00%
Sum of loads in Y Sum of support reactions in Y	105.60 105.60		Deviation 0.00%
Sum of loads in Z		kN	Deviation 0.00%
Sum of support reactions in Z	0.00	kN	
Resultant of reactions about X		kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions about Y		kNm	At center of gravity of model
Resultant of reactions about Z		kNm	At center of gravity of model
Max. displacement in X	10.82		Member No. 23, x 0.900 m
Max. displacement in Y	14.34		Member No. 8, x: 0,000 m
Max. displacement in Z		mm	
Max. vector displacement	16.94		Member No. 8, x: 0.000 m
Max. rotation about X		mrad	
Max. rotation about Y		mrad	
Max. rotation about Z		mrad	Member No. 2, x: 0.800 m
Maximum member strain	0.00000		Member No. 0, x: 0.000 m
Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to deformed system for	⊠		N, V <sub>y</sub> , V <sub>z</sub> , M <sub>y</sub> , M <sub>z</sub> , M <sub>T</sub>
Reduction of stiffness			Materials, Cross-sections, Members, Surfaces
Consider favorable effects of tensile forces			
Divide results by CO factor  Number of load increments			
Number of load increments  Number of iterations	2		
Maximum value of element of stiffness matrix on diagonal	8.64E+09		
Minimum value of element of stiffness matrix on diagonal	6.752E+06		
Stiffness matrix determinant	1.751E+1095		
Infinity Norm	1.728E+10		
· '			
ination CO4 - 1.15G + 1.5Qs	6.00	Liki	
Sum of loads in X Sum of support reactions in X	0.00 0.00		· / / / >

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### ■ 4.0 RESULTS - SUMMARY

Qescription	Value	Unit	Comment
Sum of loads/in Y	127.20	kN	
Sum of support reactions in Y	127.20	kN	Deviation 0.00%
Sum of loads in Z	0.00		Johnson Cook
Sum of support reactions in Z	0.00	kN	
Resultant of reactions about X	0.0	kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions about Y	0.0		At center of gravity of model
Resultant of reactions about Z	0.0		At center of gravity of model
Max. displacement in X	-4.10		Member No. 17, x: 0.000 m
Max. displacement in Y	18.06		Member No. 8, x: 0.000 m
Max. displacement in Z	0.00		
Max. vector displacement	18.06		Member No. 8, x: 0.000 m
Max. rotation about X		mrad	
Max. rotation about Y	0.0		
Max. rotation about Z	4.6		Member No. 2, x: 0.700 m
Maximum member strain	0.00000	-	Member No. 0, x: 0.000 m
Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to deformed system for			$N, V_y, V_z, M_y, M_z, M_T$
Reduction of stiffness	7		Materials, Cross-sections, Members, Surfaces
Consider favorable effects of tensile forces			
Divide results by CO factor	/ 40		
Number of load increments			
Number of iterations	2		
Maximum value of element of stiffness matrix on diagonal	8.64E+09	/ <	
Minimum value of element of stiffness matrix on diagonal	6.752E+06	$V \rightarrow$	
Stiffness matrix determinant	1.619E+/1095/	1 /	
Infinity Norm	1.728E+10		<i>X</i> ~
on CO5 - 1.15G + 0.9Qw + 1.5Qs		-/-/	
Sum of loads in X	5.40	T/N	
Sum of support reactions in X	5.40	kN/	Deviation 0.00%
Sum of loads in Y			Solution (1887)
Sum of support reactions in Y	127.20		Deviation 0.00%
Sum of loads in Z	0.00		
Sum of support reactions in Z	0.00	kN	
Resultant of reactions about X	0.0		At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions about Y	0.0		At center of gravity of model
Resultant of reactions about Z	-11.5		At center of gravity of model
Max. displacement in X	8.41	mm	Member No. 23 × 0.600 m
Max. displacement in Y	17.89	mm	Member No. 8, x: 0.000 m
Max. displacement in Z	0.00		
Max. vector displacement	18.71	mm	Member No. 8, x: 0.000 m
Max. rotation about X		mrad	
Max. rotation about Y	0.0		
Max. rotation about Z	4.6		Member No. 2, x: 0.800 m
Maximum member strain	0.00000		Member No. 0, x: 0.000 m
Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to deformed system for	⊠		$N, V_y, V_z, M_y, M_z, M_T$
Reduction of stiffness			Materials, Cross-sections, Members, Surfaces
Consider favorable effects of tensile forces	⋈		
Divide results by CO factor			
Divido roballo by GO rabior	1		
Number of load increments	_		
Number of load increments Number of iterations	2		
Number of load increments	8.64E+09		
Number of load increments Number of iterations Maximum value of element of stiffness matrix on diagonal Minimum value of element of stiffness matrix on diagonal	8.64E+09 6.752E+06		
Number of load increments Number of iterations Maximum value of element of stiffness matrix on diagonal	8.64E+09		

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RE	SULTS

Project: Assignment Week 6

Model: B3\_Frame

Date: 18/10/2021

■ 4 0 RESULTS - SUMMARY

$\langle \langle \langle \rangle \rangle$	Description	Value	Unit	Comment
Sum of loads/in X		0.00	kN	
Sum of support react	ions/in X/	0.00	kN	
Sum of loads in Y		48.00	kN	
Sum of support react	ions in Y	48.00 48.00	kN	Deviation 0.00%
Sum of loads in Z	John Jir i	0.00	kN	Donation 0.00%
Sum of support react	ions in 7	0.00	kN	
Resultant of reactions	s about X	0.0	kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions		0.0		At center of gravity of model
Resultant of reactions		0.0		At center of gravity of model
Max. displacement in		-1.29		Member No. 17, x: 0.000 m
Max. displacement in				Member No. 8, x: 0.000 m
Max. displacement in		0.00	mm	
Max. vector displacer		5.73		Member No. 8. x: 0.000 m
Max. rotation about X		0.0		
Max. rotation about Y		0.0		
Max. rotation about Z		1.5	mrad	Member No. 2, x: 0.700 m
Maximum member st		0.00000	-	Member No. 0, x: 0.000 m
Method of analysis		2nd Order		Second order analysis (Nonlinear, Timoshenko)
Internal forces referre	ed to deformed system for			$N, V_y, V_z, M_y, M_z, M_T$
Reduction of stiffness				Materials, Cross-sections, Members, Surfaces
Consider favorable ef	ffects of tensile forces			
Divide results by CO				
Number of load incre	ments	////	/ <	+/
Number of iterations		/ /2	/ >	
Maximum value of ele	ement of stiffness matrix on diagonal	8.64E+09/		
	ement of stiffness matrix on diagonal	6.752E+06	1 / .	<i>X</i> ~
Stiffness matrix deter	minant	2:178E+1095		
Infinity Norm		1.728E+10	I / / _	
oination CO7 - G + Qw			-	
illation COI - G i Qw				
Sum of loads in X		6.00	kN	
Sum of loads in X	ions in X		kN	Deviation 0.00%
Sum of support react	ions in X	6.00	kN	Deviation 0.00%
Sum of support react		6.00 48.00	kN kN	
Sum of support react Sum of loads in Y Sum of support react		6.00 48.00 48.00	kN kN kN	Deviation 0.00%  Deviation 0.00%
Sum of support react Sum of loads in Y Sum of support react Sum of loads in Z	ions in Y	6.00 48.00 48.00 0.00	kN kN kN	
Sum of support react Sum of loads in Y Sum of support react Sum of loads in Z Sum of support react	ions in Y	6.00 48.00 48.00 0.00 0.00	kN kN kN kN kN	Deviation 0.00%
Sum of support react Sum of loads in Y Sum of support react Sum of support react Resultant of reactions	ions in Y ions in Z s about X	6.00 48.00 48.00 0.00 0.00 0.00	kN kN kN kN kN kNm	Deviation 0.00%  At center of gravity of model (X:6,0, Y;-5.3, Z:0,0 m)
Sum of support react Sum of loads in Y Sum of support react Sum of loads in Z Sum of support react Resultant of reactions Resultant of reactions	ions in Y ions in Z s about X s about Y	6.00 48.00 48.00 0.00 0.00 0.00	kN kN kN kN kN kNm	Deviation 0.00%  At center of gravity of model (X:6.0, Y:5.3, Z:0.0 m) At center of gravity of model
Sum of support react Sum of loads in Y Sum of support react Sum of loads in Z Sum of support react Resultant of reactions Resultant of reactions	ions in Y ions in Z s about X s about Y s about Z	6.00 48.00 48.00 0.00 0.00 0.00 0.0 -13.3	kN kN kN kN kN kNm kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m) At center of gravity of model At center of gravity of model
Sum of support react Sum of loads in Y Sum of support react Sum of loads in Z Sum of support react Resultant of reactions Resultant of reactions Max. displacement in	ions in Y ions in Z s about X s about Y s about Z X	6.00 48.00 0.00 0.00 0.00 0.00 -13.3 6.40 5.55	kN kN kN kN kNm kNm kNm	At center of gravity of model (X:6.0, Y:5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m
Sum of support react Sum of loads in Y Sum of support react Sum of support react Resultant of reactions Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in	ions in Y ions in Z s about X s about Y s about Z X Y	6.00 48.00 0.00 0.00 0.00 0.00 -13.3 6.40 5.55	kN kN kN kN kNm kNm kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m) At center of gravity of model At center of gravity of model
Sum of support react Sum of loads in Y Sum of support react Sum of loads in Z Sum of support react Resultant of reactions Resultant of reactions Max. displacement in	ions in Y ions in Z s about X s about Y s about Z X X Z	6.00 48.00 0.00 0.00 0.00 0.00 -13.3 6.40 5.55 0.00	kN kN kN kN kNm kNm kNm mm mm	At center of gravity of model (X:6,0, Y:-5.3, Z:0,0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m
Sum of support react Sum of loads in Y Sum of support react Sum of support react Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in	ions in Y ions in Z s about X s about Y s about Z X Y I Z ment	6.00 48.00 0.00 0.00 0.00 0.0 0.0 -13.3 6.40 5.55 0.00 8.09	kN kN kN kN kNm kNm kNm mm mm mm	At center of gravity of model (X:6.0, Y:5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. displacement in Max. vector displacement	ions in Y ions in Z s about X s about Y s about Z X X Y Z	6.00 48.00 0.00 0.00 0.00 0.0 0.0 -13.3 6.40 5.55 0.00 8.09	kN kN kN kN kNm kNm kNm mm mm mm mm	At center of gravity of model (X:6,0, Y:-5.3, Z:0,0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. vigsplacement in Max. vigsplacement in Max. vigsplacement in	ions in Y ions in Z s about X s about Y s about Z X X Y Z ment	6.00 48.00 0.00 0.00 0.00 0.0 -13.3 6.40 5.55 0.00 8.09 0.0	kN kN kN kN kNm kNm mm mm mm mm mm	At center of gravity of model (X:6,0, Y:-5.3, Z:0,0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. vector displacement Max. rotation about X Max. rotation about X Max. rotation about Z	ions in Y ions in Z s about X s about Y s about Z X Y Z ment	6.00 48.00 0.00 0.00 0.00 0.0 0.0 1-13.3 6.40 5.55 0.00 8.09 0.0	kN kN kN kN kNm kNm mm mm mm mm mm mm mm mm	At center of gravity of model (X:6.0, Y:5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 8, x: 0.100 m
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. displacement in Max. rotation about X Max. rotation about Y Max. rotation about Y	ions in Y ions in Z s about X s about Y s about Z X Y Z ment	6.00 48.00 0.00 0.00 0.00 0.00 -13.3 6.40 5.55 0.00 8.09 0.0	kN kN kN kN kNm kNm kNm mm mm mm mm mm mrad mrad mrad	Deviation 0.00%  At center of gravity of model (X:6.0, Y:5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 21, x: 0.600 m Member No. 0, x: 0.000 m
Sum of support react Sum of loads in Y Sum of support react Sum of support react Resultant of reactions Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. vector displacer Max. rotation about X Max. rotation about Z Max. rotation about Z Maximum member st Method of analysis	ions in Y ions in Z s about X s about Y s about Z X X Y Z ment	6.00 48.00 0.00 0.00 0.00 0.0 -13.3 6.40 5.55 0.00 8.09 0.0 1.8 0.00000 2nd Order	kN kN kN kN kN kNm kNm mm mm mm mm mm mm mrad mrad	Deviation 0.00%  At center of gravity of model (X:6.0, Y:5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 21, x: 0.600 m Member No. 0, x: 0.000 m
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. vector displacement in Max. rotation about X Max. rotation about Z Maximum member st Method of analysis Internal forces referre	ions in Y ions in Z s about X s about Y s about Z X Y Z ment dr to deformed system for	6.00 48.00 0.00 0.00 0.00 0.0 0.0 -13.3 6.40 5.55 0.00 8.09 0.0 0.0	kN kN kN kN kN kNm kNm mm mm mm mm mm mm mrad mrad	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 8, x: 0.100 m  Member No. 0, x: 0.000 m  Member No. 0, x: 0.000 m  Second order analysis (Nonlinear, Timoshenko) N, Vy, Vz, My, Mz, MT
Sum of support react Sum of loads in Y Sum of support react Sum of support react Resultant of reactions Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. vector displacement Max. rotation about X Max. rotation about Y Max. rotation about S Method of analysis Internal forces referre Reduction of stiffness	ions in Y ions in Z s about X s about Y s about Z X Y Z ment ion	6.00 48.00 0.00 0.00 0.00 0.0 0.0 -13.3 6.40 5.55 0.00 8.09 0.0 1.8 0.00000 2nd Order	kN kN kN kN kNm kNm mm mm mm mm mm mrad mrad mrad	Deviation 0.00%  At center of gravity of model (X:6.0, Y:5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 21, x: 0.600 m Member No. 0, x: 0.000 m
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. vector displacer Max. rotation about X Max. rotation about Y Max. rotation about Y Max. rotation about Support of the	ions in Y ions in Z s about X s about Y s about Z X Y Z ment dr d to deformed system for iffects of tensile forces	6.00 48.00 0.00 0.00 0.00 0.0 -13.3 6.40 5.55 0.00 8.09 0.0 1.8 0.00000 2nd Order	kN kN kN kN kNm kNm mm mm mm mm mrad mrad	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 8, x: 0.100 m  Member No. 0, x: 0.000 m  Member No. 0, x: 0.000 m  Second order analysis (Nonlinear, Timoshenko) N, Vy, Vz, My, Mz, MT
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. vector displacement in Max. rotation about X Max. rotation about X Max. rotation about Z Maximum member st Method of analysis Internal forces referre Reduction of stiffness Consider favorable ef Divide results by CO	ions in Y ions in Z s about X s about Y s about Z X Y Z ment od to deformed system for S ifects of tensile forces factor	6.00 48.00 48.00 0.00 0.00 0.00 0.0 -13.3 6.40 5.55 0.00 8.09 0.0 1.8 0.00000 2nd Order	kN kN kN kN kNm kNm mm mm mm mm mrad mrad	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 8, x: 0.100 m  Member No. 0, x: 0.000 m  Member No. 0, x: 0.000 m  Second order analysis (Nonlinear, Timoshenko) N, Vy, Vz, My, Mz, MT
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Resultant of reactions Max. displacement in Max. vector displacement in Max. rotation about X Max. rotation about Y Max. rotation about Y Max. rotation about Y Max. rotation about S Method of analysis Internal forces referre Reduction of stiffness Consider favorable ef Divide results by CO Number of load incre	ions in Y ions in Z s about X s about Y s about Z X Y Z ment od to deformed system for S ifects of tensile forces factor	6.00 48.00 0.00 0.00 0.00 0.0 0.0 1-13.3 6.40 5.55 0.00 8.09 0.0 1.8 0.00000 2nd Order	kN kN kN kN kNm kNm mm mm mm mm mrad mrad	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 8, x: 0.100 m  Member No. 0, x: 0.000 m  Member No. 0, x: 0.000 m  Second order analysis (Nonlinear, Timoshenko) N, Vy, Vz, My, Mz, MT
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. displacement in Max. vector displacer Max. rotation about X Max. rotation about Y Max. rotation about Y Max. rotation about Summum member st Method of analysis Internal forces referre Reduction of stiffness Consider favorable ef Divide results by CO Number of load incre Number of Iterations	ions in Y ions in Z s about X s about Y s about Z X Y Z ment do to deformed system for s fects of tensile forces factor ments	6.00 48.00 0.00 0.00 0.00 0.00 0.00 -13.3 6.40 5.55 0.00 8.09 0.0 1.8 0.00000 2nd Order	kN kN kN kN kNm kNm mm mm mm mm mrad mrad mrad	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 8, x: 0.100 m  Member No. 0, x: 0.000 m  Member No. 0, x: 0.000 m  Second order analysis (Nonlinear, Timoshenko) N, Vy, Vz, My, Mz, MT
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. vector displacement in Max. rotation about X Max. rotation about X Max. rotation about Z Maximum member st Method of analysis Internal forces referre Reduction of stiffness Consider favorable ef Divide results by CO Number of load incre Number of iterations Maximum value of ele	ions in Y ions in Z s about X s about Y s about Z X Y Z ment d to deformed system for s factor ments ement of stiffness matrix on diagonal	6.00 48.00 0.00 0.00 0.00 0.0 0.0 1-13.3 6.40 5.55 0.00 8.09 0.0 1.8 0.00000 2nd Order	kN kN kN kN kNm kNm kNm mm mm mm mm mm mrad mrad -	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 8, x: 0.100 m  Member No. 0, x: 0.000 m  Member No. 0, x: 0.000 m  Second order analysis (Nonlinear, Timoshenko) N, Vy, Vz, My, Mz, MT
Sum of support react Sum of loads in Y Sum of support react Sum of support react Sum of support react Sum of support react Resultant of reactions Resultant of reactions Resultant of reactions Max. displacement in Max. displacement in Max. displacement in Max. rotation about X Max. rotation about X Max. rotation about X Max. rotation about Z Maximum member st Method of analysis Internal forces referre Reduction of stiffness Consider favorable ef Divide results by CO Number of load incre Number of iterations Maximum value of ele	ions in Y ions in Z s about X s about Y s about Z X Y Z ment do to deformed system for s ffects of tensile forces factor ment ment of stiffness matrix on diagonal ment of stiffness matrix on diagonal	6.00 48.00 0.00 0.00 0.00 0.00 1-13.3 6.40 5.55 0.00 8.09 0.0 1.8 0.00000 2nd Order	kN kN kN kN kNm kNm kNm mm mm mm mm mm mrad mrad -	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m) At center of gravity of model At center of gravity of model Member No. 24, x: 0.200 m Member No. 8, x: 0.100 m  Member No. 8, x: 0.100 m  Member No. 0, x: 0.000 m  Member No. 0, x: 0.000 m  Second order analysis (Nonlinear, Timoshenko) N, Vy, Vz, My, Mz, MT

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Model: B3\_Frame

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Project: Assignment Week 6

	Description	Value	Unit	Comment
tion CO8 - G + Qw + 0.7Qs				
Sum of loads in X Sum of support reactions in X	/_/	6.00 6.00	KN	Deviation 0.00%
Sum of loads in Y		81.60	kN	Deviation 0.00%
Sum of support reactions in Y		81.60	kN	Deviation 0.00%
Sum of loads in Z		0.00	kN	Deviation 6.00%
Sum of support reactions in Z		0.00	kN	
Resultant of reactions about X		0.0	kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions about Y		0.0	kNm	At center of gravity of model
Resultant of reactions about Z		-13.0	kNm	At center of gravity of model
Max. displacement in X Max. displacement in Y		7.41 10.90	mm	Member No. 23, x: 0.800 m Member No. 8, x: 0.000 m
Max. displacement in Z		0.00	mm	Member No. 6, x. 0.000 m
Max. vector displacement		12.42	mm	Member No. 8, x: 0.000 m
Max. rotation about X		0.0	mrad	I marined that of the state of
Max. rotation about Y	7 ( / / )	0.0	mrad	
Max. rotation about Z		2.8	mrad	Member No. 2, x: 0.800 m
Maximum member strain		0.00000	-	Member No. 0, x: 0.000 m
Method of analysis	-dtt	2nd Order		Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to deform Reduction of stiffness	ed system for			N, V <sub>y</sub> , V <sub>z</sub> , M <sub>y</sub> , M <sub>z</sub> , M <sub>T</sub> Mateñals, Cross-sections, Members, Surfaces
Consider favorable effects of ten	eile forces		/ ~	Materials, Closs-sections, Members, Surfaces
Divide results by CO factor	nic loreca			
Number of load increments				
Number of iterations		1/2	/ /	<i>x</i> ~
Maximum value of element of sti		8.64E+09		
Minimum value of element of stil	ness matrix on diagonal	6.752E+06		_
Stiffness matrix determinant Infinity Norm		1.915E+1095 1.728E+10	/ /	
		1.7202 10		
tion CO9 - G + Qs				
Sum of loads in X Sum of support reactions in X		0.00 0.00	KN	
Sum of loads in Y		96.00	kN	
Sum of support reactions in Y		96.00		Deviation 0.00%
Sum of loads in Z		0.00	kN	Boulden 9:300
Sum of support reactions in Z		0.00	kN	
Resultant of reactions about X		0.0	kNm	At center of gravity of model (X:6.0, Y:-5:3, Z:0,0 m)
Resultant of reactions about Y		0.0	kNm	At center of gravity of model
Resultant of reactions about Z		0.0	kNm	At center of gravity of model
Max. displacement in X Max. displacement in Y		-3.03 13.37	mm mm	Member No. 17, x: 0.000 m  Member No. 8, x: 0.000 m
Max. displacement in Z		0.00	mm	Member No. 0, A. 0.000 III
Max. vector displacement		13.37	mm	Member No. 8, x: 0.000 m
Max. rotation about X		0.0	mrad	
Max. rotation about Y		0.0	mrad	
Max. rotation about Z		3.4	mrad	Member No. 2, x: 0.700 m
Maximum member strain		0.00000	-	Member No. 0, x: 0.000 m
Method of analysis	ad avetam for	2nd Order		Second order analysis (Nonlinear, Timoshenko)  N, V <sub>v</sub> , V <sub>z</sub> , M <sub>v</sub> , M <sub>z</sub> , M <sub>T</sub>
Internal forces referred to deform Reduction of stiffness	cu əyətcin iUl	⊠		Materials, Cross-sections, Members, Surfaces
Consider favorable effects of ten	sile forces			Indicinals, Cross-sections, Intellibers, Sunders
Divide results by CO factor	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Number of load increments		1		$\sim$ / / /
Number of iterations		2		
Maximum value of element of sti		8.64E+09		
Minimum value of element of still	ness matrix on diagonal	6.752E+06		

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Project: Assignment Week 6 Model: B3\_Frame

Description	Value	Unit	Comment
Stiffness matrix determinant	1.820E+1095		
Infinity Norm	1.728E+10		
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•	
nation CO10 - G + 0.6Qw # Qs/			
Sum of loads in X	3.60 3.60	kN	
Sum of support reactions in X	3.60	kN	Deviation 0.00%
Sum of loads in Y	96.00	kN	
Sum of support reactions in Y	96.00		Deviation 0.00%
Sum of loads in Z	0.00	kN kN	
Sum of support reactions in Z Resultant of reactions about X	0.00		At contax of graphty of model (V.C.O. V. F. 2. 7/0.0 m)
Resultant of reactions about X  Resultant of reactions about Y	0.0		At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)  At center of gravity of model
Resultant of reactions about Y  Resultant of reactions about Z	-7.8		At center of gravity of model
Max. displacement in X	5.85		Actended of gravity of miodel Member No. 23, x: 0.500 m
Max. displacement in Y	13.26		Member No. 8, x: 0.000 m
Max. displacement in Z	0.00		member (e. c, x, c, ccc iii
Max. vector displacement	13.74		Member No. 8, x: 0.000 m
Max. rotation about X	0.0		
Max. rotation about Y	) ) 0.0		
Max. rotation about Z	3.4	mrad	Member No. 2, x: 0.800 m
Maximum member strain	0.00000	-	Member No. 0, x: 0.000 m
Method of analysis	2nd Order	1 /	Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to deformed system for	<u> </u>		$\uparrow$ N, $\bigvee_{y}$ , $\bigvee_{z}$ , $M_{y}$ , $M_{z}$ , $M_{T}$
Reduction of stiffness	$\sim$ / $\sim$	<i>Y</i> – 7	Méterials, Cross-sections, Members, Surfaces
Consider favorable effects of tensile forces			
Divide results by CO factor	1		
Number of load increments Number of iterations	1 2		
Maximum value of element of stiffness matrix on diagonal	8.64E+09		
Minimum value of element of stiffness matrix on diagonal	6.752E+06	/ /	
Stiffness matrix determinant	1.816E+1095		
Infinity Norm	1.728E+10		
nation CO11 - G	0.00	Lini	
Sum of loads in X Sum of support reactions in X	0.00 0.00	KIN	
Sum of loads in Y	48.00		
Sum of support reactions in Y	48.00	kNI	Deviation 0.00%
Sum of loads in Z	0.00		Deviation 0.00%
Sum of support reactions in Z	0.00		
Resultant of reactions about X	0.0		At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions about Y	0.0	kNm	At center of gravity of model
Resultant of reactions about Z	0.0	kNm	At center of gravity of model
Max. displacement in X	-1.29		Member No. 17, x: 0.000 m
Max. displacement in Y	5.73		Member No. 8, x: 0.000 m
Max. displacement in Z	0.00		~ / ( ) >
Max. vector displacement	5.73		Member No. 8, x: 0.000 m
Max. rotation about X	0.0		
Max. rotation about Y	0.0	mrad	Marchan No. 0, 170 700 11
Max. rotation about Z	1.5	mrad	Member No. 2, x: 0.700 m
Maximum member strain Method of analysis	0.00000 2nd Order	-	Member No. 0, x: 0.000 m Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to deformed system for	Zilu Oldel		N, V <sub>v</sub> , V <sub>z</sub> , M <sub>v</sub> , M <sub>z</sub> , M <sub>T</sub>
Reduction of stiffness			Materials, Cross-sections, Members, Surfaces
Consider favorable effects of tensile forces			materials, Orosa-sections, Mentibers, Surfaces
Divide results by CO factor			
Number of load increments	1		
Number of iterations	2		

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Project: Assignment Week 6

Model: B3\_Frame

$\langle \langle \langle \rangle \rangle \rangle$	Description	Value	Unit	Comment
Maximum value	of element of stiffness matrix on diagonal	8.64E+09		1
Minimum value	of element of stiffness matrix on diagonal	6.752E+06		
Stiffness matrix		2.178E+1095		
Infinity Norm		1.728E+10		
,				
ati <u>on CO12 - G + 0.</u>				
Sum of loads in		1.20	kN	
Sum of support		1.20 48.00	kN	Deviation 0.00%
Sum of loads in		48.00	kN	
Sum of support	reactions in Y	48.00		Deviation 0.00%
Sum of loads in		0.00	kN	
Sum of support		0.00	kN	4
Resultant of rea		0.0	kNm kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of rea Resultant of rea		0.0 -2.7	kNm	At center of gravity of model
Max. displacement		2.20	mm	At center of gravity of model  Member No. 23, x: 0.400 m
Max. displacem		5.70	mm	Member No. 8, x 0.400 m
Max. displaceme				Member No. 0, X. 0.000 III
Max. vector disp	acement	5.82	mm	Member No. 8, x: 0.000 m
Max. rotation ab				Michigan No. 0, A. 0.000 III
Max. rotation ab		0.0	mrad	
Max. rotation ab	out Z	1.5	mrad	Member No. 2, x: 0.800 m
Maximum meml		0.00000	-/ <-	Member No. 0, x: 0.000 m
Method of analy	sis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
Internal forces re	ferred to deformed system for	<b>/</b> Ø/		$N_{\nu}V_{\nu_{\lambda}}V_{z}, M_{\nu}, M_{z}, M_{T}$
Reduction of stif	fness		l / ,	Materials, Cross-sections, Members, Surfaces
	le effects of tensile forces			
Divide results by				
Number of load		√ 1	/_/_	
Number of iterat		2	(	
	of element of stiffness matrix on diagonal	8.64E+09		
Stiffness matrix	of element of stiffness matrix on diagonal	6.752E+06 2.177E+1095		
Infinity Norm	determinant	2.177E+1095 1.728E+10		
Initially North		1.720E+10		
ation CO13 - G + 0.:	20w + 0 20s			
Sum of loads in		1.20	kN	
Sum of support	reactions in X	1.20	kN	Deviation 0.00%
Sum of loads in	Υ	57.60	kN	
Sum of support	reactions in Y	57.60	kN	Deviation 0.00%
Sum of loads in	Z	0.00	kN	
Sum of support		0.00	kN	
Resultant of rea		0.0	kNm	At center of gravity of model (X:6.0, X:-5.3, Z:0.0 m)
Resultant of rea		0.0	kNm	At center of gravity of model
Resultant of rea		-2.6	kNm	At center of gravity of model
Max. displaceme		2.54	mm	Member No. 23, x: 0.400 m
Max. displaceme		7.22	mm	Member No. 8, x: 0.000 m
Max. displacement	ent in Z	0.00 7.32		Mambarata a una coca un
Max. vector disp		7.32	mm mrad	Member No. 8, x: 0.000 m
Max. rotation ab		0.0	mrad	4
Max. rotation ab		1.8	mrad	Member No. 2, x: 0.800 m
Maximum meml		0.00000	-	Member No. 0, x: 0.000 m
Method of analy		2nd Order		Second order analysis (Nonlinear, Timoshenko)
	ferred to deformed system for	Zild Older		Second offer alraysis (rominear, filliosheriko) N, V <sub>v</sub> , V <sub>z</sub> , M <sub>v</sub> , M <sub>z</sub> , M <sub>T</sub>
Reduction of stif				Materials, Cross-sections, Members, Surfaces
	le effects of tensile forces			materials, cross sections, members, curracts

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RE	ESULTS

Project: Assignment Week 6 Model: B3\_Frame

■ 4.0 RESULTS - SUMMARY			
Description	Value	Unit	Comment
		Offic	Confinent
Number of load increments	1		
Number of iterations	2		
Maximum value of element of stiffness matrix on diagonal	8.64E+09		
Minimum value of element of stiffness matrix on diagonal	6.752E+06		
Stiffness matrix determinant	2.101E+1095		
Infinity Norm	1.728E+10		
Load Combination CO14 - G + 0.4Qs			
Sum of loads in X	0.00	kN	
Sum of support reactions in X	0.00 67.20	kN	
Sum of loads in Y	67.20	kN	
Sum of support reactions in Y	67.20	kN	Deviation 0.00%
Sum of loads in Z	0.00	kN	
Sum of support reactions in Z	0.00	kN	
Resultant of reactions about X	0.0	kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions about Y	0.0	kNm	At center of gravity of model
Resultant of reactions about Z	0.0	kNm	At center of gravity of model
Max. displacement in X	-1.99	mm	Member No. 17, x: 0.000 m
Max. displacement in Y	8.79		Member No. 8, x: 0.000 m
Max. displacement in Z	0.00	mm	
Max. vector displacement	8.79	mm	Member No. 8, x: 0.000 m
Max. rotation about X	0.0		
Max. rotation about Y	0.0		
Max. rotation about Z	2.2	mrad	Member No. 2, x: 0.700 m
Maximum member strain	0.00000/	/ - /	Member No. 0. x: 0.000 m
Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to deformed system for	Zild Older		N, V <sub>v</sub> , V <sub>z</sub> , M <sub>v</sub> , M <sub>z</sub>
Reduction of stiffness			Materials. Cross-sections. Members. Surfaces
Consider favorable effects of tensile forces		1///	Materials, Cross-sections, Members, Surfaces
Divide results by CO factor			
Number of load increments	1	(	
Number of iterations	1		
	8.64E+09		
Maximum value of element of stiffness matrix on diagonal			
Minimum value of element of stiffness matrix on diagonal Stiffness matrix determinant	6.752E+06 2.029E+1095		
Infinity Norm	2.029E+1095 1.728E+10		
infinity Norm	1.728E+10		
Load Combination CO15 - G			
Sum of loads in X	0.00		
Sum of support reactions in X	0.00	kN	
Sum of loads in Y	48.00	kN	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Sum of support reactions in Y	48.00		Deviation 0.00%
Sum of loads in Z	0.00	kN	
Sum of support reactions in Z	0.00	kN	
Resultant of reactions about X	0.0		At center of gravity of model (X:6.0, Y:-5.3, Z:0.0/m)
Resultant of reactions about Y	0.0		At center of gravity of model
Resultant of reactions about Z	0.0	kNm	At center of gravity of model
Max. displacement in X	-1.29		Member No. 17, x: 0.000 m
Max. displacement in Y	5.73	mm	Member No. 8, x: 0.000 m
Max. displacement in Z	0.00	mm	
Max. vector displacement	5.73		Member No. 8, x: 0.000 m
Max. rotation about X	0.0		
Max. rotation about Y	0.0		
Max. rotation about Z	1.5		Member No. 2, x: 0.700 m
Maximum member strain	0.00000		Member No. 0, x 0.000 m
Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to deformed system for	Zild Older		Sector district analysis (wominear, finisheriko) N, V., V.z. M., M.z. MT
Reduction of stiffness			Materials, Cross-sections, Members, Surfaces
Troduction of summess			Interviews, Orosa-sociation, Interripcia, Outlabers

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Project: Assignment Week 6

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### ■ 4 0 RESUVTS - SUMMARY

■4.0 RESUĽTS - SUMMARY			
Description	Value	Unit	Comment
Consider favorable effects of tensile forces			
Divide results by CO factor			
Number of load increments Number of iterations	1 2		
Maximum value of element of stiffness matrix on diagonal	8.64E+09		
Minimum value of element of stiffness matrix on diagonal	6.752E+06		
Stiffness matrix determinant	2.178E+1095		
Infinity Norm	1.728E+10		
1 10 11 5 2010 2 200			
Load Combination CO16 - G + 0.2Qs Sum of loads in X	0.00	LNI	T. C.
Sum of support reactions in X	0.00	kNI	
Sum of loads in Y	57 60	kN	
Sum of support reactions in Y	57.60	kN	Deviation 0.00%
Sum of loads in Z	0.00	kN	
Sum of support reactions in Z	0.00	kN	
Resultant of reactions about X	0.0	kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions about Y	5 0.0		At center of gravity of model
Resultant of reactions about Z  Max. displacement in X	0.0	kNm mm	At center of gravity of model  Member No. 17, x: 0.000 m
Max. displacement in Y	7.26	mm	Member No. 8, x: 0.000 m
Max. displacement in Z	0.00	mm	Monator No. 6, X 0.000 III
Max. vector displacement	7.26	mm <	Member No. 8, x: 0.000 m
Max. rotation about X			
Max. rotation about Y		mrad /	
Max. rotation about Z	1.8	mrad	Member No. 2, x: 0.700 m
Maximum member strain Method of analysis	0.00000 2nd Order	-//	Member No. 0, x: 0.000 m Second order analysis (Nonlinear, Timoshenko)
Internal forces referred to deformed system for	Zild Order		Second order alraysis (volumear, rimosnenko) $N_i V_{i_i} V_{i_2} M_{i_3} M_{i_4}$
Reduction of stiffness	> E	/ /	Materials, Cross-sections, Members, Surfaces
Consider favorable effects of tensile forces			materials, cross-sections, members, curraces
Divide results by CO factor			
Number of load increments	1		
Number of iterations	2		
Maximum value of element of stiffness matrix on diagonal	8.64E+09		
Minimum value of element of stiffness matrix on diagonal Stiffness matrix determinant	6.752E+06 2.103E+1095		
Infinity Norm	1.728E+10		
Illility North	1.7201110		
Load Combination CO17 - 1.35G + 1.5Qw + 1.05Qs			
Sum of loads in X	9.00	kN	
Sum of support reactions in X	9.00	kN	Deviation 0.00%
Sum of loads in Y Sum of support reactions in Y	115.20 115.20	KN	Deviation 0.00%
Sum of loads in Z	0.00	kN	Deviation 0.00%
Sum of support reactions in Z	0.00	kN	
Resultant of reactions about X	0.0	kNm	At center of gravity of model (X:6.0, Y:-5.3, Z:0.0 m)
Resultant of reactions about Y	0.0	kNm	At center of gravity of model
Resultant of reactions about Z	-19.3	kNm	At center of gravity of model
Max. displacement in X	11.07		Member No. 23, x: 0.900 m
Max. displacement in Y Max. displacement in Z	15.49 0.00		Member No. 8, x: 0.000 m
Max. displacement in Z  Max. vector displacement	17.94		Member No. 8, x: 0.000 m
Max. rotation about X	0.0	mrad	Michigan No. 0, A. 0.000 III
Max. rotation about Y	0.0		$\sim$ / / /
Max. rotation about Z	4.0	mrad	Member No. 2, x: 0.800 m
Maximum member strain	0.00000	-	Member No. 0, x: 0.000 m
Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)

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Date: 18/10/2021

Project: Assignment Week 6 Model: B3\_Frame

	ULTS - SUMMARY			
<i>└</i>	Description	Value	Unit	Comment
	Internal forces referred to deformed system for	⊠		$N, V_y, V_z, M_y, M_z, M_T$
	Reduction of stiffness	57		Materials, Cross-sections, Members, Surfaces
	Consider favorable effects of tensile forces Divide results by CO factor	⊠ □		
	Number of load increments	1		
	Number of iterations /	2		
	Maximum value of element of stiffness matrix on diagonal	8.64E+09		
	Minimum value of element of stiffness matrix on diagonal Stiffness matrix determinant	6.752E+06 1.697E+1095		
	Infinity Norm	1.728E+10		
	7/////			
nmary	Max. displacement in X	11.07	T	CO17. Member No. 23. x: 0.900 m
	Max. displacement in X  Max. displacement in Y	11.07		CO4, Member No. 23, 3: 0.900 m
	Max. displacement in Z	0.00		004, Welliber No. 6, X. 6.000 III
	Max. vector displacement	18.71	mm	CO5, Member No. 8, x: 0.000 m
	Max. rotation about X	0.0		
	Max. rotation about Y Max. rotation about Z	0.0	mrad	CO4, Member No. 2, x: 0.700 m
	I Wax. Totalion about Z	4.0	I IIIIau	CO4, Member No. 2, A. 0.700 H
	Other Settings:			
	Number of 1D finite elements Number of 2D finite elements		/ _	
	Number of 3D finite elements  Number of 3D finite elements	0	/ 5	
	Number of FE mesh nodes	0 25/ 150	1	
	Number of equations	150		<i>X</i> ~
	Internal forces referred to deformed system for:	1 ~ /100		
	Max. number of iterations  Number of divisions for member results	100		
	Division of cable/foundation/tapered members	10		
	Number of member divisions for searching maximum values	10		
	Subdivisions of FE mesh for graphical results	3 5		
	Percentage of iterations according to Picard method in combination with Newton-Raphson method	5	%	
	Newton-Naphson method	I	I	
	Options:	_		
	Activate shear stiffness of members (Ay, Az) Activate member divisions for large deformation or post-critical analysis			
	Activate member divisions for large deformation or post-critical analysis  Activate entered stiffness modifications	⊠		
	Ignore rotational degrees of freedom			
	Check of critical forces of members			
	Nonsymmetric direct solver if demanded by nonlinear model			
	Method for the system of equations Plate bending theory	Direct Mindlin		
	Solver version	64-bit		
	Precision and Tolerance: Change default setting			
	Change default setting		I	
				$\sim$ / / / $\sim$
	<del></del> Q			
	RFEM Student 5.26.02 - General 3	D structures solved usin	g FEM	
	1			<i>₹ / •//</i>

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Project: Assignment Week 6 Model: B3\_Frame Date: 18/10/2021

■ 4 1 NODES - SNPRORT FORCES

■ 4.1 NOE	DES - SUPPO	ORT FORCES						
Node			Support Forces [kN]			Support Moments [kNm]		
No.	LC/CO	Px	P <sub>Y'</sub>	P <sub>Z'</sub>	$M_{X}$	$M_{Y'}$	$M_{Z'}$	
1*	LC1 LC2 LC3 CO1 CO2	24.00	-1.16	0.00	0.00	0.00	-2.31	Self-weight
	LC2	0.49	4.55	0.00	0.00	0.00	7.63	Wind
	LC3	-24.00 -32.40	-1.54	0.00	0.00 0.00	0.00 0.00 0.00	-3.08 -3.13	Snow
	CO1	/ -32.40	-1.56	0.00	0.00	0.00	-3.13	
	CO2	-26.84	5.50	0.00	0.00	0.00	8.91	
	CO3 CO4 CO5 CO6 CO7 CO8 CO9	-52.03	3.89	0.00	0.00	0.00	5.77	
	CO4	-63.60	-3.63 0.47	0.00	0.00 0.00	0.00	-7.35 -0.29	
	CO5	( -63.13/	0.47	0.00	0.00	0.00	-0.29	
	CO6	-24.00 -23.50	-1,15	0.00	0.00	0.00	-2.32	
	CO7	-23.50 -40.29/	3.39 2.32	0.00 0.00	0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	5.39 3.27	
	CO8	-48.00	, 2.69/	0.00	0.00	0.00	-5.43	
	CO10	-47.60	0.04	0.00	0.00	0.00	-0.45	
	CO10 CO11 CO12	-47.69 -24.00	-1/15	0.00	0.00 0.00	0.00	-0.76 -2.32	
	CO12	-23.90	-1.15 -0.25	0.00	0.00	0.00	-0.78	
	l CO13	-28.70	-0.55	0.00	0.00	0.00	-1.39	
	CO14 CO15	-33.60	/ ( -1.7/7	0.00	0.00 0.00	0.00	-3.56	
	CO15	-33.60 -24.00	-1.15	0.00	0.00	0.00 0.00 0.00 0.00 0.00 0.00	-2.32	
	CO16	-28.80	-1.46 3.66	0.00/	0.00	0.00	-2.94	
	CO17	-56.82 24.00	3.66	0.00	0.00	0.00	5.32 2.31	
4*	LC1	24.00	-1.16	0.00	0.00	0.00 0.00 0.00	2.31	Self-weight
	LC2	0.49	-1.45	0.00	0.00	0.00	4.44	Wind
	LC3	24.00 32.40	-1.54	0.00	0.00	0.00	3.08 3.13	Snow
	LC3 CO1 CO2 CO3 CO4 CO5 CO6 CO7 CO8	28.36	-1.54 -1.56 -3.50	0.00	0.00	0.00 0.00 0.00	9.44	
	CO2	53.57	-5.11	0.00	0.00	0.00	12.83	
	CO4	63.60	-3.63	0.00	0.00	0.00	7 35	
	CO5	63.60 64.07	-3.63 -4.93	0.00 0.00	0.00	0.00	7.35 11.52	
	CO6	24.00	-1 15	0.00	0.00	0.00	2.32	
	CO7	24.00 24.50	-2.61 -3.68 -2.69	0.00 0.00 0.00	0.00	0.00	2.32 6.82	
	CO8	41.31	-3.68	0.00	0.00	0.00	9.05	
	CO9	48.00	-2.69	0.00	0.00	0.00	5.43	
	CO10 CO11 CO12 CO13	48.31	-3.56 -1.15 -1.45	0.00	0.00	0.00	8.18	
	CO11	24.00	-1.15	0.00 0.00	0.00 0.00 0.00	0.00	2.32	
	CO12	24.10	-1.45	0.00	0.00	0.00	3.22	
	CO13	28.90 33.60	-1.75 -1.77	0.00 0.00	0.00	0.00 0.00	3.84 3.56	
	CO14 CO15	24.00	-1.77 -1.15	0.00	0.00	0.00	2.32	
	CO16	28.80	-1.46	0.00	0.00	0,00	2.94	
	CO17	58 38	-5.34	0.00	0.00	0.00	13.32	
Σ Supp.	CO17 LC1 LC1 LC2 LC2 LC3 LC3	58.38 0.00	48.00	0.00	5.00	3.00	) 75.52	
Σ Loads	LC1	0.00	48.00 48.00	0.00				
Σ Supp.	LC2	6.00 6.00 0.00	0.00	0.00				
Σ Loads	LC2	6.00	0.00 48.00	0.00				
Σ Supp.	LC3	0.00	48.00	0.00				
Σ Loads	LC3	0.00	48.00	0.00				
Σ Supp.	CO1 CO1 CO2 CO2 CO2 CO3	0.00 0.00	64.80 64.80	0.00 0.00				
$\Sigma$ Supp. $\Sigma$ Supp.	1001	9.00	64.80 55.20	0.00				
Σ Supp. Σ Supp.	CO2	9.00	55.20 55.20	0.00				
Σ Supp. Σ Supp.	CO3	9.00	55.20 105.60	0.00			5	
Σ Supp.	LCO3	9.00	105.60	0.00				
Σ Supp.	CO4	0.00	127 20	0.00				
Σ Supp.	CO4 CO4 CO5	0.00	127.20 127.20 127.20	0.00				
$\Sigma$ Supp. $\Sigma$ Supp.	CO5	0.00 5.40	127.20	0.00				
Σ Supp.	CO5	5.40	127.20	0.00				
Σ Supp.	LCO6	0.00 0.00	48.00 48.00	0.00 0.00				
Σ Supp.	CO6	0.00	48.00	0.00				

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Project: Assignment Week 6 Model: B3\_Frame

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### ■ 4.1 NODES - SUPPORT FORCES

Node /			Support Forces [kN]			Support Moments [kNm]		
No.	LC/CO	Px	P <sub>Y'</sub>	$P_{Z'}$	$M_{X^c}$	M <sub>Y</sub>	M <sub>Z'</sub>	
∑ Supp.	CQ7 /	6.00	48.00	0.00				
$\Sigma$ Supp. $\Sigma$ Supp.	CO7 CO8 CO8 CO9	6.00	48.00	0.00 0.00				
Σ Supp.	CO8	6.00	81.60	0.00				
Σ Supp.	CO8	6.00	81.60	0.00				
Σ Supp.	CO9	( / /0.00	96.00	0.00				
Σ Supp.	CO9	0.00	96.00	0.00				
Σ Supp.	CO9 CO10	3.60	/ / 96.00	0.00				
Σ Supp.	CO10	3.60/	96.00	/ / 0.00				
Σ Supp.	CO11	0.00	96.00 48.00 48.00 48.00 48.00 48.00 57.60	0.00				
Σ Supp.	CO11	9.00	/ / / 48.00	0.00				
Σ Supp.	CO12	/1.20/	/ / 48.00	0.00				
Σ Supp.	CO12	1.20	48.00/	0.00				
Σ Supp.	CO13	1.20	57.60	0.00				
$\Sigma$ Supp. $\Sigma$ Supp.	CO13	1.20	57.60 67.20	0.00				
Σ Supp.	CO14	0.00	67.20	0.00				
Σ Supp.	CO14	0.00	67.20	0.00				
Σ Supp.	CO15	0.00	48.00	0.00				
Σ Supp.	CO15	0.00	48.00 48.00	0.00				
Σ Supp.	CO16	0.00	57.60	0.00				
Σ Supp.	CO16	0.00	57.60	0.00				
$\Sigma$ Supp.	CO17	9.00	115.20	0.00				
Σ Supp.	CO17	9.00	115.20	/ /0.00				
■ 4 12 CR	OSS-SECTI	IONS - INTERNA	I FORCES					

Member		Node	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	No.	x [m]	N	V <sub>y</sub> / / 1	V <sub>z</sub>	$M_{T}$	$M_{y}$	M <sub>z</sub>	
	Section No. 1:	T-Rectangle 0.6/0.2	· · ·	· · · · · · · · · · · · · · · · · · ·	( (			·	<u> </u>	
2	LC1	5	0.000	-1.16	15.00	/ 0.00	0.00	0.00	11.87	
		2	1.000	-1.16	18.00	/ /0.00	0.00	0.00	-4.63	
	LC2	5	0.000	-1.45	-0.49	/ / 0.00	0.00	0.00	1.16	
		2	1.000	-1.45	-0.49	0.00	0.00	0.00	1.66	
	LC3	5	0.000	-1.54	20.00	0.00	0.00	0.00	15.82	
		2	1.000	-1.54	24.00	0.00	0.00	0.00	-6.18	
	CO1	5	0.000	-1.52	20.25	-0.00	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0.00	16.06	
		2	1.000	-1.51	24.30	0.00	0.00	0.00	-6.22	
	CO2	5	0.000	-3.48	16.50	0.00	0.00	0.00	15.50	
		2	1.000	-3.47	19.95	0.00	(0.00)	0.00	-2.73	
	CO3	5	0.000	-4.98	37.49	0.00	0.00	0.00	32.30	
		2	1.000	-4.95	45.14	0.00	0.00	0.00	-9.02	
	CO4	5	0.000	-3.41	47.27	0.00	0.00	0.00	37.58	
		2	1.000	-3.37	56.72	0.00	/0.00	0.00	-14.42	
	CO5	5	0.000	-4.72	46.80	0.00	_ / 0,00	/ ( \_0,00	38.74	
		2	1.000	-4.67	56.25	-0.00	Ø.00	-0.00	-12.79	
	CO6	5	0.000	-1.13	15.00	0.00	0.00	0.00	11.89	
		2	1.000	-1.13	18.00	0.00	0.00	// \ 0.00	-4.61	
	CO7	5	0.000	-2.59	14.50	-0.00	0.00	0.00	13.09	
		2	1.000	-2.58	17.50	0.00	0.00	0.00	-2.91	
	CO8	5	0.000	-3.60	28.50	-0.00	0.00	0,00	24.26	
		2	1.000	-3.58	34.30	0.00	0.00	Ø.00	-7.14	
	CO9	5	0.000	-2.57	35.01	0.00	0.00	/0.00	27.80	
		2	1.000	-2.55	42.01	0.00	0.00		-10.71	
	CO10	5	0.000	-3.45	34.70	0.00	0.00	0.00	28.55	
		2	1.000	-3.42	41.70	0.00	0.00	0.00	-9.65	
	CO11	5	0.000	-1.13	15.00	0.00	0.00	0.00	1/1.89  )	

Metsälinnunreitti 2 L121, 02660 Espoo

Page: 25/89 Sheet: **RESULTS** 

Project: Assignment Week 6 Model: B3\_Frame 18/10/2021 Date:

Member /	000-0201	Node	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	Nø.	x [m]	N	$V_y$	V <sub>z</sub>	$M_T$	M <sub>y</sub>	$M_z$	
2	CO14 CO12	/2/	1.000	-1.13	18.00	0.00	0.00	0.00	-4.61	
	CO12	5	0.000	-1.42 -1.42	14.90	0.00	0.00	0.00	12.13	
	CO13	$\frac{2}{5}$	1.000	-1.42 -1.72	17.90 18.90 22.70	0.00 0.00	0.00 0.00	0.00	-4.27 15.31	
		( / 2 /	/ ) 1,000	-1.71	22.70	0.00	0.00	0.00	-5.50	
	CO14	5	/ ø.000	-1.72	23.00	-0.00	0.00	0.00	18.24	
	0045	2 /	1.000	-1.71 -1.13	27.60 15.00	0.00 0.00	0.00 0.00	0.00 0.00 0.00 0.00 0.00	-7.06 11.89	
	CO15	5 2	0.000 1,000	-1.13	18.00	0.00	0.00	0.00	-4.61	
	CO16	5	0.000	-1.43	19.00	-0.00	0.00	0.00	15.06	
		2	/ / 1.000	-1.42	22.80 40.49	-0.00	0.00 0.00	-0.00 -0.00 -0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	-5.84	
	CO17	5	0.000	-5.19	40.49 48.74	0.00 -0.00	0.00 0.00	0.00	34.70	
4	LC1	2 6	0.000	-5.15 -1.16	12.00	-0.00	0.00	-0.00	-9.91 25.37	
7	LOI	5	1.000	-1.16	15.00	0.00	0.00	0.00	11.87	
	LC2	6	1.000 0.000	-1.45	-0.49	0.00	0.00	0.00	0.67	
	1.00	5	1.000	1.45 -1.54	-0.49	0.00	0.00	0.00	1.16	
	LC3	6 5	0.000 1.000	-1.54	16.00 20.00	0.00 0.00	0.00 0.00 0.00	0.00	33.82 15.82	
	CO1	6	0.000	-1.53	16.20	0.00	0.00	0.00	34.28	
		5	1.000	-1:52	20.25	-0.00	0.00	0.00	16.06	
	CO2	6	0.000 1.000 0.000	-3.49	13.05 16.50	0.00	0.00 0.00	0.00	30.27 15.50	
	CO3	5	1.000	-3.48	/ 16.50 29.84	0.00	0.00	0.00	15.50 65.96	
	003	5	1.000	-5.02 -4.98	37.49	0.00	0.00	0.00	32.30	
	CO4	6	0.000	-3.47	37.49 37.81	0.00	0.00	0.00	80.12 37.58	
		5	1.000	-3.41	<> / 4/7 27/I	0.00	0.00	0.00	37.58	
	CO5	6 5	0.000	-4.78 4.72	37.35	0.00	0.00	0.00	80.82	
	CO6	6	1.000 0.000	-4.72 -1.14 -1.13 -2.59	37.35 46.80 12.00	0.00	0.00 0.00	0.00 0.00	38.74 25.39	
		5	1.000	-1.13	\ 15-06	0.00	0.00	0.00 0.00	11.89	
	CO7	6	0.000	-2.59	11.50	/ /0.00	^ 0.00	0.00	26.09	
	CO8	5 6	1.000 0.000	-2.59 -3.63 -3.60	14.50 22.70 28.50 28.01 35.01 27.70	-0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	13.09 49.86	
	000	5	1.000	-3.03	28.50	-0.00	0.00	0.00	24 26	
	CO9	6	0.000	-2.61 -2.57 -3.48	28.01	/ /0.00	0.00	0.00	24.26 59.30	
		5	1.000	-2.57	35.01	/ 0.00	0.00	0.00	27.80 59.76	
	CO10	6 5	0.000 1.000	-3.48 -3.45	27.70	0.00 0.00	0.00	0.00	59.76 28.55	
	CO11	6	0.000	-1.14	34.70 12.00	-0.00	0.00	0.00	25.39	
		5	1.000	-1.13	15.00	0.00 0.00	∨0.00	0.00 0.00 0.00	11.89	
	CO12	6	1.000 0.000	-1.43	15.00 11.90	0.00	0.00	0.00	11.89 25.53	
	CO13	5 6	1.000	-1.42 -1.73	14.90	0.00 -0.00	0.00	0.00	12.13 32.31	
	0013	5	0.000 1.000 0.000	-1.73	15.10 18.90	0.00	0.00/	0.00	15.31	
	CO14	6	0.000	-1.73	18.40	0.00	< 0.00	0.00	38.95	
		5	1.000	-1.72	23.00	-0.00	0.00	(0.00	18.24	
	CO15	6	0.000 1.000	-1.14 -1.13	12.00 15.00	-0.00 0.00	0.00	0.00	25.39 11.89	
	CO16	5 6	0.000	-1.13 -1.44	15.20	0.00	0.00	0.00	32.17	
		5	1.000 0.000	-1 43	19.00 32.24	-0.00 -0.00	0.00	0.00	15.06 71.07	
	CO17	6	0.000	-5.23	32.24	-0.00	0.00 0.00 0.00	0.00	71.07	
-	1.04	5	1.000	-5.19	40.49	0.00	0.00	0.00/	34.70	
5	LC1	6	0.000	-1.16 -1.16	9.00	0.00	0.00	0.00	35.87 25.37	
	LC2	7	1.000 0.000	-1 45	12.00 -0.49	0.00 0.00 0.00	0.00 0.00 0.00	0.00	25.37 0.18 0.67	
		6	1.000	-1.45	-0.49	0.00	0.00	0.00 0.00	0.67	
	LC3	7	0.000	-1.54	12.00	0.00	0.00	0.00	47.82	

### Binh Ng Metsälinnunreitti

**Binh Nguyen Xuan** Metsälinnunreitti 2 L121, 02660 Espoo Page: 26/89
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RESULTS

 Project:
 Assignment Week 6
 Model:
 B3\_Frame
 Date:
 18/10/2021

Member /	JUST SEGN	Node	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	No.	x [m]	N	V <sub>v</sub>	V <sub>z</sub>	M <sub>T</sub>	, M <sub>v</sub>	M <sub>z</sub>	
5					,			,		
5	CO1	$\left(\begin{array}{c} 6 \\ 7 \end{array}\right)$	1.000	-1.54 -1.54	16.00 12.15	0.00 0.00	0.00	0.00	33.82 48.46	
	001	6	1.000	-1.54 -1.53	16.15	0.00	0.00	0.00 0.00 0.00	46.46 34.28	
	CO2	/ / 7	0.000	-1.53 -3.49 -3.49	16.20 9.60	0.00 0.00	0.00	0.00	34.28 41.59	
		( 6 /	/ ) 1,000	-3.49	13.05 22.19	0.00	0.00	0.00	30.27	
	CO3	3 /	Ø.000	-5.06	22.19	0.00	0.00	0.00	91.98	
		6 / /	/ 1.000	-5.02 -3.53 -3.47	29.84 28.36 37.81 27.90	-0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	65.96 113.21	
	CO4	7 ( (	0.000	-3.53	28.36	0.00	0.00	0.00	113.21 80.12	
	CO5	6 7	0.000	-3.47	37.81	0.00	0.00	0.00	113.44	
	003	6	7 (1.000	-4.64	37 35	0.00	0.00	0.00	80.82	
	CO6	7	0.000	-4.78 -1.15	37.35 9.00	0.00 0.00	0.00 0.00	0.00 0.00 0.00	80.82 35.89	
		6	1/000	/ / -1.14	12.00	-0.00	0.00	0.00	25.39	
	CO7	7	0,000	-2.60 -2.59 -3.65	8.50	-0.00	0.00	0.00	36.09	
		6	1.000 0.000 1.000	/ / -2.59	11.50 16.90	0.00 0.00	0.00	0.00	26.09 69.66	
	CO8	7	0.000	-3.65	16.90	0.00	0.00	0.00	69.66	
	CO9	6	1.000	3.63 -2.64	22.70 21.01	0.00 -0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	49.86 83.81	
	009	6	1 000	-2.64	28.01	0.00	0.00	0.00	59.30	
	CO10	7	0.000	-3.51	20.01	-0.00	0.00	0.00	83.96	
	0010	6	1.000 0.000 1.000 0.000	-3.51 -3.48	20.70	-0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	83.96 59.76	
	CO11	7	0.000	-1.15	/ / 9.00	0.00	0.00	0.00	35.89	
		6	1.000 0.000 1.000	-1.14	/ / 12.00	-0.00	0.00 0.00 0.00	0.00 0.00 0.00	25.39 35.93	
	CO12	7	0.000	-1.44	8.90	-0.00	0.00	0.00	35.93	
		6	1.000	-1.43	11.90	0.00	0.00	0.00	25.53	
	CO13	7	0.000	-1.74	11,30	0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	45.51	
	CO14	6	1.000 0.000 1.000 0.000	-1.73 -1.75 -1.73 -1.15	15.10/ 13.80 18.40	-0.00	0.00	0.00	32.31 55.05 38.95	
	0014	6	1 000	-1.73	18/40	0.00	0.00	0.00	38 95	
	CO15	7	0.000	-1.15	( /9.00	0:00	0.00	0.00	35.89	
		6	1.000 0.000 1.000 0.000	-1.14 -1.45 -1.44 -5.28	12.00 11.40	-0.00 -0.00 -0.00	0.00 0.00 0.00	0.00	25.39 45.47	
	CO16	7	0.000	-1.45	11.40	/ -/0.00	0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00	45.47	
		6	1.000	-1.44	15.20	/ /0.00	0.00	0.00	32.17	
	CO17	7	0.000	-5.28	23.99	0.00	0.00	0.00	99.19	
6	LC1	6 8	1.000 0.000	-5.23 -1.16 -1.16	32.24 6.00 9.00 -0.49	-0.00	0.00	0.00	71.07	
0	LUI	7	1,000	-1.10	9.00	0.00	0.00	0.00	43.37 35.87	
}	LC2	8	1.000 0.000	-1.45	-0.49	0.00	0.00	0.00	-0.32	
		7	1.000	-1.45	-0.49	0.00	0.00	0.00	0.18	
	LC3	8	0.000	-1.54	8.00	0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00	57.82	
		7	1.000 0.000	-1.54 -1.54 -1.55	12.00 8.10	0.00	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0.00	47.82	
	CO1	8 7	0.000	-1.55	8.10	-0.00	0.00	0.00	58.59	
	CO2	7 8	1.000 0.000 1.000 0.000	-1.54 -3.50 -3.49	12.15 6.15 9.60	0.00 0.00 0.00	0.00	0.00	48.46	
	CO2	7	1,000	-3.50	0.15	0.00	0.00	0.00	49.46 41.59	
	CO3	8	0.000	-5.09	14.53	0.00	0.00	0.00	110.34	
	1 - 5 - 6	7	1 000	-5.06	22.19	0.00	0.00	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	91.98	
	CO4	8	0.000 1.000 0.000	-5.06 -3.58 -3.53 -4.89	22.19 18.91	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00	/ \ \ \ 0.00	136.84	
		7	1.000	-3.53	28.36 18.44	0.00	0.00	0.00	113.21	
	CO5	8	0.000	-4.89	18.44	0.00	0.00	0.00	136.61	
	006	7	1.000	-4.84	27.90	0.00	0.00	0.00	113.44	
	CO6	8 7	0.000 1.000 0.000	-1.15 1.15	6.00 9.00 5.50	0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00	43.39 35.89	
	CO7	8	0.000	-1.15 -2.60	9.00	0.00	0.00	0.00	43.09	
	001	7	1.000	-2.60	8.50	-0.00	0.00	0.00	36.09	
	CO8	8	0.000	-3.67	11.09	0.00	0.00	0.00	36.09 83.65	
		7	1.000 0.000	-3.67 -3.65 -2.67	16.90	0.00	0.00 0.00	0.00	/ 69 66 1	
	CO9	8	0.000	-2.67	14.00	-0.00	0.00	0.00	101.32	/ /

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Project: Assignment Week 6

Model: B3\_Frame

Date: 18/10/2021

Member /		Node	Location	<u> </u>	Forces [kN]			Moments [kNm]		
No.	LC/CO	No.	x [m]	N	$V_y$	$V_z$	$M_T$	$M_{y}$	M <sub>z</sub>	
6	CQ9	7/	1.000	-2.64	21.01	-0.00	0.00	0.00	83.81	
	CO10	8	0.000	-3.54	13.70	-0.00	0.00	0.00	101.16	
		/ /7 /	1.000	-3.51 -1.15	20.70	-0.00	0.00 0.00	0.00 0.00	83.96 43.39	
	CO11	8 /	0.000	-1.15	6.00	0.00	0.00	0.00	43.39	
		( 7 /	1,000	-1.15	9.00	0.00	0.00	0.00	35.89	
	CO12	8 / /	0.000	-1.44	5.90	0.00	0.00	0.00	43.33	
	CO13	0 / /	1.000 0.000	-1.44 -1.75	8.90 7.50	-0.00 0.00	0.00 0.00	0.00 0.00	35.93 54.91	
	CO13	8 (	1,000	-1.74	11.30	0.00	0.00	0.00	45.51	
	CO14	8	0.000	-1.76	9.20	0.00	0.00	0.00	66.55	
		7	/ / 1.000	-1.76 -1.75	13.80	0.00	0.00 0.00	0.00 0.00	55.05	
	CO15	8	0.000	/ / -1.15	6.00	0.00	0.00	0.00	43.39	
		7	1,000		9.00	0.00	0.00 0.00	0.00 0.00 0.00	35.89 54.97	
	CO16	8	0.000	-1.46 -1.45	7.60	-0.00 -0.00	0.00	0.00	54.97	
		7	1.000	-1.45	11.40	-0.00	0.00	0.00	45.47	
	CO17	8 7	0.000	-5.31	15.73	-0.00	0.00	0.00	119.05	
7	LC1	9	1.000 0.000	5.28	23.99	0.00 0.00	0.00 0.00	0.00 0.00 0.00	99.19 47.87	
'	LOI	8	1.000	-1.16	6.00	0.00	0.00	0.00	43.37	
	LC2	9	0.000	-1.10	-0.49	0.00	0.00	0.00	-0.81	
	LOZ	8	1.000	-1.45 -1.45	-0.49	0.00	0.00 0.00	0.00 0.00	-0.32	
	LC3	9	0.000 1.000 0.000	-1.54	4.00	0.00	0.00	0.00	63.82	
		8	1 000	-1.54 -1.56	8.00	0.00	0.00 0.00	0.00	57.82 64.67	
	CO1	9	0.000	-1,56	4.05	0.00	0.00	0.00 0.00 0.00	64.67	
		8	1.000	-1.55	8.10 2,69	-0.00	0.00	0.00	58.59	
	CO2	9	0.000	-3.50	2.69	0.00	0.00	0.00	53.88	
	CO3	8 9	1.000 0.000	-3.50 -5.11	6.15/	0.00	0.00 0.00	0.00 0.00	49.46 121.05	
	003	8	1.000	-5.11 -5.09	14/53	0.00	0.00	0.00	110.34	
	CO4	9	0.000	-3.61	14.53 9.45	0.00 0:00 0.00	0.00	0.00	151.02	
	00.	8	0.000 1.000	-3.61 -3.58 -4.92	\ 18.91	0.00	0.00 0.00	0.00 0.00 0.00	136.84	
	CO5	9	0.000	-4.92	8.99	/ /0.00	0.00	0.00	150.33	
		8	1.000	-4.89	18.44	0.00	0.00	0.00	136.61	
	CO6	9	0.000	-1.15	3.00	0.00	0.00 0.00	0.00 0.00 0.00	47.89	
		8	1.000	-1.15	6.00	/ 0.00	0.00	0.00	43.39	
	CO7	9	0.000	-2.61	2.50	0.00	0.00	0.00	47.09	
	CO8	8 9	1.000 0.000	-2.60 -3.68	5.50 5.29	0.00	0.00	0.00 0.00	43.09 91.85	
	CO6	8	1.000	-3.67	11.09	0.00	0.00	0.00	83.65	
	CO9	9	0.000	-2.68	7.00	0.00	0.00	0.00	111.82	
		8	1.000	-2.67	14.00	-0.00	∨0.00	0.00	101.32	
	CO10	9	1.000 0.000	-2.67 -3.55	14.00 6.69	0.00	0.00	0.00	111.35	
		8	1.000 0.000	-3.54 -1.15	13.70	-0.00	0,00	0.00	101.16	
	CO11	9	0.000	-1.15	3.00	0.00	0.00/	0.00	47.89	
		8	1.000	-1.15	6.00	0.00	0.00	0.00	43.39	
	CO12	9	0.000	-1.44	2.90	-0.00	0.00	0.00	47.73	
	CO13	8 9	1.000 0.000	-1.44 -1.75	5.90 3.70	0.00 0.00 0.00	0.00	0.00	43.33 60.51	
	6013	8	1.000	-1.75	7.50	0.00	0.00	0.00	54.91	
	CO14	9	0.000	-1.73	4.60	0.00	0.00	0.00	73.45	
	1 - 5	8	1.000	-1.77 -1.76	9.20	0.00	0.00	0.00	66.55	
	CO15	9	0.000	-1.15	3.00	0.00	0.00	0.00	47.89	
		8	1.000 0.000	-1.15	6.00	0.00	0.00	0.00	43.39	
	CO16	9	0.000	-1.46 -1.46	3.80	0.00 -0.00	0.00 0.00	0.00	60.67 54.97	
		8	1.000	-1.46	7.60	-0.00	0.00	0.00	/ / 54.97	
	CO17	9	0.000	-5.34	7.48	0.00	0.00	0.00	130.65	
0	LC1	8	1.000 0.000	-5.31 -1.16	15.73 0.00	-0.00 0.00	0.00 0.00	0.00	119.05 49.37	) >
0	LUI	10	0.000	-1.16	0.00	0.00	0.00	0.00	49.37	

Metsälinnunreitti 2 L121, 02660 Espoo

Page: 28/89 Sheet: **RESULTS** 

Project: Assignment Week 6 Model: B3\_Frame Date: 18/10/2021

			ERNAL FURU	<del></del>						
Member /		Node	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	No.	x [m]	N	V <sub>v</sub>	V <sub>z</sub>	$M_T$	M <sub>y</sub>	$M_z$	
8	LC1	9	1.000	-1.16	3.00	0.00	0.00	0.00	47.87	
	LC2	10	0.000	-1.45	-0.49	0.00	0.00	0.00	-1.31	
	202	/ /9	1.000	-1.45	-0.49	0.00	0.00	0.00	-0.81	
	LC3	/ /10 /	0.000	-1.54	0.00	0.00	0.00	0.00	65.82	
		( / 9 /	1,000	-1.54	4.00	0.00	0.00	0.00	63.82	
	CO1	10	Ø.000	-1.56	0.00	0.00	0.00	0.00	66.69	
		9 /	/ 1.000	) -1.56	4.05	0.00	0.00	0.00	64.67	
	CO2	10 (	0.000	-3.50	-0.76	0.00	0.00	0.00	54.85	
	CO3	9	1,000	-3.50	2.69 -0.77	0.00 0.00	0.00 0.00	0.00 0.00	53.88 124.10	
	COS	10 9	1.000	-5.11 -5.11	6.88	0.00	0.00	0.00	124.10	
1	CO4	10	0.000	-3.63	0.00	0.00	0.00	0.00	155.75	
}	004	9	1,000	-3.61	9.45	0.00	0.00	0.00	151.02	
	CO5	10	0.000	4.93	-0.47	0.00	0.00	0.00	154.58	
		9	1.000	-4.93 -4.92	8.99	0.00	0.00	0.00	150.33	
	CO6	10	0.000	-1.15	0.00	0.00	0.00	0.00	49.39	
		9	1.000 /	( / / 1.15	3.00	0.00	0.00	0.00	47.89	
	CO7	10	0.000	-2.61	-0.50	0.00	0.00	0.00	48.09	
		9	1.000	-2.61	2.50	0.00	0.00	0.00	47.09	
	CO8	10	0.000	-3.68	-0.51	0.00	0.00	0.00	94.24	
	CO9	9	1.000 0.000	-3.68 -2.69	5.29	0.00	0.00 0.00	0.00 0.00	91.85 115.32	
	CO9	10 9	1.000	-2.68	7.00	0.00	0.00	0.00	111.82	
	CO10	10	0.000	-3.56	-0.31	0.00	0.00	0.00	111.52	
	0010	9	1.000	-3.55	6.69	0.00	0.00	0.00	111.35	
	CO11	10	0.000	-1.15	0.00	0.00	0.00	0.00	49.39	
		9	1.000	-1.15	3.00/	0.00	0.00	0.00	47.89	
	CO12	10	0.000	-1.45	-0.10 2.90	. 0.00	0.00	0.00	49.13	
		9	1.000	-1.44	2/.90	-0.00	0.00	0.00	47.73	
	CO13	10	0.000	-1.75	0.10	0.00	0.00	0.00	62.31	
	0044	9	1.000	-1.75	3.70 0.00	0.00	0.00	0.00	60.51	
}	CO14	10 9	0.000	-1.77 -1.77		0.00	0.00	0.00 0.00	75.75 73.45	
	CO15	10	1.000	-1.77 -1.15	4.60 0.00	0.00	0.00	0.00	49.39	
	CO15	9	1.000	-1.15	3.00	0.00	0.00	0.00	47.89	
	CO16	10	0.000	-1.46	0.00	0.00	0.00	0.00	62.57	
	00.0	9	1.000	-1.46	3.80	0.00	0.00	0.00	60.67	
	CO17	10	0.000	-5.34	-0.78	0.00	0.00	0.00	134.00	
		9	1.000	-5.34	7.48	0.00	0.00	0.00	130.65	
9	LC1	11	0.000	-1.16	-3.00	0.00	0.00	0.00	47.87	
		10	1.000	-1.16	0.00	0.00	0.00	0.00	49.37	
	LC2	11	0.000	-1.45	-0.49	0.00	0.00	0.00	-1.80	
	LC3	10 11	1.000 0.000	-1.45 -1.54	-0.49 -4.00	0.00 0.00	0.00	0.00	-1.31 63.82	
	LU3	10	1.000	-1.54 -1.54	0.00	0.00	0.00	0.00	65.82	
	CO1	11	0.000	-1.56	-4.05	0.00	0.00	0:00	64.67	
}	001	10	1.000	-1.56	-0.00	0.00	0.00	0.00	66.69	
	CO2	11	0.000	-3.50	-4.21	0.00	0.00	0.00	52.37	
		10	1.000	-3.50	-0.76	0.00	0.00	0.00	54.85	
	CO3	11	0.000	-5.11	-8.43	0.00	0.00	0.00/	119.50	
		10	1.000	-5.11	-0.77	0.00	0.00	0.00	124.10	
	CO4	11	0.000	-3.61	-9.45	0.00	0.00	0.00	151.02	
	005	10	1.000	-3.63	-0.00	0.00	0.00	0.00	1,55.75	
	CO5	11	0.000	-4.92	-9.93	0.00	0.00	0.00	149.39	
	CO6	10 11	1.000 0.000	-4.93 -1.15	-0.47 -3.00	0.00 0.00	0.00 0.00	0.00	154.58 47.89	
	000	10	1.000	-1.15 -1.15	-3.00	0.00	0.00	0.00	49.39	
	CO7	11	0.000	-2.60	-3.50	0.00	0.00	0.00	46.09	) /
			0.000	2.00	3.30	0.00	3.00	3.00	3.03	

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Page: 29/89 **RESULTS** 

Project: Assignment Week 6 Model: B3\_Frame 18/10/2021 Date:

Member /		Node /	Location		Forces [kN]			Moments [kNm]		
/	\ \					.,				
No.	LC/CO	No.	x [m]	N	$V_y$	V <sub>z</sub>	M <sub>T</sub>	M <sub>y</sub>	M <sub>z</sub>	
9	CO7	/10/	1.000	-2.61	-0.50	0.00	0.00	0.00	48.09	
	CO8	11/	0.000	-3.68	-6.31	0.00	0.00	0.00	90.82	
	CO9	10	1.000	-3.68 -2.68	-0.51 -7.00	0.00 0.00	0.00 0.00	0.00 0.00	94.24 111.82	
}	COS	10	1,000	-2.69	-0.00	0.00	0.00	0.00	115.32	
	CO10	11	0.000	-3.55	-7.31	0.00	0.00	0.00	110.73	
	0010	10 /	1.000	-3.56	-0.31	0.00	0.00	0.00	114.54	
	CO11	11 (	0.000		-3.00	0.00	0.00	0.00	47.89	
		10	/ 1,000	-1.15	-0.00	0.00	0.00	0.00	49.39	
	CO12	11	0.000	\ \ / -1.44	-3.10	0.00	0.00	0.00	47.53	
	0040	10	/ 1.000	-1.45	-0.10	0.00	0.00	0.00	49.13	
	CO13	11	0.000	-1.75	-3.90	0.00	0.00	0.00	60.31	
	CO14	10 11	1,000	-1.75	-0.10 -4.60	0.00 0.00	0.00 0.00	0.00	62.31 73.45	
	CO14	10	1.000	-1.77 -1.77	-0.00	0.00	0.00	0.00	75.75	
	CO15	11	0.000	-1.15	-3.00	0.00	0.00	0.00	47.89	
	00.0	10	1.000	1.15	-0.00	0.00	0.00	0.00	49.39	
	CO16	11	0.000	1.15	-3.80	0.00	0.00 0.00	0.00	60.67	
ĺ		10	1.000	-1.46	-0.00	0.00	0.00	0.00	62.57	
	CO17	11	0.000	-5.33	-9.03	0.00	0.00	0.00	129.10	
		10	1.000 0.000	-5.34	-0.78	0.00	0.00	0.00 0.00	134.00	
10	LC1	12	1.000	-1.16 -1.16	-6.00 -3.00	0.00 0.00	0.00 0.00	0.00	43.37 47.87	
	LC2	11 12	0.000	-1.16 -1.45	-3.00	0.00	0.00	0.00 0.00	47.87 -2.29	
	LOZ	11	1.000	-1.45	-0.49	0.00	0.00	0.00	-1.80	
	LC3	12	0.000	-1.54	-8.00	0.00	0.00	0.00	57.82	
		11	1.000	-1.54 -1.55	✓ / 4.00/	0.00	0.00	0.00	63.82	
	CO1	12	0.000	-1.55	-8.10 -4.05	0.00	0.00	0.00	58.59	
		11	1.000	-1.56	-4/.05	0.00	0.00	0.00	64.67	
	CO2	12	0.000	-3.50	7.66	0.00	0.00	0.00	46.44	
	CO3	11 12	1.000 0.000	-3.50 -5.08	-4.21 -16.08	0.00	0.00	0.00	52.37 107.24	
	COS	11	1.000	-5.06 -5.11	-8.43	0.00	0.00	0.00	119.50	
	CO4	12	0.000	-3.58	-18.91	0.00	0.00	0.00 0.00 0.00 0.00 0.00	136.84	
	004	11	1.000	-3.61	-9.45	0.00	0.00	0.00	151.02	
	CO5	12	0.000	-4.89	-19.38	0.00	0.00	0.00	134.73	
		11	1.000	-4.92	-9.93	0.00	0.00	0.00	149.39	
	CO6	12	0.000	-1.15	-6.00	0.00	0.00	0.00	43.39	
		11	1.000	-1.15	-3.00	0.00	0.00	0.00	47.89	
	CO7	12	0.000	-2.60 -2.60	-6.51	0.00	0.00	0.00	41.08	
	CO8	11 12	1.000 0.000	-2.60 -3.66	-3.50 -12.12	0.00 0.00	0.00	0.00	46.09 81.61	
	000	11	1.000	-3.00	-12.12 -6.31	0.00	0.00	0.00	90.82	
	CO9	12	0.000	-3.68 -2.67	-14.00	0.00 0.00	0.00	0.00	101.32	
		11	1.000	-2.68	-7.00	0.00	0.00	0.00	111.82	
	CO10	12	0.000	-3.54	-14.31	0.00	0.00	0.00	99.92	
ĺ		11	1.000	-3.55 -1.15	-7.31 -6.00	0.00 0.00	0.00	(0.00	110.73	
	CO11	12	0.000	-1.15	-6.00	0.00	0.00	0.00	43.39	
	0040	11	1.000	-1.15	-3.00	0.00	0.00	0.00	47.89	
	CO12	12	0.000	-1.44	-6.10	0.00 0.00	0.00	0.00/	42.93 47.53	
	CO13	11 12	1.000 0.000	-1.44 -1.75	-3.10 -7.70	0.00	0.00 0.00	0.00	47.53	
	0013	11	1.000	-1.75	-7.70 -3.90	0.00	0.00	0.00	60.31	
	CO14	12	0.000	-1.76	-9.20	0.00	0.00	0.00	66.55	
	0014	11	1.000	-1.77	-4.60	0.00	0.00	0.00	73.45	
	CO15	12	0.000	-1.15	-6.00	0.00	0.00	0,00	/ / / 43.39	
		11	1.000	-1.15 -1.46	-3.00	0.00	0.00	0.00	47 89	
	CO16	12	0.000	1.46	-7.60	0.00	0.00	0.00	54.97	/ /

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Sheet: 1 **RESULTS** 

Date: 18/10/2021

Project: Assignment Week 6 Model: B3\_Frame

ember /		Node	Location		Forces [kN]			Moments [kNm]		
No. <	LC/CO	Nø.	x [m]	N	$V_y$	$V_z$	$M_{T}$	M <sub>y</sub>	M <sub>z</sub>	
10	CQ16	/11/	1.000	-1.46	-3.80	0.00	0.00	0.00	60.67	
	CO17	/ 12	0.000	-5.31	-17.29	0.00	0.00	0.00	115.93	
		/ /11	/ 1.000	-5.33	-9.03 -9.00	0.00 0.00	0.00 0.00	0.00	129.10 35.87	
11	LC1	/ /13 /	0.000	-1.16	-9.00	0.00	0.00	0.00	35.87	
		( 12 /	1,000	-1.16	-6.00	0.00	0.00	0.00	43.37	
	LC2	13	Ø.000	-1.45	-0.49	0.00	0.00	0.00	-2.79	
		12 / /	/ / 1.000	) -1.45	-0.49	0.00	0.00	0.00	-2.29	
	LC3	13 (	/ 0.000	-1.54	-12.00	0.00	0.00	0.00	47.82	
		12	/ 1,000	-1.54	-8.00	0.00	0.00	0.00	57.82	
	CO1	13 12	0.000	-1.54	-12.15 -8.10	0.00	0.00	0.00	48.46	
		12	/ / 1.000	-1.55	-8.10	0.00	0.00	0.00	58.59	
	CO2	13	0.000	-3.49	-11.11	0.00	0.00	0.00	37.05	
		12 13	1,000	_3.50	-7.66 -23.74	0.00	0.00	0.00	46.44	
	CO3	13	0.000	-5.05	-23.74	0.00	0.00	0.00	87.33	
		12	1.000	-5.08	-16.08	0.00	0.00	0.00	107.24	
	CO4	13 12	0.000	-3.53	-28.36 -18.91	0.00	0.00	0.00	113.21 136.84	
		12	1.000	3.58	-18.91	0.00	0.00	0.00	136.84	
	CO5	13	0.000	-4.84	-28.84	0.00	0.00	0.00	110.62	
		12	1.000	-4.89	-19.38	0.00	0.00	0.00	134.73	
	CO6	13	0.000	-1.15	-9.00	0.00	0.00	0.00	35.89	
		12	1.000	1.15	-6.00	0.00	0.00	0.00	43.39	
	CO7	13 12	0.000	-2.60 -2.60	-9.51 -6.54	0.00 0.00	0.00	0.00	33.08	
		12	1.000	-2.60	/ / -6.51	0.00	0.00	0.00	41.08	
	CO8	13	0.000	-3.65	/ -17.92	0.00	0.00	0.00	66.59	
		12	1.000	-3.66		0.00	0.00	0.00	81.61	
	CO9	13	0.000	-2.64	-21.01	0.00	0.00	0.00	83.81	
		12	1.000	-2.67	-14.00/	0.00	0.00	0.00	101.32	
	CO10	13	0.000	-3.51 -3.54	-21.32 -14/31	0.00	0.00	0.00	82.10	
		12	1.000	-3.54	> / -14/.31	0.00	0.00	0.00	99.92	
	CO11	13	0.000	-1.15	9.00	0.00	0.00	0.00	35.89	
		12 13	1.000	-1.15	-6.00	0.00	0.00	0.00	43.39 35.33	
	CO12	13	0.000	-1.44	-9.10	0.00	0.00	0.00	35.33	
	22.0	12	1.000	-1.44	-6.10	0.00	0.00	0.00	42.93	
	CO13	13	0.000	-1.74	-11.50	0.00	0.00	0.00	44.90	
		12	1.000	-1.75	-7.70	0.00	0.00	0.00	54.51	
	CO14	13	0.000	-1.75	-13.80	0.00	0.00	0.00	55.05	
		12	1.000	-1.76	-9.20 -9.00	0.00 0.00	0.00	0.00	66.55 35.89	
	CO15	13	0.000	-1.15	-9.00	0.00	0.00	0.00	35.89	
	22.0	12	1.000	-1.15	-6.00	0.00	0.00	0.00	43.39	
	CO16	13	0.000	-1.45	-11.40	0.00	0.00	0.00	45.47	
	0047	12 13	1.000	-1.46	-7.60 -25.54	0.00	0.00	0.00	54.97	
	CO17	13	0.000	-5.27	-25.54	0.00	0.00	0.00	94.52	
40	1.04	12	1.000	-5.31	-17.29 -12.00	0.00 0.00	0.00	0.00	115.93 25.37	
12	LC1	14 13	0.000	-1.16	-12.00	0.00	0.00/	0.00	25.37	
	1.00	13	1.000	-1.16	-9.00	0.00	0.00	0.00	35.87	
	LC2	14	0.000	-1.45	-0.49	0.00	0.00	0.00	-3.28	
	1.00	13	1.000	-1.45	-0.49	0.00	0.00	0.00	-2.79	
	LC3	14	0.000	-1.54	-16.00	0.00	0.00	/ \ \ 0.00	33.82	
	004	13	1.000	-1.54 -1.53	-12.00	0.00	0.00	0.00	47.82	
	CO1	13 14 13	0.000	-1.53	-16.20	0.00	0.00	0.00/	34.28	
	000	13	1.000	-1.54	-12.15	0.00	0.00	0.00	48.46	
	CO2	14	0.000	-3.48	-14.56	0.00	0.00	0.00	24.21	
		13	1.000	-3.49	-11.11	0.00	0.00	0.00	37.05	
	CO3	14	0.000	-5.01	-31.39	0.00	0.00	0.00	59.76	
		13	1.000	-5.05	-23.74	0.00	0.00	0.00	87.33	
	CO4	14 13	0.000	-3.47	-37.81	0.00	0.00	0.00	80.12	
		13	1.000	-3.53	-28.36	0.00	0.00	0.00	/ 113.21	
	CO5	14	0.000	-4.78	-38.29	0.00	0.00	0.00	77.06	

Page: 31/89 **RESULTS** 

Project: Assignment Week 6 Model: B3\_Frame Date: 18/10/2021

■ 4.12 CR	(A22-2EC I/I	ON2 - IN 12	RNAL FORC	,ES						
Member /		Node /	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	No.	x [m]	N	$V_{v}$	V <sub>z</sub>	$M_T$	$M_{\nu}$	M <sub>z</sub>	
12	CO5	/13/	1.000	-4.84	-28.84	0.00	0.00	0.00	110.62	
	C06	14 13	0.000	-1.14	-12.00	0.00 0.00	0.00	0.00	25.39	
		/ /13	1.000	-1.15	-9.00	0.00	0.00	0.00	35.89	
	CO7	14 13	0.000	-2.59	-12.51	0.00	0.00	0.00	22.07	
		13	1,000	-2.60	-9.51	0.00	0.00	0.00	33.08	
	CO8	14	0.000	-3.62	-23.72	0.00	0.00	0.00	45.77	
	CO9	13	1.000	-3.65 -2.61	-17.92 -28.01	0.00 0.00	0.00 0.00	0.00 0.00	66.59 59.30	
	CO9	13	0.000 1,000	-2.64	-20.UT	0.00	0.00	0.00	83.81	
	CO10	14	0.000	-3.48	-21.01 -28.32	0.00	0.00	0.00	57.29	
	00.0	13	1.000	-3.51	-21.32	0.00	0.00	0.00	82.10	
	CO11	14	0.000		-12.00	0.00	0.00	0.00	25.39	
		13	1,000		-9.00	0.00	0.00	0.00	35.89	
	CO12	14	0.000	-1.43	-12.10	0.00	0.00	0.00	24.72	
	2010	13 14	1.000	-1.44	-9.10 -15.30	0.00	0.00	0.00	35.33 31.50	
	CO13	14	0.000 1.000	-1.73	-15.30 -11.50	0.00 0.00	0.00 0.00	0.00 0.00	31.50 44.90	
	CO14	13 14	0.000	-1.74	-11.50	0.00	0.00	0.00	38.95	
	0014	13	1.000	-1.75	-13.80	0.00	0.00	0.00	55.05	
	CO15	14	0.000	-1.14	-12.00	0.00	0.00	0.00	25.39	
	00.0	13	1.000	-1:15	-9.00	0.00	0.00	0.00	35.89	
	CO16	14	0.000	-1.44	/ 15.20	0.00	0.00	0.00	32.17	
		13	1.000	-1.45	/ /-11.40	0.00	0.00	0.00	45.47	
	CO17	14	0.000	-5.23	/ -33.80	0.00	0.00	0.00	64.85	
		13	1.000	-5.27	-25.54	0.00	0.00	0.00	94.52	
13	LC1	15	0.000	-1.16	-15.00	0.00	0.00	0.00	11.87	
	LC2	14 15	1.000 0.000	-1.16 -1.45	-12.00/ -0.49	0.00	0.00 0.00	0.00 0.00	25.37 -3.77	
	LOZ	14	1.000	-1.45 -1.45	-0.49	0.00	0.00	0.00	-3.28	
	LC3	15	0.000	-1.45 -1.54	-20.00	0.00	0.00	0.00	15.82	
		14	1.000	-1.54 -1.52	-16.00	0.00	0.00	0.00	33.82	
	CO1	15	0.000	-1.52	-20.25	/ /0.00	0.00	0.00	16.06	
		14	1.000	-1.53	-16.20	/ /0.00	0.00	0.00	34.28	
	CO2	15	0.000	-3.48	-18.01	0.00	0.00	0.00	7.93	
	000	14	1.000 0.000	-3.48 -4.98	-14.56 -39.04	0.00	0.00	0.00 0.00	24.21 24.55	
	CO3	15 14	1.000	-4.98 -5.01	-39.04	0.00	0.00	0.00	59.76	
	CO4	15	0.000	-3.41	-31.39 -47.27	0.00	0.00	0.00	37.58	
	004	14	1.000	-3.47	-37.81	0.00	0.00	0.00	80.12	
	CO5	15	0.000	-4.72	-47.74	0.00	0.06	0.00	34.05	
		14	1.000	-4.78	-38.29	0.00	0.00	0.00	77.06	
	CO6	15	0.000	-1.13	-15.00	0.00	0.00	0.00	11.89	
		14	1.000	-1.14	-12.00	0.00	0.00	0.00	25.39	
	CO7	15	0.000	-2.59	-15.51	0.00	0.00/	0.00	8.06	
	CO8	14	1.000 0.000	-2.59 -3.60	-12.51 -29.52	0.00 0.00	0.00	0.00	22.07 19.15	
	CO6	15 14	1.000	-3.00	-29.52	0.00	0.00	0.00	19.15	
	CO9	15	0.000	-3.62 -2.57	-23.72 -35.01	0.00 0.00	0.00	0.00	45.77 27.80	
	300	14	1.000	-2.61	-28.01	0.00	0.00	0.00	59.30	
	CO10	15	0.000	-3.44	-35.32	0.00 0.00	0.00	0.00/	25.47	
		14	1.000	-3.48	-35.32 -28.32	0.00	0.00	0.00	57.29	
	CO11	15	0.000	-1.13	-15.00	0.00	0.00	9.00	11.89	
		14	1.000	-1.14	-12.00	0.00	0.00	0.00	25.39	
	CO12	15	0.000	-1.42	-15.10	0.00	0.00	0.00	11.12	
	CO13	14	1.000 0.000	-1.43 -1.72	-12.10 -19.10	0.00 0.00	0.00 0.00	0.00	24.72 14.30	
	6013	15 14	1.000	-1.72 -1.73	-19.10 -15.30	0.00	0.00	0.00	31.50	
	CO14	15	0.000	-1.73	-23.00	0.00	0.00	0.00	18.24	
	10014	10	0.000	-1.72	-23.00	0.00	0.00	0.00	0.24	

## Metsälinnunreitti 2 L121, 02660 Espoo

Binh Nguyen Xuan

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Project: Assignment Week 6 Model: B3\_Frame Date: 18/10/2021

■ 4.12 CR	ヘッシュ-タヸた バ	ON2 - IN I'è	RNAL FORC	E9						
Member /		Node	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	Nø.	x [m]	N	$V_y$	$V_z$	$M_T$	$M_{y}$	M <sub>z</sub>	
13	CO14	/14 /	1.000	-1.73	-18.40	0.00	0.00	0.00	38.95	
	CO15	/ 1,5	0.000	-1.13	-15.00	0.00	0.00	0.00	11.89	
		/ /14	1.000	-1.14	-12.00	0.00	0.00	0.00	25.39	
	CO16	/ / 15	0.000	-1.43	-19.00	0.00	0.00	0.00 0.00	15.06	
		( / 14 /	1,000	-1.44	-15.20	0.00	0.00	0.00	32.17	
	CO17	15	0.000	-5.18	-42.05	0.00	0.00	0.00	26.93	
		14 / /	/ 1.000	-5.23	-33.80	0.00	0.00	0.00	64.85	
14	LC1	3 (	0.000	-1.16	-18.00	0.00	0.00 0.00	0.00 0.00	-4.63	
		15	1,000	-1.16	-15.00	0.00	0.00	0.00	11.87	
	LC2	3	0.000	-1.45	-0.49	0.00	0.00	0.00	-4.27	
	LC3	15	1.000	-1.45 -1.54	-0.49 -24.00	0.00 0.00	0.00 0.00	0.00 0.00 0.00	-3.77	
	LU3	3	0.000	-1.54 -1.54	-24.00 -20.00	0.00	0.00	0.00	-6.18	
	CO1	15 3	0.000	-1.54 -1.51	-20.00 -24.30	0.00	0.00	0.00	15.82 -6.22	
	COT	15	1,000	-1.52	-24.30	0.00	0.00	0.00	16.06	
	CO2	3	1.000 0.000	-3.47	-20.25	0.00	0.00 0.00	0.00 -0.00	-11.81	
	002	15	1.000	3.48	-18.01	0.00	0.00	0.00	7.93	
	CO3	3	0.000	-4.95	-46.69	0.00	0.00	-0.00	-18.32	
	550	15	1.000	-4.98	-39.04	0.00	0.00	0.00 -0.00 0.00	24.55	
	CO4	3	0.000	-3.37	-56.72	0.00	0.00	0.00	-14.42	
		15	1.000 0.000 1.000	-3.41	47.27	0.00	0.00	0.00 0.00 0.00	37.58	
	CO5	3	0.000	-3.41 -4.68	57.19	/7 0.00	0.00 0.00	0.00	-18 42	
		15	1.000	-4.72	/ /-47.74	0.00	0.00	0.00	34.05	
	CO6	3	0.000	-1.13	/ -18.00	0.00	0.00	0.00	-4.61	
		15	1.000	-1.13	( -15.00	0.00	0.00	0.00	11.89	
	CO7	3	0.000	-2.58	-18/51	0.00	0.00	0.00	-8.94	
		15	1.000	-2.59 -3.59 -3.60	-15.51/ -35.32 -29.52	0.00	0.00	0.00 0.00 0.00	8.06	
	CO8	3	0.000	-3.59	/35.32	0.00	0.00 0.00	0.00	-13.27	
	000	15	1.000	-3.60	> / -29.52	0.00	0.00	0.00	19.15	
	CO9	3 15	0.000	-2.55	-42.01	0.00	0.00 0.00	0.00	-10.71 27.80	
	CO10	3	1.000 0.000	-2.57 -3.42	-35.01 -42.32	0.00	0.00	0.00 0.00 0.00 0.00 0.00	-13.35	
	CO10	15	1.000	3.44	-35.32	0.00	0.00	0.00	25.47	
	CO11	3	0.000	-3.44 -1.13	-18.00	0.00	0.00	0.00	-4.61	
	0011	15	1.000	-1.13	-15.00	0.00	0.00	0.00	11.89	
	CO12	3	0.000	-1.42	-18.10	0.00	0.00	0.00 0.00	-5.48	
	00.12	15	1.000	-1.42	-15.10	0.00 0.00	0.00	0.00	11.12	
	CO13	3	0.000	-1.71	-15.10 -22.90	0.00	0.00	-0.00	-6.71	
		15	1.000	-1.72	-19.10	0.00	0.00	0.00	14.30	
	CO14	3	0.000	-1.71	-27.60	0.00	0.00	0.00	-7.06	
		15	1.000	-1.72	-23.00	0.00	0.00	0.00	18.24	
	CO15	3	0.000	-1.13 -1.13	-18.00	0.00 0.00	0.00	0.00	-4.61	
	0040	15	1.000	-1.13	-15.00	0.00	0.00	0.00	11.89	
	CO16	3	0.000	-1.42	-22.80	0.00	0.00/	-0.00	-5.84	
	CO17	15 3	1.000 0.000	-1.43 -5.15	-19.00 -50.30	0.00 0.00	0.00	0.00	15.06 -19.25	
	6017	3 15	1.000	-5.15 -5.18	-50.30 -42.05	0.00	0.00	0.00	-19.25 26.93	
	Section No. 2:	T-Rectangle 0.2/0.2	1.000	-5.18	-42.05	0.00	0.00	0.00	26.93	
1	LC1	16	0 000	-23.00	-1.16	0.00	0.00	0.00	1.15	
		1	0.000 1.000	-23.00 -24.00	-1.16	0.00 0.00	0.00	0.00	2.31	
	LC2	16	0.000	0.49	3.55	0.00	0.00	0.00	-3.59	
		1	0.000 1.000	0.49 0.49	3.55 4.55	0.00 0.00	0.00 0.00	0.00	-3.59 -7.63	
	LC3	16	0.000	-24.00	-1.54	0.00	0.00	0.00	1.54	
		1	1.000	-24.00	-1.54	0.00	0.00	~ / 0.00	3.08	
	CO1	16	0.000 1.000	-31.05 -32.40	-1.57	0.00	0.00 0.00	0.00	/ / 1.57	
		1	1.000	-32.40	-1.56	0.00	0.00	0.00	3.13	
	CO2	16	0.000	-25.69	4.03 5.50	0.00	0.00	0.00	/ -4.14	
		1	1.000	-26.84	5.50	0.00	0.00	0.00	78.91	

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Project: Assignment Week 6 Model: B3\_Frame 18/10/2021 Date:

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1ember	(	Node	Location		Forces [kN]			Moments [kNm]		
No.	\ LC/CO	No.	x [m]	N	$V_y$	$V_z$	M <sub>T</sub>	M <sub>y</sub>	M <sub>z</sub>	
1	CQ3 /	/16/	0.000	-50.87	2.43	-0.00	0.00	-0.00	-2.61	
		/ 1/	1.000	-52.03	3.89	0.00	0.00	0.00	-5.77	
	CO4	/16	0.000	-62.45 -63.60	-3.70 -3.63	0.00 0.00	0.00 0.00	0.00	3.69 7.35	
-	CO5	16	0,000	-61.98	-3.63 -0.44	0.00	0.00	0.00	0.31	
	000	10	1.000	-63.13	0.47	0.00	0.00	0.00	0.29	
	CO6	16 /	0.000	23.00	-1.16	0.00	0.00	0.00	1.16	
		1 ( /	/ 1.000	/ /-24.00	-1.15	0.00	0.00	0.00	2.32	
	CO7	16	/ 0,000	-22.49	2.41	-0.00	0.00	-0.00	-2.48	
		1	1.000	-23.50	3.39	0.00	0.00	0.00	-5.39	
	CO8	16	0.000	-39.29 -40.29	1.34 2.32	0.00 0.00	0.00 0.00	0.00	-1.44 -3.27	
-	CO9	16	0.000	-40.29 -47.00	-2.73	0.00	0.00	0.00	-3.27 2.72	
	CO9	10	1.000	-47.00 -48.00	-2.73	0.00	0.00	0.00	5.43	
	CO10	16	0.000	-48.00 -46.69	-0.57	0.00	0.00	0.00 0.00	0.49	
		1	1.000	47.69	0.04	0.00	0.00	0.00	0.76	
	CO11	16	0.000	-23.00	-1.16	0.00	0.00	0.00	1.16	
		1	1.000	-24.00	-1.15	0.00	0.00	0.00	2.32	
	CO12	16	0.000	-22.90	-0.45	0.00	0.00	0.00	0.43	
	CO13	1 16	1.000	-23.90	-0.25 -0.76	0.00 0.00	0.00	0.00	0.78 0.74	
	CO13	1	0.000 1.000	-27:70 -28:70	-0.76	0.00	0.00	0.00 0.00	1.39	
	CO14	16	0.000	-32.60	-1.79	0.00	0.00	0.00	1.78	
		1	1.000	-33.60	/ -1.77	0.00	0.00	0.00	3.56	
	CO15	16	0.000	-23.00	( / -1.16	0.00	0.00	0.00	1.16	
		1	1.000	-24 00	-1/15	0.00	0.00	0.00	2.32	
	CO16	16	0.000	-27.80	/1.48/	0.00	0.00	0.00	1.47	
	CO17	1 16	1.000 0.000	-27.80 -28.80 -55.47	-1.48 -1.46 2.20	0.00	0.00	0.00	2.94 -2.39	
	CO17	1	1.000	-56.82	3.66	0.00	0.00	0.00	-2.39 -5.32	
3	LC1	4	0.000	-24 00	1.16	0.00	0.00	0.00	2.31	
Ĭ		21	1.000	-24.00 -23.00	1.16 1.16	0.00	0.00	0.00 0.00 0.00 0.00 0.00	1.15	
	LC2	4	0.000	-0.49 -0.49	1 45	/ 0.00	0.00	0.00	4.44	
		21	1.000	-0.49	1.45	0.00	0.00	0.00	2.99	
	LC3	4	0.000	-24.00	1.54	0.00 0.00 0.00	0.00	0.00	3.08	
	CO1	21	1.000 0.000	-24.00 -32.40	1.54 1.56	0.00	0.00	0.00 0.00	1.54 3.13	
	COT	21	1.000	-31.05	1.57	0.00	0.00	0.00	1.57	
	CO2	4	0.000	-28.36	3.50	0.00	0.00	0.00	9.44	
		21	1.000	-27.20	3.55	-0.00	0.00	0.00	5.91	
	CO3	4	0.000	-53.57	5.11	0.00	0.00	0.00	12.83	
		21	1.000	-52.41	5.23	0.00	0.00	0.00	7.65	
	CO4	4	0.000	-63.60 -62.45	3.63	0.00 0.00	0,00	0.00	7.35 3.69	
	CO5	21	1.000 0.000	-62.45 -64.07	3.70 4.93	0.00	0.00	0.00	3.69	
	003	21	1.000	-62.91	5.05	-0.00	0.00	0.00	6.52	
	CO6	4	0.000	-24 00	1.15	0.00	0.00	(0.00	2.32	
		21	1.000	-24.00 -23.00	1.16	0.00 0.00	0.00	0.00	1.16	
	CO7	4	0.000	-24.50 -23.50	2.61	0.00	0.00	0.00	6.82	
		21	1.000	-23.50	2.63	-0.00 0.00	0.00	0.00/	4.20	
	CO8	4	0.000	-41.31	3.68	0.00	0.00	0.00	9.05	
	CO9	21	1.000 0.000	-40.31	3.74	0.00	0.00	0.00	5.34	
	CO3	21	1.000	-48.00 -47.00	2.69 2.73	0.00 0.00	0.00 0.00	0.00	5.43 2.72	
	CO10	4	0.000	-48.31	3.56	0.00	0.00	0.00	8.18	
	0	21	1.000	-47.30	3.62	0.00	0.00	0.00	4.58	
	CO11	4	0.000 1.000	-24.00	1.15 1.16	0.00	0.00	0.00	/ 2.32	
		21	1.000	-23.00	1.16	0.00	0.00	0.00	/ /1.16	/ /

## Binl Metsälinnu

**Binh Nguyen Xuan** Metsälinnunreitti 2 L121, 02660 Espoo 
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 RESULTS

 Project:
 Assignment Week 6
 Model:
 B3\_Frame
 Date:
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Member /		Node	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	No.	x [m]	N ,	V <sub>y</sub>	$V_z$	$M_{T}$	M <sub>y</sub>	M <sub>z</sub>	
3	CQ12	4	0.000	-24.10	1.45	0.00	0.00	0.00	3.22	
		/ 21/	1.000	-23.10	1.46	0.00	0.00	0.00	1.77	
	CO13	/ /4	0.000	-28.90	1.75	0.00	0.00	0.00	3.84	
	0044	/ /21	1.000	-27.90	1.77	-0.00	0.00	0.00	2.08	
	CO14	4 21	0,000	-33.60 -32.60	1.77 1.79	0.00 0.00	0.00 0.00	0.00 0.00	3.56 1.78	
	CO15	4 /	0.000	24.00	1.79	0.00	0.00	0.00	2.32	
	00.0	21 (	1.000	-23.00	1.16	0.00	0.00	0.00	1.16	
	CO16	4	/ / 0,000	-28.80	1.46	0.00	0.00	0.00	2.94	
		21	1.000	-27.80	1.48	0.00	0.00	0.00	1.47	
	CO17	4 21	0.000	-58.38 -57.02	5.34 5.47	0.00 -0.00	0.00 0.00	0.00 0.00	13.32 7.91	
15	LC1	17	0,000	-57.02	5.47 -1.16	0.00	0.00	0.00	-0.00	
15	LCI	16	1.000	-22.00	-1.10	0.00	0.00	0.00	1.15	
	LC2	17	0.000	-23.00 0.49	-1.16 2.55	0.00	0.00	0.00	-0.54	
		16	1.000	0.49	3.55	0.00	0.00	0.00	-3.59	
	LC3	17	0.000	-24:00	-1.54 -1.54	0.00	0.00	0.00	-0.01	
	004	16	1.000	-24.00	-1.54	0.00	0.00	0.00	1.54	
	CO1	17 16	0.000 1.000	-29.70 -31.05	-1.58 -1.57	0.00 0.00	0.00 0.00	0.00 0.00	-0.01 1.57	
	CO2	17	0.000	-31.05	2.54	0.00	0.00	0.00	-0.86	
	CO2	16	1.000	25.69	4.03	0.00	0.00 0.00	0.00	-0.00 -4.14	
	CO3	17	0.000	-49.72	/ / 0.95	-0.00	0.00	-0.00	-0.92	
		16	1.000	-50:87	/ / 2.43	-0.00	0.00	-0.00	-2.61	
	CO4	17	0.000	-61.29	( / -3.72	0.00	0.00	0.00	-0.03	
		16	1.000	-62.45	-3.70	0.00	0.00	0.00	3.69	
	CO5	17	0.000	-60.83	-1.34/ -0.44 -1/.17	0.00	0.00	0.00	-0.58	
	CO6	16 17	1.000 0.000	-61.98 -22.00	1/17	0.00	0.00 0.00	0.00 0.00	0.31 -0.01	
	COU	16	1.000	-23.00	1.16	0.00	0.00	0.00	1.16	
ľ	CO7	17	0.000	-21.50 -22.49 -38.29 -39.29	1.42	0.00	0.00	0.00	-0.57	
į		16 17	1.000	-22.49	1.42 2.41	0.00 -0.00 0.00	0.00	-0.00	-2.48	
	CO8	17	0.000	-38.29	0.34	/ /0.00	0.00	0.00	-0.60	
		16	1.000	-39.29	1.34	0.00	0.00	0.00	-1.44	
	CO9	17	0.000	-46.00	-2.74 -2.73	0.00	0.00	0.00	-0.02	
	CO10	16 17	1.000 0.000	-47.00 -45.69	-2.73 -1.17	0.00	0.00	0.00	2.72 -0.37	
	COTO	16	1.000	-46.69	-0.57	0.00	0.00	0.00	0.49	
ì	CO11	17	0.000	-22.00	-1.17	0.00	0.00	0.00	-0.01	
İ		16	1.000	-23.00	-1.16	0.00	0.00	0.00	1.16	
	CO12	17	0.000	-21.90	-0.65	0.00	0.00	0.00	-0.12	
	2212	16	1.000	-22.90	-0.45	0.00	0.00	0.00	0.43	
	CO13	17 16	0.000 1.000	-26.70 -27.70	-0.96 -0.76	0.00 0.00	0.00	0.00	-0.12 0.74	
	CO14	17	0.000	-27.70 -31.60	-0.76 -1.79	0.00	0.00	0.00	-0.01	
	5517	16	1.000	-32.60	-1.79	0.00	0.00	0.00	1.78	
	CO15	17	0.000	-22.00	-1.17	0.00	0.00	0.00	-0.01	
		16	1.000	-23.00	-1.16	0.00	0.00	/ \ \ 0.00	1.16	
	CO16	17	0.000	-26.80	-1.48	0.00	0.00	0.00	-0.01	
	0017	16	1.000	-27.80 -54.12	-1.48	0.00	0.00	( ) 0.00/	1.47	
	CO17	17	0.000	-54.12 -55.47	0.72 2.20	0.00 0.00	0.00 0.00	0.00	-0.93 -2.39	
16	LC1	16 18	1.000 0.000	-55.47	2.20 -1.16	0.00	0.00	0.00	-2.39 -1.16	
16	LUI	17	1.000	-21.00 -22.00	-1.16 -1.16	0.00	0.00	0.00	0.00	
	LC2	18	0.000	0.49	1.55	0.00	0.00	0.00	/ / 1.51	
		17	1.000	0.49	2.55	0.00	0.00	0.00	-0.54	
	LC3	18	0.000	-24.00	-1.54 -1.54	0.00	0.00	0.00	-1.55 -0.01	
		17	1.000	-24.00	-1.54	0.00	0.00	0.00	/ 70.01 / /_	

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	000-0EC 1		KINAL FURU	LU						
Member /		Node	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	Nø.	x [m]	N	$V_y$	$V_z$	M <sub>T</sub>	$M_{y}$	M <sub>z</sub>	
16	COI	/18/	0.000	-28.35	-1.57	0.00	0.00	0.00	-1.58	
		17	1.000	-29.70	-1.58	0.00	0.00	0.00	-0.01	
	CO2	18	0.000	-23.39 -24.54	1.04 2.54	0.00 0.00	0.00	0.00 0.00	0.93 -0.86	
	CO3	18	0,000	-24.54 -48.58	-0.55	0.00	0.00	0.00	-0.86 -0.72	
	000	17	1.000	-49.72	0.95	-0.00	0.00	-0.00	-0.92	
	CO4	18 / /	/ 0.000	€60.15	-3.69	0.00	0.00	0.00	-3.74	
		17 (	/ 1.000	/-61.29	-3.72	0.00	0.00	0.00	-0.03	
	CO5	18	0.000	-59.68	-2.22	0.00 0.00	0.00	0.00	-2.36	
	CO6	17 18	1.000	-60.83 -21.00	-1.34 -1.16	0.00	0.00	0.00	-0.58 -1.17	
	000	17	1.000	-22.00	-1.17	0.00	0.00	0.00	-0.01	
	CO7	18	0,000	-20.50	0.42	0.00	0.00	0.00	0.35	
		17	1.000	-21.50 -37.29	1.42	0.00	0.00	0.00	-0.57	
	CO8	18	0.000	-37.29	-0.65	0.00	0.00	0.00	-0.75	
	CO9	17 18	1.000	-38.29 -45.00	0.34	0.00 0.00	0.00 0.00	0.00	-0.60 -2.75	
	COA	17	1.000	-45.00 -46.00	-2.73 -2.74	0.00	0.00	-0.00 0.00	-2.75 -0.02	
	CO10	18	0.000	-44.69	-1.76	0.00	0.00	0.00	-1.84	
		17	1.000	-45.69	-1.17	0.00	0.00	0.00	-0.37	
	CO11	18	0.000	-21.00	-1.16	0.00	0.00	0.00 0.00	-1.17	
	0040	17	1.000 0.000	22.00	-1.17	0.00 0.00	0.00	0.00	-0.01	
	CO12	18 17	1.000	-20.90 -21.90	-0.85 -0.65	0.00	0.00 0.00	0.00 0.00	-0.87 -0.12	
	CO13	18	0.000	-25.70	-1.16	0.00	0.00	0.00	-1.18	
		17	1.000	-26.70	-0.96	0.00	0.00	0.00	-0.12	
	CO14	18	0.000	-30.60	-1.79/ -1.79	0.00	0.00	0.00	-1.80	
	0045	17	1.000	-31.60	( /-1.79	0.00	0.00	0.00	-0.01	
	CO15	18 17	0.000 1.000	-21.00 -22.00	-1.16 -1.17	0.00	0.00 0.00	0.00 0.00	-1.17 -0.01	
	CO16	18	0.000	-25.80	-1.47	0.00	0.00	0.00	-1.48	
	00.0	17	1.000	-25.80 -26.80	-1.48	0.00	0.00	0.00	-0.01	
	CO17	18	0.000	-52.77	-0.78	/ /0.00	0.00	0.00 0.00	-0.96	
		17	1.000	-54.12	0.72	0.00	0.00	0.00	-0.93	
17	LC1	19	0.000	-20.00 -21.00	-1.16	0.00	0.00	0.00 0.00	-2.32	
	LC2	18 19	1.000 0.000	-21.00 0.49	-1.16 0.55	0.00	0.00	0.00	-1.16 2.56	
	202	18	1.000	0.49	1.55	0.00	0.00	0.00	1.51	
	LC3	19	0.000	-24.00	-1.54	0.00	0.00	0.00	-3.09	
		18	1.000	-24.00	-1.54	0.00	0.00	0.00	-1.55	
	CO1	19	0.000	-27.00	-1.56	0.00	0.00	0.00	-3.15	
	CO2	18 19	1.000 0.000	-28.35 -22.24	-1.57 -0.47	0.00 0.00	0.00	0.00	-1.58 1.22	
	002	18	1.000	-22.24 -23.39	1.04	0.00	0.00/	0.00	0.93	
	CO3	19	0.000	-47.43	-2.04	0.00	/ 0.00	0.00	-2.02	
		18	1.000	-48.58	-0.55	0.00	0.00	0.00	-0.72	
	CO4	19	0.000	-59.00 -60.15	-3.62	0.00 0.00	0.00	0.00	-7.40	
	CO5	18 19	1.000 0.000	-60.15	-3.69 -3.07	0.00	0.00	0.00	-3.74 -5.01	
	000	18	1.000	-50.53 -59 68	-3.07 -2.22	0.00	0.00	0.00	-5.01	
	CO6	19	0.000	-58.53 -59.68 -20.00	-1.15	0.00 0.00	0.00	0.00	-2.33	
		18	1.000	-21.00	-1.16	0.00	0.00	0.00	-1.17	
	CO7	19	0.000	-19.50 -20.50	-0.59	0.00	0.00	0.00	0.26	
	000	18	1.000	-20.50	0.42	0.00	0.00	0.00	0.35	
	CO8	19 18	0.000 1.000	-36.29 -37.29	-1.64 -0.65	0.00 0.00	0.00 0.00	0.00	-1.90 -0.75	
	CO9	19	0.000	-37.29 -44.00	-0.05 -2 69	0.00	0.00	0.00	-5.46	
	1	18	1.000	-45.00	-2.69 -2.73	0.00	0.00	-0.00	2.75	/_

### Binl Metsälinnur

**Binh Nguyen Xuan** Metsälinnunreitti 2 L121, 02660 Espoo 
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 RESULTS

 Project:
 Assignment Week 6
 Model:
 B3\_Frame
 Date:
 18/10/2021

Member /		Node	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	Nø.	x [m]	N	$V_{y}$	V <sub>z</sub>	$M_T$	$M_{y}$	M <sub>z</sub>	
17	CO10	/19/	0.000	-43.69	-2.33	0.00	0.00	-0.00	-3.88	
		/ 18/	1.000	-44.69	-1.76	0.00	0.00	0.00	-1.84	
	CO11	/ /19	0.000	-20.00	-1.15	0.00	0.00	0.00	-2.33	
	0040	18	1.000	-21.00	-1.16	0.00	0.00	0.00	-1.17	
	CO12	19	0,000	-19.90 -20.90	-1.04 -0.85	0.00 0.00	0.00 0.00	0.00 0.00	-1.81 -0.87	
	CO13	19	0.000	-20.90	-1.35	0.00	0.00	0.00	-2.43	
	30.0	18	1.000	/-25.70	-1.16	0.00	0.00	0.00	-1.18	
	CO14	19 \	/ 0,000	-29.60	-1.77	0.00	0.00	0.00	-3.58	
		18 19	1.000	-30.60	-1.79	0.00	0.00	0.00	-1.80	
	CO15	19 18	0.000	-20.00 -21.00	-1.15 -1.16	0.00	0.00 0.00	0.00	-2.33 -1.17	
}	CO16	19	0,000	-21.00	-1.16 -1.46	0.00	0.00	0.00	-1.17 -2.95	
	CO 10	18	1.000	-25.80	-1.47	0.00	0.00	0.00	-1.48	
	CO17	19	0.000	-51.43	-2.26	0.00	0.00	0.00	-2.48	
		18	1.000	-52.77	-0.78	0.00	0.00	0.00	-0.96	
18	LC1	20 19	0.000	-19:00	-1.16	0.00	0.00	0.00	-3.48	
ļ	1.00		1.000	-20.00	-1.16	0.00	0.00	0.00	-2.32	
	LC2	20	0.000 1.000	0.49	-0.45	0.00 0.00	0.00	0.00	2.61 2.56	
	LC3	19 20	0.000	0.49	0.55	0.00	0.00 0.00	0.00 0.00	-4.64	
	203	19	1.000	24.00	-1.54	0.00	0.00	0.00	-3.09	
	CO1	20	0.000	-25.65	/ / -1.54	0.00	0.00	0.00	-4.70	
		19	1.000	-27 00	/ / -1.56	0.00	0.00	0.00	-3.15	
Ì	CO2	20	0.000	-21.10	( -1.97	0.00	0.00	0.00	-0.00	
		19	1.000	-22.24	-0.47	0.00	0.00	0.00	1.22	
	CO3	20	0.000	-46.28	-3.51/	0.00	0.00	0.00	-4.79	
	CO4	19 20	1.000 0.000	-47.43 -57.86	-2.04 -3.51	0.00	0.00 0.00	0.00 0.00	-2.02 -10.97	
	004	19	1.000	-59.00	3.62	0.00	0.00	0.00	-7.40	
ľ	CO5	20	0.000	-57.39	-3.90	0.00	0.00	0.00	-8.50	
		19	1.000	-57.39 -58.53	-3.90 -3.07	0.00 0.00 0.00	0.00	0.00	-5.01	
	CO6	20	0.000	-19.00	-1.14	/ /0.00	0.00	-0.00	-3.48	
		19	1.000	-20.00	-1.15	0.00	0.00	0.00	-2.33	
	CO7	20	0.000	-18.50	-1.59 -0.59 -2.62	0.00	0.00	0.00	-0.82	
	CO8	19 20	1.000 0.000	-19.50 -35.29	-0.59	0.00	0.00	0.00 -0.00	0.26 -4.03	
	000	19	1.000	-36.29	-2.62 -1.64	0.00	0.00	0.00	-4.03 -1.90	
	CO9	20	0.000	-43.00	-2.63	0.00	0.00	0.00	-8.12	
İ		19	1.000	-44.00	-2.69	0.00	0.00	0.00	-5.46	
	CO10	20	0.000	-42.70	-2.89	0.00	0.00	0.00	-6.50	
	0044	19	1.000	-43.69	-2.33	0.00	0.00	-0.00	-3.88	
	CO11	20 19	0.000 1.000	-19.00 -20.00	-1.14 -1.15	0.00 0.00	0.00	-0.00 0.00	-3.48 -2.33	
	CO12	20	0.000	-20.00 -18.90	-1.15 -1.23	0.00	0.00	0.00	-2.33	
	5512	19	1.000	-19.90	-1.04	0.00	0.00	0.00	-1.81	
	CO13	20	0.000	-23.70	-1.53	0.00	(0.00	0.00	-3.87	
		19	1.000	-24.70	-1.53 -1.35	0.00	0,00	7 \ \ 0.00	-2.43	
	CO14	20	0.000	-28.60	-1.74	0.00	0.00	0.00	-5.34	
	0045	19	1.000	-29.60	-1.77	0.00	0.00	0.00/	-3.58	
	CO15	20 19	0.000 1.000	-19.00 -20.00	-1.14 -1.15	0.00 0.00	0.00 0.00	-0.00 0.00	-3.48 -2.33	
	CO16	20	0.000	-20.00	-1.15 -1.44	0.00	0.00	0.00	-2.33 -4.41	
	0010	19	1.000	-24.80	-1.44	0.00	0.00	0.00	-2.95	
	CO17	20	0.000	-50.08	-3.72	0.00	0.00	0.00	-5.47	
		19	1.000	-51.43	-2.26	0.00	0.00	0,00	-2.48	
19	LC1	2	0.000	-18.00	-1.16	0.00	0.00	0.00	-4.63	
		20	1.000	-19.00	-1.16	0.00	0.00	0.00	3.48	

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Project: Assignment Week 6 Model: B3\_Frame 18/10/2021 Date:

	000-0EC 11		KNAL FURU	LJ						
Member /		Node	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	No.	x [m]	N	$V_y$	$V_z$	M <sub>T</sub>	$M_{y}$	M <sub>z</sub>	
19	LC2	/2/	0.000	0.49	-1.45	0.00	0.00	0.00	1.66	
		20	1.000	0.49	-0.45	0.00	0.00	0.00	2.61	
	LC3	/ /2	0.000	-24.00	-1.54	0.00 0.00	0.00	0.00 0.00	-6.18	
	CO1	20 2	1.000 0,000	-24.00 -24.30	-1.54 -1.51	0.00	0.00 0.00	0.00	-4.64 -6.22	
	1001	20	1.000	-25.65	-1.54	0.00	0.00	0.00	-0.22 -4.70	
	CO2	2 /	0.000	19.95	-3.47	0.00	0.00	0.00	-2.73	
		20 /	/ 1.000	/ /-21.10	-1.97	0.00	0.00	0.00	-0.00	
	CO3	2	0,000	-45.14	-4.95	0.00	0.00	0.00	-9.02	
	004	20	1.000	-46.28 -56.72	-3.51	0.00 0.00	0.00	0.00 0.00	-4.79	
	CO4	2 20	0.000	-50.72	-3.37 -3.51	0.00	0.00	0.00	-14.42 -10.97	
	CO5	20	0.000	-56.25	-4.67	0.00	0.00	-0.00	-12.79	
	000	20	1.000	-57.39	-3.90	0.00	0.00	0.00	-8.50	
	CO6	20 2	0.000	-57.39 -18.00	-1.13	0.00	0.00	0.00	-4.61	
		20	1.000	-19.00	-1.14	0.00	0.00	-0.00	-3.48	
	CO7	2	0.000	-17.50	-2.58	0.00	0.00	0.00 0.00	-2.91	
	CO8	20	1.000 0.000	-18.50 -34.30	-1.59 -3.58	0.00 0.00	0.00 0.00	0.00	-0.82 -7.14	
	1 000	20	1.000	-35.29	-2.62	0.00	0.00	-0.00	-7.14 -4.03	
	CO9	20	0.000	-42.01	/ \ \ \-2.55	0.00	0.00	0.00	-10.71	
		20	0.000 1.000	43.00	/ / -2.63	0.00	0.00	0.00 0.00	-8.12	
	CO10	2	0.000	-41.70	/ / -3.42	0.00	0.00	0.00	-9.65	
		20	1.000	-42.70	-2.89	0.00	0.00	0.00	-6.50	
	CO11	2	0.000 1.000	-18.00 -19.00	-1.13 -1.14	0.00	0.00	0.00 -0.00	-4.61 -3.48	
	CO12	20 2	0.000	-19.00 17.00	-1.14	0.00	0.00	0.00	-3.48 -4.27	
	0012	20	1.000	-17.90 -18.90 -22.70	-1.42/ -1.23 -1/.71	0.00	0.00	0.00	-2.95	
	CO13	2	0.000	-22.70	-1.71	0.00	0.00	0.00	-5.50	
		20	1.000	-23.70	√1.53	0.00	0.00	0.00	-3.87	
	CO14	2	0.000	-27.60 -28.60	-1.71 -1.74	0.00	0.00	0.00 0.00	-7.06	
	0045	20	1.000	-28.60		/ 0.00	0.00	0.00	-5.34	
	CO15	2 20	0.000 1.000	-18.00 -19.00	-1.13 -1.14	0.00	0.00	0.00 -0.00	-4.61 -3.48	
	CO16	20	0.000	-22.80	-1.14 -1.42	0.00	0.00	-0.00 -0.00	-5.84 -5.84	
	0010	20	1.000	-23.80	-1 44	0.00	0.00	0.00	-4.41	
	CO17	2	0.000	-48.74	-5.15	0.00	0.00	-0.00	-9.91	
		20	1.000	-50.08	-3.72	0.00	0.00	0.00	-5.47	
20	LC1	21	0.000	-23.00 -22.00	1.16	0.00	0.00	0.00	1.15	
	1.00	22	1.000 0.000	-22.00 -0.49	1.16	0.00 0.00	0.00	0.00	-0.00 2.99	
	LC2	21 22	1.000	-0.49 -0.49	1.45 1.45	0.00	0.00	0.00	2.99 1.54	
	LC3	21	0.000	-24 00	1.54	0.00	0.00	0.00	1.54	
		22	0.000 1.000	-24.00 -24.00	1.54	0.00 0.00	(0.00/	0.00	-0.01	
	CO1	21	0.000	-31.05	1.57	0.00	0.00	0.00	1.57	
		22	1.000	-29.70	1.58	0.00	0.00	0.00	-0.01	
	CO2	21	0.000	-27.20 -26.05	3.55 3.57	-0.00 0.00	0.00	0.00	5.91	
	CO3	22	1.000 0.000	-26.05	3.57	0.00	0.00	0.00	2.35	
	003	21 22	1.000	-52.41 -51.26 -62.45	5.23 5.28	0.00	0.00	0.00	2.39	
	CO4	21	0.000	-62 45	5.28 3.70	0.00 0.00	0.00	0.00	3.69	
	337	22	1.000	-61.29	3.72	0.00	0.00	0.00	-0.03	
	CO5	21	0.000	-62.91	5.05	-0.00	0.00	0.00/	6.52	
		22	1.000	-61.76	5.10	0.00	0.00	~ / 0.00	1.44	
	CO6	21	0.000	-23.00	1.16	0.00	0.00	0.00	1.16	
	007	22	1.000	-22.00	1.17	0.00	0.00	0.00	-0.01	
	CO7	21 22	0.000 1.000	-23.50 -22.50	2.63 2.65	-0.00 0.00	0.00 0.00	0.00 0.00	4.20 1.56	7
			1.000	-22.50	2.05	0.00	0.00	0.00	1.56	

Metsälinnunreitti 2 L121, 02660 Espoo

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Project: Assignment Week 6 Model: B3\_Frame 18/10/2021 Date:

ember /		Node	Location Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	No.	x [m]	N	V <sub>y</sub>	V <sub>z</sub>	$M_T$	M <sub>y</sub>	M <sub>z</sub>	
		/ / \								
20	Ç08	21 22	0.000	-40.31 -39.30	3.74 3.77	0.00 0.00	0.00 0.00	0.00	5.34 1.58	
	CO9	27	0.000	-47.00	2.73	0.00	0.00	0.00	2.72	
	000	21 22	1.000	-46.00	2.73 2.74	-0.00	0.00	0.00	-0.02	
ľ	CO10	21	0,000	-47.30	3.62	0.00	0.00	0.00	4.58	
İ		22 /	/ 1.000	-46.30	3.65	0.00	0.00	0.00	0.94	
	CO11	21 / /	/ 0.000	23.00	1.16	0.00	0.00	0.00	1.16	
		22 (	1.000	/-22.00	1.17	0.00	0.00	0.00	-0.01	
	CO12	21	0.000	-23.10	1.46 1.46	0.00 -0.00	0.00	0.00	1.77 0.31	
	CO13	22 21	7 (0.000	-22.10 -27.90	1.46	-0.00	0.00 0.00	0.00 0.00	2.08	
ŀ	0013	22	1.000	-26.90	1.78	0.00	0.00	0.00	0.31	
ì	CO14	21	0,000	-32.60	1.79	0.00	0.00	0.00	1.78	
		22	1.000	-31.60	1.79	0.00	0.00	0.00	-0.01	
	CO15	21	0.000	-31.60 -23.00	1.16	0.00	0.00	0.00 0.00	1.16	
		22	1.000	-22.00	1.17	0.00	0.00	0.00	-0.01	
	CO16	21 22	0.000	-27.80	1.48	0.00	0.00	0.00 0.00	1.47	
ļ	0047	22	1.000	-26.80	1.48	0.00	0.00	0.00	-0.01	
	CO17	21 22	0.000 1.000	-57.02 -55.66	5.47 5.53	-0.00 -0.00	0.00 0.00	0.00 0.00	7.91 2.40	
21	LC1	22	1.000	-22:00	5.53	0.00	0.00	0.00	-0.00	
21	LOI	22 23 22	0.000 1.000	21.00	1.16	0.00	0.00	0.00 0.00	-1.16	
1	LC2	22	0.000	-0.49	/ / 1.45	0.00	0.00	0.00	1.54	
		23	1.000	-0.49	1.45	0.00	0.00	0.00	0.09	
Ì	LC3	22	0.000	-24.00	( / 1.5/4	0.00	0.00	0.00	-0.01	
		23	1.000	-24.00	1,54	0.00	0.00	0.00	-1.55	
	CO1	22	0.000	-29.70 -28.35 -26.05	1.58 1.57 3.57	0.00	0.00	0.00	-0.01	
	000	23	1.000	-28.35	1.57	0.00	0.00	0.00 0.00	-1.58	
	CO2	22 23	0.000 1.000	-26.05 -24.90	3.57	0.00	0.00 0.00	0.00	2.35 -1.22	
}	CO3	22	0.000	-24.90	5.37	0.00	0.00	0.00	2.39	
	000	23	0.000 1.000	-51.26 -50.11	5.28 5.27	0.00	0.00	0.00 0.00 0.00 0.00 0.00	-2.89	
ì	CO4	22	0.000	-61.29	3.72	/ /0.00	0.00	0.00	-0.03	
		23	1.000	-61.29 -60.15	3.69	/ / 0.00	0.00	0.00	-3.74	
	CO5	22	0.000	-61.76	5.10	/ / 0.00	0.00	0.00	1.44	
		23 22	1.000	-60.61	5.08	0.00	0.00	0.00	-3.66	
	CO6	22	0.000	-22.00	1.17	0.00	0.00	0.00	-0.01	
	CO7	23 22	1.000 0.000	-21.00	1.16	0.00 0.00	0.00 0.00	0.00	-1.17 1.56	
	CO1	22 23	1.000	-22.50 -21.50	2.65 2.64	0.00	0.00	0.00	-1.09	
	CO8	23	0.000	-39.30	3.77	0.00	0.00	0.00	1.58	
		23	1.000	-38.30	3.76	0.00	0.00	0.00	-2.19	
	CO9	22	0.000	-46.00	2.74	-0.00	0,00	0.00	-0.02	
		23	0.000 1.000	-46.00 -45.00	2.73	-0.00	(0.00/	-0.00	-2.75	
	CO10	22	0.000	-46.30	3.65	0.00	0.00	0.00	0.94	
		23	1.000	-45.30	3.64	0.00	0.00	0.00	-2.70	
	CO11	22	0.000	-22.00 -21.00	1.17	0.00 0.00	0.00	0.00	-0.01	
	CO12	23 22	1.000 0.000	-21.00 -22.10	1.16	0.00 -0.00	0.00	0.00	-1.17	
	COIZ	22	1.000	-22.10 _21.10	1.46 1.46	-0.00	0.00	0.00	0.31	
	CO13	23 22	0.000	-21.10 -26.90	1.46	0.00 0.00	0.00	0.00	0.31	
	5510	23	1.000	-25.90	1.77	0.00	0.00	0.00	-1.47	
	CO14	22	0.000	-31.60	1.79	0.00	0.00	0.00	-0.01	
		23	1.000	-31.60 -30.60	1.79	0.00	0.00	~ / 0.00	1.80	
	CO15	22	0.000	-22.00	1.17	0.00	0.00	0.00	-0.01	
		23	1.000	-21.00	1.16	0.00	0.00	0.00	/ / -1.17	
	CO16	22	0.000 1.000	-26.80	1.48 1.47	0.00	0.00	0.00	-0.01	$\rightarrow$
		23	1.000	-25.80	1.47	0.00	0.00	0.00	/1.48	_

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RESULTS

 Project:
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 Date:
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ember /	/ /	Node /	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	Nø.	x [m]	N	$V_y$	V <sub>z</sub>	$M_{T}$	M <sub>y</sub>	M <sub>z</sub>	
21	CQ17	/22/	0.000	-55.66	5.53	-0.00	0.00	0.00	2.40	
		23	1.000	-54.31	5.52	0.00	0.00	0.00	-3.13	
22	LC1	23	0.000	-21.00	1.16	0.00 0.00	0.00	0.00	-1.16 -2.32	
	LC2	23 24 23 24	1.000 0,000	-20.00 -0.49	1.16 1.45	0.00	0.00 0.00	0.00 0.00	-2.32 0.09	
	LUZ	23	1.000	-0.49	1.45	0.00	0.00	0.00	-1.37	
	LC3	23	0.000	24.00	1.43	0.00	0.00	0.00	-1.55	
	200	24	1.000	-24.00	1.54 1.54	0.00	0.00	0.00	-3.09	
	CO1	23 24 23	/ 0,000	-28.35	1.57	0.00	0.00	0.00	-1.58	
		24	1.000	<b> </b>	1.56 3.57	0.00	0.00	0.00	-3.15	
	CO2	23	0.000	-24.90	3.57	0.00	0.00	0.00	-1.22	
-	000	24	1.000	-23.75	3.55	0.00	0.00	0.00	-4.78	
	CO3	23 24	0,000	-50.11 -48.96	5.27 5.21	0.00 0.00	0.00 0.00	0.00 0.00	-2.89 -8.13	
	CO4	23	0.000	-60.15	3.69	0.00	0.00	0.00	-6.13	
	004	24	1,000	59.00	3.62	0.00	0.00	0.00	-3.74 -7.40	
	CO5	24 23	1.000 0.000	-60.61	5.08	0.00	0.00	0.00	-3.66	
		24	1.000	-59.46	5.00	0.00	0.00	0.00	-8.71	
	CO6	23 24	0.000	-21.00	1.16	0.00	0.00	0.00	-1.17	
		24	1.000	-20.00	1.15	0.00	0.00	0.00	-2.33	
	CO7	23	0.000	-21.50	2.64	0.00	0.00	0.00	-1.09	
	CO8	24 23	1.000 0.000	-20.50 -38.30	2.63 3.76	0.00 0.00	0.00 0.00	0.00 0.00	-3.72 -2.19	
	000	24	1.000	-37.31	3.73	0.00	0.00	0.00	-5.94	
	CO9	23	0.000	-45.00	( / 2.73	-0.00	0.00	-0.00	-2.75	
		23 24 23	0.000 1.000	-44 00	2.69	0.00	0.00	0.00	-2.75 -5.46	
	CO10	23	0.000	-45.30	3.64/	0.00	0.00	0.00	-2.70	
		24	1.000	-44.31	3.59 1.16	-0.00 0.00	0.00	-0.00	-6.32	
	CO11	23	0.000	-21.00	> / 1/.16	0.00	0.00	0.00	-1.17	
	CO12	24	1.000	-20.00 -21.10	(1.15	0.00 0.00	0.00 0.00	0.00 0.00	-2.33 -1.15	
	CO12	23 24	0.000 1.000	-21.10 -20.10	1.46 1.45	0.00	0.00	0.00	-2.61	
	CO13	23	0.000	-25.90	1.77	0.00	0.00	0.00	-1.47	
	0010	24	1.000	-24.90	1.76	0.00	0.00	0.00	-3.23	
	CO14	23	0.000	-30.60	1.79 1.77	/ / 0.00	0.00	0.00	-1.80	
		23 24	1.000	-29.60	1.77	0.00	0.00	0.00	-3.58	
	CO15	23 24	0.000 1.000	-21.00	1.16 1.15	0.00 0.00	0.00	0.00	-1.17	
	0040	24	1.000	-20.00	1.15	0.00	0.00	0.00	-2.33	
	CO16	23 24	0.000 1.000	-25.80 -24.80	1.47 1.46	0.00 0.00	0.00	0.00	-1.48 -2.95	
	CO17	24	0.000	-24.80 -54.31	1.40 5.52	0.00	0.00	0.00	-2.95	
	6017	23 24	1.000	-52.97	5.52 5.45	-0.00	0.00	-0.00	-8.61	
23	LC1	24	0.000	-20.00	1.16	0.00	0.00	0.00	-2.32	
		25 24	0.000 1.000	-19.00	1.16	0.00 0.00	/0.00/	0.00	-3.48	
	LC2	24	0.000	-0.49	1.45	0.00	0.00	0.00	-1.37	
		25	1.000	-0.49	1.45	0.00	0.00	0.00	-2.82	
	LC3	24	0.000	-24.00	1.54 1.54	0.00	0.00	0.00	-3.09	
	CO1	25 24	1.000 0.000	-24.00 27.00	1.54	0.00 0.00	0.00	0.00	-4.64 -3.15	
	001	25	1.000	-27.00 -25.65	1.50	0.00	0.00	0.00	-3.15 -4.70	
	CO2	25 24	0.000	-23.75	1.56 1.54 3.55	0.00	0.00	0.00	-4.78	
		25	1.000	-22.60	3.52	-0.00	0.00	-0.00	-8.32	
	CO3	24	0.000	-48.96	5.21	0.00	0.00	0.00/	-8.13	
		25	1.000	-47.83	5.10	0.00	0.00	0.00	\-13.29	
	CO4	24	0.000	-59.00	3.62	0.00	0.00	0.00	-7.40	
	COF	25 24	1.000	-57.86	3.51	0.00	0.00	0.00	-10.97	
	CO5	24 25	0.000 1.000	-59.46 -58.33	5.00 4.87	0.00 -0.00	0.00 0.00	0.00 -0.00	-8.71 -13.65	7

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Binh Nguyen Xuan

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RESULTS

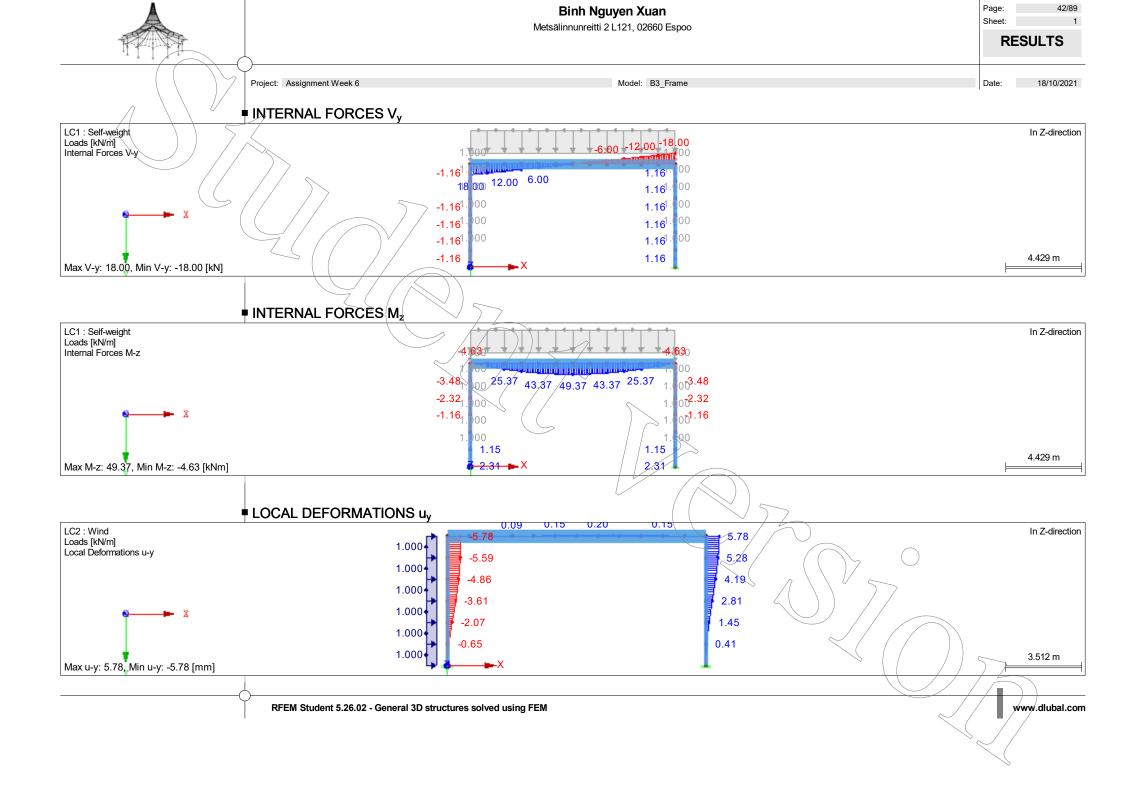
Date: 18/10/2021

Project: Assignment Week 6 Model: B3\_Frame

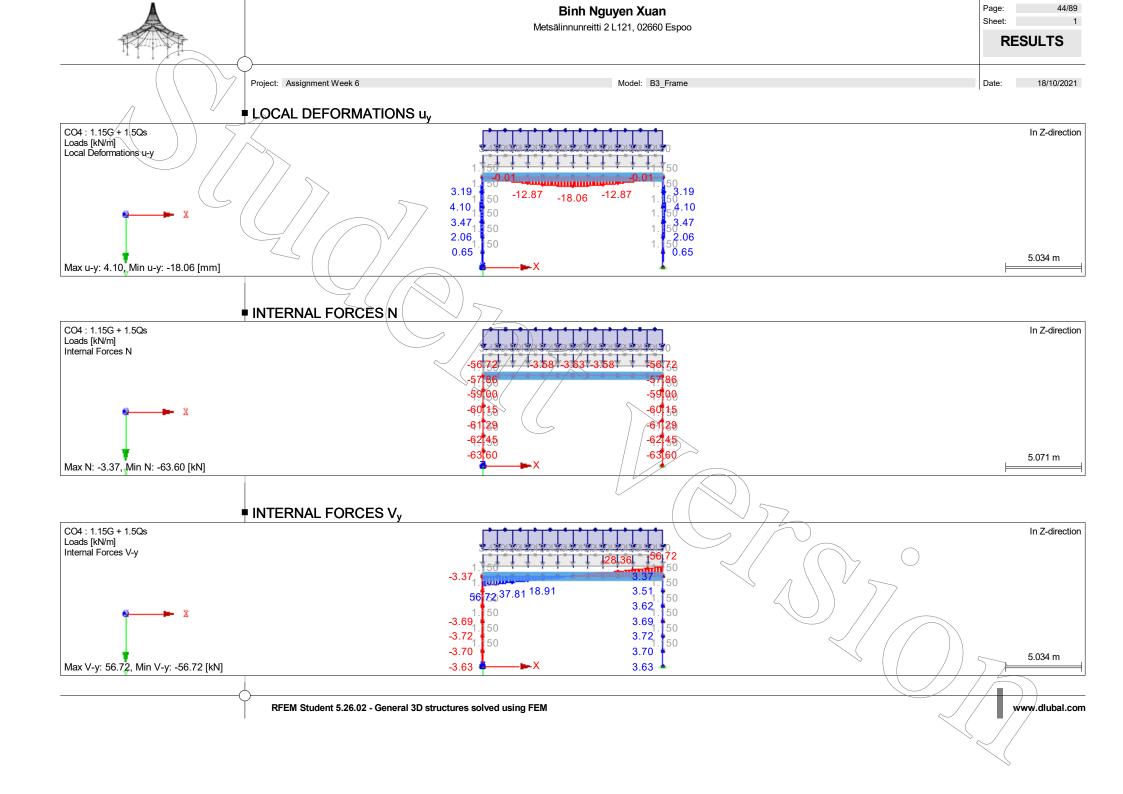
	000-0EC N	· /	ERNAL FURU	LU	F (14)			AA ( FIAL 2		
Member		Node	Location		Forces [kN]			Moments [kNm]		
No.	LC/CO	Nø.	x [m]	N	$V_y$	V <sub>z</sub>	$M_T$	$M_{y}$	$M_z$	
23	CQ6	/24/	0.000	-20.00	1.15	0.00	0.00	0.00	-2.33	
	007	25	1.000	-19.00	1.14	-0.00	0.00	-0.00	-3.48	
	CO7	24 25	0.000	-20.50 -19.50	2.63 2.61	0.00	0.00	0.00 0.00	-3.72 -6.35	
	CO8	25 24	0,000	-37.31	3.73	0.00	0.00	0.00	-5.94	
		25	1.000	-36.31	3.67	0.00	0.00	0.00	-9.64	
	CO9	24 /	/ / 0.000	44.00	2.69	0.00	0.00	0.00	-5.46	
		25 (	1.000	/-43.00	2.63	0.00	0.00	0.00	-8.12	
	CO10	24 25	0.000	-44.31 -43.31	3.59 3.52	-0.00 0.00	0.00 0.00	-0.00 0.00	-6.32 -9.88	
8	CO11	25	0.000	-20.00	1.15	0.00	0.00	0.00	-9.00	
	0011	25	1.000	-19.00	1.14	-0.00	0.00	-0.00	-3.48	
	CO12	24	0,000	-20.10	1.45	0.00	0.00	0.00	-2.61	
		25	1.000	-19.10 -24.90	1.44	0.00	0.00	0.00	-4.05	
	CO13	24	0.000	-24.90	1.76	0.00	0.00	0.00	-3.23	
	CO14	25 24	1.000 0.000	-23.90 -29.60	1.74	0.00	0.00 0.00	0.00 0.00	-4.98 -3.58	
	0014	25	1.000	-28.60	1.74	0.00	0.00	0.00	-5.34	
	CO15	24	0.000	-20.00	/ / 1.15	0.00	0.00	0.00	-2.33	
		25	1.000	-19.00	1.14	-0.00	0.00	-0.00	-3.48	
	CO16	24	0.000	-24.80	1.46	0.00	0.00	0.00	-2.95	
	CO17	25 24	1.000 0.000	-23.80 -52.97	1.44 5.45	0.00	0.00 0.00	0.00 -0.00	-4.41 -8.61	
	CO17	25	1.000	-52.97 -51.63	5.32	-0.00	0.00	-0.00	-14.01	
24	LC1	25	0.000	-19.00	1.16	0.00	0.00	0.00	-3.48	
		3	1.000	-18.00	1.16	0.00	0.00	0.00	-4.63	
	LC2	25	0.000	-0.49	(1.45/	0.00	0.00	0.00	-2.82	
	LC3	3	1.000	-0.49	1.45 1.54	0.00	0.00 0.00	0.00 0.00	-4.27	
	LU3	25 3	0.000 1.000	-24.00 -24.00	(1.54	0.00	0.00	0.00	-4.64 -6.18	
	CO1	25	0.000	-25.65	1.54	0.00	0.00	0.00	-4.70	
		3	1.000	-25.65 -24.30	1.54 1.51	/ /0.00	0.00	0.00	-6.22	
	CO2	25	0.000	-22.60	3.52	-0.00	0.00	-0.00	-8.32	
	000	3	1.000	-21.46	3.47	-0.00	0.00	-0.00	-11.81	
	CO3	25 3	0.000 1.000	-47.83 -46.69	5.10 4.95	0.00	0.00	0.00 -0.00	-13.29 -18.32	
	CO4	25	0.000	-57.86	3.51	0.00	0.00	0.00	-10.97	
		3	1.000	-56.72	3.37	0.00	0.00	0.00	-14.42	
	CO5	25	0.000	-58.33	4.87	-0.00	0.00	-0.00	-13.65	
		3	1.000	-57.19	4.68	0.00	0.00	0.00	-18.42	
	CO6	25 3	0.000 1.000	-19.00 -18.00	1.14 1.13	-0.00 0.00	0.00/	-0.00 0.00	-3.48 -4.61	
	CO7	25	0.000	-18.00 -19.50	2.61	0.00	0.00	0.00	-4.61 -6.35	
		3	1.000	-18.51	2.58	0.00	0.00/	0.00	-8.94	
	CO8	25	0.000	-36.31	3.67	0.00	0.00	0.00	-9.64	
		3	1.000	-35.32	3.59	0.00	0.00	0.00	-13.27	
	CO9	25 3	0.000 1.000	-43.00 -42.01	2.63 2.55	0.00	0.00	0.00	-8.12 -10.71	
	CO10	25	0.000	-42.01 -43.31	3.52	0.00	0.00	0.00	-9.88	
	0010	3	1.000	-42.32	3.42	0.00	0.00	0.00	-13.35	
	CO11	25	0.000	-19.00	1.14	-0.00	0.00	-0.00	-3.48	
		3	1.000	-18.00	1.13	0.00	0.00	0.00	-4.61	
	CO12	25	0.000	-19.10	1.44	0.00	0.00	0.00	-4.05	
	CO13	3 25	1.000 0.000	-18.10 -23.90	1.42 1.74	0.00	0.00 0.00	0.00	-5.48	
	0013	3	1.000	-23.90 -22.90	1.74	-0.00	0.00	-0.00	-4.98 -6.71	
	CO14	25	0.000	-28.60	1.74	0.00	0.00	0.00	-5.34	
		3	1.000	-27.60	1.71	0.00	0.00	0.00	7.06	/ /

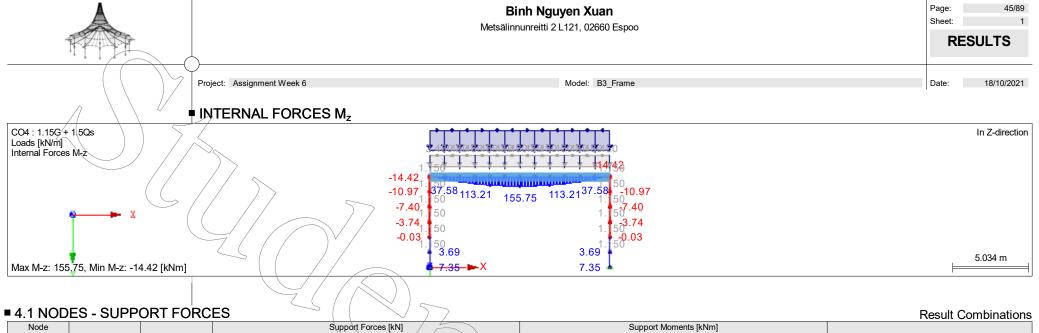
### Page: Binh Nguyen Xuan 41/89 Metsälinnunreitti 2 L121, 02660 Espoo **RESULTS** Project: Assignment Week 6 Model: B3\_Frame Date: 18/10/2021 ■ 4.12 CROSS-SECTIONS - INTERNAL FORCES Forces [kN] Moments [kNm] Node Location $V_z$ $M_T$ $M_z$ No. LC/CO Ŋσ. x [m] Ν 24 CQ15 25 0.000 -19.00 1.14 -0.00 0.00 -0.00 -3.48 1.13 1.44 1.42 -4.61 -4.41 -18.00 0.00 3/ 25 1.000 0.00 0.00 CO16 0.00 0.00 0.00 0.000 -23.80 3 25 3 1.000 -22.80 -5.84 CO17 5.32 5.15 0.00 0.000 -51.63 -0.00 -0.00 -14.01 -50.30 0.00 0.00 0.00 -19.25 1.000 \*LOCAL DEFORMATIONS uv LC1 : Self-weight Loads [kN/m] Local Deformations u-y In Z-direction -4.98 -5.73 -4.98 -2.91 <sub>0</sub>1.01 01.29 1.29 ექ.09 ე.65 0.65 0.20 0.20 4.429 m Max u-y: 1.29, Min u-y: -5.73 [mm] **■ INTERNAL FORCES N** LC1 : Self-weight Loads [kN/m] Internal Forces N In Z-direction **-18.00** -20100 -2100 -2100 -22000 -2200 -23,00 -2400 4.462 m Max N: -1.16, Min N: -24.00 [kN]

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Node				Support Forces [kN]			Support Moments [kNm]		
No.	RC		P <sub>X'</sub>	Pr	/ Pz	M <sub>X'</sub>	$M_{Y'}$	$M_{Z'}$	
1*	RC1	Max	-26.84	5/50	0.00	0.00			ULS (STR/GEO) - Permanent / transient - Eq. 6.10a and 6.10b
		Min	-63.60	3.63	0.00				ULS (STR/GEO) - Permanent / transient - Eq. 6.10a and 6.10b
	RC2	Max	-23.50	3.39	0.00	0.00			SLS - Characteristic
		Min	-48.00	-2.69	/ /0.00	0.00			SLS - Characteristic
	RC3	Max	-23.90	-0.25	0.00	0.00			SLS - Frequent
		Min	-33.60	-1.77	( / 0.00	0.00			SLS - Frequent
	RC4	Max	-24.00	-1.15	0.00	0.00			SLS - Quasi-permanent
		Min	-28.80	-1.46	0.00	/ / 0.00			SLS - Quasi-permanent
4*	RC1	Max	64.07	-1.56	0.00	0.00	0.00	12.83	ULS (STR/GEO) - Permanent / transient - Eq. 6.10a and 6.10b
		Min	28.36	-5.11	0.00	0.00	0.00	3.13	ULS (STR/GEO) - Permanent / transient - Eq. 6.10a and 6.10b
	RC2	Max	48.31	-1.15	0.00	0.00			SLS - Characteristic
		Min	24.00	-3.68	0.00	0.00	0.00		SLS - Characteristic
	RC3	Max	33.60	-1.15	0.00	0.00	0.00	3.84	SLS - Frequent
		Min	24.00	-1.77	0.00	0.00	0.00	2.32	SLS - Frequent
	RC4	Max	28.80	-1.15	0.00	0.00			SLS - Quasi-permanent
		Min	24.00	-1.46	0.00	0.00	0.00	2.32	SLS - Quasi-permanent

## ■ 4.12 CROSS-SECTIONS - INTERNAL FORCES

### Result Combinations

Memb	r	Node	Location				Forces [kN]		(	Moments [kl	Nm]			Corresponding
No.	RC	No.	x [m]		N	N I	$V_y$	V <sub>z</sub>	M <sub>T</sub>	_ \ M <sub>y</sub>	5	$M_z$		Load Cases
	Section No. 1	T-Rectangle 0.6/0.2				•	<u>.                                      </u>	•	2 (		77			
2	RC1	5	0.000	Max N	⊳	-1.52	20.25	-0.00	0.00		/ 0,00		16.06   CO	1
				Min N	⊳	-4.98	37.49	0.00	00.0		Ø.00		32.30 CO	
				Max V <sub>y</sub>		-3.41 ⊳	47.27	0.00	0.00		0.00		37.58 CO	4
				Min V <sub>y</sub>		-3.48 ⊳	16.50	0.00	0.00		0.00		15.50 CO	2
				Max V <sub>z</sub>		-3.48	16.50	0.00	0.00		0.00		15.50 CO	2
				Min V <sub>z</sub>		-1.52	20.25	-0.00	0.00		0.00		16.06 CO	1
				Max M <sub>T</sub>		-1.52	20.25	-0.00	▷ 0.00		0.00		16.06 CO	1

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CRO		Node	Location				Forces [kN]			Moments [kNm]		sult Combination
. 4	RC	No.	x [m]		N		V <sub>v</sub>	$V_z$	M <sub>T</sub>	M <sub>v</sub>	M <sub>z</sub>	Load Cases
		INO.	X [111]	Min M <sub>T</sub>	IN	4.50	,					
	RC1	/_/		Max M <sub>v</sub>		-1.52 -1.52	20.25 20.25	-0.00 -0.00		0.00 > 0.00	16.06	CO 1 CO 1
			/ /	Min M <sub>v</sub>		-3.48	16.50	0.00	0.00		15.50	
		///////////////////////////////////////		Max M <sub>z</sub>		-4.72	46.80	0.00	0.00	0.00	10.50	CO 5
				Min M <sub>z</sub>		-3.48	16.50	0.00	0.00	0.00	15.50	
			1.000	Max N		-1.51	24.30	0.00	0.00	0.00	6.22	CO 1
}		~ / /	/ /1.000	Min N		-4.95	45.14	0.00	0.00	0.00	-0.22 -9.02	CO 1 CO 3
				Max V <sub>v</sub>	7	-3.37 ⊳	56.72	0.00	0.00	0.00	-14.42	CO 4
				Min V	/	-3.47 ⊳	19.95	0.00	0.00	0.00	-2.73	
			7///	Max V <sub>2</sub>		-1.51	24.30	0.00	0.00	0.00	-6.22	
				Min V₂∕		-4.67	56.25	-0.00	0.00	-0.00	-12.79	CO 5
				Max M <sub>T</sub>		-1.51	24.30	0.00		0.00		CO 1
				Min M <sub>T</sub>		-1.51	24.30	0.00		0.00	-6.22	
				Max M <sub>v</sub>		-1.51	24.30	0.00	0.00	▷ 0.00	-6.22	CO 1
				Min My		-4.67	56.25	-0.00	0.00		-12.79	CO 5
				Max M <sub>z</sub>		-3.47	19.95	0.00	0.00	0.00	-2.73	CO 2
				Min M <sub>z</sub>		-3,37	56.72	0.00	0.00	0.00		
	RC2	5	0.000	Max N	<b>&gt;</b> /	-1.13	15.00	0.00	0.00	0.00	11.89	CO 6
				Min N		-3.60	28.50	-0.00	0.00	0.00	24.26	
				Max V <sub>y</sub>		/ -2.57 Þ	35.01	0.00	0.00	0.00	27.80	
				Min V <sub>y</sub>	T //	-2.59	/14.50	-0.00	0.00	0.00	13.09	CO 7
				Max V <sub>z</sub>	$\sim$	-1.13	15.00	0.00	0.00	0.00		CO 6
				Min V <sub>z</sub>		-3,60	28.50	-0.00	0.00	0.00	24.26	
				Max M <sub>T</sub>		-1.13/	15.00	0.00		0.00		CO 6
				Min M <sub>T</sub>		-1.13	/ 15.00	0.00		0.00	11.89	
				Max M <sub>y</sub>		-3(60	28.50	-0.00				CO 8
				Min M <sub>y</sub>		-1.13	15.00	0.00	0.00		11.89	
				Max M <sub>z</sub>		-3.45	34.70	0.00	0.00	0.00		
				Min M <sub>z</sub>		-1.13	15.00	0.00	0.00	0.00	11.89	CO 6
		2	1.000	Max N	D	-1.13	18.00	0.00	0.00	0.00	-4.61	
				Min N Max V <sub>v</sub>	D	-3.58 -2.55 ⊳	34.30 42.01	0.00	0.00	0.00	-7.14 -10.71	CO 8 CO 9
				Min V <sub>v</sub>		-2.58 ⊳	17.50	0.00	0.00	0.00	-2.91	
				Max V <sub>2</sub>		-1.13	18.00	0.00		0.00	-4.61	
				Min V <sub>z</sub>		-1.13	18.00	0.00		0.00	-4.61	CO 6
				Max M <sub>T</sub>		-1.13	18.00	0.00	0.00	0.00	-4.61	
				Min M <sub>T</sub>		-1.13	18.00	0.00		0.00	-4.61	CO 6
				Max M <sub>v</sub>		-1.13	18.00	0.00	0.00	▶ 0.00	-4.61	
1				Min M <sub>v</sub>		-1.13	18.00	0.00	0.00	0.00	-4.61	
				Max M <sub>z</sub>		-2.58	17.50	0.00				
				Min M <sub>z</sub>		-2.55	42.01	0.00		0.00		
	RC3	5	0.000	Max N	Þ	-1.13	15.00	0.00		0.00	11.89	CO 11
ì				Min N	⊳	-1.72	23.00	-0.00	0.00	0.00	18.24	CO 14
				Max V <sub>y</sub>		-1.72 ⊳	23.00	-0.00	0.00	0.00	18.24	CO 14
				Min V <sub>y</sub>		-1.42 ⊳	14.90	0.00	> 0/00	0.00	12.13	
				Max V <sub>z</sub>		-1.13	15.00	0.00		0.00	11.89	
				Min V <sub>z</sub>		-1.72	23.00	-0.00	0,00	0.00	18.24	CO 14
				Max M <sub>T</sub>		-1.13	15.00	0.00			11.89	
				Min M <sub>T</sub>		-1.13	15.00	0.00		/0.00	11.89	CO 11
				Max M <sub>y</sub>		-1.72	23.00	-0.00				CO 14
				Min M <sub>y</sub>		-1.13	15.00	0.00	0.00		/ 11.89	CO 11
				Max M <sub>z</sub>		-1.72	23.00	-0.00	0.00			CO 14
				Min M <sub>z</sub>		-1.13	15.00	0.00	0.00	0.00	/ / 11 80	CO 11

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Project: Assignment Week 6

Model: B3\_Frame

	000-0EC I		RNAL FORCE			_				Re	sult Combinati
mber /	1 (	Node	Location			Forces [kN]			Moments [kNm]		Corresponding
lo. 🗸	RC	Nø.	x [m]		N	$V_y$	$V_z$	M <sub>T</sub>	$M_{y}$	$M_z$	Load Cases
2	RC3	/2/	1.000	Max N	▶ -1.13	18.00	0.00	0.00	0.00	-4.61	CO 11
				Min N	▶ -1.71	22.70	0.00	0.00	0.00		CO 13
				Max V <sub>y</sub>	-1.71		0.00	0.00	0.00	-7.06	CO 14
				Min V <sub>y</sub>	-1.42	> 17.90	0.00	0.00	0.00	-4.27	CO 12
				Max V <sub>z</sub>	-1.13	18.00 ⊳	0.00	0.00	0.00	-4.61	CO 11
				Min V <sub>z</sub>	-1.13	18.00 ⊳	0.00	0.00	0.00	-4.61	CO 11
				Max M <sub>T</sub>	-1.13	18.00	0.00		0.00	-4.61	CO 11
				Min M <sub>T</sub>	-1.13	18.00	0.00	▷ 0.00	0.00	-4.61	CO 11
				Max M <sub>v</sub>	-1.13	18.00	0.00	0.00	0.00	-4.61	CO 11
			7///	Min M <sub>v</sub>	-1.13	18.00	0.00	0.00	0.00	-4.61	CO 11
				Max M	-1.42	17.90	0.00	0.00	0.00 ⊳		CO 12
				Min M <sub>z</sub>	-1.71	27.60	0.00	0.00	0.00 ⊳		CO 14
	RC4	5	0.000	Max N	-1.13	15.00	0.00	0.00	0.00	11.89	CO 15
				/ Min N / <	-1.43	19.00	-0.00	0.00	0.00	15.06	CO 16
				∕Max V <sub>v</sub> ∕	-1.43		-0.00	0.00	0.00		CO 16
				(Min $v_v$ /	-1.13	> 15.00	0.00	0.00	0.00	11.89	CO 15
				Max V <sub>z</sub>	-1;13	15.00 ⊳	0.00	0.00	0.00	11.89	CO 15
				Min V <sub>z</sub>	-1.43	19.00 ⊳	-0.00	0.00	0.00	15.06	CO 16
				Max M <sub>T</sub>	/-1.13	15.00	0.00		0.00		CO 15
				Min M <sub>T</sub>	-1.13	15.00	0.00		0.00		CO 15
				Max M <sub>v</sub>	-1.43	19.00	-0.00	0.00		15.06	
				Min M <sub>v</sub>	-1.13	15.00	0.00	0.00	0.00		CO 15
				Max M <sub>z</sub>	-1,43	19.00	-0.00	0.00	0.00 ⊳	15.06	
				Min M <sub>z</sub>	1.13	15.00	0.00	0.00	0.00		CO 15
		2	1.000	Max N	D -1.13	18.00	0.00	0.00	0.00	-4.61	CO 15
		_	1.000	Min N	D -1/42	22.80	-0.00	0.00	-0.00	-5.84	CO 16
				Max V <sub>v</sub>	-1.42 -1.42	> / 22.80	-0.00	0.00	-0.00	-5.84	
				Min V <sub>v</sub>	-1.13		0.00	0.00	0.00		CO 15
				Max V <sub>z</sub>	-1.13	18.00	0.00	0.00	0.00	-4.61	CO 15
				Min V <sub>z</sub>	-1.42	22.80 >	<-0.00	0.00	-0.00	-5.84	CO 16
				Max M <sub>T</sub>	-1.13	18.00	0.00		0.00	-4.61	CO 15
				Min M <sub>⊤</sub>	-1.13	18.00	0.00		0.00		CO 15
				Max M <sub>v</sub>	-1.13	18.00	0.00	0.00		-4.61	CO 15
				Min M <sub>v</sub>	-1.42	22.80	-0.00	0.00			CO 16
				Max M <sub>2</sub>	-1.13	18.00	0.00	0.00	0.00	-4.61	CO 15
				Min M <sub>z</sub>	-1.42	22.80	-0,00	0.00	-0.00 ⊳		CO 16
4	RC1	6	0.000	Max N	► -1.53	16.20	0.00	0.00	0.00	34.28	CO 1
•	1101	0	0.000	Min N	D -5.02	29.84	-0.00	0.00	0.00		CO 3
				Max V <sub>v</sub>	-3.47	> 37.81	0.00	0.00	0.00	80.12	CO 4
				Min V <sub>v</sub>	-3.49		0.00	0.00	0.00	30.27	CO 2
				Max V <sub>z</sub>	-1.53	16.20 ⊳	0.00	0.00	0.00	34.28	
				Min V <sub>z</sub>	-5.02	29.84 ⊳	-0.00	0.00	0.00		CO 3
				Max M <sub>T</sub>	-1.53	16.20	0.00		0.00		CO 1
				Min M <sub>T</sub>	-1.53	16.20	0.00		_0.00		CO 1
				Max M <sub>v</sub>	-5.02	29.84	-0.00	0.00	0.00	65.96	
				Min M <sub>v</sub>	-1.53	16.20	0.00	0.00			CO 1
				Max M <sub>z</sub>	-4.78	37.35	0.00	0.00	0.00	80.82	
				Min M <sub>z</sub>	-3.49	13.05	0.00	0.00	0.00		CO 2
		5	1.000	Max N	-3.49 ▶ -1.52	20.25	-0.00	0.00	0.00	16.06	CO 1
		J	1.000	Min N	D -1.32 D -4.98	37.49	0.00	0.00	0.00	32.30	CO 1 CO 3 CO 4
				Max V <sub>v</sub>	-3.41		0.00	0.00	0.00	37.58	CO 4
				Min V <sub>v</sub>	-3.48		0.00	0.00	0.00	15.50	CO 2
				Max V <sub>z</sub>	-3.48	16.50 Þ	0.00	0.00	0.00		CO 2
	1			man v <sub>Z</sub>	-5.40	15.50	0.00	0.00	3.90	/ / 10.00)	1 37 2

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Project: Assignment Week 6 Model: B3\_Frame Date: 18/10/2021

Result Combinations
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RC 1	Node No.	Location x [m]	Min V <sub>2</sub> Max M <sub>T</sub> Min M <sub>T</sub> Max M <sub>y</sub> Min M <sub>y</sub> Max M <sub>z</sub> Min M <sub>2</sub> Min M <sub>2</sub> Max N Min N	N -1.52 -1.52 -1.52 -1.52 -1.52 -3.48 -4.72 -3.48 -1.14	Forces [kN]  V <sub>y</sub> 20.25 > 20.25 20.25 20.25 6.50 46.80 16.50	-0.00 -0.00 -0.00 -0.00 -0.00 0.00	M <sub>T</sub> 0.00 0.00 0.00 0.00 0.00 ⊳ 0.00 ⊳	Moments [kNm]  M <sub>y</sub> 0.00  0.00  0.00  0.00  0.00  0.00  0.00	16.06	CO 1 CO 1
			Max M <sub>T</sub> Min M <sub>T</sub> Max M <sub>y</sub> Min M <sub>y</sub> Max M <sub>z</sub> Min M <sub>z</sub> Min M <sub>z</sub> Min M <sub>z</sub> Max N Min N	-1.52 -1.52 -1.52 -1.52 -1.52 -3.48 -4.72 -3.48	20.25 20.25 20.25 20.25 20.25 16.50 46.80	-0.00 -0.00 -0.00 -0.00 -0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	16.06 16.06 16.06 16.06	CO 1 CO 1 CO 1
	6	0.000	Max M <sub>T</sub> Min M <sub>T</sub> Max M <sub>y</sub> Min M <sub>y</sub> Max M <sub>z</sub> Min M <sub>z</sub> Min M <sub>z</sub> Min M <sub>z</sub> Max N Min N	-1.52 -1.52 -1.52 -3.48 -4.72 -3.48	20.25 20.25 20.25 16.50 46.80	-0.00 b -0.00 c -0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00 0.00	16.06 16.06 16.06	CO 1 CO 1
2	6	0.000	Min M <sub>T</sub> Max M <sub>y</sub> Min M <sub>y</sub> Max M <sub>z</sub> Min M <sub>z</sub> Min M <sub>z</sub> Max N Min M	-1.52 -1.52 -3.48 -4.72 -3.48	20.25 20.25 16.50 46.80	-0.00 -0.00 0.00	0.00 0.00 Þ	0.00 0.00 0.00	16.06 16.06	CO 1
2	6	0.000	Max My Min My Max Mz Min Mz Max N Min M	-1.52 -3.48 -4.72 -3.48	20.25 16.50 46.80	-0.00 0.00	0.00 ⊳	0.00 0.00	16.06	
2	6	0.000	Min M <sub>y</sub> Max M <sub>z</sub> Min M <sub>z</sub> Max N Max N Min N	-3.48 -4.72 -3.48	16.50 46.80	0.00		0.00		CO 1
2	6	0.000	Max M <sub>z</sub> Min M <sub>z</sub> Max N Min N	-4.72 -3.48	46.80		0.00  ⊳		15.50 i	
2	6	0.000	Min M <sub>z</sub> Max N Min\N	-3.48				0.00		
2	6	0.000	Max N Min N				0.00	0.00	38.74	
2	6	0.000	Min N	D -1 14 I		0.00	0.00	0.00 >	15.50	
		7///		<ul><li>→ -3.63</li></ul>	12.00 22.70	-0.00 0.00	0.00 0.00	0.00 0.00	25.39 49.86	CO 6
		/ ( / / 1	Max V <sub>v</sub>	-3.63 -2.61 ⊳	28.01	0.00	0.00	0.00	59.30	
			Min V	-2.59 Þ	11.50	0.00	0.00	0.00	26.09	
			Max V <sub>2</sub>	-2.59	11.50	0.00	0.00	0.00	26.09	
			Min V <sub>z</sub>	-1.14	12.00	-0.00	0.00	0.00		
			Max M <sub>T</sub>	-1.14	12.00	-0.00	0.00	0.00	25.39	
			Min M <sub>T</sub>	-1.14	12.00	-0.00	0.00	0.00	25.39	
		7	Max M <sub>v</sub>	-1.14	12.00	-0.00	0.00	0.00	25.39	
	5	1 000			45.00				11.89	CO 6
		1.000	Min N		28.50	-0.00	0.00		24.26	CO 8
			Max V <sub>v</sub>	-2.57 ⊳	> / 35.01	0.00	0.00	0.00	27.80	CO 9
			Min V <sub>v</sub>	-2,59	14.50	-0.00	0.00	0.00	13.09	CO 7
			Max V <sub>z</sub>	71.13	/ 15.00 ▷	0.00	0.00	0.00	11.89	CO 6
			Min V <sub>z</sub>	-3.60	/ 28.50 ⊳	-0.00	0.00	0.00	24.26	CO 8
			Max M <sub>T</sub>		15.00	0.00	0.00	0.00	11.89	CO 6
			$Min M_T$						11.89	CO 6
			Max M <sub>y</sub>							
			Min M <sub>y</sub>	-1.13						
									11.89	CO 6
3	6	0.000								
				▶ -1.73	18.40		0.00	0.00	38.95	CO 14
					18.40					
					11.90					
					15.10		9.00		32.31	CO 13 CO 11
							0.00			
								0.00	20.00	
	E .	1 000						0.00		
	3	1.000				-0.00	0.00	0.00		
				-1.72 b	23.00	-0.00	0.00	0.00	18 24	CO 14
										CO 11
			Min M <sub>T</sub>	-1.13	15.00	0.00	0.00			
									11.89	CO 11
:3		5	6 0.000	5 1.000 Max N Min M <sub>2</sub> Min M <sub>2</sub> Min N Max V <sub>2</sub> Min V <sub>2</sub> Min V <sub>2</sub> Min V <sub>2</sub> Max M <sub>7</sub> Min M <sub>7</sub> Min M <sub>7</sub> Max M <sub>8</sub> Min M <sub>9</sub> Min M <sub>2</sub> Min M <sub>2</sub> Min M <sub>2</sub> Min V <sub>2</sub> Min V <sub>2</sub> Min M <sub>2</sub> Min M <sub>2</sub> Min M <sub>2</sub> Min M <sub>2</sub> Min N Max V <sub>3</sub> Min V <sub>4</sub> Max M <sub>7</sub> Min M <sub>7</sub> Max M <sub>7</sub> Min M <sub>8</sub> Min V <sub>2</sub> Min V <sub>2</sub> Min V <sub>2</sub> Min V <sub>2</sub> Min M <sub>3</sub> Max M <sub>7</sub> Max M <sub>9</sub> Min M <sub>1</sub> Max M <sub>9</sub> Min M <sub>1</sub> Max M <sub>2</sub> Min M <sub>2</sub> Min M <sub>2</sub> Min M <sub>2</sub> Min N Max V <sub>3</sub> Min N Max V <sub>4</sub> Min N Min N Max V <sub>7</sub> Min V <sub>8</sub> Min V <sub>8</sub> Min V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max V <sub>9</sub> Min V <sub>9</sub> Max N Max V <sub>9</sub> Min V <sub>9</sub> Max N Min V <sub>9</sub> Max N Max V <sub>9</sub> Min V <sub>9</sub> Max N Max V <sub>9</sub> Min V <sub>9</sub> Max N Max V <sub>9</sub> Min V <sub>9</sub> Max N Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min M <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min V <sub>9</sub> Max M <sub>7</sub> Min M <sub>9</sub> Max M <sub>8</sub> Min M <sub>9</sub>	Min My	Min M <sub>y</sub>	Min M <sub>2</sub>	Min M <sub>x</sub>   3.48   27.70   0.00   0.	Min M <sub>y</sub>	Min Min Min Min Min Min Min Min Min Min

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Project: Assignment Week 6

Model: B3\_Frame

.12 CR	OSS-SEC I	IONS - IN I E	RNAL FORC	ES						Re	sult Combination
Member /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	Nø.	x [m]		N	$V_{y}$	V <sub>z</sub>	$M_{T}$	$M_y$	$M_z$	Load Cases
4	RC3	/ / / 4		Max M <sub>z</sub>	-1.72	23.00	-0.00	0.00	0.00 ⊳	18.24	
				Min M <sub>z</sub>	-1.13	15.00	0.00	0.00	0.00 ⊳	11.89	CO 11
	RC4	/ /6	0.000	Max N	▶ -1.14	12.00	-0.00	0.00	0.00	25.39	CO 15
				Min N	▶ -1.44	15.20	0.00	0.00	0.00	32.17 32.17	CO 16 CO 16
			/ / / /	Max V <sub>y</sub>	-1.44	▶ 15.20	0.00	0.00	0.00	32.17	CO 16
				Min V <sub>y</sub>	-1.14		-0.00	0.00	0.00	25.39	CO 15
				Max V <sub>z</sub>	-1.44	15.20	> 0.00	0.00	0.00	32.17	CO 16
				Min V <sub>z</sub>	-1.14	12.00		0.00	0.00	25.39	CO 15
			= ///	Max M <sub>T</sub>	-1.14	12.00	-0.00	▶ 0.00	0.00	25.39	CO 15
			/ ( / /	Min M <sub>T</sub>	-1.14	12.00	-0.00		0.00	25.39	CO 15
				Max M	-1.14	12.00	-0.00	0.00	0.00	25.39	CO 15
				Min M <sub>y</sub>	-1.44	15.20	0.00	0.00	0.00	32.17	CO 16
				Max M <sub>z</sub>	-1.44 -1.14	15.20 12.00	0.00 -0.00	0.00	0.00	32.17	CO 16 CO 15
		_	1.000	Min M <sub>z</sub>				0.00	0.00	25.39	
		5	1:900	Max N Min N	-1.13 -1.43	15.00 19.00	0.00 -0.00	0.00 0.00	0.00 0.00	11.89	CO 15 CO 16
			4	Max V <sub>v</sub>	-1.43		-0.00	0.00	0.00	15.06	CO 16
				Min V <sub>v</sub>	-1.13		0.00	0.00	0.00	11.89	CO 15
				Max V <sub>z</sub>	/-1.13	15.00	> 0.00	0.00	0.00	11.89	CO 15
				Min V <sub>z</sub>	-1.43	19.00		0.00	0.00	15.06	CO 16
				Max M <sub>T</sub>	-1.13	15.00	0.00	▶ 0.00	0.00	11.89	CO 15
				Min M <sub>T</sub>	-1.13	15.00	0.00		0.00		CO 15
				Max M <sub>y</sub>	-1,43	19.00	-0.00	0.00	0.00	15.06	CO 16
				Min M <sub>v</sub>	71.13/	15.00	0.00	0.00	0.00	11.89	CO 15
				Max M <sub>z</sub>	-1.43	19.00	-0.00	0.00	0.00	15.06	CO 16
				Min M <sub>z</sub>	-1(13	15.00	0.00	0.00	0.00 ⊳	11.89	CO 15
5	RC1	7	0.000	Max N	▶ -1.54	12.15	0.00	0.00	0.00	48.46	CO 1
				Min N	⊳ -5.06	( 22.19	0.00	0.00	0.00	91.98	CO 3
				Max V <sub>y</sub>	-3.53	≥ 28.36	0.00	0.00	0.00	113.21	CO 4
				Min V <sub>y</sub>	-3.49	▶ 9.60	0.00	0.00	0.00	41.59	CO 2
				Max V <sub>z</sub>	-1.54	12.15	>   0.00	0.00	0.00	48.46	CO 1
				Min V <sub>z</sub>	-1.54	12.15		0.00	0.00	48.46	CO 1
				Max M <sub>T</sub>	-1.54	12.15	0.00	0.00	0.00	48.46	CO 1
				Min M <sub>T</sub>	-1.54	12.15	0.00		0.00	48.46	CO 1
				Max M <sub>y</sub>	-1.54	12.15	0.00	0.00	0.00	48.46	CO 1
				Min M <sub>y</sub>	-1.54	12.15	/ 0,00	0.00	0.00	48.46	CO 1
				Max M <sub>z</sub>	-4.84	27.90	0.00	0.00	0.00 ⊳	113.44	CO 5
				Min M <sub>z</sub>	-3.49	9.60	0,00	0.00	0.00 ⊳	41.59	CO 2
		6	1.000	Max N	▶ -1.53	16.20	0.00	0.00	0.00	34.28	CO 1
				Min N	▶ -5.02	29.84	-0.00	0.00	0.00	65.96	CO 3
				Max V <sub>y</sub>	-3.47	> 37.81	0.00	0.00	0.00	80.12	CO 4
				Min V <sub>y</sub>	-3.49		> 0.00	0.00	0.00	30.27	CO 2
				Max V <sub>z</sub>	-1.53	16.20		0.00	0.00	34.28	CO 1
				Min V <sub>z</sub>	-5.02	29.84	-0.00 0.00	0.00	0.00	65.96	CO 3
				Max M <sub>T</sub> Min M <sub>T</sub>	-1.53 -1.53	16.20	0.00		0.00	34.28 34.28	CO 1
						16.20		0.00	0.00		CO 1
				Max M <sub>y</sub> Min M <sub>y</sub>	-5.02 -1.53	29.84 16.20	-0.00 0.00	0.00	0.00	65.96	CO 1
				Min M <sub>y</sub> Max M <sub>z</sub>	-1.53 -4.78	16.20 37.35	0.00	0.00	0.00	34.28 80.82	CO 1
				Max M <sub>z</sub>	-4.78	13.05	0.00	0.00	0.00	30.27	CO 2
	RC2	7	0.000	Max N	-3.49 > -1.15	9.00	0.00	0.00	0.00	35.89	CO 6
	1102	,	0.000	Min N	→ -1.15 → -3.65	16.90	0.00	0.00	0.00	69.66	CO 8
				Max V <sub>v</sub>	-2.64	≥ 21.01	-0.00	0.00	0.00	83.81	CO9

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RE	SULTS

Project: Assignment Week 6

Model: B3\_Frame

Date: 18/10/2021

	022-2EC		RNAL FORCE	:5						Res	ult Combinatio
mber /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
lo. 🧠	RC	No.	x [m]		N	$V_{y}$	$V_z$	M <sub>T</sub>	$M_y$	$M_z$	Load Cases
5	RC2	/ / / *		Min V <sub>y</sub>	-2.60	> 8.50	-0.00	0.00	0.00	36.09	
				Max V <sub>z</sub>	-1.15	9.00		0.00	0.00	35.89	
		1/////	′ / ~	Min V <sub>z</sub>	-2.64	21.01	-0.00	0.00	0.00	83.81	
				Max M <sub>T</sub>	-1.15	9.00	0.00		0.00	35.89	
				Min M <sub>T</sub>	-1.15	9.00	0.00		0.00	35.89	
				Max M <sub>y</sub>	-3.51	20.70	-0.00	0.00 ⊳	0.00	83.96	
				Min M <sub>y</sub>	-1.15	9.00	0.00	0.00 ⊳	0.00	35.89	
				Max M <sub>z</sub>	-3.51	20.70	-0.00	0.00	0.00 ⊳	83.96	
			= / $/$ $/$	Min Mz	-1.15	9.00	0.00	0.00	0.00 ⊳	35.89	
		6	/ / 1.000	Max N	→ -1.14	12.00	-0.00	0.00	0.00	25.39	
				Min N	> -3.63 -2.61	22.70	0.00 0.00	0.00 0.00	0.00	49.86	
				Max V <sub>y</sub> Min V <sub>y</sub>	-2.51 L		0.00		0.00	59.30	
				Max V <sub>z</sub>	-2.59 l	> 11.50 11.50	> 0.00	0.00 0.00	0.00	26.09 26.09	
					-2.59		> -0.00		0.00		
				Min V <sub>z</sub> Max M <sub>T</sub>	-1.14	12.00 12.00	-0.00 -0.00	0.00 > 0.00	0.00	25.39 25.39	
			<u></u>	Min M <sub>T</sub>	-1.14	12.00	-0.00 -0.00		0.00	25.39	
				Max M <sub>v</sub>	-1.14	12.00	-0.00	0.00	0.00	25.39	
				Min M <sub>v</sub>	-2.59		0.00	0.00	0.00		
				Max M <sub>z</sub>	-3.48	11.50 27.70	0.00	0.00	0.00	26.09 59.76	
				Min M <sub>z</sub>	-1.14	12.00	-0.00	0.00	0.00	25.39	
	RC3	7	0.000	Max N	-1.14	9.00	0.00	0.00	0.00	35.89	
	NC3	,	0.000	Min N	-1,75	13.80	0.00	0.00	0.00	55.05	CO 14
				Max V <sub>v</sub>	1.75		0.00	0.00	0.00	55.05	
				Min V <sub>v</sub>	-1.44		-0.00	0.00	0.00	35.93	
				Max V <sub>z</sub>	-1(15	9.00	> \ 0.00	0.00	0.00	35.89	
				Min V <sub>z</sub>	-1.44	8.90	-0.00	0.00	0.00	35.93	
				Max M <sub>T</sub>	-1.15	9.00	0.00		0.00	35.89	
				Min M <sub>T</sub>	-1.15	9.00	0.00		0.00	35.89	
				Max M <sub>v</sub>	-1.44	8.90	<-0.00	0.00	0.00	35.93	
				Min M <sub>v</sub>	-1.15	9.00	0.00	0.00	0.00		CO 11
				Max M <sub>z</sub>	-1.75	13.80	0.00	0.00	0.00 ⊳	55.05	
				Min M <sub>z</sub>	-1.15	9.00	0.00	0.00	0.00 ⊳	35.89	
		6	1.000	Max N	▶ -1.14	12.00	-0.00	0.00	0.00	25.39	
				Min N	▶ -1.73	18.40	0.00	0.00	0.00		CO 14
				Max V <sub>y</sub>	-1.73		0.00	0.00	0.00	38.95	
				Min V <sub>y</sub>	-1.43	> 11.90	0.00	0.00	0.00	25.53	
				Max V <sub>z</sub>	-1.43	11.90	> 0.00	0.00	0.00	25.53	
				Min V <sub>z</sub>	-1.73	15.10	> \-0.00	0.00	0.00	32.31	
				Max M <sub>T</sub>	-1.14	12.00	-0.00	0.00	0.00	25.39	
				$Min M_T$	-1.14	12.00	-0.00	0.00	0.00	25.39	
				Max M <sub>y</sub>	-1.73	15.10	-0.00	0.00	0.00	32.31	
				Min M <sub>y</sub>	-1.43	11.90	0.00	0.00	0.00	25.53	
				Max M <sub>z</sub>	-1.73	18.40	0.00	0.00	\ 0.00 ▷	38.95	
				Min M <sub>z</sub>	-1.14	12.00	-0.00	0.00	0.00		CO 11
	RC4	7	0.000	Max N	▶ -1.15	9.00	0.00	0.00	0.00	35.89	
				Min N	▶ -1.45	11.40	-0.00	0.00	0.00		CO 16
				Max V <sub>y</sub>	-1.45		-0.00	0.00	0.00	45.47	
				Min V <sub>y</sub>	-1.15	9.00	0.00	0.00	0.00	35.89	
				Max V <sub>z</sub>	-1.15	9.00		0.00	0.00	35.89	
				Min V <sub>z</sub>	-1.45	11.40	-0.00	0.00	0.00	45.47	
				Max M <sub>T</sub>	-1.15	9.00	0.00		0.00	35.89	
		1		Min M <sub>T</sub>	-1.15	9.00	0.00	▶ 0.00	0.00	/ 35.89	CO 15

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Model: B3\_Frame Project: Assignment Week 6

Date: 18/10/2021

### ■ 4 12 CROSS-SECTIONS - INTERNAL FORCES

4.12 CRU	JSS-SEC N	ONS - IN LE	RNAL FORC	ES						Res	sult Combinations
Member /		Node /	Location			Forces [kN]		Mo	ments [kNm]		Corresponding
No.	RC	No.	x [m]		N	$V_{\nu}$	V <sub>z</sub>	M <sub>T</sub>	M <sub>v</sub>	M <sub>z</sub>	Load Cases
5	RC4	///		Max M <sub>v</sub>	-1.45	11.40	-0.00	0.00	0.00	45.47	CO 16
				Min M <sub>v</sub>	-1.15	9.00	0.00	0.00 ⊳	0.00	35.89	CO 15
1			/ / ^	Max M <sub>z</sub>	-1.45	11.40	-0.00	0.00	0.00 ⊳	45.47	CO 16
				Min M <sub>z</sub>	-1.15	9.00	0.00	0.00	0.00 ⊳	35.89	CO 15
		( 6 /	/ 1.000	Max N	▶ -1.14	12.00	-0.00	0.00	0.00	25.39	CO 15
				Min N	-1.44	15.20	0.00	0.00	0.00	32.17	CO 16
				Max V <sub>y</sub>	-1.44		0.00	0.00	0.00	32.17	CO 16
				Min V <sub>y</sub>	-1.14		-0.00	0.00	0.00	25.39	CO 15
			7 / / A	Max V <sub>z</sub> Min V <sub>z</sub>	-1.44 -1.14	15.20 12.00	> 0.00 > -0.00	0.00 0.00	0.00	32.17 25.39	CO 16 CO 15
				Max M <sub>T</sub>	-1.14	12.00	-0.00	▶ 0.00	0.00	25.39	CO 15
				Min M <sub>T</sub>	-1.14	12.00	-0.00		0.00	25.39	CO 15
				Max M <sub>v</sub>	-1.14	12.00	-0.00	0.00	0.00	25.39	CO 15
				Min M <sub>v</sub>	-1.14	15.20	0.00	0.00	0.00	32.17	CO 16
1				Max M <sub>z</sub>	-1.44	15.20	0.00	0.00	0.00	32.17	CO 16
				Min M <sub>z</sub>	-1.14	12.00	-0.00	0.00	0.00	25.39	CO 15
6	RC1	8	0.000	Max N	▶ -1,55	8.10	-0.00	0.00	0.00	58.59	CO 1
ı ı	1101		0.000	Min\N		14.53	0.00	0.00	0.00	110.34	CO 3
1				Max V <sub>v</sub>	/-3.58	▶ 18.91	0.00	0.00	0.00	136.84	CO 4
				Min V <sub>v</sub>	-3.50	△6.15	0.00	0.00	0.00	49.46	CO 2
				Max V <sub>z</sub>	-3.50	6.15	> 0.00	0.00	0.00	49.46	CO 2
				Min V <sub>z</sub>	-1.55	8.10	> -0.00	0.00	0.00	58.59	CO 1
				Max M <sub>T</sub>	-1,55	8.10	-0.00	▶ 0.00	0.00	58.59	CO 1
				Min M <sub>T</sub>	-1.55/	8.10	-0.00		0.00	58.59	CO 1
				Max M <sub>y</sub>	-1.55	8.10	-0.00	0.00 ⊳	0.00	58.59	CO 1
				Min M <sub>y</sub>	-3(50	6.15	0.00	0.00 ⊳	0.00		CO 2
				Max M <sub>z</sub>	-3.58	18.91	0.00	0.00	0.00	136.84	CO 4
				Min M <sub>z</sub>	-3.50	6.15	0.00	0.00	0.00	49.46	CO 2
		7	1.000	Max N	> -1.54 > -5.06	12.15	0.00	0.00	0.00	48.46	CO 1
				Min N	-5.06	22.19	0.00	0.00	0.00	91.98	CO 3
				Max V <sub>y</sub> Min V <sub>v</sub>	-3.53 -3.49	<ul><li>≥ 28.36</li><li>⊳ 9.60</li></ul>	0.00	0.00 0.00	0.00 0.00	113.21 41.59	CO 4 CO 2
				Max V <sub>z</sub>	-3.49	12.15		0.00	0.00	48.46	CO 1
				Min V <sub>z</sub>	-1.54	12.15	0.00	0.00	0.00	48.46	CO 1
				Max M <sub>T</sub>	-1.54	12.15	0.00	0.00	0.00	48.46	CO 1
				Min M <sub>T</sub>	-1.54	12.15	0.00		0.00		
				Max M <sub>y</sub>	-1.54	12.15	0.00	0.00 ⊳	0.00	48.46	CO 1
				Min M <sub>v</sub>	-1.54	12.15	0.00	0.00	0.00	48.46	CO 1
				Max M <sub>z</sub>	-4.84	27.90	0.00	0.00	0.00	113.44	CO 5
				Min M <sub>z</sub>	-3.49	9.60	0.00	0.00	0.00 ⊳	41.59	CO 2
	RC2	8	0.000	Max N	▶ -1.15	6.00	0.00	0.00	0.00	43.39	CO 6
				Min N	⊳ -3.67	11.09	0.00	/ 0.00 / (	0.00	83.65	CO 8
				Max V <sub>y</sub>	-2.67	▶ 14.00	-0.00	0.00	0.00	101.32	CO 9
				Min V <sub>y</sub>	-2.60		0.00	0.00	0.00		CO 7
				Max V <sub>z</sub>	-1.15	6.00		0.00	0.00	43.39	CO 6
				Min V <sub>z</sub>	-2.67	14.00		0.00	0.00	101.32	CO 9
				Max M <sub>T</sub>	-1.15	6.00	0.00		0.00	43.39	CO 6
				Min M <sub>T</sub>	-1.15	6.00	0.00		0.00	43.39	CO 6
				Max M <sub>y</sub>	-2.67	14.00	-0.00	0.00	0.00	101.32	CO 9
				Min M <sub>y</sub>	-1.15	6.00	0.00	0.00	0.00	43.39	CO 6
				Max M <sub>z</sub>	-2.67	14.00	-0.00	0.00	0.00	101.32	CO 9
		7	4.000	Min M <sub>z</sub>	-2.60	5.50	0.00	0.00	0.00	43.09	
i l		7	1.000	Max N	▶ -1.15	9.00	0.00	0.00	0.00	/ 35.89	1000

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Project: Assignment Week 6

Model: B3\_Frame

er / (	\ \	Node /	Location			Forces [kN]			Moments [kNm]		Correspondir
4/	RC	No.	x [m]		N	V <sub>y</sub>	V <sub>z</sub>	M <sub>T</sub>	M <sub>y</sub>	$M_z$	Load Cases
Ř	C2			Min N	⊳ -3.65	16.90	0.00	0.00	0.00	69.66	CO 8
				Max V <sub>v</sub>	-2.64	▶ 21.01	-0.00	0.00	0.00	83.81	CO 9
		///	/ / .	Min V <sub>v</sub>	-2.60	⊳ 8.50	-0.00	0.00	0.00	36.09	
		/ / /		Max V <sub>2</sub>	-1.15	9.00	▶ 0.00	0.00	0.00		
				Min V <sub>z</sub>	-2.64	21.01	⊳ -0.00	0.00	0.00	83.81	CO 9
				Max M <sub>T</sub>	-1.15	9.00	0.00		0.00		CO 6
				Min M <sub>T</sub>	-1.15	9.00	0.00		0.00	35.89	CO 6
				Max M <sub>v</sub> /	-3.51	20.70	-0.00	0.00	0.00		CO 10
			J / / X	Min My	-1.15	9.00	0.00	0.00	0.00	35.89	CO 6
		4	7///	Max M <sub>z</sub>	-3.51	20.70	-0.00	0.00	0.00 >		CO 10
				Min M-	-1.15	9.00	0.00	0.00	0.00 >	35.89	CO 6
R	C3	8	0,000	/Max/N	▶1.15	6.00	0.00	0.00	0.00	43.39	
1.,		•	0,000	Min N	-1.76	9.20	0.00	0.00	0.00	66.55	CO 14
				Max V <sub>v</sub>	-1.76	⊳ 9.20	0.00	0.00	0.00	66.55	CO 14 CO 14
				Min V, /	-1.44	⊳ 5.90	0.00	0.00	0.00	43.33	
			1	(Max V <sub>z</sub> /	-1.15	6.00	▶ 0.00	0.00	0.00	43.39	
				MinVz	-1,15	6.00	▶ 0.00	0.00	0.00	43.39	CO 11
				Max M <sub>T</sub>	-1.15	6.00	0.00	▶ 0.00	0.00	43.39	CO 11
				Min M <sub>T</sub>	-1.15	6.00	0.00	▶ 0.00	0.00	43.39	
				Max M <sub>v</sub>	-1.15		0.00	0.00	0.00	43.39	CO 11
				Min M <sub>v</sub>	-1.15	6.00	0.00	0.00	0.00	43.39	
				Max M <sub>z</sub>	-1.76	9.20	0.00	0.00	0.00	66.55	
				Min M <sub>z</sub>	-1.44	5.90	0.00	0.00	0.00	43.33	
		7	1.000	Max N			0.00	0.00	0.00	35.89	CO 11
		'	1.000	Min N	► -1.75	13.80	0.00	0.00	0.00	55.05	CO 11 CO 14
				Max V <sub>v</sub>	-1/75	▶ / 13.80	0.00	0.00	0.00	55.05	CO 14
				Min V <sub>v</sub>	-1.44	⊳ / 8.90	-0.00	0.00	0.00	35.93	
				Max V <sub>2</sub>	-1.15		0.00	0.00	0.00		
				Min V <sub>z</sub>	-1.44	8.90	-0.00	0.00	0.00	35.93	
				Max M <sub>T</sub>	-1.15	9.00	0.00	▶ 0.00	0.00	35.89	
				Min M <sub>T</sub>	-1.15	9.00	0.00	▶ 0.00	0.00	35.89	
				Max M <sub>v</sub>	-1.44	8.90	-0.00	0.00	0.00		CO 12
				Min M <sub>v</sub>	-1.15	9.00	0.00	0.00	0.00	35.89	
				Max M <sub>z</sub>	-1.75	13.80	0.00	0.00	0.00	55.05	
				Min M <sub>z</sub>	-1.15	9.00	0.00	0.00	0.00	35.89	
R	C4	8	0.000	Max N	→ -1.15	6.00	0,00	0.00	0.00	43.39	CO 15
1		•	0.000	Min N	▶ -1.46	7.60	-0.00	0.00	0.00	54.97	CO 16
				Max V <sub>v</sub>	-1.46	⊳ 7.60	-0.00	0.00	0.00	54.97	CO 16
				Min V <sub>v</sub>	-1.15	⊳ 6.00	0.00	0.00	0.00	43.39	
				Max V₂	-1.15	6.00	▶ 0.00	0.00	0.00	43.39	
				Min V <sub>z</sub>	-1.46	7.60	⊳ -0.00	0.00	0.00	54.97	
				Max M <sub>⊤</sub>	-1.15	6.00	0.00	▶ . / 0.00 /	0.00		
				Min M <sub>T</sub>	-1.15	6.00	0.00	▶ 0.00	0.00	43.39	
				Max M <sub>v</sub>	-1.46	7.60	-0.00	0.00	0.00	54.97	CO 16
				Min M <sub>v</sub>	-1.15	6.00	0.00	0.00	0.00	43.39	
				Max M <sub>z</sub>	-1.46	7.60	-0.00	0.00	0.00	54.97	CO 16
				Min M <sub>z</sub>	-1.15	6.00	0.00	0.00	0.00	43.39	CO 15
		7	1.000	Max N	► -1.15	9.00	0.00	0.00	0.00	35.89	CO 15
				Min N	<ul><li>→ -1.45</li></ul>	11.40	-0.00	0.00	/ 0.00	45.47	CO 16
				Max V <sub>v</sub>	-1.45		-0.00	0.00	0.00	45.47	CO 16
				Min V <sub>v</sub>	-1.15		0.00	0.00	0.00	35.89	CO 15
				Max V <sub>2</sub>	-1.15	9.00	▶ 0.00	0.00	0.00	35.89	CO 15
				Min V <sub>z</sub>	-1.45			0.00	0.00		CO 16

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Project: Assignment Week 6

Model: B3\_Frame

	033-3EC I		RNAL FORC	ES		E 811			( PIN 3	Re	sult Combination
ember		Node	Location			Forces [kN]			oments [kNm]		Corresponding
No. ∽	RC	No.	x [m]		N	$V_{y}$	V <sub>z</sub>	M <sub>T</sub>	M <sub>y</sub>	M <sub>z</sub>	Load Cases
6	RC4			$Max M_T$	-1.15		0.00		0.00		CO 15
			/ >	Min M <sub>T</sub>	-1.15		0.00		0.00	35.89	
		/ / X		Max M <sub>y</sub>	-1.45		-0.00	0.00 ⊳	0.00	45.47	
				Min M <sub>y</sub>	-1.15		0.00	0.00	0.00	35.89	
				Max M <sub>z</sub> Min M <sub>z</sub>	-1.45 -1.15	11.40 9.00	-0.00 0.00	0.00 0.00	0.00 Þ 0.00 Þ	45.47 35.89	
7	RC1	9 / /	0.000	Max N	-1.15	4.05	0.00	0.00	0.00	64.67	CO 13
'	INCI	9 (	0.000	Min N	► -5.11	6.88	0.00	0.00	0.00	121.05	
			J / / X	Max V <sub>v</sub>	-3.61	⊳ 9.45	0.00	0.00	0.00	151.02	
			7 / / /	Min V <sub>v</sub>	-3.50	⊳ 2.69	0.00	0.00	0.00	53.88	CO 2
		4		Max V₂	-1.56	4.05		0.00	0.00	64.67	CO 1
				Min V <sub>z</sub>	-1.56	4.05		0.00	0.00	64.67	CO 1
				/ Max M <sub>T</sub>	-1.56	4.05	0.00	▶ 0.00	0.00	64.67	CO 1
				Min M <sub>T</sub>	-1.56	4.05	0.00		0.00	64.67	CO 1
			7	Max M <sub>y</sub>	-1.56	4.05	0.00	0.00 ⊳	0.00	64.67	CO 1
			4	Min M <sub>y</sub>	-1.56	4.05	0.00	0.00 ⊳	0.00	64.67	CO 1
				Max M <sub>z</sub>	-3,61	9.45	0.00	0.00	0.00	151.02	
		0	4.000	Min M <sub>z</sub>	-3.50		0.00	0.00	0.00	53.88	
		8	1.000	Max N Min N	-1.55 -5.09	8.10 14.53	-0.00 0.00	0.00 0.00	0.00 0.00	58.59 110.34	
				Max V <sub>v</sub>	-3.58		0.00	0.00	0.00	136.84	
				Min V <sub>v</sub>	-3.50		0.00	0.00	0.00	49.46	
				Max V <sub>2</sub>	-3,50			0.00	0.00	49.46	
				Min V <sub>z</sub>	-1.55/			0.00	0.00	58.59	
				Max M <sub>T</sub>	-1.55	8.10	-0.00		0.00	58.59	
				Min M <sub>T</sub>	-1(55		-0.00		0.00	58.59	
				Max M <sub>v</sub>	-1.95	8.10	-0.00	0.00 ⊳	0.00	58.59	
				Min M <sub>v</sub>	-3.50	6.15	0.00	0.00 ⊳	0.00	49.46	CO 2
				Max M <sub>z</sub>	-3.58	18.91	0.00	0.00	0.00 ⊳	136.84	
				Min M <sub>z</sub>	-3.50		0.00	0.00	0.00 ⊳	49.46	CO 2
	RC2	9	0.000	Max N	▶ -1.15	3.00	0.00	0.00	0.00	47.89	CO 6
				Min N	> -3.68		0.00	0.00	0.00	91.85	
				Max V <sub>y</sub>	-2.68	▶ 7.00	0.00	0.00	0.00	111.82	
				Min V <sub>y</sub>	-2.61		0.00	0.00	0.00	47.09	
				Max V <sub>z</sub> Min V₂	-1.15 -1.15	3.00 3.00	> 0.00	0.00	0.00	47.89 47.89	
				Max M <sub>T</sub>	-1.15		0.00		0.00	47.89	
				Min M <sub>T</sub>	-1.15		0.00		0.00	47.89	
				Max M <sub>v</sub>	-1.15		0.00		0.00	47.89	
				Min M <sub>v</sub>	-1.15		0.00	0.00 Þ 0.00 Þ	0.00	47.89	
				Max M <sub>z</sub>	-2.68	7.00	0.00	0.00	0.00	111.82	
				Min M <sub>z</sub>	-2.61	2.50	0.00	0.00	0.00	47.09	
		8	1.000	Max N	▶ -1.15	6.00	0.00	0.00	0.00	43.39	CO 6
				Min N	⊳ -3.67	11.09	0.00	0.00	_0.00	83.65	CO 8
				Max V <sub>y</sub>	-2.67		-0.00	> 0.00	0.00	101.32	
				Min V <sub>y</sub>	-2.60		0.00	0.00	0.00	43.09	
				Max V <sub>z</sub>	-1.15		> 0.00	0.00	0.00	43.39	
				Min V <sub>z</sub>	-2.67	14.00		0.00	0.00	101.32	
				Max M <sub>T</sub>	-1.15		0.00		0.00	43.39	
				Min M <sub>T</sub>	-1.15		0.00		0.00	43.39	
				Max M <sub>y</sub>	-2.67	14.00	-0.00	0.00	0.00	101.32	
				Min M <sub>y</sub>	-1.15	6.00 14.00	0.00	0.00 ⊳	0.00	/ 43.39	CO 6 CO 9

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Project: Assignment Week 6

Model: B3\_Frame

nber /		Node	Location			Forces [kN]		Mor	nents [kNm]		Correspondin
0.	RC	No.	x [m]		N	V <sub>v</sub>	$V_{\tau}$	M <sub>T</sub>	M <sub>v</sub>	M <sub>z</sub>	Load Cases
,	RC2	1,0.	, , , , , , , , , , , , , , , , , , ,	Min M <sub>z</sub>	-2.60	5.50	0.00	0.00	0.00 ⊳		CO 7
	RC3	9/	0.000	Max N	-2.00 ▶ -1.15		0.00	0.00	0.00		CO 11
	NC3	/ 9	0.000	Min N	► -1.15 ► -1.77	4.60	0.00	0.00	0.00	73.45	
				Max V <sub>v</sub>	-1.77		0.00	0.00	0.00	73.45	CO 14
				Min V <sub>v</sub>	-1.77		-0.00		0.00	47.73	CO 14
			/ / /					0.00			
			1 / /	Max V <sub>z</sub>	-1.15		> 0.00	0.00	0.00	47.89	
				Min V <sub>z</sub>	-1.44	2.90	-0.00	0.00	0.00	47.73	
				Max M <sub>T</sub>	-1.15		0.00		0.00	47.89	
				Min W <sub>T</sub>	-1.15	3.00	0.00		0.00	47.89	
			7///	Max M <sub>v</sub>	-1.44	2.90	-0.00	0.00 ⊳	0.00	47.73	CO 12
				Min M√	-1.15	3.00	0.00	0.00 ⊳	0.00	47.89	CO 11
				Max M <sub>z</sub>	-1.77	4.60	0.00	0.00	0.00 ⊳	73.45	CO 14
				Min M <sub>z</sub>	-1.44	2.90	-0.00	0.00	0.00 ⊳	47.73	
		8	1.000	Max N	-1.15		0.00	0.00	0.00	43.39	CO 11
			(60	Min N	-1.76		0.00	0.00	0.00	66.55	CO 14
				Max V <sub>v</sub>	-1.76		0.00	0.00	0.00	66.55	CO 14
				Min V <sub>v</sub>	-1:44		0.00	0.00	0.00	43.33	
				Max V <sub>z</sub>	-1.15		> 0.00	0.00	0.00	43.39	
				Min V <sub>z</sub>	(-1.15)		> 0.00	0.00	0.00	43.39	
				Max M <sub>T</sub>	-1.15		0.00		0.00	43.39	
				Min M <sub>T</sub>	-1.15		0.00		0.00	43.39	
				Max M <sub>y</sub>	-1.15		0.00	0.00 ⊳	0.00	43.39	
				Min M <sub>y</sub>	-1/15		0.00	0.00 ⊳	0.00	43.39	
				Max M <sub>z</sub>	-1.76		0.00	0.00	0.00 ⊳	66.55	
				Min M <sub>z</sub>	-1.44	5.90	0.00	0.00	0.00 ⊳	43.33	
	RC4	9	0.000	Max N	→ -1(15)	3.00	0.00	0.00	0.00	47.89	CO 15
				Min N	▶ -1.46		0.00	0.00	0.00	60.67	
				Max V <sub>v</sub>	-1.46	⊳( ( 3.80	0.00	0.00	0.00	60.67	CO 16
				Min V <sub>v</sub>	-1.15	▶ 3.00	0.00	0.00	0.00	47.89	CO 15
				Max V <sub>₂</sub>	-1.15		> \ (0.00	0.00	0.00	47.89	CO 15
				Min V <sub>z</sub>	-1.15		> 0.00	0.00	0.00	47.89	
				Max M <sub>⊤</sub>	-1.15		0.00		0.00	47.89	
				Min M <sub>T</sub>	-1.15		0.00	0.00	0.00	47.89	
				Max M <sub>v</sub>	-1.15		0.00	0.00	0.00	47.89	
				Min M <sub>v</sub>	-1.15	3.00	0.00	0.00	0.00	47.89	
				Max M <sub>2</sub>	-1.46		0.00	0.00	0.00	60.67	
				Min M <sub>z</sub>	-1.15		0.00	0.00	0.00 >	47.89	
		8	1.000	Max N	→ -1.15		0,00	0.00	0.00	43.39	CO 15
				Min N	▶ -1.46		-0.00	0.00	0.00	54.97	CO 16
				Max V <sub>y</sub>	-1.46		-0.00	0.00	0.00	54.97	CO 16
				Min V <sub>y</sub>	-1.15		0.00	/ / 0.00	0.00	43.39	CO 15
				Max V <sub>z</sub>	-1.15		> 0.00	0.00	0.00	43.39	
				Min V <sub>z</sub>	-1.46		-0.00	0.00	0.00	54.97	
				Max M <sub>T</sub>	-1.15		0.00		0.00	43.39	
				Min M <sub>T</sub>	-1.15	6.00	0.00	> 0.00	0.00	43.39	
				Max M <sub>v</sub>	-1.46	7.60	-0.00	0.00 ⊳	0.00	54.97	CO 16
				Min M <sub>v</sub>	-1.15		0.00	0.00  >	0.00	43.39	
				Max M <sub>z</sub>	-1.46		-0.00	0.00	0.00	54.97	
				Min M <sub>z</sub>	-1.15	6.00	0.00	0.00	0.00	43.39	
3	RC1	10	0.000	Max N	→ -1.56		0.00	0.00	0.00	66.69	
,	1.01	10	0.000	Min N	→ -5.11	-0.77	0.00	0.00	0.00	124.10	
				Max V <sub>v</sub>	-3.63		0.00	0.00	0.00	155.75	
				IVIAN Vy	-3.03	0.00	0.00	0.00	0.00		CO 3

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Project: Assignment Week 6

Model: B3\_Frame

nber /		Node	Location			Forces [kN]			Moments [kNm]		Correspondin
o. 🔄	RC	No.	x [m]		N	$V_{y}$	$V_z$	M <sub>T</sub>	M <sub>y</sub>	$M_z$	Load Cases
3	RC1			Max V <sub>2</sub>	-1.56	0.00	> 0.00	0.00	0.00	66.69	CO 1
				Min V <sub>z</sub>	-1.56		> 0.00	0.00	0.00	66.69	
		/ / /		Max M <sub>T</sub>	-1.56	0.00	0.00	▶ 0.00	0.00	66.69	CO 1
				Min M <sub>T</sub>	-1.56	0.00	0.00	▶ 0.00	0.00	66.69	CO 1
				Max M <sub>v</sub>	-1.56	0.00	0.00	0.00 ⊳	0.00	66.69	CO 1
				Min M <sub>v</sub> <	-1.56	0.00	0.00	0.00 ⊳	0.00	66.69	
				Max M <sub>z</sub>	-3.63	0.00	0.00	0.00	0.00 ⊳	155.75	
				Min Mz	-3.50	-0.76	0.00	0.00	0.00 ⊳	54.85	CO 2
		9	1.000	Max N	▶ -1.56	4.05	0.00	0.00	0.00	64.67	CO 1
			7 / / /	Min N	⊳ -5.11	6.88	0.00	0.00	0.00	121.05	CO 3
				Max V√	-3.61	⊳ 9.45	0.00	0.00	0.00	151.02	CO 4
				Min √y	-3.50		0.00	0.00	0.00	53.88	CO 2
				/ Max V <sub>z</sub>	-1.56	4.05	> 0.00	0.00	0.00	64.67	CO 1
				Min V <sub>z</sub>	-1.56	4.05	> 0.00	0.00	0.00	64.67	CO 1
			7	Max M <sub>T</sub>	-1.56	4.05	0.00	▶ 0.00	0.00	64.67	CO 1
			4	Min M <sub>T</sub>	-1.56		0.00		0.00	64.67	
				Max M <sub>v</sub>	-1,56	4.05	0.00	0.00 ⊳	0.00	64.67	CO 1
				Min M <sub>v</sub>	-1.56	4.05	0.00	0.00 ⊳	0.00	64.67	
				Max M <sub>z</sub>	(-3.61)	9.45	0.00	0.00	0.00 ⊳	151.02	
				Min Mz	-3.50	2.69	0.00	0.00	0.00 ⊳	53.88	
	RC2	10	0.000	Max N	▶ / -1.15		0.00	0.00	0.00	49.39	CO 6
				Min N	▶	-0.51	0.00	0.00 0.00	0.00	94.24	CO 8
				Max V <sub>v</sub>	-2,69	0.00	0.00	0.00	0.00	115.32	CO 9
				Min V <sub>v</sub>	-3.68/	→ / -0.51	0.00	0.00	0.00	94.24	CO 8
				Max V <sub>z</sub>	-1.15	0.00	> 0.00	0.00	0.00	49.39	CO 6
				Min V <sub>z</sub>	-1(15			0.00	0.00	49.39	CO 6
				Max M <sub>T</sub>	-1.15		0.00		0.00	49.39	
				Min M <sub>T</sub>	-1.15	0.00	0.00		0.00	49.39	CO 6
				Max M <sub>v</sub>	-1.15	0.00	0.00	0.00 ⊳	0.00	49.39	
				Min M <sub>v</sub>	-1.15	0.00	0.00	0.00 ⊳	0.00	49.39	
				Max M <sub>z</sub>	-2.69	0.00	0.00	0.00	0.00 ⊳	115.32	
				Min M <sub>z</sub>	-2.61	-0.50	0.00	0.00	0.00 ⊳	48.09	CO 7
		9	1.000	Max N	▶ -1.15	3.00	0.00	0.00	0.00	47.89	CO 6
				Min N	⊳ -3.68	5.29	0.00	0.00	0.00	91.85	CO 8
				Max V <sub>v</sub>	-2.68	⊳ 7.00	0.00	0.00	0.00	111.82	CO 9
				Min V <sub>v</sub>	-2.61	⊳ 2.50	0,00	0.00	0.00	47.09	CO 7
				Max V <sub>z</sub>	-1.15	3.00	> / 0.00	0.00	0.00	47.89	CO 6
				Min V <sub>z</sub>	-1.15	3.00	> 0,00	0.00	0.00	47.89	CO 6
				Max M <sub>T</sub>	-1.15		0.00	▶ 0.00	0.00	47.89	
				Min M <sub>T</sub>	-1.15	3.00	0.00		0.00	47.89	
				Max M <sub>v</sub>	-1.15	3.00	0.00	0.00 ▷	0.00	47.89	CO 6
				Min M <sub>v</sub>	-1.15	3.00	0.00	0.00	0.00	47.89	CO 6
				Max M <sub>z</sub>	-2.68	7.00	0.00	0.00	0.00	111.82	CO 9
				Min M <sub>z</sub>	-2.61	2.50	0.00	0.00	0.00 >	47.09	CO 7
	RC3	10	0.000	Max N	▶ -1.15	0.00	0.00	0.00	0.00	49.39	CO 7 CO 11 CO 14
				Min N	D -1.15 D -1.77	0.00 0.00	0.00 0.00	0.00	0.00	49.39 75.75	CO 14
				Max V <sub>y</sub>	-1.77	⊳ 0.00	0.00	0,00	0.00	75.75	CO 14
				Min V <sub>v</sub>	-1.75	⊳ -0.10	0.00	0.00	0.00	62.31	CO 13
				Max V <sub>z</sub>	-1.15	0.00	> 0.00	0.00	0.00	49.39	CO 11
				Min V <sub>z</sub>	-1.15		> 0.00	0.00	0.00	49.39	
				Max M <sub>T</sub>	-1.15	0.00	0.00	⊳ 0.00	0.00	49.39	CO 11
				Min M <sub>T</sub>	-1.15		0.00		0.00	49.39	
				Max M <sub>v</sub>	-1.15		0.00	0.00	0.00	40.00	CO 11

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Project: Assignment Week 6 Model: B3\_Frame

	Result	Combinations
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4.12 CR	OSS-SECTI	ONS - INTE	RNAL FORC	ES									Re	sult Combination
Member /		Node	Location				Forces [kN]				Moments [kN	m]		Corresponding
No.	RC	No.	x [m]		N	1	$V_y$	$V_z$		$M_{T}$	M <sub>y</sub>		$M_z$	Load Cases
8	RC3			Min M <sub>y</sub>		-1.15	0.00	0.	00	0.00	⊳	0.00		CO 11
				Max M <sub>z</sub>		-1.77	0.00	0.	00	0.00		0.00	⊳ 75.75	
			/ / ~	Min M <sub>z</sub>		-1.45	-0.10		00	0.00		0.00	→ 49.13	
		/ / 9 /	1.000	Max N	⊳	-1.15	3.00	0.		0.00		0.00	47.89	CO 11
				Min N	⊳	-1.77	4.60	0.	00	0.00		0.00	73.45 73.45	CO 14
				Max V <sub>y</sub>	h	-1.77 ⊳	4.60	0.		0.00		0.00		
				Min V <sub>y</sub>	/	-1.44 ⊳	2.90	-0.		0.00		0.00	47.73	
				Max V <sub>z</sub>		-1.15	3.00		00	0.00		0.00		CO 11
			= / / /	Min V <sub>z</sub>		-1.44	2.90	· -0.		0.00		0.00	47.73	CO 12
				Max M <sub>T</sub>		-1.15	3.00		00 >	0.00		0.00		CO 11
				Min M <sub>T</sub>		-1.15	3.00		00 >	0.00		0.00	47.89	CO 11
				Max M <sub>y</sub>		-1.44	2.90	-0.		0.00		0.00		CO 12
				Min M <sub>y</sub>		-1.15	3.00		00	0.00	▷	0.00		CO 11
				Max M <sub>z</sub>		-1.77	4.60		00	0.00		0.00		CO 14
				Min M <sub>z</sub>		-1.44	2.90	-0.		0.00		0.00		CO 12
	RC4	10	0.000	Max/N		-1.15	0.00	0.		0.00		0.00	49.39	CO 15
				Min N Max V <sub>v</sub>		-1.46 -1.46 ▷	0.00 0.00		00	0.00		0.00	62.57	CO 16 CO 16
				Min V <sub>v</sub>	/	-1.40 D	0.00	0.	00	0.00 0.00		0.00		
				Max V <sub>z</sub>			0.00	0.					49.39	00 15
						-1.15	0.00		00	0.00		0.00	49.39	
				Min V <sub>z</sub>		-1.15				0.00		0.00	49.39	
				Max M <sub>T</sub>	$\sim$ /	-1.15	0.00		00  >					CO 15
				Min M <sub>T</sub> Max M <sub>v</sub>		-1/15	0.00		00 Þ	0.00		0.00	49.39 49.39	
					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	-1.15 -1.15				0.00		0.00		
				Min M <sub>y</sub>		-1./5	0.00		00		D		49.39	
				Max M <sub>z</sub>		-1(46	0.00		00	0.00		0.00		
		9	1.000	Min M <sub>z</sub>		-1.15	0.00		00	0.00		0.00		
		9	1.000	Max N Min N		-1.15 -1.46	3.00		00	0.00 0.00		0.00	60.67	
				Max V <sub>v</sub>		-1.46 Þ	3.80	0.		0.00		0.00		CO 16
				Min V <sub>v</sub>		-1.15 Þ	3.00	0.		0.00		0.00		CO 15
				Max V <sub>z</sub>		-1.15	3.00	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	00	0.00		0.00		CO 15
				Min V <sub>z</sub>		-1.15	3.00		00	0.00		0.00		CO 15
				Max M <sub>T</sub>		-1.15	3.00		00 Þ	0.00		0.00		CO 15
				Min M <sub>T</sub>		-1.15	3.00		00	0.00		0.00	47.89	
				Max M <sub>v</sub>		-1.15	3.00		00	0.00	Ь	0.00		CO 15
				Min M <sub>v</sub>		-1.15	3.00		00	0.00		0.00	47.89	
				Max M <sub>z</sub>		-1.46	3.80		00	0.00		0.00		
				Min M <sub>z</sub>		-1.15	3.00		00	0.00		0.00		
9	RC1	11	0.000	Max N	<b>&gt;</b>	-1.56	-4.05	0.		0.00		0.00	64.67	
Ĭ	1.0.	• • •	0.000	Min N	<b>&gt;</b>	-5.11	-8.43	0.	00	0.00		0.00	119.50	CO 3
				Max V <sub>v</sub>		-1.56 ⊳	-4.05		00	0.00		0.00	64.67	CO 1
				Min V <sub>v</sub>		-4.92 ⊳	-9.93	0.	00	0.00		0.00	149.39	
				Max V <sub>z</sub>		-1.56	-4.05	<b>O</b> .	00	0.00		0.00	64.67	CO 1
				Min V <sub>z</sub>		-1.56	-4.05	<b>)</b>	00	0.00		0.00	64.67	CO 1
				Max M <sub>T</sub>		-1.56	-4.05		00 ⊳	0.00		0.00/	64.67	CO 1
				Min M <sub>T</sub>		-1.56	-4.05	0.	00  >	0,00		0.00	64.67	CO 1
				Max M <sub>v</sub>		-1.56	-4.05		00	0.00		0.00	64.67	CO 1
				Min M <sub>v</sub>		-1.56	-4.05		00	0.00	<b>D</b>	0.00	64.67	
				Max M <sub>z</sub>		-3.61	-9.45		00	0.00		0.00		CO 4
				Min M <sub>z</sub>		-3.50	-4.21	0.		0.00		0.00	⊳ \ \52.37	CO 2
		10	1.000	Max N	⊳	-1.56	-0.00		00	0.00		0.00	/ 66.69	CO 1 CO 3
				Min N	⊳	-5.11	-0.77		00	0.00		0.00	/ /124.10	CQ 3
	-	· I	'				'				•	\ '		. /

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Project: Assignment Week 6

Model: B3\_Frame

18/10/2021 Date:

2 CRØ	\22-2\\	ONS - IN I E	ERNAL FORC	ES						Re	sult Combinat
mber /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
lo.	RC	No.	x [m]		N	$V_y$	$V_z$	M <sub>T</sub>	$M_{y}$	$M_z$	Load Cases
9 1	RC1			Max V <sub>v</sub>	-1.56	⊳ -0.00	0.00	0.00	0.00	66.69	CO 1
				Min V <sub>v</sub>	-5.11			0.00	0.00	124.10	CO 3
		///	/ / .	Max V <sub>z</sub>	-1.56	-0.00	▷ 0.00	0.00	0.00	66.69	CO 1
				Min V <sub>z</sub>	-1.56	-0.00	▷ 0.00	0.00	0.00	66.69	CO 1
				Max M <sub>T</sub>	-1.56	-0.00	0.00	⊳ 0.00	0.00	66.69	CO 1
				Min M <sub>T</sub>	-1.56	-0.00	0.00	⊳ 0.00	0.00	66.69	CO 1
		/ /		Max M <sub>v</sub>	-1.56		0.00	0.00	> 0.00	66.69	CO 1
				Min My	-1.56	-0.00	0.00	0.00	> 0.00	66.69	CO 1
				Max M <sub>z</sub>	-3.63	-0.00	0.00	0.00	0.00 ⊳	155.75	CO 4
			[/ / / ]	Min M <sub>z</sub>	-3.50			0.00	0.00 ⊳	54.85	CO 2
F	RC2	11	0.000	Max N∕	▶ -1.15		0.00	0.00	0.00	47.89	CO 6
				Min N	→ -3.68	-6.31	0.00	0.00	0.00	90.82	I CO 8
				/ Max V <sub>y</sub>	-1.15		0.00	0.00	0.00	47.89	CO 6
				Min V <sub>y</sub>	-3.55		0.00	0.00	0.00	110.73	CO 10
				Max V <sub>z</sub>	-3.55			0.00	0.00	110.73	CO 10
			4	Min V <sub>z</sub>	-1.15			0.00	0.00	47.89	
				Max M <sub>T</sub>	-1/15		0.00	▶ 0.00	0.00	47.89	CO 6
				Min M <sub>T</sub>	-1.15			▶ 0.00	0.00	47.89	
				Max M <sub>y</sub>	-3.55		0.00	0.00		110.73	
				Min M <sub>y</sub>	-1.15		0.00	0.00		47.89	
				Max M <sub>z</sub>	-2.68		0.00	0.00	0.00	111.82	CO 9
		40	4 000	Min M <sub>z</sub>	-2.60		0.00	0.00	0.00	46.09	
		10	1.000	Max N	D -1.15 D -3.68		0.00	0.00 0.00	0.00	49.39	CO 6 CO 8
				Min N Max V <sub>v</sub>	-1.15	-0.00	0.00	0.00	0.00	49.39	CO 6
				Min V <sub>v</sub>	-3.68	→ -0.00 → -0.51	0.00	0.00	0.00		CO 8
				Max V <sub>z</sub>	-1.15			0.00	0.00	49.39	
				Min V <sub>z</sub>	-1.15			0.00	0.00	49.39	
				Max M <sub>T</sub>	-1.15		0.00	▶ 0.00	0.00	49.39	
				Min M <sub>T</sub>	-1.15			D 0.00 D 0.00	0.00		CO 6
				Max M <sub>v</sub>	-1.15		0.00	0.00		49.39	CO 6
				Min M <sub>v</sub>	-1.15			0.00		49.39	
				Max M <sub>z</sub>	-2.69		0.00	0.00	0.00	115.32	CO 9
				Min M <sub>z</sub>	-2.61			0.00	0.00	48.09	CO 7
	RC3	11	0.000	Max N	► -1.15			0.00	0.00		CO 11
	1100		0.000	Min N	D -1.77		0.00	0.00	0.00	73.45	CO 14
				Max V <sub>v</sub>	-1.15	⊳ -3.00	0.00	0.00	0.00	47.89	CO 11
				Min V <sub>v</sub>	-1.77		0.00	0.00	0.00	73.45	CO 14
				Max V <sub>z</sub>	-1.44	-3.10	0.00	0.00	0.00	47.53	CO 12
				Min V <sub>z</sub>	-1.15			0.00	0.00		CO 11
				Max M <sub>T</sub>	-1.15	-3.00	0.00	0.00	0.00	47.89	
				Min M <sub>T</sub>	-1.15	-3.00	0.00	D 0.00	0.00		CO 11
				Max M <sub>v</sub>	-1.44	-3.10		0.00		47.53	CO 12
				Min M <sub>v</sub>	-1.15	-3.00	0.00	0.00	>\ \ _0.00	47.89	CO 11
				Max M <sub>z</sub>	-1.77	-4.60	0.00	9.00	0.00 ▷	73.45	CO 14
				Min M <sub>z</sub>	-1.44	-3.10	0.00	0.00	\ \ \ 0.00 ▷	47.53	CO 12
		10	1.000	Max N	▶ -1.15		0.00	0.00	) / 0,00	49.39	CO 11
				Min N	▶ -1.77		0.00	0.00	0.00		CO 14
				Max V <sub>y</sub>	-1.15		0.00	0.00	/ /0.00	49.39	
				Min V <sub>y</sub>	-1.75			0.00	0.00	62.31	
				Max V <sub>z</sub>	-1.15			0.00	0.00	49.39	CO 11
				Min V <sub>z</sub>	-1.15			0.00	0.00		CO 11
				Max M <sub>T</sub>	-1.15	-0.00	0.00	▶ 0.00	0.00	/ / 49.39	CO 11

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Project: Assignment Week 6

Model: B3\_Frame

4.12 CR	OSS-SECT	IONS - INTĘ	RNAL FORC	ES						Re	sult Combination
Member /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	No.	x [m]		N	$V_y$	$V_z$	M <sub>T</sub>	$M_{y}$	$M_z$	Load Cases
9	RC3	/ / 📉		Min M <sub>T</sub>	-1.15	-0.00	0.00	▷ 0.00	0.00	49.39	CO 11
				Max M <sub>y</sub>	-1.15	-0.00	0.00	0.00 >	0.00	49.39	CO 11
		///	/ / ^	Min M <sub>y</sub>	-1.15	-0.00	0.00	0.00 ⊳	0.00	49.39	CO 11
				Max M <sub>z</sub>	-1.77	-0.00	0.00	0.00	0.00		CO 14
				Min M <sub>z</sub>	-1.45	-0.10	0.00	0.00	0.00	> 49.13	CO 12
	RC4	TH /	0.000	Max N	-1.15	-3.00	0.00	0.00	0.00	47.89	CO 15
				Min N	-1.46	-3.80	0.00	0.00	0.00	60.67	CO 16
				Max V <sub>y</sub>	-1.15		0.00	0.00	0.00	47.89	CO 15
			7 / / A	Min V <sub>y</sub> Max V <sub>z</sub>	-1.46 -1.15	> -3.80 -3.00	0.00 ▶ 0.00	0.00	0.00	60.67	CO 16 CO 15
			/ ( / /	Min V <sub>2</sub>		-3.00 -3.00	D 0.00 D 0.00	0.00	0.00 0.00	47.89 47.89	CO 15
				Max M <sub>T</sub>	-1.15 -1.15	-3.00	0.00	0.00  ▶ 0.00	0.00	47.09	CO 15
				Min M <sub>T</sub>	-1.15	-3.00	0.00		0.00	47.89	CO 15
				Max M <sub>v</sub>	-1.15	-3.00	0.00	0.00	0.00	47.89	
				Min My	-1.15	-3.00	0.00	0.00	0.00	47.89	CO 15
				Max M <sub>z</sub>	-1.15	-3.80	0.00	0.00	0.00	> 60.67	CO 16
				Min M <sub>z</sub>	-1,40	-3.00	0.00	0.00	0.00	> 47.89	CO 15
		10	1.000	Max N	→ -1.15	-0.00	0.00	0.00	0.00	49.39	CO 15
		10	1.000	Min N	D (-1.46	-0.00	0.00 0.00	0.00	0.00 0.00 0.00	62.57	CO 15 CO 16 CO 15 CO 16
				Max V <sub>v</sub>	-1.15	70.00	0.00	0.00	0.00	49.39	CO 15
				Min V <sub>v</sub>	-1.46	-0.00	0.00	0.00	0.00	62.57	CO 16
				Max V <sub>z</sub>	-1.15	-0.00	▶ 0.00	0.00	0.00		CO 15
				Min V <sub>z</sub>	-1/15	-0.00	▶ 0.00	0.00	0.00	49.39	CO 15
				Max M <sub>T</sub>	-1.15/	-0.00	0.00	▶ 0.00	0.00	49.39	CO 15
				Min M <sub>T</sub>	-1.15	-0.00	0.00	▶ 0.00	0.00	49.39	CO 15
				Max M <sub>v</sub>	-1(15	-0.00	0.00	0.00 >	0.00	49.39	CO 15
				Min M <sub>v</sub>	-1.15	-0.00	0.00	0.00 >	0.00	49.39	CO 15
				Max M <sub>z</sub>	-1.46	-0.00	0.00	0.00	0.00	> 62.57	CO 16
				Min M <sub>z</sub>	-1.15	-0.00	0.00	0.00	0.00	> 49.39	CO 15
10	RC1	12	0.000	Max N	▶ -1.55	-8.10	0.00	0.00	0.00	58.59	CO 1 CO 3
				Min N	⊳ -5.08 -3.50	-16.08	0.00	0.00	0.00	107.24	CO 3
				Max V <sub>y</sub>	-3.50	> -7.66	0.00	0.00	0.00	46.44	CO 2
				Min V <sub>y</sub>	-4.89	▶ -19.38	0.00	0.00	0.00	134.73	CO 5
				Max V <sub>z</sub>	-5.08	-16.08	0.00	0.00	0.00	107.24	CO 3
				Min V <sub>z</sub>	-3.50	-7.66	0.00	0.00	0.00	46.44	CO 2
				Max M <sub>⊤</sub>	-1.55	-8.10	0.00		0.00	58.59	CO 1
				Min M <sub>T</sub>	-1.55	-8.10	0.00		0.00	58.59	CO 1
				Max M <sub>y</sub>	-5.08	-16.08 -7.66	0.00	0.00 >	0.00 0.00	107.24	CO 3 CO 2
				Min M <sub>y</sub>	-3.50 -3.58		0.00		0.00	46.44	CO 2
				Max M <sub>z</sub>	-3.58	-18.91	0.00	0.00			
		11	1.000	Min M <sub>z</sub> Max N	-3.50 > -1.56	-7.66 -4.05		0.00	0.00	46.44 64.67	CO 2
		11	1.000	Min N	→ -1.56 → -5.11	-4.05 -8.43	0.00 0.00	0.00	0.00	119.50	CO 1 CO 3
				Max V <sub>v</sub>	-1.56	→ -4.05	0.00	0.00	0.00	64.67	CO 1
				Min V <sub>v</sub>	-4.92	→ -9.93	0.00	0.00	0.00	149.39	CO 5
				Max V <sub>z</sub>	-1.56	-4.05	▶ 0.00	0.00	0.00	64.67	CO 1
				Min V <sub>z</sub>	-1.56	-4.05	D.00	0,00	0.00	64.67	CO 1
				Max M <sub>T</sub>	-1.56	-4.05	0.00		0.00	64.67	CO 1
				Min M <sub>T</sub>	-1.56	-4.05	0.00		0.00	64.67	CO 1
				Max M <sub>v</sub>	-1.56	-4.05	0.00	0.00	0.00	64.67	CO 1
				Min M <sub>v</sub>	-1.56	-4.05	0.00	0.00	0.00	64.67	CO 1
				Max M <sub>z</sub>	-3.61	-9.45	0.00	0.00	0.00	151.02	CO 4
				Min M <sub>z</sub>	-3.50	-4.21	0.00	0.00	0.00	52.37	CQ 2

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Project: Assignment Week 6

Model: B3\_Frame

mber /		Node /	Location			Forces [kN]			Moments [kNm]		Corresponding
10.	RC	No.	x [m]		N	V <sub>V</sub>	$V_z$	M <sub>T</sub>	M <sub>y</sub>	$M_z$	Load Cases
10	RC2	12	0.000	Max N	▶ -1.15		0.00		0.00		CO 6
10	RGZ /	/ 12/	0.000	Min N	→ -3.66	-12.12	0.00	0.00	0.00	43.39	CO 8
				Max V <sub>v</sub>	-1.15	→ -6.00	0.00		0.00	43.39	CO 6
				Min V <sub>v</sub>	-3.54	<ul><li>→ -14.31</li></ul>	0.00		0.00	99.92	
				Max V <sub>z</sub>	-2.67	-14.00	D.00 D.00		0.00	101.32	
				Min V <sub>z</sub>	-1.15			0.00	0.00	43.39	
				Max M <sub>T</sub>	-1.15	-6.00	0.00		0.00	43.39	
				Min M <sub>T</sub>	-1.15		0.00		0.00	43.39	
				Max My	-2.67	-14.00	0.00		0.00	101.32	
			7///	Min M <sub>v</sub>	-1.15		0.00		0.00		
				Max M₂	-2.67	-14.00	0.00		0.00	▶ 101.32	
				Min M <sub>z</sub>	-2.60		0.00	0.00	0.00	▶ 41.08	
		11	1.000	Max N	-1.15	-3.00	0.00 0.00 0.00	0.00	0.00	47.89	CO 6
				Min N	-3.68	-6.31	0.00	0.00	0.00 0.00	90.82	CO 8
				Max V <sub>y</sub> /	-1.15	⊳ -3.00	0.00	0.00	0.00	47.89	CO 6
				Min $V_y$	-3.55		0.00	0.00	0.00	110.73	CO 10
				Max V <sub>z</sub>	-3;55	-7.31	▷ 0.00	0.00	0.00	110.73	CO 10
				Min V <sub>z</sub>	-1.15		▶ 0.00		0.00		
				Max M <sub>T</sub>	/-1.15	-3.00	0.00	▷ 0.00	0.00	47.89	
				Min M <sub>T</sub>	-1.15		0.00		0.00	47.89	CO 6
				Max M <sub>y</sub>	-3.55	/-7.31	0.00	0.00	0.00		
				Min M <sub>y</sub>	-1.15		0.00		0.00	47.89	
				Max M <sub>z</sub>	-2,68		0.00	0.00	0.00	▶ 111.82	CO 9
				Min M <sub>z</sub>	-2.60/	-3.50	0.00		0.00	▶ 46.09	CO 7
	RC3	12	0.000	Max N	► -1.1/5	-6.00	0.00	0.00	0.00 0.00	43.39	CO 11 CO 14
				Min N	▶ -1(76	-9.20	0.00	0.00	0.00	66.55	CO 14
				Max V <sub>y</sub>	-1.35		0.00	0.00	0.00	43.39	CO 11
				Min V <sub>y</sub>	-1.76		0.00		0.00	66.55	CO 14
				Max V <sub>z</sub>	-1.44	-6.10	0.00		0.00	42.93	CO 12
				Min V <sub>z</sub>	-1.15		0.00		0.00	43.39	CO 11
				Max M <sub>T</sub>	-1.15		0.00	▶ 0.00	0.00	43.39	CO 11
				Min M <sub>⊤</sub>	-1.15	-6.00	0.00		0.00	43.39	CO 11
				Max M <sub>y</sub>	-1.44	-6.10	0.00	0.00	0.00	42.93	CO 12
				Min M <sub>y</sub>	-1.15		0.00			43.39	CO 11
				Max M <sub>z</sub>	-1.76		0.00		0.00	▶ 66.55	CO 14
		44	4 000	Min M <sub>z</sub>	-1.44	-6.10	0.00		0.00		CO 12
		11	1.000	Max N	► -1.15 ► -1.77	-3.00	0.00	0.00	0.00 0.00 0.00	47.89	CO 11
				Min N Max V <sub>v</sub>	-1.77	-4.60 > -3.00	0.00	0.00	0.00	/3.45 //7.80	CO 14 CO 11
				Min V <sub>v</sub>	-1.77	→ -4.60	0.00	0.00	0.00	73.45	CO 14
				Max V <sub>2</sub>	-1.44	-3.10			0.00	47.53	CO 12
				Min V <sub>z</sub>	-1.44	-3.10			0.00	47.89	CO 12
				Max M <sub>T</sub>	-1.15		0.00	0.00	0.00	47.89	CO 11
				Min M <sub>T</sub>	-1.15		0.00		0.00	47.89	
				Max M <sub>v</sub>	-1.44	-3.10	0.00	0.00	0.00	77.53	CO 12
				Min M <sub>v</sub>	-1.44		0.00	0.00	0.00	47.89	CO 12
				Max M <sub>z</sub>	-1.15	-3.00 -4.60	0.00		0.00	→ 73.45	CO 11
				Min M <sub>z</sub>	-1.77	-4.60 -3.10	0.00	0.00	0.00	> 73.45 > 47.53	CO 14
	RC4	12	0.000	Max N	-1.44 ▶ -1.15		0.00	0.00	0.00	47.53	CO 12
	NO4	12	0.000	Min N	► -1.15 ► -1.46		0.00	0.00	0.00	43.39	CO 15 CO 16
				Max V <sub>v</sub>	-1.46		0.00	0.00	0.00	43.39	CO 16
				Min V <sub>v</sub>	-1.46		0.00		0.00	54.97	CO 16
				Max V <sub>z</sub>	-1.46				0.00		CO 16

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Project: Assignment Week 6

Model: B3\_Frame

hor /		Node	Location			Eoroca (IANI)		N 4	nts [kNm]		sult Combina Correspondir
ber						Forces [kN]	<b>\</b> /				
). <u>`</u>	RC	No.	x [m]		N	$V_y$	V <sub>z</sub>		M <sub>y</sub>	M <sub>z</sub>	Load Cases
)	RC4	/ / 1		$Min V_z$	-1.15		▶ 0.00	0.00	0.00		CO 15
			>	Max M <sub>T</sub>	-1.15		0.00		0.00		CO 15
		1//		Min M <sub>T</sub>	-1.15		0.00		0.00	43.39	CO 15
				Max M <sub>y</sub>	-1.46		0.00	0.00 ⊳	0.00	54.97	
			/ /	Min M <sub>y</sub>	-1.15		0.00	0.00 ⊳	0.00	43.39	
			/ /	Max M <sub>z</sub>	-1.46		0.00	0.00	0.00 ⊳	54.97	
				Min M <sub>z</sub> /	-1.15		0.00	0.00	0.00	43.39	CO 15
ļ		11 \	1.000	Max N	<b>→</b> -1.15		0.00	0.00	0.00	47.89	
			7 / /	Min N	→ -1.46		0.00	0.00	0.00	60.67	CO 16
		1	′ / / /	Max V <sub>y</sub>	-1.15		0.00	0.00	0.00	47.89	CO 15
				Min V <sub>y</sub> ∕	-1.46	> -3.80	0.00	0.00	0.00	60.67	
				Max V <sub>z</sub>	-1.15			0.00	0.00	47.89	
			\ \	/ Min Vz	-1.15		▶ 0.00	0.00	0.00	47.89	
				Max M <sub>T</sub>	-1.15		0.00		0.00	47.89	
			7	Min M <sub>T</sub>	-1.15		0.00		0.00	47.89	CO 15
			4	Max M <sub>y</sub>	-1.15		0.00	0.00 ⊳	0.00	47.89	
				Min M <sub>y</sub>	-1/15		0.00	0.00 ⊳	0.00	47.89	
				Max M <sub>z</sub>	4.46		0.00	0.00	0.00 ⊳	60.67	
ĺ				Min M <sub>z</sub>	/ /-1.15		0.00	0.00	0.00 ⊳	47.89	CO 15
1	RC1	13	0.000	Max N	D / -1.54	12.15	0.00	0.00	0.00	48.46	CO 1
ĺ				Min N			0.00	0.00	0.00	87.33	CO 3
				Max V <sub>y</sub>	-3.49		0.00	0.00	0.00	37.05	
				Min V <sub>y</sub>	-4,84		0.00	0.00	0.00	110.62	
				Max V <sub>z</sub>	-1.54	-12.15		0.00	0.00	48.46	
				Min V <sub>z</sub>	-1.54	-12.15	⊳ 0.00	0.00	0.00	48.46	CO 1
l				Max M <sub>T</sub>	-1/54	-12.15	△ 0.00	▶ 0.00	0.00	48.46	CO 1
				Min M <sub>T</sub>	-1.54	-12.15	0.00	▶ 0.00	0.00	48.46	CO 1
				Max M <sub>v</sub>	-1.54	-12.15	0.00	0.00 ⊳	0.00	48.46	CO 1
ľ				Min M <sub>v</sub>	-1.54	-12.15	0.00	0.00 >	0.00	48.46	CO 1
				Max M <sub>2</sub>	-3.53		0.00	0.00	0.00 ⊳	113.21	
				Min M <sub>z</sub>	-3.49		0.00	0.00	0.00 ⊳	37.05	
		12	1.000	Max N	▶ -1.55		0.00	0.00	0.00	58.59	
ľ				Min N	⊳ -5.08	-16.08	0.00	0.00	0.00	107.24	CO 3
i				Max V <sub>v</sub>	⊳ -5.08 -3.50	⊳ -7.66	0.00	0.00	0.00	46.44	CO 3 CO 2
				Min V <sub>v</sub>	-4.89		0.00	0.00	0.00	134.73	
i				Max V <sub>z</sub>	-5.08	-16.08	0.00	0.00	0.00	107.24	CO 3
				Min V <sub>z</sub>	-3.50		D 0.00	0.00	0.00	46.44	
				Max M <sub>T</sub>	-1.55		0.00		0.00	58.59	
ľ				Min M <sub>T</sub>	-1.55		0.00		0.00	58.59	
				Max M <sub>v</sub>	-5.08		0.00		0.00	107.24	
				Min M <sub>v</sub>	-3.50		0.00	0.00	0.00	46.44	
				Max M <sub>z</sub>	-3.58		0.00	0.00	0.00	136.84	
				Min M <sub>z</sub>	-3.50		0.00	0.00	0.00	46.44	
	RC2	13	0.000	Max N	→ -1.15		0.00	0.00	0.00	35.89	
		10	3.300	Min N	> -3.65		0.00	0.00	0.00	66.59	CO 8
				Max V <sub>v</sub>	-1.15	▶ -9.00	0.00	0.00	0.00	35.89	
				Min V <sub>v</sub>	-3.51		0.00	0.00	0.00	82.10	
				Max V <sub>2</sub>	-2.64			0.00	0.00	83.81	
				Min V <sub>2</sub>	-1.15		<ul><li>0.00</li><li>0.00</li></ul>	0.00	0.00	35.89	
				Max M <sub>T</sub>	-1.15		0.00		0.00	35.89	
				Min M <sub>T</sub>	-1.15		0.00		0.00	35.89	
				Max M <sub>v</sub>	-2.64		0.00	0.00	0.00	83.81	
				Min M <sub>v</sub>	-2.04		0.00	0.00	0.00	03.01	CO 6

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Project: Assignment Week 6 Model: B3\_Frame Date: 18/10/2021

Result	Combinations

	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	J. 1	RNAL FORC							175	sult Combination
Member /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC RC	Nø.	x [m]		N	$V_y$	V <sub>z</sub>	M <sub>T</sub>	$M_{y}$	$M_z$	Load Cases
11	RC2	// /		Max M <sub>z</sub>	-2.64	-21.01	0.00	0.00	0.00 ⊳		CO 9
				Min M <sub>z</sub>	-2.60	-9.51	0.00	0.00	0.00 ⊳	33.08	CO 7
		/ /12	1.000	Max N	▶ -1.15	-6.00	0.00	0.00	0.00	43.39	CO 6
				Min N	⊳ -3.66	-12.12	0.00	0.00	0.00	81.61	CO 8
				Max V <sub>y</sub>	-1.15		0.00	0.00	0.00	43.39	CO 6
			/ /	Min V <sub>y</sub>	-3.54		0.00	0.00	0.00		CO 10
				Max V <sub>z</sub>	-2.67	-14.00		0.00	0.00	101.32	CO 9
				Min V <sub>z</sub>	-1.15	-6.00		0.00	0.00	43.39	
			= / / $X$	Max M <sub>T</sub>	-1.15	-6.00	0.00		0.00	43.39	CO 6
			7 / / /	Min M <sub>T</sub>	-1.15	-6.00	0.00		0.00	43.39	CO 6
				Max M√	-2.67	-14.00	0.00	0.00	0.00	101.32	CO 9
				Min M <sub>y</sub>	-1.15	-6.00	0.00	0.00		43.39	CO 6
			\ \	/ Max M <sub>z</sub>	-2.67	-14.00	0.00	0.00	0.00 ⊳	101.32	
				/ Min M <sub>z</sub> / <	-2.60	-6.51	0.00	0.00	0.00 ⊳	41.08	CO 7
	RC3	13	0.000	/Max N/	-1.15	-9.00	0.00	0.00	0.00	35.89	CO 11
			4		-1.75	-13.80	0.00	0.00	0.00		CO 14
				Max V <sub>y</sub>	7-1,15		0.00	0.00	0.00	35.89	CO 11
				Min V <sub>y</sub>	/ -1.75		0.00	0.00	0.00		CO 14
				Max V <sub>z</sub>	/ -1.15	-9.00	▶ 0.00	0.00	0.00	35.89	CO 11
				Min V <sub>z</sub>	/ -1.15	79.00		0.00	0.00		CO 11
				Max M <sub>T</sub>	/ / -1.15	/-9.00	0.00		0.00		CO 11
				Min M <sub>T</sub>	-1.15	-9.00	0.00	> 0.00	0.00		CO 11
				Max M <sub>y</sub>	-1/15	-9.00	0.00	0.00			CO 11
				Min M <sub>y</sub>	-1.15/	-9.00	0.00	0.00	0.00	35.89	CO 11
				Max M <sub>z</sub>	-1.75	-13.80	0.00	0.00	0.00	55.05	CO 14
				Min M <sub>z</sub>	-1(44	-9.10	0.00	0.00	0.00 ⊳	35.33	CO 12
		12	1.000	Max N	-1.35	-6.00	0.00	0.00	0.00	43.39	CO 11
				Min N	▶ -1.76	-9.20	0.00	0.00	0.00		CO 14
				Max V <sub>y</sub>	-1.15		/ / 0.00	0.00	0.00	43.39	CO 11
				Min V <sub>y</sub>	-1.76		/ / <0.00	0.00	0.00		CO 14
				Max V <sub>z</sub>	-1.44	-6.10	▷ / / / 0.00	0.00	0.00		CO 12
				Min V <sub>z</sub>	-1.15	-6.00		0.00	0.00		CO 11
				Max M <sub>T</sub>	-1.15	-6.00	0.00	0.00	0.00		CO 11
				Min M <sub>T</sub>	-1.15	-6.00	0.00		0.00		CO 11
				Max M <sub>v</sub>	-1.44	-6.10	0.00	0.00	0.00	42.93	CO 12
				Min M <sub>v</sub>	-1.15	-6.00	0.00	0.00	0.00	43.39	CO 11
				Max M <sub>z</sub>	-1.76	-9.20	0.00	0.00	0.00 ⊳	66.55	CO 14
				Min M <sub>z</sub>	-1.44	-6.10	0.00	0.00	0.00 ⊳	42.93	CO 12
	RC4	13	0.000	Max N	▶ -1.15	-9.00	0.00	0.00	0.00	35.89	CO 15
				Min N	▶ -1.45	-11.40	0.00	0.00	0.00	45.47	CO 16
				Max V <sub>y</sub>	-1.15		0.00	0.00	0.00	35.89	CO 15
				Min V <sub>v</sub>	-1.45	-11.40	0.00	0.00	0.00	45.47	
				Max V <sub>z</sub>	-1.45	-11.40	▶ 0.00	0.00	0.00	45.47	CO 16
				Min V <sub>z</sub>	-1.15	-9.00	▶ 0.00	0.00	_0.00	35.89	CO 15
				Max M <sub>T</sub>	-1.15	-9.00	0.00		0.00	35.89	CO 15
				Min M <sub>T</sub>	-1.15	-9.00	0.00		0.00	35.89	CO 15
				Max M <sub>v</sub>	-1.45	-11.40	0.00	0,00	0.00	45.47	CO 16
				Min M <sub>v</sub>	-1.15	-9.00	0.00	0.00	0.00	35.89	CO 15
				Max M <sub>z</sub>	-1.45	-11.40	0.00	0.00	0.00 ▶	45.47	CO 16
				Min M <sub>z</sub>	-1.15	-9.00	0.00	0.00	0.00 ⊳	35.89	CO 15
		12	1.000	Max N	▶ -1.15	-6.00	0.00	0.00	0.00	43.39	CO 15
		.=	000	Min N	⊳ -1.46	-7.60	0.00	0.00	0.00	54.97	CO 16
				Max V <sub>v</sub>	-1.15		0.00	0.00	0.00	/ /13 30	CO 15

Metsälinnunreitti 2 L121, 02660 Espoo

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Project: Assignment Week 6 Model: B3\_Frame Date: 18/10/2021

Result Combinations
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	600-0FC 1/1	IONO - IN IEL	RNAL FORCE	_0						Re	sult Combination
lember /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	Nø.	x [m]		N	$V_{y}$	$V_z$	M <sub>T</sub>	$M_y$	$M_z$	Load Cases
11	RC4			Min V <sub>v</sub>	-1.46	⊳ -7.60	0.00	0.00	0.00	54.97	CO 16
				Max V <sub>z</sub>	-1.46			0.00	0.00		CO 16
			/ ^	Min V <sub>z</sub>	-1.15	-6.00	▶ 0.00	0.00	0.00	43.39	CO 15
				Max M <sub>T</sub>	-1.15	-6.00	0.00	▷ 0.00	0.00	43.39	CO 15
				Min M <sub>T</sub>	-1.15		0.00		0.00	43.39	CO 15
				Max M <sub>y</sub>	-1.46		0.00	0.00			CO 16
				Min M <sub>y</sub>	-1.15		0.00	0.00	> 0.00		CO 15
				Max M <sub>z</sub> /	-1.46		0.00	0.00	0.00		CO 16
			= $/$ $/$	Min Mz	-1.15		0.00	0.00	0.00		CO 15
12	RC1	14	0.000	Max N	▶ -1.53		0.00	0.00	0.00	34.28	
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Mîn N	⊳ -5.01	-31.39	0.00	0.00	0.00		CO 3
				Max V <sub>y</sub>	-3.48		0.00	0.00	0.00		CO 2
				Min V <sub>y</sub>	-4.78		0.00	0.00	0.00	77.06	CO 5
				Max V <sub>z</sub>	-5.01			0.00	0.00	59.76	
			7	Min V <sub>z</sub>	-1.53		▷ 0.00	0.00	0.00	34.28	CO 1
			4	Max M <sub>T</sub>	-1.53		0.00		0.00	34.28	
				Min M <sub>T</sub>	-1,53 -5.01		0.00	0.00	0.00 > 0.00	34.28 59.76	
				Max M <sub>y</sub>	-5.0 <del>1</del>		0.00	0.00	> 0.00		
				Min M <sub>y</sub> Max M <sub>z</sub>	-1.53		0.00	0.00	0.00	34.28 > 80.12	
		13	1.000	Min M <sub>z</sub> Max N	-3.48 -1.54		0.00	0.00	0.00	48.46	CO 2
		13	1.000	Min N	5,05		0.00	0.00	0.00	87.33	CO 3
				Max V <sub>v</sub>	-3.49		0.00	0.00	0.00	37.05	CO 2
				Min V <sub>v</sub>	-4.84		0.00	0.00	0.00	110.62	
				Max V <sub>z</sub>	-1.54			0.00	0.00	48.46	
				Min V <sub>z</sub>	-1.54			0.00	0.00	48.46	
				Max M <sub>T</sub>	-1.54		0.00		0.00	48.46	CO 1
				Min M <sub>T</sub>	-1.54	-12.15	0.00	▷ 0.00	0.00	48.46	
				Max M <sub>v</sub>	-1.54	-12.15	0.00	0.00	> 0.00	48.46	CO 1
				Min M <sub>v</sub>	-1.54		0.00	0.00		48.46	
				Max M <sub>z</sub>	-3.53		0.00	0.00	0.00		
				Min M <sub>z</sub>	-3.49		0.00	0.00	0.00	⊳ 37.05	
	RC2	14	0.000	Max N	▶ -1.14		0.00	0.00	0.00	25.39	CO 6
				Min N	⊳ -3.62	-23.72	0.00	0.00	0.00	45.77	
				Max V <sub>y</sub>	-1.14		0.00	0.00	0.00		CO 6
				Min V <sub>y</sub>	-3.48	▶ -28.32	0.00	0.00	0.00		CO 10
				Max V <sub>z</sub>	-3.48			0.00	0.00		CO 10
				Min V <sub>z</sub>	-2.59		0.00	0.00	0.00		CO 7
				Max M <sub>T</sub>	-1.14		0.00		0.00		CO 6
				Min M <sub>T</sub>	-1.14		0.00		0.00	25.39	CO 6
				Max M <sub>y</sub>	-3.48		0.00	0.00	0.00		CO 10
				Min M <sub>y</sub>	-2.59		0.00	0.00	0.00	22.07	CO 7
				Max M <sub>z</sub>	-2.61		0.00	0.00	0.00		
		10	1 000	Min M <sub>z</sub>	-2.59		0.00	0.00	0.00		
		13	1.000	Max N	-1.15		0.00	0.00	0.00	35.89	
				Min N Max V <sub>v</sub>	> -3.65 -1.15	-17.92 ▶ -9.00	0.00 0.00	0.00	0.00	66.59	CO 8
				Min V <sub>v</sub>	-3.51		0.00	0.00	0.00		CO 10
				Max V <sub>z</sub>	-3.51			0.00	0.00	83.81	
				Min V <sub>2</sub>	-2.04		D.00	0.00	0.00		CO 6
				Max M <sub>T</sub>	-1.15		0.00		0.00	35.89	
				Min M <sub>T</sub>	-1.15		0.00		0.00	35.89	COG
	I	1 1		INITI INIT	-1.13	-9.00	0.00	0.00	0.00	/ / 33.69	1 00 0

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Project: Assignment Week 6

Model: B3\_Frame

.12 CR	022-2ECI	<u>IONS - INTER</u>	KNAL FURU	E9						Re	sult Combination
Member /	1(	Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	Nø.	x [m]		N	$V_{y}$	V <sub>z</sub>	M <sub>T</sub>	$M_{y}$	$M_z$	Load Cases
12	RC2	/ / 1		Max M <sub>v</sub>	-2.64	-21.01	0.00	0.00	0.00	83.81	CO 9
				Min M <sub>v</sub>	-1.15	-9.00	0.00	0.00 ⊳	0.00	35.89	CO 6
		///////////////////////////////////////	/ .	Max M <sub>z</sub>	-2.64	-21.01	0.00	0.00	0.00 ⊳	83.81	CO 9
				Min M <sub>z</sub>	-2.60		0.00	0.00	0.00 ⊳	33.08	CO 7
	RC3	1 ( 14 / /	0.000	Max N	⊳ -1.14		0.00	0.00	0.00	25.39	CO 11
				Min N 🤝	-1.73	-18.40	0.00	0.00	0.00	38.95	
				Max V <sub>y</sub>	-1.14		0.00	0.00	0.00	25.39	CO 11
				Min V <sub>y</sub>	-1.73	▶ -18.40	0.00	0.00	0.00	38.95	CO 14
			-/ / / X	Max V <sub>z</sub>	-1.73			0.00	0.00	31.50	
		1	7 / / /	Min V <sub>z</sub>	-1.43			0.00	0.00		CO 12
		<		Max M <sub>x</sub>	-1.14			▷ 0.00	0.00		CO 11
				Min M <sub>T</sub>	-1.14	-12.00	0.00	▷ 0.00	0.00	25.39	CO 11
				/ Max M <sub>y</sub>	-1.73		0.00	0.00	0.00	31.50	CO 13
				/ Min M <sub>y</sub> /	-1.43	-12.10	0.00	0.00 ⊳	0.00	24.72	CO 12
			7	/Max M/z /	-1.73	-18.40	0.00	0.00	0.00 ⊳	38.95	CO 14
			4	Min M <sub>z</sub>	-1.43			0.00	0.00 ⊳	24.72	CO 12
		13	1.000	Max N	▶ -1/15	-9.00	0.00	0.00	0.00	35.89	CO 11
				Min\N \			0.00	0.00	0.00	55.05	CO 14
				Max V <sub>y</sub>	/ /-1.15	-9.00	0.00	0.00	0.00	35.89	
				Min V <sub>y</sub>	-1.75		0.00	0.00	0.00		CO 14
				Max V <sub>z</sub>	<b>T</b> / / -1.15			0.00	0.00	35.89	
				Min V <sub>z</sub>	-1.15			0.00	0.00		CO 11
				$Max M_T$	-1/15			▷ 0.00	0.00	35.89	
				Min M <sub>T</sub>	71.15			▷ 0.00	0.00		CO 11
				Max M <sub>y</sub>	-1.15	-9.00	0.00	0.00	0.00		CO 11
				Min M <sub>y</sub>	-1(15			0.00 ⊳	0.00	35.89	
				$Max M_z$	-1.75		0.00	0.00	0.00 ⊳	55.05	CO 14
				Min M <sub>z</sub>	-1.44			0.00	0.00 ⊳		CO 12
	RC4	14	0.000	Max N	▶ -1.14		0.00	0.00	0.00	25.39	CO 15
				Min N	▶ -1.44		0.00	0.00	0.00	32.17	
				Max V <sub>y</sub>	-1.14		0.00	0.00	0.00	25.39	CO 15
				Min V <sub>y</sub>	-1.44			0.00	0.00		CO 16
				Max V <sub>z</sub>	-1.14		▶ 0.00	0.00	0.00	25.39	
				Min V <sub>z</sub>	-1.44			0.00	0.00		CO 16
				Max M <sub>T</sub>	-1.14				0.00	25.39	
				Min M <sub>T</sub>	-1.14				0.00		CO 15
				Max M <sub>y</sub>	-1.14		0.00	5 0.00 ▷	0.00	25.39	CO 15
				Min M <sub>y</sub>	-1.44		0,00	0.00 ▷	0.00		CO 16
				Max M <sub>z</sub>	-1.44		0.00	0.00	0.00 ⊳	32.17	
				Min M <sub>z</sub>	-1.14			0.00	0.00	25.39	
		13	1.000	Max N	▶ -1.15		0.00	0.00	0.00	35.89	CO 15
				Min N	▶ -1.45		0.00 0.00	0.00	0.00		CO 16
				Max V <sub>y</sub>	-1.15			0.00		35.89	
				Min V <sub>y</sub>	-1.45			0.00	0.00	45.47	
				Max V <sub>z</sub>	-1.45			0.00	0.00	45.47	CO 16
				Min V <sub>z</sub>	-1.15			0.00	0.00		CO 15
				Max M <sub>T</sub>	-1.15		0.00	0.00	0.00	35.89	CO 15
				Min M <sub>T</sub>	-1.15			0.00	0.00	35.89	
				Max M <sub>y</sub>	-1.45			0.00	0.00	45.47	CO 16
				Min M <sub>y</sub>	-1.15			0.00	0.00	35.89	CO 15
				Max M <sub>z</sub>	-1.45		0.00	0.00	0.00	45.47	CO 16
		1.5		Min M <sub>z</sub>	-1.15			0.00	0.00		CO 15
13	RC1	15	0.000	Max N	▶ -1.52	-20.25	0.00	0.00	0.00	/ / 16.06)	CO 1

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Project: Assignment Week 6

Model: B3\_Frame

ber /		Node	Location			Forces [kN]			Moments [kNm]		Correspondin
. 4	RC	Nø.	x [m]		N	$V_{y}$	V <sub>z</sub>	M <sub>T</sub>	$M_y$	$M_z$	Load Cases
	RC1			Min N	▶ -4.98	-39.04	0.00	0.00	0.00	24.55	CO 3
				Max V <sub>v</sub>	-3.48		0.00	0.00	0.00	7.93	CO 2
		/ /		Min V <sub>v</sub>	-4.72	⊳ -47.74	0.00	0.00	0.00	34.05	CO 5
		/ /		Max V <sub>2</sub>	-1.52		▷ 0.00	0.00	0.00	16.06	CO 1
				Min V <sub>z</sub>	-3.48		▶ 0.00	0.00	0.00	7.93	CO 2
				Max M <sub>T</sub> <	-1.52		0.00		0.00	16.06	
				Min M <sub>T</sub>	-1.52		0.00	▶ 0.00	0.00	16.06	CO 1
				Max M <sub>v</sub>	-1.52	-20.25	0.00	0.00 ⊳	0.00	16.06	
			J / / X	Min M.	-3.48		0.00	0.00	0.00	7.93	CO 2
			7 / / /	Max M <sub>z</sub>	-3.41		0.00	0.00	0.00 ⊳	37.58	CO 4
		<		Min M	-3.48		0.00	0.00	0.00	7.93	
		14	1,000	Max N	▶1.53	-16.20	0.00	0.00	0.00	34.28	
		1-4	1,000	Min N	-5.01	-31.39	0.00	0.00	0.00	59.76	CO 3
				Max V <sub>v</sub>	-5.01 -3.48	-31.39 ▶ -14.56	0.00	0.00	0.00	24.21	CO 2
				Min V,	-4.78	⊳ -38.29	0.00	0.00	0.00	77.06	CO 5
			1	Max V <sub>2</sub>	-5.01		▶ 0.00	0.00	0.00	59.76	
				Min V <sub>z</sub>	-1,53		▶ 0.00	0.00	0.00	34.28	
				Max M <sub>T</sub>	-1.53	-16.20	0.00	▶ 0.00	0.00	34.28	CO 1
				Min M <sub>T</sub>	-1.53		0.00	▶ 0.00	0.00	34.28	
				Max M <sub>v</sub>	-5.01		0.00	0.00	0.00	59.76	CO 3
				Min M <sub>v</sub>	-1.53		0.00	0.00	0.00	34.28	CO 1
				Max M <sub>z</sub>	-3.47		0.00	0.00	0.00 ⊳	80.12	
				Min M <sub>z</sub>	-3.48		0.00	0.00	0.00	24.21	CO 2
	RC2	15	0.000	Max N			0.00	0.00	0.00	11.89	
	1102	10	0.000	Min N	-3.60	-29.52	0.00	0.00	0.00	19.15	CO 8
				Max V <sub>v</sub>	-1(13	► / -15.00	0.00	0.00	0.00	11.89	
				Min V <sub>v</sub>	-3.44		0.00	0.00	0.00	25.47	CO 10
				Max V <sub>2</sub>	-1.13		▶ 0.00	0.00	0.00	11.89	
				Min V <sub>z</sub>	-1.13		▶ 0.00	0.00	0.00	11.89	CO 6
				Max M <sub>T</sub>	-1.13	-15.00	0.00	▶ 0.00	0.00	11.89	
				Min M <sub>T</sub>	-1.13		0.00	▶ 0.00	0.00	11.89	CO 6
				Max M <sub>v</sub>	-1.13		0.00	0.00	0.00	11.89	
				Min M <sub>v</sub>	-1.13		0.00	0.00	0.00	11.89	
				Max M <sub>z</sub>	-2.57	-35.01	0.00	0.00	0.00 ⊳	27.80	
				Min M <sub>z</sub>	-2.59	-15.51	0.00	0.00	0.00	8.06	CO 7
		14	1.000	Max N	▶ -1.14	-12.00	0,00	0.00	0.00	25.39	CO 6
Î				Min N	⊳ -3.62	-23.72	0.00	0.00	0.00	45.77	CO 8
				Max V <sub>v</sub>	-1.14	⊳ -12.00	0.00	0.00	0.00	25.39	CO 6
				Min V <sub>v</sub>	-3.48	⊳ -28.32	0.00	0.00	0.00	57.29	
				Max V <sub>z</sub>	-3.48		▶ 0.00	0.00	0.00	57.29	CO 10
				Min V <sub>z</sub>	-2.59		▷ 0.00	0.00	0.00	22.07	CO 7
				Max M <sub>T</sub>	-1.14		0.00		0.00	25.39	
				Min M <sub>T</sub>	-1.14		0.00	▶ 0.00	0.00	25.39	CO 6
				Max M <sub>v</sub>	-3.48	-28.32	0.00	0.00	0.00	57.29	CO 10
				Min M <sub>v</sub>	-2.59		0.00	0.00 ⊳	0.00	22.07	CO 7
				Max M <sub>z</sub>	-2.61		0.00	0.00	0.00	59.30	CO 9
				Min M <sub>z</sub>	-2.59		0.00	0.00	0.00	22.07	CO 7
	RC3	15	0.000	Max N	▶ -1.13	-15.00	0.00	0.00	0.00	11.89	CO 11
			2.500	Min N	▶ -1.72	-23.00	0.00	0.00	0.00	18.24	CO 14
				Max V <sub>v</sub>	-1.13	▶ -15.00	0.00	0.00	0.00	11.89	CO 11
				Min V <sub>v</sub>	-1.72	▶ -23.00	0.00	0.00	0.00	18.24	CO 14
				Max V <sub>z</sub>	-1.72	-23.00	▶ 0.00	0.00	0.00	18.24	CO 14
				Min V <sub>z</sub>	-1.13			0.00	0.00	/ /	CQ 11

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Project: Assignment Week 6

Model: B3\_Frame

■ 4.12 CR	OSS-SECT	IONS - INTE	RNAL FORC	ES						Re	sult Combinations
Member /		Node	Location			Forces [kN]		Mome	ents [kNm]		Corresponding
No.	RC	No.	x [m]		N	$V_y$	$V_z$	M <sub>T</sub>	M <sub>y</sub>	$M_z$	Load Cases
13	RC3	/ / /		Max M <sub>T</sub>	-1.13	-15.00	0.00	▶ 0.00	0.00	11.89	CO 11
				Min M <sub>T</sub>	-1.13	-15.00	0.00		0.00	11.89	CO 11
			/ / _	Max M <sub>v</sub>	-1.72	-23.00	0.00	0.00 ⊳	0.00	18.24	CO 14
				Min M <sub>y</sub>	-1.13	-15.00	0.00	0.00 ⊳	0.00		CO 11
				Max M <sub>z</sub>	-1.72	-23.00	0.00	0.00	0.00 ⊳	18.24	CO 14
				Min M <sub>z</sub>	-1.42	-15.10	0.00	0.00	0.00 ⊳	11.12	CO 12
		14 /	/ 1.000	Max N	-1.14	-12.00	0.00	0.00	0.00	25.39	CO 11
				Min N	-1.73	-18.40	0.00	0.00	0.00	38.95	CO 14
			$\exists$ / / $\land$	MaxV <sub>y</sub>	-1.14	→ -12.00	0.00	0.00	0.00	25.39	CO 11
				Min V <sub>y</sub>	-1.73	→ -18.40	0.00	0.00	0.00	38.95	CO 14
				Max V₂ Min V₂	-1.73 -1.43	-15.30 -12.10	<ul><li>D 0.00</li><li>D 0.00</li></ul>	0.00	0.00	31.50 24.72	
				Max M <sub>T</sub>		-12.10 -12.00	0.00	0.00 > 0.00	0.00 0.00	25.39	CO 12 CO 11
				Min M <sub>T</sub>	-1.14 -1.14	-12.00	0.00		0.00	25.39	CO 11
				Max My	-1.73	-12.00		0.00	0.00	31.50	0011
				Min M <sub>v</sub>	-1.73	-12.10	0.00 0.00	0.00	0.00 0.00		CO 13 CO 12
			1	Max M <sub>z</sub>	-1.43	-12.10	0.00	0.00	0.00	38.95	CO 12
				Min M <sub>z</sub>	-1.43	-12.10	0.00	0.00	0.00	20.93	CO 14
	RC4	15	0.000	Max N	D /-1.13	-15.00	0.00	0.00	0.00	11.89	CO 12
	NC4	15	0.000	Min N	-1.13	19.00	0.00	0.00	0.00	15.06	CO 15 CO 16
				Max V <sub>v</sub>	-1.13		0.00	0.00	0.00	11.89	CO 15
				Min V <sub>v</sub>	-1.43		0.00	0.00	0.00	15.06	CO 16
				Max V <sub>z</sub>	-1,43	19.00		0.00	0.00	15.06	
				Min V <sub>z</sub>	71.13/	-15.00		0.00	0.00	11.89	CO 15
				Max M <sub>T</sub>	-1.13	-15.00	0.00		0.00	11.89	
				Min M <sub>T</sub>	-1(13	-15.00	0.00		0.00		CO 15
				Max M <sub>v</sub>	-1.43	-19.00	0.00	0.00 ⊳	0.00	15.06	
				Min M <sub>v</sub>	-1.13	-15.00	0.00	0.00 ⊳	0.00	11.89	CO 15
				Max M <sub>z</sub>	-1.43	-19.00	0.00	0.00	0.00 ⊳	15.06	CO 16
				Min M <sub>z</sub>	-1.13	-15.00	0.00	0.00	0.00 ⊳	11.89	CO 15 CO 15 CO 16
		14	1.000	Max N	> -1.14 > -1.44	-12.00	0.00	0.00	0.00 0.00	25.39	CO 15
				Min N	▶ -1.44	-15.20	0.00	0.00	0.00	32.17	CO 16
				Max V <sub>y</sub>	-1.14		0.00	0.00	0.00	25.39	CO 15
				Min V <sub>y</sub>	-1.44		0.00	0.00	0.00	32.17	CO 16
				Max V <sub>z</sub>	-1.14	-12.00	▶ 0.00	0.00	0.00	25.39	CO 15
				Min V <sub>z</sub>	-1.44	-15.20	0.00	0.00	0.00	32.17	
				Max M <sub>T</sub>	-1.14	-12.00	0.00		0.00	25.39	CO 15
				Min M <sub>T</sub>	-1.14	-12.00	0.00	0.00	0.00	25.39	CO 15
				Max M <sub>y</sub>	-1.14	-12.00	0.00	0.00	0.00	25.39	CO 15
				Min M <sub>y</sub>	-1.44	-15.20	0.00	0.00	0.00	32.17	CO 16
				Max M <sub>z</sub>	-1.44	-15.20	0.00	0.00	0.00	32.17	CO 16
4.4	504		2 222	Min M <sub>z</sub>	-1.14	-12.00	0.00	0.00	0.00	25.39	CO 15 CO 1 CO 3 CO 2
14	RC1	3	0.000	Max N Min N	<ul><li>→ -1.51</li><li>→ -4.95</li></ul>	-24.30 -46.69	0.00 0.00	0.00	0.00 -0.00 -0.00	-6.22 -18.32	001
				Max V <sub>y</sub>	-3.47	→ -21.46	0.00	0.00	-0.00	-11.81	CO 3
				Min V <sub>v</sub>	-4.68		0.00	0.00	0.00	-18.42	CO 5
				Max V <sub>z</sub>	-4.95	-46.69	D.00 ▷	0,00	-0.00	-18.32	
				Min V <sub>z</sub>	-1.51	-24.30		0.00	0.00	-6.22	
				Max M <sub>T</sub>	-1.51	-24.30	0.00		0.00	-6.22	CO 1
				Min M <sub>T</sub>	-1.51	-24.30	0.00	D 0.00	0.00	-6.22	CO 1
				Max M <sub>v</sub>	-1.51	-24.30	0.00	0.00	0.00	-6.22	CO 1
				Min M <sub>v</sub>	-4.95	-46.69	0.00	0.00	-0.00	-18.32	CO 3
				Max M <sub>z</sub>	-1.51	-24.30	0.00	0.00	0.00		CQ 1
	1	' '	ļ		1.01	2 7.00	3.00	0.00	72 17	/ / 5.22	17

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Project: Assignment Week 6

Model: B3\_Frame

nber /		Node	Location	ES		Forces [kN]			Moments [kNm]		sult Combina Correspondin
o.	RC	No.	x [m]		N	. V <sub>v</sub>	$V_z$	M <sub>T</sub>	M <sub>v</sub>	Mz	Load Cases
4	RC1	/ / / `	*	Min M <sub>z</sub>	-4.68	,	0.00	0.00	0.00 ⊳		CO 5
•		/ 15	1.000	Max N	▶ -1.52		0.00	0.00	0.00	16.06	
		-   / /-	//	Min N	▶ -4.98	-39 04	0.00	0.00	0.00	24.55	CO 3
				Max V <sub>v</sub>	-3.48	-18.01	0.00	0.00	0.00	7.93	CO 2
				Min V <sub>v</sub>	-4.72		0.00	0.00	0.00	34.05	
				Max V <sub>2</sub> <	-1.52			0.00	0.00	16.06	
				Min V <sub>z</sub>	-3.48		▷ 0.00	0.00	0.00	7.93	
				Max M <sub>T</sub>	-1.52		0.00		0.00	16.06	
				Min M <sub>T</sub>	-1.52		0.00		0.00	16.06	
			7///	Max M <sub>v</sub>	-1.52		0.00	0.00 ⊳	0.00	16.06	
				Min M.	-3.48		0.00	0.00	0.00	7.93	
				Max M <sub>z</sub>	-3.41	-47.27	0.00	0.00	0.00 ⊳	37.58	
				Min M <sub>z</sub>	-3.48		0.00	0.00	0.00	7.93	
	RC2	3	0.000	Max N	-1.13		0.00	0.00	0.00	-4.61	CO 6
	1102	3	0.000	Min N	-3.59		0.00	0.00	0.00	-13.27	
				Max V <sub>v</sub>	-1.13	▶ -18.00	0.00	0.00	0.00	-4.61	
				Min V	-3;42		0.00	0.00	0.00	-13.35	
				Max V <sub>z</sub>	-1.13	-18.00	▷ 0.00	0.00	0.00	-4.61	
				Min V <sub>z</sub>	/-1.13		<ul><li>0.00</li><li>0.00</li></ul>	0.00	0.00	-4.61	CO 6
				Max M <sub>T</sub>	-1.13		0.00		0.00	-4.61	CO 6
				Min M <sub>T</sub>	-1.13		0.00	0.00	0.00	-4.61	CO 6
				Max M <sub>v</sub>	-1.13		0.00	0.00	0.00	-4.61	
				Min M <sub>v</sub>	-1/13		0.00	0.00	0.00	-4.61	CO 6
				Max M <sub>z</sub>	71.13		0.00	0.00	0.00 ⊳	-4.61	CO 6
					-3.42		0.00	0.00	0.00		
		45	1.000	Min M <sub>z</sub> Max N	D -1(13	-42.32	0.00	0.00		-13.35	
		15	1.000	Min N	D -1(13 D -3.60	-15.00 -29.52	0.00	0.00	0.00 0.00	11.89 19.15	CO 8
				Max V <sub>v</sub>	-1.13		0.00	0.00	0.00	11.89	
				Min V <sub>v</sub>	-3.44		0.00		0.00		
				Max V <sub>2</sub>				0.00		25.47	
					-1.13			0.00	0.00	11.89	
				Min V <sub>z</sub>	-1.13		0.00	0.00	0.00	11.89	CO 6
				Max M <sub>T</sub>	-1.13		0.00		0.00	11.89	
				Min M <sub>T</sub>	-1.13		0.00		0.00	11.89	
				Max M <sub>y</sub>	-1.13		0.00	0.00	0.00	11.89	
				Min M <sub>y</sub>	-1.13		0.00	0.00 >	0.00	11.89	
				Max M <sub>z</sub>	-2.57		0.00	0.00	0.00 ⊳	27.80	
				Min M <sub>z</sub>	-2.59	-15.51	0.00	0.00	0.00 ⊳	8.06	CO 7
	RC3	3	0.000	Max N	▶ -1.13		0.00	0.00	0.00	-4.61	CO 11
				Min N	► -1.71		0.00	0.00	-0.00	-6.71	CO 13
				Max V <sub>y</sub>	-1.13		0.00	0.00	0.00	-4.61	CO 11
				Min V <sub>y</sub>	-1.71	▶ -27.60	0.00	0.00	0.00	-7.06	CO 14
				Max V <sub>z</sub>	-1.71		0.00	0.00	-0.00	-6.71	
				Min V <sub>z</sub>	-1.13		▶ 0.00	0.00	0.00	-4.61	CO 11
				Max M <sub>T</sub>	-1.13		0.00		0.00	-4.61	CO 11
				Min M <sub>T</sub>	-1.13		0.00	> 9.90	0.00	-4.61	CO 11
				Max M <sub>y</sub>	-1.13		0.00	0.00 >	0.00	-4.61	CO 11
				Min M <sub>y</sub>	-1.71		0.00	0,00 ⊳	-0.00	-6.71	CO 13
				Max M <sub>z</sub>	-1.13		0.00	0.00	0.00	-4.61	
				Min M <sub>z</sub>	-1.71		0.00	0.00	/ 0.00	-7.06	CO 14
		15	1.000	Max N	▶ -1.13		0.00	0.00	0.00	11.89	CO 11
				Min N	▶ -1.72	-23.00	0.00	0.00	0.00	18.24	CO 14
				Max V <sub>y</sub>	-1.13	⊳ -15.00	0.00	0.00	0.00	11.89	CO 11
				Min V <sub>v</sub>	-1.72	⊳ -23.00	0.00	0.00	0.00	18.24	CO 14

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Project: Assignment Week 6

Model: B3\_Frame

	7000.		RNAL FORC		1	E (1.kg)				110	sult Combinat
ember		Node	Location			Forces [kN]	.,		Moments [kNm]		Corresponding
No.	RC	No.	x [m]		N	$V_y$	$V_z$	M <sub>T</sub>	M <sub>y</sub>	M <sub>z</sub>	Load Cases
14	RC3	1 / / Y		$Max V_z$	-1.72	-23.00	▷ 0.0		0.00	18.24	CO 14
				Min V <sub>z</sub>	-1.13	-15.00	▶ 0.0		0.00	11.89	CO 11
		///	/ / ~	$Max M_T$	-1.13	-15.00	0.0		0.00	11.89	CO 11
				Min M <sub>T</sub>	-1.13	-15.00	0.0	0.00	0.00	11.89	CO 11
				Max M <sub>y</sub>	-1.72	-23.00	0.0	0.00	▶ 0.00	18.24	
				Min M <sub>v</sub>	-1.13	-15.00	0.0	0.00	▶ 0.00	11.89	CO 11
		/ /		Max M <sub>z</sub>	-1.72	-23.00	0.0		0.00	⊳ 18.24	CO 14
				Min Mz/	-1.42	-15.10	0.0	0.00	0.00	▶ 11.12	CO 12
	RC4	3	0.000	Max N	▶ -1.13	-18.00 -22.80	0.0 0.0 0.0	0.00	0.00 -0.00 0.00	-4.61	CO 12 CO 15 CO 16 CO 15
			7 / / /	Min N	▶ -1.42	-22.80	0.0	0.00	-0.00	-5.84	CO 16
				Max V <sub>y</sub> ∕	-1.13	▶ -18.00	0.0	0.00	0.00	-4.61	CO 15
				Min V <sub>y</sub>	-1.42		0.0	0.00	-0.00	-5.84	CO 16
			\ \ \	/ Max Vz	-1.42	-22.80	<ul><li>D 0.00</li><li>D 0.00</li></ul>	0.00	-0.00	-5.84	CO 16
				/ Min V <sub>z</sub> / <	-1.13	-18.00			0.00		CO 15
			7	Max M <sub>T</sub>	-1.13	-18.00	0.0		0.00	-4.61	CO 15
			4	Min M <sub>T</sub>	-1.13	-18.00	0.0		0.00		CO 15
				Max M <sub>y</sub>	-1/13	-18.00	0.0	0.00	▶ 0.00	-4.61	CO 15
				Min M <sub>y</sub>	-1.42	-22.80	0.0				CO 16
				Max M <sub>z</sub>	-1.13	-18.00	0.0	0.00	0.00	▶ -4.61	CO 15
				Min M <sub>z</sub>	-1.42	-22.80	0.0	0.00	-0.00	⊳ -5.84	CO 16
		15	1.000	Max N		/-15.00	0.0 0.0	0.00	0.00	11.89 15.06	CO 15 CO 16
				Min N	P	-19.00	0.0	0.00	0.00 0.00	15.06	CO 16
				Max V <sub>y</sub>	-1/13	15.00	0.0	0.00	0.00	11.89	CO 15
				Min V <sub>y</sub>	-1.43/		0.0	0.00	0.00		CO 16
				Max V <sub>z</sub>	-1.43	-19.00		0.00	0.00	15.06	CO 16
				Min V <sub>z</sub>	-1(13	-15.00			0.00	11.89	
				$Max M_T$	-1.13	-15.00	0.0		0.00	11.89	CO 15
				Min M <sub>T</sub>	-1.13	-15.00	0.0		0.00		CO 15
				Max M <sub>y</sub>	-1.43	-19.00	0.0		▶ 0.00	15.06	CO 16
				Min M <sub>y</sub>	-1.13	-15.00	0.0			11.89	CO 15
				$Max M_z$	-1.43	-19.00	0.0		0.00	▶ 15.06	
				Min M <sub>z</sub>	-1.13	-15.00	0.0	0.00	0.00	▶ 11.89	CO 15
	Section No. 2:	T-Rectangle 0.2/0.2									
1	RC1	16	0.000	Max N	-25.69	4.03 -3.70	0.0	0.00	0.00 0.00		CO 2
				Min N	-62.45 -25.69	-3.70 > 4.03	0.0		0.00	3.69	CO 4 CO 2
				Max V <sub>y</sub>		<ul><li>4.03</li><li>→ -3.70</li></ul>	0.0	0.00	0.00	-4.14	CO 4
				Min V <sub>y</sub>	-62.45 -31.05	-3.70 -1.57	D 0.00	0.00	0.00	3.69	004
				Max V <sub>z</sub>						1.57	CO 1 CO 3
				Min V <sub>z</sub>	-50.87	2.43	-0.0 0.0	0.00	-0.00	-2.61	003
				Max M <sub>T</sub>	-31.05	-1.57			0.00	1.57	CO 1
				Min M <sub>T</sub>	-31.05	-1.57	0.0		0.00	1.57	CO 1
				Max M <sub>y</sub>	-31.05	-1.57	0.0	0.00	0.00	1.57	CO 1
				Min M <sub>y</sub>	-50.87	2.43	-0.0	0.00	-0.00	-2.61	CO 3
				Max M <sub>z</sub>	-62.45	-3.70	0.0	0.00	0.00	▶ 3.69	CO 4
			1.000	Min M <sub>z</sub>	-25.69	4.03	0.0	0.00	0.00	-4.14	CO 2 CO 2 CO 4
		1	1.000	Max N	-26.84	5.50	0.0	0.00	0.00	-8.91	CO 4
				Min N	-63.60 -26.84	-3.63 ▶ 5.50	0.0	0.00	0.00	7.35	CO 2
				Max V <sub>y</sub>	-26.84 -63.60	> 5.50 > -3.63	0.0		0.00		
				Min V <sub>y</sub>	-03.60	-3.63 -1.56			0.00	7.35	CO 1
				Max V <sub>z</sub>							
				Min V <sub>z</sub>	-32.40	-1.56	▶ 0.0		0.00	3.13	CO 1
				Max M <sub>T</sub>	-32.40	-1.56	0.0		0.00	3.13	CO 1
				Min M <sub>T</sub>	-32.40	-1.56	0.0	0.00	0.00	/ / 3.13)	CQ 1

### Binh Nguyen Xuan

Metsälinnunreitti 2 L121, 02660 Espoo

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Project: Assignment Week 6 Model: B3\_Frame

18/10/2021 Date:

### ■ 4 12 CROSS-SECTIONS - INTERNAL FORCES

ber /		Node	Location		Fo	orces [kN]		Morr	ents [kNm]		Corresponding
4	RC	Nø.	x [m]		N	$V_{y}$	V <sub>z</sub>	M <sub>T</sub>	M <sub>y</sub>	$M_z$	Load Cases
	RC1			Max M <sub>v</sub>	-32.40	-1.56	0.00	0.00 ⊳	0.00	3.13	CO 1
				Min M <sub>v</sub>	-32.40	-1.56	0.00	0.00 ⊳	0.00	3.13	CO 1
		///////////////////////////////////////	/ .	Max M <sub>z</sub>	-63.60	-3.63	0.00	0.00	0.00 ⊳	7.35	CO 4
				Min M <sub>z</sub>	-26.84	5.50	0.00	0.00	0.00 ⊳	-8.91	CO 2
i	RC2	16 / /	0.000	Max N	-22.49	2.41	-0.00	0.00	-0.00	-2.48	CO 7
			/ /	Min N <	▶ -47.00	-2.73	0.00	0.00	0.00	2.72	CO 9
				Max V <sub>y</sub>	-22.49 ⊳	2.41	-0.00	0.00	-0.00	-2.48	CO 7
				Min V <sub>y</sub>	-47.00 ⊳	-2.73	0.00	0.00	0.00	2.72	CO 9
			=/ / / X	Max V <sub>z</sub>	-23.00	-1.16 ▷	0.00	0.00	0.00	1.16	CO 6
		T,	/ / / /	Min V <sub>z</sub>	-22.49	2.41 ⊳	-0.00	0.00	-0.00	-2.48	CO 7
		`		Max M <sub>T</sub>	-23.00	-1.16	0.00 >	0.00	0.00	1.16	CO 6
				Min M <sub>T</sub>	-23.00	-1.16	0.00 ▷	0.00	0.00		
				Max M <sub>y</sub>	-23.00	-1.16	0.00	0.00 ⊳	0.00	1.16	CO 6
				Min M <sub>y</sub>	-22.49	2.41	-0.00	0.00 >	-0.00		CO 7
			7	Max M <sub>z</sub>	-47.00	-2.73	0.00	0.00	0.00	2.72	CO 9
-		4	4 000	Min M <sub>z</sub>	-22.49	2.41	-0.00	0.00	-0.00 ⊳	-2.48	CO 7
		1	1.000	Max N Min N	> -23,50 -48.00	3.39 -2.69	0.00 0.00	0.00 0.00	0.00 0.00	-5.39 5.43	1 00 7
				Max V <sub>v</sub>	23.50 ▷	3.39	0.00	0.00	0.00	-5 30	CO 7 CO 7 CO 9
				Min V <sub>v</sub>	-48.00 F	2.69	0.00	0.00	0.00	-5.59 5.43	CO 9
				Max V <sub>z</sub>	-24.00	-1.15 ⊳	0.00	0.00	0.00	2.32	CO 6
				Min V <sub>z</sub>	-24.00	-1.15 ▷	0.00	0.00	0.00	2.32	CO 6
				Max M <sub>T</sub>	-24,00	-1.15	0.00 ⊳	0.00	0.00	2.32	CO 6
				Min M <sub>T</sub>	-24.00	-1.15	0.00 ⊳	0.00	0.00	2.32	
				Max M <sub>v</sub>	-24.00	-1.15	0.00	0.00 ⊳	0.00	2.32	CO 6
				Min M <sub>v</sub>	-24(00	-1.15	0.00	0.00 ⊳	0.00	2.32	CO 6
				Max M <sub>z</sub>	-48:00	-2.69	0.00	0.00	0.00 ⊳	5.43	CO 9
				Min M <sub>z</sub>	-23.50	3.39	0.00	0.00	0.00 ⊳	-5.39	CO 7
	RC3	16	0.000	Max N	▶ -22.90	-0.45	0.00	0.00	0.00	0.43	CO 12
				Min N	> -32.60	-1.79	0.00	0.00	0.00	1.78	CO 14
				Max V <sub>y</sub>	-22.90 ▷ -32.60 ▷	-0.45	0.00	0.00	0.00	0.43	CO 12
				Min V <sub>y</sub>	-32.60 ⊳	-1.79	0.00	0.00	0.00	1.78	CO 14
				Max V <sub>z</sub>	-23.00	-1.16 ▷	0.00	0.00	0.00	1.16	CO 11
				Min V <sub>z</sub>	-23.00	-1.16 ▷	0.00	0.00	0.00		CO 11
				Max M <sub>T</sub>	-23.00	-1.16	0.00	0.00	0.00	1.16	CO 11
				Min M <sub>T</sub>	-23.00	-1.16	0.00	0.00	0.00	1.16	CO 11
				Max M <sub>y</sub>	-23.00	-1.16	0.00	0.00 ⊳	0.00		
				Min M <sub>y</sub>	-23.00	-1.16	0.00	0.00 ▶	0.00	1.16	CO 11
				Max M <sub>z</sub>	-32.60	-1.79	0.00	0.00	0.00 ⊳		
				Min M <sub>z</sub>	-22.90	-0.45	0.00	0.00	0.00 ⊳	0.43	CO 12
		1	1.000	Max N	> -23.90 > -33.60	-0.25	0.00	0.00	0.00	0.78	CO 12
-				Min N Max V <sub>v</sub>	-33.60 -23.90	-1.77 -0.25	0.00	0.00	0.00	3.56	CO 14 CO 12
				Min V <sub>v</sub>	-23.90 Þ -33.60 Þ	-0.25 -1.77	0.00	0.00	0.00	3.56	
				Max V <sub>z</sub>	-33.00 P	-1.77 -1.15 ⊳	0.00	0.00	0.00	2.32	CO 14
				Min V <sub>z</sub>	-24.00 -24.00	-1.15 Þ	0.00	0.00	0.00	2.32	CO 11
				Max M <sub>T</sub>	-24.00	-1.15	0.00	0,00	0.00	2.32	CO 11
				Min M <sub>T</sub>	-24.00	-1.15	0.00	0.00	0.00	2.32	
				Max M <sub>v</sub>	-24.00	-1.15	0.00	0.00	0.00	2.32	CO 11
				Min M <sub>v</sub>	-24.00	-1.15	0.00	0.00	0.00	2.32	CO 11
				Max M <sub>z</sub>	-33.60	-1.77	0.00	0.00	0.00	3.56	CO 14
				Min M <sub>z</sub>	-23.90	-0.25	0.00	0.00	0.00	0.00	CO 12

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Project: Assignment Week 6

Model: B3\_Frame

12 CR	OSS-SEC N		RNAL FORC	ES						Re	sult Combinatio
/lember		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	No.	x [m]		N	$V_{y}$	$V_z$	$M_T$	$M_{y}$	$M_z$	Load Cases
1	RC4			Min N	⊳ -27.80	-1.48	0.00	0.00	0.00	1.47	CO 16
				Max V <sub>y</sub>	-23.00	▶ -1.16	0.00	0.00	0.00	1.16	CO 15
			/ / .	Min V <sub>v</sub>	-27.80	⊳ -1.48	0.00	0.00	0.00	1.47	CO 16
				Max V <sub>z</sub>	-23.00			0.00	0.00		CO 15
				$Min V_z$	-23.00	-1.16	▶ 0.00	0.00	0.00	1.16	CO 15
			/ / /	Max M <sub>T</sub> <	-23.00	-1.16	0.00	▶ 0.00	0.00	1.16	CO 15
				Min M <sub>T</sub>	-23.00		0.00	▶ 0.00	0.00	1.16	
				Max M <sub>y</sub>	-23.00	-1.16	0.00	0.00 >	0.00	1.16	CO 15
			<u> </u>	Min My	-23.00	-1.16	0.00	0.00 ⊳	0.00	1.16	CO 15
			7////	Max M <sub>z</sub>	-27.80		0.00	0.00	0.00 ⊳	1.47	CO 16
				Min M₂	-23.00		0.00	0.00	0.00 ⊳	1.16	CO 15
		1	1,000	/Max/N	▶ -24.00		0.00	0.00	0.00	2.32	CO 15 CO 16
				Min N	-28.80	-1.46	0.00	0.00	0.00	2.94	CO 16
				Max V <sub>y</sub>	-24.00		0.00	0.00	0.00	2.32	CO 15
			7	, Min V <sub>y</sub>	-28.80	▶ -1.46	0.00	0.00	0.00	2.94	CO 16
			4	MaxVz	-24.00			0.00	0.00	2.32	CO 15
				Min V <sub>z</sub>	-24,00			0.00	0.00	2.32	CO 15
				Max M <sub>T</sub>	-24.00		0.00		0.00	2.32	CO 15
				Min M <sub>T</sub>	/24.00		0.00	▶ 0.00	0.00	2.32	CO 15
				Max M <sub>y</sub>	-24.00		0.00	0.00 ⊳	0.00		CO 15
				Min M <sub>y</sub>	-24.00		0.00	0.00 >	0.00	2.32	CO 15
				Max M <sub>z</sub>	-28.80		0.00	0.00	0.00 >	2.94	CO 16
				Min M <sub>z</sub>	-24.00		0.00	0.00	0.00 >	2.32	CO 15
3	RC1	4	0.000	Max N	-28.36	3.50	0.00 0.00	0.00	0.00	9.44	CO 2 CO 5
				Min N Max V <sub>v</sub>	-64.07 -53.57	4.93 5.11	0.00	0.00 0.00	0.00 0.00	11.52	CO 3
				Min V <sub>v</sub>	-32.40	D 1.56	0.00	0.00	0.00	3.13	
				Max V <sub>2</sub>	-32.40		0.00	0.00	0.00	2.13	CO 1
				Min V <sub>z</sub>	-32.40		0.00	0.00	0.00	3.13	CO 1
				Max M <sub>⊤</sub>	-32.40		0.00		0.00	2.13	CO 1
				Min M <sub>T</sub>	-32.40		0.00	D 0.00 D 0.00	0.00	3.13	
				Max M <sub>v</sub>	-32.40		0.00	0.00	0.00	2.13	CO 1
				Min M <sub>v</sub>	-32.40		0.00	0.00	0.00	2.13	CO 1
				Max M <sub>z</sub>	-53.57		0.00	0.00	0.00		CO 3
				Min M <sub>z</sub>	-32.40	1.56	0.00	0.00	0.00	3.13	CO 1
		21	1.000	Max N	→ -27.20	3.55	-0,00	0.00	0.00	5.91	CO 2
		21	1.000	Min N	► -62.91	5.05	-0.00	0.00	0.00	6.52	CO 5
				Max V <sub>v</sub>	-52.41	▶ 5.23	0.00	0.00	0.00	7.65	CO 3
				Min V <sub>v</sub>	-31.05	▶ 1.57	0.00	0.00	0.00	1.57	CO 1
				Max V <sub>2</sub>	-31.05	1.57	▶ 0.00	0.00	0.00	1.57	CO 1
				Min V <sub>z</sub>	-62.91	5.05	▶ -0.00	0.00	0.00	6.52	CO 5
				Max M <sub>T</sub>	-31.05		0.00		0.00	1.57	CO 1
				Min M <sub>T</sub>	-31.05		0.00	▶ 0.00	0.00	1.57	CO 1
				Max M <sub>v</sub>	-62.91	5.05	-0.00	0.00	0.00	6.52	CO 5
				Min M <sub>v</sub>	-31.05		0.00	0.00 ⊳	0.00	1.57	CO 1
				Max M <sub>z</sub>	-52.41	5.23	0.00	0.00	0.00 ⊳	7.65	CO 3
				Min M <sub>z</sub>	-31.05		0.00	0.00	) / 0.00 ⊳	1.57	CO 1
	RC2	4	0.000	Max N	⊳ -24.00		0.00	0.00	0.00		CO 6
				Min N	▶ -48.31	3.56	0.00	0.00	0.00	8.18	CO 10
				Max V <sub>y</sub>	-41.31	⊳ 3.68	0.00	0.00	0.00	9.05	CO 8
				Min V <sub>y</sub>	-24.00		0.00	0.00	0.00	2.32	CO 6
				Max V <sub>z</sub>	-24.00			0.00	0.00	2.32	CO 6
				Min V <sub>z</sub>	-24.00	1.15	⊳ 0.00	0.00	0.00	/ 2.32	CO 6

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Project: Assignment Week 6 Model: B3\_Frame

Result Combinations											
	Corresponding										
	1 10										

1 /		ONS - INTE					E 0.50			NA CENTS	1 10	sult Combinati
mber /	( )	Node	Location				Forces [kN]			Moments [kNm]		Corresponding
lo.	RC	Nø.	x [m]		N		$V_y$	V <sub>z</sub>	M <sub>T</sub>	M <sub>y</sub>	$M_z$	Load Cases
3	RC2	// M		Max M <sub>⊤</sub>		-24.00	1.15	0.00		0.00	2.32	CO 6
				Min M <sub>T</sub>		-24.00	1.15	0.00		0.00	2.32	CO 6
		///	/ / ~	Max M <sub>y</sub>		-24.00	1.15	0.00	0.00	> 0.00	2.32	CO 6
				Min M <sub>y</sub>		-24.00	1.15	0.00	0.00			CO 6
				Max M <sub>z</sub>		-41.31	3.68	0.00	0.00	0.00 ⊳	9.05	
		S / 1		Min M <sub>z</sub>		-24.00	1.15	0.00	0.00	0.00 ⊳	2.32	CO 6
		21 / /	/ 1.000	Max N	Þ	-23.00	1.16	0.00	0.00	0.00 0.00	1.16	CO 6
				Min N /	<b> </b> ⊳	-47.30	3.62	0.00	0.00		4.58	CO 10
		\ \	-////	Max V <sub>y</sub>		-40.31 ⊳	3.74	0.00	0.00	0.00	5.34	CO 8
		7	7///	Min V <sub>y</sub>		-23.00 ⊳	1.16	0.00	0.00	0.00		CO 6
				Max V <sub>z</sub> ∕		-23.00	1.16	0.00	0.00	0.00	1.16	CO 6
			~	Min √z		-23.50	2.63 ⊳	-0.00	0.00	0.00	4.20	CO 7
				/ Max M <sub>T</sub>		-23.00	1.16	0.00	> 0.00	0.00		CO 6
				/ Min M <sub>T</sub> / <		-23.00	1.16	0.00		0.00	1.16	CO 6
				Max My		-23.50	2.63	-0.00	0.00	> 0.00	4.20	CO 7
			<	Min M <sub>v</sub>	V   -	-23.00	1.16	0.00	0.00	> 0.00	1.16	CO 6
				Max M <sub>z</sub>		-40,31	3.74	0.00	0.00	0.00 ⊳	5.34	CO 8
				Min M <sub>z</sub>	/	-23.00	1.16	0.00	0.00	0.00 ⊳	1.16	CO 6
	RC3	4	0.000	Max N	D /	-24.00	1.15	0.00	0.00	0.00	2.32	CO 11
				Min N	D /	/-33.60	<i></i> 1.77 │	0.00	0.00	0.00	3.56	CO 14
				Max V <sub>v</sub>		-33.60	/ 1.77	0.00	0.00	0.00	3.56	CO 14
				Min V <sub>v</sub>		-24.00 ⊳	1.15	0.00	0.00	0.00	2.32	CO 11
				Max V <sub>z</sub>		-24,00	1.15	0.00	0.00	0.00	2.32	CO 11
				Min V <sub>z</sub>		-24.00/	1.15	0.00	0.00	0.00	2.32	CO 11
				Max M <sub>T</sub>	Ĭ (	-24.00	/ 1.15	0.00	> 0.00	0.00	2.32	CO 11
				Min M <sub>T</sub>		-24 00	1.15	0.00	> 0.00	0.00	2.32	CO 11
				Max M <sub>v</sub>		-24.00	1.15	0.00	0.00		2.32	CO 11
				Min M <sub>v</sub>		-24.00	1.15	0.00	0.00		2.32	CO 11
				Max M <sub>z</sub>		-28.90	1.75	0.00	0.00	0.00 ⊳	3.84	
				Min M <sub>z</sub>		-24.00	1.15	0.00	0.00	0.00 ⊳	2.32	CO 11
		21	1.000	Max N	<b>&gt;</b>	-23.00	1.16	0.00	0.00	0.00	1.16	CO 11
			1.000	Min N	>	-32.60	1.79	0.00	0.00	0.00	1.78	CO 14
				Max V <sub>v</sub>		-32.60 ⊳	1.79	0.00	0.00	0.00	1.78	CO 14
				Min V <sub>v</sub>		-23.00 ⊳	1.16	0.00	0.00	0.00	1.16	CO 11
				Max V <sub>z</sub>		-23.00	1.16	0.00	0.00	0.00		CO 11
				Min V <sub>z</sub>		-27.90	1.77 ⊳	/-0,00	0.00	0.00	2.08	CO 13
				Max M <sub>T</sub>		-23.00	1.16	0.00	0.00	0.00	1.16	
				Min M <sub>T</sub>		-23.00	1.16	0.00	> 0.00	0.00		CO 11
				Max M <sub>v</sub>		-27.90	1.77	-0.00	0.00	0.00		CO 13
				Min M <sub>v</sub>		-23.00	1.16	0.00	0.00			CO 11
				Max M <sub>z</sub>		-27.90	1.77	-0.00	0.00	0.00	2.08	
RC4				Min M <sub>z</sub>		-23.00	1.16	0.00	0.00	0.00	1 16	CO 11
	RC4	4	0.000	Max N	<b>&gt;</b>	-24.00	1.15	0.00	0.00	0.00	2.32	CO 15
		·	0.000	Min N	>	-28.80	1.46	0.00	0.00	0.00	2.94	CO 15 CO 16
				Max V <sub>v</sub>		-28.80 ⊳	1.46	0.00	0.00	0.00	2.94	CO 16
				Min V <sub>v</sub>		-24.00 ⊳	1.15	0.00	0.00	0.00	2.32	CO 15
				Max V <sub>z</sub>		-24.00	1.15	0.00	0,00	0.00	2.32	CO 15
				Min V <sub>z</sub>		-24.00	1.15	0.00	0.00	0.00	2.32	
				Max M <sub>T</sub>		-24.00	1.15	0.00		0.00	2.32	
				Min M <sub>T</sub>		-24.00	1.15	0.00		0.00	2.32	CO 15
				Max M <sub>v</sub>		-24.00	1.15	0.00	0.00		2.32	CO 15
				Min M <sub>v</sub>		-24.00	1.15	0.00	0.00		2.32	CO 15 CO 15
				Max M <sub>z</sub>		-28.80	1.46	0.00	0.00	0.00	2.02	CO 16

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Project: Assignment Week 6

Model: B3\_Frame

No.   RC   No.   x[m]	nber /		Node	RNAL FORC			Forces [kN]			Moments [kNm]		Sult Combinati Corresponding
RC    21	/	RC				N		V-	M <sub>T</sub>		$M_z$	Load Cases
15   100   Mar. N			1 7 / 1		Min M		,		·	· · · · · · · · · · · · · · · · · · ·		CO 15
Min N   27,80   1.48   0.00	,   ,	n04	21/	1,000							1.16	
Max V,   2780     1.48   0.00   0.0			/ 2/1	1.000		-23.00	1.10			0.00	1.47	CO 15
Min V,   23.00			1/////			-27.00	1.40	0.00	0.00	0.00	1.47	CO 16
Min V											1.47	
Min V				/ / /						0.00	1.16	CO 15
Max My   23.00				/ /						0.00		CO 15
Nin W   2-300			[ [ [								1.16	
Mark My   23.00											1.16	CO 15
Min Max My				= / / $/$			1.16		▷ 0.00	0.00	1.16	CO 15
Max M <sub>2</sub>				7////							1.16	CO 15
15   RC1										0.00	1.16	CO 15
15				~							1.47	CO 16
Min N					/ Min/Mz				0.00	0.00 ⊳	1.16	CO 15
Max V <sub>1</sub>	5 F	RC1	17	0.000	/ Max N /	-24.54		0.00	0.00	0.00	-0.86	CO 2
Min Vy							-3.72			0.00	-0.03	CO 4
Max V <sub>2</sub>				4	(Max V <sub>v</sub> /	-24.54	⊳ 2.54		0.00	0.00	-0.86	CO 2
Min V <sub>2</sub>					Min V <sub>v</sub>		⊳ -3.72	0.00	0.00	0.00	-0.03	CO 4
Max M <sub>T</sub>   29.70   1.58   0.00   0.					Max V <sub>z</sub>	-29.70	-1.58	▷ 0.00	0.00	0.00	-0.01	CO 1
Max M <sub>1</sub>   29.70   1.58   0.00   0.					Min V <sub>z</sub>	49.72	0.95	⊳ -0.00	0.00	-0.00	-0.92	CO 3
Min My					Max MT						-0.01	CO 1
Max M <sub>1</sub>   29.70											-0.01	CO 1
Min M <sub>y</sub>											-0.01	CO 1
Max M₂											-0.92	CO 3
16										0.00	-0.01	CO 1
16											-0.92	CO 3
Min N   -62.45   -3.70   0.00   0.			16	1 000							-0.92	003
Max V <sub>y</sub>			10	1.000			4.03		0.00	0.00	-4.14 3.69	CO 4
Min V <sub>2</sub>						-02.40	-3.70				-4.14	CO 2
Max V <sub>2</sub>											3.69	CO 4
Min V <sub>2</sub>												004
Max M <sub>T</sub>											1.57	CO 1
Min M <sub>T</sub>						-50.87	2.43	-0.00	0.00	-0.00	-2.61	CO 3
Max My											1.57	CO 1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						-31.05	-1.57				1.57	CO 1
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$											1.57	CO 1
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$							2.43				-2.61	CO 3
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					Max M <sub>z</sub>						3.69	CO 4
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					Min M <sub>z</sub>	-25.69	4.03		0.00		-4.14	CO 2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	F	RC2	17	0.000			1.42	0,00	0.00	0.00	-0.57	CO 7
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						▶ -46.00	-2.74	\ 0.00		0.00	-0.02	CO 9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$											-0.57	CO 7
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$							⊳ -2.74	0.00			-0.02	CO 9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					Max V <sub>z</sub>				0.00	0.00	-0.02	CO 9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					Min V <sub>z</sub>	-22.00	-1.17	⊳ 0.00			-0.01	CO 6
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						-22.00			▶ 0.00 \		-0.01	CO 6
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$								0.00	0.00	0.00	-0.01	CO 6
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									0.00 ⊳		-0.01	CO 6
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$											-0.01	CO 6
Min M₂											-0.01	CO 6
16 1.000 Max N > -22.49 2.41 -0.00 0.00 -0.00 -0.00 0.00 -0.00 0.00											-0.60	CO 8
Min N ▷ -47.00 -2.73 0.00 0.00 0.00 0.00			16	1.000								CO 7
Mill N 2 47.00 7-2.73 0.00 0.00 0.00 0.00 0.00			10	1.000		-22.49		-0.00	0.00	-0.00	-2.48	CO 9
					Max V <sub>v</sub>			-0.00	0.00	-0.00	2.72	CO 9 CO 7
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$											-2.48	CO 9

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Project: Assignment Week 6

Model: B3\_Frame

Date: 18/10/2021

CROSS-SEC	TIONS - INTE	RNAL FORC	ES						Re	sult Combination
er /	Node	Location			Forces [kN]			Moments [kNm]		Corresponding
RC )	Nø.	x [m]		N	$V_y$	$V_z$	M <sub>T</sub>	$M_{y}$	$M_z$	Load Cases
RC2	/ / / 4		Max V <sub>z</sub>	-23.00	-1.16	▷ 0.00	0.00	0.00	1.16	CO 6
			Min V <sub>z</sub>	-22.49	2.41	-0.00	0.00	-0.00	-2.48	CO 7
		/ / ^	Max M <sub>T</sub>	-23.00	-1.16	0.00	▶ 0.00	0.00	1.16	CO 6
			Min M <sub>T</sub>	-23.00	-1.16	0.00	▷ 0.00	0.00	1.16	CO 6
			Max M <sub>y</sub>	-23.00	-1.16	0.00	0.00	0.00	1.16	CO 6
			Min M <sub>y</sub>	-22.49	2.41	-0.00	0.00	-0.00	-2.48	CO 7
			Max M <sub>z</sub>	-47.00	-2.73	0.00	0.00	0.00 ⊳	2.72	CO 9
			Min Mz/	-22.49	2.41	-0.00	0.00	-0.00 ⊳		CO 7
RC3	17	0.000	Max N	▶ -21.90	-0.65	0.00	0.00	0.00	-0.12	CO 12
			Min N	▶ -31.60	-1.79	0.00	0.00	0.00	-0.01	
			Max V <sub>y</sub>	-21.90		0.00	0.00	0.00	-0.12	
			Min V <sub>y</sub>	-31.60		0.00	0.00	0.00	-0.01	
			Max Vz	-22.00	-1.17		0.00	0.00	-0.01	
			Min V <sub>z</sub>	-22.00	-1.17		0.00	0.00	-0.01	
			Max M <sub>T</sub>	-22.00	-1.17	0.00	▶ 0.00	0.00	-0.01	
		4	Min M <sub>T</sub>	-22.00	-1.17	0.00	▶ 0.00	0.00	-0.01	CO 11
			Max M <sub>y</sub>	-22,00	-1.17	0.00	0.00	0.00	-0.01	CO 11
			Min My	-22.00	-1.17	0.00	0.00	0.00		CO 11
			Max M <sub>z</sub>	/22.00	-1.17	0.00	0.00	0.00 ⊳	-0.01	CO 11
			Min M <sub>z</sub>	-26.70	0.96	0.00	0.00	0.00 ⊳	-0.12	CO 13
	16	1.000	Max N	> / -22.90	-0.45	0.00	0.00	0.00	0.43	CO 12
			Min N Max V <sub>v</sub>	-32.60	-1.79 -0.45	0.00	0.00	0.00	1.78	CO 14 CO 12
			Min V <sub>y</sub>	-32.60/		0.00	0.00	0.00		CO 12
			Max V <sub>z</sub>	-23.00	-1.16		0.00	0.00	1.16	
			Min V <sub>z</sub>	-23.00	-1.16		0.00	0.00		CO 11
			Max M <sub>T</sub>	-23.00	-1.16	0.00	D.00	0.00		CO 11
			Min M <sub>T</sub>	-23.00	-1.16	0.00	0.00	0.00	1.10	CO 11
			Max M <sub>v</sub>	-23.00	-1.16	0.00	0.00	0.00		CO 11
			Min M <sub>v</sub>	-23.00	-1.16	0.00	0.00	0.00		CO 11
			Max M <sub>z</sub>	-32.60	-1.79	0.00	0.00	0.00	1.78	
			Min M <sub>z</sub>	-22.90	-0.45	0.00	0.00	0.00	0.73	CO 14
RC4	17	0.000	Max N	► -22.90 ► -22.00	-1.17	0.00	0.00	0.00	-0.01	
1104	17	0.000	Min N	≥ -26.80	-1.48	0.00	0.00	0.00	-0.01	
			Max V <sub>v</sub>	-22.00		0.00	0.00	0.00	-0.01	CO 15
			Min V <sub>v</sub>	-26.80		0,00	0.00	0.00		CO 16
			Max V <sub>z</sub>	-22.00	-1.17		0.00	0.00	-0.01	CO 15
			Min V <sub>z</sub>	-22.00	-1.17		0.00	0.00	-0.01	
			Max M <sub>T</sub>	-22.00	-1.17	0.00	▶ 0.00	0.00	-0.01	CO 15
			Min M <sub>T</sub>	-22.00	-1.17	0.00	0.00	0.00	-0.01	
			Max M <sub>v</sub>	-22.00	-1.17	0.00	0.00	0.00	-0.01	CO 15
			Min M <sub>v</sub>	-22.00	-1.17	0.00	0.00	0.00	-0.01	
			Max M <sub>z</sub>	-22.00	-1.17	0.00	0.00	0.00	-0.01	CO 15
			Min M <sub>z</sub>	-26.80	-1.48	0.00	0.00	0.00	-0.01	
	16	1.000	Max N	⊳ -23.00	-1.16	0.00	0.00	0.00	1.16	CO 15
			Min N	▶ -27.80	-1.48	0.00	0.00	0.00	1.47	CO 16
			Max V <sub>y</sub>	-23.00		0.00		0.00	1.16	CO 15
			Min V <sub>y</sub>	-27.80		0.00	0.00	0.00	1.47	
			Max V <sub>z</sub>	-23.00	-1.16		0.00	/ /0.00	1.16	
			Min V <sub>z</sub>	-23.00	-1.16		0.00	0.00	1.16	CO 15
			Max M <sub>T</sub>	-23.00	-1.16	0.00	▷ 0.00	0.00		CO 15
			Min M <sub>T</sub>	-23.00	-1.16	0.00	▷ 0.00	0.00		CO 15
			Max M <sub>y</sub>	-23.00	-1.16	0.00	0.00	0.00	/ / 1.16)	CO 15

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 RESULTS

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■ 4.12 CROSS-SECTIONS - INTERNAL FORCES

Result Combinations

	953-3EC I	IONO - IN IE	RNAL FORCI	<b>-</b> 3						Re	sult Combination
mber /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	No.	x [m]		N	$V_y$	$V_z$	M <sub>T</sub>	M <sub>y</sub>	$M_z$	Load Cases
15	RC4	/ / /		Min M <sub>v</sub>	-23.00	-1.16	0.00	0.00 ▷	0.00	1.16	CO 15
				Max M <sub>z</sub>	-27.80	-1.48	0.00	0.00	0.00 ⊳		CO 16
			/ ,	Min M <sub>z</sub>	-23.00	-1.16	0.00	0.00	0.00 ⊳	1.16	CO 15
16	RC1	/ / 18	0.000	Max N	⊳ -23.39	1.04	0.00	0.00	0.00	0.93	CO 2
				Min N	▶ -60.15	-3.69	0.00	0.00	0.00	-3.74	CO 4
			/ /	Max V <sub>y</sub> <	-23.39		0.00	0.00	0.00	0.93	CO 2
				Min V <sub>y</sub>	-60.15		0.00	0.00	0.00		CO 4
				Max V <sub>z</sub>	-28.35	-1.57	> 0.00	0.00	0.00		CO 1
			= / / X	Min V <sub>z</sub>	-28.35	-1.57	> 0.00	0.00	0.00		CO 1
			7 / / /	Max M <sub>T</sub>	-28.35	-1.57	0.00		0.00		CO 1
				Min M <sub>y</sub> ∕	-28.35	-1.57	0.00		0.00	-1.58	CO 1
				Max M <sub>y</sub>	-28.35	-1.57	0.00	0.00 ⊳	0.00		CO 1
				/ Min/M <sub>y</sub>	-28.35	-1.57	0.00	0.00 ⊳	0.00		
				/ Max M <sub>z</sub> / <	-23.39	1.04	0.00	0.00	0.00 ⊳		CO 2
			7	Min M <sub>z</sub>	-60.15	-3.69	0.00	0.00	0.00 ⊳	-3.74	CO 4
		17	1.000	Max/N	-24.54	2.54	0.00	0.00	0.00		CO 2
				Min N Max V <sub>v</sub>	-61.29 -24.54	-3.72 ≥ 2.54	0.00	0.00	0.00	-0.03	CO 4 CO 2
				Min V <sub>v</sub>	-24.54		0.00	0.00	0.00		
				Max V <sub>2</sub>	-29.70	1.58	> 0.00	0.00	0.00		CO 4 CO 1
				Min V <sub>z</sub>	-29.70 -49.72	0.95	> -0.00	0.00	-0.00		CO 3
				Max M <sub>T</sub>	-49.72	-1.58	0.00		0.00		CO 1
				Min M <sub>T</sub>	-29.70	-1.58	0.00		0.00		CO 1
				Max M <sub>v</sub>	-29.70/	-1.58	0.00	0.00	0.00		CO 1
				Min M <sub>v</sub>	49.72	0.95	-0.00	0.00	-0.00	-0.92	CO 3
				Max M <sub>z</sub>	29.70	-1.58	0.00	0.00	0.00		CO 1
				Min M <sub>z</sub>	-49.72	0.95	-0.00	0.00	-0.00 ⊳		CO 3
	RC2	18	0.000	Max N	→ -20.50	0.42	0.00	0.00	0.00		CO 7
	1102	10	0.000	Min N		-2.73	0.00	0.00	-0.00		CO 9
				Max V <sub>v</sub>	-20.50		0.00	0.00	0.00		CO 7
				Min V <sub>v</sub>	-45.00	⊳ -2.73	0.00	0.00	-0.00		CO 9
				Max V <sub>z</sub>	-45.00	-2.73		0.00	-0.00		CO 9
				Min V <sub>z</sub>	-21.00	-1.16	> 0.00	0.00	0.00	-1.17	CO 6
				Max M <sub>T</sub>	-21.00	-1.16	0.00	0.00	0.00	-1.17	CO 6
				Min M <sub>T</sub>	-21.00	-1.16	0.00	0.00	0.00	-1.17	CO 6
				Max M <sub>v</sub>	-21.00	-1.16	0,00	0.00 ⊳	0.00	-1.17	CO 6
				Min M <sub>y</sub>	-45.00	-2.73	0.00	0.00 ⊳	-0.00		CO 9
				Max M <sub>z</sub>	-20.50	0.42	0,00	0.00	0.00 ⊳		CO 7
				Min M <sub>z</sub>	-45.00	-2.73	0.00	0.00	-0.00 ⊳	-2.75	CO 9
		17	1.000	Max N	▶ -21.50	1.42	0.00	0.00	0.00		CO 7
				Min N	▶ -46.00	-2.74	0.00	/ 0.00	0.00	-0.02	CO 9
				Max V <sub>y</sub>	-21.50		0.00	0.00	0.00		CO 7
				Min V <sub>y</sub>	-46.00	> -2.74	0.00	0.00	0.00	-0.02	
				Max V <sub>z</sub>	-46.00	-2.74		0.00	0.00		CO 9
				Min V <sub>z</sub>	-22.00	-1.17		0.00	0.00		CO 6
				Max M <sub>T</sub>	-22.00	-1.17	0.00		0.00		CO 6
				Min M <sub>T</sub>	-22.00	-1.17	0.00	0.00	0.00		CO 6
				Max M <sub>y</sub>	-22.00	-1.17	0.00	0.00	0.00		CO 6
				Min M <sub>y</sub>	-22.00	-1.17	0.00	0.00	0.00		CO 6
				Max M <sub>z</sub>	-22.00	-1.17	0.00	0.00	0.00		CO 6
	DOS	40	0.000	Min M <sub>z</sub>	-38.29	0.34	0.00	0.00	0.00	-0.60	CO 8
	RC3	18	0.000	Max N	-20.90	-0.85	0.00	0.00	0.00	-0.87	CO 12 CO 14
	I	1		Min N	> -30.60	-1.79	0.00	0.00	υ.ψυ μ	/ -1.80)	1 09 14

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Project: Assignment Week 6 Model: B3\_Frame

■ 4.12 CR	OSS-SECTI	IONS - INTE	ERNAL FORC	ES						Res	sult Combinations
Member /		Node	Location			Forces [kN]		1	Moments [kNm]		Corresponding
No.	RC	No.	x [m]		N	$V_y$	$V_z$	M <sub>T</sub>	M <sub>y</sub>	$M_z$	Load Cases
16	RC3			Max V <sub>v</sub>	-20.90		0.00	0.00	0.00		CO 12
				Min V <sub>y</sub>	-30.60		0.00	0.00	0.00	-1.80	CO 14
			/ / \	Max V <sub>z</sub>	-21.00	-1.16		0.00	0.00	-1.17	CO 11
				Min V <sub>z</sub>	-21.00	-1.16		0.00	0.00		CO 11
			/ / /	Max M <sub>T</sub>	-21.00	-1.16	0.00		0.00	-1.17	CO 11
				Min M <sub>T</sub>	-21.00	-1.16	0.00		0.00		CO 11
				Max M <sub>y</sub>	-21.00	-1.16	0.00	0.00 ⊳	0.00	-1.17	CO 11
				Min My	-21.00	-1.16	0.00	0.00 ⊳	0.00	-1.17	CO 11
			= / / $A$	Max M <sub>z</sub>	-20.90	-0.85	0.00	0.00	0.00	-0.87	CO 12
		47	( / 4 / 20	Min M <sub>z</sub>	-30.60	-1.79	0.00	0.00	0.00		CO 14
		17	1.000	Max N Min N	> -21.90 > -31.60	-0.65 -1.79	0.00 0.00	0.00	0.00 0.00	-0.12	CO 12
				Max V <sub>v</sub>	-21.90		0.00	0.00	0.00	-0.01 -0.12	CO 14 CO 12
				Min V <sub>v</sub>	-31.60		0.00	0.00	0.00	-0.01	CO 14
				Max V <sub>z</sub>	-22.00	-1.17		0.00	0.00	-0.01	CO 11
				Min V <sub>z</sub>	-22.00	-1.17	<ul><li>D.00</li><li>D.00</li></ul>	0.00	0.00	-0.01	CO 11
				Max M <sub>T</sub>	-22,00	-1.17	0.00		0.00	-0.01	CO 11
				Min M <sub>T</sub>	-22.00	-1.17	0.00		0.00	-0.01	CO 11
				Max M <sub>v</sub>	/22.00	-1.17	0.00	0.00	0.00	-0.01	CO 11
				Min M <sub>v</sub>	-22.00	→1.17	0.00	0.00	0.00		CO 11
				Max M <sub>z</sub>	-22.00	/-1.17	0.00	0.00	0.00	-0.01	CO 11
				Min M <sub>z</sub>	-26.70	-0.96	0.00	0.00	0.00	-0.12	CO 13 CO 15 CO 16
	RC4	18	0.000	Max N	▶ -21.00	1.16	0.00	0.00	0.00	-1.17	CO 15
				Min N	-25.80/	-1.47	0.00	0.00	0.00	-1.48	CO 16
				Max V <sub>y</sub>	-21.00	► / -1.16	0.00	0.00	0.00	-1.1/	CO 15
				Min V <sub>y</sub>	-25 80		0.00	0.00	0.00		CO 16
				Max V <sub>z</sub>	-21.00	-1.16	0.00	0.00	0.00	-1.17	CO 15
				Min V <sub>z</sub>	-21.00	-1.16		0.00	0.00	-1.17	CO 15
				Max M <sub>T</sub>	-21.00	-1.16	0.00		0.00	-1.17	CO 15
				Min M <sub>T</sub>	-21.00	-1.16	0.00		0.00		CO 15
				Max M <sub>y</sub>	-21.00	-1.16	0.00	0.00	0.00	-1.17	CO 15
				Min M <sub>y</sub>	-21.00	-1.16	0.00	0.00 >	0.00		CO 15
				Max M <sub>z</sub>	-21.00	-1.16	0.00	0.00	0.00 Þ 0.00 Þ	-1.17	CO 15
		17	1.000	Min M <sub>z</sub> Max N	-25.80 > -22.00	-1.47 -1.17	0.00	0.00	0.00	-1.48	CO 16
		17	1.000	Min N	-22.00 > -26.80	-1.17	0.00	0.00	0.00	-0.01 -0.01	CO 15
				Max V <sub>v</sub>	-22.00	> -1.17	0.00	0.00	0.00	-0.01	CO 15 CO 16 CO 15
				Min V <sub>v</sub>	-26.80		0.00	0.00	0.00	-0.01	CO 16
				Max V <sub>z</sub>	-22.00	-1.17		0.00	0.00	-0.01	CO 15
				Min V <sub>z</sub>	-22.00	-1.17	▶ 0.00	0.00	0.00	-0.01	CO 15
				Max M <sub>T</sub>	-22.00	-1.17	0.00	0.00	0.00	-0.01	CO 15
				Min M <sub>T</sub>	-22.00	-1.17	0.00		0.00		CO 15
				Max M <sub>v</sub>	-22.00	-1.17	0.00	0.00	0.00	-0.01	CO 15
				Min M <sub>y</sub>	-22.00	-1.17	0.00	0.00 ▷	0.00	-0.01	CO 15
				Max M <sub>z</sub>	-22.00	-1.17	0.00	0.00	0.00	-0.01	CO 15
				Min M <sub>z</sub>	-26.80	-1.48	0.00	0.00	0.00	-0.01	CO 16
17	RC1	19	0.000	Max N	▶ -22.24	-0.47	0.00	0.00	0.00	1.22 -7.40	CO 2 CO 4
				Min N	⊳ -59.00	-3.62	0.00	0.00	0.00	-7.40	CO 4
				Max V <sub>y</sub>	-22.24	-0.47	0.00	0.00	0.00	1.22	CO 2
				Min V <sub>y</sub>	-59.00	→ -3.62	0.00 ▷ 0.00	0.00	0.00		CO 4
				Max V <sub>z</sub> Min V <sub>z</sub>	-27.00 -27.00	-1.56 -1.56		0.00	0.00	-3.15 -3.15	CO 1
					-27.00 -27.00		0.00		0.00	-3.15	CO 1
	I	[		Max M <sub>T</sub>	-27.00	-1.56	0.00	Įν	0.00	/ / -3.15)	69 1

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Project: Assignment Week 6 Model: B3\_Frame Date: 18/10/2021

### ■ 4 12 CROSS-SECTIONS - INTERNAL FORCES

Result Combinations
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	200-0EC N	ONO - IN I EI	RNAL FORC	EO						Re	sult Combination
mber /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	Nø.	x [m]		N	$V_{y}$	$V_z$	M <sub>T</sub>	$M_y$	$M_z$	Load Cases
17	RC1	/ / /		Min M <sub>T</sub>	-27.00	-1.56	0.00	▶ 0.00	0.00	-3.15	CO 1
				Max M <sub>y</sub>	-22.24		0.00	0.00			CO 2
		/ / X	/ ~	Min M <sub>y</sub>	-27.00		0.00	0.00	0.00	-3.15	CO 1
				Max M <sub>z</sub>	-22.24		0.00	0.00	0.00		CO 2
			/ / /	Min M <sub>z</sub>	-59.00		0.00	0.00	0.00 ⊳	-7.40	CO 4
		18	/1.000	Max N	-23.39		0.00	0.00	0.00	0.93	CO 2
				Min N Max V <sub>v</sub>	-60.15		0.00	0.00	0.00	-3.74	CO 4 CO 2
				Min V <sub>y</sub>	-23.39 -60.15		0.00 0.00	0.00	0.00		CO 4
			7//	Max V <sub>2</sub>	-00.15			0.00	0.00	-3.74 1.50	CO 1
			(	Min V <sub>2</sub>	-28.35		D 0.00 D 0.00	0.00	0.00	-1.50	CO 1
				Max M <sub>T</sub>	-28.35		0.00		0.00		CO 1
				Min M <sub>T</sub>	-28.35		0.00		0.00	-1.58	
				Max M <sub>v</sub>	-28.35		0.00	0.00	0.00		CO 1
				Min My	-28.35		0.00	0.00	0.00	-1.58	CO 1
			7	Max M <sub>z</sub>	-23.39		0.00	0.00	0.00		CO 2
				Min M <sub>z</sub>	-60/15		0.00	0.00	0.00		CO 4
	RC2	19	0.000	Max N	<ul><li>→ -19.50</li></ul>		0.00	0.00	0.00		CO 7
	1102		0.000	Min N			0.00	0.00	0.00		CO 9
				Max V <sub>v</sub>	/-19.50		0.00	0.00	0.00		CO 7
				Min V <sub>v</sub>	-44.00		0.00	0.00	0.00	-5.46	CO 9
				Max V <sub>z</sub>	-43.69	-2.33	▶ 0.00	0.00	-0.00	-3.88	CO 10
				Min V <sub>z</sub>	-20,00		▶ 0.00	0.00	0.00		CO 6
				$Max M_T$	-20.00		0.00		0.00		CO 6
				Min M <sub>T</sub>	-20.00		0.00		0.00		CO 6
				Max M <sub>y</sub>	-20,00		0.00	0.00	0.00		CO 6
				Min M <sub>y</sub>	-43.69		0.00	0.00	-0.00		CO 10
				Max M <sub>z</sub>	-19.50		0.00	0.00	0.00 ⊳		CO 7
				Min M <sub>z</sub>	-44.00		0.00	0.00	0.00 ▷	-5.46	
		18	1.000	Max N	-20.50	0.42	0.00	0.00	0.00	0.35	CO 7 CO 9
				Min N Max V <sub>v</sub>	-45.00 -20.50	-2.73 > 0.42	0.00	0.00	-0.00 0.00	-2.75 0.35	CO 7
				Min V <sub>v</sub>	-45.00		0.00	0.00	-0.00		CO 9
				Max V <sub>2</sub>	-45.00			0.00	-0.00		CO 9
				Min V <sub>z</sub>	-21.00		0.00	0.00	0.00		CO 6
				Max M <sub>T</sub>	-21.00		0.00		0.00		CO 6
				Min M <sub>T</sub>	-21.00		0.00	0.00	0.00		CO 6
				Max M <sub>v</sub>	-21.00		0.00	0.00	0.00		CO 6
				Min M <sub>v</sub>	-45.00		0.00	0.00	-0.00		CO 9
				Max M <sub>z</sub>	-20.50		0.00	0.00	0.00 ⊳	0.35	CO 7
				Min M <sub>z</sub>	-45.00	-2.73	0.00	0.00	-0.00	-2.75	CO 9
	RC3	19	0.000	Max N	▶ -19.90	-1.04	0.00	0.00	0.00	-1.81	CO 12
				Min N	⊳ -29.60		0.00	0.00	0.00	-3.58	CO 14
				Max V <sub>y</sub>	-19.90		0.00	0.00	0.00		CO 12
				Min V <sub>y</sub>	-29.60		0.00	0.00	0.00		CO 14
				Max V <sub>z</sub>	-20.00			0.00	0.00		CO 11
				Min V <sub>z</sub>	-20.00		▶ 0.00	0.00	0.00	-2.33	CO 11
				Max M <sub>T</sub>	-20.00		0.00		0.00		CO 11
				Min M <sub>⊤</sub>	-20.00		0.00		0.00	-2.33	
				Max M <sub>y</sub>	-20.00		0.00	0.00			CO 11
				Min M <sub>y</sub>	-20.00		0.00	0.00	0.00	-2.33	
				Max M <sub>z</sub>	-19.90		0.00	0.00	0.00	-1.81	CO 12
		1		Min M <sub>z</sub>	-29.60	-1.77	0.00	0.00	0.00	/ -3.58	CO 14

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R	FSULTS

Project: Assignment Week 6

Model: B3\_Frame

ber . RC	RC 3	Node No.	Location x [m]			Forces [kN]		l l	Noments [kNm]		Corresponding
			v [m]								
RC	:3	/10 /	^ [iii]		N	$V_y$	$V_z$	M <sub>T</sub>	$M_y$	$M_z$	Load Cases
		′ /18 / Y	1.000	Max N	⊳ -20.90		0.00	0.00	0.00	-0.87	CO 12
				Min N	⊳ -30.60		0.00	0.00	0.00	-1.80	CO 14
			/ / .	Max V <sub>y</sub>	-20.90	⊳ -0.85	0.00	0.00	0.00	-0.87	CO 12
				Min V <sub>v</sub>	-30.60	⊳ -1.79	0.00	0.00	0.00	-1.80	CO 14
				Max V <sub>z</sub>	-21.00	-1.16		0.00	0.00	-1.17	CO 11
		5/		Min V <sub>z</sub> <	-21.00	-1.16	⊳ 0.00	0.00	0.00		CO 11
				Max M <sub>T</sub>	-21.00	-1.16	0.00	▶ 0.00	0.00	-1.17	
				Min M <sub>T</sub>	-21.00	-1.16	0.00	▶ 0.00	0.00	-1.17	
				Max M <sub>v</sub>	-21.00	-1.16	0.00	0.00 >	0.00	-1.17	
			7///	Min M <sub>v</sub>	-21.00		0.00	0.00 >	0.00	-1.17	CO 11
				Max M-	-20.90	-0.85	0.00	0.00	0.00 ⊳	-0.87	
				Min M <sub>z</sub>	-30.60		0.00	0.00	0.00 ⊳		CO 14
RC	:4	19	0.000	Max N	-20.00		0.00	0.00	0.00	-2.33	CO 15
1.0	•	· · ·	0.000	Min N	-24.80	-1.46	0.00	0.00	0.00	-2.95	CO 15 CO 16
				Max V <sub>v</sub> /	-20.00		0.00	0.00	0.00	-2.33	CO 15
			/	Min V <sub>v</sub>	-24.80		0.00	0.00	0.00	-2.95	CO 16
			`	Max V <sub>7</sub>	-20:00			0.00	0.00	-2.33	
				Min V <sub>z</sub>	-20.00	-1.15	▶ 0.00	0.00	0.00	-2.33	CO 15
				Max M <sub>T</sub>	-20.00		0.00		0.00	-2.33	
				Min M <sub>T</sub>	-20.00		0.00		0.00		CO 15
				Max M <sub>v</sub>	-20.00		0.00	0.00	0.00	-2.33	CO 15
				Min M <sub>v</sub>	-20.00		0.00	0.00	0.00	-2 33	CO 15
				Max M <sub>z</sub>	-20,00		0.00	0.00	0.00	-2.33	
				Min M <sub>z</sub>	-24.80		0.00	0.00	0.00	-2.05	CO 16
		18	1.000	Max N	▶ -21.00	-1.16	0.00	0.00	0.00	1 17	CO 15
		10	1.000	Min N	≥ -25.80		0.00	0.00	0.00	-1.17 -1.48	CO 15 CO 16
				Max V <sub>v</sub>	-21.00		0.00	0.00	0.00 0.00	-1.17	CO 15
				Min V <sub>v</sub>	-25.80		0.00	0.00	0.00	-1.48	CO 16
				Max V <sub>7</sub>	-21.00	-1.16		0.00	0.00	-1 17	CO 15
				Min V <sub>z</sub>	-21.00			0.00	0.00	-1 17	CO 15
				Max M <sub>T</sub>	-21.00		0.00	▶ 0.00	0.00	-1.17	
				Min M <sub>T</sub>	-21.00		0.00		0.00		CO 15
				Max M <sub>v</sub>	-21.00	-1.16	0.00	0.00	0.00	-1.17	
				Min M <sub>v</sub>	-21.00		0.00	0.00	0.00		CO 15
				Max M <sub>2</sub>	-21.00		0.00	0.00	0.00	-1.17	
				Min M <sub>z</sub>	-25.80	-1.47	0.00	0.00	0.00	1.17	CO 16
RC	٠1	20	0.000	Max N	-23.60		0.00	0.00		-1.40	CO 10
KC	, I	20	0.000	Min N	→ -57.86	-1.97 -3.51	0.00	0.00	0.00 0.00	-0.00 -10.97	CO 2 CO 4 CO 1
				Max V <sub>v</sub>	-25.65	> -1.54	0.00	0.00	0.00	-10.37 -4.70	CO 1
				Min V <sub>v</sub>	-57.39	> -3.90	0.00	0.00	0.00	-8 50	CO 5
				Max V <sub>2</sub>	-21.10		▶ 0.00	0.00	0.00	-0.00	
				Min V <sub>z</sub>	-25.65			0.00	0.00	-4.70	CO 1
				Max M <sub>T</sub>	-25.65		0.00		0.00	-4.70	
				Min M <sub>T</sub>	-25.65		0.00	0.00	0.00	-4.70 -4.70	CO 1
				Max M <sub>v</sub>	-25.65		0.00	0.00	0.00	-4.70 -4.70	
				Min M <sub>v</sub>	-25.65		0.00	0.00	0.00	-4.70 -4.70	CO 1
				Max M <sub>z</sub>	-21.10		0.00	0.00	0.00	-4.70 -0.00	
				Min M <sub>z</sub>	-21.10 -57.86			0.00	0.00		CO 4
		10	4.000				0.00			-10.97	004
		19	1.000	Max N Min N	> -22.24 > -59.00	-0.47 -3.62	0.00 0.00	0.00	0.00	1.22	CO 2 CO 4
				Max V <sub>v</sub>	-59.00	-3.62 > -0.47	0.00	0.00	0.00	1.22	CO 2
				Min V <sub>v</sub>	-59.00		0.00	0.00	0.00	7.40	CO 4
				Max V <sub>2</sub>	-27.00			0.00	0.00		CO 1

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Project: Assignment Week 6 Model: B3\_Frame

ember /		Node /	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	No.	x [m]		N	V <sub>v</sub>	V <sub>z</sub>	M <sub>T</sub>	M <sub>y</sub>	$M_z$	Load Cases
18	RC1			Min V <sub>z</sub>	-27.00	-1.56	> 0.00	0.00	0.00		CO 1
	1.00			Max M <sub>T</sub>	-27.00	-1.56	0.00		0.00	-3 15	CO 1
			/ /	Min M <sub>T</sub>	-27.00	-1.56	0.00	▶ 0.00	0.00	-3 15	CO 1
				Max M <sub>v</sub>	-22.24	-0.47	0.00	0.00	0.00	1 22	CO 2
			$/$ ) $\rangle$ $ $	Min M <sub>v</sub>	-27.00	-1.56	0.00	0.00	0.00	-3.15	
				Max M <sub>z</sub>	-22.24	-0.47	0.00	0.00	0.00	1.22	CO 2
				Min M <sub>z</sub>	-59.00	-3.62	0.00	0.00	0.00	-7.40	
	RC2	20 (	0.000	Max N	-59.00 ▶ -18.50	-1.59	0.00	0.00	0.00	-0.82	CO 7
}	NG2	20	0.000	Min N	-16.50 -43.00	-2.63	0.00	0.00	0.00	-8.12	CO 7 CO 9
			7 / / /	Max V <sub>v</sub>	-19.00	► -1.14	0.00	0.00	-0.00	-3.48	CO 6
				Min V	-42.70		0.00	0.00	0.00	-6.50	
				Max V <sub>2</sub>	-35.29			0.00	-0.00	-4.03	
				Min V <sub>z</sub>	-18.50	-1.59		0.00	0.00	-0.82	
				Max M <sub>T</sub>	-19.00	-1.14	0.00	D.00 □	-0.00	-3.48	
				Min M <sub>T</sub>	-19.00	-1.14	0.00	D 0.00 D 0.00	-0.00	-3.48	
				Max M <sub>v</sub>							
			4		-18.50	-1.59	0.00	0.00	0.00	-0.82	007
				Min M <sub>y</sub>	-19,00	-1.14	0.00	0.00 >	-0.00	-3.48	CO 6
				Max M <sub>z</sub>	-18.50		0.00	0.00	0.00	-0.82	CO 7
				Min M <sub>z</sub>	43.00	-2.63	0.00	0.00	0.00 >	-8.12	CO 9
		19	1.000	Max N	-19.50	0.59	0.00	0.00	0.00	0.26	CO 7
				Min N	► / -44.00	-2.69	0.00	0.00	0.00	-5.46	CO 9 CO 7
				Max V <sub>y</sub>	-19.50		0.00	0.00	0.00	0.26	007
				Min V <sub>y</sub>	-44,00		0.00	0.00	0.00	-5.46	CO 9
				Max V <sub>z</sub>	-43.69			0.00	-0.00	-3.88	
				Min V <sub>z</sub>	20.00	-1.15		0.00	0.00	-2.33	CO 6
				Max M <sub>T</sub>	-20,00	-1.15	0.00	▶ 0.00	0.00	-2.33	
				Min M <sub>T</sub>	-20.00	-1.15	0.00	▶ 0.00	0.00	-2.33	CO 6
				Max M <sub>y</sub>	-20.00		0.00	0.00 ⊳	0.00	-2.33	CO 6
				Min M <sub>y</sub>	-43.69	-2.33	0.00	0.00 ⊳	-0.00	-3.88	
				$Max M_z$	-19.50	-0.59	0.00	0.00	0.00 ⊳	0.26	CO 7
				Min M <sub>z</sub>	-44.00	-2.69	0.00	0.00	0.00 ⊳	-5.46	CO 9
	RC3	20	0.000	Max N	▶ -18.90	-1.23	0.00	0.00	0.00	-2.95	CO 12
				Min N	⊳ -28.60	-1.74	0.00	0.00	0.00	-5.34	CO 14
				Max V <sub>y</sub>	-19.00		0.00	0.00	-0.00	-3.48	CO 11
				$Min V_y$	-28.60		0.00	0.00	0.00	-5.34	CO 14
				Max V <sub>z</sub>	-19.00	-1.14	> / 0.00 [	0.00	-0.00	-3.48	CO 11
				$Min V_z$	-18.90	-1.23	> / 0.00	0.00	0.00	-2.95	CO 12
				Max M <sub>⊤</sub>	-19.00	-1.14	0.00	▶ 0.00	-0.00	-3.48	CO 11
				Min M <sub>T</sub>	-19.00	-1.14	0.00	▶ 0.00	-0.00	-3.48	CO 11
				Max M <sub>v</sub>	-18.90	-1.23	0.00	( 0.00 ▶	0.00	-2.95	CO 12
				Min M <sub>v</sub>	-19.00	-1.14	0.00	0.00 ⊳	-0.00	-3.48	
				Max M <sub>z</sub>	-18.90	-1.23	0.00	0.00	0.00	-2.95	CO 12
				Min M <sub>z</sub>	-28.60	-1.74	0.00	0.00	0.00	-5.34	CO 14
		19	1.000	Max N	→ -19.90		0.00		~0.00	-1.81	
			000	Min N	> -29.60	-1.77	0.00	0.00	0.00	-3.58	CO 14
				Max V <sub>v</sub>	-19.90		0.00	0.00	0.00	-1.81	CO 12
				Min V <sub>v</sub>	-29.60		0.00	0,00	0.90	-3.58	
				Max V <sub>z</sub>	-20.00			0.00	0.00	-2.33	
				Min V <sub>z</sub>	-20.00	-1.15		0.00	0.00	-2.33	
				Max M <sub>T</sub>	-20.00	-1.15	0.00		0.00	-2.33	
				Min M <sub>T</sub>	-20.00	-1.15	0.00	D 0.00 D 0.00	0.00	-2.33	CO 11
				Max M <sub>v</sub>	-20.00	-1.15	0.00	0.00	0.00	-2.33	CO 11
				IVIAX IVI <sub>V</sub>	-20.00	-1.15	0.00	0.00 №	0.00	/ -2.33	10011

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Date: 18/10/2021

■ 4.12 CROSS-SECTIONS - INTERNAL FORCES

1.12 CR	(OSS-SEC I)	ION2 - IN I 🕏	RNAL FORC	,ES						Re	sult Combination
Member		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	No.	x [m]		N	$V_{v}$	V <sub>z</sub>	M <sub>T</sub>	M <sub>v</sub>	$M_z$	Load Cases
18	RC3			Max M <sub>z</sub>	-19.	90 -1.04	0.00	0.00	0.00 ⊳	-1.81	CO 12
				Min M <sub>z</sub>	-29.			0.00	0.00 ⊳	-3.58	CO 14
	RC4	/ /20	0.000	Max N	▶ -19.			0.00	-0.00	-3.48	
				Min N	→ -23.			0.00	0.00	-4.41	
				Max V <sub>v</sub>		00 ⊳ -1.14		0.00	-0.00		CO 15
			/ /	Min V <sub>y</sub> <	-23.	30 ⊳ -1.44		0.00	0.00	-4.41	CO 16
				Max V <sub>z</sub>	-19.			0.00	-0.00	-3.48	
				Min V <sub>z</sub>	-23.			0.00	0.00		CO 16
			<u> </u>	Max M <sub>T</sub>	´   -19.			▶ 0.00	-0.00	-3.48	
			7////	Min M <sub>T</sub>	-19.			▷ 0.00	-0.00		CO 15
				Max M <sub>y</sub>	-23.		0.00	0.00		-4.41	
			~	Min M <sub>y</sub>	-19.			0.00			CO 15
			\ \	/ Max M <sub>z</sub>	-19.			0.00	-0.00 ⊳	-3.48	
				Min Mz	-23.			0.00	0.00 ⊳	-4.41	
		19	1.000	/ Max N	-20.			0.00	0.00	-2.33	CO 15
			4	Min N	-24.			0.00	0.00	-2.95	
				Max V <sub>y</sub>		00 > -1.15		0.00	0.00	-2.33	
				Min V <sub>y</sub>		30 ▶ -1.46		0.00	0.00		CO 16
				Max V <sub>z</sub>	/ -20.			0.00	0.00	-2.33	
				Min V <sub>z</sub>	/ -20.			0.00	0.00		CO 15
				Max M <sub>T</sub>	-20.			▶ 0.00	0.00	-2.33	
				Min M <sub>T</sub>	-20.				0.00		CO 15
				Max M <sub>y</sub>	-20			0.00		-2.33	
				Min M <sub>y</sub>	-20.			0.00			CO 15
				Max M <sub>z</sub>	-20.			0.00	0.00	-2.33	CO 15
40	201		0.000	Min M <sub>z</sub>	-24			0.00	0.00		CO 16
19	RC1	2	0.000	Max N Min N	<ul><li>D -19:</li><li>D -56.</li></ul>	95 -3.47 72 -3.37		0.00	0.00 0.00	-2.73 -14.42	CO 2
				Max V <sub>v</sub>	-24.		0.00	0.00	0.00	-6.22	CO 1
				Min V <sub>v</sub>		14 > -4.95		0.00	0.00		CO 3
				Max V <sub>z</sub>	-56.			0.00	-0.00	-12.79	
				Min V <sub>z</sub>	-24.		▶ 0.00	0.00	0.00	-6.22	CO 1
				Max M <sub>T</sub>	-24.		0.00	0.00	0.00		CO 1
				Min M <sub>T</sub>	-24.			0.00	0.00		CO 1
				Max M <sub>v</sub>	-24.		0.00	0.00		-6.22	
				Min M <sub>v</sub>	-56.			0.00		-12.79	
				Max M <sub>z</sub>	-19.		0.00	0.00	0.00	-2.73	
				Min M <sub>z</sub>	-56.		0.00	0.00	0.00	-14.42	
		20	1.000	Max N	→ -21.		0.00	0.00	0.00		
		20	1.000	Min N	→ -57.		0.00	0.00	0.00	-0.00 -10.97	CO 4
				Max V <sub>v</sub>	-25.			0.00	0.00	-4.70	
				Min V <sub>v</sub>		39 ⊳ -3.90		0.00	0.00		CO 5
				Max V <sub>z</sub>	-21.			0.00	0.00	-0.00	
				Min V <sub>z</sub>	-25.			0.00	0.00	-4.70	
				Max M <sub>T</sub>	-25.			▶ 0.00	0.00	-4.70	
				Min M <sub>T</sub>	-25.			▶ /0.00	0.00		CO 1
				Max M <sub>v</sub>	-25.		0.00	0,00		-4.70	
				Min M <sub>v</sub>	-25.			0.00		-4.70	
				Max M <sub>z</sub>	-21.		0.00	0.00	0.00	-0.00	
				Min M <sub>z</sub>	-57.		0.00	0.00	0.00 ⊳	-10.97	
	RC2	2	0.000	Max N	► -17.			0.00		-2.91	CO 7
				Min N	→ -42.	01 -2.55	0.00	0.00	0.00	-10.71	CO 9
				Max V <sub>v</sub>	-18.	00 ⊳ -1.13	0.00	0.00	0.00	/ -4.61	CO 6

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Model: B3\_Frame

nber /		Node /	RNAL FORC			Forces [kN]		N.A.	oments [kNm]	110	sult Combina Correspondin
o.	RC	No.	x [m]		N	V <sub>v</sub>	Vz	M <sub>T</sub>	M <sub>v</sub>	M <sub>z</sub>	Load Cases
9	RC2	140.	X [iii]	Min V <sub>v</sub>	-34.30		0.00	0.00	0.00		CO 8
9	RUZ			Max V <sub>2</sub>	-34.30			0.00	0.00	-7.14 -4.61	CO 6
			7	Min V <sub>2</sub>	-18.00			0.00	0.00	-4.61	CO 6
				Max M <sub>T</sub>	-18.00		0.00	D.00 D.00	0.00	-4.61	CO 6
			/ ) \	Min M <sub>T</sub>	-18.00		0.00	D.000 D.000	0.00	-4.61	CO 6
				Max M <sub>v</sub>	-18.00		0.00	0.00	0.00	-4.61	CO 6
				Min M <sub>v</sub>	-18.00		0.00	0.00	0.00	-4.61	CO 6
				Max M <sub>z</sub>	-17.50		0.00	0.00	0.00	-2.91	CO 7
			J / / X	Min Mz	-42.01	-2.55	0.00	0.00	0.00	-10.71	CO 9
		20	7 / /1.000	Max N	► -18.50		0.00	0.00	0.00	-0.82	CO 7
		20	1.000	Min N	→ -43.00		0.00	0.00	0.00	-8.12	CO 9
				Max V <sub>v</sub>	-19.00		0.00	0.00	-0.00	-3.48	CO 6
				Min V <sub>v</sub>	-42.70	⊳ -2.89	0.00	0.00	0.00	-6.50	CO 10
				/ Max V <sub>z</sub> /	-35.29	-2.62	> 0.00	0.00	-0.00	-4.03	CO 8
				Min V <sub>z</sub>	-18.50	-1.59	> 0.00	0.00	0.00	-0.82	CO 7
			4	Max M <sub>T</sub>	-19.00	-1.14	0.00	⊳ 0.00	-0.00	-3.48	CO 6
				Min M <sub>T</sub>	-19,00	-1.14	0.00	⊳ 0.00	-0.00	-3.48	CO 6
				Max M <sub>y</sub>	-1.8.50	-1.59	0.00	0.00 ⊳	0.00	-0.82	CO 7
				Min M <sub>y</sub>	/19.00		0.00	0.00 ⊳	-0.00	-3.48	CO 6
				Max M <sub>z</sub>	-18.50		0.00	0.00	0.00 ⊳	-0.82	CO 7
				Min M <sub>z</sub>	-43.00		0.00	0.00	0.00 ⊳	-8.12	CO 9
	RC3	2	0.000	Max N	-17.90		0.00	0.00	0.00	-4.27	CO 12
				Min N	▶ -27,60		0.00	0.00	0.00	-7.06	CO 14
				Max V <sub>y</sub>	-18.00		0.00	0.00	0.00	-4.61	CO 11
				Min V <sub>y</sub>	-22.70		0.00	0.00	0.00	-5.50	CO 13
				Max V <sub>z</sub>	18 00			0.00	0.00	-4.61	CO 11
				Min V <sub>z</sub>	-18.00		0.00	0.00	0.00	-4.61	CO 11
				Max M <sub>T</sub>	-18.00		0.00		0.00	-4.61	CO 11
				Min M <sub>T</sub>	-18.00		0.00	▶ 0.00	0.00	-4.61	CO 11
				Max M <sub>y</sub>	-18.00		0.00	0.00	0.00	-4.61	CO 11
				Min M <sub>y</sub>	-18.00		0.00	0.00	0.00	-4.61	CO 11 CO 12
				Max M <sub>z</sub>	-17.90		0.00	0.00	0.00	-4.27 -7.06	CO 12
		20	1.000	Min M <sub>z</sub> Max N	-27.60 > -18.90		0.00	0.00	0.00 D	-2.95	CO 14
-		20	1.000	Min N	→ -18.90 → -28.60		0.00	0.00	0.00	-5.34	CO 12
				Max V <sub>v</sub>	-19.00		0.00	0.00	-0.00	-3.48	CO 14
				Min V <sub>v</sub>	-28.60		0.00	0.00	0.00	-5.34	CO 14
				Max V <sub>z</sub>	-19.00			0.00	-0.00	-3.48	CO 11
				Min V <sub>z</sub>	-18.90			9.00	0.00	-2.95	CO 12
				Max M <sub>T</sub>	-19.00		0.00	0.00	-0.00	-3.48	CO 11
				Min M <sub>T</sub>	-19.00		0.00	0.00	-0.00	-3.48	CO 11
				Max M <sub>v</sub>	-18.90		0.00	0.00	0.00	-2.95	CO 12
				Min M <sub>v</sub>	-19.00		0.00	0.00	-0.00	-3.48	CO 11
				Max M <sub>z</sub>	-18.90		0.00	0.00	_0.00 ⊳	-2.95	CO 12
				Min M <sub>z</sub>	-28.60		0.00	0.00	0.00 ⊳	-5.34	CO 14
	RC4	2	0.000	Max N	▶ -18.00		0.00	0.00	0.00	-4.61	CO 15
				Min N	▶ -22.80	-1.42	0.00	0.00	-0.00	-5.84	CO 16
				Max V <sub>y</sub>	-18.00		0.00	0.00	0.00	-4.61	CO 15
				Min V <sub>y</sub>	-22.80		0.00	0.00	/-0.00	-5.84	CO 16
				Max V <sub>z</sub>	-22.80			0.00	-0.00	-5.84	CO 16
				Min V₂	-18.00	-1.13	> 0.00	0.00	0.00	-4.61	CO 15
				Max M <sub>T</sub>	-18.00	-1.13	0.00		0.00	-4.61	CO 15

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Model: B3\_Frame

ember /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	No.	x [m]		N	$V_{v}$	$V_z$	M <sub>T</sub>	M <sub>v</sub>	$M_z$	Load Cases
19	RC4			Max M <sub>v</sub>	-18.00	-1.13	0.00	0.00 ⊳	0.00	-4.61	CO 15
				Min M <sub>v</sub>	-22.80		0.00	0.00 >	-0.00	-5.84	
		///////////////////////////////////////		Max M <sub>z</sub>	-18.00		0.00	0.00	0.00 ⊳	-4.61	CO 15
				Min M <sub>z</sub>	-22.80		0.00	0.00	-0.00 ⊳	-5.84	CO 16
		20	1.000	Max N	▶ -19.00		0.00	0.00	-0.00	-3.48	
			/ /	Min N 🤝	-23.80	-1.44	0.00	0.00	0.00	-4.41	CO 16
				Max V <sub>v</sub>	-19.00		0.00	0.00	-0.00	-3.48	CO 15
				Min V <sub>v</sub>	-23.80		0.00	0.00	0.00	-4.41	
			J / / X	Max V <sub>z</sub>	-19.00		▶ 0.00	0.00	-0.00	-3.48	
			7 / / /	Min Vz	-23.80			0.00	0.00	-4.41	
				Max M <sub>7</sub>	-19.00		0.00		-0.00	-3.48	
				Min M <sub>T</sub>	-19.00		0.00		-0.00		CO 15
				Max M <sub>v</sub>	-23.80		0.00	0.00	0.00	-4.41	
				Min M <sub>v</sub>	-19.00		0.00	0.00	-0.00	-3.48	
				Max M <sub>z</sub>	-19.00		0.00	0.00	-0.00	-3.48	
			7	Min M <sub>z</sub>	-23.80		0.00	0.00	0.00	-4.41	
20	RC1	21	0.000	Max N	→ -27.20		-0.00	0.00	0.00	5.91	CO 2
20	NC I	21	0.000	Min N	-27/20 D -62.9	5.05	-0.00	0.00	0.00	6.52	CO 5
				Max V <sub>v</sub>	/52.4	5.23	0.00	0.00	0.00	7.65	CO 3
				Min V <sub>v</sub>	-31.09		0.00	0.00	0.00	1.57	
				Max V <sub>2</sub>	-31.05		D.00 □	0.00	0.00	1.57	CO 1
				Min V <sub>z</sub>	-62.9			0.00	0.00	6.52	CO 5
					-31,05		0.00	▶ 0.00	0.00	1.57	
				Max M <sub>T</sub>	-31.05		0.00		0.00		
				Min M <sub>T</sub>	-51.05					1.57	
				Max M <sub>y</sub>			-0.00	0.00 >	0.00	6.52	005
				Min M <sub>y</sub>	-31 05		0.00	0.00 >	0.00	1.57	
				Max M <sub>z</sub>	-52.4		0.00	0.00	0.00	7.65	CO 3
				Min M <sub>z</sub>	-31.05	1.57	0.00	0.00	0.00 ⊳	1.57	CO 1
		22	1.000	Max N	▶ -26.05	3.57	0.00	0.00	0.00	2.35	CO 2
				Min N	▶ -61.76		0.00	0.00	0.00	1.44	CO 5
				Max V <sub>y</sub>	-51.26	5.28	0.00	0.00	0.00	2.39	CO 3
				Min V <sub>y</sub>	-29.70		0.00	0.00	0.00	-0.01	CO 1
				Max V <sub>z</sub>	-29.70	1.58	▶ 0.00	0.00	0.00	-0.01	CO 1
				Min V <sub>z</sub>	-29.70			0.00	0.00	-0.01	
				Max M <sub>T</sub>	-29.70		0.00		0.00	-0.01	
				Min M <sub>T</sub>	-29.70		0,00		0.00	-0.01	CO 1
				Max M <sub>y</sub>	-29.70		0.00	0.00	0.00	-0.01	
				Min M <sub>y</sub>	-29.70		0,00	0.00	0.00	-0.01	CO 1
				$Max M_z$	-51.26	5.28	0.00	0.00	0.00 ⊳	2.39	CO 3
				Min M <sub>z</sub>	-61.29		0.00	0.00	0.00 ⊳	-0.03	CO 4
	RC2	21	0.000	Max N	⊳ -23.00	1.16	0.00	/ 0.00	0.00	1.16	CO 6
				Min N	▶ -47.30	3.62	0.00	0.00	0.00	4.58	CO 10
				Max V <sub>y</sub>	-40.31	⊳ 3.74	0.00	0.00	0.00	5.34	CO 8
				Min V <sub>y</sub>	-23.00	1.16	0.00	0.00	0.00	1.16	CO 6
				Max V <sub>z</sub>	-23.00			0.00	0.00	1.16	CO 6
				Min V <sub>z</sub>	-23.50		⊳ -0.00	0.00	0.00	4.20	CO 7
				Max M <sub>T</sub>	-23.00		0.00		0.00	1.16	
				Min M <sub>T</sub>	-23.00		0.00		0.00		CO 6
				Max M <sub>v</sub>	-23.50		-0.00	0.00	0.00	4.20	
				Min M <sub>v</sub>	-23.00		0.00	0.00	0.00	1.16	
				Max M <sub>z</sub>	-40.3		0.00	0.00	0.00	5.34	
				Min M <sub>z</sub>	-23.00		0.00	0.00	0.00	1 16	CO 6
		22	1.000	Max N	-23.00 > -22.00		0.00	0.00	0.00	1.10	CO 6

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Model: B3\_Frame

■ 4.12 CR	OSS-SECTI	ONS - INTE	ERNAL FORC	ES						Res	sult Combinations
Member /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	No.	x [m]		N	$V_{v}$	$V_z$	M <sub>T</sub>	M <sub>v</sub>	$M_z$	Load Cases
20	RC2			Min N	▶ -46.30	3.65	0.00	0.00	0.00	0.94	CO 10
				Max V <sub>v</sub>	-39.30		0.00	0.00	0.00	1.58	CO 8
			/ / .	Min V <sub>v</sub>	-22.00	▶ 1.17	0.00	0.00	0.00	-0.01	CO 6
				Max V <sub>z</sub>	-22.00	1.17	▶ 0.00	0.00	0.00	-0.01	CO 6
				Min V <sub>z</sub>	-46.00	2.74	▶ -0.00	0.00	0.00	-0.02	CO 9
			( / / I	Max M <sub>T</sub>	-22.00	1.17	0.00		0.00	-0.01	CO 6
		/ /		Min M <sub>T</sub>	-22.00	1.17	0.00		0.00	-0.01	CO 6
				Max M <sub>y</sub> /	-22.00	1.17	0.00	0.00 ⊳	0.00	-0.01	CO 6
				Min My	-22.00	1.17	0.00	0.00 ⊳	0.00	-0.01	CO 6
				Max M <sub>z</sub>	-39.30	3.77	0.00	0.00	0.00 ⊳	1.58	CO 8
ļ				Min M₂	-46.00	2.74	-0.00	0.00	0.00 ⊳	-0.02	CO 9
	RC3	21	0.000	Max/N	-23.00	1.16	0.00	0.00	0.00	1.16	CO 11 CO 14 CO 14
				Min N	-32.60	1.79	0.00	0.00	0.00	1.78	CO 14
				Max V <sub>y</sub> Min V <sub>y</sub>	-32.60		0.00	0.00	0.00	1.78	CO 14
			<b>—</b>	Max V <sub>2</sub>	-23.00	→ 1.16	0.00	0.00	0.00	1.16	CO 11
			4	Min V <sub>z</sub>	-23.00	1.16 1.77	<ul><li>D.00</li><li>D −0.00</li></ul>	0.00	0.00		CO 11 CO 13
					-27,90 -23,00		0.00	0.00	0.00	2.08	CO 13
				Max M <sub>T</sub>		1.16			0.00	1.16	00 11
				Min M <sub>T</sub> Max M <sub>v</sub>	23.00	1.16	0.00	0.00	0.00	1.16	CO 11 CO 13
				Min M <sub>v</sub>	-27.90	1.77	-0.00	0.00	0.00	2.08	00 14
				Max M <sub>z</sub>	-23.00	1.16	0.00	0.00	0.00	1.16	CO 11 CO 13
					-27.90		-0.00	0.00			00 14
		22	4 000	Min M <sub>z</sub>	-23,00 -22.00/	1.16	0.00 0.00	0.00	0.00 Þ 0.00	1.16	CO 11
		22	1.000	Max N Min N	-22.00 -31.60	1.17	0.00	0.00	0.00	-0.01	CO 11
				Max V <sub>v</sub>	31.60	D 1.79 1.79 1.79	0.00	0.00	0.00	-0.01 -0.01	CO 11 CO 14 CO 14
				Min V <sub>v</sub>	-22.00	▶ / 1.17	0.00	0.00	0.00	-0.01	CO 11
				Max V <sub>z</sub>	-22.00	1.17		0.00	0.00	-0.01	CO 11
				Min V <sub>7</sub>	-22.10	1.46	-0.00	0.00	0.00	0.31	CO 12
				Max M <sub>T</sub>	-22.00	1.17	0.00	▶ 0.00	0.00	-0.01	CO 11
				Min M <sub>T</sub>	-22.00	1.17	0.00		0.00	-0.01	CO 11
				Max M <sub>v</sub>	-22.00	1.17	0.00	0.00	0.00	-0.01	CO 11 CO 11
				Min M <sub>v</sub>	-22.00	1.17	0.00	0.00	0.00	-0.01	CO 11
				Max M <sub>2</sub>	-22.10	1.46	-0.00	0.00	0.00 ⊳	0.31	CO 12
				Min M <sub>z</sub>	-31.60	1.79	0.00	0.00	0.00 ⊳	-0.01	CO 14
	RC4	21	0.000	Max N	⊳ -23.00	1.16	0,00	0.00	0.00	1.16	CO 15
				Min N	⊳ -27.80	1.48	0.00	0.00	0.00	1.47	CO 15 CO 16 CO 16 CO 15
				Max V <sub>y</sub>	-27.80	▶ 1.48	0.00	0.00	0.00	1.47	CO 16
				Min $V_y$	-23.00	▶ 1.16	0.00	0.00	0.00	1.16	CO 15
				Max V <sub>z</sub>	-23.00	1.16		0.00	0.00	1.16	CO 15
				Min V <sub>z</sub>	-23.00	1.16	▶ 0.00	/ 0.00	0.00	1.16	CO 15
				Max M <sub>T</sub>	-23.00	1.16	0.00		0.00		CO 15
				Min M <sub>T</sub>	-23.00	1.16	0.00		0.00	1.16	CO 15
				Max M <sub>y</sub>	-23.00	1.16	0.00	0.00	0.00	1.16	CO 15
				Min M <sub>y</sub>	-23.00	1.16	0.00	0.00 >	0.00	1.16	CO 15
				Max M <sub>z</sub>	-27.80	1.48	0.00	(0.00	0.00		CO 16
			4	Min M <sub>z</sub>	-23.00	1.16	0.00	0.00	0.00	1.16	CO 15
		22	1.000	Max N	-22.00	1.17	0.00	0.00	0.00	-0.01	CO 15 CO 16 CO 16
				Min N	-26.80 -26.80	1.48 > 1.48	0.00 0.00	0.00	0.00	-0.01	CO 16
				Max V <sub>y</sub> Min V <sub>v</sub>	-26.80 -22.00	D 1.48 D 1.17	0.00	0.00	0.00	-0.01	CO 16 CO 15
				Max V <sub>2</sub>	-22.00	1.17	D.00  D 0.00	0.00	0.00	-0.01	CO 15
				Min V <sub>z</sub>	-22.00	1.17		0.00	0.00		CO 15
	I	1	1	IVIIII V Z	-22.00	1.17	0.00	0.00	0.00	/ -0.01)	00 15
									\ \	/ / /	

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Project: Assignment Week 6 Model: B3\_Frame

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mb or		IONS - INTE	Loopti			Force - FI-ND			Mamanta [kN  1		sult Combinati
mber		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No. ∽	RC	No.	x [m]		N	$V_{y}$	V <sub>z</sub>	M <sub>T</sub>	M <sub>y</sub>	M <sub>z</sub>	Load Cases
20	RC4	/ / / 1		Max M <sub>⊤</sub>	-22.00	1.17	0.00	> 0.00	0.00	-0.01	
				Min M <sub>T</sub>	-22.00	1.17	0.00	> 0.00	0.00	-0.01	
			/ / ^	Max M <sub>y</sub>	-22.00		0.00	0.00	0.00	-0.01	CO 15
				Min M <sub>v</sub>	-22.00	1.17	0.00	0.00	0.00	-0.01	CO 15
				Max M <sub>z</sub>	-22.00	1.17	0.00	0.00	0.00 ⊳	-0.01	CO 15
				Min M <sub>z</sub>	-26.80	1.48	0.00	0.00	0.00 ⊳	-0.01	CO 16
21	RC1	22 / /	/ 0.000	Max N	-26.05	3.57	0.00	0.00	0.00	2.35	CO 2
				Min N	-61.76	5.10	0.00	0.00	0.00	1.44	CO 5
				Max∖V <sub>y</sub> /	-51.26	⊳ 5.28	0.00	0.00	0.00	2.39	CO 3
			7///	Min V <sub>y</sub>	-29.70		0.00	0.00	0.00	-0.01	CO 1
				Max V <sub>z</sub> ∕	-29.70	1.58	> 0.00	0.00	0.00	-0.01	CO 1
				Min V <sub>z</sub>	-29.70		> 0.00	0.00	0.00	-0.01	CO 1
				/ Max M <sub>T</sub>	-29.70		0.00	> 0.00	0.00	-0.01	CO 1
				Min M <sub>T</sub>	-29.70	1.58	0.00		0.00	-0.01	
			7	/Max M <sub>v</sub> /	-29.70	1.58	0.00	0.00	0.00	-0.01	CO 1
			1	Min M <sub>v</sub>	-29.70		0.00	0.00	0.00	-0.01	
				Max M <sub>z</sub>	-51,26	5.28	0.00	0.00	0.00 ⊳	2.39	CO 3
				Min M <sub>z</sub>	-61.29		0.00	0.00	0.00 ⊳	-0.03	
		23	1.000	Max N	▶ / /24.90	3.57	0.00	0.00	0.00	-1.22	CO 2
				Min N	-60.61	5.08	0.00	0.00	0.00	-3.66	CO 5
				Max V <sub>v</sub>	-50.11		0.00	0.00	0.00	-2.89	CO 3
				Min V <sub>y</sub>	-28.35		0.00	0.00	0.00	-1.58	
				Max V <sub>z</sub>	-28,35	1.57	0.00	0.00	0.00	-1.58	CO 1
				Min V <sub>z</sub>	-28.35	/ / / 1.57	0.00	0.00	0.00	-1.58	CO 1
				Max M <sub>T</sub>	-28.35	1.57	0.00	> 0.00	0.00	-1.58	CO 1
				Min M <sub>T</sub>	-28(35	1.57	0.00	> 0.00	0.00	-1.58	CO 1
				Max M <sub>v</sub>	-28.35	1.57	0.00	0.00	0.00	-1.58	
				Min M <sub>v</sub>	-28.35	1.57	0.00	0.00	0.00	-1.58	
				Max M <sub>z</sub>	-24.90		0.00	0.00	0.00 ⊳	-1.22	
				Min M <sub>z</sub>	-60.15		0.00	0.00	0.00 ⊳	-3.74	
	RC2	22	0.000	Max N	▶ -22.00	1.17	0.00	0.00	0.00	-0.01	CO 6
				Min N	▶ -46.30	3.65 > 3.77	0.00	0.00	0.00	0.94	CO 10 CO 8
				Max V <sub>v</sub>	-39.30	⊳ 3.77	0.00	0.00	0.00	1.58	CO 8
				Min V <sub>v</sub>	-22.00		0.00	0.00	0.00	-0.01	
				Max V <sub>z</sub>	-22.00	1.17	0.00	0.00	0.00	-0.01	
				Min V <sub>z</sub>	-46.00		-0.00	0.00	0.00	-0.02	CO 9
				Max M <sub>T</sub>	-22.00		0.00 1	→ 0.00	0.00	-0.01	CO 6
				Min M <sub>T</sub>	-22.00		0.00	> 0.00	0.00	-0.01	
				Max M <sub>v</sub>	-22.00		0.00	0.00	0.00	-0.01	
				Min M <sub>v</sub>	-22.00		0.00	0.00		-0.01	
				Max M <sub>z</sub>	-39.30		0.00	0.00	0.00	1.58	
				Min M <sub>z</sub>	-46.00		-0.00	0.00	0.00	-0.02	CO 9
		23	1.000	Max N	⊳ -21.00	1.16	0.00	0.00	0.00	-1.17	CO 6
		,		Min N	▶ -45.30	3.64	0.00	0.00	\ \ \ _0.00	-2.70	CO 10
				Max V <sub>y</sub>	-38.30	⊳ 3.76	0.00	0.00	0.00	-2.19	CO 8
				Min V <sub>v</sub>	-21.00		0.00	0.00	0.00	-1.17	CO 6
				Max V <sub>z</sub>	-21.00	1.16	0.00	0,00	0.00	-1.17	CO 6
				Min V <sub>z</sub>	-45.00			0.00	-0.00	-2.75	
				Max M <sub>T</sub>	-21.00		0.00	> 0.00	0.00	-1.17	
				Min M <sub>T</sub>	-21.00		0.00		0.00	-1.17	
				Max M <sub>v</sub>	-21.00		0.00	0.00	0.00	-1.17	
				Min M <sub>v</sub>	-45.00		-0.00	0.00	-0.00		CO 9
				IVIIII IVIY	-73.00	2.13	-0.00	0.00	-0.00		CO 7

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Project: Assignment Week 6

Model: B3\_Frame

Date: 18/10/2021

nber /		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
o. 🔄	RC	No.	x [m]		N	V <sub>v</sub>	$V_z$	M <sub>T</sub>	M <sub>v</sub>	$M_z$	Load Cases
1	RC2	// 🔭		Min M <sub>z</sub>	-45.00	2.73	-0.00	0.00	-0.00 ⊳	-2.75	CO 9
	RC3	/ 22	0.000	Max N	⊳ -22.00	1.17	0.00	0.00	0.00	-0.01	CO 11
i		1 / 7 V	/ /	Min N	⊳ -31.60	1.79	0.00	0.00	0.00	-0.01	CO 14
		///		Max V <sub>v</sub>	-31.60	▶ 1.79	0.00 0.00	0.00	0.00	-0.01	CO 14
				Min V <sub>v</sub>	-22.00	▶ 1.17	0.00	0.00	0.00	-0.01	CO 11
				Max V <sub>2</sub> <	-22.00	1.17	▶ 0.00	0.00	0.00	-0.01	CO 11
				Min V <sub>z</sub>	-22.10	1.46	⊳ -0.00	0.00	0.00	0.31	CO 12
				Max M <sub>T</sub>	-22.00	1.17	0.00		0.00		CO 11
			J / / X	Min W <sub>T</sub>	-22.00	1.17	0.00		0.00		CO 11
			7///	Max M <sub>v</sub>	-22.00	1.17	0.00	0.00	0.00		CO 11
				Min M	-22.00	1.17	0.00	0.00	0.00	-0.01	CO 11
				Max M <sub>z</sub>	-22.10	1.46	-0.00	0.00	0.00 ⊳		CO 12
1				Min M <sub>z</sub>	-31.60	1.79	0.00	0.00	0.00	-0.01	CO 14
		23	1.000	Max N	-21.00	1.16	0.00	0.00	0.00		CO 11
ł		20	1.000	Min N	-30.60	1.79	0.00	0.00	0.00	-1.80	CO 14
			7	Max V <sub>v</sub>	-30.60		0.00	0.00	0.00		CO 14
			1	Min V <sub>v</sub>	-21,00		0.00	0.00	0.00		CO 11
				Max V <sub>2</sub>	-21.00	1.16	D.00 D.00	0.00	0.00		CO 11
-				Min V <sub>z</sub>	-21.00	1.16	<ul><li>0.00</li><li>0.00</li></ul>	0.00	0.00	-1.17	CO 11
				Max M <sub>T</sub>	-21.00	1.16	0.00		0.00		CO 11
				Min M <sub>T</sub>	-21.00	1.16	0.00		0.00		CO 11
					-21.00			0.00	0.00		
				Max M <sub>y</sub>		1.16	0.00				CO 11
				Min M <sub>y</sub>	-21,00	1.16	0.00	0.00	0.00	-1.17	CO 11
				Max M <sub>z</sub>	-21.10/	1.46	0.00	0.00	0.00 >		CO 12
				Min M <sub>z</sub>	-30.60	1.79	0.00	0.00	0.00 >	-1.80	
ļ	RC4	22	0.000	Max N	22 00	1.17	0.00	0.00	0.00	-0.01	CO 15
				Min N Max V <sub>v</sub>	> -26.80 -26.80	1.48 1.48	0.00 0.00	0.00 0.00	0.00	-0.01	CO 16 CO 16
									0.00		
				Min V <sub>y</sub>	-22.00	▶ 1.17	0.00	0.00	0.00		CO 15
				Max V <sub>z</sub>	-22.00	1.17	0.00	0.00	0.00		CO 15
				Min V <sub>z</sub>	-22.00	1.17	▶ 0.00	0.00	0.00	-0.01	CO 15
				Max M <sub>T</sub>	-22.00	1.17	0.00		0.00		CO 15
				Min M <sub>T</sub>	-22.00	1.17	0.00	0.00	0.00	-0.01	CO 15
				Max M <sub>y</sub>	-22.00	1.17	0.00	0.00			CO 15
				Min M <sub>y</sub>	-22.00	1.17	0.00	0.00	0.00	-0.01	CO 15
				Max M <sub>z</sub>	-22.00	1.17	0.00	0.00	0.00 ⊳	-0.01	CO 15
				Min M <sub>z</sub>	-26.80	1.48	0.00	0.00	0.00 ⊳	-0.01	CO 16
ļ		23	1.000	Max N	▶ -21.00	1.16	0.00	0.00	0.00		CO 15
				Min N	⊳ -25.80	1.47	0.00	0.00	0.00	-1.48	CO 16
				Max V <sub>y</sub>	-25.80	▶ 1.47	(0.00	0.00	0.00		CO 16
				Min V <sub>y</sub>	-21.00	▶ 1.16	0.00	0.00	0.00	-1.17	CO 15
				Max V <sub>z</sub>	-21.00	1.16	▶ 0.00		0.00		CO 15
				Min V <sub>z</sub>	-21.00	1.16	▶ 0.00	0.00	0.00	-1.17	CO 15
				$Max M_T$	-21.00	1.16	0.00		0.00	-1.17	CO 15
				Min M <sub>T</sub>	-21.00	1.16	0.00	0.00	0.00	-1.17	CO 15
				Max M <sub>v</sub>	-21.00	1.16	0.00	0.00 ⊳	0.00	-1.17	CO 15
				Min M <sub>v</sub>	-21.00	1.16	0.00	0,00	0.00	-1.17	CO 15
				Max M <sub>z</sub>	-21.00	1.16	0.00	0.00	0.00		CO 15
				Min M <sub>z</sub>	-25.80	1.47	0.00	0.00	0.00	-1.48	
2	RC1	23	0.000	Max N	▶ -24.90	3.57	0.00	0.00	0.00	-1 22	CO 2
-			0.000	Min N	b -60.61	5.08	0.00	0.00	0.00	-3.66	CO 2 CO 5
				Max V <sub>v</sub>	-50.11		0.00	0.00	0.00	-2.89	CO 3
				Min V <sub>v</sub>	-28.35		0.00	0.00	0.00		CO 1

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Project: Assignment Week 6 Model: B3\_Frame

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### ■ 4 12 CROSS-SECTIONS - INTERNAL FORCES

Res	sult Combinations	
	Corresponding	

ber /		Node /	Location			Forces [kN]			Moments [kNm]		Correspondir
. 4	RC	Nø.	x [m]		N	$V_{v}$	V <sub>7</sub>	M <sub>T</sub>	, M <sub>y</sub>	$M_z$	Load Cases
	RC1			Max V <sub>2</sub>	-28.3	,	<u>=</u>	0.00	0.00	<del>_</del>	CO 1
			)	Min V <sub>z</sub>	-28.3			0.00	0.00		CO 1
		///	/ /	Max M <sub>T</sub>	-28.3		0.00		0.00	-1.58	CO 1
		///		Min M <sub>T</sub>	-28.3		0.00		0.00		CO 1
				Max M <sub>v</sub>	-28.3		0.00	0.00		-1.58	CO 1
				Min M <sub>v</sub>	-28.3		0.00	0.00		-1.58	CO 1
		//		Max M <sub>z</sub>	-24.9		0.00	0.00	0.00 ⊳	-1.22	CO 2
				Min Mz/	-60.1		0.00	0.00	0.00 ⊳		CO 4
		24	1.000	Max N	> -23.7	5 3.55	0.00	0.00	0.00	-4.78	CO 2
		T	7 / / /	Min N	⊳ -59.4		0.00	0.00	0.00	-8.71	CO 5
				Max V <sub>y</sub>	-48.9		0.00	0.00	0.00	-8.13	CO 3
			-	Min V <sub>y</sub>	-27.0		0.00	0.00	0.00		CO 1
				Max Vz	-27.0		> 0.00	0.00	0.00	-3.15	CO 1
				Min V <sub>z</sub>	-27.0			0.00	0.00	-3.15	CO 1
				Max M <sub>T</sub>	-27.0		0.00		0.00		CO 1
			<	Min M <sub>T</sub>	-27.0		0.00		0.00	-3.15	CO 1
				Max M <sub>y</sub>	-27,00		0.00	0.00	▶ 0.00	-3.15	CO 1
				Min M <sub>y</sub>	-27.0		0.00	0.00			CO 1
				Max M <sub>z</sub>	-27.0		0.00	0.00 0.00	0.00	-3.15	CO 1
	RC2	00	0.000	Min M <sub>z</sub>	-59.40		0.00 0.00	0.00	0.00		CO 5 CO 6
	RC2	23	0.000	Max N Min N	-21.00 -45.3	0 1.16 3.64	0.00	0.00	0.00	-1.17 2.70	CO 10
				Max V <sub>v</sub>	-45.5		0.00	0.00	0.00	-2.70 -2.19	CO 8
				Min V <sub>v</sub>	-21.0		0.00	0.00	0.00		CO 6
				Max V <sub>z</sub>	-21.0	1.16		0.00	0.00	-1.17	CO 6
				Min V <sub>z</sub>	45.0	0 / 2.73		0.00	-0.00	-2.75	
				Max M <sub>T</sub>	-21.0		0.00	▶ 0.00	0.00	-1.17	CO 6
				Min M <sub>T</sub>	-21.0		0.00		0.00		CO 6
				Max M <sub>v</sub>	-21.0		0.00	0.00		-1.17	CO 6
				Min M <sub>v</sub>	-45.0	2.73	⟨-0.00	0.00	⊳ -0.00	-2.75	CO 9
				Max M <sub>z</sub>	-21.5	0 2.64	0.00	0.00	0.00 ⊳	-1.09	CO 7
				Min M <sub>z</sub>	-45.0	0 2.73	-0.00	0.00	-0.00 ⊳	-2.75	CO 9
		24	1.000	Max N	> -20.0	1.15	0.00	0.00	0.00	-2.33	CO 6
				Min N	→ -44.3		-0.00	0.00	-0.00	-6.32	CO 10
				Max V <sub>y</sub>	-37.3		0.00	0.00	0.00	-5.94	CO 8
				Min V <sub>y</sub>	-20.0		0.00	0.00	0.00		CO 6
				Max V <sub>z</sub>	-20.0		> 0.00	0.00	0.00	-2.33	CO 6
				Min V <sub>z</sub>	-44.3			0.00	-0.00	-6.32	CO 10
				Max M <sub>T</sub>	-20.0		0.00	D 0.00 D 0.00	0.00	-2.33	CO 6
				Min M <sub>T</sub>	-20.0						CO 6 CO 6
				Max M <sub>y</sub> Min M <sub>v</sub>	-20.00 -44.3		0.00	0.00	0.00	-2.33	CO 10
				Max M <sub>z</sub>	-44.3		-0.00 0.00	0.00	0.00	-0.32	CO 10
				Max M <sub>z</sub> Min M <sub>z</sub>	-20.0		-0.00	0.00	-0.00	-2.33	CO 10
	RC3	23	0.000	Max N	-44.3 > -21.0		0.00	0.00	0.00	-0.32 -1.17	CO 10
	1100	23	0.000	Min N	-21.00 > -30.60		0.00	0.00	0.00		CO 14
				Max V <sub>v</sub>	-30.6		0.00	0.00	0.00	-1.80	CO 14
				Min V <sub>v</sub>	-21.0		0.00	0.00	0.00		CO 11
				Max V <sub>2</sub>	-21.0			0.00	0.00	-1.17	CO 11
				Min V <sub>z</sub>	-21.0			0.00	0.00		CO 11
				Max M <sub>T</sub>	-21.0		0.00		0.00	-1.17	CO 11
				Min M <sub>T</sub>	-21.0		0.00	▶ 0.00	0.00		CO 11
				Max M <sub>v</sub>	-21.0		0.00	0.00	▶ 0.00	/ -1 17	CO 11

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Project: Assignment Week 6

Model: B3\_Frame

			RNAL FORC				E (1)			M ( ((A)) )	T.C	sult Combinatio
Member /		Node	Location				Forces [kN]			Moments [kNm]		Corresponding
No.	RC	No.	x [m]		N	1	$V_y$	$V_z$	M <sub>T</sub>	M <sub>y</sub>	$M_z$	Load Cases
22	RC3	1 / / 4		Min M <sub>y</sub>		-21.00	1.16	0.00	0.00	▶ 0.00	-1.17	CO 11
				Max M <sub>z</sub>		-21.10	1.46	0.00	0.00	0.00		CO 12
			′ / ^	Min M <sub>z</sub>		-30.60	1.79	0.00	0.00	0.00	⊳ -1.80	CO 14
		/ / 24 /	1.000	Max N		-20.00	1.15	0.00	0.00	0.00	-2.33	CO 11
			/ / /	Min N	⊳	-29.60	1.77	0.00	0.00	0.00	-3.58	CO 11 CO 14 CO 14
				Max V <sub>y</sub> <		-29.60	> 1.77	0.00	0.00	0.00	-3.58	CO 14
				Min V <sub>y</sub>		-20.00	> 1.15	0.00	0.00	0.00	-2.33	CO 11
				Max V <sub>z</sub>		-20.00	1.15		0.00	0.00		
			$\exists$ / / $\land$	Min V <sub>z</sub>		-20.00	1.15	> 0.00	0.00	0.00		CO 11
			/ / / /	Max M <sub>T</sub>		-20.00	1.15	0.00		0.00		CO 11
				Min M <sub>T</sub>		-20.00	1.15	0.00		0.00		CO 11
				Max M <sub>y</sub>		-20.00	1.15	0.00	0.00			
				Min M <sub>y</sub>		-20.00	1.15	0.00	0.00	▶ 0.00		CO 11
				Max M <sub>z</sub>		-20.00	1.15	0.00	0.00	0.00		
	DC4	20	0.000	Min Mz		-29.60	1.77	0.00	0.00	0.00	→ -3.58	CO 14 CO 15
	RC4	23	0.000	Max/N Min/N		-21.00 -25,80	1.16 1.47	0.00 0.00	0.00	0.00	-1.1 <i>i</i> -1.48	
				Max V <sub>v</sub>		-25.80	≥ 1.47	0.00	0.00	0.00	-1.46	CO 16
				Min V <sub>v</sub>		-21.00		0.00	0.00	0.00		
				Max V <sub>2</sub>		-21.00	1.16		0.00	0.00		CO 15
				Min V <sub>z</sub>		-21.00	1.16	> 0.00	0.00	0.00		
				Max M <sub>T</sub>		-21.00	1.16	0.00		0.00		
				Min M <sub>T</sub>		-21,00	1.16	0.00	D 0.00	0.00		
				Max M <sub>v</sub>		-21.00	1.16	0.00	0.00			
				Min M <sub>v</sub>		-21.00	1.16	0.00	0.00	▶ 0.00		
				Max M <sub>z</sub>		-21.00	1.16	0.00	0.00	0.00		
				Min M <sub>z</sub>		-25.80	1.47	0.00	0.00	0.00		
		24	1.000	Max N		-20.00	1.15	0.00	0.00	0.00		
				Min N	<b>&gt;</b>	-24.80	1.46	0.00	0.00	0.00		CO 16
				Max V <sub>v</sub>		-24.80	> 1.46	0.00	0.00	0.00	-2.95	CO 16
				Min V <sub>v</sub>		-20.00	> 1.15	0.00	0.00	0.00		CO 15
				Max V <sub>z</sub>		-20.00	1.15	>   0.00	0.00	0.00		
				Min V <sub>z</sub>		-20.00	1.15	> 0.00	0.00	0.00	-2.33	
				Max M <sub>T</sub>		-20.00	1.15	0,00		0.00		
				Min M <sub>T</sub>		-20.00	1.15	0.00		0.00		
				Max M <sub>v</sub>		-20.00	1.15	0,00	0.00	⊳ 0.00	-2.33	
				Min M <sub>v</sub>		-20.00	1.15	0.00	0.00	⊳ 0.00		
				Max M <sub>z</sub>		-20.00	1.15	0,00	0.00	0.00		
				Min M <sub>z</sub>		-24.80	1.46	0.00	0.00	0.00	▶ -2.95	CO 16
23	RC1	24	0.000	Max N	⊳	-23.75	3.55	0.00	0.00		-4.78	CO 2
				Min N	⊳	-59.46	5.00	0.00	0.00	0.00	-8.71	CO 5
				Max V <sub>y</sub>		-48.96	> 5.21	0.00	0.00	0.00		CO 3
				Min V <sub>y</sub>		-27.00	> 1.56	0.00	0.00	0.00	-3.15	
				Max V <sub>z</sub>		-27.00	1.56		0.00	0.00	-3.15	CO 1
				Min V <sub>z</sub>		-27.00	1.56		0.00	0.00	-3.15	CO 1
				Max M <sub>T</sub>		-27.00	1.56	0.00		0.00		CO 1
				Min M <sub>T</sub>		-27.00	1.56	0.00		0.00		
				Max M <sub>y</sub>		-27.00	1.56	0.00	0.00			
				Min M <sub>y</sub>		-27.00	1.56	0.00	0.00			CO 1
				Max M <sub>z</sub>		-27.00	1.56	0.00	0.00	0.00		
				Min M <sub>z</sub>		-59.46	5.00	0.00	0.00	0.00	⊳/ -8.71	CO 5
		25	1.000	Max N		-22.60	3.52	-0.00	0.00	-0.00	-8.32	CO 2
		1		Min N	⊳	-58.33	4.87	-0.00	0.00	-0.00	/ /-13.65)	CO 5

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Project: Assignment Week 6 Model: B3\_Frame Date: 18/10/2021

### ■ 4 12 CROSS-SECTIONS - INTERNAL FORCES

Res	sult Com	binations	
	-		

nber /	1	Node /	ERNAL FORC				Forces [kN]				Moments [kNm	1		sult Combina Correspondir
lo.	RC	No.	x [m]		N		V <sub>v</sub>	$V_z$	M <sub>T</sub>		M <sub>y</sub>	,	$M_z$	Load Cases
		INO.	X [m]	Manak	IN	47.00				0.00		0.00		
23	RC1	/_/_``[		Max V <sub>y</sub>		-47.83 Þ	5.10	0.00		0.00		0.00	-13.29	CO 3
			/ >	Min V <sub>y</sub>		-25.65 ⊳	1.54	0.00		0.00		0.00		CO 1
		_/_/	′ / <	Max V <sub>z</sub>		-25.65	1.54	0.00		0.00		0.00	-4.70	
				Min V <sub>z</sub>		-58.33	4.87	-0.00		0.00		-0.00		CO 5
			//_	Max M <sub>T</sub>		-25.65	1.54	0.00		0.00		0.00	-4.70	CO 1
			/_/	Min M <sub>T</sub>		-25.65	1.54	0.00		0.00		0.00		CO 1
			/_/	Max M <sub>y</sub>	V	-25.65	1.54	0.00		0.00 ⊳		0.00	-4.70	
				Min My		-58.33	4.87	-0.00		0.00 ⊳		-0.00	-13.65	CO 5
			= / / /	Max M <sub>z</sub>		-25.65	1.54	0.00		0.00		0.00 >	-4.70	CO 1
				Min Mz		-58.33	4.87	-0.00		0.00		-0.00 >	-13.65	
	RC2	24	0.000	Max N	Þ	-20.00	1.15	0.00		0.00		0.00	-2.33	CO 6
				Min N	<b>D</b>	-44.31	3.59	-0.00		0.00		-0.00	-6.32 -5.94	CO 10
				Max V <sub>y</sub>		-37.31 ⊳	3.73	0.00		0.00		0.00	-5.94	CO 8
				Min V <sub>y</sub> /		-20.00 ⊳	1.15	0.00		0.00		0.00	-2.33	
				Max V <sub>z</sub>		-20.00	1.15	0.00		0.00		0.00	-2.33	CO 6
			<	Min V <sub>z</sub>	1 / 1 /	-44.31	3.59			0.00		-0.00	-6.32	
				Max M <sub>T</sub>		-20,00	1.15	0.00		0.00		0.00	-2.33	CO 6
				Min M <sub>T</sub>	/	-20.00	1.15	0.00		0.00		0.00	-2.33	CO 6
				Max M <sub>y</sub>		-20.00	1.15	0.00		0.00		0.00	-2.33	CO 6
				Min M <sub>y</sub>		-44.31	3.59	-0.00		0.00		-0.00		CO 10
				Max M <sub>z</sub>		-20.00	1.15	0.00		0.00		0.00	-2.33	
				Min M <sub>z</sub>	$\sim$ /	-44.31	3.59	-0.00		0.00		-0.00 ⊳		CO 10
		25	1.000	Max N	<b>&gt;</b> (	-19.00	1.14	-0.00		0.00		-0.00	-3.48	CO 6
				Min N	D \	-4/3.31/	3.52	0.00		0.00		0.00	-9.88	CO 10
				Max V <sub>y</sub>		-36.31 ⊳	3.67	0.00		0.00		0.00		CO 8
				Min V <sub>y</sub>	· ·	19(00 ⊳	1.14	-0.00		0.00		-0.00		CO 6
				Max V <sub>z</sub>		-19:50	2.61	0.00		0.00		0.00	-6.35	CO 7
				Min V <sub>z</sub>		-19.00	1.14	-0.00		0.00		-0.00	-3.48	CO 6
				Max M <sub>T</sub>		-19.00	1.14	-0.00		0.00		-0.00	-3.48	
				Min M <sub>T</sub>		-19.00	1.14	\$-0.00		0.00		-0.00		CO 6
				Max M <sub>y</sub>		-19.50	2.61	0.00		0.00 >		0.00	-6.35	
				Min M <sub>y</sub>		-19.00	1.14	-0.00		0.00		-0.00		CO 6
				Max M <sub>z</sub>		-19.00	1.14	-0.00		0.00		-0.00 ⊳	-3.48	CO 6
				Min M <sub>z</sub>		-43.31	3.52	0.00		0.00		0.00 ⊳	-9.88	CO 10
	RC3	24	0.000	Max N	⊳	-20.00	1.15	/0.00		0.00		0.00	-2.33	CO 11
				Min N	⊳	-29.60	1.77	0.00		0.00		0.00	-3.58	CO 14
				Max V <sub>y</sub>		-29.60 ⊳	1.77	0.00		0.00		0.00	-3.58	
				Min V <sub>y</sub>		-20.00 ⊳	1.15	0/00		0.00		0.00		CO 11
				Max V <sub>z</sub>		-20.00	1.15	0.00		0.00		0.00	-2.33	CO 11
				Min V <sub>z</sub>		-20.00	1.15			0.00		0.00	-2.33	
				Max M <sub>T</sub>		-20.00	1.15	0.00		0.00		0.00	-2.33	
				Min M <sub>T</sub>		-20.00	1.15	0.00		0.00		0.00	-2.33	
				Max M <sub>y</sub>		-20.00	1.15	0.00		0.00		0.00	-2.33	
				Min M <sub>y</sub>		-20.00	1.15	0.00		0.00 >		0.00		CO 11
				Max M <sub>z</sub>		-20.00	1.15	0.00		0.00		0.00 ⊳	-2.33	CO 11
				Min M <sub>z</sub>		-29.60	1.77	0.00		0.00		0.00 >	-3.58	CO 14
		25	1.000	Max N	⊳	-19.00	1.14	-0.00		0.00	) / / .	-0,00	-3.48	CO 11
				Min N	Þ	-28.60	1.74	0.00		0.00		0.00	-5.34	CO 14
				Max V <sub>y</sub>		-28.60 ⊳	1.74	0.00		0.00		0.00	-5.34	CO 14
				Min V <sub>y</sub>		-19.00 ⊳	1.14	-0.00		0.00		-0.00	-3.48	
				Max V <sub>z</sub>		-19.10	1.44	0.00		0.00		0.00	-4.05	CO 12
				Min V <sub>z</sub>		-19.00	1.14			0.00		-0.00		CO 11
				Max M <sub>T</sub>		-19.00	1.14	-0.00	)  ⊳	0.00		-0.00	/ / -3.48	CQ 11

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Project: Assignment Week 6 Model: B3\_Frame

■ 4.12 CR	OSS-SECT	IONS - INȚĘ	<b>ERNAL FORC</b>	ES							Re	sult Combinations
Member /		Node /	Location				Forces [kN]			Moments [kNm]		Corresponding
No.	RC	Nø.	x [m]		N	1	$V_y$	$V_z$	M <sub>T</sub>	, M <sub>y</sub>	M <sub>z</sub>	Load Cases
23	RC3			Min M <sub>⊤</sub>		-19.00	1.14	-0.00	▶ 0.00	-0.00	-3.48	CO 11
				Max M <sub>v</sub>		-19.10	1.44	0.00		▶ 0.00		
			/ / .	Min M <sub>v</sub>		-19.00	1.14	-0.00		⊳ -0.00		
				Max M <sub>z</sub>		-19.00	1.14	-0.00	0.00	-0.00	⊳ -3.48	CO 11
				Min M <sub>z</sub>		-28.60	1.74	0.00	0.00	0.00	⊳ -5.34	
	RC4	24 /	/0.000	Max N 🤝	Δ,	-20.00	1.15	0.00		0.00	-2.33	CO 15
				Min N	<b>D</b> /	-24.80	1.46	0.00		0.00	-2.95	CO 16
				Max V <sub>y</sub>		-24.80 ⊳	1.46	0.00		0.00		
			$\preceq$ / / /	Min V <sub>y</sub>		-20.00 ⊳	1.15	0.00		0.00		CO 15
				Max V <sub>z</sub>		-20.00	1.15	> 0.00	0.00	0.00		CO 15
				Min V <sub>z</sub>		-20.00	1.15			0.00	-2.33	CO 15
				Max M <sub>T</sub>		-20.00	1.15	0.00		0.00		CO 15
				Min M <sub>T</sub>		-20.00	1.15 1.15	0.00		0.00 > 0.00		CO 15 CO 15
				Max M <sub>y</sub>		-20.00 -20.00		0.00				
				Min M <sub>y</sub> Max M <sub>z</sub>		-20.00	1.15 1.15	0.00 0.00		0.00	-2.33 > -2.33	CO 15
				Min M <sub>z</sub>	7 / 5	-24,80	1.46	0.00		0.00		
		25	1.000	Max N	_ /	-19.00	1.14	-0.00		-0.00		CO 15
		25	1.000	Min N	<b>A</b> .	-19.00	1.14	0.00	0.00	0.00	-4.41	
				Max V <sub>v</sub>		-23.80	1.44	0.00		0.00	-4 41	CO 16
				Min V <sub>v</sub>		-19.00 ⊳	1.14	-0.00		-0.00		CO 15
				Max V <sub>z</sub>	~//	-23.80	1.44			0.00		CO 16
				Min V <sub>z</sub>		-19,00	1.14			-0.00		
				Max M <sub>T</sub>		-19.00/	1.14	-0.00		-0.00		
				Min M <sub>T</sub>	× <	-19.00	1.14	-0.00	▷ 0.00	-0.00		CO 15
				Max M <sub>v</sub>		-23 80	/ / 1.44	0.00	0.00	⊳ 0.00	-4.41	CO 16
				Min M <sub>y</sub>		-19.00	1.14	-0.00	0.00	⊳ -0.00	-3.48	CO 15
				Max M <sub>z</sub>		-19.00	1.14	-0.00		-0.00		CO 15
				Min M <sub>z</sub>		-23.80	1.44	0.00		0.00		CO 16
24	RC1	25	0.000	Max N	⊳	-22.60	3.52	⟨-0.00	0.00	-0.00	-8.32	CO 2
				Min N	⊳	-58.33	4.87	-0.00		-0.00		CO 5
				Max V <sub>y</sub>		-47.83 Þ	5.10	0.00		0.00		
				Min V <sub>y</sub>		-25.65 ⊳	1.54	0.00		0.00	-4.70	CO 1
				Max V <sub>z</sub>		-25.65 -58.33	1.54 I 4.87 I	0.00		0.00		
				Min V <sub>z</sub> Max M <sub>T</sub>		-25.65	1.54	0.00		0.00		
				Min M <sub>T</sub>		-25.65	1.54	0.00		0.00		
				Max M <sub>v</sub>		-25.65	1.54	0.00				
				Min M <sub>v</sub>		-58.33	4.87	-0.00				
				Max M <sub>z</sub>		-25.65	1.54	0.00			-13.03 > -4.70	CO 1
				Min M <sub>z</sub>		-58.33	4.87	-0.00	0.00	-0.00		
		3	1.000	Max N	<b>&gt;</b>	-21.46	3.47	-0.00		-0.00		
		Ü	1.000	Min N	<b>&gt;</b>	-57.19	4.68	0.00	0.00	0.00	-18.42	CO 5
				Max V <sub>v</sub>		-46.69 ⊳	4.95	-0.00	0.00	-0.00	-18.32	CO 3
				Min V <sub>v</sub>		-24.30 ⊳	1.51	0.00	0.00	0.00	-6.22	CO 1
				Max V <sub>z</sub>		-24.30	1.51	> 0.00	0.00	0.00	-6.22	CO 1
				Min V <sub>z</sub>		-46.69	4.95			-0.00		
				Max M <sub>T</sub>		-24.30	1.51	0.00				CO 1
				Min M <sub>T</sub>		-24.30	1.51	0.00		/ /0.00		CO 1
				Max M <sub>y</sub>		-24.30	1.51	0.00		0.00		CO 1
				Min M <sub>y</sub>		-46.69	4.95	-0.00			-18.32	CO 3
				Max M <sub>z</sub>		-24.30	1.51	0.00				CO 1
				Min M <sub>z</sub>		-57.19	4.68	0.00	0.00	0.00	-18.42	CO 5
	1	' I '	1	- 1	1	- 1			1	,	\ / / "7	'

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Project: Assignment Week 6

Model: B3\_Frame

ber /		Node /	Location			Forces [kN]			Moments [kNm]		Correspondin
). <	RC	No.	x [m]		N	, V <sub>v</sub>	$V_z$	M <sub>T</sub>	M <sub>v</sub>	M <sub>z</sub>	Load Cases
1	RC2	25	0.000	Max N	▶ -19.00	1.14	-0.00	0.00	-0.00	-3 48	CO 6
		/25/	0.000	Min N	→ -43.31	3.52	0.00		0.00	-9.88	CO 10
ľ			/	Max V <sub>v</sub>	-36.31		0.00		0.00	-9.64	CO 8
				Min V <sub>v</sub>	-19.00		-0.00		-0.00	-3.48	CO 6
			) >	Max V <sub>z</sub>	-19.50	2.61	⊳ 0.00		0.00	-6.35	CO 7
				Min V <sub>z</sub>	-19.00	1.14			-0.00	-3 48	CO 6
				Max M <sub>T</sub>	-19.00	1.14	-0.00		-0.00	-3.48	CO 6
				Min M <sub>T</sub>	-19.00	1.14	-0.00		-0.00		CO 6
			/ / / }	Max My	-19.50	2.61	0.00			-6.35	CO 7
		7		Min M <sub>v</sub>	-19.00	1.14	-0.00		÷ -0.00	3 48	CO 6
-			( / /	Max M	-19.00	1.14	-0.00	0.00	-0.00	→ -3.48	CO 6
			$\rightarrow$ $ $ $ $	Min M <sub>z</sub>	-43.31	3.52	0.00		0.00	-5.40	CO 10
		3	1.000	Max N	-18.00	1.13	0.00	0.00	0.00	-4.61	CO 10
		3	1.000	Min N	-16.00 -42.32	3.42	0.00 0.00	0.00	0.00 0.00	-4.61	CO 10
1				Max V <sub>v</sub>	-35.32	> 3.42	0.00	0.00	0.00	-13.27	CO 10
				Min V <sub>v</sub>	-18.00		0.00		0.00	-15.27	CO 6
			4	Max V <sub>z</sub>	-18,00	1.13			0.00	-4.61	CO 6
				Min V <sub>z</sub>	-18.00	1.13		0.00	0.00	-4.01	CO 6
				Max M <sub>T</sub> Min M <sub>T</sub>	18.00	1.13	0.00		0.00	-4.61	CO 6
					-18.00	1.13	0.00		0.00		CO 6
				Max M <sub>y</sub>	-18.00	1.13	0.00		> 0.00	-4.61	CO 6
				Min M <sub>y</sub>	-18.00	1.13	0.00				CO 6
				Max M <sub>z</sub>	-18,00	1.13	0.00		0.00	> -4.61	CO 6
				Min M <sub>z</sub>	-42.32	3.42	0.00		0.00	► -13.35	CO 10
	RC3	25	0.000	Max N	▶ -19.00	1.14	-0.00	0.00	-0.00	-3.48	CO 11 CO 14
				Min N	≥ 28 60	1.74	0.00	0.00	0.00	-5.34	CO 14
				Max V <sub>y</sub>	-28.60	▶ / 1.74	0.00		0.00	-5.34	CO 14
				Min V <sub>y</sub>	-19.00		-0.00	0.00	-0.00		CO 11
				Max V <sub>z</sub>	-19.10	1.44			0.00	-4.05	CO 12
				Min V <sub>z</sub>	-19.00	1.14			-0.00		CO 11
				Max M <sub>T</sub>	-19.00	1.14	-0.00	0.00	-0.00	-3.48	CO 11
				Min M <sub>T</sub>	-19.00	1.14	-0.00		-0.00	-3.48	CO 11
				Max M <sub>y</sub>	-19.10	1.44	0.00		0.00	-4.05	CO 12
				Min M <sub>y</sub>	-19.00	1.14	-0.00	0.00	-0.00		CO 11
				Max M <sub>z</sub>	-19.00	1.14	-0.00		-0.00	⊳ -3.48	CO 11
				Min M <sub>z</sub>	-28.60	1.74	0,00	0.00	0.00	⊳ -5.34	CO 14
ĺ		3	1.000	Max N	▶ -18.00	1.13	0.00	0.00	0.00	-4.61	CO 11
				Min N	⊳ -27.60	1.71	0.00	0.00	0.00 -0.00	-7.06	CO 14 CO 13
				Max V <sub>y</sub>	-22.90	▶ 1.71	-0.00	0.00	-0.00	-6.71	CO 13
				Min V <sub>y</sub>	-18.00	▶ 1.13	0.00	0.00	0.00	-4.61	CO 11
				Max V <sub>z</sub>	-18.00	1.13	⊳ 0.00	0.00	0.00	-4.61	CO 11
				Min V <sub>z</sub>	-22.90	1.71			-0.00	-6.71	CO 13
				Max M <sub>T</sub>	-18.00	1.13	0.00	0.00	0.00	-4.61	CO 11
				Min M <sub>T</sub>	-18.00	1.13	0.00	0.00	0.00	-4.61	CO 11
				Max M <sub>v</sub>	-18.00	1.13	0.00		> \ 0.00	-4.61	CO 11
				Min M <sub>v</sub>	-22.90	1.71	-0.00			-6.71	CO 13
				Max M <sub>z</sub>	-18.00	1.13	0.00		0.00	→ -4.61	CO 11
				Min M <sub>z</sub>	-27.60	1.71	0.00		0.00		CO 14
	RC4	25	0.000	Max N	► -19.00	1.14	-0.00		-0.00	-3.48	CO 15
	1104	20	0.000	Min N	≥ -19.00 ≥ -23.80	1.14	0.00	0.00	0.00	-3.46	CO 15 CO 16
				Max V <sub>v</sub>	-23.80	D 1.44	0.00	0.00	0.00	-4.41	CO 16
				Min V <sub>v</sub>	-19.00	D 1.14	-0.00		-0.00	3.48	CO 15
				Max V <sub>z</sub>	-23.80	1.44			0.00		CO 16

Metsälinnunreitti 2 L121, 02660 Espoo

**RESULTS** 

Project: Assignment Week 6

Model: B3\_Frame

18/10/2021 Date:

### ■ 4.12 CROSS-SECTIONS - INTERNAL FORCES

4.12 CRC	OSS-SECTI	ONS - INTE	RNAL FORCE	CES						Res	sult Combination
Member		Node	Location			Forces [kN]			Moments [kNm]		Corresponding
No.	RC	Nø.	x [m]		N	$V_y$	V <sub>z</sub>	$M_T$	$M_{y}$	$M_z$	Load Cases
24	RC4			Min V <sub>z</sub>	-19.00	1.14 ⊳	-0.00	0.00	-0.00	-3.48	CO 15
				Max M <sub>T</sub>	-19.00	1.14	-0.00 ⊳	0.00	-0.00	-3.48	CO 15
			/ / ~	Min M <sub>T</sub>	-19.00	1.14	-0.00 ⊳	0.00	-0.00		CO 15
				Max M <sub>y</sub>	-23.80	1.44	0.00	0.00	0.00		CO 16
			/ / /	Min M <sub>y</sub>	-19.00	1.14	-0.00	0.00 >	-0.00		CO 15
				Max M <sub>z</sub>	-19.00	1.14	-0.00	0.00	-0.00 ⊳		CO 15
			/	Min M <sub>z</sub>	-23.80	1.44	0.00	0.00	0.00 ⊳		CO 16
ļ		3 \	/ 1.000	Max N /	▶ -18.00	1.13	0.00	0.00	0.00	-4.61	CO 15
			$\exists$ / / /	Min N	▶ -22.80	1.42	-0.00	0.00	-0.00		CO 16
				Max V <sub>y</sub>	-22.80 ▷	1.42	-0.00	0.00	-0.00		CO 16
				Mín V <sub>y</sub>	-18.00 ⊳	1.13	0.00	0.00	0.00		CO 15
				Max V <sub>z</sub>	-18.00	1.13 ⊳	0.00	0.00	0.00		CO 15
				Min Vz	-22.80	1.42 ⊳	-0.00	0.00	-0.00		CO 16
				Max M <sub>T</sub>	-18.00	1.13	0.00	0.00	0.00		CO 15
				/Min M/T	-18.00	1.13	0.00	0.00	0.00		CO 15
			4	Max M <sub>y</sub>	-18.00	1.13	0.00	0.00	0.00		CO 15
				Min M <sub>y</sub>	-22,80	1.42	-0.00	0.00 >	-0.00		CO 16
				Max M <sub>z</sub>	-1.8.00	1.13	0.00	0.00	0.00 ⊳		CO 15
				Min M <sub>z</sub>	/ /22.80	1.42	-0.00	0.00	-0.00 ⊳	-5.84	CO 16