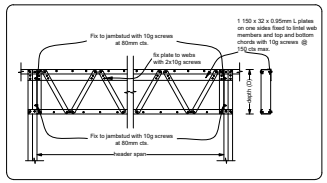
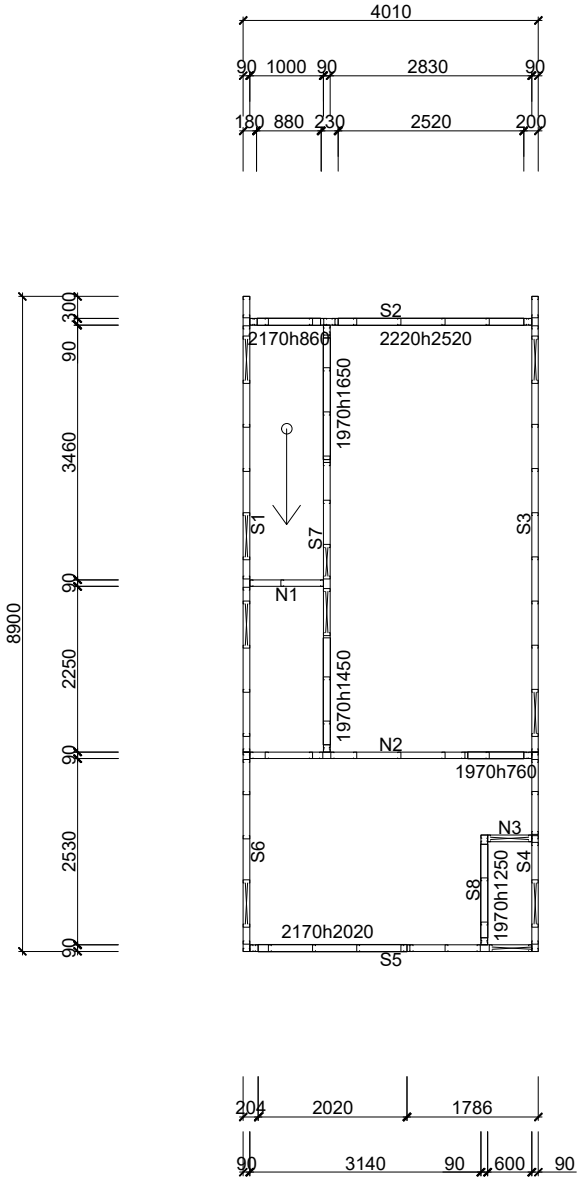
Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.





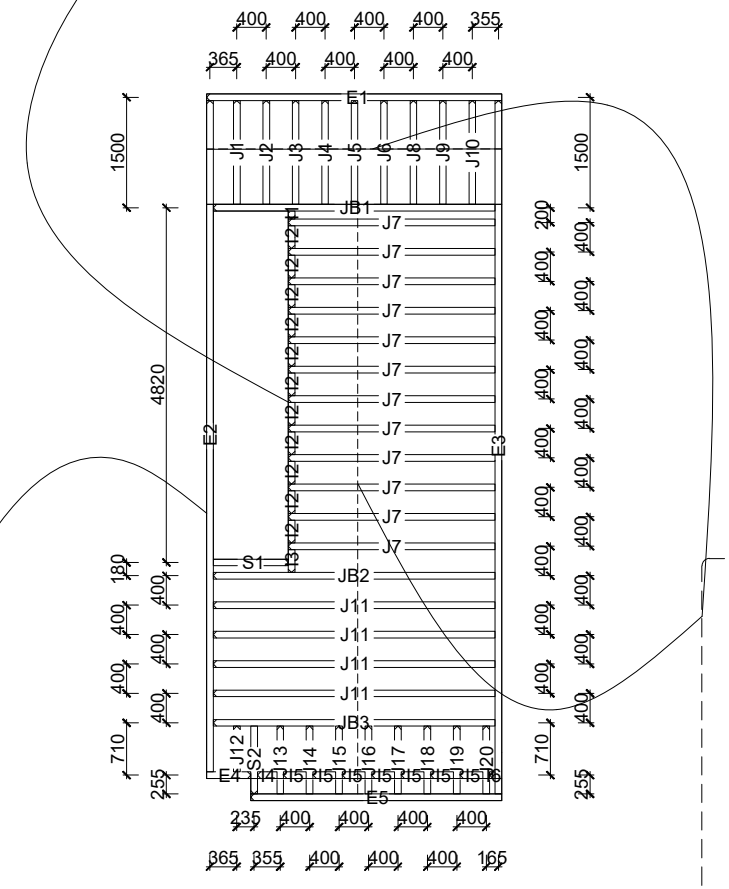
GROUND FLOOR LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

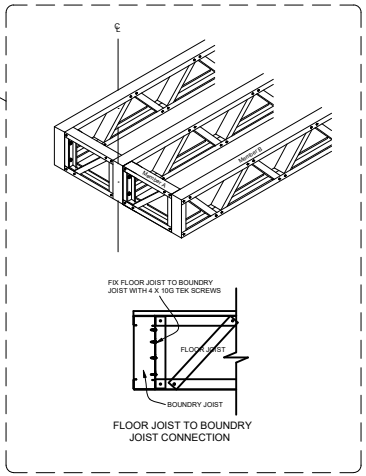
	JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
FRAMECAD	Unit 14 Type D 107 Blockhouse Bay Road	Ralph Lao	06-10-2021	1 : 100		
		DWG FILE Unit 14 Type D	VIEW NAME 1 of 7	ON A4-Sheet		

Floor Member Summary

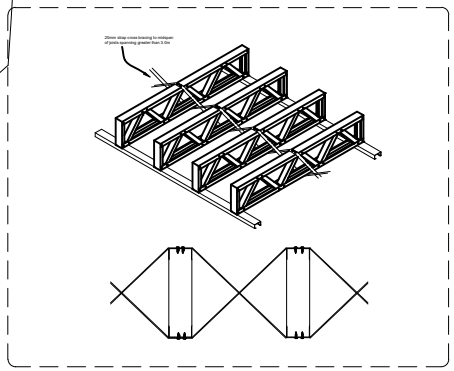
E1	WJ89095H	1	4010
E2	WJ89095H	1	9120
E3	WJ89095H	1	9420
E4	WJ89095H	1	600
E5	WJ89095H	1	3410
I1	WJ89095H	1	110
I2	WJ89095H	11	310
I3	WJ89095H	1	310
I4	WJ89095H	1	265
I5	WJ89095H	7	310
I6	WJ89095H	1	75
J1	WJ89095H	1	1410
J2	WJ89095H	1	1410
J3	WJ89095H	1	1410
J4	WJ89095H	1	1410
J5	WJ89095H	1	1410
J6	WJ89095H	1	1410
J7	WJ89095H	12	2810
J8	WJ89095H	1	1410
J9	WJ89095H	1	1410
J10	WJ89095H	1	1410
J11	WJ89095H	4	3830
J12	WJ89095H	1	620
J13	WJ89095H	1	920
J14	WJ89095H	1	920
J15	WJ89095H	1	920
J16	WJ89095H	1	920
J17	WJ89095H	1	920
J18	WJ89095H	1	920
J19	WJ89095H	1	920
J20	WJ89095H	1	920
JB1	WJ89095H	1	3830
JB2	WJ89095H	1	3830
JB3	WJ89095H	1	3830
S1	WJ89095H	1	1020
S2	WJ89095H	1	920
	FRAMECAD BATTEN 22	17	4800
	FRAMECAD BATTEN 22	0	6100
	FRAMECAD 10g-19mm HWH Hex		900

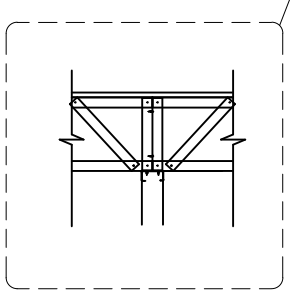


FIRST FLOOR LEVEL JOIST LAYOUT



FLOOR JOIST TO BOUNDRY JOIST CONNECTION





DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD

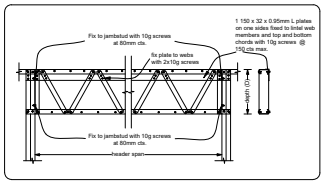
JOB DETAILS Unit 14 Type D 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 06-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
	DWG FILE Unit 14 Type D	VIEW NAME 2 of 7	ON A4-Sheet		

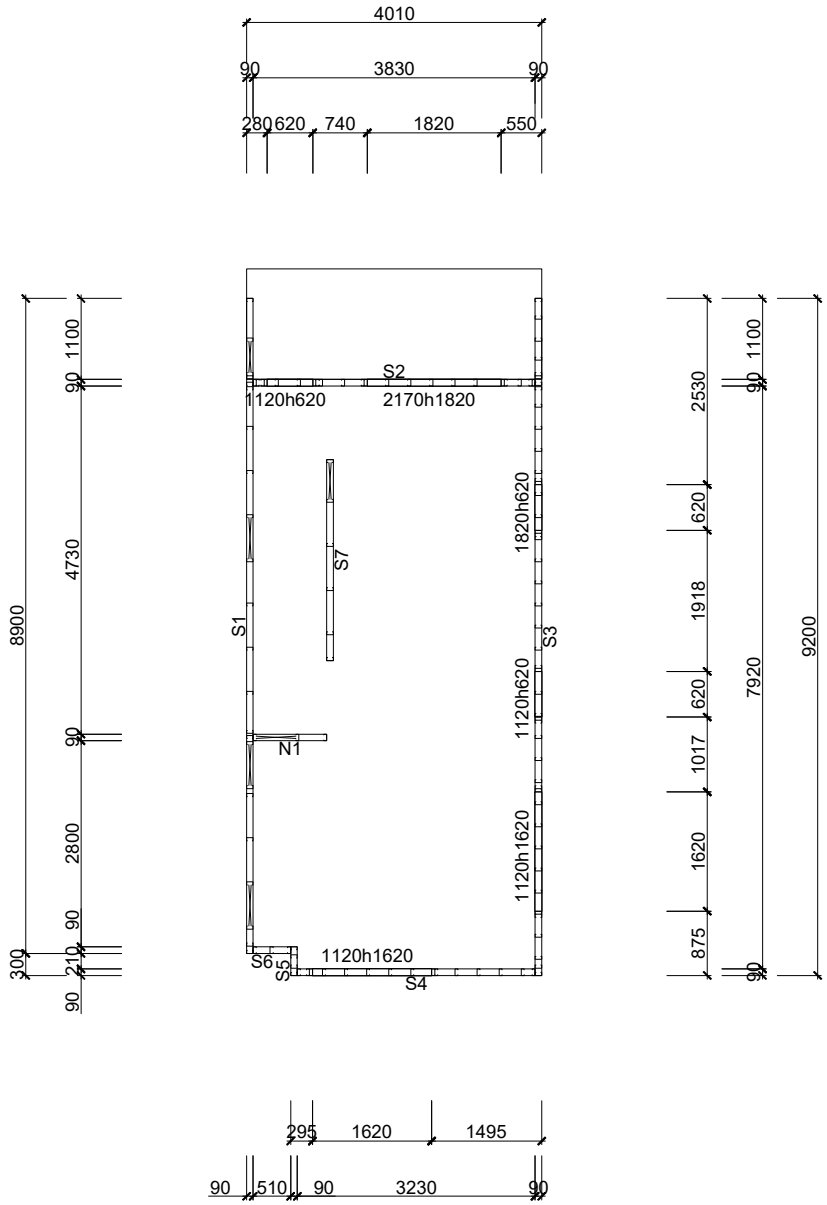
Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.



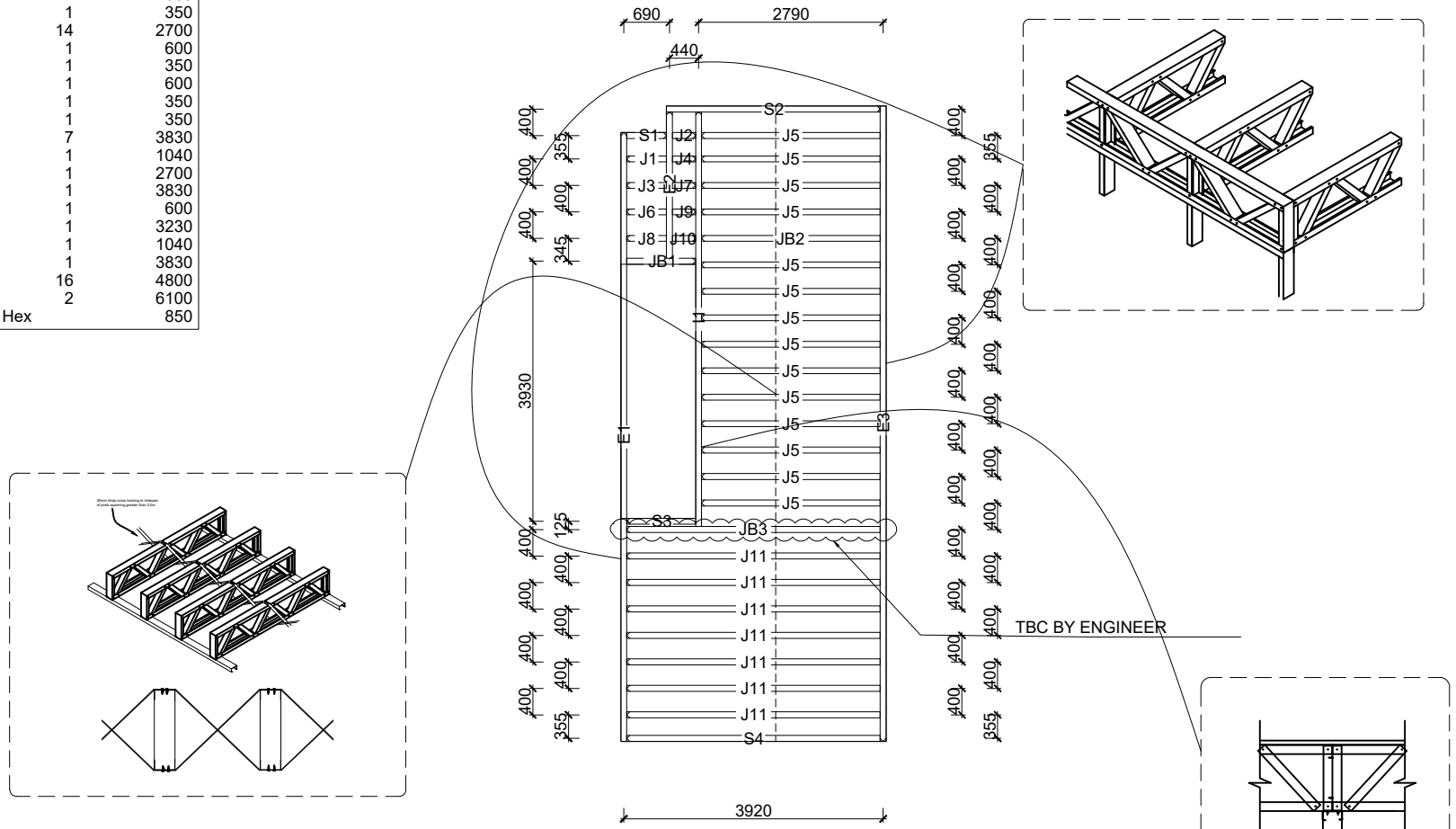


FIRST FLOOR LEVEL LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD	JOB DETAILS Unit 14 Type D 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 06-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 14 Type D	VIEW NAME 3 of 7	ON A4-Sheet		

Floor Member Summary			
E1	WJ89095H	1	9200
E2	WJ89095H	1	2210
E3	WJ89095H	1	9600
I1	WJ89095H	1	6265
J1	WJ89095H	1	600
J2	WJ89095H	1	350
J3	WJ89095H	1	600
J4	WJ89095H	1	350
J5	WJ89095H	14	2700
J6	WJ89095H	1	600
J7	WJ89095H	1	350
J8	WJ89095H	1	600
J9	WJ89095H	1	350
J10	WJ89095H	1	350
J11	WJ89095H	7	3830
JB1	WJ89095H	1	1040
JB2	WJ89095H	1	2700
JB3	WJ89095H	1	3830
S1	WJ89095H	1	600
S2	WJ89095H	1	3230
S3	WJ89095H	1	1040
S4	WJ89095H	1	3830
	FRAMECAD BATTEN 22	16	4800
	FRAMECAD BATTEN 22	2	6100
	FRAMECAD 10g-19mm HWH Hex		850



SECOND FLOOR LEVEL JOIST LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD®

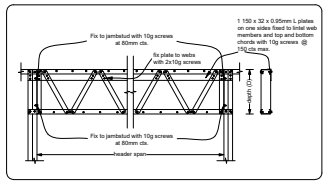
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 14 Type D 107 Blockhouse Bay Road	Ralph Lao	06-10-2021	1 : 100		
	DWG FILE Unit 14 Type D	VIEW NAME 4 of 7	ON A4-Sheet		

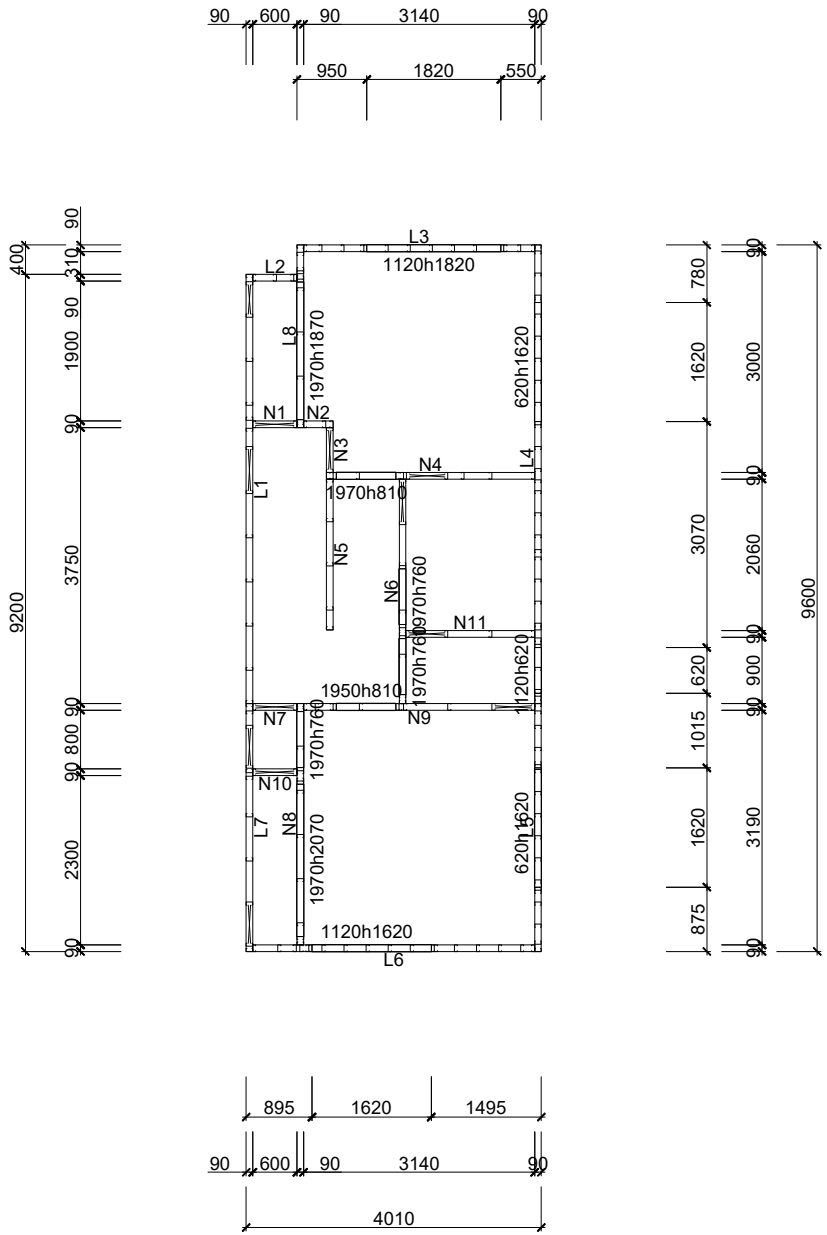
Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.





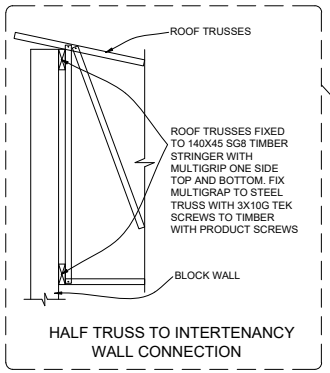
SECOND FLOOR LEVEL LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

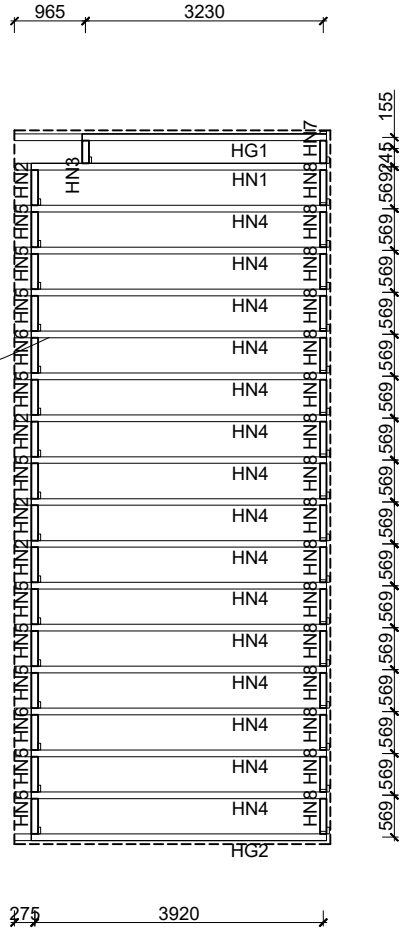
FRAMECAD

JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 14 Type D 107 Blockhouse Bay Road	Ralph Lao	06-10-2021	1 : 100		
	DWG FILE: Unit 14 Type D	VIEW NAME: 5 of 7	ON: A4-Sheet		

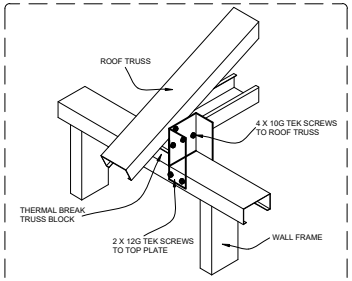
Truss Design Summary	
System Name	FC_SFSNZ
Design Code	AS/NZS 4600:2018
Loading Code	NASH NZ 2010
Roof Load	SHEET
Wind Speed	LOW
Snow Load	0.00
Roof Pitch	15.000
BC Restraints	600



HALF TRUSS TO INTERTENANCY WALL CONNECTION



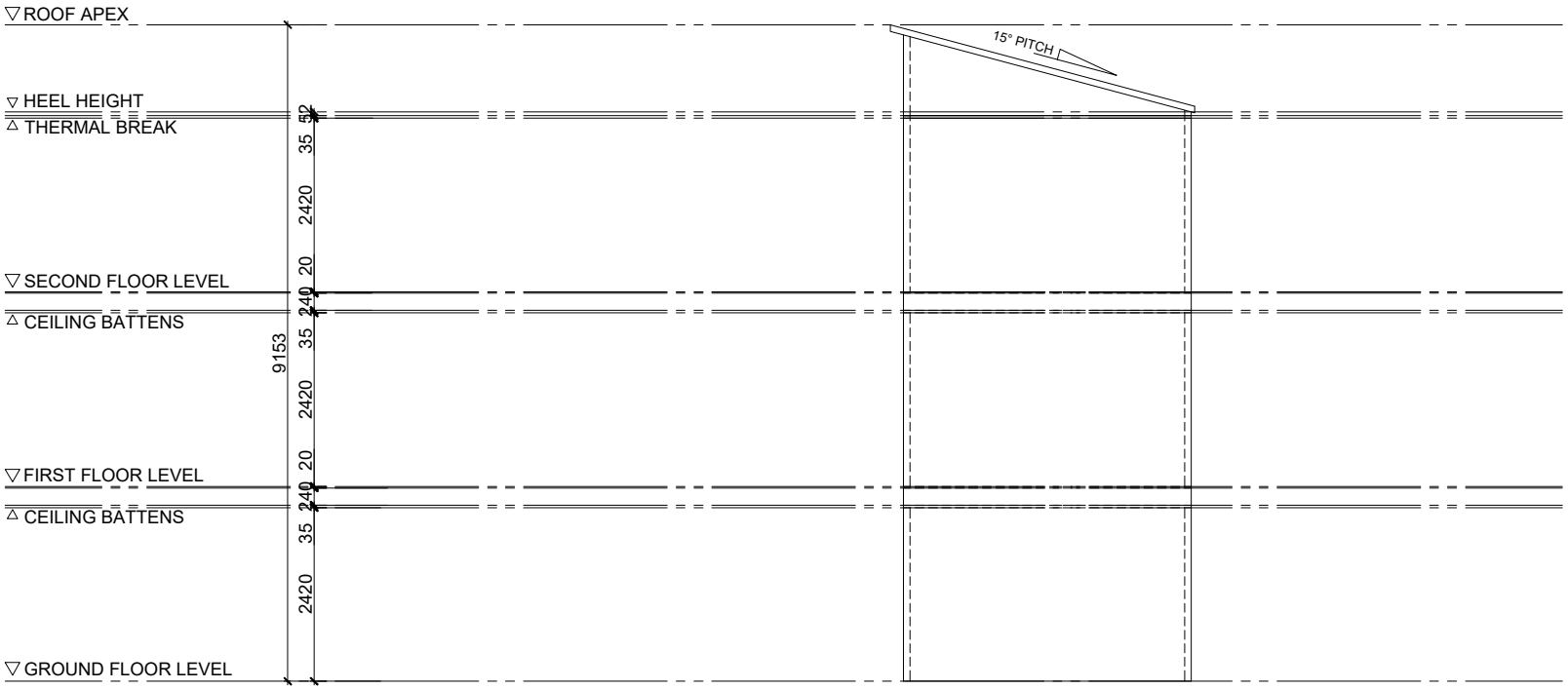
ROOF FRAMING LAYOUT



TYPE A "H" BRACKET CONNECTION

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD	JOB DETAILS Unit 14 Type D 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 06-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 14 Type D	VIEW NAME 6 of 7	ON A4-Sheet		



DO NOT SCALE.
IF IN DOUBT, ASK.

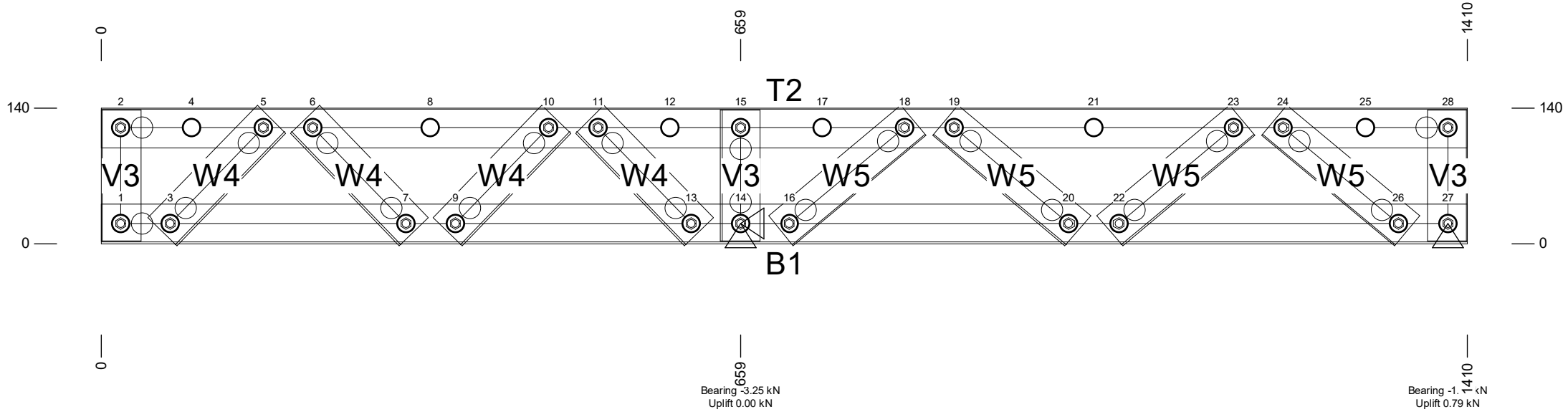
FRAMECAD®

JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 14 Type D 107 Blockhouse Bay Road	Ralph Lao	06-10-2021	1 : 100		
	DWG FILE Unit 14 Type D	VIEW NAME 7 of 7	ON A4-Sheet		

B1	89S41-095-550	1	1410	T2	89S41-095-550	1	1410	V3	89S41-095-550	3	135	W4	89S41-095-550	4	162	W5	89S41-095-550	4	178

Assembly Weight	6.6kg	FRAMECAD 10g-16mm Flathead	44	FRAMECAD 10g-19mm XDrive	44

FRAMECAD



Beam Type WJ89095H Mark as J1 Quantity Required = 1 Engineering Status = 19%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.15	0.00	1%	(7)
3-5	0.00	0.36	1%	(7)
6-7	-2.42	0.00	9%	(14)
9-10	-0.27	2.25	4%	(14)
11-13	-3.50	0.15	13%	(13)
14-15	-2.35	0.26	9%	(12)
16-18	-3.36	0.00	13%	(11)
19-20	-0.73	1.41	3%	(11)
22-23	-1.79	0.96	7%	(14)
24-26	-2.71	1.72	10%	(10)
27-28	-0.15	0.11	12%	(10)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	0.00	0.00	7%	(4)
5-10	0.00	1.93	8%	(14)
10-15	-0.16	5.10	16%	(14)
15-18	-0.16	5.10	14%	(11)
18-23	-2.74	4.10	13%	(11)
23-28	-2.72	1.64	10%	(10)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	-0.25	0.00	13%	(14)
7-13	-3.50	0.05	14%	(14)
13-16	-5.11	0.17	19%	(14)
16-20	-4.09	2.75	19%	(14)
20-26	-3.01	2.72	11%	(14)
26-27	-0.32	0.65	1%	(14)

SPECIAL LOADING

Location	Source	G kN	Q kN	S kN
mm				

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	4%
LC2	(G+Q)	6%
LC3-LC6	Patch(G+0.4Q)	5%
LC3-LC6	Patch(G+Q)	7%
LC7	(1.2G+1.5Q)	8%
LC8-LC9	Patch(1.2G+1.5Q)	9%
LC10-LC14	(1.2G+1.5P)	19%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.16	2	Span/360,12.0	3.55	4%
LC2	0.30	2	Span/240,12.0	5.3	6%
Summary for Patch Loading cases (LC3 - LC6) :					
Critical case inPatch(G+0.4Q):					
LC4	0.35	2	Span/240,12.0	5.3	7%
Critical case inPatch(G+Q):					
LC5	0.04	2	Span/360,12.0	3.55	1%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

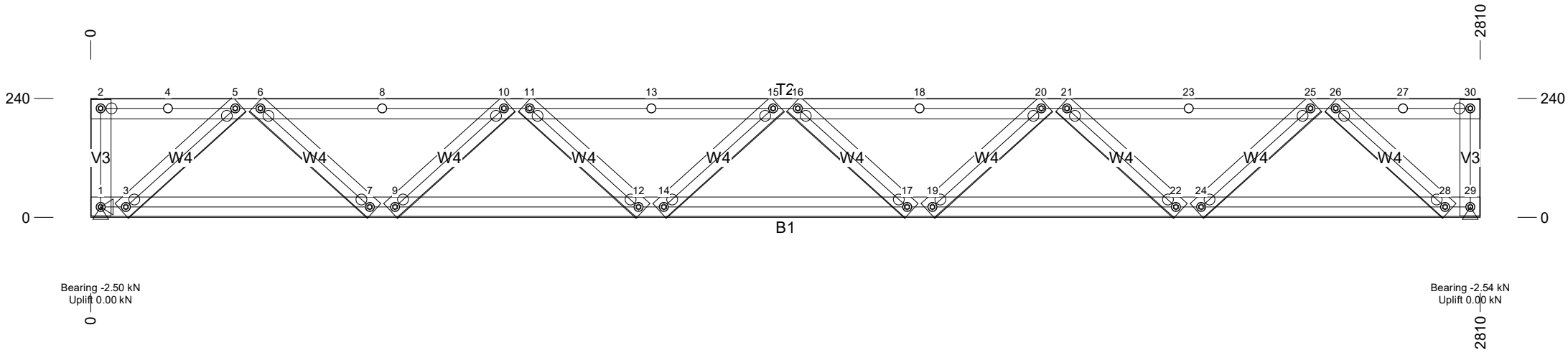
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00	Top Chord Dead Load (kPa) :	0.32
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Top Chord Live Load (kPa) :	2.00
								Design Point Load (kN) :	1.8

B1	89S41-095-550	12	2810	T2	89S41-095-550	12	2810	V3	89S41-095-550	24	235	W4	89S41-095-550	120	321
Assembly Weight		13.3kg		FRAMECAD 10g-16mm Flathead		576		FRAMECAD 10g-19mm XDrive		576					

FRAMECAD®



Beam Type WJ89095H Mark as J7 Quantity Required = 12 Engineering Status = 26%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.21	15%	(8)
3-5	-4.09	0.00	15%	(8)
6-7	0.00	2.20	4%	(3)
9-10	-2.08	0.00	8%	(3)
11-12	-0.37	1.38	2%	(6)
14-15	-1.17	0.57	4%	(6)
16-17	-1.10	0.65	4%	(6)
19-20	-0.44	1.31	2%	(6)
21-22	-2.08	0.09	8%	(3)
24-25	0.00	2.20	4%	(3)
26-28	-3.81	0.00	14%	(4)
29-30	-0.03	0.11	17%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.54	0.00	20%	(8)
5-10	-4.33	0.00	19%	(8)
10-15	-6.49	0.00	24%	(3)
15-20	-6.95	0.00	26%	(3)
20-25	-5.88	0.00	22%	(3)
25-30	-3.30	0.00	17%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.61	11%	(8)
7-12	0.00	5.91	16%	(3)
12-17	0.00	6.97	14%	(3)
17-22	0.00	6.51	16%	(3)
22-28	0.00	4.34	12%	(4)
28-29	0.00	0.47	1%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	10%
LC2	(G+Q)	18%
LC3	(1.2G+1.5Q)	26%
LC4-LC8	(1.2G+1.5P)	21%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.68	15	Span/360,12.0	7.7	9%
LC2	1.30	15	Span/240,12.0	11.5	11%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

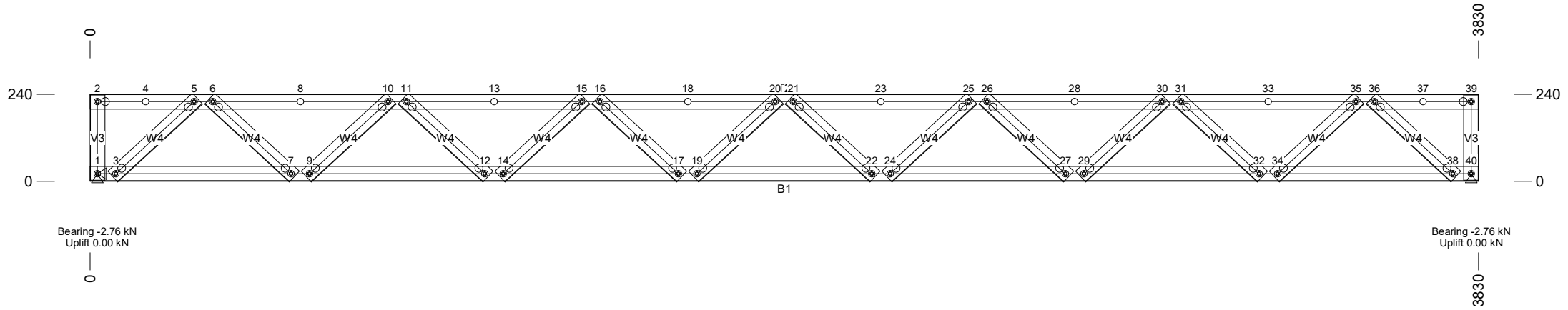
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	4	3830	T2	89S41-095-550	4	3830	V3	89S41-095-550	8	235	W4	89S41-095-550	56	317
Assembly Weight		18.0kg		FRAMECAD 10g-16mm Flathead		256		FRAMECAD 10g-19mm XDrive		256					

FRAMECAD



Beam Type WJ89095H Mark as J11 Quantity Required = 4 Engineering Status = 49%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.23	15%	(10)
3-5	-4.45	0.00	17%	(3)
6-7	0.00	3.54	6%	(3)
9-10	-3.43	0.00	13%	(3)
11-12	0.00	2.20	4%	(3)
14-15	-2.00	0.11	7%	(3)
16-17	-0.50	1.37	2%	(7)
19-20	-1.17	0.70	4%	(7)
21-22	-1.08	0.78	4%	(7)
24-25	-0.58	1.28	2%	(7)
26-27	-2.00	0.19	8%	(3)
29-30	0.00	2.21	4%	(3)
31-32	-3.43	0.00	13%	(3)
34-35	0.00	3.53	6%	(3)
36-38	-4.44	0.00	17%	(3)
39-40	-0.01	0.14	18%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.54	0.00	23%	(3)
5-10	-6.34	0.00	25%	(3)
10-15	-10.48	0.00	39%	(3)
15-20	-12.54	0.00	47%	(3)
20-25	-12.98	0.00	49%	(3)
25-30	-11.95	0.00	45%	(3)
30-35	-8.86	0.00	33%	(3)
35-39	-3.75	0.00	23%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.85	35%	(10)
7-12	0.00	8.90	27%	(2)
12-17	0.00	11.99	34%	(2)
17-22	0.00	13.01	35%	(2)
22-27	0.00	12.56	35%	(2)
27-32	0.00	10.50	28%	(2)
32-38	0.00	6.35	17%	(2)
38-40	0.00	0.50	2%	(2)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	21%
LC2	(G+Q)	35%
LC3	(1.2G+1.5Q)	49%
LC4-LC10	(1.2G+1.5P)	35%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	2.22	20	Span/360,12.0	10.5	21%
LC2	4.22	20	Span/240,12.0	12.0	35%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

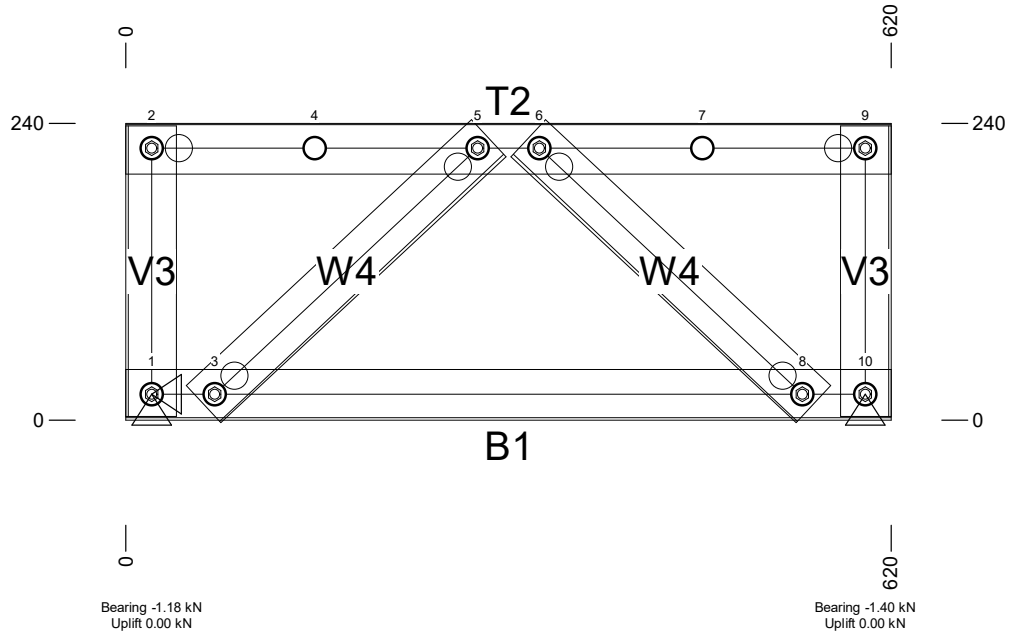
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	620	T2	89S41-095-550	1	620	V3	89S41-095-550	2	235	W4	89S41-095-550	2	315
Assembly Weight		3.3kg		FRAMECAD 10g-16mm Flathead		16		FRAMECAD 10g-19mm XDrive		16					

FRAMECAD



Beam Type WJ89095H Mark as J12 Quantity Required = 1 Engineering Status = 16%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.17	0.06	7%	(4)
3-5	-1.77	0.00	7%	(4)
6-8	-1.81	0.00	7%	(4)
9-10	-0.17	0.00	8%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.25	0.00	7%	(4)
5-9	-1.54	0.00	6%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-8	0.00	1.55	16%	(4)
8-10	0.00	0.22	14%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	2%
LC3	(1.2G+1.5Q)	3%
LC4	(1.2G+1.5P)	16%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

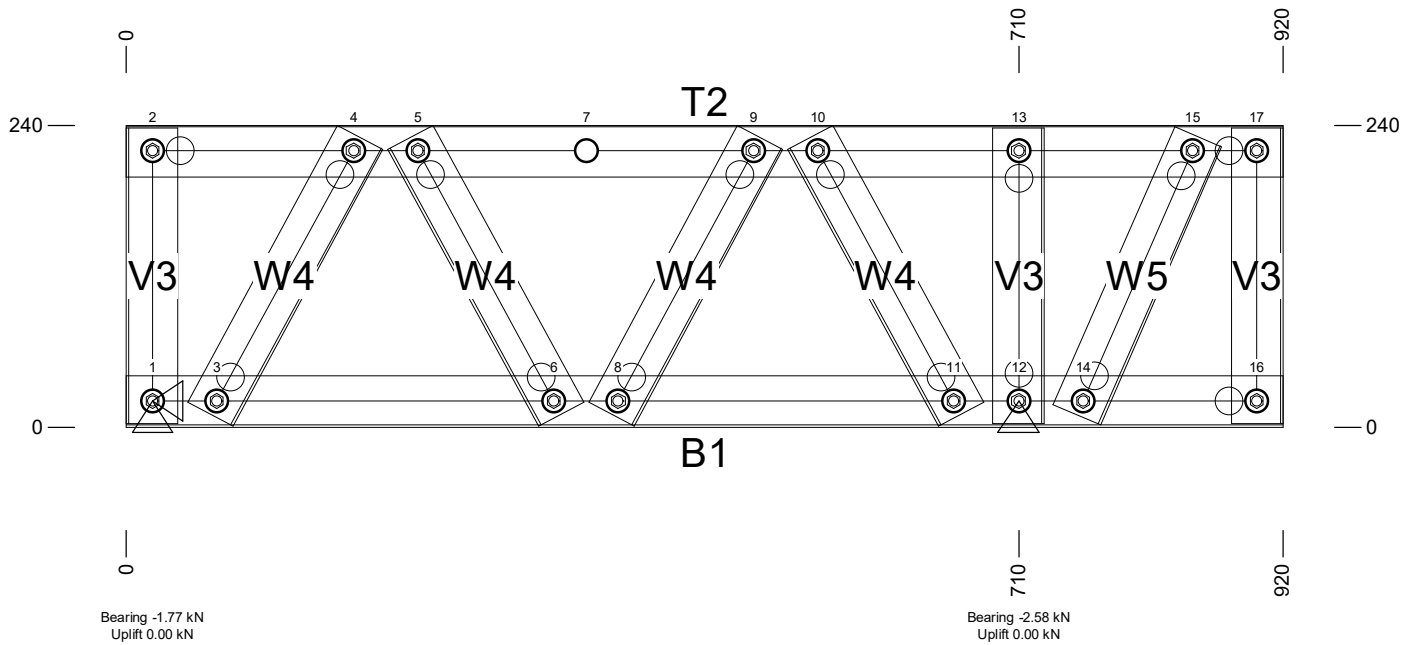
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	1	920	T2	89S41-095-550	1	920	V3	89S41-095-550	3	235	W4	89S41-095-550	4	251	W5	89S41-095-550	1	241
Assembly Weight	5.4kg	FRAMECAD 10g-16mm Flathead	32	FRAMECAD 10g-19mm XDrive	32														

FRAMECAD



Beam Type WJ89095H Mark as J13 Quantity Required = 1 Engineering Status = 23%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.07	0.25	10%	(6)
3-4	-2.34	0.00	9%	(6)
5-6	-0.66	0.88	2%	(6)
8-9	-0.60	0.89	2%	(5)
10-11	-2.14	0.00	8%	(5)
12-13	-2.25	0.08	8%	(4)
14-15	-0.14	0.69	1%	(5)
16-17	-0.43	0.01	2%	(5)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	1.49	23%	(6)
6-11	0.00	1.30	14%	(5)
11-14	-0.05	0.28	0%	(5)
14-16	0.00	0.00	11%	(5)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.35	0.00	14%	(6)
4-9	-1.47	0.00	10%	(6)
9-13	-1.29	0.06	9%	(6)
13-15	-0.27	0.06	4%	(5)
15-17	0.00	0.00	3%	(5)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	2%
LC2	(G+Q)	3%
LC3	(1.2G+1.5Q)	4%
LC4-LC6	(1.2G+1.5P)	23%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

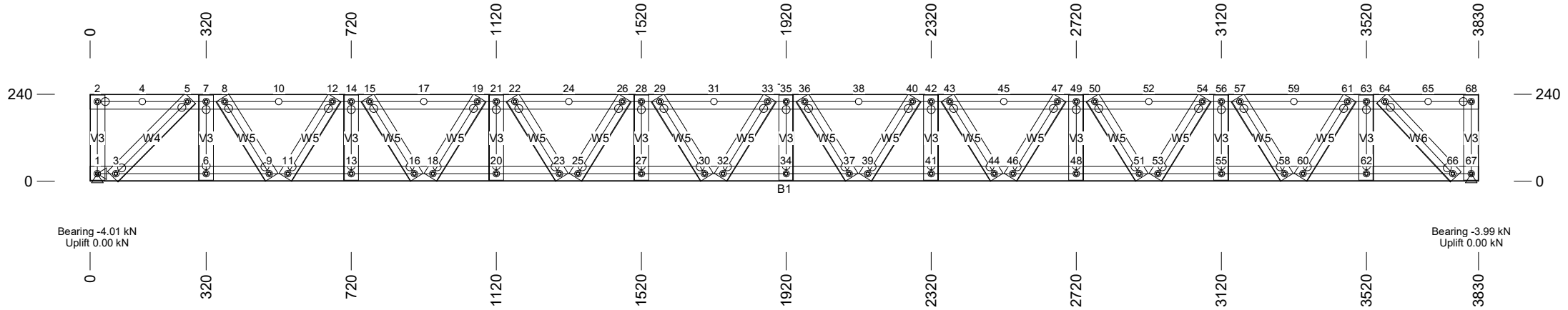
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	1	3830	T2	89S41-095-550	1	3830	V3	89S41-095-550	11	235	W4	89S41-095-550	1	304	W5	89S41-095-550	16	258	W6	89S41-095-550	1	297

Assembly Weight	21.4kg	FRAMECAD 10g-16mm Flathead	116	FRAMECAD 10g-19mm XDrive	116

FRAMECAD



Beam Type WJ89095H Mark as JB1 Quantity Required = 1 Engineering Status = 73%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.70	27%	(3)
3-5	-6.85	0.00	26%	(3)
6-7	-0.40	0.17	1%	(3)
8-9	0.00	5.74	10%	(3)
11-12	-5.59	0.00	21%	(3)
13-14	-0.13	0.19	0%	(3)
15-16	0.00	4.34	7%	(3)
18-19	-3.89	0.00	15%	(3)
20-21	-0.24	0.13	1%	(3)
22-23	-0.02	2.66	5%	(3)
25-26	-2.08	0.23	8%	(3)
27-28	-0.34	0.09	1%	(3)
29-30	-0.54	1.50	3%	(8)
32-33	-1.19	0.79	4%	(8)
34-35	-0.37	0.07	1%	(3)
36-37	-1.07	0.95	4%	(9)
39-40	-0.66	1.34	2%	(7)
41-42	-0.34	0.09	1%	(3)
43-44	-2.21	0.39	8%	(3)
46-47	-0.14	2.79	5%	(3)
48-49	-0.25	0.13	1%	(3)
50-51	-3.90	0.00	15%	(3)
53-54	0.00	4.35	7%	(3)
55-56	-0.13	0.20	0%	(3)
57-58	-5.57	0.00	21%	(3)
60-61	0.00	5.77	10%	(3)
62-63	-0.58	0.04	2%	(3)
64-66	-6.50	0.00	24%	(3)
67-68	0.00	0.72	42%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.99	0.00	64%	(3)
5-8	-5.82	0.00	32%	(3)
8-12	-8.84	0.00	53%	(3)
12-15	-11.78	0.00	44%	(3)
15-19	-14.07	0.00	57%	(3)
19-22	-16.12	0.00	60%	(3)
22-26	-17.52	0.00	66%	(3)
26-29	-18.62	0.00	70%	(3)
29-33	-19.18	0.00	72%	(3)
33-36	-19.41	0.00	73%	(3)
36-40	-19.12	0.00	72%	(3)
40-43	-18.50	0.00	69%	(3)
43-47	-17.34	0.00	65%	(3)
47-50	-15.87	0.00	60%	(3)
50-54	-13.82	0.00	56%	(3)
54-57	-11.54	0.00	43%	(3)
57-61	-8.61	0.00	53%	(3)
61-64	-5.58	0.00	31%	(3)
64-68	-1.13	0.00	62%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	5.91	64%	(3)
6-9	0.00	5.90	24%	(3)
9-13	0.00	11.86	40%	(3)
13-16	0.00	11.86	42%	(2)
16-20	0.00	16.19	50%	(2)
20-23	0.00	16.19	55%	(2)
23-27	0.00	18.68	60%	(2)
27-30	0.00	18.68	62%	(2)
30-34	0.00	19.46	63%	(2)
34-37	0.00	19.46	63%	(2)
37-41	0.00	19.17	62%	(2)
41-44	0.00	18.53	59%	(2)
44-48	0.00	17.37	56%	(2)
48-51	0.00	15.90	50%	(2)
51-55	0.00	13.85	44%	(2)
55-58	0.00	11.56	39%	(3)
58-62	0.00	8.63	26%	(2)
62-66	0.00	5.58	15%	(4)
66-67	0.00	1.13	3%	(2)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
3520.0	Other	0.05	0.32	0.00
3120.0	Other	0.05	0.32	0.00
2720.0	Other	0.05	0.32	0.00
2320.0	Other	0.05	0.32	0.00
1920.0	Other	0.05	0.32	0.00
1520.0	Other	0.05	0.32	0.00
1120.0	Other	0.05	0.32	0.00
720.0	Other	0.05	0.32	0.00
320.0	Other	0.05	0.32	0.00
1065.0	Other	0.01	0.04	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	37%
LC2	(G+Q)	63%
LC3	(1.2G+1.5Q)	73%
LC4-LC12	(1.2G+1.5P)	48%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	3.93	35	Span/360,12.0	10.5	37%
LC2	7.5	35	Span/240,12.0	12.0	63%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

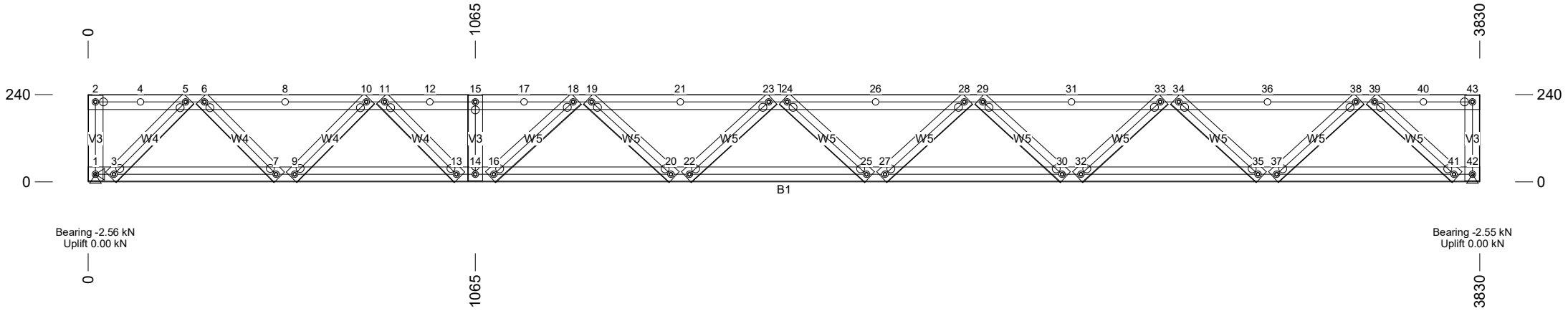
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	1.50	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	1	3830	T2	89S41-095-550	1	3830	V3	89S41-095-550	3	235	W4	89S41-095-550	4	304	W5	89S41-095-550	10	319

Assembly Weight	18.3kg	FRAMECAD 10g-16mm Flathead	68	FRAMECAD 10g-19mm XDrive	68

FRAMECAD



Beam Type WJ89095H Mark as JB2 Quantity Required = 1 Engineering Status = 33%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.25	14%	(11)
3-5	-4.07	0.00	15%	(11)
6-7	0.00	2.32	4%	(3)
9-10	-2.34	0.00	9%	(3)
11-13	-0.07	1.87	3%	(9)
14-15	-1.37	0.00	5%	(9)
16-18	-1.72	0.37	6%	(8)
19-20	-0.53	1.37	2%	(7)
22-23	-1.12	0.74	4%	(7)
24-25	-1.08	0.80	4%	(7)
27-28	-0.63	1.24	2%	(6)
29-30	-1.56	0.31	6%	(6)
32-33	-0.14	1.73	3%	(6)
34-35	-2.05	0.00	8%	(5)
37-38	0.00	2.17	4%	(5)
39-41	-3.84	0.00	14%	(4)
42-43	-0.02	0.13	17%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.50	0.00	21%	(11)
5-10	-3.83	0.00	19%	(11)
10-15	-6.73	0.00	25%	(3)
15-18	-6.73	0.00	25%	(3)
18-23	-7.59	0.00	28%	(3)
23-28	-7.70	0.00	29%	(3)
28-33	-6.99	0.00	26%	(6)
33-38	-5.10	0.00	19%	(5)
38-43	-3.30	0.00	13%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.42	33%	(11)
7-13	0.00	5.52	17%	(3)
13-16	0.00	6.77	18%	(2)
16-20	0.00	7.40	21%	(8)
20-25	0.00	7.73	21%	(2)
25-30	0.00	7.36	21%	(2)
30-35	0.00	6.01	17%	(2)
35-41	0.00	3.60	12%	(4)
41-42	0.00	0.47	1%	(2)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
1065.0	Other	0.04	0.23	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	13%
LC2	(G+Q)	22%
LC3	(1.2G+1.5Q)	29%
LC4-LC11	(1.2G+1.5P)	33%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	1.39	23	Span/360,12.0	10.5	13%
LC2	2.59	23	Span/240,12.0	12.0	22%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

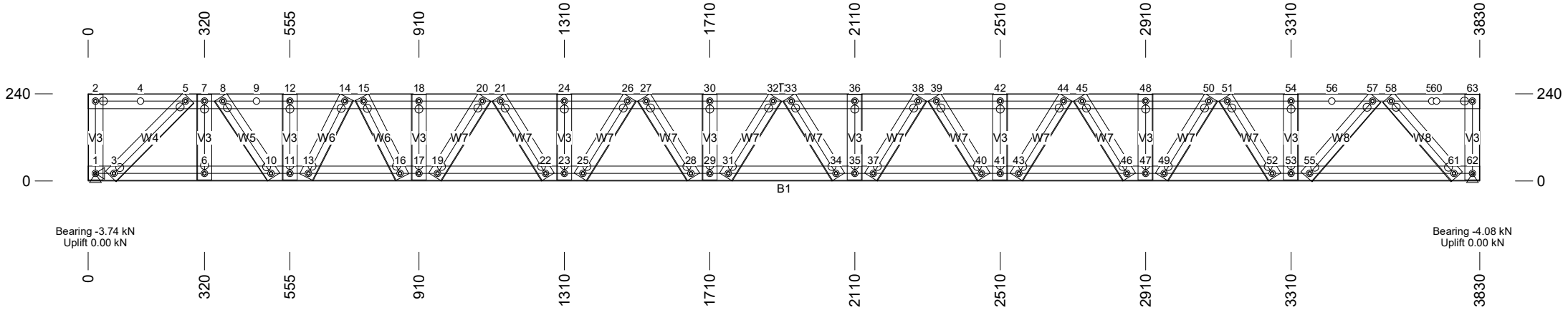
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.10	Ground Snow Load (kPa) :	0.00	Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Design Point Load (kN) :	1.8

B1	89S41-095-550	1	3830	T2	89S41-095-550	1	3830	V3	89S41-095-550	11	235	W4	89S41-095-550	1	304	W5	89S41-095-550	1	263	W6	89S41-095-550	2	247
W7	89S41-095-550	12	258	W8	89S41-095-550	2	288																

Assembly Weight	21.4kg	FRAMECAD 10g-16mm Flathead	116	FRAMECAD 10g-19mm XDrive	116

FRAMECAD



Beam Type WJ89095H Mark as JB3 Quantity Required = 1 Engineering Status = 69%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.71	27%	(3)
3-5	-6.42	0.00	24%	(3)
6-7	-0.88	0.00	3%	(3)
8-10	0.00	6.07	10%	(3)
11-12	-1.65	0.00	6%	(19)
13-14	-4.91	0.00	18%	(3)
15-16	0.00	4.50	8%	(3)
17-18	-1.29	0.10	5%	(17)
19-20	-3.64	0.00	14%	(3)
21-22	-0.06	2.82	5%	(3)
23-24	-1.28	0.09	5%	(15)
25-26	-2.00	0.37	7%	(3)
27-28	-0.61	1.39	2%	(12)
29-30	-1.25	0.11	5%	(13)
31-32	-1.15	0.89	4%	(10)
33-34	-1.16	0.85	4%	(14)
35-36	-1.25	0.10	5%	(11)
37-38	-0.60	1.43	2%	(12)
39-40	-1.94	0.34	7%	(3)
41-42	-1.28	0.09	5%	(9)
43-44	-0.04	2.74	5%	(3)
45-46	-3.46	0.00	13%	(3)
47-48	-1.33	0.05	5%	(7)
49-50	0.00	4.38	7%	(3)
51-52	-4.80	0.00	18%	(3)
53-54	-1.37	0.01	5%	(5)
55-57	0.00	5.70	10%	(3)
58-61	-6.49	0.00	24%	(3)
62-63	-0.00	0.20	20%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.97	0.00	65%	(3)
5-8	-5.49	0.00	32%	(3)
8-12	-8.85	0.00	49%	(3)
12-14	-8.85	0.00	34%	(2)
14-18	-13.11	0.00	49%	(3)
18-20	-13.11	0.00	49%	(3)
20-24	-16.51	0.00	62%	(3)
24-26	-16.51	0.00	62%	(3)
26-30	-18.20	0.00	68%	(3)
30-32	-18.20	0.00	68%	(3)
32-36	-18.44	0.00	69%	(3)
36-38	-18.24	0.00	68%	(3)
38-42	-17.65	0.00	66%	(3)
42-44	-16.63	0.00	62%	(3)
44-48	-15.19	0.00	57%	(3)
48-50	-13.38	0.00	50%	(3)
50-54	-11.07	0.00	41%	(3)
54-57	-8.55	0.00	33%	(3)
57-63	-4.81	0.00	38%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	5.58	63%	(3)
6-10	0.00	5.58	35%	(3)
10-13	0.00	8.94	31%	(3)
13-16	0.00	11.15	62%	(3)
16-19	0.00	13.18	45%	(2)
19-22	0.00	15.09	52%	(2)
22-25	0.00	16.58	55%	(2)
25-28	0.00	17.63	59%	(2)
28-31	0.00	18.25	60%	(2)
31-34	0.00	18.49	60%	(2)
34-37	0.00	18.28	60%	(2)
37-40	0.00	17.68	58%	(2)
40-43	0.00	16.66	54%	(2)
43-46	0.00	15.22	51%	(2)
46-49	0.00	13.40	43%	(2)
49-52	0.00	11.09	57%	(3)
52-55	0.00	8.56	29%	(3)
55-61	0.00	4.82	35%	(3)
61-62	0.00	0.56	2%	(2)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
320.0	Other	0.04	0.25	0.00
555.0	Other	0.02	0.15	0.00
910.0	Other	0.05	0.30	0.00
1310.0	Other	0.05	0.30	0.00
1710.0	Other	0.05	0.30	0.00
2110.0	Other	0.05	0.30	0.00
2510.0	Other	0.05	0.30	0.00
2910.0	Other	0.05	0.30	0.00
3310.0	Other	0.05	0.30	0.00
3710.0	Other	0.05	0.30	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	36%
LC2	(G+Q)	60%
LC3	(1.2G+1.5Q)	69%
LC4-LC20	(1.2G+1.5P)	47%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	3.77	32	Span/360,12.0	10.5	36%
LC2	7.2	32	Span/240,12.0	12.0	60%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

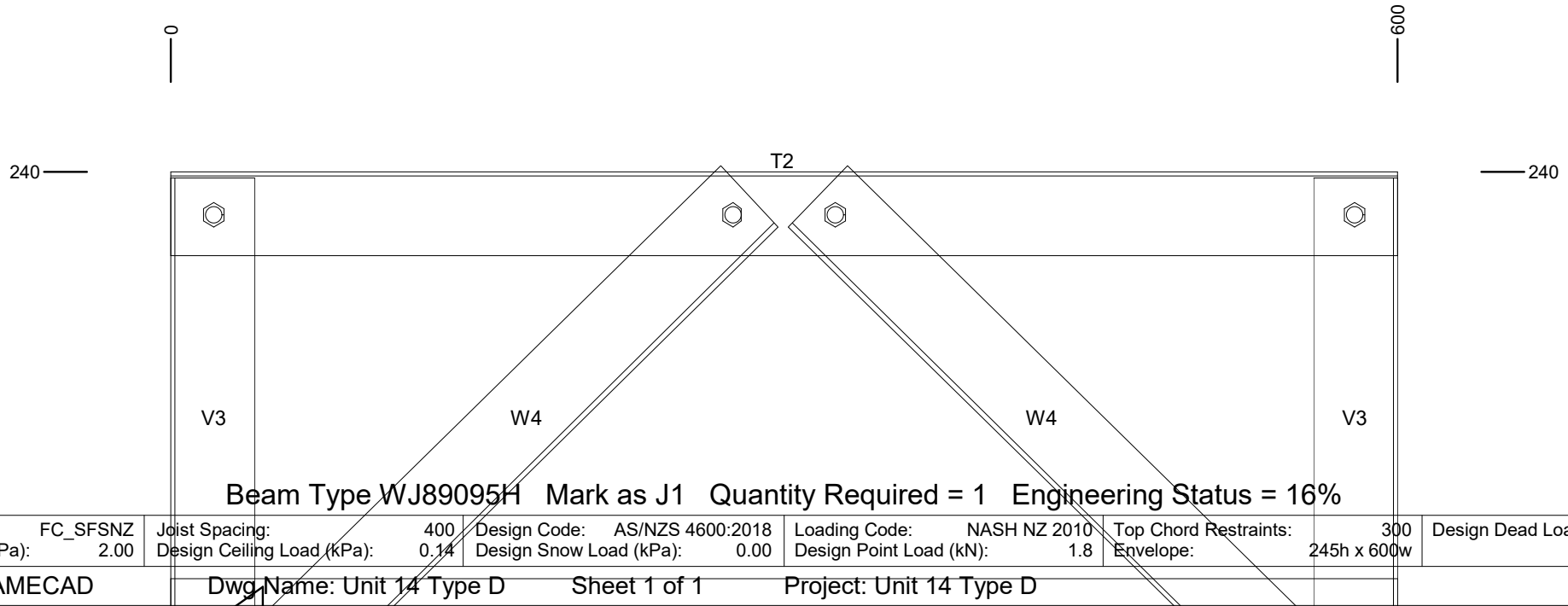
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	1.40	Ground Snow Load (kPa) :	0.00	Top Chord Dead Load (kPa) :	0.32
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Top Chord Live Load (kPa) :	2.00
								Design Point Load (kN) :	1.8

B1	89S41-095-550	1	600	T2	89S41-095-550	1	600	V3	89S41-095-550	2	235	W4	89S41-095-550	2	308
Assembly Weight		3.3kg		FRAMECAD 10g-16mm Flathead		16		FRAMECAD 10g-19mm XDrive		16					

FRAMECAD

Minimum number of fasteners required is 4 per joint

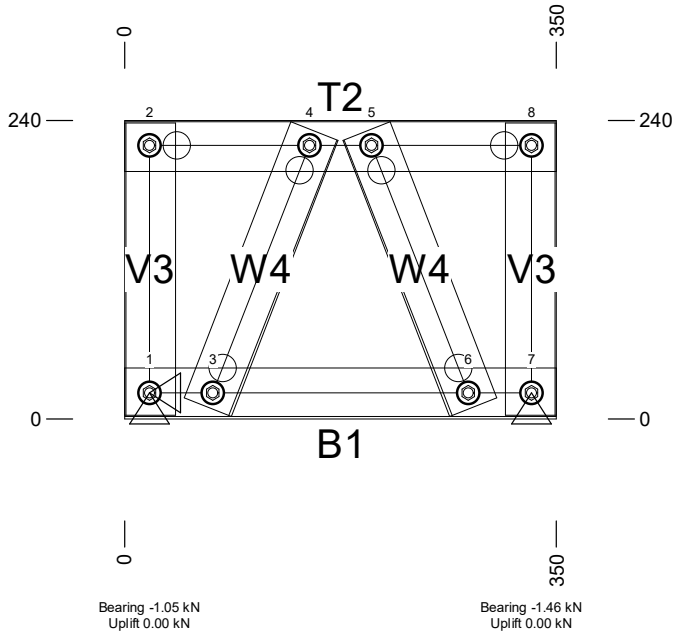


Beam Type WJ89095H Mark as J1 Quantity Required = 1 Engineering Status = 16%

System Name:	FC_SFSNZ	Joist Spacing:	400	Design Code:	AS/NZS 4600:2018	Loading Code:	NASH NZ 2010	Top Chord Restraints:	300	Design Dead Load (kPa):	0.32
Design Live Load (kPa):	2.00	Design Ceiling Load (kPa):	0.14	Design Snow Load (kPa):	0.00	Design Point Load (kN):	1.8	Envelope:	245h x 600w		

B1	89S41-095-550	1	350	T2	89S41-095-550	1	350	V3	89S41-095-550	2	235	W4	89S41-095-550	2	238
Assembly Weight		2.4kg		FRAMECAD 10g-16mm Flathead		16		FRAMECAD 10g-19mm XDrive		16					

FRAMECAD



Beam Type WJ89095H Mark as J2 Quantity Required = 1 Engineering Status = 13%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.09	0.13	6%	(4)
3-4	-1.20	0.00	4%	(4)
5-6	-1.35	0.00	5%	(4)
7-8	-0.24	0.00	6%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.20	0.00	6%	(4)
4-8	-0.64	0.00	5%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	0.65	13%	(4)
6-7	0.00	0.16	10%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	1%
LC3	(1.2G+1.5Q)	1%
LC4	(1.2G+1.5P)	13%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

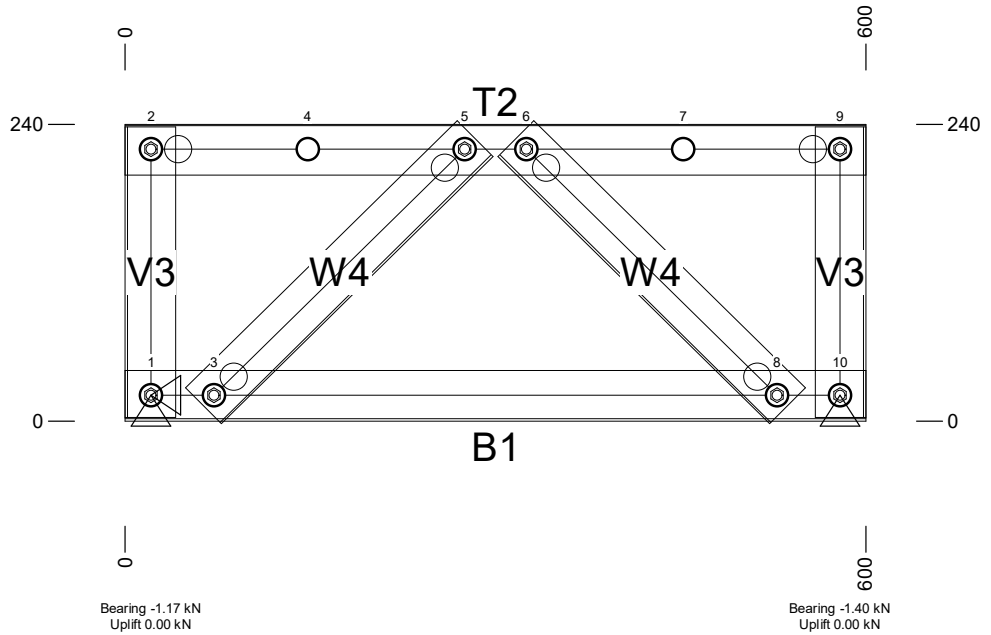
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	600	T2	89S41-095-550	1	600	V3	89S41-095-550	2	235	W4	89S41-095-550	2	308
Assembly Weight		3.3kg		FRAMECAD 10g-16mm Flathead		16		FRAMECAD 10g-19mm XDrive		16					

FRAMECAD



Beam Type WJ89095H Mark as J3 Quantity Required = 1 Engineering Status = 16%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.17	0.07	7%	(4)
3-5	-1.72	0.00	6%	(4)
6-8	-1.77	0.00	7%	(4)
9-10	-0.17	0.00	8%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.25	0.00	7%	(4)
5-9	-1.48	0.00	6%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-8	0.00	1.48	16%	(4)
8-10	0.00	0.22	14%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	2%
LC3	(1.2G+1.5Q)	3%
LC4	(1.2G+1.5P)	16%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

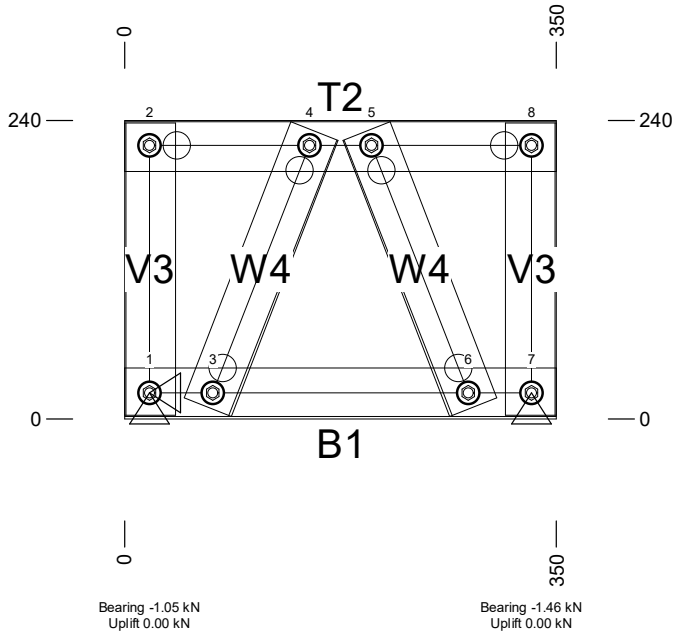
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	1	350	T2	89S41-095-550	1	350	V3	89S41-095-550	2	235	W4	89S41-095-550	2	238
Assembly Weight		2.4kg		FRAMECAD 10g-16mm Flathead		16		FRAMECAD 10g-19mm XDrive		16					

FRAMECAD



Beam Type WJ89095H Mark as J4 Quantity Required = 1 Engineering Status = 13%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.09	0.13	6%	(4)
3-4	-1.20	0.00	4%	(4)
5-6	-1.35	0.00	5%	(4)
7-8	-0.24	0.00	6%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.20	0.00	6%	(4)
4-8	-0.64	0.00	5%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	0.65	13%	(4)
6-7	0.00	0.16	10%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	1%
LC3	(1.2G+1.5Q)	1%
LC4	(1.2G+1.5P)	13%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

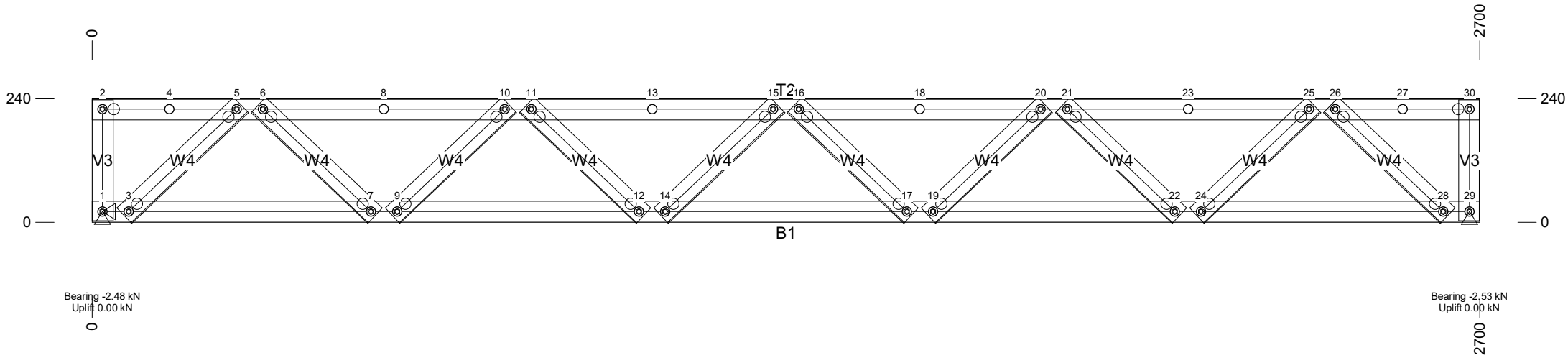
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	14	2700	T2	89S41-095-550	14	2700	V3	89S41-095-550	28	235	W4	89S41-095-550	140	313
Assembly Weight		12.9kg		FRAMECAD 10g-16mm Flathead		672		FRAMECAD 10g-19mm XDrive		672					

FRAMECAD



Beam Type WJ89095H Mark as J5 Quantity Required = 14 Engineering Status = 32%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.22	14%	(8)
3-5	-4.00	0.00	15%	(8)
6-7	0.00	2.09	4%	(3)
9-10	-1.96	0.00	7%	(3)
11-12	-0.36	1.35	2%	(6)
14-15	-1.14	0.56	4%	(6)
16-17	-1.07	0.64	4%	(6)
19-20	-0.43	1.27	2%	(6)
21-22	-1.96	0.10	7%	(3)
24-25	0.00	2.08	4%	(3)
26-28	-3.70	0.00	14%	(4)
29-30	-0.03	0.12	17%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.50	0.00	20%	(8)
5-10	-4.00	0.00	18%	(8)
10-15	-5.98	0.00	22%	(3)
15-20	-6.41	0.00	24%	(3)
20-25	-5.42	0.00	20%	(3)
25-30	-3.14	0.00	16%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.43	32%	(8)
7-12	0.00	5.45	15%	(3)
12-17	0.00	6.43	13%	(3)
17-22	0.00	6.00	15%	(3)
22-28	0.00	4.01	12%	(4)
28-29	0.00	0.46	1%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	9%
LC2	(G+Q)	17%
LC3	(1.2G+1.5Q)	24%
LC4-LC8	(1.2G+1.5P)	32%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.59	15	Span/360,12.0	7.4	8%
LC2	1.12	15	Span/240,12.0	11.1	10%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

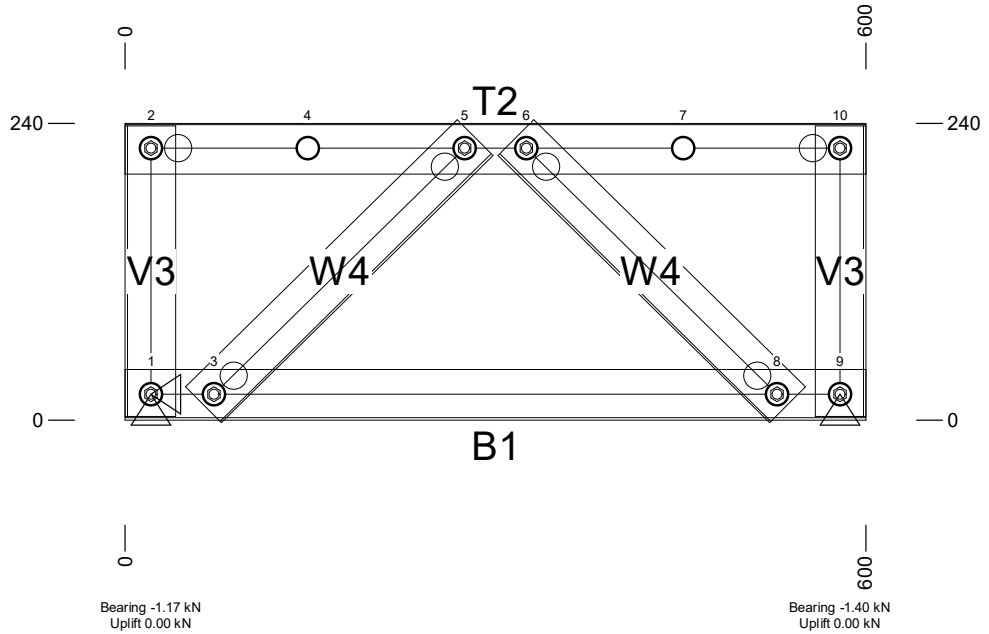
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	600	T2	89S41-095-550	1	600	V3	89S41-095-550	2	235	W4	89S41-095-550	2	308
Assembly Weight		3.3kg		FRAMECAD 10g-16mm Flathead		16		FRAMECAD 10g-19mm XDrive		16					

FRAMECAD



Beam Type WJ89095H Mark as J6 Quantity Required = 1 Engineering Status = 16%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.17	0.07	7%	(4)
3-5	-1.72	0.00	6%	(4)
6-8	-1.77	0.00	7%	(4)
9-10	-0.17	0.00	8%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.25	0.00	7%	(4)
5-10	-1.48	0.00	6%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-8	0.00	1.48	16%	(4)
8-9	0.00	0.22	14%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	2%
LC3	(1.2G+1.5Q)	3%
LC4	(1.2G+1.5P)	16%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

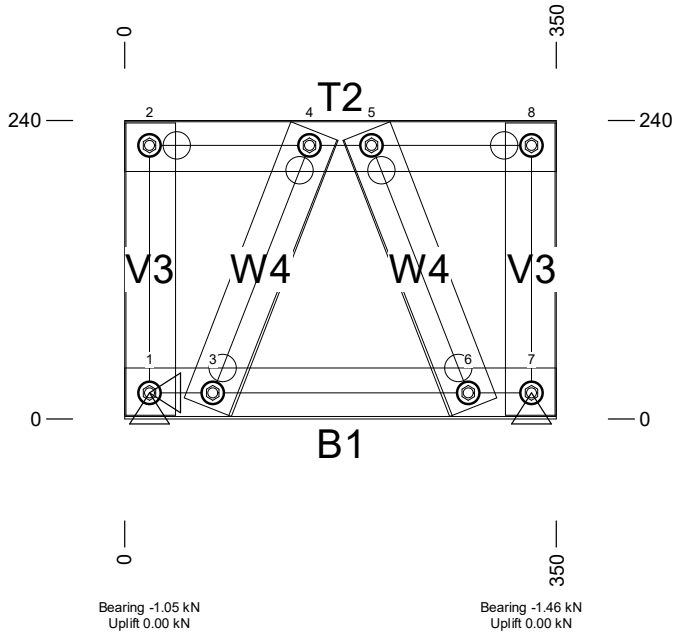
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	1	350	T2	89S41-095-550	1	350	V3	89S41-095-550	2	235	W4	89S41-095-550	2	238
Assembly Weight		2.4kg		FRAMECAD 10g-16mm Flathead		16		FRAMECAD 10g-19mm XDrive		16					

FRAMECAD



Beam Type WJ89095H Mark as J7 Quantity Required = 1 Engineering Status = 13%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.09	0.13	6%	(4)
3-4	-1.20	0.00	4%	(4)
5-6	-1.35	0.00	5%	(4)
7-8	-0.24	0.00	6%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.20	0.00	6%	(4)
4-8	-0.64	0.00	5%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	0.65	13%	(4)
6-7	0.00	0.16	10%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	1%
LC3	(1.2G+1.5Q)	1%
LC4	(1.2G+1.5P)	13%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

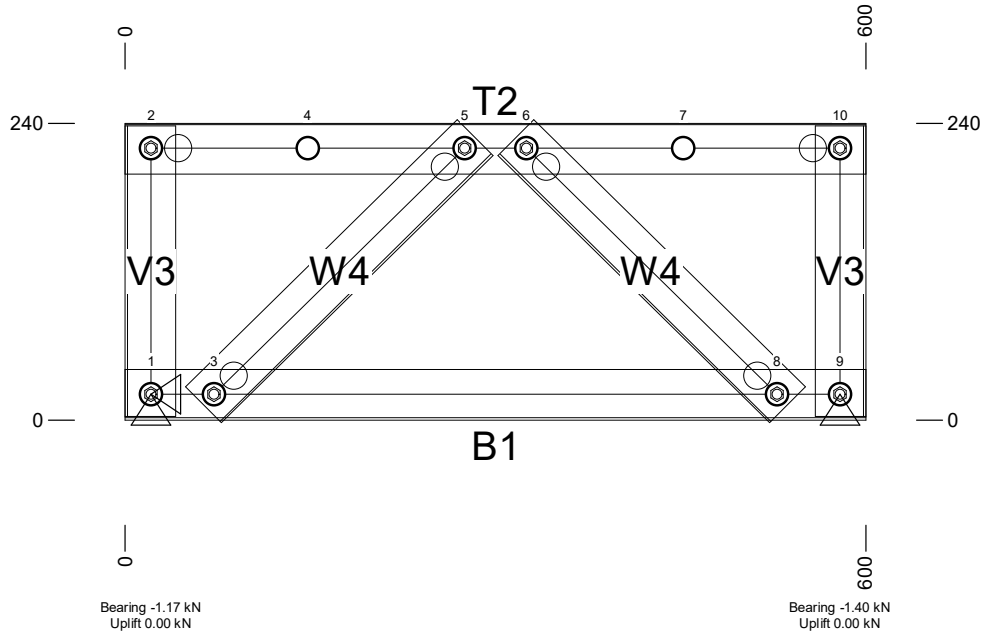
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	600	T2	89S41-095-550	1	600	V3	89S41-095-550	2	235	W4	89S41-095-550	2	308
Assembly Weight		3.3kg		FRAMECAD 10g-16mm Flathead		16		FRAMECAD 10g-19mm XDrive		16					

FRAMECAD



Beam Type WJ89095H Mark as J8 Quantity Required = 1 Engineering Status = 16%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.17	0.07	7%	(4)
3-5	-1.72	0.00	6%	(4)
6-8	-1.77	0.00	7%	(4)
9-10	-0.17	0.00	8%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.25	0.00	7%	(4)
5-10	-1.48	0.00	6%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-8	0.00	1.48	16%	(4)
8-9	0.00	0.22	14%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	2%
LC3	(1.2G+1.5Q)	3%
LC4	(1.2G+1.5P)	16%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

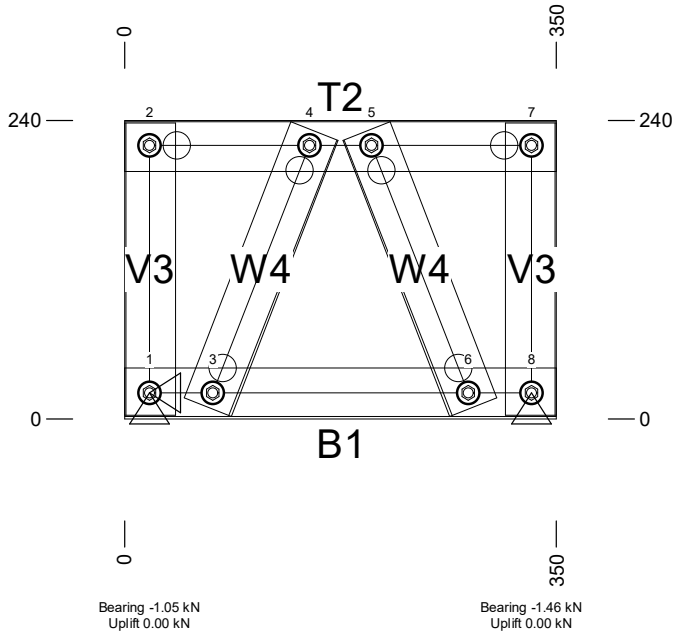
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	1	350	T2	89S41-095-550	1	350	V3	89S41-095-550	2	235	W4	89S41-095-550	2	238
Assembly Weight		2.4kg		FRAMECAD 10g-16mm Flathead		16		FRAMECAD 10g-19mm XDrive		16					

FRAMECAD



Beam Type WJ89095H Mark as J9 Quantity Required = 1 Engineering Status = 13%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.09	0.13	6%	(4)
3-4	-1.20	0.00	4%	(4)
5-6	-1.35	0.00	5%	(4)
7-8	-0.24	0.00	6%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.20	0.00	6%	(4)
4-7	-0.64	0.00	5%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	0.65	13%	(4)
6-8	0.00	0.16	10%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	1%
LC3	(1.2G+1.5Q)	1%
LC4	(1.2G+1.5P)	13%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

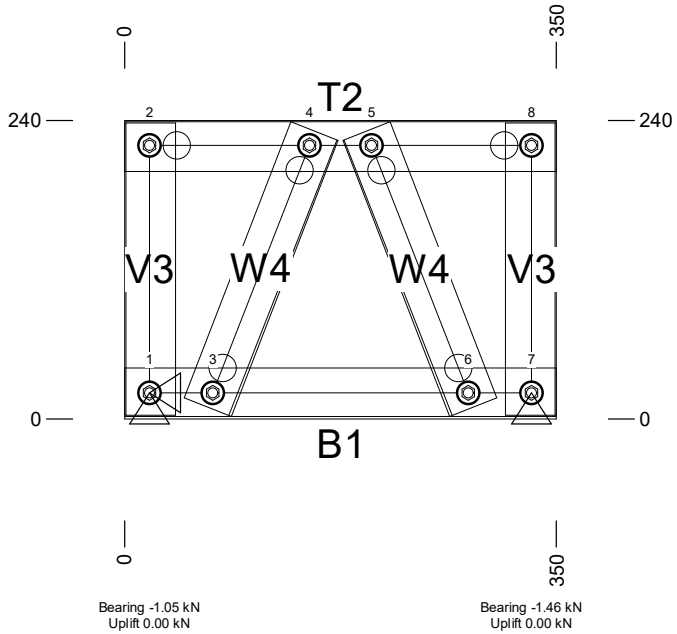
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	350	T2	89S41-095-550	1	350	V3	89S41-095-550	2	235	W4	89S41-095-550	2	238
Assembly Weight		2.4kg		FRAMECAD 10g-16mm Flathead		16		FRAMECAD 10g-19mm XDrive		16					

FRAMECAD



Beam Type WJ89095H Mark as J10 Quantity Required = 1 Engineering Status = 13%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.09	0.13	6%	(4)
3-4	-1.20	0.00	4%	(4)
5-6	-1.35	0.00	5%	(4)
7-8	-0.24	0.00	6%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.20	0.00	6%	(4)
4-8	-0.64	0.00	5%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	0.65	13%	(4)
6-7	0.00	0.16	10%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	1%
LC3	(1.2G+1.5Q)	1%
LC4	(1.2G+1.5P)	13%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

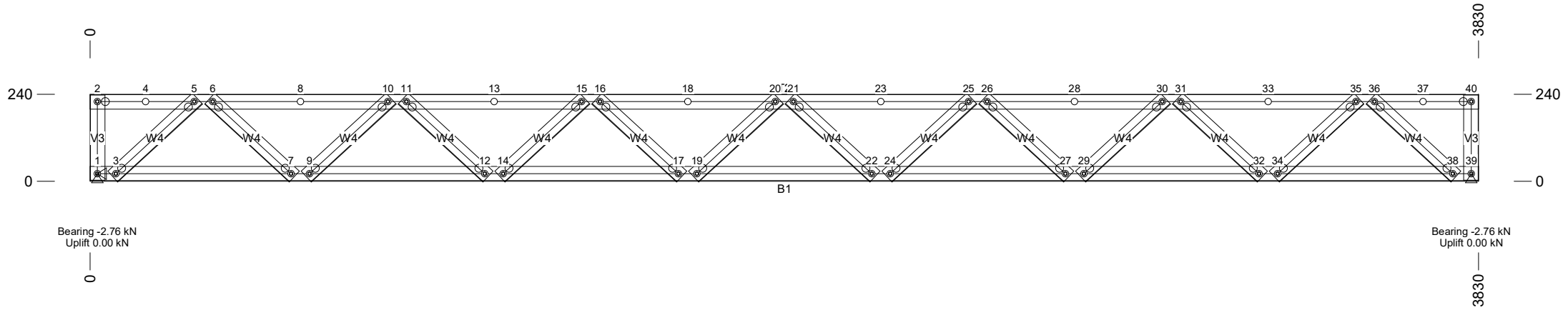
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	7	3830	T2	89S41-095-550	7	3830	V3	89S41-095-550	14	235	W4	89S41-095-550	98	317
Assembly Weight		18.0kg		FRAMECAD 10g-16mm Flathead		448		FRAMECAD 10g-19mm XDrive		448					

FRAMECAD



Beam Type WJ89095H Mark as J11 Quantity Required = 7 Engineering Status = 49%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.23	16%	(10)
3-5	-4.44	0.00	17%	(3)
6-7	0.00	3.52	6%	(3)
9-10	-3.43	0.00	13%	(3)
11-12	0.00	2.20	4%	(3)
14-15	-2.00	0.11	7%	(3)
16-17	-0.50	1.37	2%	(7)
19-20	-1.17	0.70	4%	(7)
21-22	-1.08	0.78	4%	(7)
24-25	-0.58	1.28	2%	(7)
26-27	-2.00	0.19	8%	(3)
29-30	0.00	2.21	4%	(3)
31-32	-3.43	0.00	13%	(3)
34-35	0.00	3.54	6%	(3)
36-38	-4.46	0.00	17%	(3)
39-40	-0.01	0.14	17%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.57	0.00	23%	(3)
5-10	-6.34	0.00	25%	(3)
10-15	-10.48	0.00	39%	(3)
15-20	-12.54	0.00	47%	(3)
20-25	-12.98	0.00	49%	(3)
25-30	-11.95	0.00	45%	(3)
30-35	-8.86	0.00	33%	(3)
35-40	-3.74	0.00	23%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.87	16%	(3)
7-12	0.00	8.90	27%	(2)
12-17	0.00	11.99	34%	(2)
17-22	0.00	13.01	35%	(2)
22-27	0.00	12.56	35%	(2)
27-32	0.00	10.50	28%	(2)
32-38	0.00	6.35	17%	(3)
38-39	0.00	0.47	31%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	21%
LC2	(G+Q)	35%
LC3	(1.2G+1.5Q)	49%
LC4-LC10	(1.2G+1.5P)	32%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	2.22	20	Span/360,12.0	10.5	21%
LC2	4.22	20	Span/240,12.0	12.0	35%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

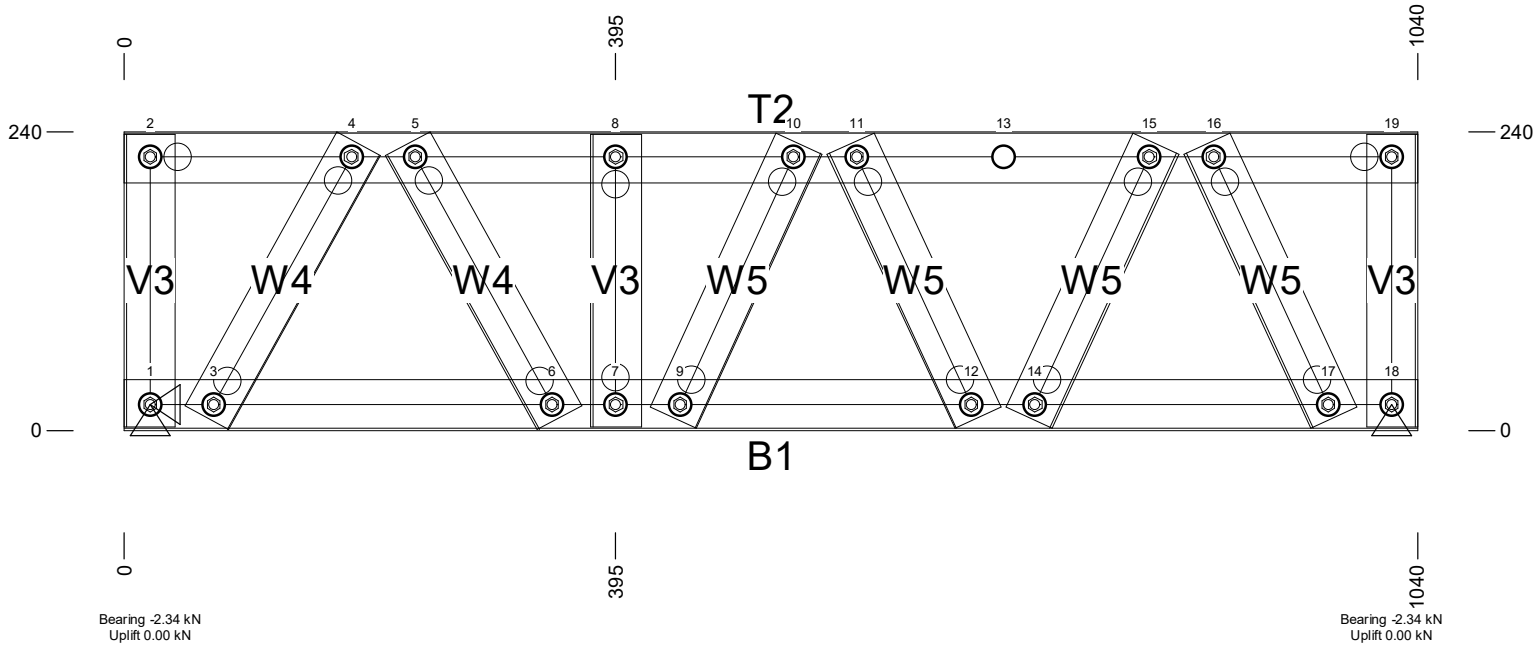
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	1040	T2	89S41-095-550	1	1040	V3	89S41-095-550	3	235	W4	89S41-095-550	2	252	W5	89S41-095-550	4	243

Assembly Weight	6.1kg	FRAMECAD 10g-16mm Flathead	36	FRAMECAD 10g-19mm XDrive	36

FRAMECAD



Beam Type WJ89095H Mark as JB1 Quantity Required = 1 Engineering Status = 29%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.40	12%	(7)
3-4	-3.60	0.00	14%	(3)
5-6	0.00	2.95	5%	(3)
7-8	-3.16	0.00	12%	(3)
9-10	-1.16	1.33	4%	(5)
11-12	-2.03	0.29	8%	(3)
14-15	0.00	2.21	4%	(3)
16-17	-2.76	0.00	10%	(4)
18-19	-0.03	0.36	12%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	2.20	29%	(7)
6-9	0.00	3.63	11%	(5)
9-12	0.00	3.06	20%	(5)
12-17	0.00	2.32	17%	(4)
17-18	0.00	0.34	22%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.44	0.00	24%	(3)
4-8	-3.61	0.00	18%	(3)
8-10	-3.61	0.00	17%	(3)
10-15	-3.05	0.00	13%	(5)
15-19	-1.49	0.00	17%	(5)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
395.0	Other	0.28	1.77	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	10%
LC2	(G+Q)	19%
LC3	(1.2G+1.5Q)	27%
LC4-LC7	(1.2G+1.5P)	29%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

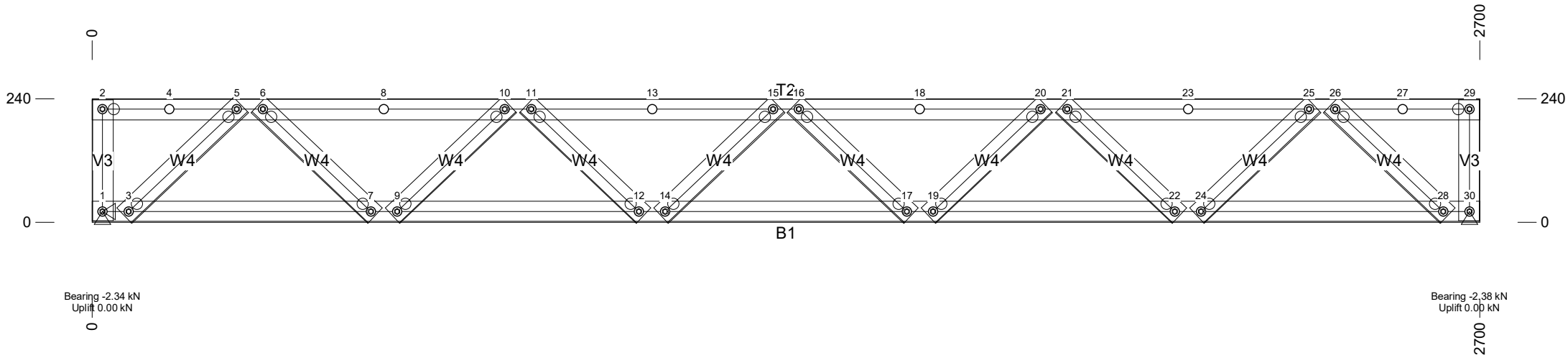
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.90	Ground Snow Load (kPa) :	0.00	Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Design Point Load (kN) :	1.8

B1	89S41-095-550	1	2700	T2	89S41-095-550	1	2700	V3	89S41-095-550	2	235	W4	89S41-095-550	10	313
Assembly Weight		12.9kg		FRAMECAD 10g-16mm Flathead		48		FRAMECAD 10g-19mm XDrive		48					

FRAMECAD®



Beam Type WJ89095H Mark as JB2 Quantity Required = 1 Engineering Status = 30%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.21	13%	(8)
3-5	-3.78	0.00	14%	(8)
6-7	0.00	1.86	3%	(7)
9-10	-1.72	0.11	6%	(7)
11-12	-0.43	1.28	2%	(6)
14-15	-1.11	0.60	4%	(6)
16-17	-1.04	0.67	4%	(6)
19-20	-0.50	1.21	2%	(6)
21-22	-1.65	0.23	6%	(5)
24-25	-0.07	1.78	3%	(5)
26-28	-3.48	0.00	13%	(4)
29-30	-0.04	0.12	16%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.47	0.00	19%	(8)
5-10	-3.25	0.00	17%	(8)
10-15	-4.18	0.00	16%	(7)
15-20	-4.93	0.00	18%	(6)
20-25	-4.11	0.00	15%	(5)
25-29	-2.95	0.00	11%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.25	30%	(8)
7-12	0.00	4.21	12%	(7)
12-17	0.00	4.95	12%	(6)
17-22	0.00	4.19	12%	(5)
22-28	0.00	2.96	11%	(4)
28-30	0.00	0.43	1%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	5%
LC2	(G+Q)	9%
LC3	(1.2G+1.5Q)	12%
LC4-LC8	(1.2G+1.5P)	30%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.31	15	Span/360,12.0	7.4	4%
LC2	0.58	15	Span/240,12.0	11.1	5%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

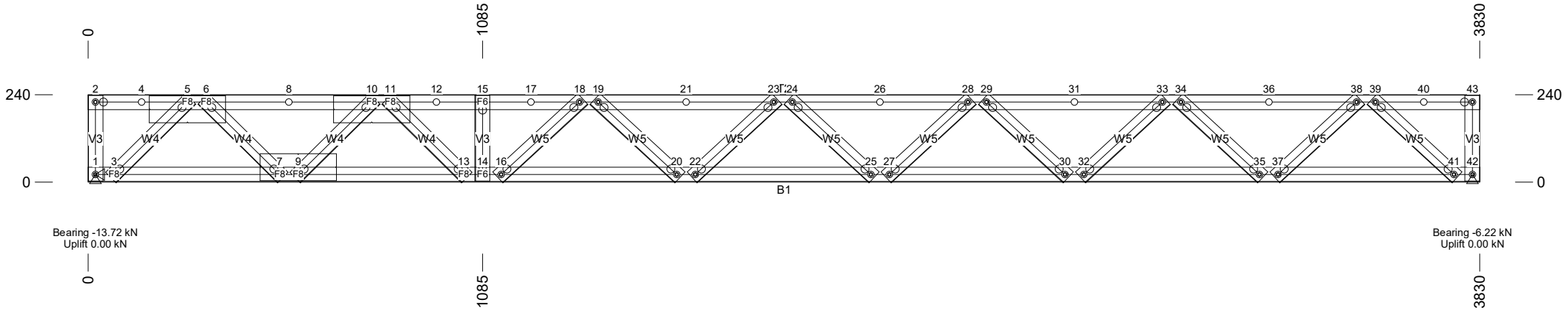
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	3830	T2	89S41-095-550	1	3830	V3	89S41-095-550	3	235	W4	89S41-095-550	4	308	W5	89S41-095-550	10	318

Assembly Weight	18.3kg	FRAMECAD 10g-16mm Flathead	104	FRAMECAD 10g-19mm XDrive	68

FRAMECAD®



Beam Type WJ89095H Mark as JB3 Quantity Required = 1 Engineering Status = 256%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	1.32	66%	(3)
3-5	-23.37	0.00	88%	(3)
6-7	0.00	23.37	40%	(3)
9-10	-23.93	0.00	90%	(3)
11-13	0.00	21.74	37%	(3)
14-15	-17.35	0.00	65%	(3)
16-18	-0.64	5.97	10%	(3)
19-20	-7.76	0.10	29%	(3)
22-23	0.00	8.43	14%	(3)
24-25	-9.03	0.00	34%	(3)
27-28	0.00	9.08	15%	(3)
29-30	-9.69	0.00	36%	(3)
32-33	0.00	9.82	17%	(3)
34-35	-10.43	0.00	39%	(3)
37-38	0.00	10.39	18%	(3)
39-41	-10.77	0.00	40%	(3)
42-43	0.00	0.51	38%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-2.40	0.00	59%	(3)
5-10	-35.71	0.00	147%	(3)
10-15	-68.25	0.00	256%	(3)
15-18	-68.25	0.00	256%	(3)
18-23	-63.86	0.00	239%	(3)
23-28	-51.96	0.00	195%	(3)
28-33	-38.63	0.00	145%	(3)
33-38	-24.28	0.00	91%	(3)
38-43	-8.97	0.00	53%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	19.10	96%	(3)
7-13	0.00	52.80	161%	(3)
13-16	0.00	68.29	144%	(3)
16-20	0.00	63.89	155%	(2)
20-25	0.00	58.18	155%	(2)
25-30	0.00	45.34	144%	(2)
30-35	0.00	31.52	111%	(2)
35-41	0.00	16.62	62%	(2)
41-42	0.00	1.05	68%	(3)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
1085.0	Other	1.54	9.64	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	91%
LC2	(G+Q)	177%
LC3	(1.2G+1.5Q)	256%
LC4-LC11	(1.2G+1.5P)	59%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	9.6	20	Span/360,12.0	10.5	91%
LC2	18.6	20	Span/240,12.0	12.0	155%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node:	Plate:
5	FRAMECAD 1.15mm Fix Plate
9	FRAMECAD 1.15mm Fix Plate
10	FRAMECAD 1.15mm Fix Plate

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	4.80	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

Stud Design for Panel S3

Company:	FRAMECAD	Tab Name:	GROUND WALL
Project:	Unit 14 Type D 107 Blockhouse Bay Road	Dwg Name:	Unit 14 Type D
		Detailer:	Ralph Lao
		Print Date:	06-10-2021
Job Number:		Page No:	1

Panel Label: S3

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	3.45	kN/m
Live Load (Q1 = max(Q2,Q3))	7.73	kN/m
Roof Live Load (Q2)	0.42	kN/m
Floor Live Load (Q3)	7.73	kN/m
Live Load (Q4 = Q2+Q3)	8.15	kN/m
Wind Up Load (Wu)	1.06	kN/m
Wind Down Load (Wd)	0.47	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	3518.0	mm
1.2G + 1.5Q3	1757.5	mm
1.2G + 0.4Q3 + 1.0S	3824.0	mm
1.2G + 1.5P1	6281.4	mm
1.2G + 0.4Q3 + Wd + Wh	2015.6	mm
0.9G + 1.0Wu + 1.0Wh	3656.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	1750	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	34	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

POINT LOAD

Load Location	Stud Qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow(S) kN	Wind Up (Wu) kN	Floor Live(Q3) kN
3151	1	0.70	0.10	0.00	0.30	1.60
2530	1	0.70	0.10	0.00	0.30	1.60
5689	1	0.80	0.20	0.00	0.40	1.70
5068	1	0.80	0.20	0.00	0.40	1.70
379	1	0.50	0.30	0.00	0.80	0.00
2000	1	0.50	0.30	0.00	0.80	0.00

Stud Design for Panel S3

Company:	FRAMECAD	Tab Name:	1ST WALL
Project:	Unit 14 Type D 107 Blockhouse Bay Road	Dwg Name:	Unit 14 Type D
		Detailer:	Ralph Lao
		Print Date:	06-10-2021
Job Number:		Page No:	1

Panel Label: S3

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	2.47	kN/m
Live Load (Q1 = max(Q2,Q3))	5.20	kN/m
Roof Live Load (Q2)	0.42	kN/m
Floor Live Load (Q3)	5.20	kN/m
Live Load (Q4 = Q2+Q3)	5.62	kN/m
Wind Up Load (Wu)	1.06	kN/m
Wind Down Load (Wd)	0.47	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	3519.0	mm
1.2G + 1.5Q3	1855.2	mm
1.2G + 0.4Q3 + 1.0S	3959.0	mm
1.2G + 1.5P1	6180.5	mm
1.2G + 0.4Q3 + Wd + Wh	1711.8	mm
0.9G + 1.0Wu + 1.0Wh	2711.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	1700	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	35	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

POINT LOAD

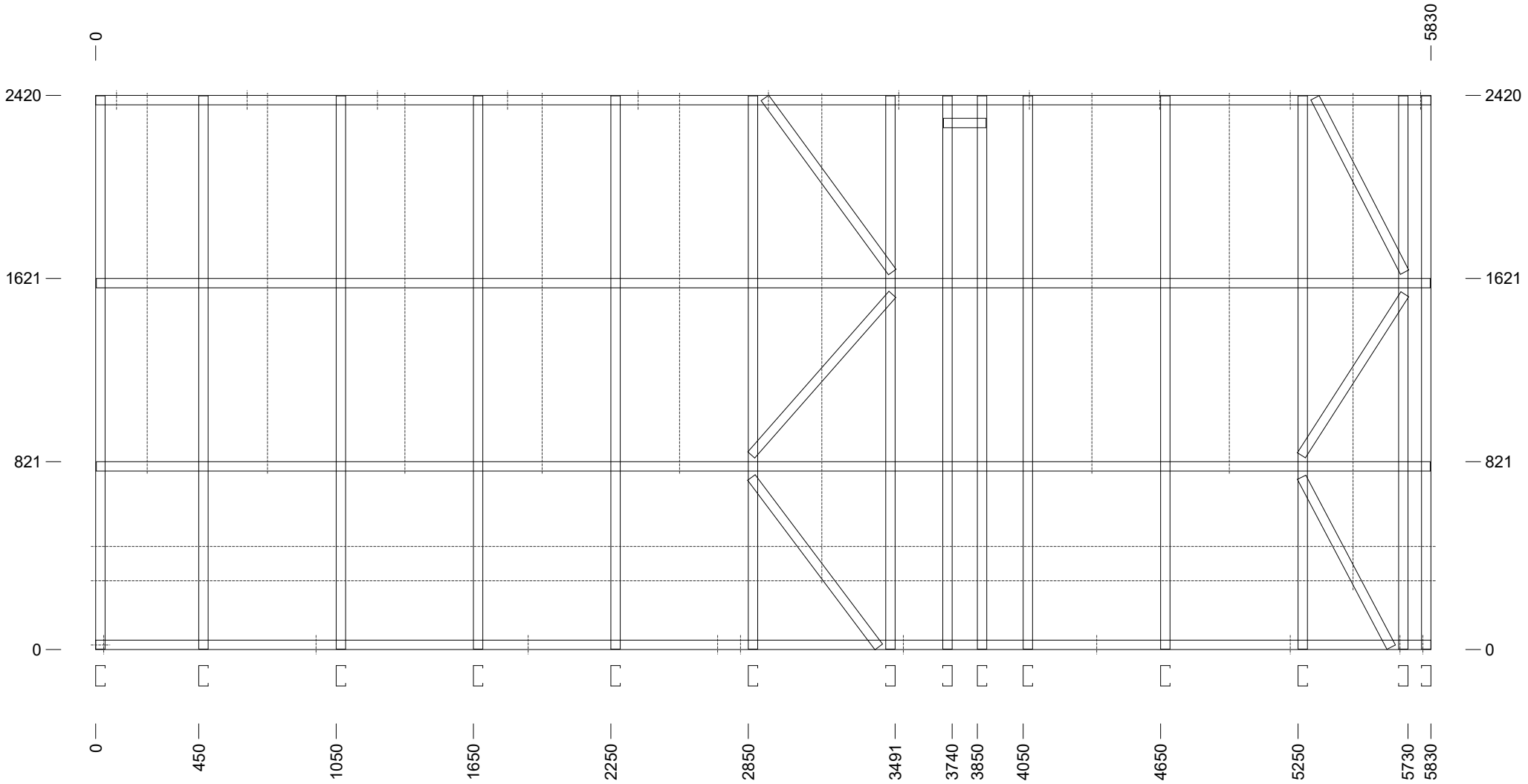
Load Location	Stud Qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow(S) kN	Wind Up (Wu) kN	Floor Live(Q3) kN
8821	1	0.50	0.30	0.00	0.80	0.00
7200	1	0.50	0.30	0.00	0.80	0.00
4131	1	0.20	0.20	0.00	0.40	0.00
3510	1	0.20	0.20	0.00	0.40	0.00
2495	1	0.50	0.40	0.00	1.00	0.00
874	1	0.50	0.40	0.00	1.00	0.00

89S41-075-550	1	186mm	89S41-075-550	14	2416mm	89S41-075-550	2	5824mm	89S41-075-550	2	5830mm
89S41-075-550	1	856mm	89S41-075-550	1	926mm	89S41-075-550	1	933mm	89S41-075-550	1	941mm

89S41-075-550	1	836mm	89S41-075-550	1	839mm						

Assembly Weight	71.4kg	FRAMECAD 10g-19mm XDrive	140

FRAMECAD®



<<< Joins L7

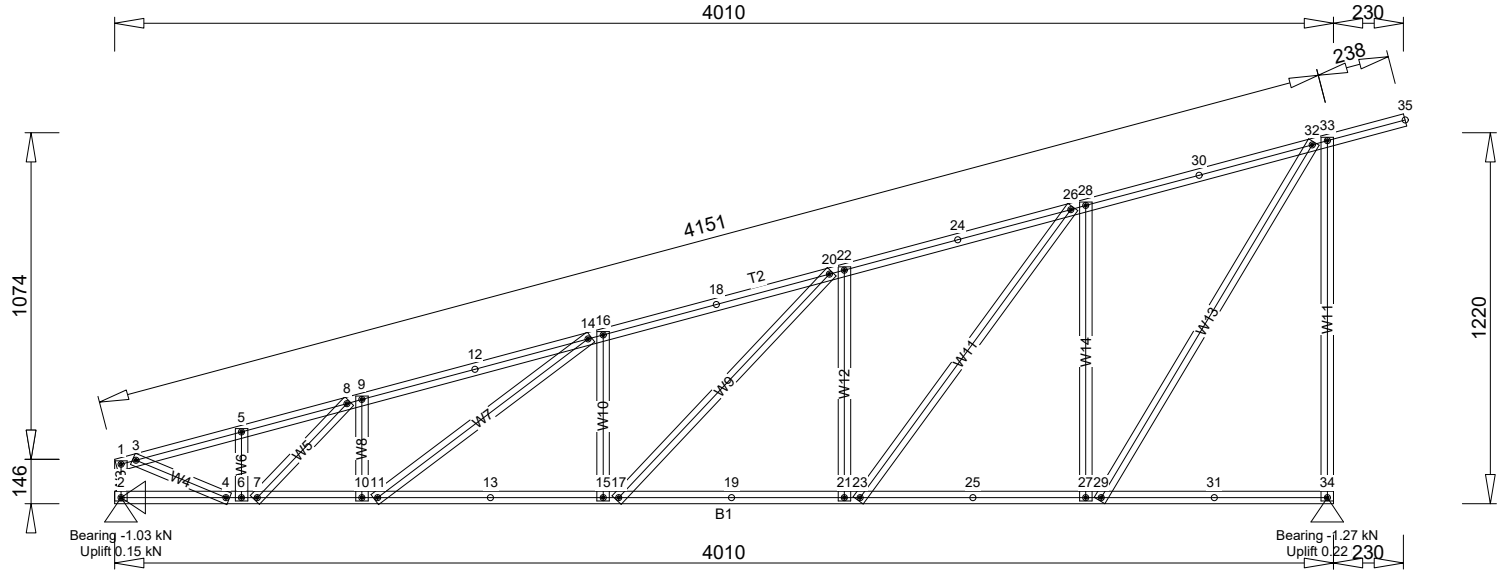
Quantity Required = 1 Mark as L1 Header Engineering = Passed

Joins L2 >>>

Company: FRAMECAD	Dwg Name: Unit 14 Type D	Sheet 1 of 1	Project: Unit 14 Type D	Job Number:

B1	89S41-075-550	1 4010mm	T2	89S41-075-550	1 4390mm	W3	89S41-075-550	1 132mm	W4	89S41-075-550	1 343mm	W5	89S41-075-550	1 450mm
W6	89S41-075-550	1 238mm	W7	89S41-075-550	1 889mm	W8	89S41-075-550	1 344mm	W9	89S41-075-550	1 1032mm	W10	89S41-075-550	1 557mm
W11	89S41-075-550	1 1195mm	W11	89S41-075-550	1 1195mm	W12	89S41-075-550	1 770mm	W13	89S41-075-550	1 1374mm	W14	89S41-075-550	1 982mm
Assembly Weight	20.4kg		FRAMECAD 10g-19mm XDrive	52										

FRAMECAD



Quantity Required = 1 Mark as HN1 Engineering Status = Passed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors	
SNOW Factors	
No Snow Load Apply	
Wind Pressure Factors	
Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type:	Name	Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
1-5	-1.86	0.25	18%	(11)
5-8	-1.87	0.26	21%	(11)
8-14	-2.67	0.31	49%	(11)
14-20	-2.35	0.28	48%	(12)
20-26	-1.62	0.20	44%	(13)
26-32	-0.90	0.11	51%	(14)
32-35	-0.06	0.32	13%	(14)

Web

Member	Com. kN	Ten. kN	CSI	LC
1-4	-1.11	1.99	7%	(11)
5-8	-0.94	0.07	6%	(7)
9-14	-0.37	0.62	2%	(8)
15-20	-0.89	1.34	5%	(11)
21-26	-1.14	1.52	7%	(12)
27-32	-1.35	1.62	8%	(13)
33-34	-1.26	0.23	8%	(14)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.18	0.08	8%	(11)
4-7	-0.36	1.84	8%	(7)
7-10	-0.37	2.46	15%	(7)
10-15	-0.37	2.46	37%	(7)
15-21	-0.32	2.13	37%	(8)
21-27	-0.22	1.53	35%	(9)
27-34	-0.11	0.83	35%	(10)

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	4%
LC2	(G)	4%
LC3	(max(1.0Q,0.7S))	3%
LC4	(1.2G+1.5Q)	9%
LC5	(1.2G+Wd)	9%
LC6	(0.9G+Wu)	3%
LC7-LC14	(1.2G+1.5P)	51%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.15	13	Span/250,15.0	15.0	1.0%
LC2	0.24	13	Span/300,12.0	12.0	2.0%
LC3	0.17	12	Span/300,20.0	13.2	1.3%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.

Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

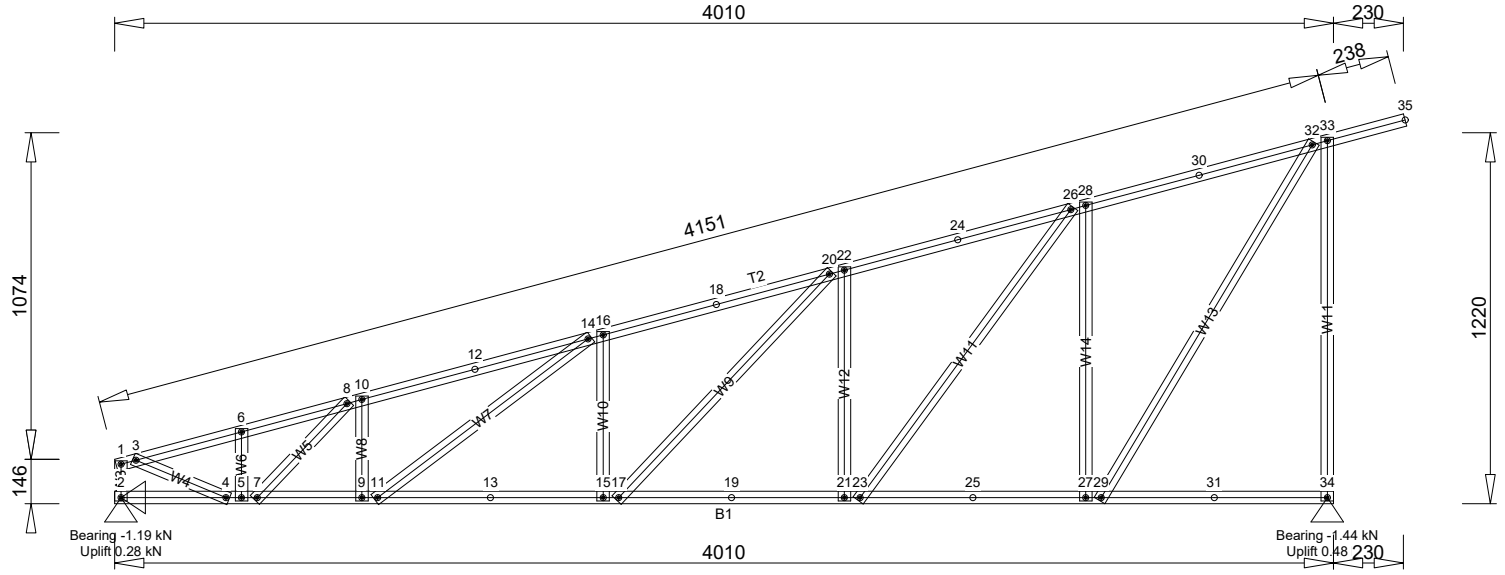
Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	307	Roof Load Type:	SHEET	Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00	Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW	Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10

Company: FRAMECAD Dwg Name: Unit 14 Type D Sheet 1 of 1 Project: Unit 14 Type D Job Number:

B1	89S41-075-550	15 4010mm	T2	89S41-075-550	15 4390mm	W3	89S41-075-550	15 132mm	W4	89S41-075-550	15 343mm	W5	89S41-075-550	15 450mm
W6	89S41-075-550	15 238mm	W7	89S41-075-550	15 889mm	W8	89S41-075-550	15 344mm	W9	89S41-075-550	15 1032mm	W10	89S41-075-550	15 557mm
W11	89S41-075-550	15 1195mm	W11	89S41-075-550	15 1195mm	W12	89S41-075-550	15 770mm	W13	89S41-075-550	15 1374mm	W14	89S41-075-550	15 982mm
Assembly Weight	20.4kg		FRAMECAD 10g-19mm XDrive	780										

FRAMECAD



Quantity Required = 15 Mark as HN4 Engineering Status = Passed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors	
SNOW Factors	
No Snow Load Apply	
Wind Pressure Factors	
Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type: Name Qty
Main: FRAMECAD 10g-19mm XDrive (SJ) 2
Sub: FRAMECAD 10g-16mm Flathead(SJ) Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	-2.14	0.47	21%	(11)
6-8	-2.15	0.51	22%	(11)
8-14	-3.01	0.61	51%	(11)
14-20	-2.66	0.55	49%	(12)
20-26	-1.85	0.39	46%	(13)
26-32	-1.02	0.20	52%	(14)
32-35	-0.14	0.36	14%	(14)

Web

Member	Com. kN	Ten. kN	CSI	LC
1-4	-1.28	2.29	8%	(11)
5-8	-1.01	0.14	6%	(7)
9-14	-0.33	0.65	2%	(8)
15-20	-0.94	1.46	6%	(11)
21-26	-1.24	1.69	8%	(12)
27-32	-1.50	1.83	9%	(13)
33-34	-1.42	0.50	9%	(14)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.33	0.15	9%	(11)
4-7	-0.78	2.11	9%	(7)
7-9	-0.83	2.78	16%	(7)
9-15	-0.83	2.78	39%	(7)
15-21	-0.71	2.43	37%	(8)
21-27	-0.49	1.74	36%	(9)
27-34	-0.24	0.94	35%	(10)

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	7%
LC2	(G)	6%
LC3	(max(1.0Q,0.7S))	5%
LC4	(1.2G+1.5Q)	15%
LC5	(1.2G+Wd)	14%
LC6	(0.9G+Wu)	7%
LC7-LC14	(1.2G+1.5P)	52%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.28	13	Span/250,15.0	15.0	1.9%
LC2	0.37	13	Span/300,12.0	12.0	3.1%
LC3	0.31	12	Span/300,20.0	13.2	2.4%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.

Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	569	Roof Load Type:	SHEET	Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00	Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW	Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10

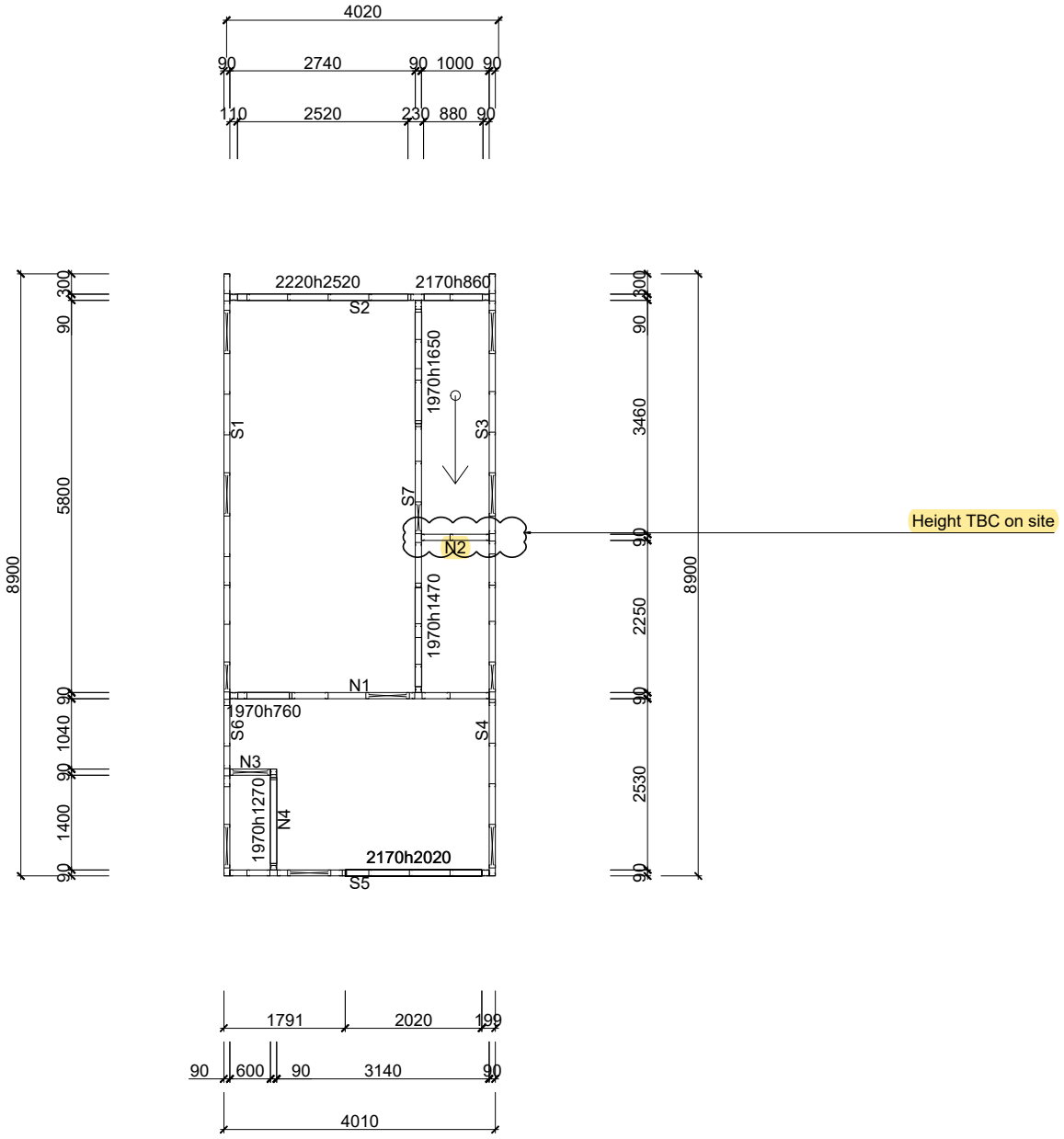
Company: FRAMECAD Dwg Name: Unit 14 Type D Sheet 1 of 1 Project: Unit 14 Type D Job Number:

Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.



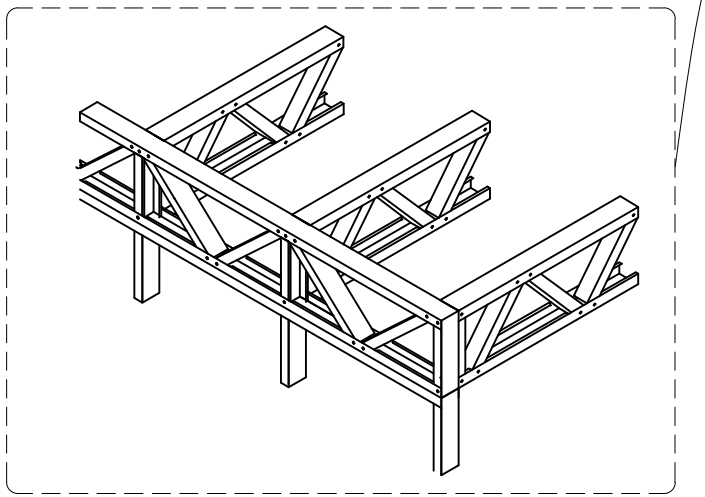
DO NOT SCALE.
IF IN DOUBT, ASK.

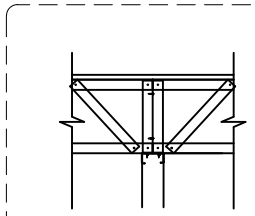
GROUND FLOOR LAYOUT

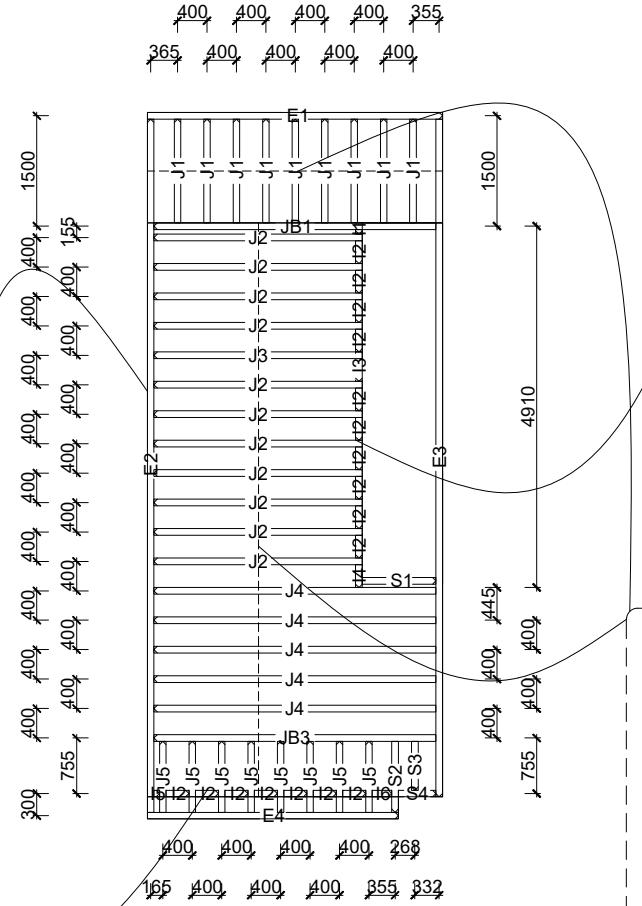
FRAMECAD

JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 15 Type D 107 Blockhouse Bay Road	Ralph Lao	04-10-2021	1 : 100		
	DWG FILE Unit 15 Type D 400	VIEW NAME 1 of 12	ON A4-Sheet		

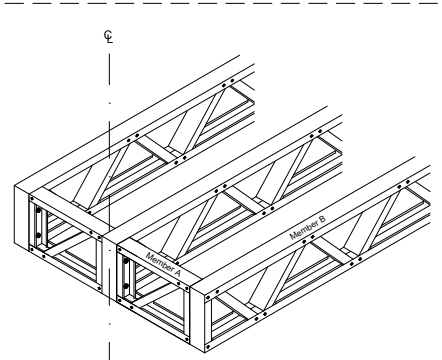
Floor Member Summary			
E1	WJ89095H	1	4010
E2	WJ89095H	1	9420
E3	WJ89095H	1	9210
E4	WJ89095H	1	3410
I1	WJ89095H	1	65
I2	WJ89095H	17	310
I3	WJ89095H	1	400
I4	WJ89095H	1	310
I5	WJ89095H	1	75
I6	WJ89095H	1	265
J1	WJ89095H	9	1410
J2	WJ89095H	11	2830
J3	WJ89095H	1	2830
J4	WJ89095H	4	3830
J5	WJ89095H	8	965
JB1	WJ89095H	1	3830
JB2	WJ89095H	1	3830
JB3	WJ89095H	1	3830
S1	WJ89095H	1	1000
S2	WJ89095H	1	965
S3	WJ89095H	1	665
S4	WJ89095H	1	510

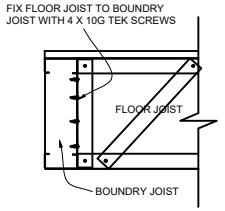




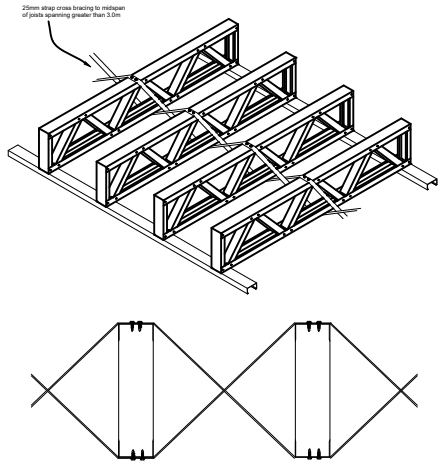


FIRST FLOOR LEVEL JOIST LAYOUT





FLOOR JOIST TO BOUNDRY JOIST CONNECTION



DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD

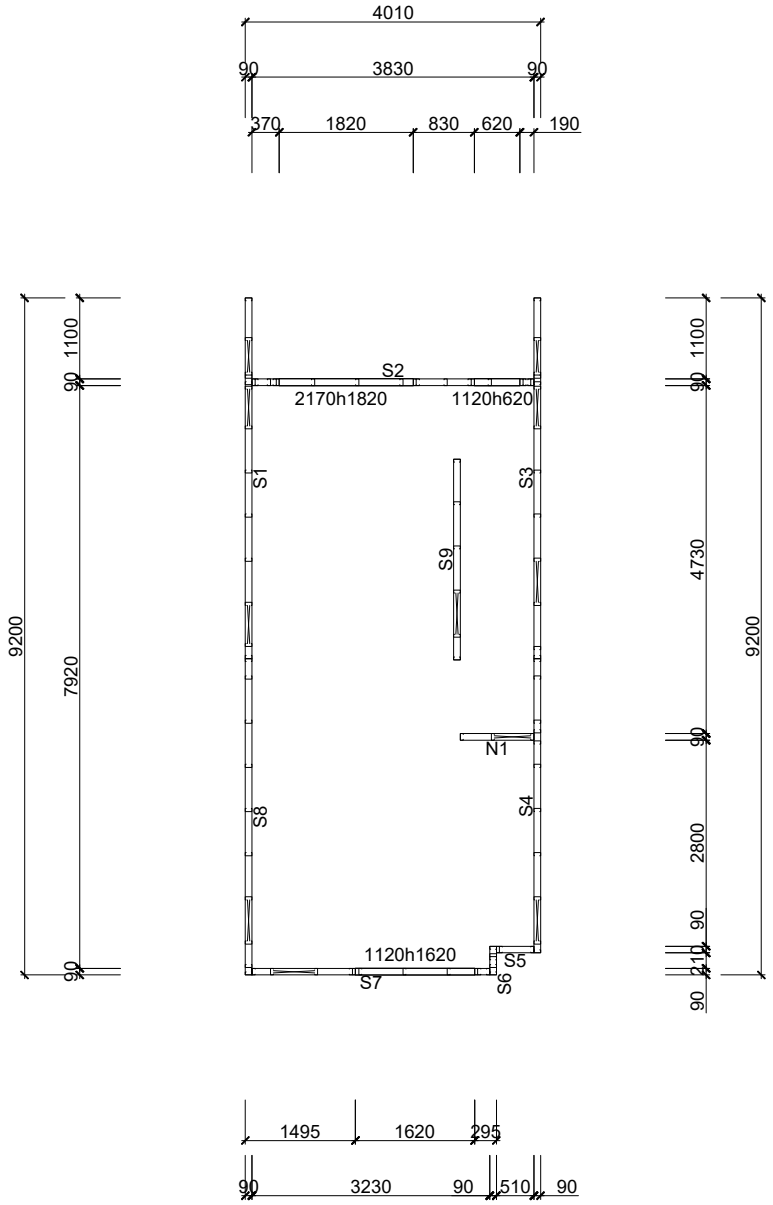
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 15 Type D 107 Blockhouse Bay Road	Ralph Lao	04-10-2021	1 : 100		
	DWG FILE Unit 15 Type D 400	VIEW NAME 2 of 12	ON A4-Sheet		

Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.



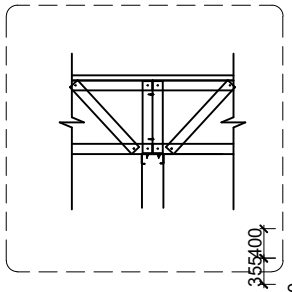
FIRST FLOOR LEVEL LAYOUT

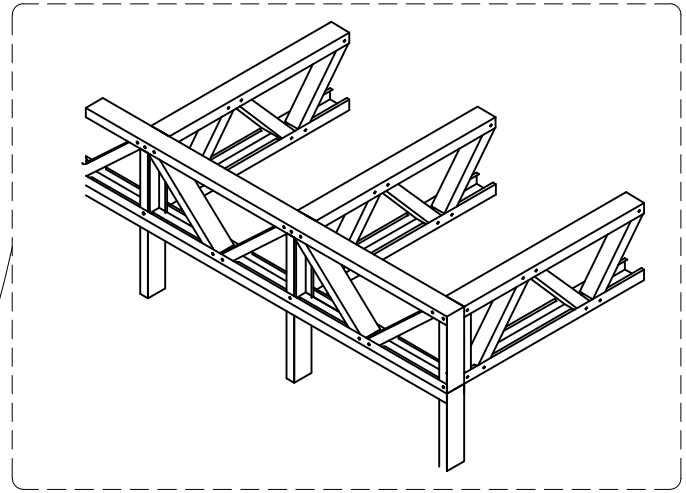
DO NOT SCALE.
IF IN DOUBT, ASK.

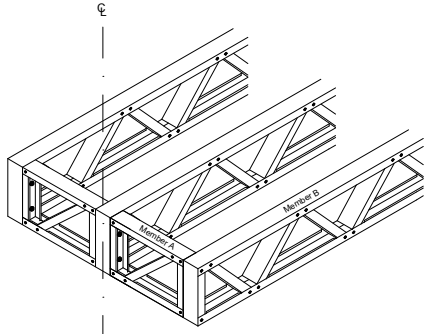
FRAMECAD

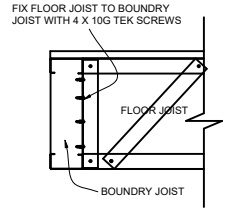
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 15 Type D 107 Blockhouse Bay Road	Ralph Lao	04-10-2021	1 : 100 ON A4-Sheet		
	DWG FILE: Unit 15 Type D 400	VIEW NAME: 3 of 12			

Floor Member Summary			
E1	WJ89095H	1	9600
E2	WJ89095H	1	9200
I1	WJ89095H	1	6265
J1	WJ89095H	15	2700
J2	WJ89095H	5	350
J3	WJ89095H	4	600
J4	WJ89095H	7	3830
JB1	WJ89095H	1	2390
JB2	WJ89095H	1	1040
JB3	WJ89095H	1	3830
S1	WJ89095H	1	3140
S2	WJ89095H	1	600
S3	WJ89095H	1	1040
S4	WJ89095H	1	3830



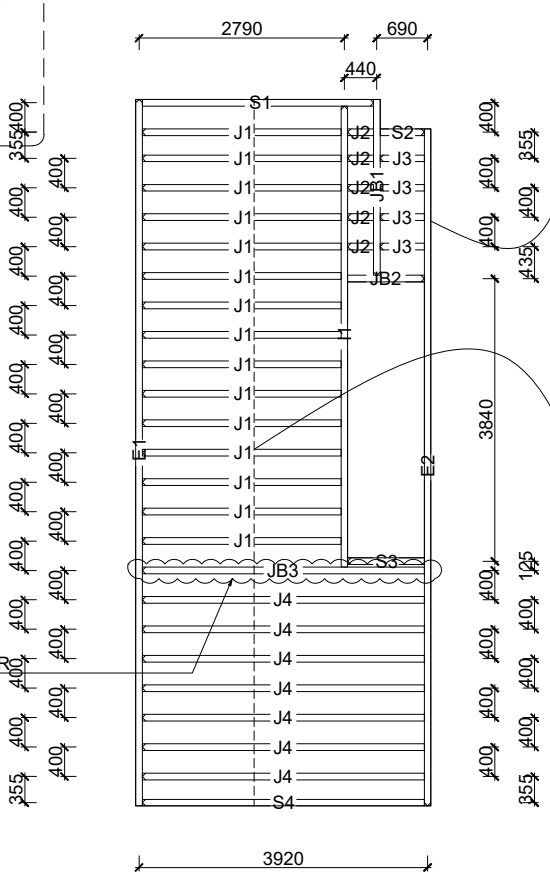




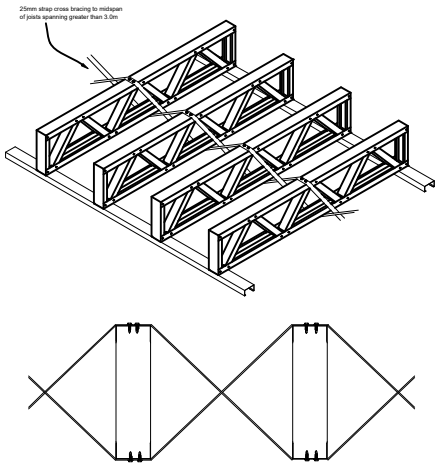


FLOOR JOIST TO BOUNDRY JOIST CONNECTION

TBC BY ENGINEER



SECOND FLOOR LEVEL JOIST LAYOUT



DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD

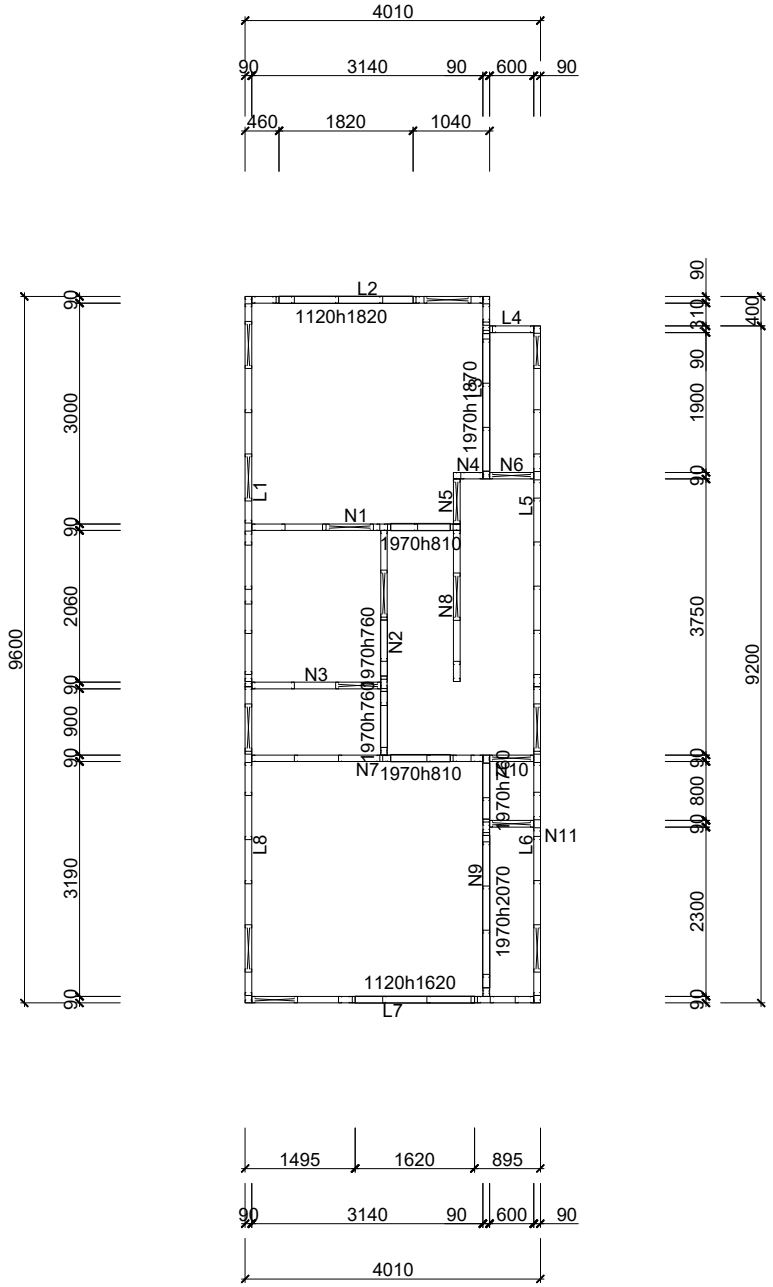
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 15 Type D 107 Blockhouse Bay Road	Ralph Lao	04-10-2021	1 : 100		
	DWG FILE Unit 15 Type D 400	VIEW NAME 4 of 12	ON A4-Sheet		

Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.



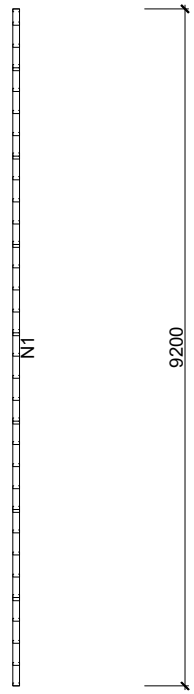
SECOND FLOOR LEVEL LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD

JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 15 Type D 107 Blockhouse Bay Road	Ralph Lao	04-10-2021	1 : 100 ON A4-Sheet		
	DWG FILE Unit 15 Type D 400	VIEW NAME 5 of 12			

Design Summary	
Floor Type	Concrete
System	FC_SFSNZ

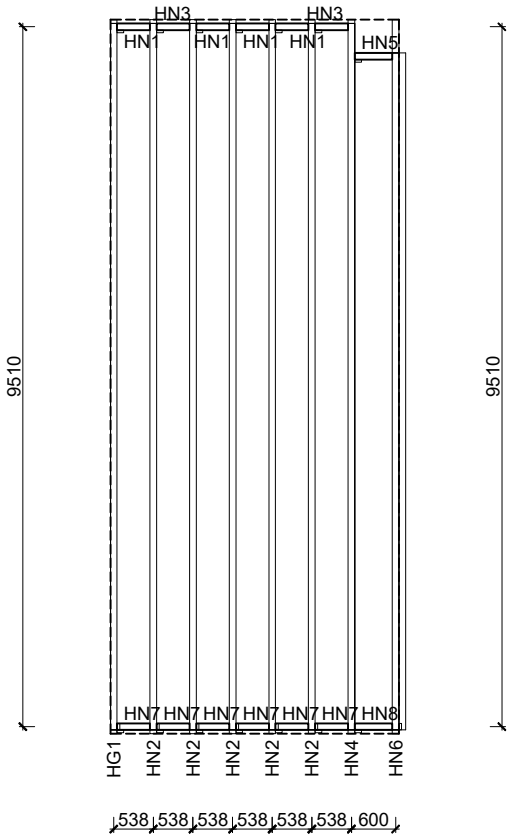


DO NOT SCALE.
IF IN DOUBT, ASK.

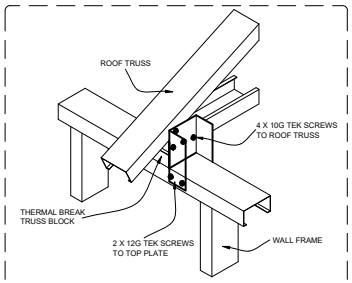
FRAMECAD®

JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 15 Type D 107 Blockhouse Bay Road	Ralph Lao	04-10-2021	1 : 100		
	DWG FILE Unit 15 Type D 400	VIEW NAME 6 of 12	ON A4-Sheet		

Truss Design Summary	
System Name	FC_SFSNZ
Design Code	AS/NZS 4600:2018
Loading Code	NASH NZ 2010
Roof Load	SHEET
Wind Speed	LOW
Snow Load	0.00
Roof Pitch	3.000
BC Restraints	600



ROOF FRAMING LAYOUT

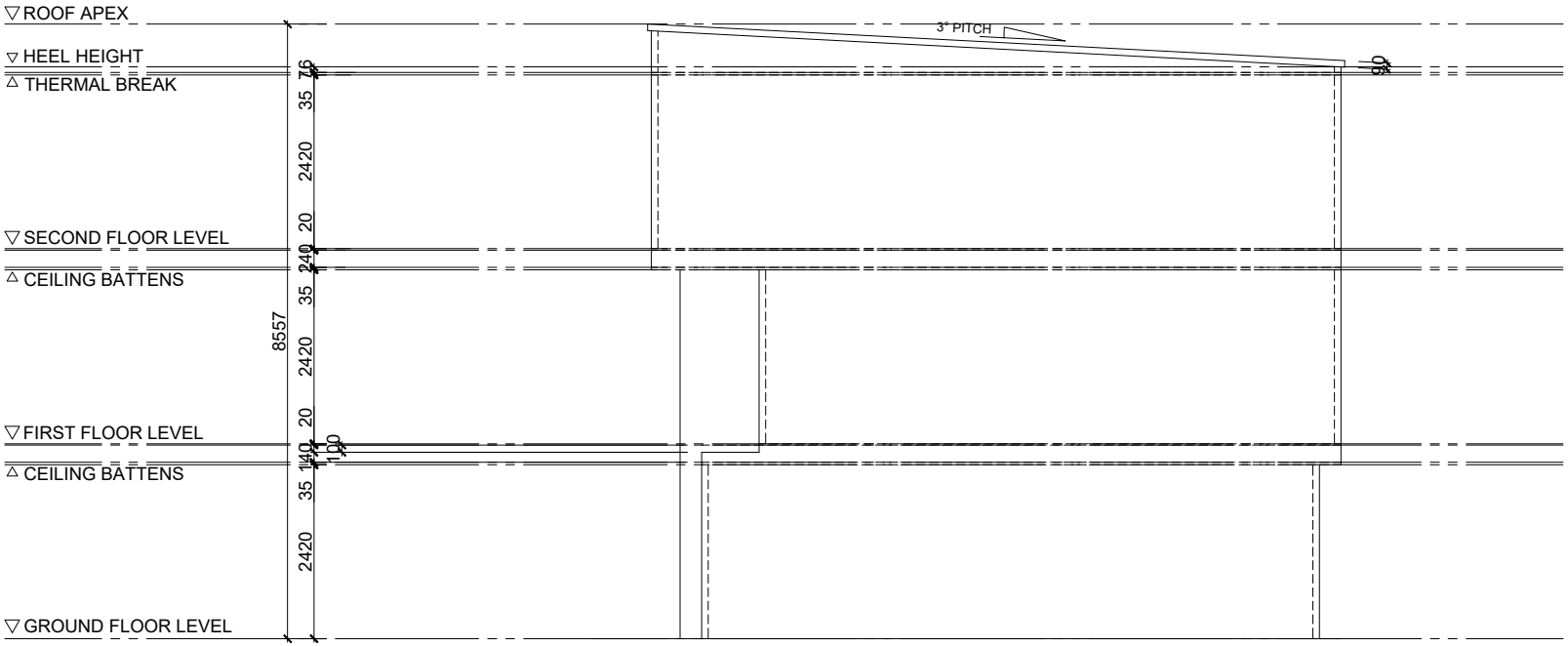


TYPE A "H" BRACKET CONNECTION

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD

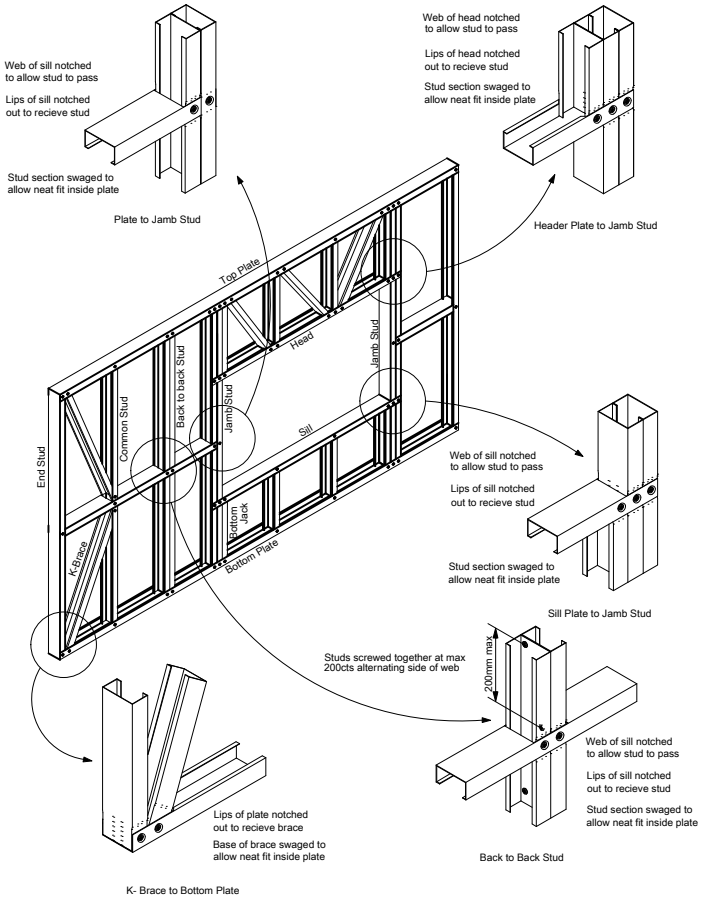
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 15 Type D 107 Blockhouse Bay Road	Ralph Lao	04-10-2021	1 : 100 ON A4-Sheet		
	DWG FILE Unit 15 Type D 400	VIEW NAME 7 of 12			



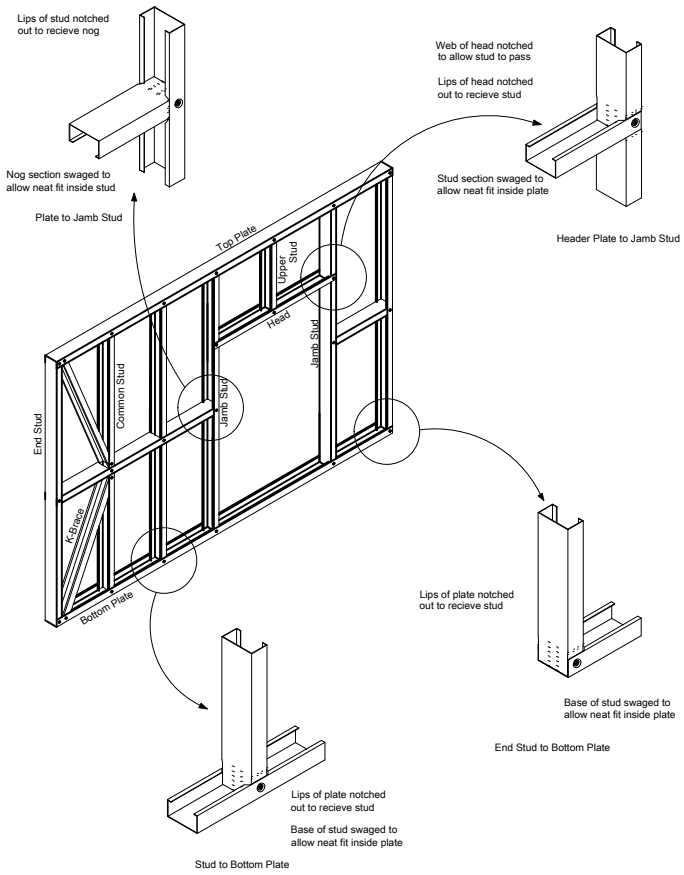
DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD®

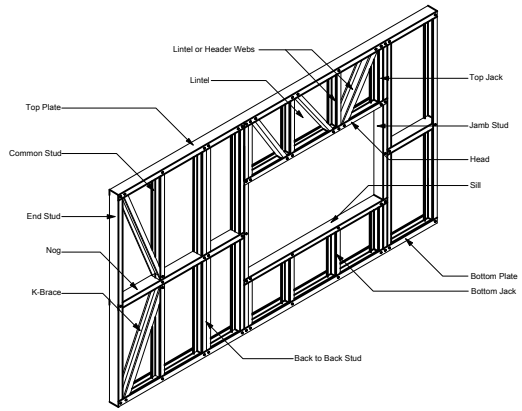
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 15 Type D 107 Blockhouse Bay Road	Ralph Lao	04-10-2021	1 : 100		
	DWG FILE	VIEW NAME	ON		
	Unit 15 Type D 400	8 of 12	A4-Sheet		



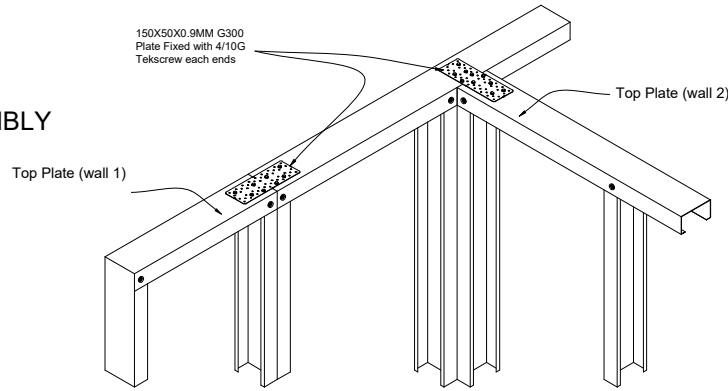
LOAD BEARING WALL PANEL ASSEMBLY



NON - LOAD BEARING WALL PANEL ASSEMBLY



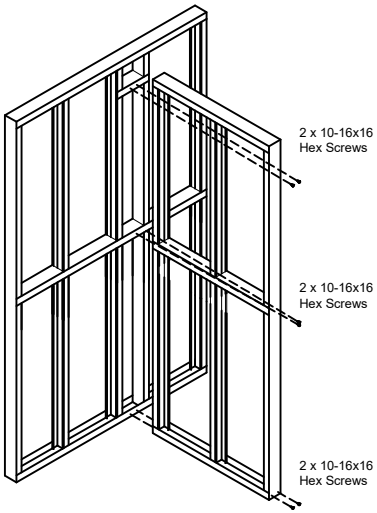
TYPICAL WALL PANEL COMPONENT

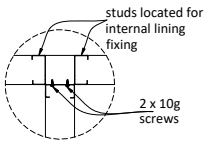


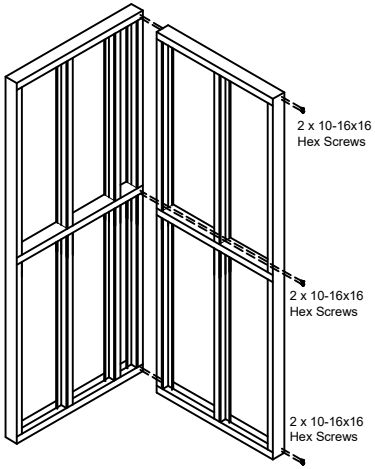
BRACING WALL TOP PLATE TO TOP PLATE CONNECTION

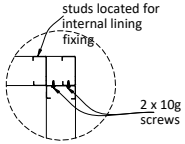
DO NOT SCALE.
IF IN DOUBT, ASK.

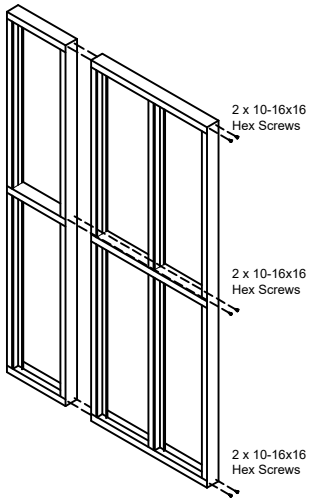
FRAMECAD®	JOB DETAILS Unit 15 Type D 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 04-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 15 Type D 400	VIEW NAME 9 of 12	ON A4-Sheet		

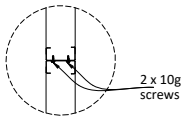




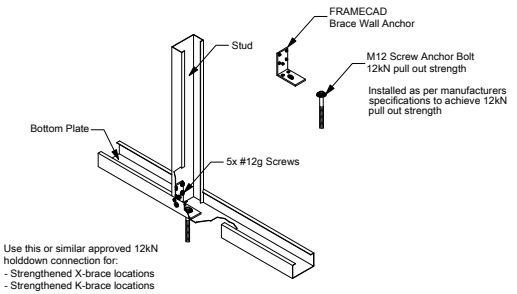




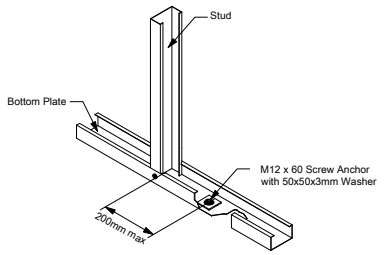




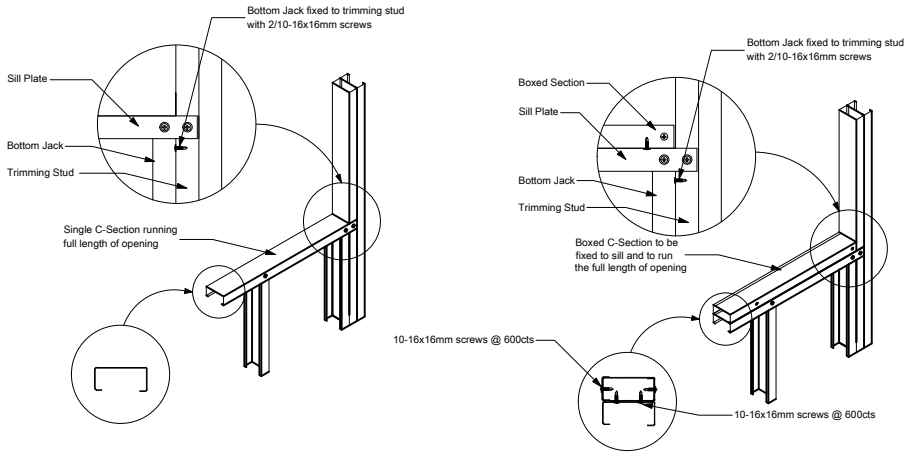
GENERAL WALL TO WALL CONNECTION



12kN Bracing Hold Down



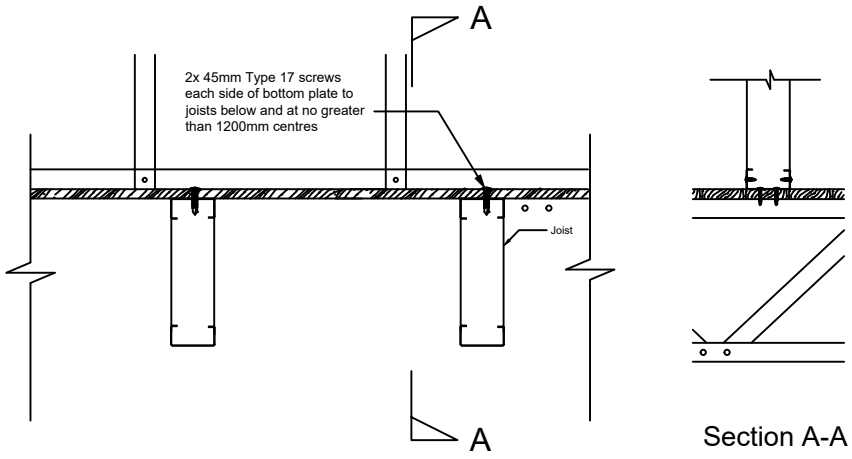
Load Bearing Wall Hold Down



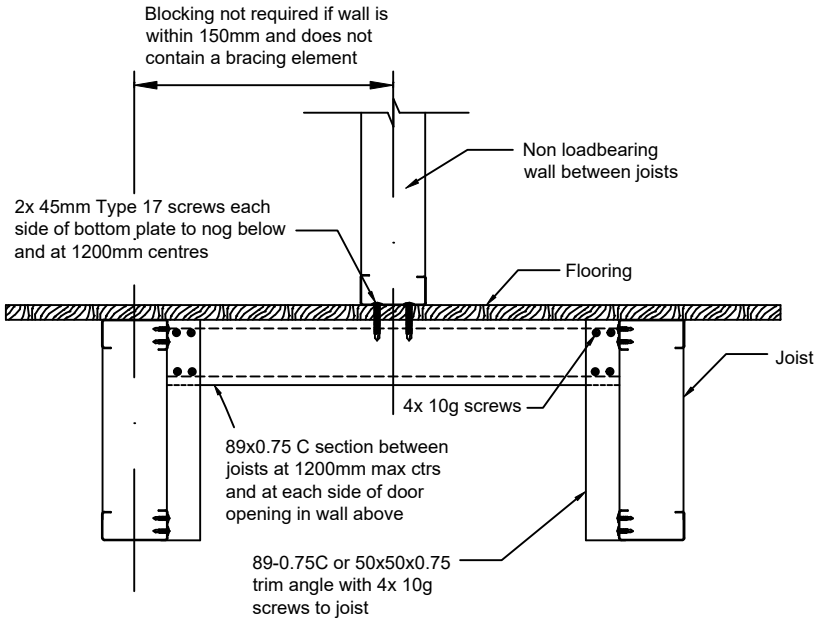
DO NOT SCALE.
IF IN DOUBT, ASK.

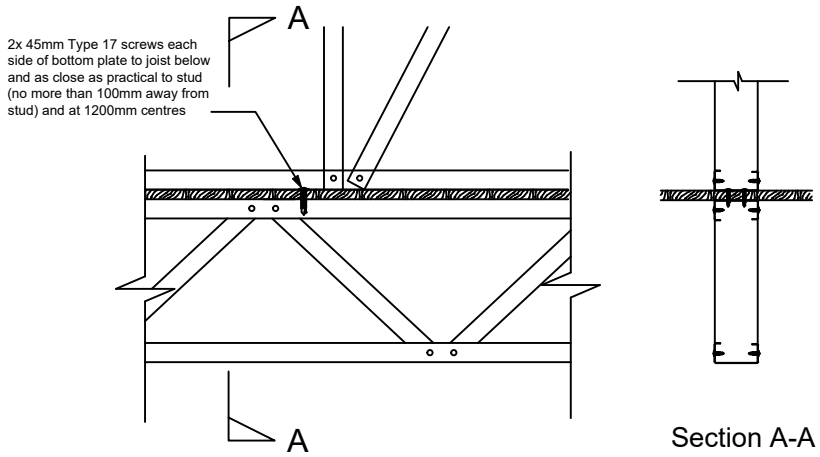
WINDOW SILL FRAMING

	JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
FRAMECAD	Unit 15 Type D 107 Blockhouse Bay Road	Ralph Lao	04-10-2021	1 : 100		
		DWG FILE Unit 15 Type D 400	VIEW NAME 10 of 12	ON A4-Sheet		



Section A-A



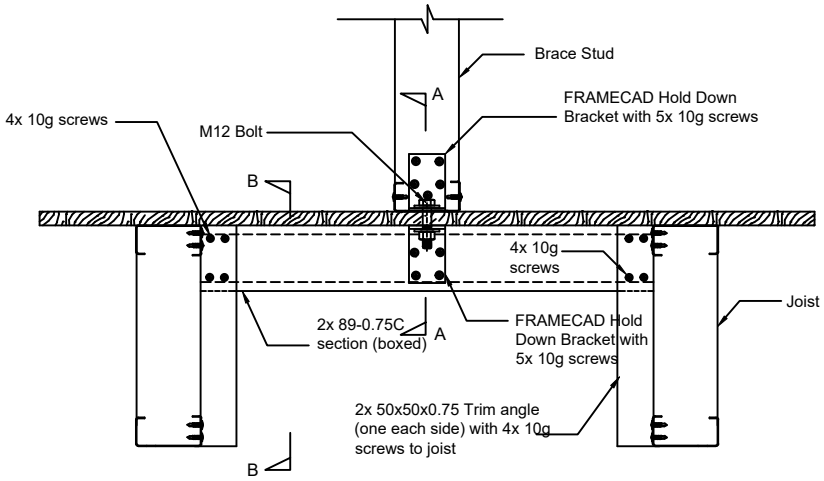


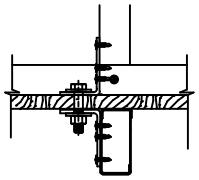
Section A-A

NON LOADBEARING WALL SUPPORTED ACROSS JOISTS

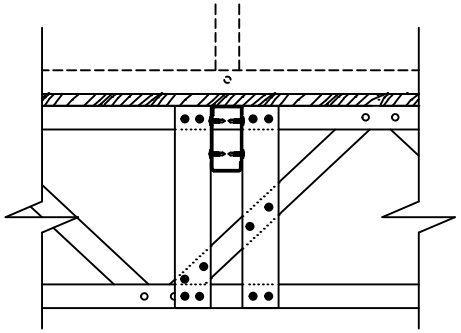
DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD	JOB DETAILS Unit 15 Type D 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 04-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 15 Type D 400	VIEW NAME 11 of 12	ON A4-Sheet		



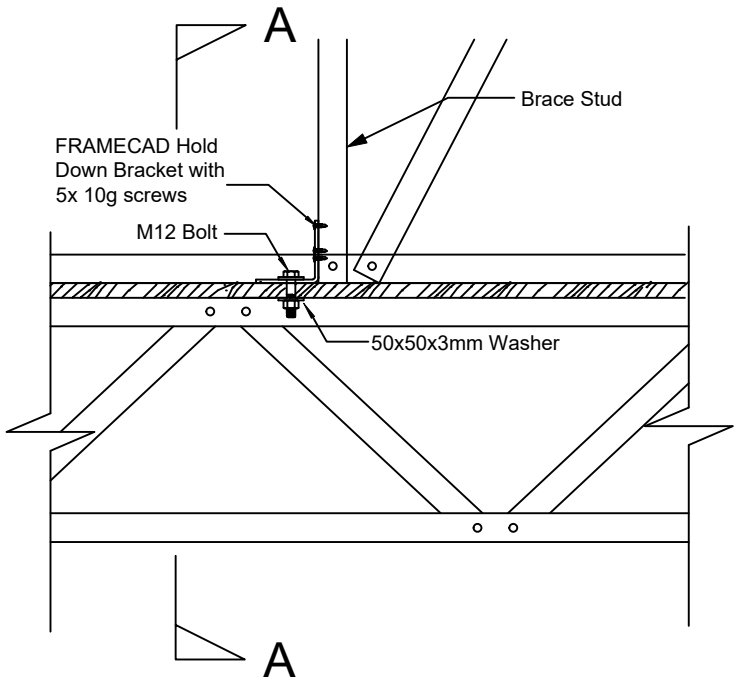


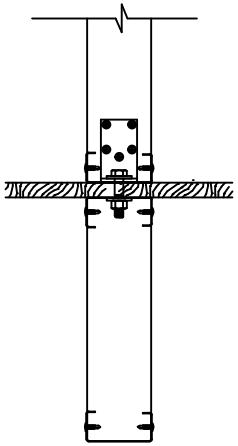
Section A-A



Section B-B

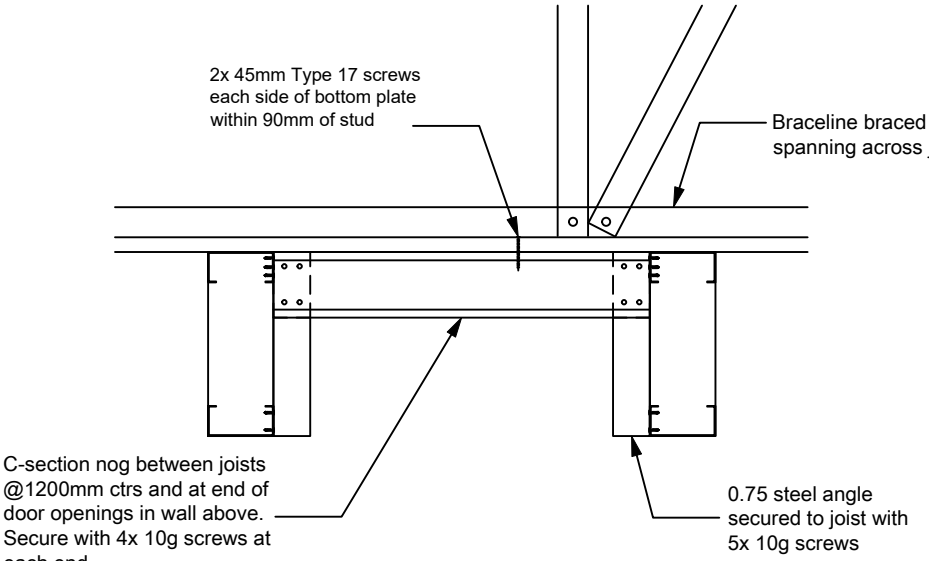
INTERNAL BRACED WALL SUPPORTED BETWEEN JOISTS
(12kN CONNECTOR - BRACELINE BRACE)





Section A-A

INTERNAL BRACED WALL SUPPORTED BETWEEN JOISTS
(8kN - 12 kN CONNECTOR)



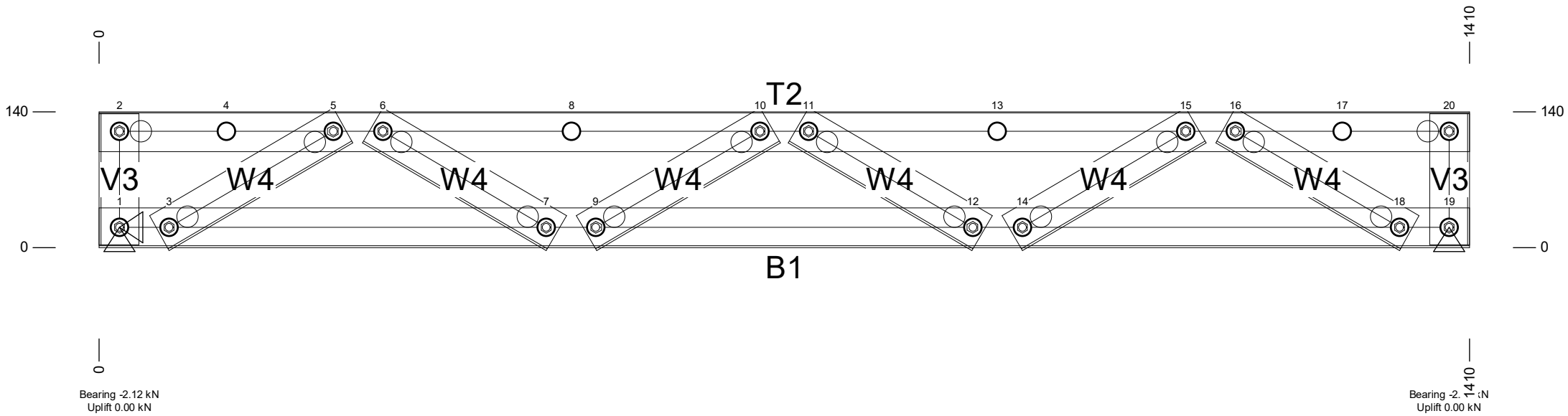
INTERNAL BRACED WALL SUPPORTED BETWEEN JOISTS
(12kN CONNECTOR - BRACELINE BRACE)

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD	JOB DETAILS Unit 15 Type D 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 04-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 15 Type D 400	VIEW NAME 12 of 12	ON A4-Sheet		

B1	89S41-095-550	9	1410	T2	89S41-095-550	9	1410	V3	89S41-095-550	18	135	W4	89S41-095-550	54	219
Assembly Weight		6.3kg		FRAMECAD 10g-16mm Flathead		288		FRAMECAD 10g-19mm XDrive		288					

FRAMECAD



Beam Type WJ89095H Mark as J1 Quantity Required = 9 Engineering Status = 20%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.07	0.18	14%	(6)
3-5	-4.51	0.00	17%	(6)
6-7	-0.58	1.72	3%	(5)
9-10	-1.51	0.73	6%	(5)
11-12	-1.44	0.85	5%	(5)
14-15	-0.64	1.63	3%	(5)
16-18	-4.17	0.00	16%	(4)
19-20	-0.10	0.08	15%	(4)
7-12	0.00	4.72	12%	(5)
12-18	0.00	4.43	12%	(4)
18-19	0.00	0.83	1%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.99	0.00	14%	(6)
5-10	-4.88	0.00	20%	(6)
10-15	-4.71	0.00	18%	(5)
15-20	-4.42	0.00	17%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	4.89	12%	(6)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	4%
LC2	(G+Q)	9%
LC3	(1.2G+1.5Q)	12%
LC4-LC6	(1.2G+1.5P)	20%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.16	10	Span/360,12.0	3.80	4%
LC2	0.31	10	Span/240,12.0	5.7	5%

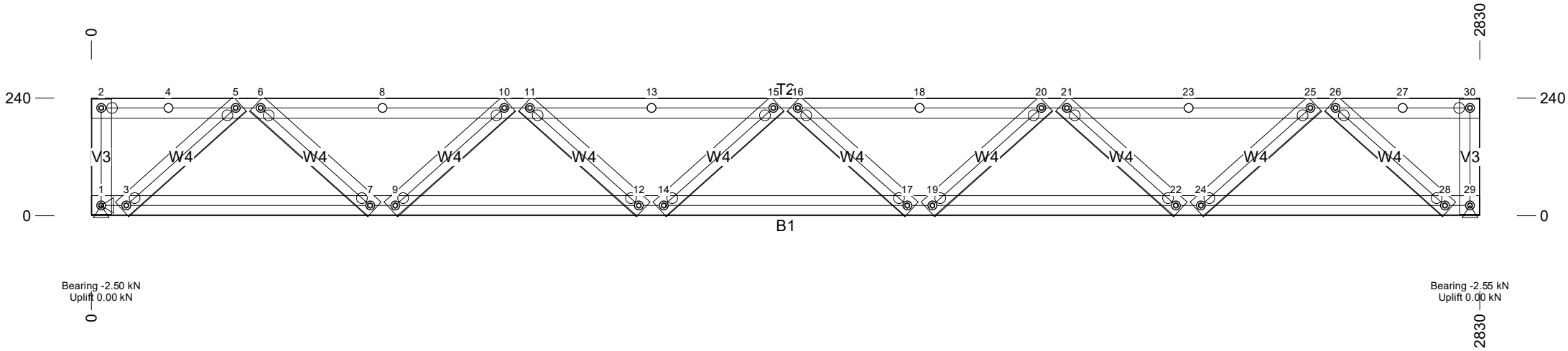
REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.
Fasteners: FRAMECAD 10-g 16m Flathead
Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00	Top Chord Dead Load (kPa) :	0.32
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Top Chord Live Load (kPa) :	2.00
								Design Point Load (kN) :	1.8

B1	89S41-095-550	11	2830	T2	89S41-095-550	11	2830	V3	89S41-095-550	22	235	W4	89S41-095-550	110	323
Assembly Weight		13.4kg		FRAMECAD 10g-16mm Flathead		528		FRAMECAD 10g-19mm XDrive		528					

FRAMECAD



Beam Type WJ89095H Mark as J2 Quantity Required = 11 Engineering Status = 33%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.00	0.21	14%	(8)
3-5	-4.14	0.00	16%	(8)
6-7	0.00	2.23	4%	(3)
9-10	-2.10	0.00	8%	(3)
11-12	-0.37	1.39	2%	(6)
14-15	-1.18	0.57	4%	(6)
16-17	-1.11	0.65	4%	(6)
19-20	-0.44	1.31	2%	(6)
21-22	-2.11	0.08	8%	(3)
24-25	0.00	2.23	4%	(3)
26-28	-3.84	0.00	14%	(4)
29-30	-0.03	0.11	17%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.50	0.00	21%	(8)
5-10	-4.40	0.00	19%	(8)
10-15	-6.58	0.00	25%	(3)
15-20	-7.05	0.00	26%	(3)
20-25	-5.96	0.00	22%	(3)
25-30	-3.33	0.00	17%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.62	33%	(8)
7-12	0.00	5.99	16%	(3)
12-17	0.00	7.07	15%	(3)
17-22	0.00	6.60	16%	(3)
22-28	0.00	4.40	11%	(4)
28-29	0.00	0.47	1%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	10%
LC2	(G+Q)	18%
LC3	(1.2G+1.5Q)	26%
LC4-LC8	(1.2G+1.5P)	33%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.70	15	Span/360,12.0	7.7	9%
LC2	1.34	15	Span/240,12.0	11.6	11%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

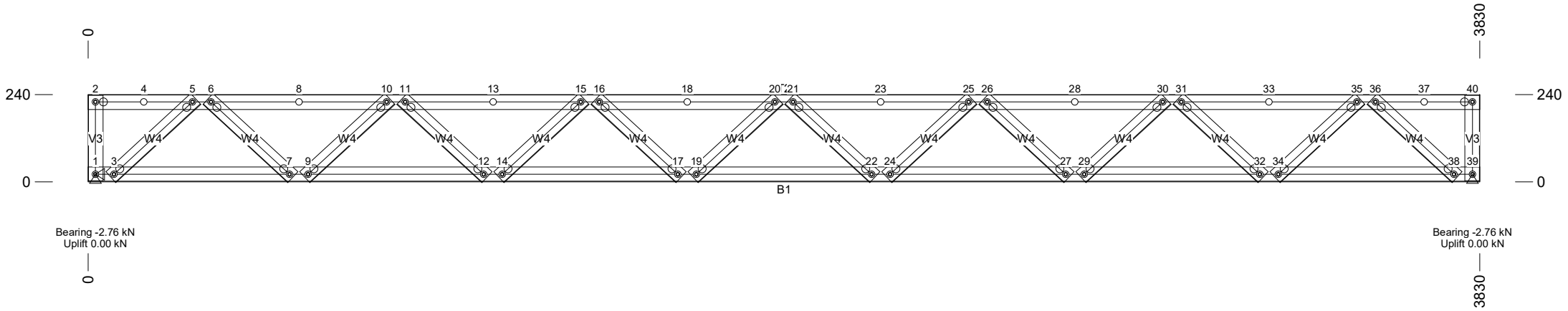
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	3	3830	T2	89S41-095-550	3	3830	V3	89S41-095-550	6	235	W4	89S41-095-550	42	317
Assembly Weight		18.0kg		FRAMECAD 10g-16mm Flathead		192		FRAMECAD 10g-19mm XDrive		192					

FRAMECAD



Beam Type WJ89095H Mark as J5 Quantity Required = 3 Engineering Status = 49% (Edited)

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.23	15%	(10)
3-5	-4.45	0.00	17%	(3)
6-7	0.00	3.54	6%	(3)
9-10	-3.43	0.00	13%	(3)
11-12	0.00	2.20	4%	(3)
14-15	-2.00	0.11	7%	(3)
16-17	-0.50	1.37	2%	(7)
19-20	-1.17	0.70	4%	(7)
21-22	-1.08	0.78	4%	(7)
24-25	-0.58	1.28	2%	(7)
26-27	-2.00	0.19	8%	(3)
29-30	0.00	2.21	4%	(3)
31-32	-3.43	0.00	13%	(3)
34-35	0.00	3.53	6%	(3)
36-38	-4.44	0.00	17%	(3)
39-40	-0.01	0.14	18%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.54	0.00	23%	(3)
5-10	-6.34	0.00	25%	(3)
10-15	-10.48	0.00	39%	(3)
15-20	-12.54	0.00	47%	(3)
20-25	-12.98	0.00	49%	(3)
25-30	-11.95	0.00	45%	(3)
30-35	-8.86	0.00	33%	(3)
35-40	-3.75	0.00	23%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.85	35%	(10)
7-12	0.00	8.90	27%	(2)
12-17	0.00	11.99	34%	(2)
17-22	0.00	13.01	35%	(2)
22-27	0.00	12.56	35%	(2)
27-32	0.00	10.50	28%	(2)
32-38	0.00	6.35	17%	(2)
38-39	0.00	0.50	2%	(2)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	21%
LC2	(G+Q)	35%
LC3	(1.2G+1.5Q)	49%
LC4-LC10	(1.2G+1.5P)	35%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	2.22	20	Span/360,12.0	10.5	21%
LC2	4.22	20	Span/240,12.0	12.0	35%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

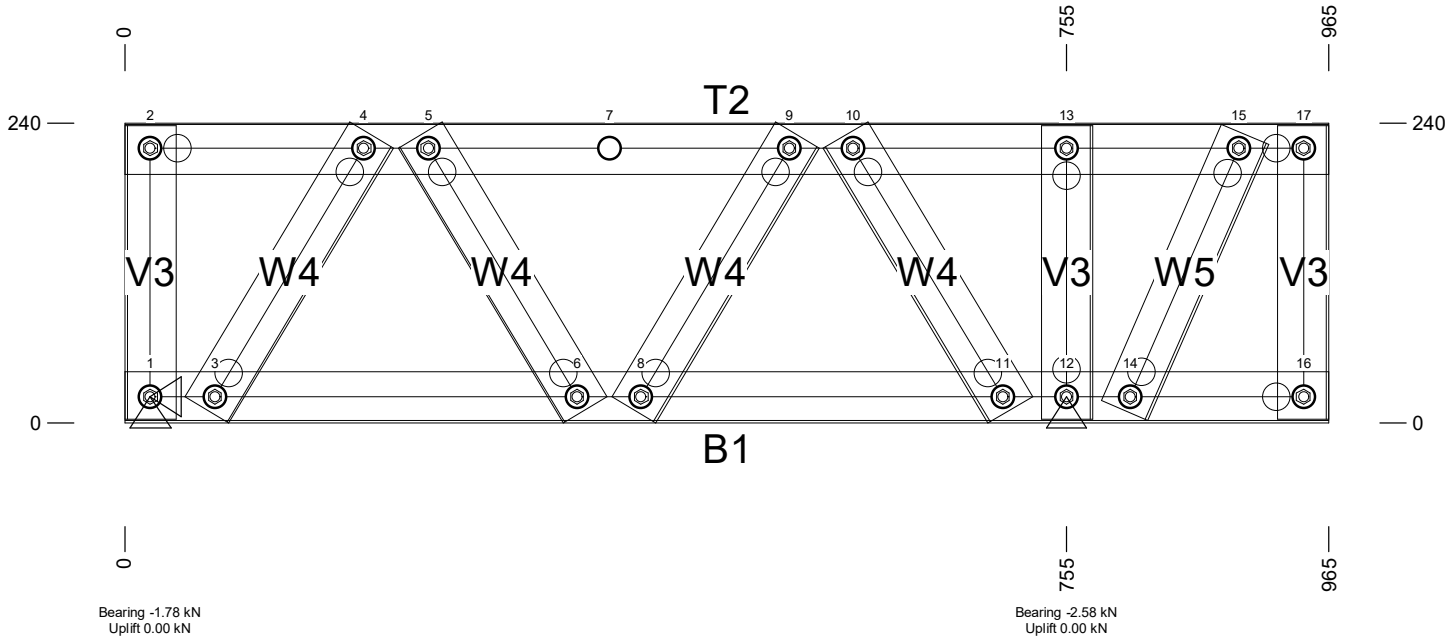
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	8	965	T2	89S41-095-550	8	965	V3	89S41-095-550	24	235	W4	89S41-095-550	32	256	W5	89S41-095-550	8	241

Assembly Weight	5.6kg	FRAMECAD 10g-16mm Flathead	256	FRAMECAD 10g-19mm XDrive	256

FRAMECAD



Beam Type WJ89095H Mark as J6 Quantity Required = 8 Engineering Status = 23%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.07	0.24	10%	(6)
3-4	-2.39	0.00	9%	(6)
5-6	-0.68	0.89	3%	(6)
8-9	-0.62	0.90	2%	(5)
10-11	-2.19	0.00	8%	(5)
12-13	-2.27	0.08	8%	(4)
14-15	-0.13	0.71	1%	(5)
16-17	-0.44	0.01	2%	(5)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	1.61	23%	(6)
6-11	0.00	1.42	13%	(5)
11-14	-0.05	0.29	0%	(5)
14-16	0.00	0.00	11%	(5)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.36	0.00	14%	(6)
4-9	-1.59	0.00	10%	(6)
9-13	-1.40	0.06	9%	(6)
13-15	-0.28	0.06	4%	(5)
15-17	0.00	0.00	3%	(5)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	2%
LC2	(G+Q)	3%
LC3	(1.2G+1.5Q)	5%
LC4-LC6	(1.2G+1.5P)	23%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

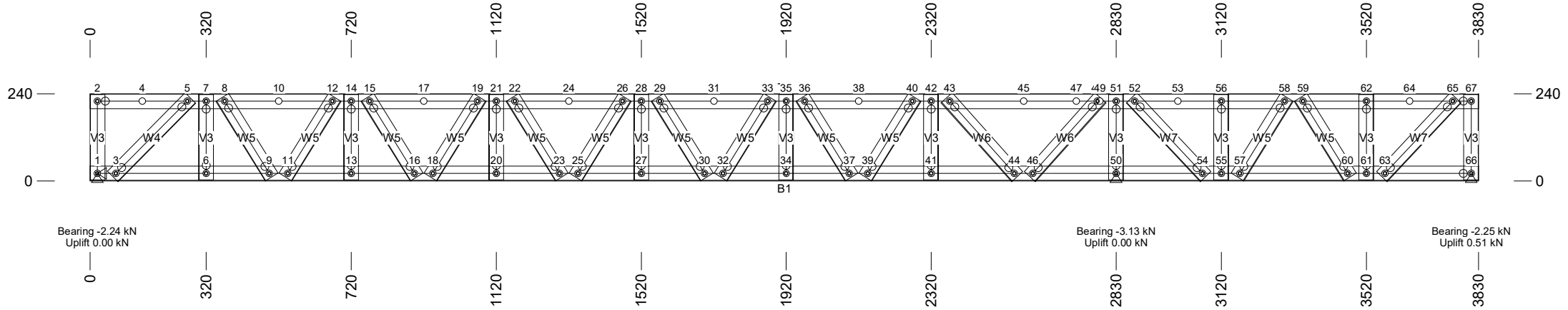
Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32		
		Top Chord Live Load (kPa) :	2.00		
		Design Point Load (kN) :	1.8		

Company: FRAMECAD Dwg Name: Unit 15 Type D 400 Sheet 1 of 1 Project: Unit 15 Type D Job Number:

B1	89S41-095-550	1	3830	T2	89S41-095-550	1	3830	V3	89S41-095-550	11	235	W4	89S41-095-550	1	304	W5	89S41-095-550	12	258	W6	89S41-095-550	2	291
W7	89S41-095-550	2	297																				

Assembly Weight	21.2kg	FRAMECAD 10g-16mm Flathead	112
		FRAMECAD 10g-19mm XDrive	112

FRAMECAD



Beam Type WJ89095H Mark as JB1 Quantity Required = 1 Engineering Status = 37%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.44	15%	(21)
3-5	-3.93	0.00	15%	(21)
6-7	-0.13	0.26	0%	(20)
8-9	-0.06	1.89	3%	(20)
11-12	-1.85	0.00	7%	(20)
13-14	-0.06	0.24	0%	(20)
15-16	-0.62	1.41	2%	(19)
18-19	-1.30	0.69	5%	(19)
20-21	-0.06	0.22	0%	(19)
22-23	-0.96	0.90	4%	(19)
25-26	-0.79	0.93	3%	(18)
27-28	-0.05	0.23	0%	(18)
29-30	-1.48	0.42	6%	(18)
32-33	-0.33	1.46	2%	(19)
34-35	-0.04	0.26	0%	(17)
36-37	-1.97	0.18	7%	(17)
39-40	-0.15	1.89	3%	(18)
41-42	-0.02	0.37	1%	(16)
43-44	-3.97	0.00	15%	(16)
46-48	0.00	3.72	6%	(16)
50-51	-3.28	0.00	12%	(16)
52-54	-0.03	3.29	6%	(13)
55-56	-2.76	0.21	10%	(13)
57-58	-1.61	0.79	6%	(12)
59-60	-0.72	1.38	3%	(13)
61-62	-2.96	0.06	11%	(11)
63-65	-1.15	3.03	5%	(11)
66-67	-2.27	0.66	8%	(10)
65-67	0.00	0.00	18%	(10)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.57	0.00	37%	(21)
5-8	-3.33	0.00	18%	(21)
8-12	-3.30	0.00	24%	(21)
12-15	-3.59	0.00	13%	(20)
15-19	-3.56	0.00	16%	(20)
19-22	-4.25	0.00	16%	(19)
22-26	-3.75	0.00	15%	(19)
26-29	-4.02	0.00	15%	(18)
29-33	-3.24	0.00	16%	(18)
33-36	-3.04	0.00	11%	(17)
36-40	-2.56	0.03	20%	(18)
40-43	-2.64	0.20	12%	(17)
43-48	-0.03	0.87	24%	(17)
48-52	0.00	2.48	17%	(15)
52-56	-1.70	1.93	15%	(14)
56-58	-1.70	1.92	7%	(13)
58-62	-2.13	1.35	12%	(12)
62-65	-2.07	0.79	21%	(10)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	3.42	37%	(21)
6-9	0.00	3.42	9%	(21)
9-13	0.00	3.66	13%	(20)
13-16	0.00	3.66	9%	(20)
16-20	0.00	4.32	12%	(19)
20-23	0.00	4.31	12%	(19)
23-27	0.00	4.07	10%	(18)
27-30	0.00	4.07	13%	(18)
30-34	0.00	3.29	7%	(18)
34-37	0.00	3.08	16%	(17)
37-41	-0.16	2.68	8%	(17)
41-44	-0.16	2.68	25%	(16)
44-50	-2.46	0.07	14%	(16)
50-54	-2.46	0.00	14%	(12)
54-57	-1.91	1.72	12%	(12)
57-60	-1.33	2.15	24%	(12)
60-63	-0.79	2.08	10%	(12)
63-66	0.00	0.00	12%	(12)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
3520.0	Other	0.00	0.02	0.00
3120.0	Other	0.00	0.02	0.00
2720.0	Other	0.00	0.02	0.00
2320.0	Other	0.00	0.02	0.00
1920.0	Other	0.00	0.02	0.00
1520.0	Other	0.00	0.02	0.00
1120.0	Other	0.00	0.02	0.00
720.0	Other	0.00	0.02	0.00
320.0	Other	0.00	0.02	0.00
2785.0	Other	0.00	0.03	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	7%
LC2	(G+Q)	13%
LC3-LC6	Patch(G+0.4Q)	7%
LC3-LC6	Patch(G+Q)	13%
LC7	(1.2G+1.5Q)	18%
LC8-LC9	Patch(1.2G+1.5Q)	18%
LC10-LC21	(1.2G+1.5P)	37%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.43	24	Span/360,12.0	7.8	5%
LC2	0.80	24	Span/240,12.0	11.7	7%

Summary for Patch Loading cases (LC3 - LC6) :

Critical case inPatch(G+0.4Q):					
LC4	0.80	24	Span/240,12.0	11.7	7%
Critical case inPatch(G+Q):					
LC5	0.20	24	Span/360,12.0	7.8	3%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.10	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

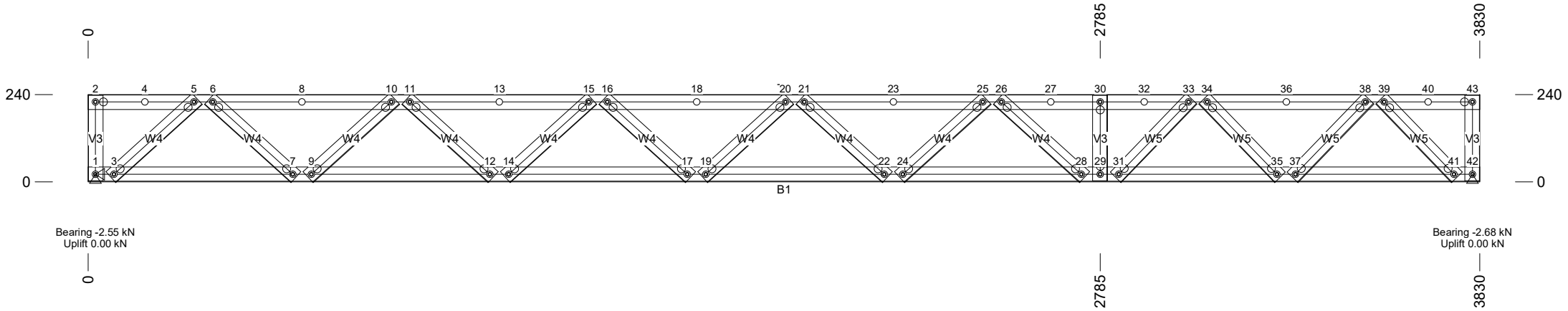
Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

Company: FRAMECAD	Dwg Name: Unit 15 Type D 400	Sheet 1 of 1	Project: Unit 15 Type D	Job Number:

B1	89S41-095-550	1	3830	T2	89S41-095-550	1	3830	V3	89S41-095-550	3	235	W4	89S41-095-550	10	321	W5	89S41-095-550	4	301

Assembly Weight	18.3kg	FRAMECAD 10g-16mm Flathead	68	FRAMECAD 10g-19mm XDrive	68

FRAMECAD®



Beam Type WJ89095H Mark as JB2 Quantity Required = 1 Engineering Status = 37%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.22	14%	(11)
3-5	-4.23	0.00	16%	(11)
6-7	0.00	2.37	4%	(3)
9-10	-2.31	0.00	9%	(3)
11-12	-0.07	1.87	3%	(9)
14-15	-1.69	0.18	6%	(9)
16-17	-0.51	1.37	2%	(8)
19-20	-1.21	0.67	5%	(8)
21-22	-1.01	0.86	4%	(8)
24-25	-0.60	1.25	2%	(7)
26-28	-1.51	0.33	6%	(8)
29-30	-1.37	0.00	5%	(6)
31-33	0.00	2.68	5%	(3)
34-35	-3.31	0.00	12%	(3)
37-38	0.00	3.25	6%	(3)
39-41	-3.85	0.00	14%	(4)
42-43	-0.00	0.16	17%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.51	0.00	21%	(11)
5-10	-4.16	0.00	19%	(11)
10-15	-7.12	0.00	27%	(3)
15-20	-8.97	0.00	34%	(3)
20-25	-9.74	0.00	37%	(3)
25-30	-9.74	0.00	37%	(3)
30-33	-9.30	0.00	35%	(3)
33-38	-7.44	0.00	28%	(3)
38-43	-3.14	0.00	19%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.70	33%	(11)
7-12	0.00	5.92	20%	(2)
12-17	0.00	8.31	26%	(2)
17-22	0.00	9.63	27%	(2)
22-28	0.00	9.77	27%	(2)
28-31	0.00	9.32	23%	(2)
31-35	0.00	7.45	23%	(3)
35-41	0.00	5.15	14%	(3)
41-42	0.00	0.48	1%	(2)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
2785.0	Other	0.10	0.64	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	16%
LC2	(G+Q)	27%
LC3	(1.2G+1.5Q)	37%
LC4-LC11	(1.2G+1.5P)	33%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	1.73	21	Span/360,12.0	10.5	16%
LC2	3.26	21	Span/240,12.0	12.0	27%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

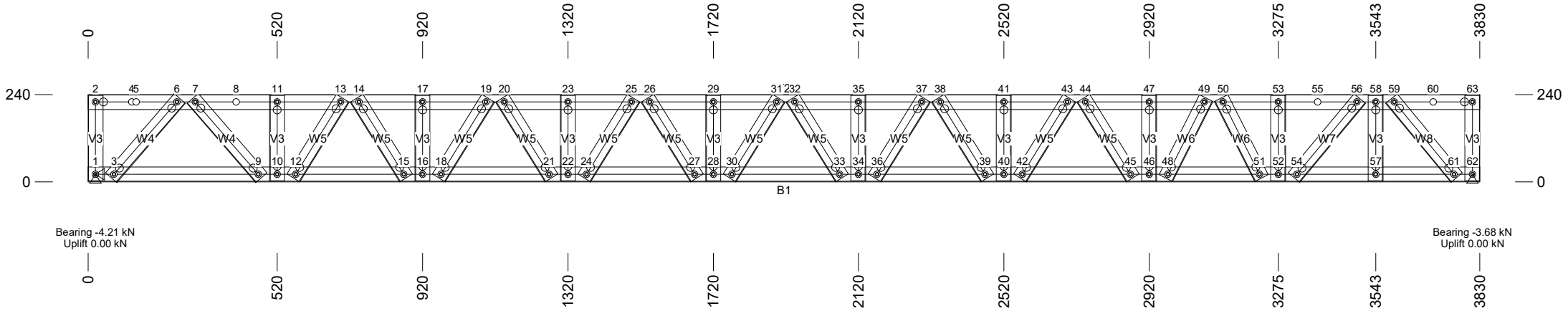
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.30	Ground Snow Load (kPa) :	0.00	Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Design Point Load (kN) :	1.8

Company: FRAMECAD	Dwg Name: Unit 15 Type D 400	Sheet 1 of 1	Project: Unit 15 Type D	Job Number:

B1	89S41-095-550	1	3830	T2	89S41-095-550	1	3830	V3	89S41-095-550	11	235	W4	89S41-095-550	2	288	W5	89S41-095-550	12	258	W6	89S41-095-550	2	247
W7	89S41-095-550	1	283	W8	89S41-095-550	1	282																

Assembly Weight	21.4kg	FRAMECAD 10g-16mm Flathead	116	FRAMECAD 10g-19mm XDrive	116

FRAMECAD



Beam Type WJ89095H Mark as JB3 Quantity Required = 1 Engineering Status = 71%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.27	16%	(3)
3-6	-6.70	0.00	25%	(3)
7-9	0.00	5.87	10%	(3)
10-11	-1.37	0.01	5%	(19)
12-13	-4.94	0.00	19%	(3)
14-15	0.00	4.51	8%	(3)
16-17	-1.33	0.05	5%	(17)
18-19	-3.54	0.00	13%	(3)
20-21	-0.06	2.80	5%	(3)
22-23	-1.28	0.09	5%	(15)
24-25	-1.96	0.39	7%	(3)
26-27	-0.63	1.37	2%	(16)
28-29	-1.25	0.10	5%	(13)
30-31	-1.13	0.91	4%	(10)
32-33	-1.18	0.83	4%	(14)
34-35	-1.25	0.10	5%	(11)
36-37	-0.57	1.46	2%	(12)
38-39	-2.12	0.30	8%	(3)
40-41	-1.28	0.08	5%	(9)
42-43	-0.01	2.99	5%	(3)
44-45	-3.82	0.00	14%	(3)
46-47	-1.28	0.09	5%	(7)
48-49	0.00	4.67	8%	(3)
50-51	-4.92	0.00	18%	(3)
52-53	-1.71	0.00	6%	(5)
54-56	0.00	6.78	11%	(3)
57-58	-1.27	0.00	5%	(3)
59-61	-5.50	0.00	21%	(3)
62-63	0.00	0.80	43%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-6	-0.57	0.00	39%	(3)
6-11	-8.82	0.00	34%	(3)
11-13	-8.82	0.00	33%	(3)
13-17	-13.79	0.00	52%	(3)
17-19	-13.80	0.00	52%	(3)
19-23	-17.13	0.00	64%	(3)
23-25	-17.14	0.00	64%	(3)
25-29	-18.76	0.00	70%	(3)
29-31	-18.76	0.00	70%	(3)
31-35	-18.95	0.00	71%	(3)
35-37	-18.68	0.00	70%	(3)
37-41	-18.00	0.00	67%	(3)
41-43	-16.89	0.00	63%	(3)
43-47	-15.32	0.00	57%	(3)
47-49	-13.31	0.00	50%	(3)
49-53	-11.21	0.00	42%	(3)
53-56	-8.99	0.00	50%	(3)
56-59	-4.66	0.00	31%	(3)
59-63	-1.17	0.00	62%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-9	0.00	5.06	37%	(3)
9-12	0.00	8.91	30%	(3)
12-15	0.00	11.50	59%	(3)
15-18	0.00	13.87	44%	(2)
18-21	0.00	15.73	52%	(2)
21-24	0.00	17.20	55%	(2)
24-27	0.00	18.23	60%	(2)
27-30	0.00	18.82	61%	(2)
30-33	0.00	19.00	61%	(2)
33-36	0.00	18.73	61%	(2)
36-39	0.00	18.04	60%	(2)
39-42	0.00	16.93	56%	(2)
42-45	0.00	15.35	53%	(2)
45-48	0.00	13.34	45%	(2)
48-51	0.00	11.23	62%	(3)
51-54	0.00	9.01	31%	(3)
54-57	0.00	4.67	34%	(3)
57-61	0.00	4.67	15%	(3)
61-62	0.00	1.17	3%	(2)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
3275.0	Other	0.03	0.16	0.00
2920.0	Other	0.05	0.32	0.00
2520.0	Other	0.05	0.32	0.00
2120.0	Other	0.05	0.32	0.00
1720.0	Other	0.05	0.32	0.00
1320.0	Other	0.05	0.32	0.00
920.0	Other	0.05	0.32	0.00
520.0	Other	0.05	0.32	0.00
120.0	Other	0.05	0.32	0.00
3543.0	Other	0.02	0.13	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	37%
LC2	(G+Q)	62%
LC3	(1.2G+1.5Q)	71%
LC4-LC20	(1.2G+1.5P)	35%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	3.85	32	Span/360,12.0	10.5	37%
LC2	7.4	32	Span/240,12.0	12.0	62%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

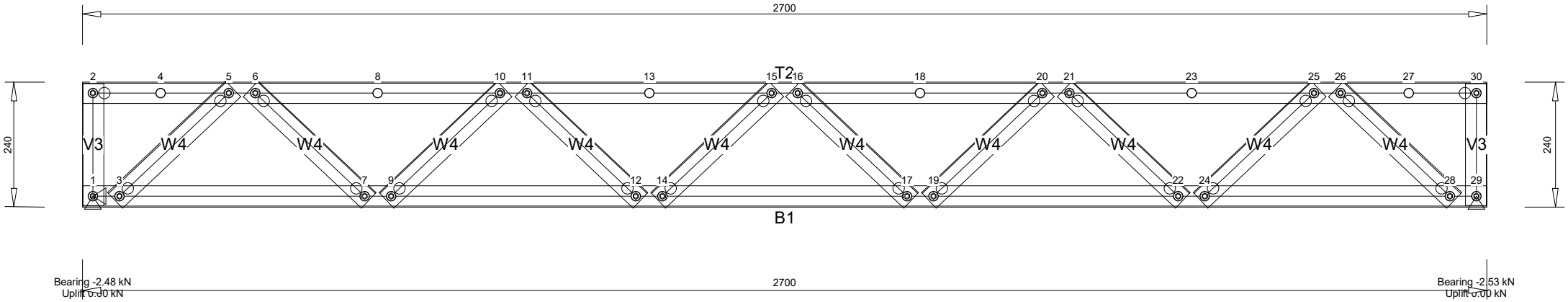
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	1.40	Ground Snow Load (kPa) :	0.00	Top Chord Dead Load (kPa) :	0.32
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Top Chord Live Load (kPa) :	2.00
								Design Point Load (kN) :	1.8

Company: FRAMECAD	Dwg Name: Unit 15 Type D 400	Sheet 1 of 1	Project: Unit 15 Type D	Job Number:

B1	89S41-095-550	15	2700	T2	89S41-095-550	15	2700	V3	89S41-095-550	30	235	W4	89S41-095-550	150	313
Assembly Weight		12.9kg		FRAMECAD 10g-16mm Flathead		720		FRAMECAD 10g-19mm XDrive		720					

FRAMECAD®



Beam Type WJ89095H Mark as J1 Quantity Required = 15 Engineering Status = 32%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.22	14%	(8)
3-5	-4.00	0.00	15%	(8)
6-7	0.00	2.09	4%	(3)
9-10	-1.96	0.00	7%	(3)
11-12	-0.36	1.35	2%	(6)
14-15	-1.14	0.56	4%	(6)
16-17	-1.07	0.64	4%	(6)
19-20	-0.43	1.27	2%	(6)
21-22	-1.96	0.10	7%	(3)
24-25	0.00	2.08	4%	(3)
26-28	-3.70	0.00	14%	(4)
29-30	-0.03	0.12	17%	(4)
15-20	-6.41	0.00	24%	(3)
20-25	-5.42	0.00	20%	(3)
25-30	-3.14	0.00	16%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.50	0.00	20%	(8)
5-10	-4.00	0.00	18%	(8)
10-15	-5.98	0.00	22%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.43	32%	(8)
7-12	0.00	5.45	15%	(3)
12-17	0.00	6.43	13%	(3)
17-22	0.00	6.00	15%	(3)
22-28	0.00	4.01	12%	(4)
28-29	0.00	0.46	1%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	9%
LC2	(G+Q)	17%
LC3	(1.2G+1.5Q)	24%
LC4-LC8	(1.2G+1.5P)	32%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.59	15	Span/360,12.0	7.4	8%
LC2	1.12	15	Span/240,12.0	11.1	10%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

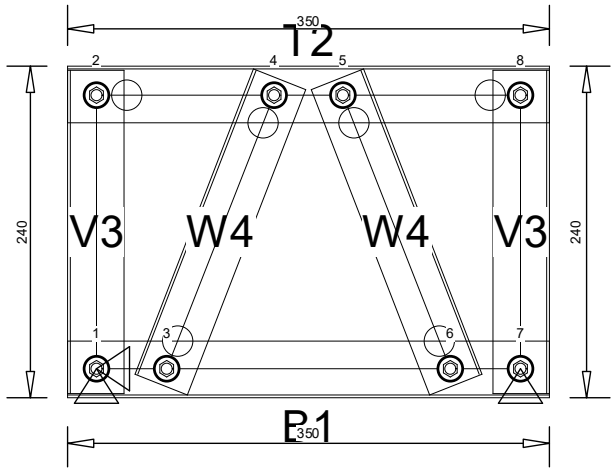
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	5	350	T2	89S41-095-550	5	350	V3	89S41-095-550	10	235	W4	89S41-095-550	10	238
Assembly Weight		2.4kg		FRAMECAD 10g-16mm Flathead		80		FRAMECAD 10g-19mm XDrive		80					

FRAMECAD



Bearing -1.05 kN
Uplift 0.00 kN

Bearing -1.46 kN
Uplift 0.00 kN

Beam Type WJ89095H Mark as J2 Quantity Required = 5 Engineering Status = 13%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.09	0.13	6%	(4)
3-4	-1.20	0.00	4%	(4)
5-6	-1.35	0.00	5%	(4)
7-8	-0.24	0.00	6%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.20	0.00	6%	(4)
4-8	-0.64	0.00	5%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	0.65	13%	(4)
6-7	0.00	0.16	10%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	1%
LC3	(1.2G+1.5Q)	1%
LC4	(1.2G+1.5P)	13%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

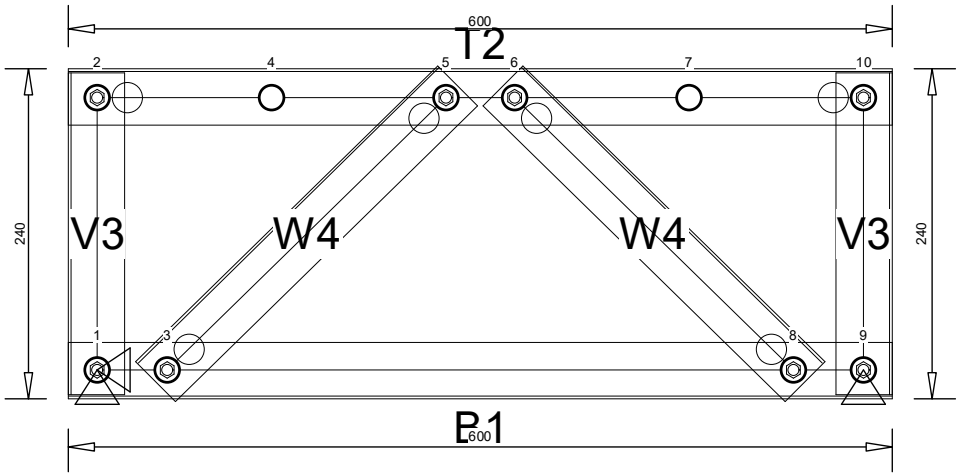
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	4	600	T2	89S41-095-550	4	600	V3	89S41-095-550	8	235	W4	89S41-095-550	8	308
Assembly Weight		3.3kg		FRAMECAD 10g-16mm Flathead		64		FRAMECAD 10g-19mm XDrive		64					

FRAMECAD



Bearing -1.17 kN
Uplift 0.00 kN

Bearing -1.40 kN
Uplift 0.00 kN

Beam Type WJ89095H Mark as J3 Quantity Required = 4 Engineering Status = 16%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.17	0.07	7%	(4)
3-5	-1.72	0.00	6%	(4)
6-8	-1.77	0.00	7%	(4)
9-10	-0.17	0.00	8%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.25	0.00	7%	(4)
5-10	-1.48	0.00	6%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-8	0.00	1.48	16%	(4)
8-9	0.00	0.22	14%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	2%
LC3	(1.2G+1.5Q)	3%
LC4	(1.2G+1.5P)	16%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

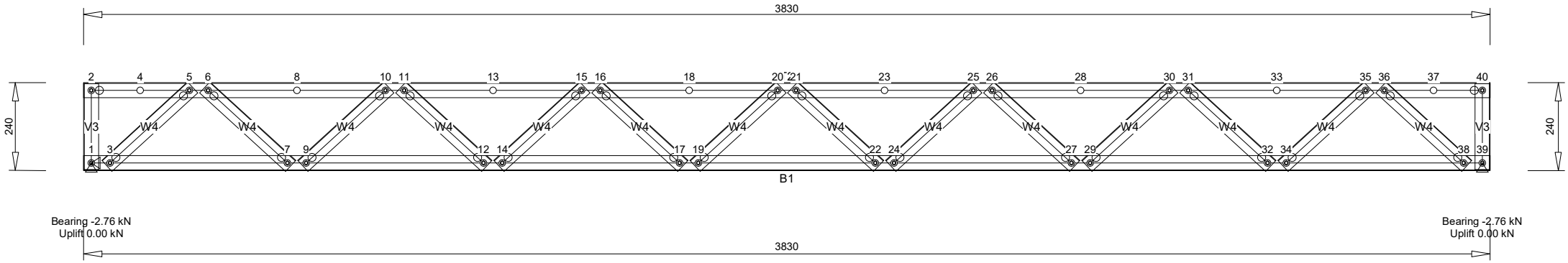
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	7	3830	T2	89S41-095-550	7	3830	V3	89S41-095-550	14	235	W4	89S41-095-550	98	318
Assembly Weight		18.0kg		FRAMECAD 10g-16mm Flathead		448		FRAMECAD 10g-19mm XDrive		448					

FRAMECAD



Beam Type WJ89095H Mark as J4 Quantity Required = 7 Engineering Status = 49%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.23	15%	(10)
3-5	-4.45	0.00	17%	(3)
6-7	0.00	3.54	6%	(3)
9-10	-3.43	0.00	13%	(3)
11-12	0.00	2.20	4%	(3)
14-15	-2.00	0.11	7%	(3)
16-17	-0.50	1.37	2%	(7)
19-20	-1.17	0.70	4%	(7)
21-22	-1.08	0.78	4%	(7)
24-25	-0.58	1.28	2%	(7)
26-27	-2.00	0.19	8%	(3)
29-30	0.00	2.21	4%	(3)
31-32	-3.43	0.00	13%	(3)
34-35	0.00	3.53	6%	(3)
36-38	-4.44	0.00	17%	(3)
39-40	-0.01	0.14	18%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.54	0.00	23%	(3)
5-10	-6.34	0.00	25%	(3)
10-15	-10.48	0.00	39%	(3)
15-20	-12.54	0.00	47%	(3)
20-25	-12.98	0.00	49%	(3)
25-30	-11.95	0.00	45%	(3)
30-35	-8.86	0.00	33%	(3)
35-40	-3.75	0.00	23%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.85	35%	(10)
7-12	0.00	8.90	27%	(2)
12-17	0.00	11.99	34%	(2)
17-22	0.00	13.01	35%	(2)
22-27	0.00	12.56	35%	(2)
27-32	0.00	10.50	28%	(2)
32-38	0.00	6.35	17%	(2)
38-39	0.00	0.50	2%	(2)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	21%
LC2	(G+Q)	35%
LC3	(1.2G+1.5Q)	49%
LC4-LC10	(1.2G+1.5P)	35%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	2.22	20	Span/360,12.0	10.5	21%
LC2	4.22	20	Span/240,12.0	12.0	35%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

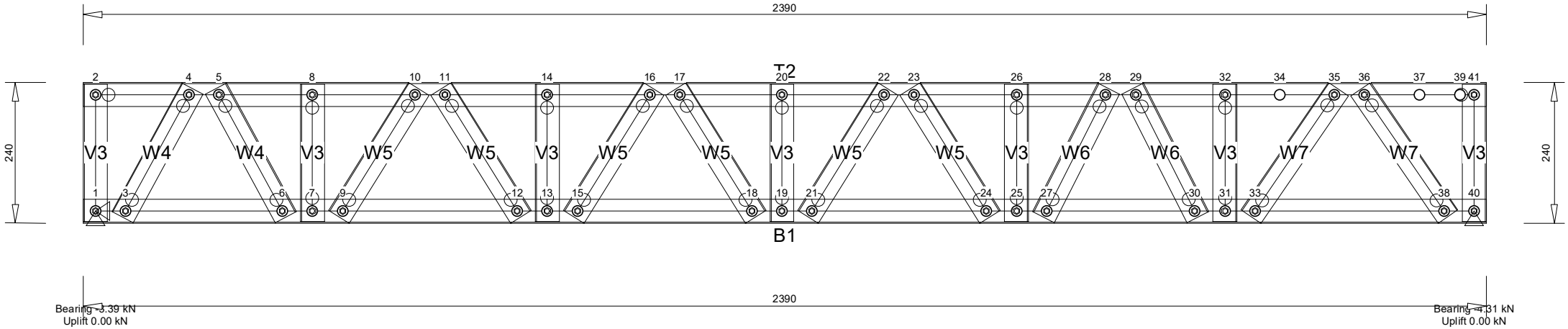
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	2390	T2	89S41-095-550	1	2390	V3	89S41-095-550	7	235	W4	89S41-095-550	2	250	W5	89S41-095-550	6	258	W6	89S41-095-550	2	247
W7	89S41-095-550	2	265																				

Assembly Weight	13.6kg	FRAMECAD 10g-16mm Flathead	76
FRAMECAD 10g-19mm XDrive	76		

FRAMECAD®



Beam Type WJ89095H Mark as JB1 Quantity Required = 1 Engineering Status = 48%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.65	16%	(3)
3-4	-5.63	0.00	21%	(3)
5-6	0.00	4.78	8%	(3)
7-8	-2.35	0.04	9%	(13)
9-10	-3.95	0.00	15%	(3)
11-12	0.00	3.26	6%	(3)
13-14	-1.42	0.00	5%	(11)
15-16	-1.50	0.42	6%	(3)
17-18	-0.59	1.15	2%	(13)
19-20	-1.40	0.00	5%	(9)
21-22	-0.70	1.22	3%	(5)
23-24	-1.60	0.52	6%	(3)
25-26	-1.37	0.00	5%	(7)
27-28	-0.03	3.19	5%	(3)
29-30	-3.70	0.00	14%	(3)
31-32	-2.46	0.00	9%	(5)
33-35	0.00	4.65	8%	(3)
36-38	-5.44	0.00	20%	(3)
40-41	-0.52	0.27	19%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.57	0.00	39%	(3)
4-8	-5.54	0.00	25%	(3)
8-10	-5.54	0.00	21%	(3)
10-14	-9.34	0.00	35%	(3)
14-16	-9.34	0.00	35%	(3)
16-20	-10.58	0.00	40%	(3)
20-22	-10.58	0.00	40%	(3)
22-26	-10.13	0.00	38%	(3)
26-28	-9.29	0.00	35%	(3)
28-32	-7.85	0.00	29%	(3)
32-35	-6.18	0.00	26%	(3)
35-41	-3.57	0.00	35%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	3.31	37%	(3)
6-9	0.00	5.59	24%	(3)
9-12	0.00	7.67	48%	(3)
12-15	0.00	9.38	22%	(3)
15-18	0.00	10.17	29%	(3)
18-21	0.00	10.61	21%	(2)
21-24	0.00	10.15	29%	(3)
24-27	0.00	9.31	22%	(3)
27-30	0.00	7.87	46%	(3)
30-33	0.00	6.20	23%	(3)
33-38	0.00	3.58	30%	(3)
38-40	0.00	0.52	1%	(2)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
2345.0	S1	0.10	0.63	0.00
1945.0	S2	0.02	0.12	0.00
1590.0	J2	0.02	0.14	0.00
1590.0	J3	0.04	0.24	0.00
1190.0	J3	0.04	0.24	0.00
1190.0	J2	0.02	0.14	0.00
790.0	J2	0.02	0.14	0.00
790.0	J3	0.04	0.24	0.00
390.0	J3	0.04	0.24	0.00
390.0	J2	0.02	0.14	0.00
1945.0	J2	0.02	0.14	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	17%
LC2	(G+Q)	33%
LC3	(1.2G+1.5Q)	48%
LC4-LC14	(1.2G+1.5P)	34%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	1.08	20	Span/360,12.0	6.5	17%
LC2	2.08	20	Span/240,12.0	9.8	21%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

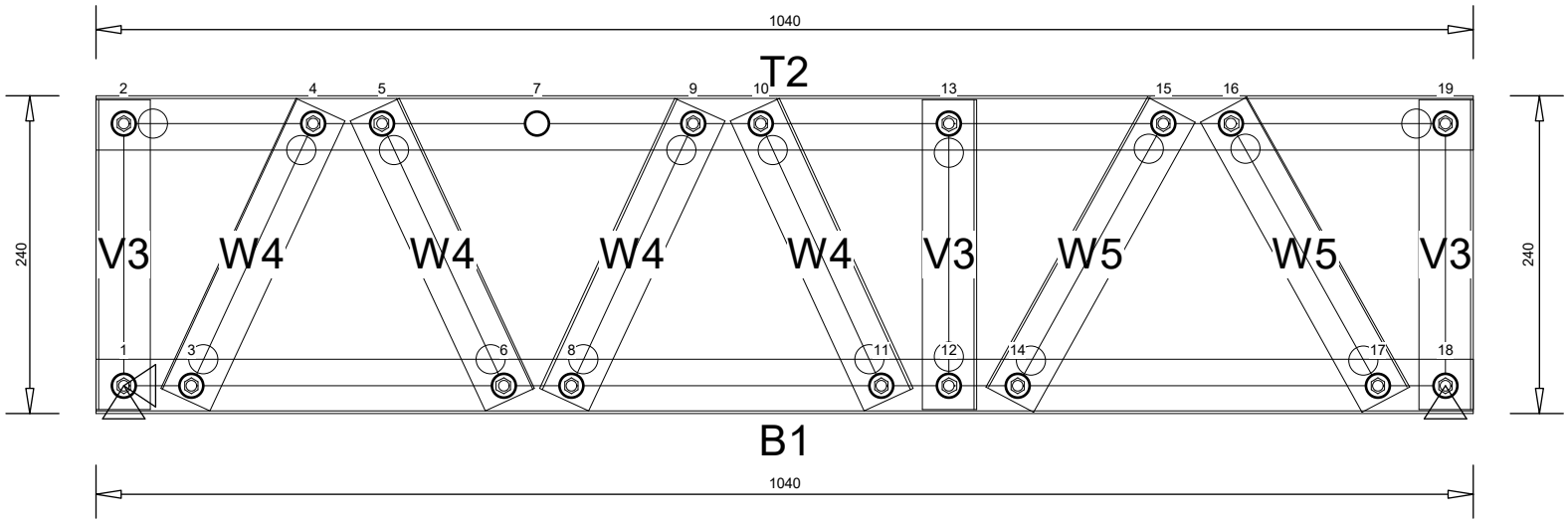
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist Beam
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	1.20	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	1	1040	T2	89S41-095-550	1	1040	V3	89S41-095-550	3	235	W4	89S41-095-550	4	243	W5	89S41-095-550	2	252

Assembly Weight	6.1kg	FRAMECAD 10g-16mm Flathead	36	FRAMECAD 10g-19mm XDrive	36

FRAMECAD



Bearing -2.31 kN
Uplift 0.00 kN

Bearing -3.13 kN
Uplift 0.00 kN

Beam Type WJ89095H Mark as JB2 Quantity Required = 1 Engineering Status = 36%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.40	13%	(7)
3-4	-3.20	0.00	12%	(3)
5-6	0.00	2.84	5%	(3)
8-9	-2.59	0.10	10%	(3)
10-11	-0.54	1.59	3%	(3)
12-13	-3.96	0.00	15%	(3)
14-15	0.00	3.82	6%	(3)
16-17	-4.75	0.00	18%	(3)
18-19	-0.02	0.48	21%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	1.83	16%	(3)
6-11	0.00	4.05	18%	(3)
11-14	0.00	4.72	13%	(3)
14-17	0.00	2.86	24%	(3)
17-18	0.00	0.56	36%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.48	0.00	20%	(3)
4-9	-2.94	0.00	15%	(3)
9-13	-4.70	0.00	21%	(3)
13-15	-4.70	0.00	23%	(3)
15-19	-2.85	0.00	31%	(3)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
645.0	JB1	0.35	2.16	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	13%
LC2	(G+Q)	25%
LC3	(1.2G+1.5Q)	36%
LC4-LC7	(1.2G+1.5P)	25%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

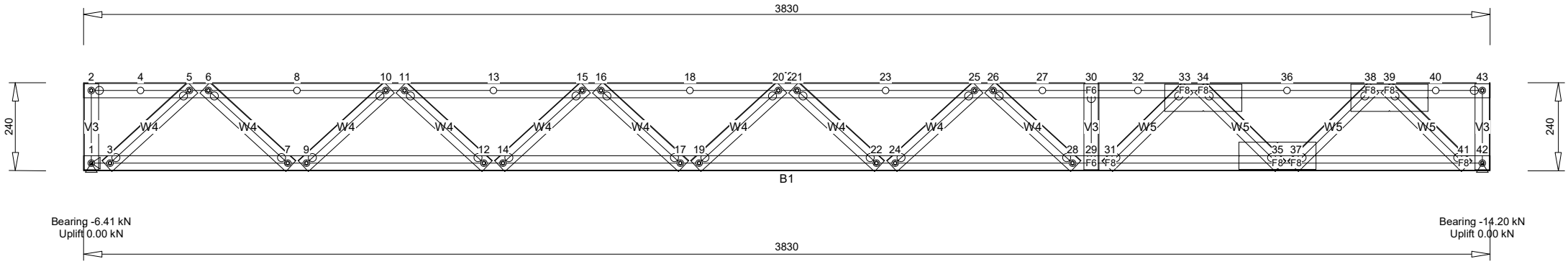
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	1.10	Ground Snow Load (kPa) :	0.00	Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Design Point Load (kN) :	1.8

B1	89S41-095-550	1	3830	T2	89S41-095-550	1	3830	V3	89S41-095-550	3	235	W4	89S41-095-550	10	318	W5	89S41-095-550	4	308

Assembly Weight	18.3kg	FRAMECAD 10g-16mm Flathead	104	FRAMECAD 10g-19mm XDrive	68

FRAMECAD®



Beam Type WJ89095H Mark as JB3 Quantity Required = 1 Engineering Status = 265%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.53	30%	(3)
3-5	-11.09	0.00	42%	(3)
6-7	0.00	10.72	18%	(3)
9-10	-10.76	0.00	40%	(3)
11-12	0.00	10.15	17%	(3)
14-15	-10.02	0.00	38%	(3)
16-17	0.00	9.42	16%	(3)
19-20	-9.37	0.00	35%	(3)
21-22	0.00	8.76	15%	(3)
24-25	-8.07	0.00	30%	(3)
26-28	-0.41	6.24	11%	(3)
29-30	-18.01	0.00	68%	(3)
31-33	0.00	22.54	38%	(3)
34-35	-24.79	0.00	93%	(3)
37-38	0.00	24.22	41%	(3)
39-41	-24.19	0.00	91%	(3)
42-43	0.00	1.37	91%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-1.09	0.00	54%	(3)
5-10	-17.13	0.00	85%	(2)
10-15	-32.52	0.00	130%	(2)
15-20	-46.82	0.00	176%	(3)
20-25	-60.16	0.00	226%	(3)
25-30	-70.69	0.00	265%	(3)
30-33	-70.69	0.00	265%	(3)
33-38	-54.63	0.00	205%	(3)
38-43	-19.72	0.00	74%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	9.30	70%	(3)
7-12	0.00	25.10	109%	(2)
12-17	0.00	39.93	145%	(2)
17-22	0.00	53.74	159%	(2)
22-28	0.00	66.12	160%	(2)
28-31	0.00	70.71	149%	(3)
31-35	0.00	54.65	167%	(3)
35-41	0.00	36.98	99%	(3)
41-42	0.00	2.49	8%	(2)

SPECIAL LOADING

Location	Source	G kN	Q kN	S kN
mm				
2745.0	I1	1.60	10.02	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	94%
LC2	(G+Q)	184%
LC3	(1.2G+1.5Q)	265%
LC4-LC11	(1.2G+1.5P)	60%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	9.9	24	Span/360,12.0	10.5	94%
LC2	19.2	24	Span/240,12.0	12.0	160%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

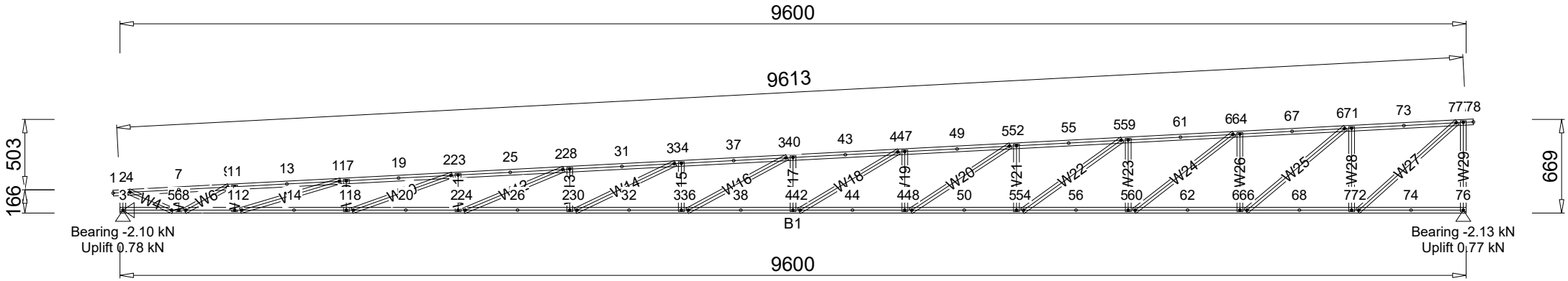
Node:	Plate:
34	FRAMECAD 1.15mm Fix Plate
35	FRAMECAD 1.15mm Fix Plate
39	FRAMECAD 1.15mm Fix Plate

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	5.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-095-550	5 9600mm	T2	89S41-095-550	5 9713mm	W3	89S41-095-550	5 148mm	W4	89S41-095-550	5 345mm	W5	89S41-095-550	5 169mm
W6	89S41-095-550	5 361mm	W7	89S41-095-550	5 190mm	W8	89S41-095-550	5 746mm	W9	89S41-095-550	5 232mm	W10	89S41-095-550	5 759mm
W11	89S41-095-550	5 273mm	W12	89S41-095-550	5 774mm	W13	89S41-095-550	5 315mm	W14	89S41-095-550	5 792mm	W15	89S41-095-550	5 357mm
W16	89S41-095-550	5 810mm	W17	89S41-095-550	5 399mm	W18	89S41-095-550	5 831mm	W19	89S41-095-550	5 440mm	W20	89S41-095-550	5 853mm
W21	89S41-095-550	5 482mm	W22	89S41-095-550	5 877mm	W23	89S41-095-550	5 524mm	W24	89S41-095-550	5 902mm	W25	89S41-095-550	5 928mm
W26	89S41-095-550	5 566mm	W27	89S41-095-550	5 956mm	W28	89S41-095-550	5 607mm	W29	89S41-095-550	5 649mm			
Assembly Weight		49.5kg	FRAMECAD 10g-19mm XDrive		540									

FRAMECAD



Quantity Required = 5 Mark as HN2 Engineering Status = Passed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors
SNOW Factors
No Snow Load Apply
Wind Pressure Factors

Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type:	Name	Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
1-4	-0.12	0.05	18%	(5)
4-7	-5.25	1.91	30%	(5)
7-9	-5.26	1.92	23%	(18)
9-15	-9.15	3.26	57%	(18)
15-21	-13.10	4.73	70%	(19)
21-27	-14.74	5.32	74%	(20)
27-33	-15.01	5.41	75%	(21)
33-39	-14.41	5.18	72%	(22)
39-45	-13.21	4.73	68%	(23)
45-51	-11.58	4.14	62%	(24)
51-57	-9.65	3.44	56%	(25)
57-63	-7.48	2.65	49%	(26)
63-69	-5.14	1.82	41%	(27)
69-75	-2.67	0.93	39%	(28)
75-78	-0.04	0.11	16%	(28)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
3-5	-0.14	0.06	16%	(18)
5-8	-2.04	5.32	21%	(2)
8-10	-3.35	9.04	34%	(2)
10-16	-4.82	13.05	61%	(2)
16-22	-5.41	14.75	79%	(2)
22-29	-5.49	15.03	89%	(2)
29-35	-5.49	15.03	92%	(2)
35-41	-5.24	14.42	92%	(2)
41-46	-4.79	13.21	89%	(2)
46-53	-4.18	11.58	81%	(2)
53-58	-3.47	9.65	69%	(2)
58-65	-2.68	7.47	55%	(2)
65-70	-1.83	5.13	38%	(2)
70-76	-0.93	2.65	23%	(17)
40-45	-1.32	2.83	5%	(22)
46-51	-1.54	3.03	6%	(23)
52-57	-1.74	3.20	7%	(24)
58-63	-1.92	3.34	7%	(25)
64-69	-2.09	3.47	8%	(26)
70-75	-2.35	3.56	9%	(27)
76-77	-2.12	0.80	8%	(5)

Web

Member	Com. kN	Ten. kN	CSI	LC
2-5	-2.32	5.73	10%	(5)
6-9	-4.51	1.50	17%	(7)
10-15	-4.81	1.88	18%	(8)
16-21	-2.59	1.00	10%	(9)
22-27	-1.27	1.52	5%	(10)
28-33	-0.80	2.14	4%	(20)
34-39	-1.08	2.55	4%	(21)

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	56%
LC2	(G)	92%
LC3	(max(1.0Q,0.7S))	65%
LC4	(1.2G+1.5Q)	55%
LC5	(1.2G+Wd)	56%
LC6	(0.9G+Wu)	21%
LC7-LC28	(1.2G+1.5P)	75%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	8.4	35	Span/250,15.0	15.0	56.1%
LC2	11.0	35	Span/300,12.0	12.0	91.8%
LC3	7.9	35	Span/300,12.0	12.0	65.4%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.

Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

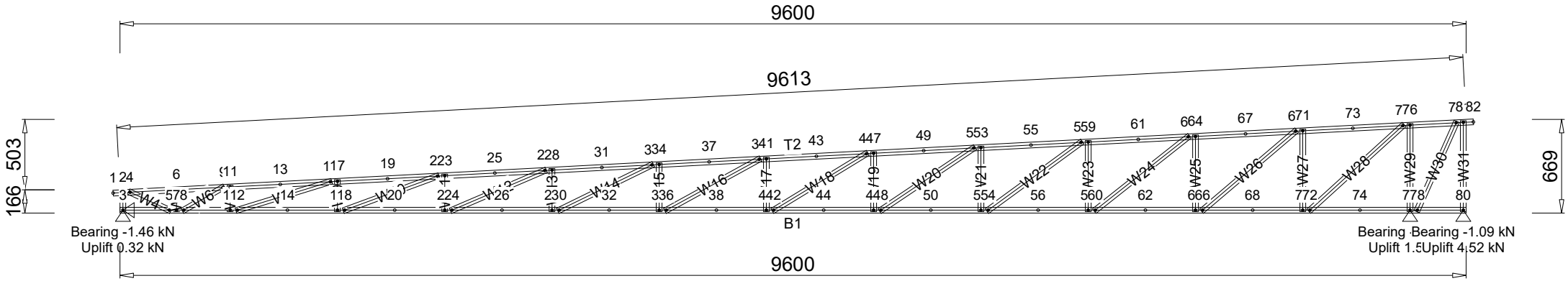
Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	538	Roof Load Type:	SHEET	Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00	Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW	Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10

Company: FRAMECAD Dwg Name: Unit 15 Type D 400 Sheet 1 of 1 Project: Unit 15 Type D Job Number:

B1	89S41-095-550	1	9600mm	T2	89S41-095-550	1	9713mm	W3	89S41-095-550	1	148mm	W4	89S41-095-550	1	330mm	W5	89S41-095-550	1	168mm
W6	89S41-095-550	1	346mm	W7	89S41-095-550	1	188mm	W8	89S41-095-550	1	715mm	W9	89S41-095-550	1	228mm	W10	89S41-095-550	1	728mm
W11	89S41-095-550	1	268mm	W12	89S41-095-550	1	743mm	W13	89S41-095-550	1	308mm	W14	89S41-095-550	1	759mm	W15	89S41-095-550	1	348mm
W16	89S41-095-550	1	778mm	W17	89S41-095-550	1	389mm	W18	89S41-095-550	1	798mm	W19	89S41-095-550	1	429mm	W20	89S41-095-550	1	820mm
W21	89S41-095-550	1	469mm	W22	89S41-095-550	1	843mm	W23	89S41-095-550	1	509mm	W24	89S41-095-550	1	867mm	W25	89S41-095-550	1	549mm
W26	89S41-095-550	1	892mm	W27	89S41-095-550	1	589mm	W28	89S41-095-550	1	919mm	W29	89S41-095-550	1	629mm	W30	89S41-095-550	1	705mm
W31	89S41-095-550	1	649mm																
Assembly Weight			50.7kg	FRAMECAD 10g-19mm XDrive			116												

FRAMECAD



Quantity Required = 1 Mark as HN4 Engineering Status = Passed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors	
SNOW Factors	
No Snow Load Apply	
Wind Pressure Factors	
Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type: Name Qty
Main: FRAMECAD 10g-19mm XDrive (SJ) 2
Sub: FRAMECAD 10g-16mm Flathead(SJ) Refer DWG
F# denotes total number fasteners in each member at joint.
Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.
Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
1-4	-0.09	0.02	13%	(18)
4-6	-3.63	0.76	21%	(18)
6-9	-3.63	0.76	19%	(18)
9-15	-6.59	1.29	47%	(18)
15-21	-9.18	1.86	55%	(19)
21-27	-10.04	2.06	58%	(20)
27-33	-9.90	2.05	57%	(21)
33-39	-9.14	1.90	54%	(22)
39-45	-8.01	1.66	50%	(23)
45-51	-6.67	1.36	46%	(24)
51-57	-5.19	1.00	41%	(25)
57-63	-3.60	0.62	36%	(26)
63-69	-1.94	0.20	31%	(27)
69-75	-0.27	1.43	30%	(28)
75-79	-0.64	2.63	83%	(11)
79-82	-0.26	0.06	41%	(11)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
3-5	-0.07	0.03	12%	(18)
5-8	-0.79	3.64	13%	(18)
8-10	-1.31	6.50	25%	(18)
10-16	-1.88	9.13	37%	(7)
16-22	-2.08	10.00	40%	(8)
22-29	-2.08	10.00	41%	(2)
29-35	-2.07	9.85	42%	(2)
35-40	-1.92	9.10	42%	(2)
40-46	-1.67	7.96	40%	(2)
46-52	-1.37	6.65	36%	(2)
52-58	-1.01	5.18	30%	(2)
58-65	-0.62	3.59	25%	(15)
65-70	-1.37	1.93	24%	(16)
70-77	-2.57	0.62	27%	(11)
77-80	-2.57	0.62	44%	(11)

Web

Member	Com. kN	Ten. kN	CSI	LC
2-5	-1.66	4.00	7%	(18)
6-9	-3.34	0.60	13%	(7)
10-15	-3.49	1.45	13%	(8)
16-21	-1.89	1.02	7%	(9)
22-27	-0.95	1.75	4%	(10)
28-33	-0.86	2.16	4%	(20)
34-39	-1.07	2.41	4%	(21)
40-45	-1.25	2.57	5%	(22)
46-51	-1.40	2.68	5%	(23)
52-57	-1.54	2.77	6%	(24)
58-63	-1.67	2.83	6%	(25)
64-69	-1.79	2.94	7%	(26)
70-75	-1.91	2.62	7%	(27)
76-79	-6.34	1.54	24%	(11)
80-81	-1.19	4.94	8%	(11)

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	21%
LC2	(G)	42%
LC3	(max(1.0Q,0.7S))	25%
LC4	(1.2G+1.5Q)	67%
LC5	(1.2G+Wd)	68%
LC6	(0.9G+Wu)	9%
LC7-LC28	(1.2G+1.5P)	83%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	3.16	35	Span/250,15.0	15.0	21.0%
LC2	5.0	35	Span/300,12.0	12.0	42.0%
LC3	2.94	35	Span/300,12.0	12.0	24.5%

REINFORCING PLATES & MEMBERS

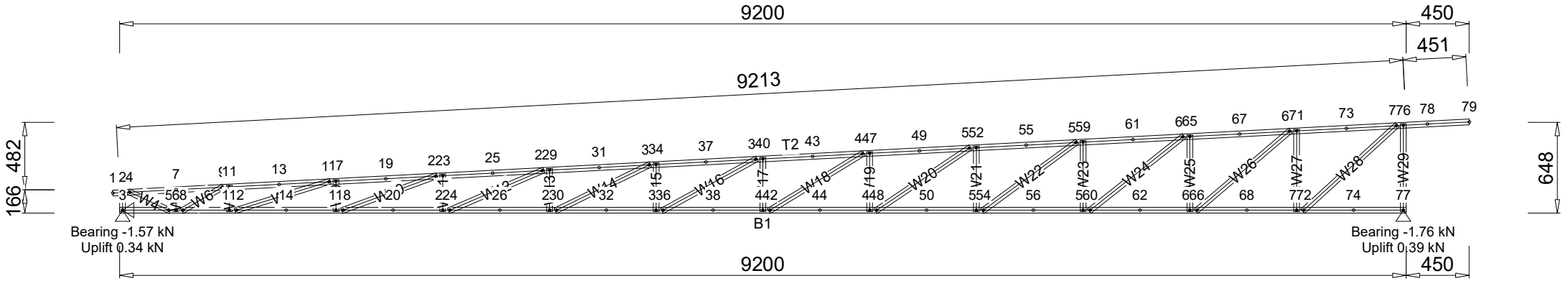
Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.
Fasteners: FRAMECAD 10-g 16m Flathead
Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.
Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.
Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	292	Roof Load Type:	SHEET	Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00	Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW	Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10

Company: FRAMECAD Dwg Name: Unit 15 Type D 400 Sheet 1 of 1 Project: Unit 15 Type D Job Number:

B1	89S41-095-550	1	9200mm	T2	89S41-095-550	1	9713mm	W3	89S41-095-550	1	148mm	W4	89S41-095-550	1	329mm	W5	89S41-095-550	1	168mm
W6	89S41-095-550	1	345mm	W7	89S41-095-550	1	188mm	W8	89S41-095-550	1	713mm	W9	89S41-095-550	1	228mm	W10	89S41-095-550	1	726mm
W11	89S41-095-550	1	268mm	W12	89S41-095-550	1	741mm	W13	89S41-095-550	1	308mm	W14	89S41-095-550	1	758mm	W15	89S41-095-550	1	348mm
W16	89S41-095-550	1	776mm	W17	89S41-095-550	1	388mm	W18	89S41-095-550	1	796mm	W19	89S41-095-550	1	428mm	W20	89S41-095-550	1	818mm
W21	89S41-095-550	1	468mm	W22	89S41-095-550	1	841mm	W23	89S41-095-550	1	508mm	W24	89S41-095-550	1	865mm	W25	89S41-095-550	1	548mm
W26	89S41-095-550	1	890mm	W27	89S41-095-550	1	588mm	W28	89S41-095-550	1	917mm	W29	89S41-095-550	1	628mm				
Assembly Weight		48.1kg		FRAMECAD 10g-19mm XDrive		108													

FRAMECAD



Quantity Required = 1 Mark as HN6 Engineering Status = Passed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors	
SNOW Factors	
No Snow Load Apply	
Wind Pressure Factors	
Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type: Name Qty
Main: FRAMECAD 10g-19mm XDrive (SJ) 2
Sub: FRAMECAD 10g-16mm Flathead(SJ) Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
1-4	-0.09	0.02	14%	(18)
4-7	-3.91	0.82	23%	(18)
7-9	-3.91	0.83	20%	(18)
9-15	-7.09	1.42	49%	(18)
15-21	-10.19	2.07	58%	(19)
21-27	-11.47	2.34	62%	(20)
27-33	-11.67	2.39	62%	(21)
33-39	-11.17	2.30	61%	(22)
39-45	-10.19	2.10	57%	(23)
45-51	-8.98	1.84	53%	(24)
51-57	-7.53	1.53	48%	(25)
57-63	-5.88	1.18	43%	(26)
63-69	-4.06	0.81	36%	(27)
69-75	-2.11	0.40	48%	(29)
75-79	-0.06	0.09	30%	(29)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
3-5	-0.07	0.03	13%	(18)
5-8	-0.86	3.91	14%	(18)
8-10	-1.43	7.00	27%	(18)
10-16	-2.09	10.13	38%	(7)
16-22	-2.36	11.43	45%	(2)
22-28	-2.41	11.63	50%	(2)
28-35	-2.41	11.63	52%	(2)
35-41	-2.31	11.12	52%	(2)
41-46	-2.12	10.14	51%	(2)
46-53	-1.85	8.97	46%	(2)
53-58	-1.54	7.52	39%	(2)
58-64	-1.19	5.86	31%	(2)
64-70	-0.81	4.05	26%	(16)
70-77	-0.40	2.09	22%	(17)

Web

Member	Com. kN	Ten. kN	CSI	LC
2-5	-1.78	4.31	7%	(18)
6-9	-3.60	0.66	13%	(7)
10-15	-3.90	1.57	15%	(8)
16-21	-2.23	0.86	8%	(9)
22-27	-1.22	1.51	5%	(10)
28-33	-0.77	1.95	3%	(20)
34-39	-0.98	2.22	4%	(21)
40-45	-1.16	2.40	4%	(22)
46-51	-1.32	2.53	5%	(23)
52-57	-1.47	2.64	6%	(24)
58-63	-1.60	2.72	6%	(25)
64-69	-1.72	2.81	6%	(26)
70-75	-1.90	2.83	7%	(27)
76-77	-1.76	0.40	7%	(29)

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	25%
LC2	(G)	52%
LC3	(max(1.0Q,0.7S))	30%
LC4	(1.2G+1.5Q)	30%
LC5	(1.2G+Wd)	31%
LC6	(0.9G+Wu)	7%
LC7-LC29	(1.2G+1.5P)	62%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	3.81	35	Span/250,15.0	15.0	25.4%
LC2	6.3	35	Span/300,12.0	12.0	52.2%
LC3	3.57	35	Span/300,12.0	12.0	29.7%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.

Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	278	Roof Load Type:	SHEET
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW

Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12		
Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25		
Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10		

Stud Design for Panel S6

Company:	FRAMECAD	Tab Name:	GROUND WALL
Project:	Unit 15 Type D 107 Blockhouse Bay Road	Dwg Name:	Unit 15 Type D 400
		Detailer:	Ralph Lao
		Print Date:	06-10-2021
Job Number:		Page No:	1

Panel Label: S6

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	2.91	kN/m
Live Load (Q1 = max(Q2,Q3))	8.10	kN/m
Roof Live Load (Q2)	0.09	kN/m
Floor Live Load (Q3)	8.10	kN/m
Live Load (Q4 = Q2+Q3)	8.19	kN/m
Wind Up Load (Wu)	0.25	kN/m
Wind Down Load (Wd)	0.11	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	4027.0	mm
1.2G + 1.5Q3	1768.0	mm
1.2G + 0.4Q3 + 1.0S	4108.0	mm
1.2G + 1.5P1	7447.0	mm
1.2G + 0.4Q3 + Wd + Wh	2166.9	mm
0.9G + 1.0Wu + 1.0Wh	3481.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	1750	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	34	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

Stud Design for Panel S7

Company:	FRAMECAD	Tab Name:	1ST WALL
Project:	Unit 15 Type D 107 Blockhouse Bay Road	Dwg Name:	Unit 15 Type D 400
		Detailer:	Ralph Lao
		Print Date:	06-10-2021
Job Number:		Page No:	1

Panel Label: S7

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	2.57	kN/m
Live Load (Q1 = max(Q2,Q3))	1.37	kN/m
Roof Live Load (Q2)	1.37	kN/m
Floor Live Load (Q3)	0.80	kN/m
Live Load (Q4 = Q2+Q3)	2.17	kN/m
Wind Up Load (Wu)	3.31	kN/m
Wind Down Load (Wd)	1.52	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	3658.0	mm
1.2G + 1.5Q3	4661.3	mm
1.2G + 0.4Q3 + 1.0S	5866.3	mm
1.2G + 1.5P1	5940.0	mm
1.2G + 0.4Q3 + Wd + Wh	1811.8	mm
0.9G + 1.0Wu + 1.0Wh	3086.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	1800	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	33	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

POINT LOAD

Load Location	Stud Qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow(S) kN	Wind Up (Wu) kN	Floor Live(Q3) kN
1405	1	1.40	1.00	0.00	2.40	0.00
3026	1	1.40	1.00	0.00	2.40	0.00

Stud Design for Panel L2

Company:	FRAMECAD	Tab Name:	2ND WALL
Project:	Unit 15 Type D 107 Blockhouse Bay Road	Dwg Name:	Unit 15 Type D 400
		Detailer:	Ralph Lao
		Print Date:	06-10-2021
Job Number:		Page No:	1

Panel Label: L2

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	1.50	kN/m
Live Load (Q1 = max(Q2,Q3))	1.05	kN/m
Roof Live Load (Q2)	1.05	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	1.05	kN/m
Wind Up Load (Wu)	2.55	kN/m
Wind Down Load (Wd)	1.15	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	5917.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2236.8	mm
0.9G + 1.0Wu + 1.0Wh	3086.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2225	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	27	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N1

Company:	FRAMECAD	Tab Name:	ROOF WALL
Project:	Unit 15 Type D 107 Blockhouse Bay Road	Dwg Name:	Unit 15 Type D 400
		Detailer:	Ralph Lao
		Print Date:	06-10-2021
Job Number:		Page No:	1

Panel Label: N1

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.12	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	9000.0	mm
0.9G + 1.0Wu + 1.0Wh	9000.0	mm
0.44Wh	9000.0	mm
P2	16491.1	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	1058	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	9000	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	7	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

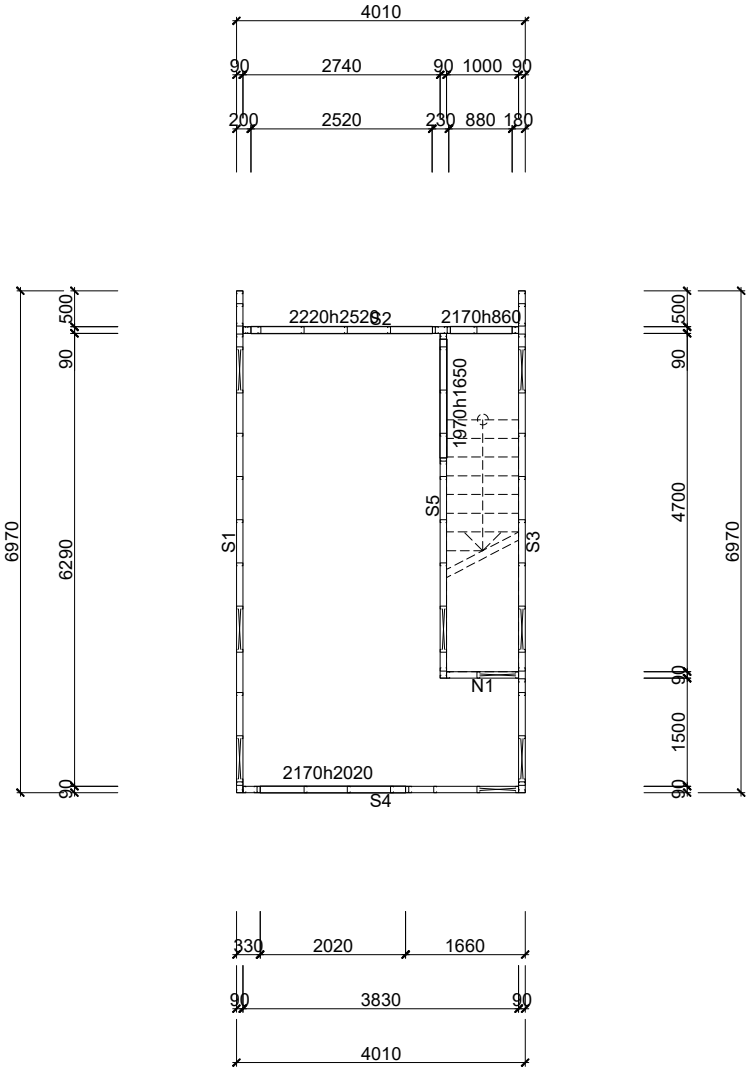
Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	22.05	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

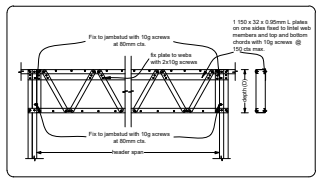
NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.



GROUND FLOOR LAYOUT

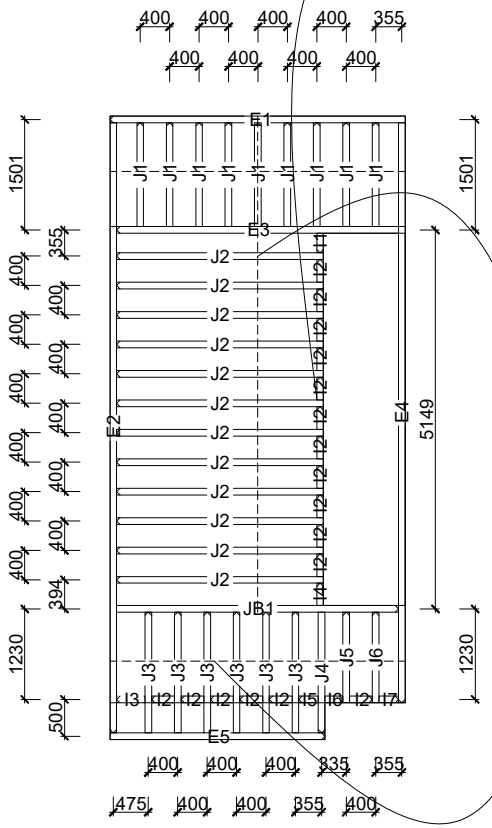


DO NOT SCALE.
IF IN DOUBT, ASK.

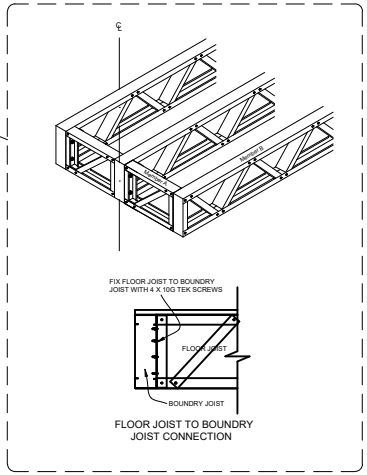
FRAMECAD

JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 18 Type E 107 Blockhouse Bay Road	Ralph Lao	06-10-2021	1 : 100		
	DWG FILE Unit 18	VIEW NAME 1 of 8	ON A4-Sheet		

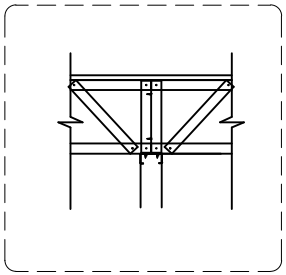
Floor Member Summary			
E1	WJ89115H	1	4010
E2	WJ89115H	1	6879
E3	WJ89115H	1	3830
E4	WJ89115H	1	5060
E5	WJ89115H	1	2920
E6	WJ89115H	1	1320
I1	WJ89115H	1	266
I2	WJ89115H	17	310
I3	WJ89115H	1	385
I4	WJ89115H	1	304
I5	WJ89115H	1	265
I6	WJ89115H	1	245
I7	WJ89115H	1	265
J1	WJ89115H	9	1411
J2	WJ89115H	12	2810
J3	WJ89115H	6	1640
J4	WJ89115H	1	1640
J5	WJ89115H	1	1230
J6	WJ89115H	1	1230
JB1	WJ89115H	1	3830
S1	WJ89115H	2	1411
	FRAMECAD BATTEN 22	15	4800
	FRAMECAD BATTEN 22	1	6100
	FRAMECAD 10g-19mm HWH Hex		800

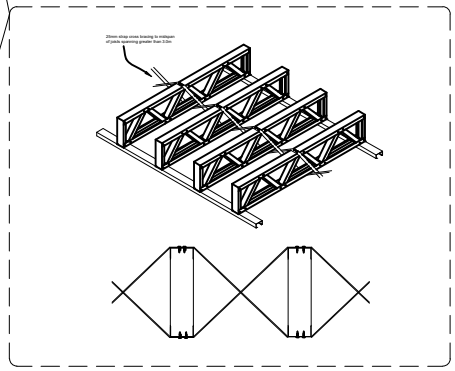


FIRST FLOOR LEVEL JOIST LAYOUT



FLOOR JOIST TO BOUNDRY JOIST CONNECTION





DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD

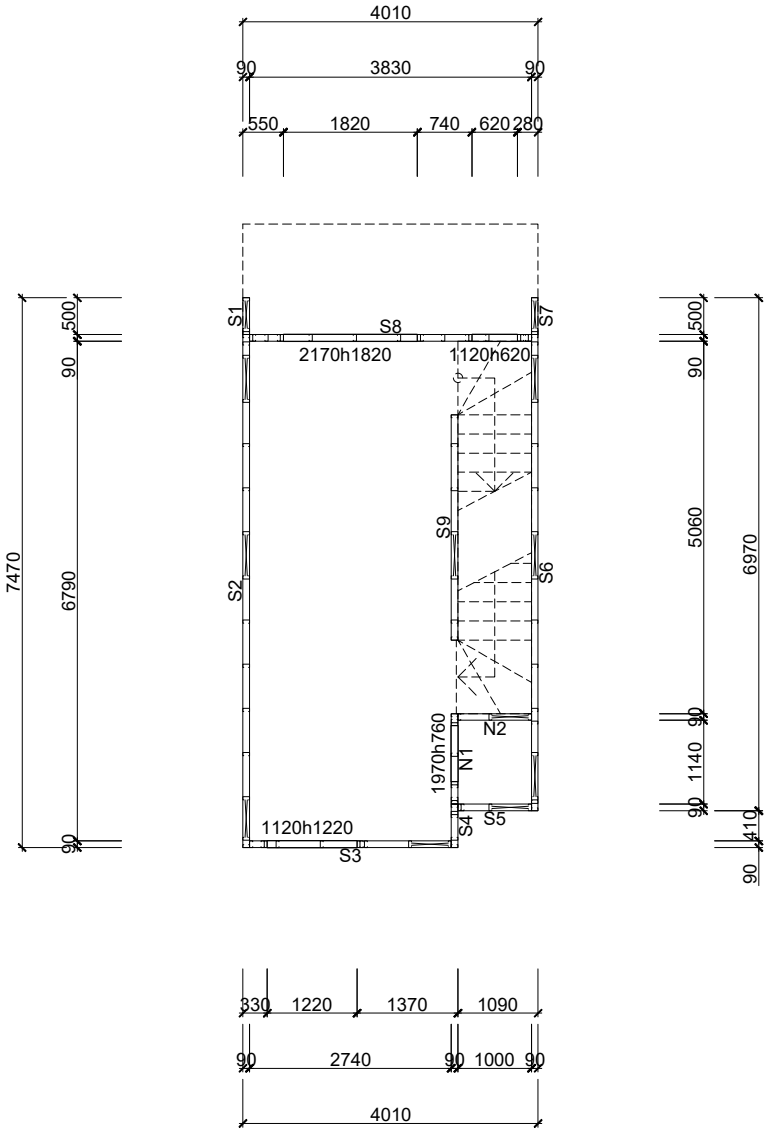
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 18 Type E 107 Blockhouse Bay Road	Ralph Lao	06-10-2021	1 : 100		
	DWG FILE Unit 18	VIEW NAME 2 of 8	ON A4-Sheet		

Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

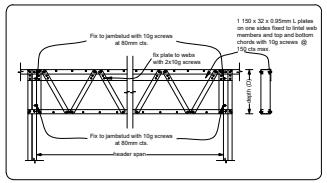
NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.



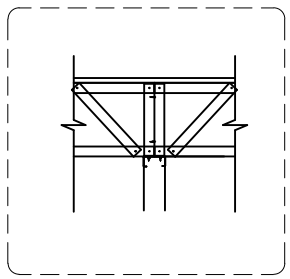
FIRST FLOOR LEVEL LAYOUT

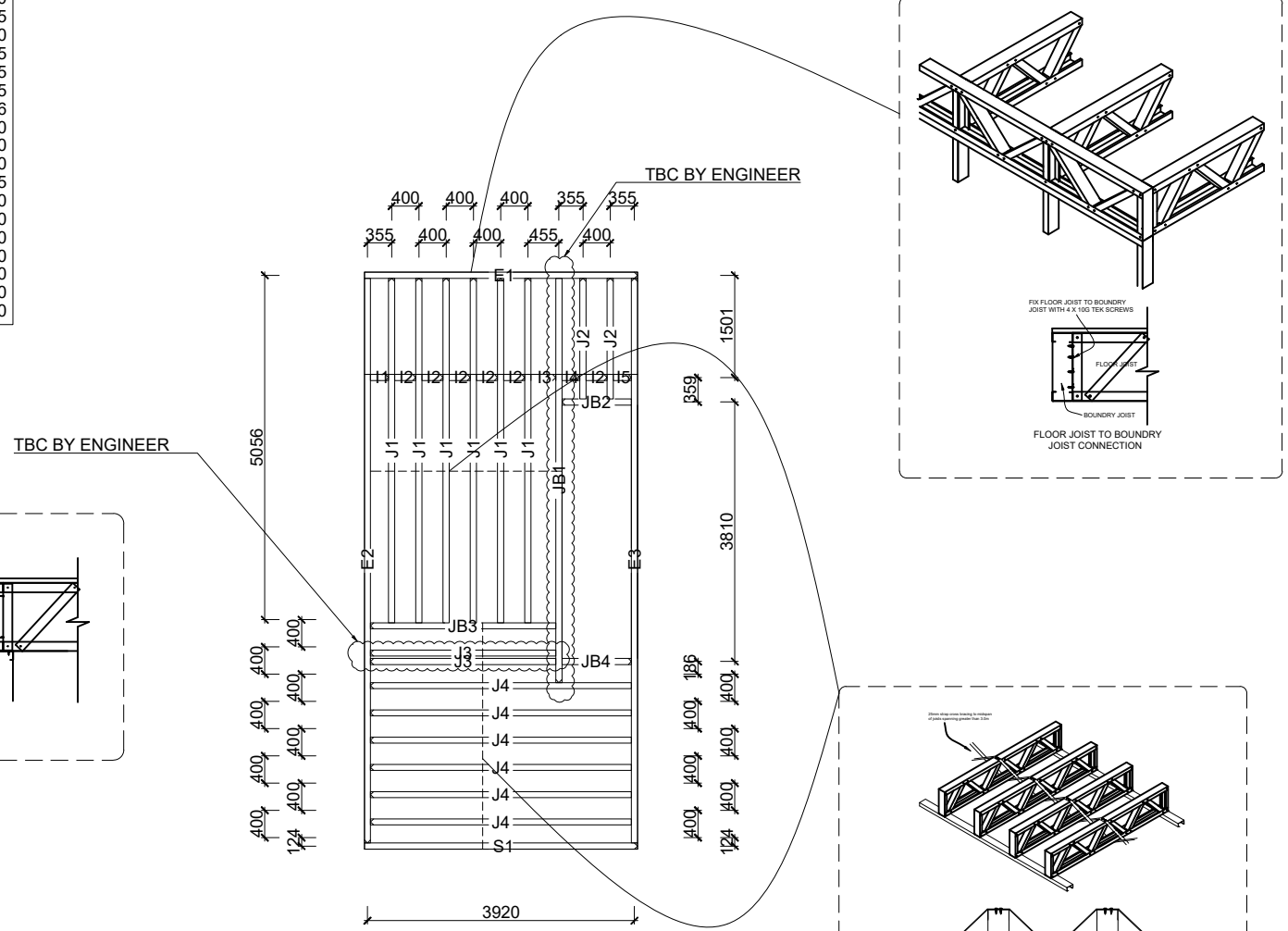


DO NOT SCALE.
IF IN DOUBT, ASK.

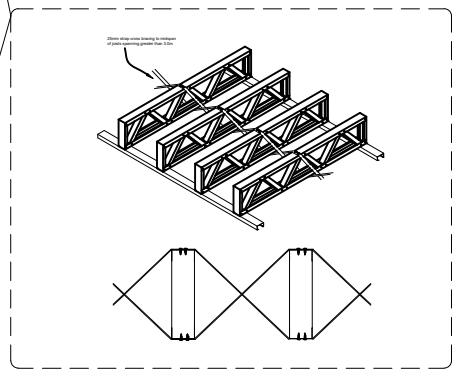
FRAMECAD	JOB DETAILS Unit 18 Type E 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 06-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 18	VIEW NAME 3 of 8	ON A4-Sheet		

Floor Member Summary			
E1	WJ89115H	1	4010
E2	WJ89115H	1	8290
E3	WJ89115H	1	8290
I1	WJ89115H	1	265
I2	WJ89115H	6	310
I3	WJ89115H	1	365
I4	WJ89115H	1	265
I5	WJ89115H	1	265
J1	WJ89115H	6	5056
J2	WJ89115H	2	1770
J3	WJ89115H	2	2720
J4	WJ89115H	6	3830
JB1	WJ89115H	1	5935
JB2	WJ89115H	1	1020
JB3	WJ89115H	1	2720
JB4	WJ89115H	1	1020
S1	WJ89115H	1	4010
	FRAMECAD BATTEN 22	13	4800
	FRAMECAD BATTEN 22	1	6100
	FRAMECAD 10g-19mm HWH Hex		700





FLOOR JOIST TO BOUNDRY JOIST CONNECTION



SECOND FLOOR LEVEL JOIST LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD

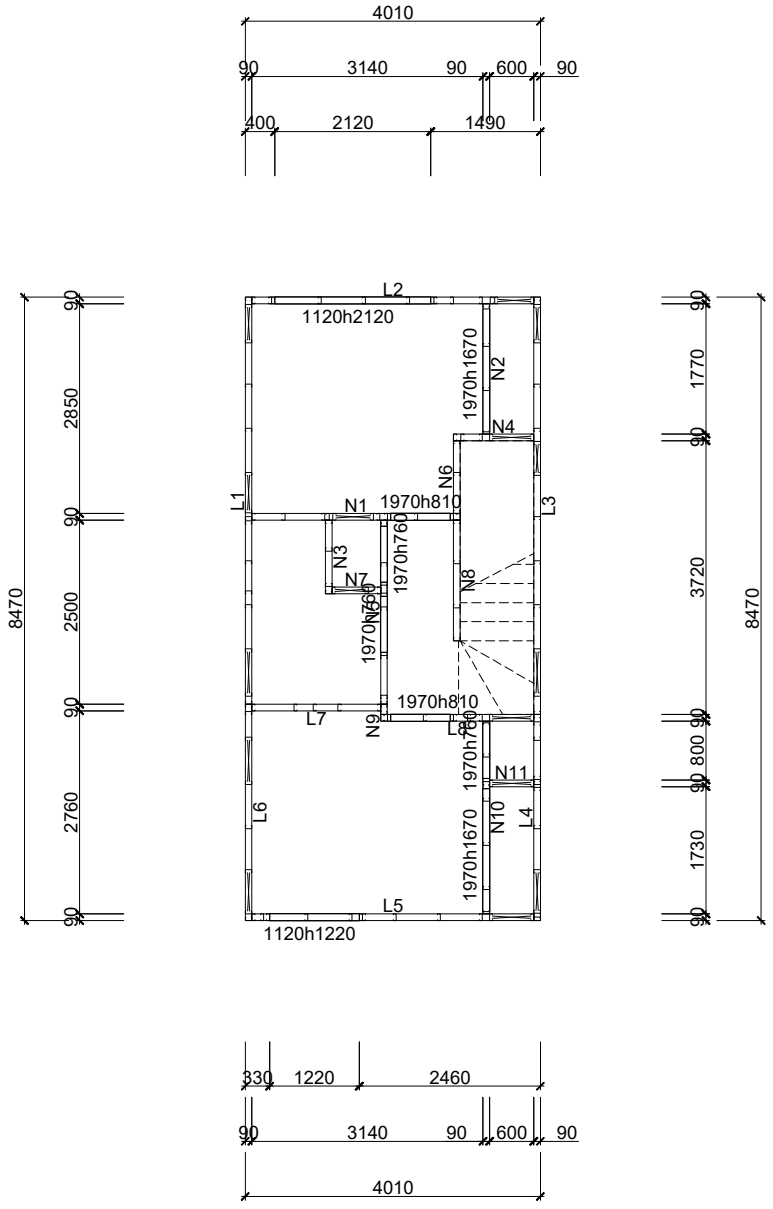
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 18 Type E 107 Blockhouse Bay Road	Ralph Lao	06-10-2021	1 : 100		
	DWG FILE Unit 18	VIEW NAME 4 of 8	ON A4-Sheet		

Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.

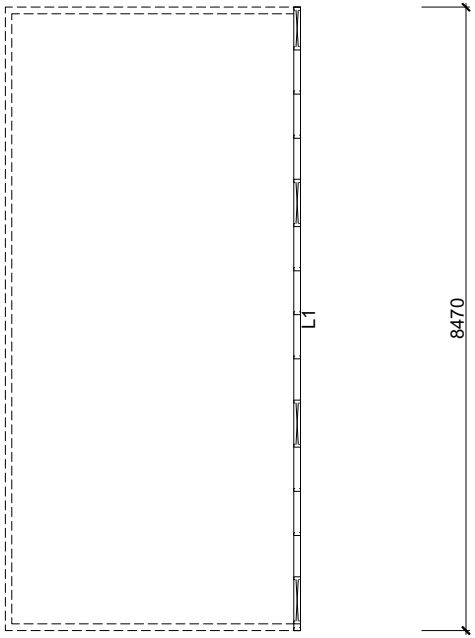


SECOND FLOOR LEVEL LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD	JOB DETAILS Unit 18 Type E 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 06-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 18	VIEW NAME 5 of 8	ON A4-Sheet		

Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

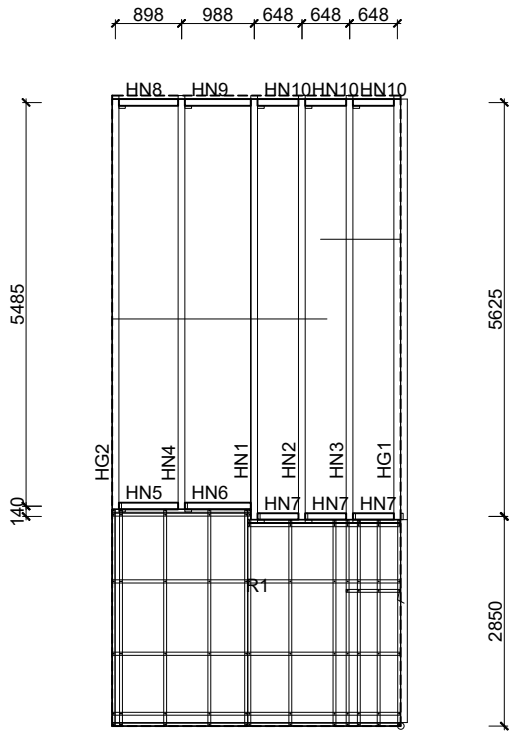


DO NOT SCALE.
IF IN DOUBT, ASK.

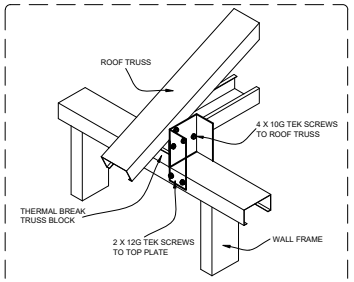
FRAMECAD®

JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 18 Type E 107 Blockhouse Bay Road	Ralph Lao	06-10-2021	1 : 100		
	DWG FILE Unit 18	VIEW NAME 6 of 8	ON A4-Sheet		

Truss Design Summary	
System Name	FC_SFSNZ
Design Code	AS/NZS 4600:2018
Loading Code	NASH NZ 2010
Roof Load	SHEET
Wind Speed	LOW
Snow Load	0.00
Roof Pitch	3.000
BC Restraints	600



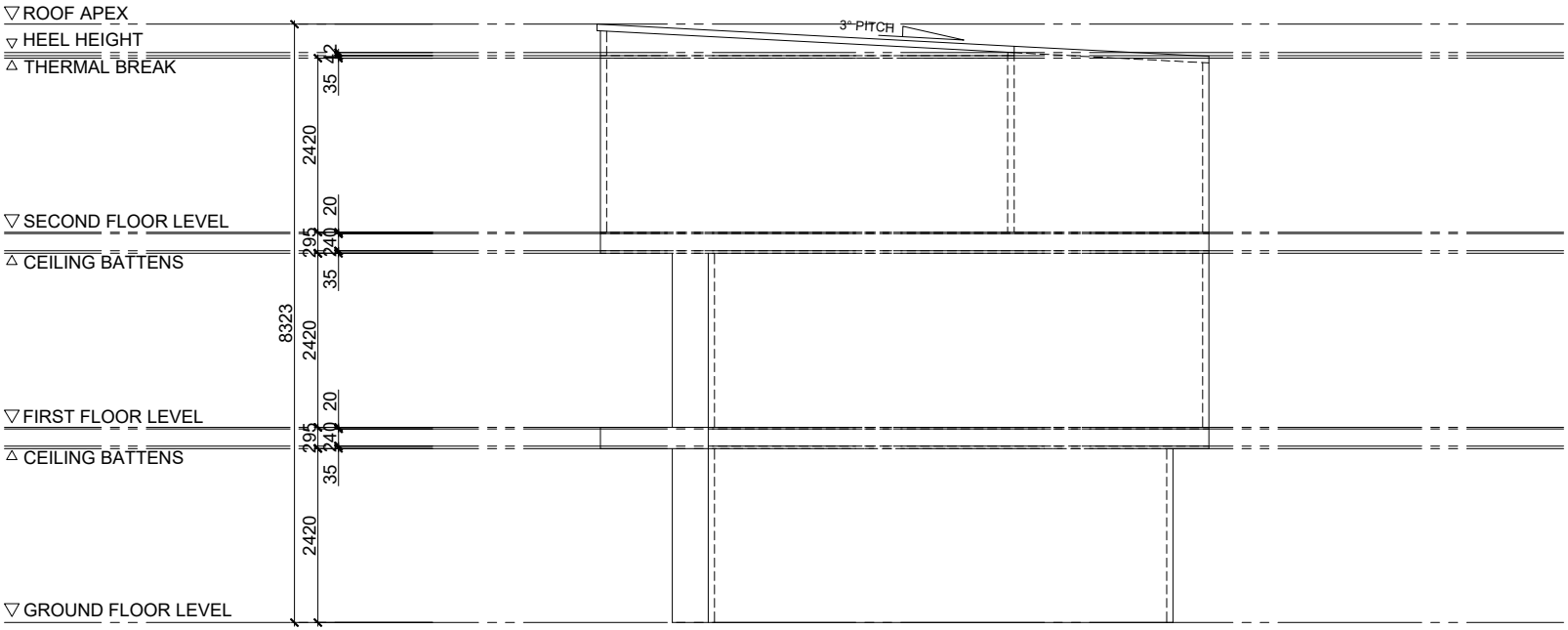
ROOF FRAMING LAYOUT



TYPE A "H" BRACKET CONNECTION

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD	JOB DETAILS Unit 18 Type E 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 06-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 18	VIEW NAME 7 of 8	ON A4-Sheet		

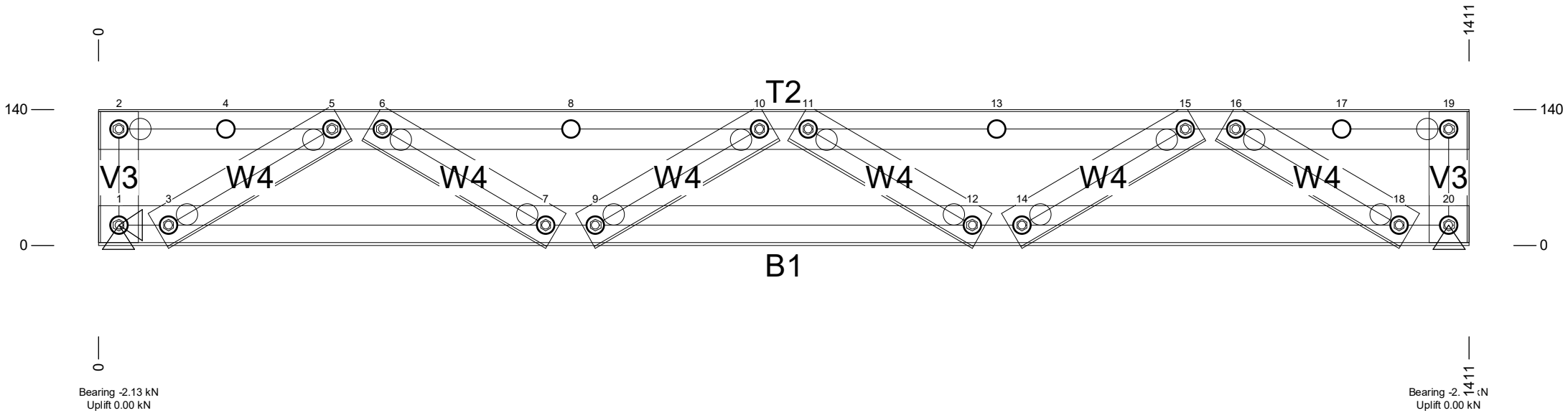


DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD	JOB DETAILS Unit 18 Type E 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 06-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 18	VIEW NAME 8 of 8	ON A4-Sheet		

B1	89S41-115-550	9	1411	T2	89S41-115-550	9	1411	V3	89S41-115-550	18	135	W4	89S41-115-550	54	219
Assembly Weight		7.5kg		FRAMECAD 10g-16mm Flathead		288		FRAMECAD 10g-19mm XDrive		288					

FRAMECAD



Beam Type WJ89115H Mark as J1 Quantity Required = 9 Engineering Status = 17%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.07	0.18	12%	(6)
3-5	-4.52	0.00	13%	(6)
6-7	-0.57	1.73	3%	(5)
9-10	-1.51	0.73	4%	(5)
11-12	-1.45	0.85	4%	(5)
14-15	-0.63	1.63	2%	(5)
16-18	-4.19	0.00	12%	(4)
19-20	-0.10	0.08	14%	(4)
7-12	0.00	4.74	11%	(5)
12-18	0.00	4.44	10%	(4)
18-20	0.00	0.83	1%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-1.00	0.00	13%	(6)
5-10	-4.89	0.00	17%	(6)
10-15	-4.73	0.00	13%	(5)
15-19	-4.44	0.00	12%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	4.91	10%	(6)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	4%
LC2	(G+Q)	7%
LC3	(1.2G+1.5Q)	10%
LC4-LC6	(1.2G+1.5P)	17%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.14	10	Span/360,12.0	3.80	4%
LC2	0.26	10	Span/240,12.0	5.7	5%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

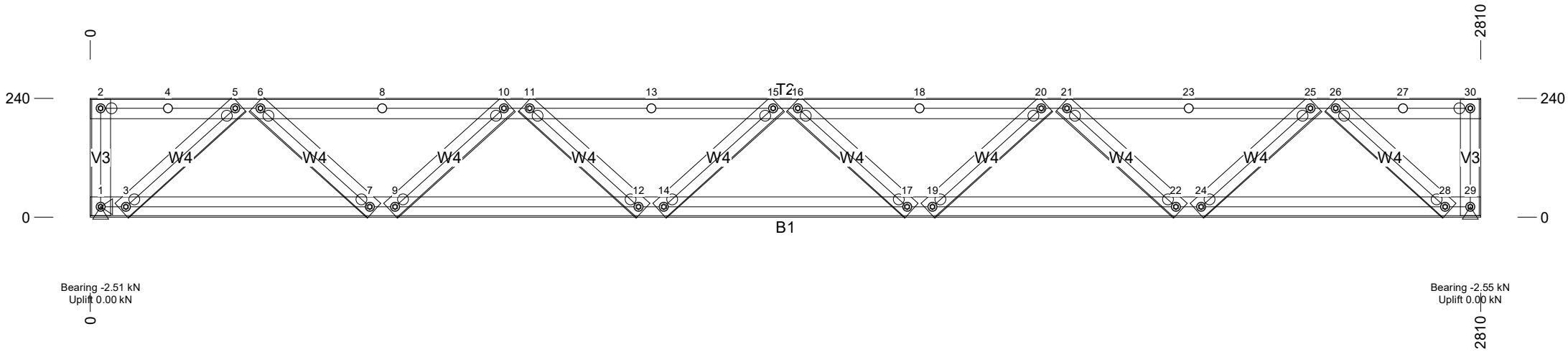
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32		
		Top Chord Live Load (kPa) :	2.00		
		Design Point Load (kN) :	1.8		

B1	89S41-115-550	12	2810	T2	89S41-115-550	12	2810	V3	89S41-115-550	24	235	W4	89S41-115-550	120	321
Assembly Weight		15.8kg		FRAMECAD 10g-16mm Flathead		576		FRAMECAD 10g-19mm XDrive		576					

FRAMECAD



Beam Type WJ89115H Mark as J2 Quantity Required = 12 Engineering Status = 28%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.21	12%	(8)
3-5	-4.13	0.00	12%	(8)
6-7	0.00	2.22	3%	(3)
9-10	-2.09	0.00	6%	(3)
11-12	-0.36	1.39	2%	(6)
14-15	-1.17	0.57	3%	(6)
16-17	-1.11	0.64	3%	(6)
19-20	-0.43	1.31	2%	(6)
21-22	-2.09	0.08	6%	(3)
24-25	0.00	2.22	3%	(3)
26-28	-3.83	0.00	11%	(4)
29-30	-0.03	0.11	15%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.50	0.00	18%	(8)
5-10	-4.36	0.00	16%	(8)
10-15	-6.52	0.00	19%	(3)
15-20	-6.98	0.00	20%	(3)
20-25	-5.90	0.00	17%	(3)
25-30	-3.31	0.00	14%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.61	28%	(8)
7-12	0.00	5.94	14%	(3)
12-17	0.00	7.01	13%	(3)
17-22	0.00	6.54	14%	(3)
22-28	0.00	4.36	10%	(4)
28-29	0.00	0.47	1%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	7%
LC2	(G+Q)	14%
LC3	(1.2G+1.5Q)	20%
LC4-LC8	(1.2G+1.5P)	28%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.58	15	Span/360,12.0	7.7	7%
LC2	1.09	15	Span/240,12.0	11.5	9%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

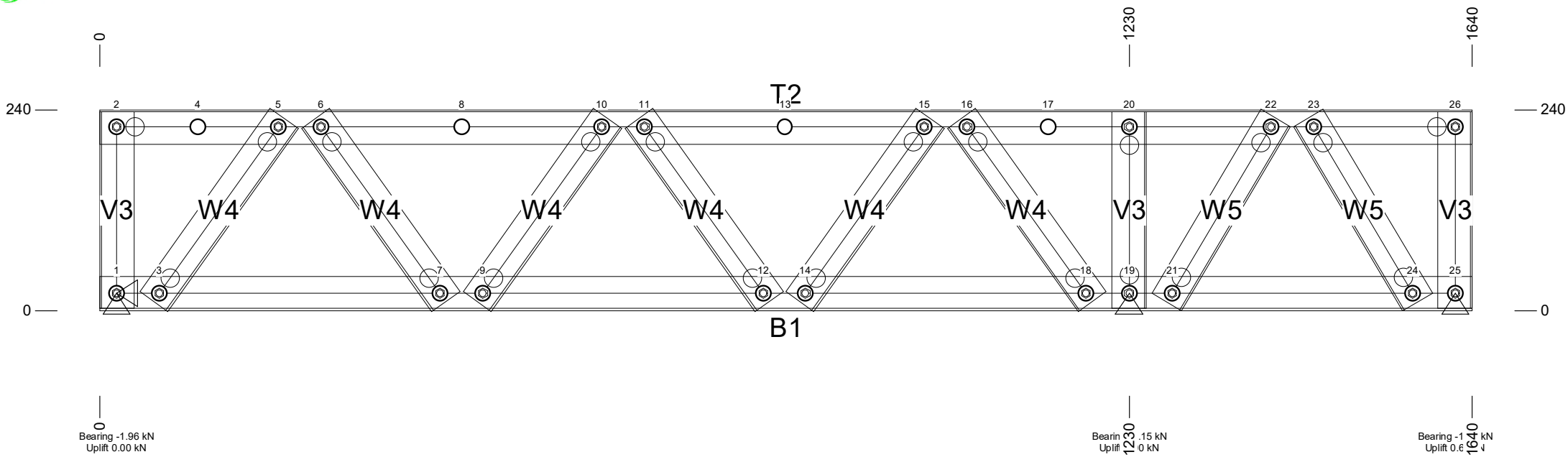
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00	Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Design Point Load (kN) :	1.8

Company: FRAMECAD	Dwg Name: Unit 18	Sheet 1 of 1	Project: Unit 18 Type E	Job Number:

B1	89S41-115-550	6	1640	T2	89S41-115-550	6	1640	V3	89S41-115-550	18	235	W4	89S41-115-550	36	268	W5	89S41-115-550	12	255

Assembly Weight	10.4kg	FRAMECAD 10g-16mm Flathead	264	FRAMECAD 10g-19mm XDrive	264

FRAMECAD



Beam Type WJ89115H Mark as J3 Quantity Required = 6 Engineering Status = 22%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.05	0.24	10%	(14)
3-5	-2.75	0.00	8%	(14)
6-7	-0.47	0.91	1%	(13)
9-10	-0.71	0.71	2%	(13)
11-12	-1.17	0.20	3%	(13)
14-15	-0.04	1.29	2%	(13)
16-18	-2.94	0.00	8%	(12)
19-20	-2.31	0.21	6%	(11)
21-22	-1.40	0.00	4%	(10)
23-24	-1.40	0.62	4%	(10)
25-26	-0.21	0.00	6%	(10)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.39	0.00	14%	(14)
5-10	-1.99	0.00	10%	(14)
10-15	-1.63	0.00	6%	(14)
15-20	-0.88	0.83	9%	(13)
20-22	-0.17	0.82	6%	(10)
22-26	-0.89	0.49	5%	(10)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	2.03	22%	(14)
7-12	0.00	1.75	7%	(13)
12-18	0.00	0.98	8%	(12)
18-21	-0.81	0.19	2%	(12)
21-24	-0.48	0.89	9%	(12)
24-25	-0.17	0.18	10%	(10)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	3%
LC2	(G+Q)	5%
LC3-LC6	Patch(G+0.4Q)	3%
LC3-LC6	Patch(G+Q)	5%
LC7	(1.2G+1.5Q)	7%
LC8-LC9	Patch(1.2G+1.5Q)	7%
LC10-LC14	(1.2G+1.5P)	22%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.04	8	Span/360,12.0	3.36	1%
LC2	0.07	8	Span/240,12.0	5.0	1%
Summary for Patch Loading cases (LC3 - LC6) :					
Critical case inPatch(G+0.4Q):					
LC4	0.07	8	Span/240,12.0	5.0	1%
Critical case inPatch(G+Q):					
LC5	0.01	8	Span/360,12.0	3.36	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

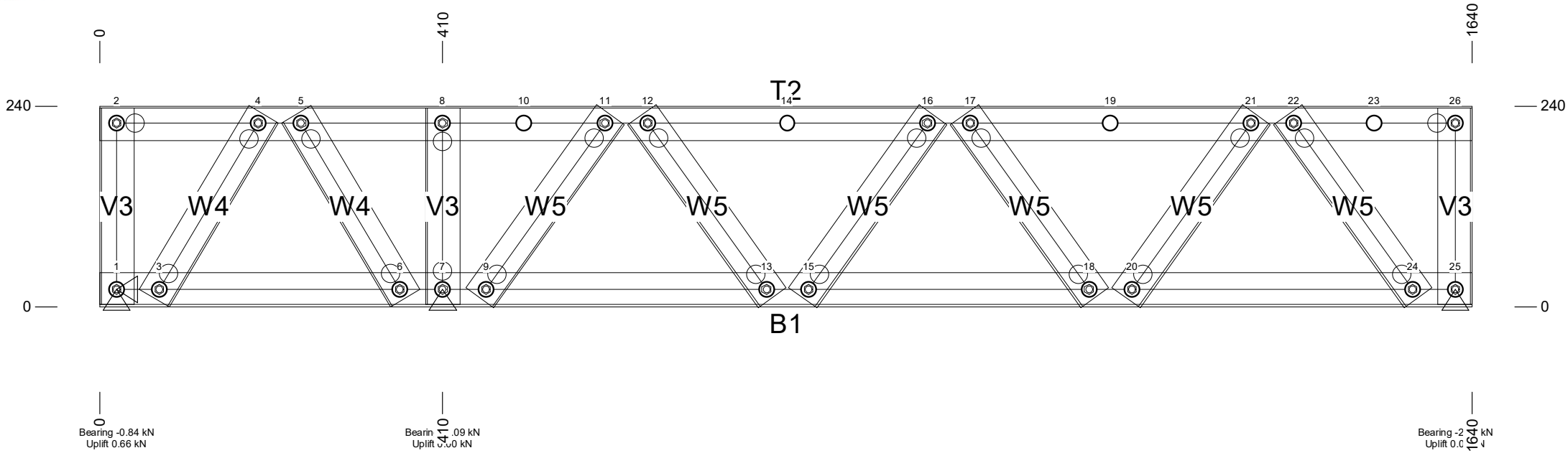
Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

Company: FRAMECAD	Dwg Name: Unit 18	Sheet 1 of 1	Project: Unit 18 Type E	Job Number:

B1	89S41-115-550	1	1640	T2	89S41-115-550	1	1640	V3	89S41-115-550	3	235	W4	89S41-115-550	2	255	W5	89S41-115-550	6	268

Assembly Weight	10.4kg	FRAMECAD 10g-16mm Flathead	44	FRAMECAD 10g-19mm XDrive	44

FRAMECAD®



Beam Type WJ89115H Mark as J4 Quantity Required = 1 Engineering Status = 17%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.15	0.06	6%	(12)
3-4	-0.94	0.58	3%	(14)
5-6	-1.78	0.00	5%	(14)
7-8	-2.31	0.42	6%	(13)
9-11	-3.29	0.00	9%	(12)
12-13	0.00	1.32	2%	(11)
15-16	-1.18	0.11	3%	(11)
17-18	-0.70	0.71	2%	(11)
20-21	-0.47	0.88	1%	(11)
22-24	-2.56	0.00	7%	(10)
25-26	-0.08	0.10	11%	(10)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-4	-0.17	0.19	4%	(14)
4-8	-0.65	0.85	5%	(12)
8-11	0.00	0.85	17%	(12)
11-16	-1.09	0.19	10%	(12)
16-21	-1.70	0.04	5%	(11)
21-26	-1.83	0.00	6%	(11)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	-0.45	0.69	11%	(12)
6-9	-0.82	0.00	2%	(12)
9-13	-0.17	1.09	7%	(12)
13-18	-0.12	1.71	7%	(11)
18-24	0.00	1.84	10%	(10)
24-25	0.00	0.35	1%	(10)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	2%
LC2	(G+Q)	4%
LC3-LC6	Patch(G+0.4Q)	2%
LC3-LC6	Patch(G+Q)	4%
LC7	(1.2G+1.5Q)	6%
LC8-LC9	Patch(1.2G+1.5Q)	6%
LC10-LC14	(1.2G+1.5P)	17%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.04	19	Span/360,12.0	3.36	1%
LC2	0.07	19	Span/240,12.0	5.0	1%
Summary for Patch Loading cases (LC3 - LC6) :					
Critical case inPatch(G+0.4Q):					
LC6	0.07	19	Span/240,12.0	5.0	1%
Critical case inPatch(G+Q):					
LC5	0.04	19	Span/360,12.0	3.36	1%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

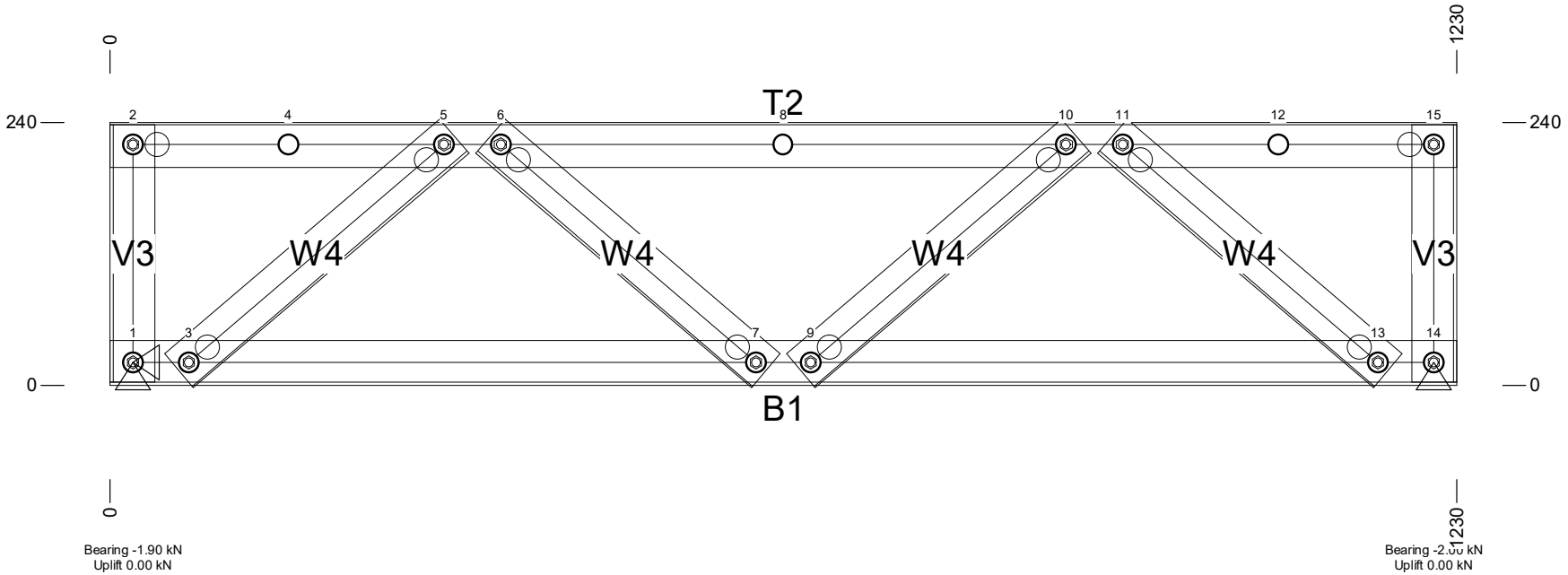
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

B1	89S41-115-550	1	1230	T2	89S41-115-550	1	1230	V3	89S41-115-550	2	235	W4	89S41-115-550	4	331
Assembly Weight		7.2kg		FRAMECAD 10g-16mm Flathead		24		FRAMECAD 10g-19mm XDrive		24					

FRAMECAD



Beam Type WJ89115H Mark as J5 Quantity Required = 1 Engineering Status = 23%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.12	0.14	10%	(5)
3-5	-3.12	0.00	9%	(5)
6-7	-0.91	1.10	3%	(5)
9-10	-0.91	1.08	3%	(4)
11-13	-2.94	0.00	8%	(4)
14-15	-0.12	0.07	12%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.41	0.00	13%	(5)
5-10	-2.78	0.00	11%	(5)
10-15	-2.61	0.00	8%	(5)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	2.80	23%	(5)
7-13	0.00	2.62	7%	(4)
13-14	0.00	0.38	1%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	3%
LC2	(G+Q)	6%
LC3	(1.2G+1.5Q)	8%
LC4	(1.2G+1.5P)	12%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.08	8	Span/360,12.0	3.30	2%
LC2	0.15	8	Span/240,12.0	4.95	3%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

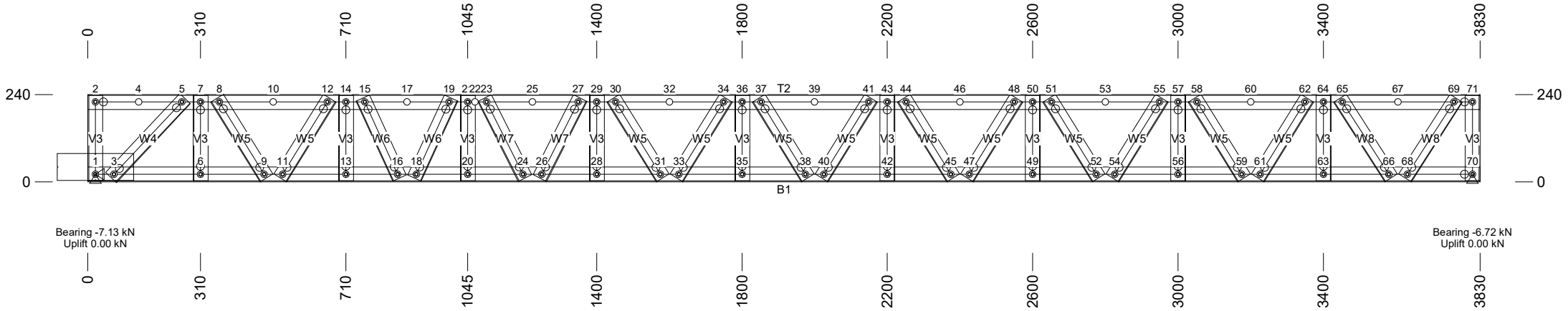
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32		
		Top Chord Live Load (kPa) :	2.00		
		Design Point Load (kN) :	1.8		

B1	89S41-115-550	1	3830	T2	89S41-115-550	1	3830	V3	89S41-115-550	11	235	W4	89S41-115-550	1	297	W5	89S41-115-550	12	258	W6	89S41-115-550	2	243
W7	89S41-115-550	2	247	W8	89S41-115-550	2	261																

Assembly Weight	25.7kg	FRAMECAD 10g-16mm Flathead	120
FRAMECAD 10g-19mm XDrive	120		

FRAMECAD®



Beam Type WJ89115H Mark as JB1 Quantity Required = 1 Engineering Status = 99%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	1.30	44%	(3)
3-5	-11.96	0.00	34%	(3)
6-7	-0.75	0.12	2%	(3)
8-9	0.00	10.43	16%	(3)
11-12	-10.49	0.00	29%	(3)
13-14	-0.02	0.32	0%	(12)
15-16	0.00	8.16	12%	(3)
18-19	-7.52	0.00	21%	(3)
20-21	-0.63	0.05	2%	(3)
23-24	0.00	5.57	8%	(3)
26-27	-4.28	0.00	12%	(3)
28-29	-0.67	0.01	2%	(3)
30-31	-0.25	2.61	4%	(3)
33-34	-1.44	0.58	4%	(9)
35-36	-0.63	0.04	2%	(3)
37-38	-0.94	1.08	3%	(10)
40-41	-0.70	1.40	2%	(3)
42-43	-0.60	0.05	2%	(3)
44-45	-3.12	0.34	9%	(3)
47-48	0.00	4.15	6%	(3)
49-50	-0.48	0.09	1%	(3)
51-52	-6.02	0.00	17%	(3)
54-55	0.00	6.85	10%	(3)
56-57	-0.27	0.17	1%	(3)
58-59	-8.94	0.00	25%	(3)
61-62	0.00	9.45	14%	(3)
63-64	-0.11	0.41	1%	(5)
65-66	-11.75	0.00	33%	(3)
68-69	0.00	12.19	18%	(3)
70-71	-8.05	0.00	23%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-1.79	0.00	99%	(3)
5-8	-9.98	0.00	51%	(3)
8-12	-15.47	0.00	86%	(3)
12-15	-21.00	0.00	60%	(3)
15-19	-24.38	0.00	85%	(3)
19-23	-27.50	0.00	77%	(3)
23-27	-30.01	0.00	86%	(3)
27-30	-31.95	0.00	90%	(3)
30-34	-33.33	0.00	94%	(3)
34-37	-34.08	0.00	96%	(3)
37-41	-33.93	0.00	95%	(3)
41-44	-33.20	0.00	93%	(3)
44-48	-31.56	0.00	89%	(2)
48-51	-29.38	0.00	83%	(3)
51-55	-26.21	0.00	84%	(3)
55-58	-22.61	0.00	64%	(3)
58-62	-17.90	0.00	78%	(3)
62-65	-12.94	0.00	52%	(3)
65-69	-6.59	0.00	99%	(3)
69-71	0.00	0.00	56%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	10.09	57%	(3)
6-9	0.00	10.09	38%	(3)
9-13	0.00	21.10	63%	(3)
13-16	0.00	21.09	60%	(2)
16-20	0.00	27.59	71%	(2)
20-24	0.00	27.59	78%	(2)
24-28	0.00	32.03	86%	(2)
28-31	0.00	32.03	90%	(2)
31-35	0.00	34.14	93%	(2)
35-38	0.00	34.14	93%	(2)
38-42	0.00	33.99	93%	(2)
42-45	0.00	33.25	90%	(2)
45-49	0.00	31.60	86%	(2)
49-52	0.00	29.41	78%	(2)
52-56	0.00	26.24	71%	(2)
56-59	0.00	22.63	62%	(3)
59-63	0.00	17.93	47%	(2)
63-66	0.00	12.95	61%	(3)
66-70	0.00	6.59	39%	(3)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
1400.0	Other	0.08	0.51	0.00
1800.0	Other	0.08	0.51	0.00
2200.0	Other	0.08	0.51	0.00
2600.0	Other	0.08	0.51	0.00
3000.0	Other	0.08	0.51	0.00
3400.0	Other	0.08	0.51	0.00
1045.0	Other	0.08	0.51	0.00
310.0	Other	0.08	0.49	0.00
710.0	Other	0.08	0.49	0.00
1065.0	Other	0.02	0.12	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	55%
LC2	(G+Q)	93%
LC3	(1.2G+1.5Q)	99%
LC4-LC13	(1.2G+1.5P)	48%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	5.8	37	Span/360,12.0	10.5	55%
LC2	11.2	37	Span/240,12.0	12.0	93%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node:	Plate:
1	FRAMECAD 1.15mm Fix Plate

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist Beam
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	2.30	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

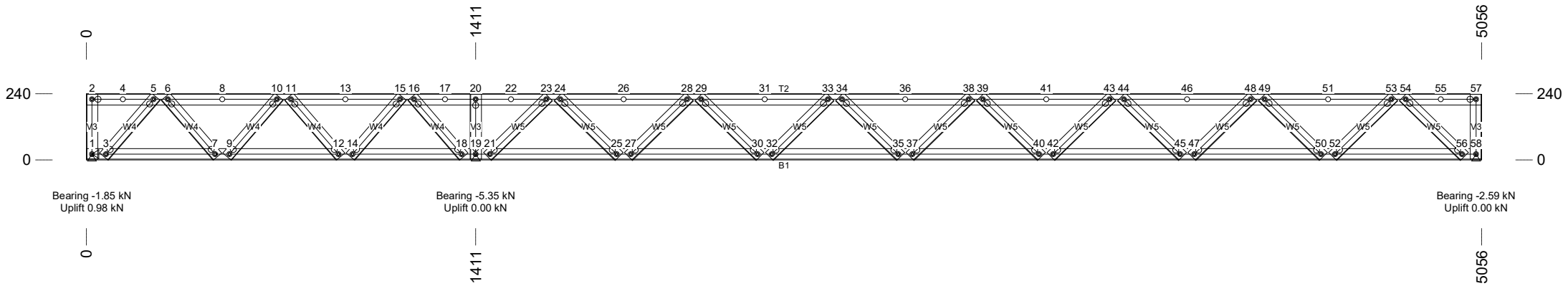
Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

Company: FRAMECAD	Dwg Name: Unit 18	Sheet 1 of 1	Project: Unit 18 Type E	Job Number:

B1	89S41-115-550	6	5056	T2	89S41-115-550	6	5056	V3	89S41-115-550	18	235	W4	89S41-115-550	36	287	W5	89S41-115-550	84	309

Assembly Weight	28.7kg	FRAMECAD 10g-16mm Flathead	552	FRAMECAD 10g-19mm XDrive	552

FRAMECAD



Beam Type WJ89115H Mark as J1 Quantity Required = 6 Engineering Status = 25%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.20	0.19	9%	(20)
3-5	-2.70	1.69	8%	(20)
6-7	-1.82	0.73	5%	(9)
9-10	-0.54	1.94	3%	(9)
11-12	-2.55	0.05	7%	(7)
14-15	0.00	2.32	3%	(7)
16-18	-3.36	0.00	9%	(18)
19-20	-2.33	0.36	7%	(17)
21-23	-4.82	0.00	14%	(9)
24-25	0.00	4.01	6%	(9)
27-28	-4.06	0.00	11%	(7)
29-30	0.00	2.93	4%	(7)
32-33	-2.71	0.00	8%	(7)
34-35	-0.03	1.79	3%	(13)
37-38	-1.58	0.23	4%	(13)
39-40	-0.61	1.17	2%	(12)
42-43	-0.96	0.81	3%	(12)
44-45	-1.23	0.51	3%	(12)
47-48	-0.30	1.43	2%	(12)
49-50	-2.44	0.00	7%	(9)
52-53	0.00	2.56	4%	(9)
54-56	-3.78	0.00	11%	(10)
57-58	-0.03	0.13	14%	(10)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.38	0.16	13%	(20)
5-10	-2.14	2.46	10%	(20)
10-15	-1.47	5.05	14%	(7)
15-20	-0.52	7.59	20%	(7)
20-23	0.00	7.59	24%	(7)
23-28	-0.86	4.18	19%	(7)
28-33	-3.94	0.24	15%	(9)
33-38	-6.96	0.00	20%	(9)
38-43	-8.09	0.00	23%	(9)
43-48	-8.11	0.00	23%	(9)
48-53	-6.40	0.00	18%	(9)
53-57	-3.14	0.00	16%	(9)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	-1.27	2.23	21%	(20)
7-12	-3.72	1.72	13%	(7)
12-18	-6.17	0.70	21%	(9)
18-21	-7.53	0.00	21%	(7)
21-25	-4.12	0.24	17%	(7)
25-30	-1.29	2.36	20%	(7)
30-35	0.00	5.86	16%	(9)
35-40	0.00	7.93	16%	(9)
40-45	0.00	8.11	16%	(6)
45-50	0.00	7.33	16%	(9)
50-56	0.00	4.65	12%	(10)
56-58	0.00	0.44	25%	(10)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	10%
LC2	(G+Q)	17%
LC3-LC6	Patch(G+0.4Q)	10%
LC3-LC6	Patch(G+Q)	17%
LC7	(1.2G+1.5Q)	24%
LC8-LC9	Patch(1.2G+1.5Q)	24%
LC10-LC20	(1.2G+1.5P)	25%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.99	41	Span/360,12.0	10.1	10%
LC2	1.88	41	Span/240,12.0	12.0	16%
Summary for Patch Loading cases (LC3 - LC6) :					
Critical case inPatch(G+0.4Q):					
LC6	1.92	41	Span/240,12.0	12.0	16%
Critical case inPatch(G+Q):					
LC5	1.01	41	Span/360,12.0	10.1	10%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00
Design Code:	AS/NZS 4600:2018				

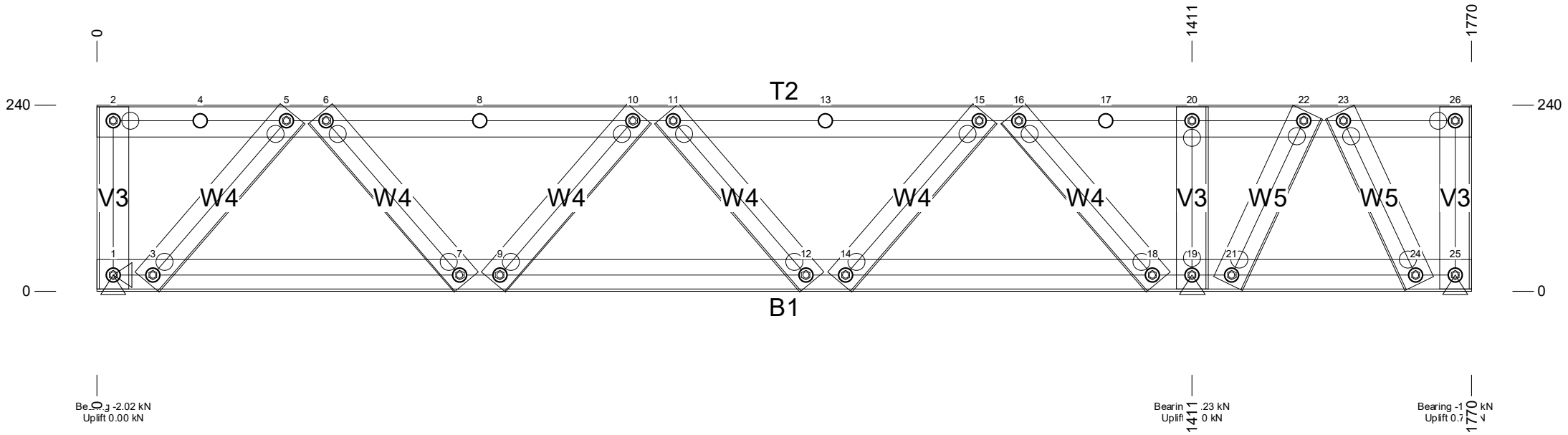
Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

Company: FRAMECAD Dwg Name: Unit 18 Sheet 1 of 1 Project: Unit 18 Type E Job Number:

B1	89S41-115-550	2	1770	T2	89S41-115-550	2	1770	V3	89S41-115-550	6	235	W4	89S41-115-550	12	287	W5	89S41-115-550	4	243

Assembly Weight	11.0kg	FRAMECAD 10g-16mm Flathead	88	FRAMECAD 10g-19mm XDrive	88

FRAMECAD®



Beam Type WJ89115H Mark as J2 Quantity Required = 2 Engineering Status = 19%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.06	0.21	11%	(14)
3-5	-2.96	0.00	8%	(14)
6-7	-0.50	1.00	2%	(13)
9-10	-0.82	0.69	2%	(13)
11-12	-1.21	0.24	3%	(13)
14-15	0.00	1.42	2%	(13)
16-18	-3.15	0.00	9%	(12)
19-20	-2.33	0.10	7%	(11)
21-22	-0.93	0.00	3%	(10)
23-24	-1.55	0.97	4%	(10)
25-26	-0.22	0.00	7%	(10)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.44	0.00	14%	(14)
5-10	-2.38	0.00	11%	(14)
10-15	-2.04	0.00	6%	(7)
15-20	-1.12	0.94	8%	(13)
20-22	-0.46	0.93	8%	(12)
22-26	-0.86	0.57	5%	(10)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	2.41	8%	(14)
7-12	0.00	2.08	7%	(13)
12-18	0.00	1.27	19%	(12)
18-21	-0.92	0.48	10%	(12)
21-24	-0.57	0.87	9%	(10)
24-25	-0.16	0.21	0%	(12)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	3%
LC2	(G+Q)	5%
LC3-LC6	Patch(G+0.4Q)	3%
LC3-LC6	Patch(G+Q)	6%
LC7	(1.2G+1.5Q)	8%
LC8-LC9	Patch(1.2G+1.5Q)	8%
LC10-LC14	(1.2G+1.5P)	19%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.06	13	Span/360,12.0	3.86	2%
LC2	0.12	13	Span/240,12.0	5.8	2%
Summary for Patch Loading cases (LC3 - LC6) :					
Critical case inPatch(G+0.4Q):					
LC4	0.12	13	Span/240,12.0	5.8	2%
Critical case inPatch(G+Q):					
LC5	0.02	13	Span/360,12.0	3.86	1%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

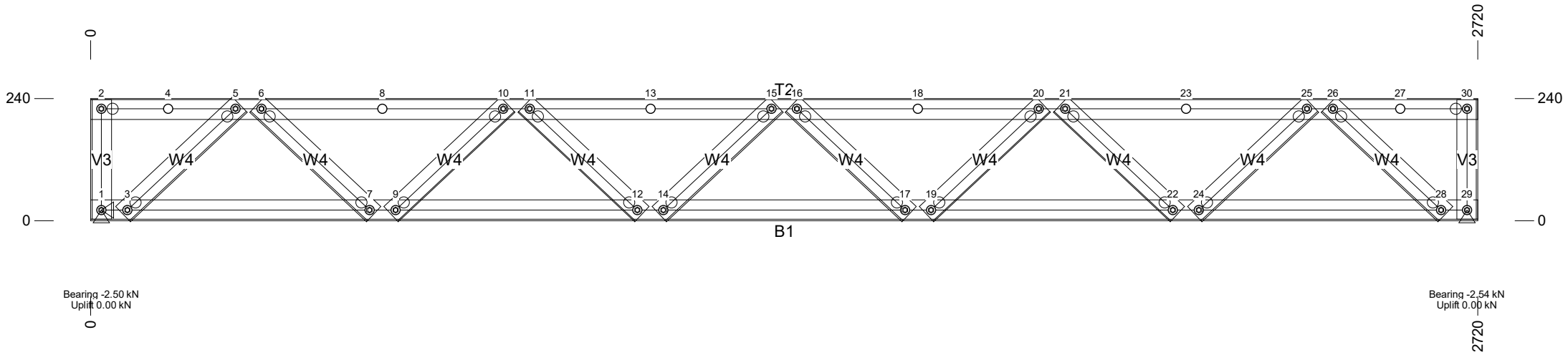
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

Company: FRAMECAD Dwg Name: Unit 18 Sheet 1 of 1 Project: Unit 18 Type E Job Number:

B1	89S41-115-550	1	2720	T2	89S41-115-550	1	2720	V3	89S41-115-550	2	235	W4	89S41-115-550	10	314
Assembly Weight		15.4kg		FRAMECAD 10g-16mm Flathead		48		FRAMECAD 10g-19mm XDrive		48					

FRAMECAD



Beam Type WJ89115H Mark as J3 Quantity Required = 1 Engineering Status = 25%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.22	13%	(8)
3-5	-4.01	0.00	11%	(8)
6-7	0.00	2.11	3%	(3)
9-10	-1.99	0.00	6%	(3)
11-12	-0.36	1.36	2%	(6)
14-15	-1.15	0.56	3%	(6)
16-17	-1.08	0.64	3%	(6)
19-20	-0.42	1.29	2%	(6)
21-22	-1.99	0.09	6%	(3)
24-25	0.00	2.13	3%	(3)
26-28	-3.75	0.00	11%	(4)
29-30	-0.03	0.12	14%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.53	0.00	18%	(8)
5-10	-4.08	0.00	16%	(8)
10-15	-6.10	0.00	18%	(3)
15-20	-6.53	0.00	18%	(3)
20-25	-5.53	0.00	16%	(3)
25-30	-3.17	0.00	14%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.50	10%	(8)
7-12	0.00	5.56	14%	(3)
12-17	0.00	6.56	12%	(3)
17-22	0.00	6.12	14%	(3)
22-28	0.00	4.09	12%	(4)
28-29	0.00	0.44	25%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	7%
LC2	(G+Q)	13%
LC3	(1.2G+1.5Q)	18%
LC4-LC8	(1.2G+1.5P)	25%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.51	15	Span/360,12.0	7.4	7%
LC2	0.96	15	Span/240,12.0	11.2	9%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

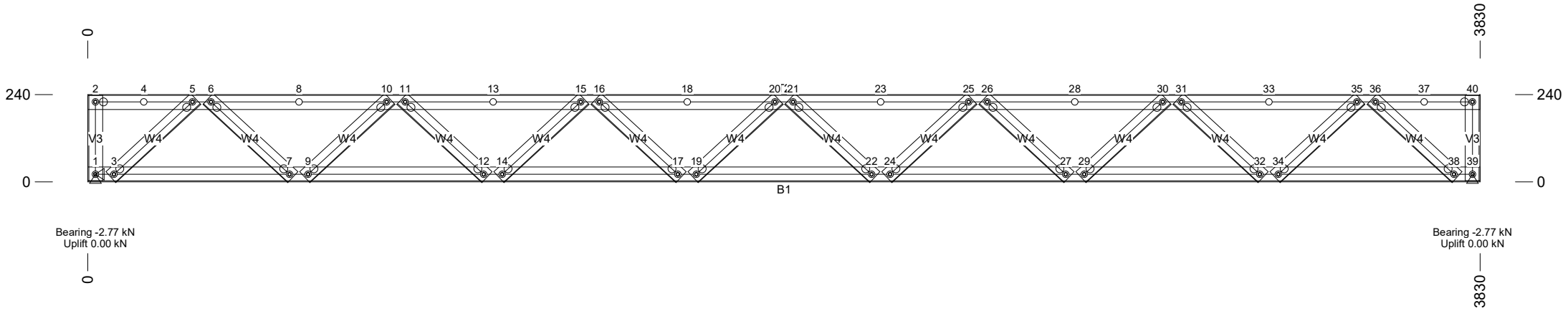
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-115-550	6	3830	T2	89S41-115-550	6	3830	V3	89S41-115-550	12	235	W4	89S41-115-550	84	317
Assembly Weight		21.4kg		FRAMECAD 10g-16mm Flathead		384		FRAMECAD 10g-19mm XDrive		384					

FRAMECAD



Beam Type WJ89115H Mark as J5 Quantity Required = 6 Engineering Status = 37%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.23	14%	(10)
3-5	-4.46	0.00	13%	(3)
6-7	0.00	3.54	5%	(3)
9-10	-3.44	0.00	10%	(3)
11-12	0.00	2.22	3%	(3)
14-15	-2.01	0.10	6%	(3)
16-17	-0.49	1.38	2%	(7)
19-20	-1.17	0.69	3%	(7)
21-22	-1.09	0.78	3%	(7)
24-25	-0.57	1.29	2%	(7)
26-27	-2.01	0.19	6%	(3)
29-30	0.00	2.22	3%	(3)
31-32	-3.45	0.00	10%	(3)
34-35	0.00	3.56	5%	(3)
36-38	-4.48	0.00	13%	(3)
39-40	-0.01	0.14	15%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.57	0.00	20%	(3)
5-10	-6.37	0.00	21%	(3)
10-15	-10.53	0.00	30%	(3)
15-20	-12.60	0.00	35%	(3)
20-25	-13.04	0.00	37%	(3)
25-30	-12.01	0.00	34%	(3)
30-35	-8.90	0.00	25%	(3)
35-40	-3.75	0.00	20%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.90	14%	(3)
7-12	0.00	8.95	23%	(2)
12-17	0.00	12.05	29%	(2)
17-22	0.00	13.08	29%	(2)
22-27	0.00	12.63	29%	(2)
27-32	0.00	10.55	24%	(2)
32-38	0.00	6.38	15%	(3)
38-39	0.00	0.48	27%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	18%
LC2	(G+Q)	29%
LC3	(1.2G+1.5Q)	37%
LC4-LC10	(1.2G+1.5P)	27%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	1.87	20	Span/360,12.0	10.5	18%
LC2	3.53	20	Span/240,12.0	12.0	29%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

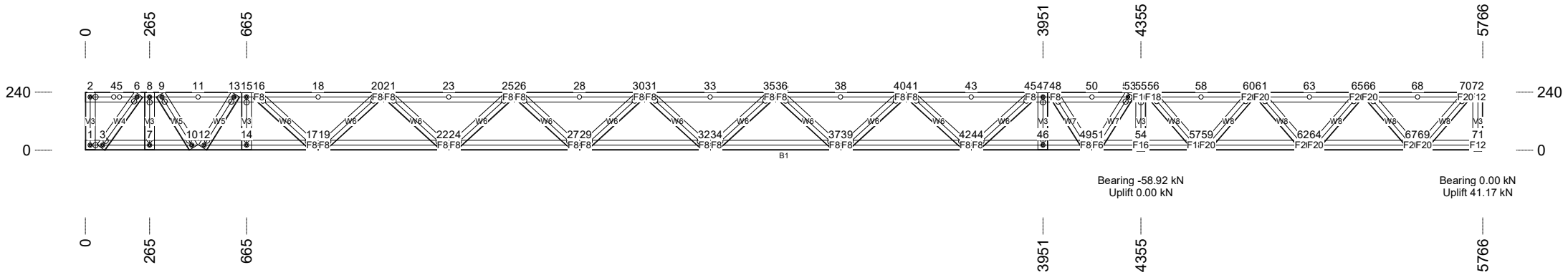
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	2.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-115-550	1	5766	T2	89S41-115-550	1	5766	V3	89S41-115-550	6	235	W4	89S41-115-550	1	268	W5	89S41-115-550	2	258	W6	89S41-115-550	12	319
W7	89S41-115-550	2	259	W8	89S41-115-550	6	287																

Assembly Weight	33.6kg	FRAMECAD 10g-16mm Flathead	450	FRAMECAD 10g-19mm XDrive	116

FRAMECAD®



Beam Type WJ89115H Mark as JB1 Quantity Required = 1 Engineering Status = +300%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-1.85	0.00	5%	(7)
3-6	0.00	2.94	4%	(7)
7-8	0.00	0.60	1%	(7)
9-10	-9.35	0.00	26%	(7)
12-13	0.00	8.30	12%	(7)
14-15	0.00	1.43	2%	(7)
16-17	-25.80	0.00	72%	(7)
19-20	0.00	25.79	38%	(7)
21-22	-25.66	0.00	72%	(7)
24-25	0.00	25.63	38%	(7)
26-27	-26.31	0.00	74%	(7)
29-30	0.00	26.45	39%	(7)
31-32	-27.07	0.00	76%	(7)
34-35	0.00	27.11	40%	(7)
36-37	-27.60	0.00	78%	(7)
39-40	0.00	28.31	42%	(7)
41-42	-30.93	0.00	87%	(7)
44-45	0.00	28.11	42%	(7)
46-47	0.00	4.46	7%	(8)
48-49	-28.49	0.00	80%	(8)
51-52	0.00	19.97	30%	(8)
54-55	-56.58	0.00	159%	(7)
56-57	0.00	63.95	95%	(7)
59-60	-71.90	0.00	202%	(7)
61-62	0.00	70.40	105%	(7)
64-65	-70.25	0.00	197%	(8)
66-67	0.00	74.66	111%	(8)
69-70	-73.17	0.00	206%	(8)
71-72	0.00	46.32	69%	(8)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-6	-0.00	0.00	3345%	(4)
6-9	0.00	1.71	3158%	(4)
9-13	0.00	6.62	3056%	(4)
13-16	0.00	10.99	2768%	(4)
16-20	0.00	30.05	2661%	(4)
20-25	0.00	68.08	2191%	(4)
25-30	0.00	106.46	1688%	(4)
30-35	0.00	146.01	1220%	(4)
35-40	0.00	186.44	800%	(4)
40-45	0.00	230.22	455%	(8)
45-48	0.00	250.99	452%	(8)
48-52	0.00	266.16	574%	(8)
52-56	0.00	276.79	497%	(7)
56-60	0.00	235.27	564%	(7)
60-65	0.00	188.56	395%	(8)
65-70	0.00	96.64	421%	(8)
70-72	0.00	0.00	350%	(8)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	-1.71	0.00	3345%	(4)
7-10	-1.72	0.00	3107%	(4)
10-14	-11.00	0.00	2937%	(4)
14-17	-11.01	0.00	2715%	(4)
17-22	-49.14	0.00	2450%	(4)
22-27	-87.05	0.00	1936%	(4)
27-32	-126.04	0.00	1449%	(4)
32-37	-166.09	0.00	1003%	(4)
37-42	-207.41	0.00	613%	(4)
42-46	-251.05	0.00	706%	(7)
46-49	-251.05	0.00	706%	(7)
49-54	-276.80	0.00	778%	(7)
54-57	-276.79	0.00	778%	(8)
57-62	-235.27	0.00	661%	(8)
62-67	-142.56	0.00	401%	(8)
67-71	-47.83	0.00	219%	(8)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
141.0	Other	0.03	0.20	0.00
3951.0	Other	0.03	0.20	0.00
4310.0	Other	0.02	0.15	0.00
4310.0	Other	0.02	0.11	0.00
140.0	Other	0.17	1.09	0.00
265.0	Other	0.17	1.09	0.00
665.0	Other	0.80	4.97	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1724%
LC2	(G+Q)	3344%
LC3-LC6	Patch(G+0.4Q)	1725%
LC3-LC6	Patch(G+Q)	3345%
LC7	(1.2G+1.5Q)	778%
LC8-LC9	Patch(1.2G+1.5Q)	778%
LC10-LC22	(1.2G+1.5P)	199%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical	CSI
LC1	206.9	2	Span/360,12.0	12.0	1724%
LC2	401.2	2	Span/240,12.0	12.0	3344%
Summary for Patch Loading cases (LC3 - LC6) :					
Critical case inPatch(G+0.4Q):					
LC4	401.4	2	Span/240,12.0	12.0	3345%
Critical case inPatch(G+Q):					
LC5	193.5	2	Span/360,12.0	12.0	1612%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	3.90
Design Code:	AS/NZS 4600:2018				

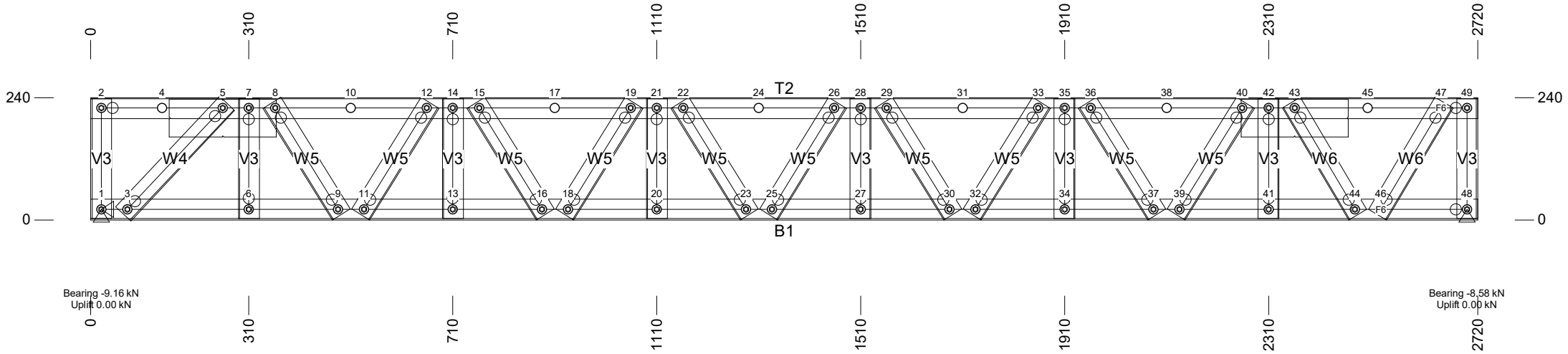
Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14
Ground Snow Load (kPa) :	0.00		
Factored Drag Load (kN/m) :	0.00		

Top Chord Dead Load (kPa) :	0.32
Top Chord Live Load (kPa) :	2.00
Design Point Load (kN) :	1.8

B1	89S41-115-550	1	2720	T2	89S41-115-550	1	2720	V3	89S41-115-550	8	235	W4	89S41-115-550	1	297	W5	89S41-115-550	10	258	W6	89S41-115-550	2	255

Assembly Weight	18.2kg	FRAMECAD 10g-16mm Flathead	88	FRAMECAD 10g-19mm XDrive	84

FRAMECAD



Beam Type WJ89115H Mark as JB2 Quantity Required = 1 Engineering Status = 93%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	1.72	64%	(3)
3-5	-15.00	0.00	42%	(3)
6-7	-1.22	0.00	3%	(3)
8-9	0.00	11.66	17%	(3)
11-12	-11.19	0.00	31%	(3)
13-14	-0.09	0.21	0%	(9)
15-16	0.00	6.57	10%	(3)
18-19	-5.64	0.00	16%	(3)
20-21	-0.26	0.16	1%	(3)
22-23	-0.57	1.31	2%	(7)
25-26	-1.02	0.75	3%	(7)
27-28	-0.29	0.16	1%	(3)
29-30	-4.39	0.04	12%	(3)
32-33	0.00	5.35	8%	(3)
34-35	-0.13	0.20	0%	(3)
36-37	-10.01	0.00	28%	(3)
39-40	0.00	10.78	16%	(3)
41-42	-0.14	0.43	1%	(5)
43-44	-15.24	0.00	43%	(3)
46-47	0.00	16.02	24%	(3)
48-49	-10.49	0.00	29%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-2.59	0.00	64%	(3)
5-8	-12.86	0.00	63%	(3)
8-12	-19.00	0.00	91%	(3)
12-15	-24.89	0.00	70%	(3)
15-19	-28.35	0.00	90%	(3)
19-22	-31.32	0.00	88%	(3)
22-26	-31.92	0.00	90%	(3)
26-29	-31.98	0.00	90%	(3)
29-33	-29.67	0.00	87%	(3)
33-36	-26.86	0.00	75%	(3)
36-40	-21.60	0.00	93%	(3)
40-43	-15.93	0.00	66%	(3)
43-47	-8.16	0.00	87%	(3)
47-49	0.00	0.00	73%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	12.94	25%	(3)
6-9	0.00	12.94	45%	(3)
9-13	0.00	24.95	73%	(3)
13-16	0.00	24.95	50%	(3)
16-20	0.00	31.37	69%	(3)
20-23	0.00	31.37	63%	(3)
23-27	0.00	32.01	64%	(3)
27-30	0.00	32.01	66%	(3)
30-34	0.00	29.70	54%	(3)
34-37	0.00	26.88	73%	(3)
37-41	0.00	21.62	46%	(3)
41-44	0.00	15.94	81%	(3)
44-48	0.00	8.17	52%	(3)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
310.0	Other	0.24	1.48	0.00
710.0	Other	0.24	1.48	0.00
1110.0	Other	0.24	1.48	0.00
1510.0	Other	0.24	1.48	0.00
1910.0	Other	0.24	1.48	0.00
2310.0	Other	0.24	1.48	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	44%
LC2	(G+Q)	65%
LC3	(1.2G+1.5Q)	93%
LC4-LC10	(1.2G+1.5P)	35%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	3.29	25	Span/360,12.0	7.4	44%
LC2	6.4	25	Span/240,12.0	11.2	57%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node:	Plate:
5	FRAMECAD 1.15mm Fix Plate
43	FRAMECAD 1.15mm Fix Plate

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	4.40	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	2.00
		Design Point Load (kN) :	1.8

Company: FRAMECAD	Dwg Name: Unit 18	Sheet 1 of 1	Project: Unit 18 Type E	Job Number:

Stud Design for Panel S8

Company:	FRAMECAD	Tab Name:	1ST WALL
Project:	Unit 18 Type E 107 Blockhouse Bay Road	Dwg Name:	Unit 18
		Detailer:	Ralph Lao
		Print Date:	06-10-2021
Job Number:		Page No:	1

Panel Label: S8

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	3.41	kN/m
Live Load (Q1 = max(Q2,Q3))	5.77	kN/m
Roof Live Load (Q2)	0.92	kN/m
Floor Live Load (Q3)	5.77	kN/m
Live Load (Q4 = Q2+Q3)	6.69	kN/m
Wind Up Load (Wu)	2.22	kN/m
Wind Down Load (Wd)	1.01	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	2763.0	mm
1.2G + 1.5Q3	1686.7	mm
1.2G + 0.4Q3 + 1.0S	3359.4	mm
1.2G + 1.5P1	4850.9	mm
1.2G + 0.4Q3 + Wd + Wh	1501.5	mm
0.9G + 1.0Wu + 1.0Wh	2736.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	501	mm
Max Nominal Stud Spacing	1500	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	40	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	21.50	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

JOIST BEAM POINT LOAD (included in UDL)

Load Location	Stud qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow (S) kN	Wind Up (W kN	Floor Live (Qf) kN

Stud Design for Panel S1

Company:	FRAMECAD	Tab Name:	GROUND WALL
Project:	Unit 18 Type E 107 Blockhouse Bay Road	Dwg Name:	Unit 18
		Detailer:	Ralph Lao
		Print Date:	06-10-2021
Job Number:		Page No:	1

Panel Label: S1

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	2.00	kN/m
Live Load (Q1 = max(Q2,Q3))	4.60	kN/m
Roof Live Load (Q2)	0.09	kN/m
Floor Live Load (Q3)	4.60	kN/m
Live Load (Q4 = Q2+Q3)	4.69	kN/m
Wind Up Load (Wu)	0.22	kN/m
Wind Down Load (Wd)	0.10	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	6321.0	mm
1.2G + 1.5Q3	2973.7	mm
1.2G + 0.4Q3 + 1.0S	6522.4	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2731.3	mm
0.9G + 1.0Wu + 1.0Wh	3831.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2725	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	22	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

Stud Design for Panel L7

Company:	FRAMECAD	Tab Name:	2ND WALL
Project:	Unit 18 Type E 107 Blockhouse Bay Road	Dwg Name:	Unit 18
		Detailer:	Ralph Lao
		Print Date:	06-10-2021
Job Number:		Page No:	1

Panel Label: L7

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.26	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3299.4	mm
0.9G + 1.0Wu + 1.0Wh	3299.4	mm
0.44Wh	3889.9	mm
P2	3483.3	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2302	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3275	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	18	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	20.16	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel L1

Company:	FRAMECAD	Tab Name:	ROOF WALL
Project:	Unit 18 Type E 107 Blockhouse Bay Road	Dwg Name:	Unit 18
		Detailer:	Ralph Lao
		Print Date:	06-10-2021
Job Number:		Page No:	1

Panel Label: L1

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.04	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	9000.0	mm
0.9G + 1.0Wu + 1.0Wh	9000.0	mm
0.44Wh	9000.0	mm
P2	149025.0	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	352	mm
Nominal Noggin Spacing	352	mm
Max Nominal Stud Spacing	9000	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	7	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

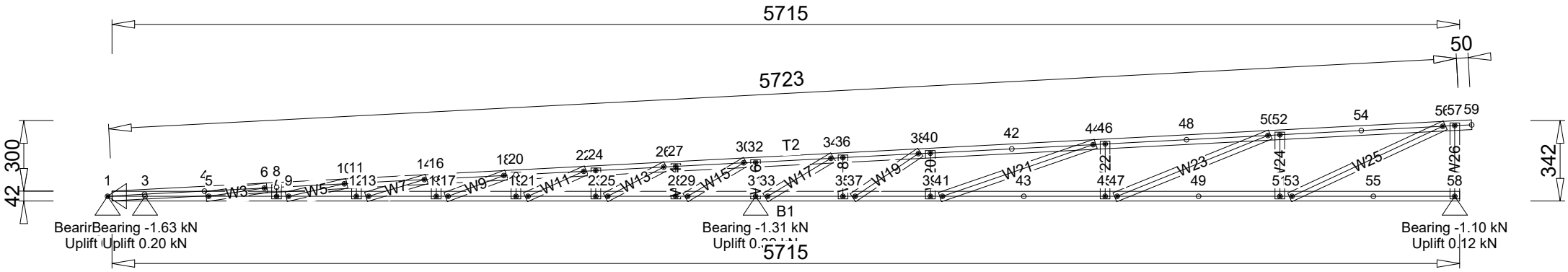
Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	25.57	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

B1	89S41-095-550	1	5715mm	T2	89S41-095-550	1	5773mm	W3	89S41-095-550	1	261mm	W4	89S41-095-550	1	60mm	W5	89S41-095-550	1	264mm
W6	89S41-095-550	1	77mm	W7	89S41-095-550	1	268mm	W8	89S41-095-550	1	95mm	W9	89S41-095-550	1	274mm	W10	89S41-095-550	1	113mm
W11	89S41-095-550	1	281mm	W12	89S41-095-550	1	131mm	W13	89S41-095-550	1	289mm	W14	89S41-095-550	1	148mm	W15	89S41-095-550	1	297mm
W16	89S41-095-550	1	166mm	W17	89S41-095-550	1	335mm	W18	89S41-095-550	1	185mm	W19	89S41-095-550	1	345mm	W20	89S41-095-550	1	205mm
W21	89S41-095-550	1	697mm	W22	89S41-095-550	1	244mm	W23	89S41-095-550	1	711mm	W24	89S41-095-550	1	283mm	W25	89S41-095-550	1	727mm
W26	89S41-095-550	1	321mm																
Assembly Weight			26.1kg	FRAMECAD 10g-19mm XDrive			98												

FRAMECAD®



Quantity Required = 1 Mark as HN1 Engineering Status = Passed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors
SNOW Factors
No Snow Load Apply
Wind Pressure Factors

Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type:	Name	Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	Refer DWG

F# denotes total number fasteners in each member at joint.
Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.
Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	-0.08	0.29	29%	(10)
6-10	-3.79	0.43	14%	(10)
10-14	-1.93	0.41	7%	(10)
14-18	-0.94	0.30	4%	(2)
18-22	-0.34	0.58	3%	(2)
22-26	-0.15	1.04	3%	(10)
26-30	-0.40	1.53	4%	(10)
30-34	-0.60	2.01	8%	(7)
34-38	-0.47	1.18	19%	(11)
38-44	-2.35	0.52	32%	(11)
44-50	-2.94	0.25	34%	(12)
50-56	-2.18	0.21	34%	(13)
56-59	-0.01	0.06	8%	(13)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-3	-0.26	0.04	28%	(10)
3-5	-0.26	0.04	27%	(10)
5-7	-0.48	3.78	13%	(10)
7-12	-0.48	3.78	10%	(10)
12-15	-0.45	1.93	4%	(10)
15-19	-0.57	0.96	3%	(2)
19-23	-1.03	0.36	4%	(11)
23-28	-1.52	0.37	6%	(11)
28-31	-1.99	0.57	9%	(11)
31-35	-1.99	0.57	8%	(11)
35-39	-1.18	2.29	12%	(7)
39-45	-0.52	2.91	27%	(7)
45-51	-0.25	2.91	26%	(8)
51-58	-0.21	2.17	23%	(9)
37-40	-2.35	1.01	9%	(7)
41-46	-1.76	0.40	7%	(8)
47-52	-0.95	1.61	4%	(12)
53-58	-1.06	2.39	4%	(12)

Web

Member	Com. kN	Ten. kN	CSI	LC
5-8	-4.08	0.51	15%	(10)
9-12	-0.22	1.89	3%	(10)
13-16	-0.30	1.05	2%	(10)
17-20	-0.31	0.95	2%	(10)
21-24	-0.37	0.85	1%	(10)
25-28	-0.44	0.91	2%	(4)
29-32	-0.36	0.74	1%	(4)
33-36	-2.52	1.38	9%	(11)

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	3%
LC2	(G)	5%
LC3	(max(1.0Q,0.7S))	3%
LC4	(1.2G+1.5Q)	11%
LC5	(1.2G+Wd)	11%
LC6	(0.9G+Wu)	3%
LC7-LC13	(1.2G+1.5P)	34%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.24	12	Span/250,15.0	10.4	2.3%
LC2	0.32	13	Span/300,12.0	8.6	3.8%
LC3	0.22	11	Span/300,20.0	8.6	2.6%

REINFORCING PLATES & MEMBERS

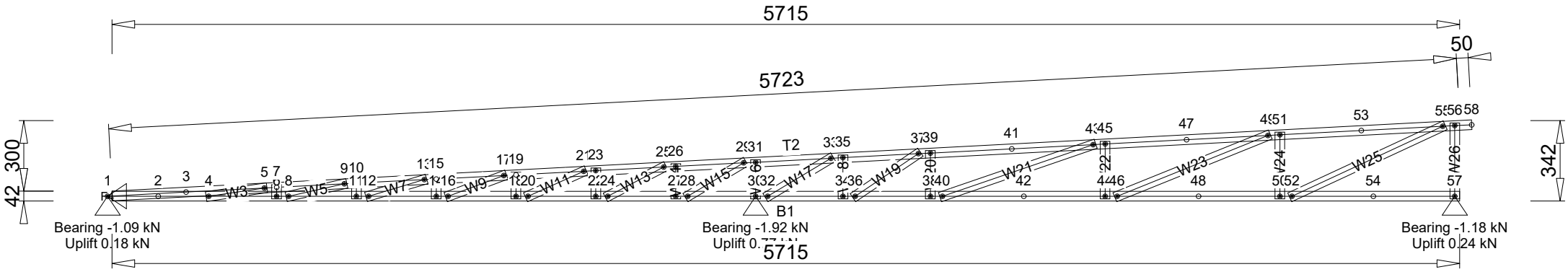
Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.
Fasteners: FRAMECAD 10-g 16m Flathead
Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.
Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.
Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	347	Roof Load Type:	SHEET	Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00	Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW	Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10

Company: FRAMECAD Dwg Name: Unit 18 Sheet 1 of 1 Project: Unit 18 Type E Job Number:

B1	89S41-095-550	1	5715mm	T2	89S41-095-550	1	5773mm	W3	89S41-095-550	1	261mm	W4	89S41-095-550	1	60mm	W5	89S41-095-550	1	264mm
W6	89S41-095-550	1	77mm	W7	89S41-095-550	1	268mm	W8	89S41-095-550	1	95mm	W9	89S41-095-550	1	274mm	W10	89S41-095-550	1	113mm
W11	89S41-095-550	1	281mm	W12	89S41-095-550	1	131mm	W13	89S41-095-550	1	289mm	W14	89S41-095-550	1	148mm	W15	89S41-095-550	1	297mm
W16	89S41-095-550	1	166mm	W17	89S41-095-550	1	335mm	W18	89S41-095-550	1	185mm	W19	89S41-095-550	1	345mm	W20	89S41-095-550	1	205mm
W21	89S41-095-550	1	697mm	W22	89S41-095-550	1	244mm	W23	89S41-095-550	1	711mm	W24	89S41-095-550	1	283mm	W25	89S41-095-550	1	727mm
W26	89S41-095-550	1	321mm																
Assembly Weight		26.1kg		FRAMECAD 10g-16mm Flathead		2		FRAMECAD 10g-19mm XDrive		98									

FRAMECAD



Quantity Required = 1 Mark as HN2 Engineering Status = Passed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors	
SNOW Factors	
No Snow Load Apply	
Wind Pressure Factors	
Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type:	Name	Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
1-5	-3.51	0.66	37%	(11)
5-9	-5.68	1.49	21%	(11)
9-13	-3.13	1.19	12%	(11)
13-17	-1.63	0.64	10%	(2)
17-21	-0.15	0.63	7%	(2)
21-25	-0.62	1.90	6%	(4)
25-29	-1.28	3.17	9%	(5)
29-33	-1.78	4.32	12%	(5)
33-37	-0.90	2.58	21%	(12)
37-43	-2.16	1.36	32%	(12)
43-49	-3.05	0.38	35%	(13)
49-55	-2.33	0.38	35%	(14)
55-58	-0.01	0.06	9%	(14)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-4	-0.75	3.51	36%	(7)
4-6	-1.57	5.67	36%	(7)
6-11	-1.57	5.67	14%	(11)
11-14	-1.27	3.12	11%	(2)
14-18	-0.72	1.66	10%	(2)
18-22	-1.87	0.55	7%	(11)
22-27	-3.13	1.21	12%	(11)
27-30	-4.26	1.71	16%	(5)
30-34	-4.26	1.71	16%	(5)
34-38	-2.57	2.10	12%	(8)
38-44	-1.36	3.02	27%	(8)
44-50	-0.40	3.02	27%	(9)
50-57	-0.38	2.32	23%	(10)
40-45	-2.11	0.62	8%	(9)
46-51	-0.98	1.58	4%	(13)
52-57	-1.13	2.56	4%	(13)

Web

Member	Com. kN	Ten. kN	CSI	LC
4-7	-2.92	0.83	11%	(11)
8-11	-0.49	2.61	4%	(11)
12-15	-0.58	2.06	4%	(11)
16-19	-0.66	1.73	3%	(11)
20-23	-0.76	1.72	3%	(5)
24-27	-0.87	1.83	3%	(4)
28-31	-0.68	1.44	3%	(4)
32-35	-3.02	1.63	11%	(12)
36-39	-2.77	1.17	10%	(8)

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	8%
LC2	(G)	11%
LC3	(max(1.0Q,0.7S))	9%
LC4	(1.2G+1.5Q)	22%
LC5	(1.2G+Wd)	23%
LC6	(0.9G+Wu)	7%
LC7-LC14	(1.2G+1.5P)	37%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.86	8	Span/250,15.0	11.0	7.9%
LC2	1.05	9	Span/300,20.0	9.2	11.5%
LC3	0.80	9	Span/300,20.0	9.2	8.8%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.

Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

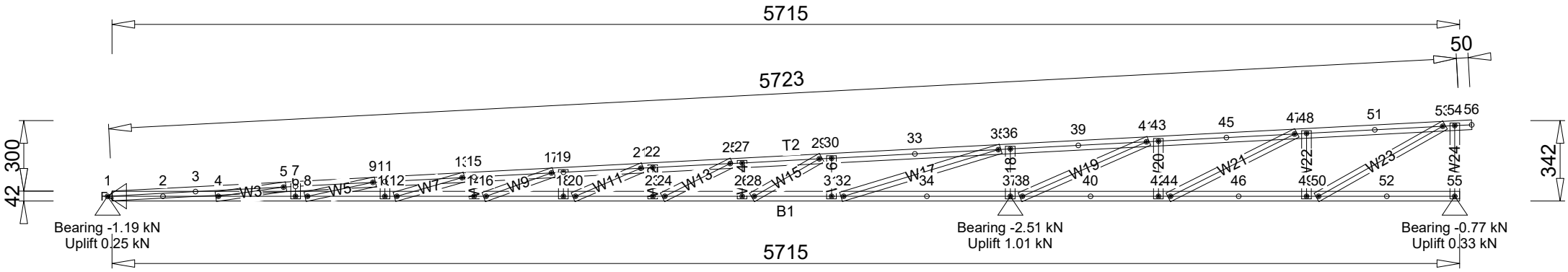
Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	648	Roof Load Type:	SHEET
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW

Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12		
Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25		
Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10		

B1	89S41-095-550	1 5715mm	T2	89S41-095-550	1 5773mm	W3	89S41-095-550	1 301mm	W4	89S41-095-550	1 64mm	W5	89S41-095-550	1 305mm
W6	89S41-095-550	1 84mm	W7	89S41-095-550	1 309mm	W8	89S41-095-550	1 103mm	W9	89S41-095-550	1 316mm	W10	89S41-095-550	1 123mm
W11	89S41-095-550	1 323mm	W12	89S41-095-550	1 143mm	W13	89S41-095-550	1 331mm	W14	89S41-095-550	1 163mm	W15	89S41-095-550	1 341mm
W16	89S41-095-550	1 183mm	W17	89S41-095-550	1 707mm	W18	89S41-095-550	1 223mm	W19	89S41-095-550	1 596mm	W20	89S41-095-550	1 256mm
W21	89S41-095-550	1 610mm	W22	89S41-095-550	1 288mm	W23	89S41-095-550	1 626mm	W24	89S41-095-550	1 321mm			

Assembly Weight	26.0kg	FRAMECAD 10g-16mm Flathead	2	FRAMECAD 10g-19mm XDrive	90		

FRAMECAD®



Quantity Required = 1 Mark as HN3 Engineering Status = Passed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors
SNOW Factors
No Snow Load Apply
Wind Pressure Factors

Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type:	Name	Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	Refer DWG

F# denotes total number fasteners in each member at joint.
Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.
Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
1-5	-4.60	1.18	45%	(12)
5-9	-7.38	2.43	28%	(12)
9-13	-5.44	2.19	20%	(5)
13-17	-4.00	1.60	19%	(2)
17-21	-2.35	0.92	16%	(2)
21-25	-0.82	0.51	13%	(2)
25-29	-0.52	1.85	10%	(2)
29-35	-1.27	3.14	31%	(13)
35-41	-2.55	6.27	26%	(14)
41-47	-1.21	2.95	27%	(15)
47-53	-0.79	0.96	29%	(16)
53-56	-0.02	0.04	5%	(16)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-4	-1.26	4.59	45%	(12)
4-6	-2.51	7.37	45%	(12)
6-10	-2.51	7.37	21%	(2)
10-14	-2.26	5.47	21%	(2)
14-18	-1.66	4.02	20%	(2)
18-23	-0.98	2.37	17%	(2)
23-26	-1.82	0.81	13%	(2)
26-31	-3.10	1.20	12%	(13)
31-37	-6.20	2.49	30%	(8)
37-42	-6.20	2.49	23%	(5)
42-49	-2.94	1.19	20%	(10)
49-55	-0.96	0.78	20%	(11)

Web

Member	Com. kN	Ten. kN	CSI	LC
4-7	-3.54	1.26	13%	(12)
8-11	-0.48	2.67	5%	(12)
12-15	-0.62	2.14	4%	(12)
16-19	-0.72	1.81	3%	(12)
20-23	-0.80	1.89	3%	(5)
24-27	-0.94	1.99	4%	(4)
28-31	-1.14	2.14	4%	(13)
32-37	-1.51	3.57	6%	(13)
38-43	-3.57	1.42	13%	(5)
44-49	-2.29	0.92	9%	(5)
50-55	-1.10	0.89	4%	(12)

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	14%
LC2	(G)	21%
LC3	(max(1.0Q,0.7S))	16%
LC4	(1.2G+1.5Q)	34%
LC5	(1.2G+Wd)	35%
LC6	(0.9G+Wu)	12%
LC7-LC16	(1.2G+1.5P)	45%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	2.03	10	Span/250,15.0	15.0	13.6%
LC2	2.48	10	Span/300,12.0	12.0	20.7%
LC3	1.89	10	Span/300,12.0	12.0	15.8%

REINFORCING PLATES & MEMBERS

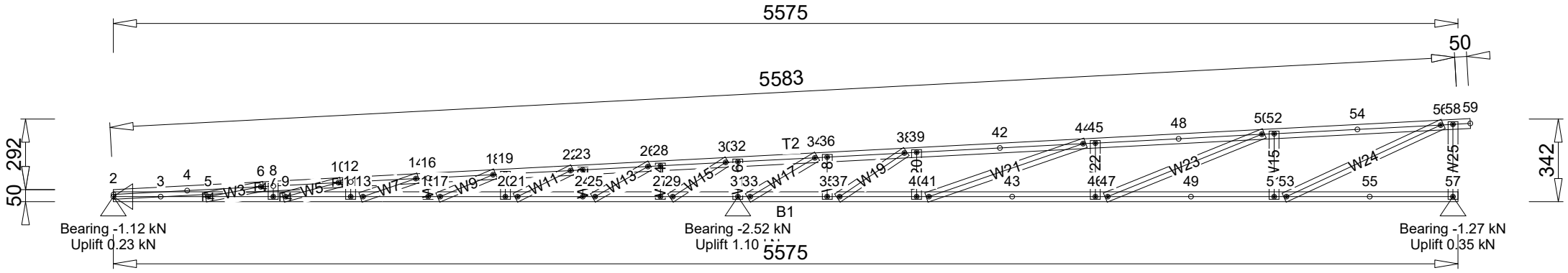
Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.
Fasteners: FRAMECAD 10-g 16m Flathead
Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.
Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.
Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	648	Roof Load Type:	SHEET	Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00	Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW	Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10

Company: FRAMECAD Dwg Name: Unit 18 Sheet 1 of 1 Project: Unit 18 Type E Job Number:

B1	89S41-095-550	1 5575mm	T2	89S41-095-550	1 5633mm	W3	89S41-095-550	1 245mm	W4	89S41-095-550	1 66mm	W5	89S41-095-550	1 248mm
W6	89S41-095-550	1 83mm	W7	89S41-095-550	1 253mm	W8	89S41-095-550	1 99mm	W9	89S41-095-550	1 259mm	W10	89S41-095-550	1 116mm
W11	89S41-095-550	1 266mm	W12	89S41-095-550	1 133mm	W13	89S41-095-550	1 274mm	W14	89S41-095-550	1 150mm	W15	89S41-095-550	1 283mm
W15	89S41-095-550	1 283mm	W16	89S41-095-550	1 167mm	W17	89S41-095-550	1 335mm	W18	89S41-095-550	1 186mm	W19	89S41-095-550	1 345mm
W20	89S41-095-550	1 206mm	W21	89S41-095-550	1 697mm	W22	89S41-095-550	1 244mm	W23	89S41-095-550	1 711mm	W24	89S41-095-550	1 727mm
W25	89S41-095-550	1 322mm												
Assembly Weight		25.6kg	FRAMECAD 10g-16mm Flathead		8	FRAMECAD 10g-19mm XDrive		96						

FRAMECAD



Quantity Required = 1 Mark as HN4 Engineering Status = Passed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors
SNOW Factors
No Snow Load Apply
Wind Pressure Factors

Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type:	Name	Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-6	0.00	0.06	56%	(11)
6-10	-10.91	2.84	72%	(11)
10-14	-3.00	1.22	14%	(2)
14-18	-1.54	0.58	12%	(2)
18-22	-0.21	1.54	9%	(2)
22-26	-1.03	3.03	8%	(11)
26-30	-1.89	4.43	12%	(4)
30-34	-2.52	5.50	15%	(5)
34-38	-1.26	3.45	22%	(12)
38-44	-2.16	1.85	32%	(12)
44-50	-3.24	0.57	36%	(13)
50-56	-2.49	0.56	36%	(14)
56-59	-0.02	0.06	9%	(14)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-5	-0.13	0.06	63%	(11)
5-7	-2.94	10.83	81%	(11)
7-11	-2.94	10.83	22%	(11)
11-15	-1.32	3.04	14%	(2)
15-20	-1.51	1.58	11%	(2)
20-24	-3.00	0.92	11%	(11)
24-27	-4.39	1.78	16%	(11)
27-31	-5.41	2.43	20%	(5)
31-35	-5.41	2.43	20%	(5)
35-40	-3.43	2.09	13%	(11)
40-46	-1.84	3.21	28%	(8)
46-51	-0.60	3.21	27%	(9)
51-57	-0.57	2.48	23%	(10)
41-46	-2.31	0.88	9%	(9)
47-52	-1.03	1.60	4%	(13)
53-58	-1.21	2.74	5%	(13)

Web

Member	Com. kN	Ten. kN	CSI	LC
5-8	-11.02	2.85	41%	(11)
9-12	-1.67	9.12	15%	(11)
13-16	-0.69	1.96	3%	(11)
17-20	-0.84	1.87	3%	(5)
21-24	-1.00	2.07	4%	(4)
25-28	-1.14	2.25	4%	(4)
29-32	-0.87	1.75	3%	(4)
33-36	-3.37	1.81	13%	(12)
37-40	-3.04	1.28	11%	(8)

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	23%
LC2	(G)	29%
LC3	(max(1.0Q,0.7S))	41%
LC4	(1.2G+1.5Q)	41%
LC5	(1.2G+Wd)	39%
LC6	(0.9G+Wu)	21%
LC7-LC14	(1.2G+1.5P)	81%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	3.27	2	Span/180,20.0	14.4	22.7%
LC2	2.47	2	Span/300,20.0	8.6	28.6%
LC3	3.55	2	Span/300,20.0	8.6	41.1%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.

Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

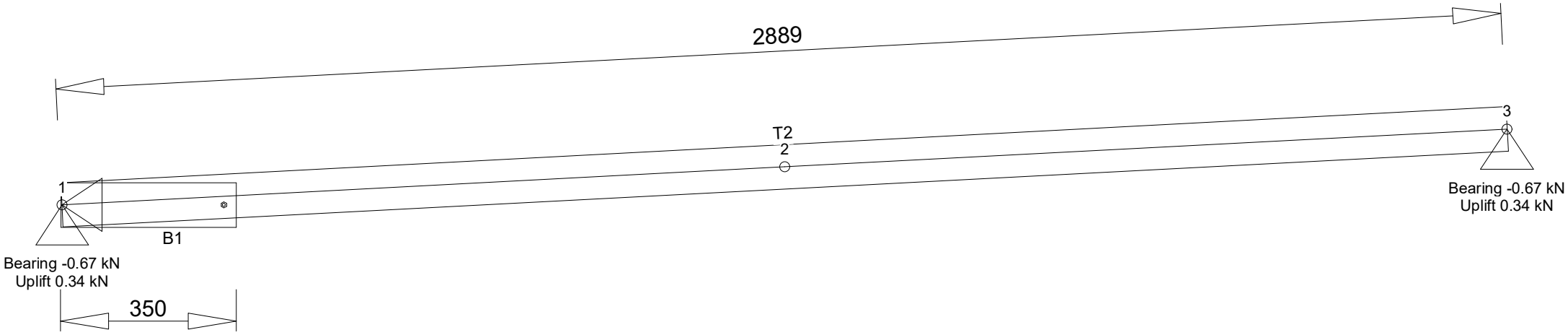
Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	898	Roof Load Type:	SHEET	Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00	Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW	Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10

Company: FRAMECAD Dwg Name: Unit 18 Sheet 1 of 1 Project: Unit 18 Type E Job Number:

B1	89S41-075-550	1	350mm	T2	89S41-075-550	1	2889mm		
Assembly Weight	3.7kg	FRAMECAD 10g-16mm Flathead	2	FRAMECAD 10g-19mm XDrive	1				

FRAMECAD®



Quantity Required = 1 Mark as V1 Engineering Status = Passed

Minimum number of fasteners required is 3 per joint

LOADS & DESIGN FACTORS

WIND Factors
SNOW Factors
No Snow Load Apply
Wind Pressure Factors

Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type:	Name	Qty
Main:	FRAMECAD 10g-19mm XDrive (SC)	1
Sub:	FRAMECAD 10g-16mm Flathead(SC)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	0.75	Panel	1.00	Rest.	0.75	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
1-3	-0.03	0.03	97%	(7)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC

Web

Member	Com. kN	Ten. kN	CSI	LC

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	22%
LC2	(G)	23%
LC3	(max(1.0Q,0.7S))	41%
LC4	(1.2G+1.5Q)	40%
LC5	(1.2G+Wd)	29%
LC6	(0.9G+Wu)	28%
LC7	(1.2G+1.5P)	97%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	3.47	2	Span/180,20.0	16.0	21.7%
LC2	2.19	2	Span/300,20.0	9.6	22.8%
LC3	3.96	2	Span/300,20.0	9.6	41.1%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.

Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

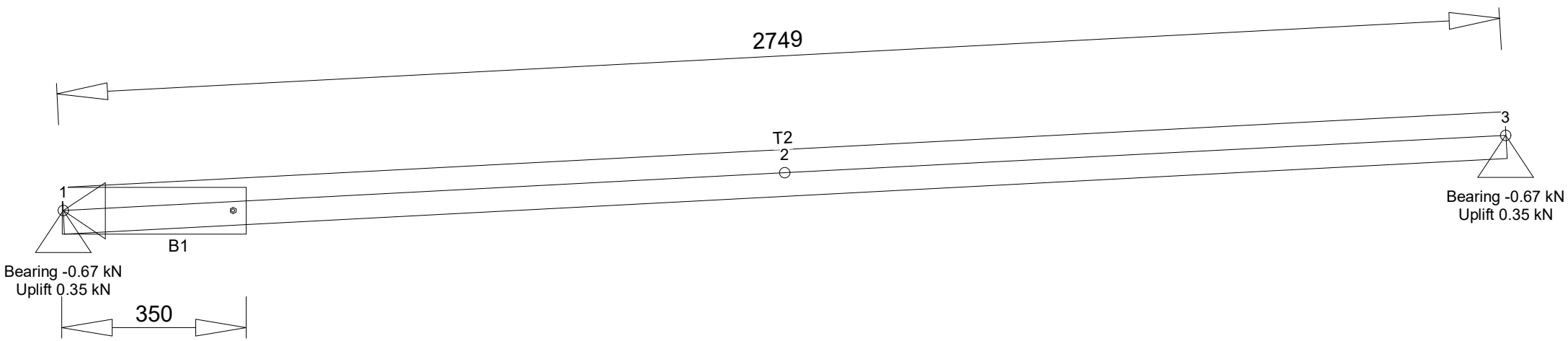
Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	628	Roof Load Type:	SHEET
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	1200	Shuttered Conditions:	No	Wind speed:	LOW

Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12		
Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25		
Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10		

Company: FRAMECAD | Dwg Name: Unit 18 | Sheet 1 of 1 | Project: Unit 18 Type E | Job Number:

B1	89S41-075-550	1 350mm	T2	89S41-075-550	1 2749mm			
Assembly Weight	3.5kg		FRAMECAD 10g-16mm Flathead	2		FRAMECAD 10g-19mm XDrive	1	



Quantity Required = 1 Mark as V2 Engineering Status = Passed

Minimum number of fasteners required is 3 per joint

LOADS & DESIGN FACTORS

WIND Factors
SNOW Factors
No Snow Load Apply
Wind Pressure Factors

Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type:	Name	Qty
Main:	FRAMECAD 10g-19mm XDrive (SC)	1
Sub:	FRAMECAD 10g-16mm Flathead(SC)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	0.75	Panel	1.00	Rest.	0.75	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
1-3	-0.03	0.03	90%	(7)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC

Web

Member	Com. kN	Ten. kN	CSI	LC

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	20%
LC2	(G)	21%
LC3	(max(1.0Q,0.7S))	38%
LC4	(1.2G+1.5Q)	38%
LC5	(1.2G+Wd)	27%
LC6	(0.9G+Wu)	27%
LC7	(1.2G+1.5P)	90%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	3.07	2	Span/180,20.0	15.3	20.2%
LC2	1.92	2	Span/300,20.0	9.2	21.0%
LC3	3.50	2	Span/300,20.0	9.2	38.2%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.

Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	678	Roof Load Type:	SHEET	Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00	Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	1200	Shuttered Conditions:	No	Wind speed:	LOW	Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10

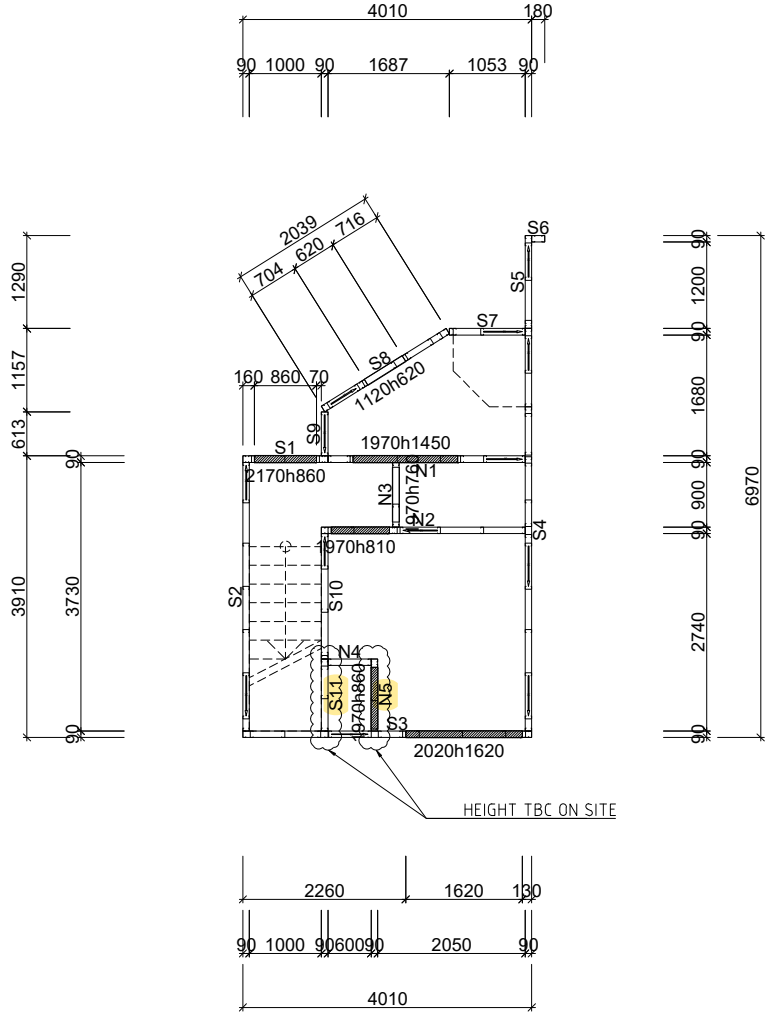
Company: FRAMECAD Dwg Name: Unit 18 Sheet 1 of 1 Project: Unit 18 Type E Job Number:

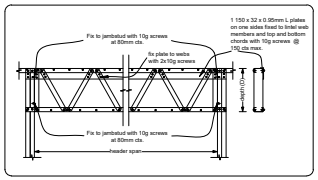
Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.





GROUND FLOOR LAYOUT

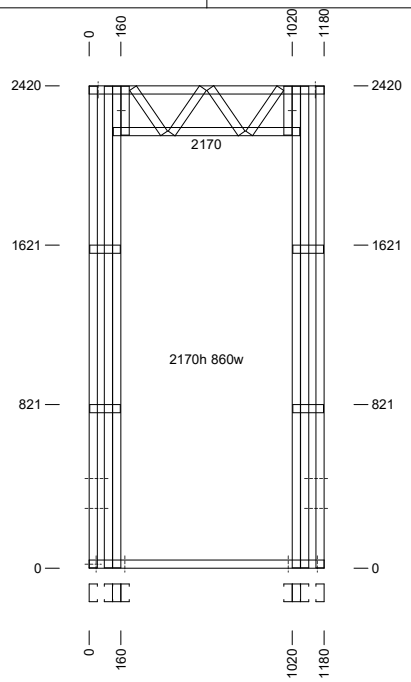
DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD	JOB DETAILS Unit 19 Type F 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 12-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 19 Bak	VIEW NAME 1 of 7	ON A4-Sheet		

89S41-095-550 2 1180mm 89S41-095-550 1 936mm	89S41-095-550 4 154mm	89S41-095-550 6 2416mm	89S41-095-550 2 245mm	89S41-095-550 2 276mm	89S41-095-550 2 277mm

Assembly Weight	28.6kg	FRAMECAD 10g-19mm XDrive 80	

FRAMECAD®



<<< Joins N1

Quantity Required = 1 Mark as S1 Header Engineering = Passed

Joins S2 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

Location mm	Qty	G kN	Qr kN	Wd kN	Wu kN	S kN	Qf kN

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.99		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	2.45		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

Location mm	StudQty	Vertical (kN) Down	Vertical (kN) UpLift	Lateral (kN) Down	Lateral (kN) UpLift
160	2	0.62	0.00	0	0
1020	2	0.62	0.00	0	0

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-095-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3575.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	17%
Maximum Base Reactions	5.19 (Down) kN/m 0.00 (Up) kN/m

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
2170h 860w	160	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & FRAMECAD Hold Down Fix

WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

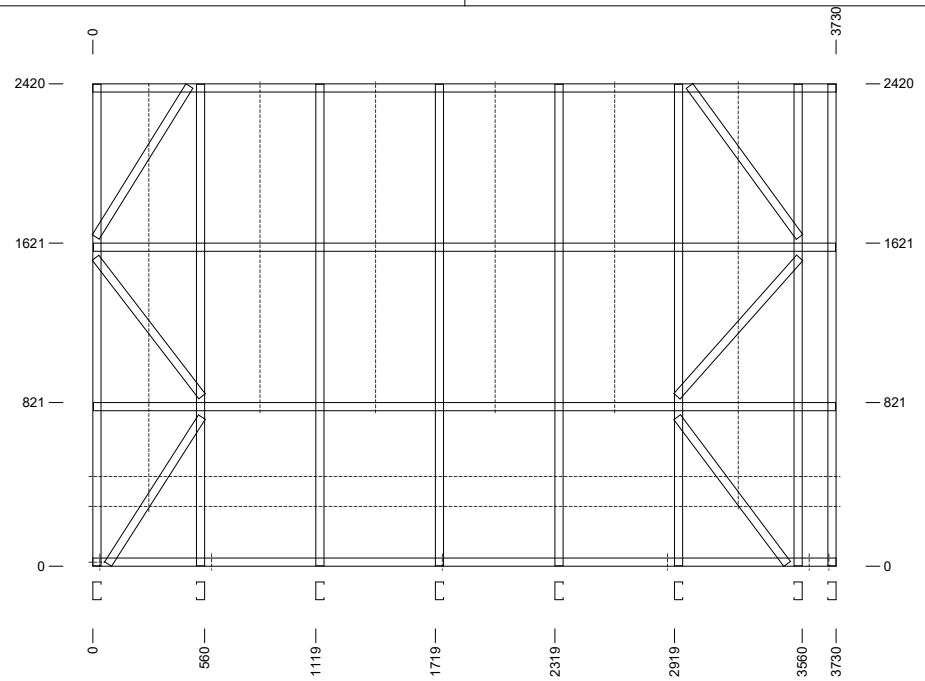
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 1180w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-095-550	8	2416mm	89S41-095-550	2	3724mm	89S41-095-550	2	3730mm	89S41-095-550	1	875mm
89S41-095-550	1	920mm	89S41-095-550	1	928mm	89S41-095-550	1	936mm			

89S41-095-550	1	877mm	89S41-095-550 1 891mm

Assembly Weight	56.7kg	FRAMECAD 10g-19mm XDrive	88

FRAMECAD®



<<< Joins S1

Quantity Required = 1 Mark as S2 Header Engineering = Passed

Joins S3 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	1.49		kN/m
Qr	Roof Live	0.15		kN/m
Qf	Floor Live Load	1.89		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.36		kN/m
Wd	Wind Down	0.16		kN/m
Wh	Wind Horizontal	0.55		kPa

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-095-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3325.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	18%
Maximum Base Reactions	4.95 (Down) kN/m
	0.00 (Up) kN/m

SPECIAL LOADING

Location mm	Qty	G kN	Qr kN	Wd kN	Wu kN	S kN	Qf kN
LOADS FROM SUPPORTED WALLS							
1825	1	0.20	0.00	0.00	0.00	0.00	0.00
3046	1	0.20	0.00	0.00	0.00	0.00	0.00
640	1	1.60	0.30	0.30	0.60	0.00	2.60
871	1	0.10	0.00	0.00	0.10	0.00	0.00

JAMB STUD ACTIONS

Location mm	StudQty	Vertical (kN) Down	Vertical (kN) UpLift	Lateral (kN) Down	Lateral (kN) UpLift

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

OPENING DESIGN

No opening on this panel

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

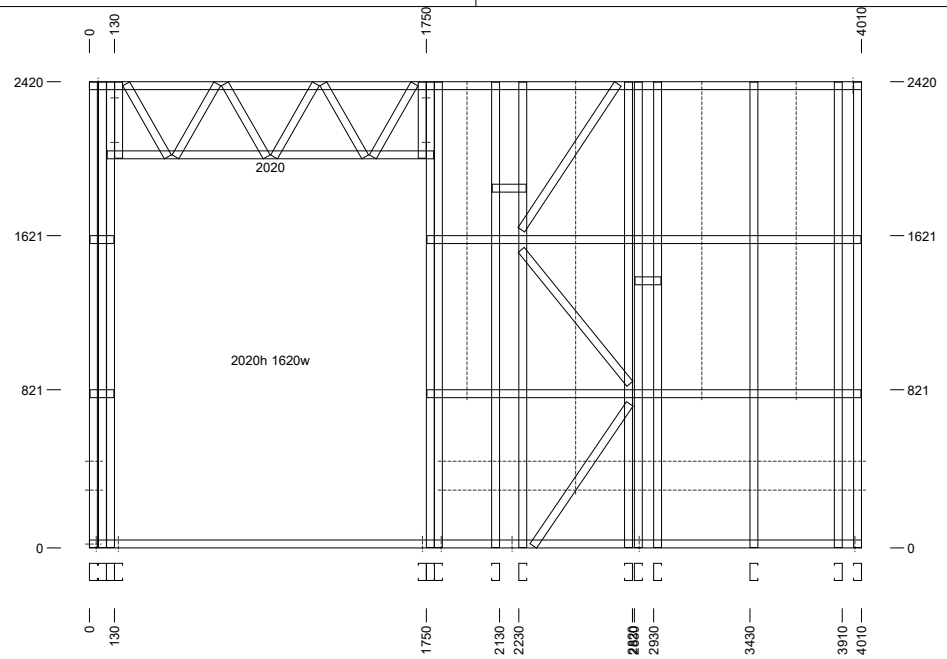
Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 3730w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-095-550	2	124mm	89S41-095-550	1	135mm	89S41-095-550	1	1696mm	89S41-095-550	1	176mm	89S41-095-550	2	2254mm	89S41-095-550	13	2416mm		
89S41-095-550	2	395mm	89S41-095-550	2	4010mm	89S41-095-550	2	436mm	89S41-095-550	4	437mm	89S41-095-550	1	891mm	89S41-095-550	1	895mm		
89S41-095-550	1	907mm																	

Assembly Weight	74.8kg	FRAMECAD 10g-19mm XDrive	168

FRAMECAD®



<<< Joins S4

Quantity Required = 1 Mark as S3 Header Engineering = Passed

Joins S2 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.64		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.33		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-095-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3950.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	15%
Maximum Base Reactions	1.59 (Down) kN/m
	0.00 (Up) kN/m

SPECIAL LOADING

Location	Qty	G	Qr	Wd	Wu	S	Qf
mm		kN	kN	kN	kN	kN	kN
LOADS FROM SUPPORTED WALLS							
979	0	0.20	0.00	0.00	0.00	0.00	0.30
1600	0	0.20	0.00	0.00	0.00	0.00	0.30

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
130	2	1.74	0.00	0	0
1750	2	1.74	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
2020h 1620w	130	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog
' Height '	denotes nominal panel height				
' Nog '	denotes maximum spacing				

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & FRAMECAD Hold Down Fix

WALL NOTE

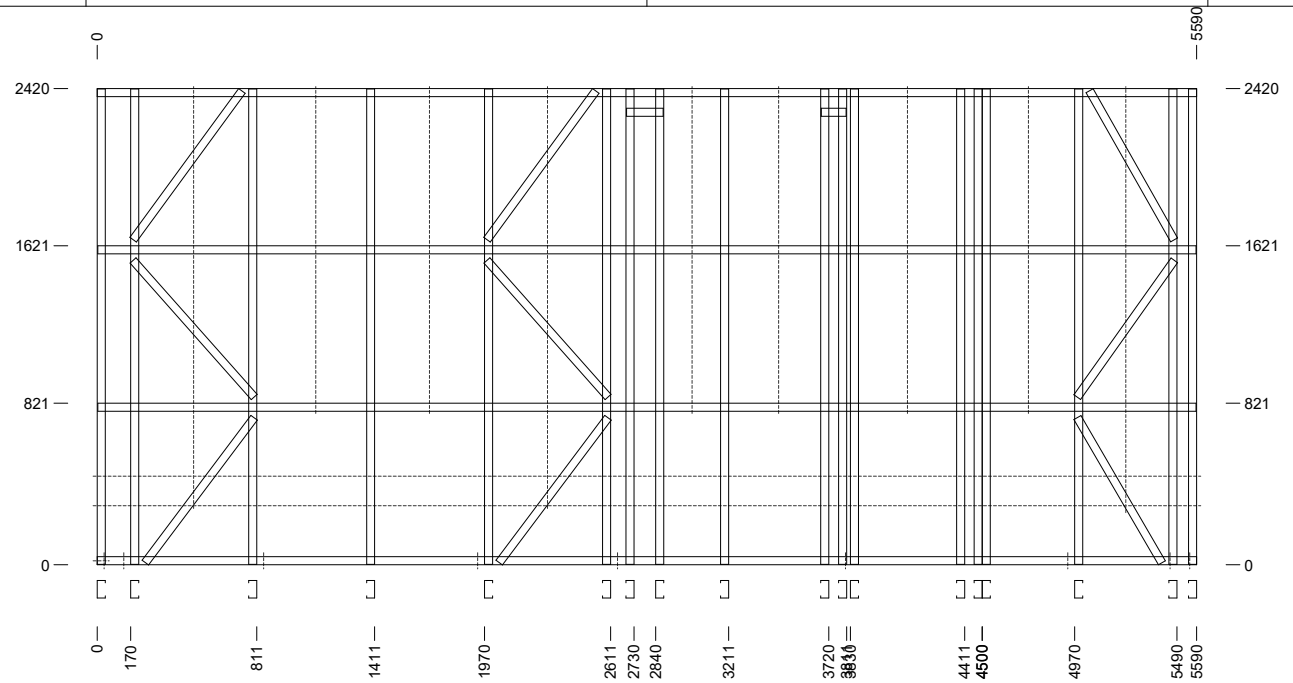
Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 4010w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-095-550	1	126mm	89S41-095-550	1	186mm	89S41-095-550	18	2416mm	89S41-095-550	2	5584mm	89S41-095-550	2	5590mm	89S41-095-550	1	853mm
89S41-095-550	1	854mm	89S41-095-550	1	871mm	89S41-095-550	2	920mm	89S41-095-550	2	928mm	89S41-095-550	2	936mm			

Assembly Weight	106.2kg	FRAMECAD 10g-19mm XDrive	188

FRAMECAD



<<< Joins S3

Quantity Required = 1 Mark as S4 Header Engineering = Passed

Joins S5 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	2.31		kN/m
Qr	Roof Live	0.19		kN/m
Qf	Floor Live Load	3.78		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.49		kN/m
Wd	Wind Down	0.22		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-095-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2675.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	22%
Maximum Base Reactions	8.77 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

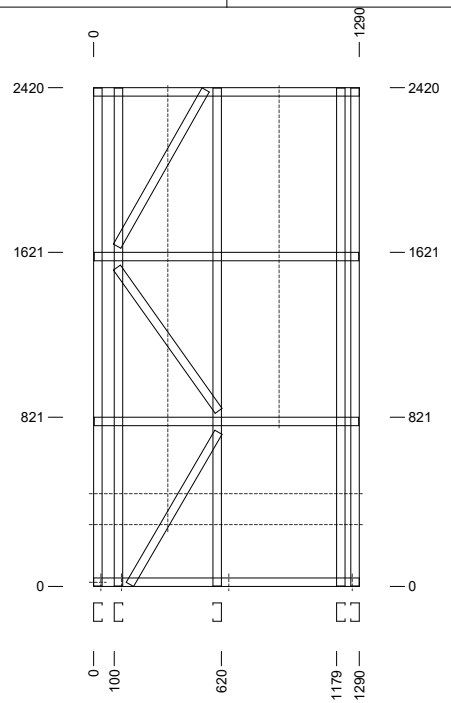
WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 5590w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-095-550 2 1284mm	89S41-095-550 2 1290mm	89S41-095-550 5 2416mm	89S41-095-550 1 853mm	89S41-095-550 1 854mm	89S41-095-550 1 871mm
Assembly Weight 28.3kg	FRAMECAD 10g-19mm XDrive 52				

FRAMECAD®



<<< Joins S6

Quantity Required = 1 Mark as S5 Header Engineering = Passed

Joins S7 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.86		kN/m
Qr	Roof Live	0.23		kN/m
Qf	Floor Live Load	0.08		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.55		kN/m
Wd	Wind Down	0.25		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-095-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3925.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	15%
Maximum Base Reactions	1.73 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

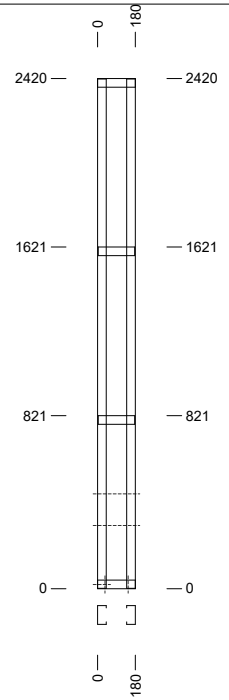
WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 1290w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-095-550	2	174mm	89S41-095-550	2	180mm	89S41-095-550	2	2416mm
Assembly Weight	7.9kg		FRAMECAD 10g-19mm XDrive	16				

FRAMECAD®



<<< Joins

Quantity Required = 1 Mark as S6 Header Engineering = Passed

Joins S5 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.88		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.60		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-095-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3925.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	15%
Maximum Base Reactions	2.28 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

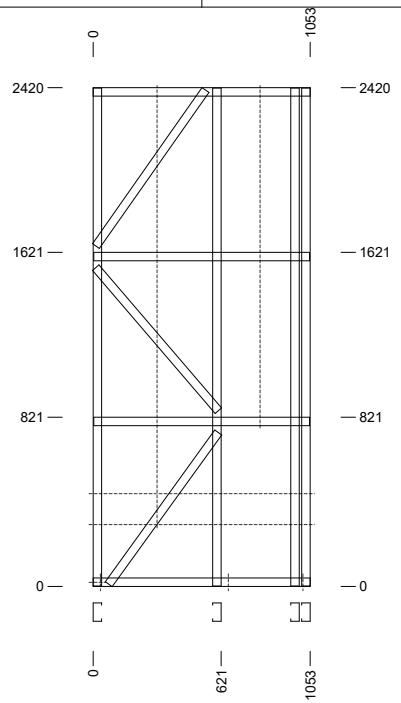
Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 180w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-095-550	2	1047mm	89S41-095-550	2	1053mm	89S41-095-550	4	2416mm	89S41-095-550	1	908mm	89S41-095-550	1	914mm	89S41-095-550	1	925mm

Assembly Weight	23.8kg	FRAMECAD 10g-19mm XDrive	44

FRAMECAD®



<<< Joins S5

Quantity Required = 1 Mark as S7 Header Engineering = Passed

Joins S8 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	1.52		kN/m
Qr	Roof Live	0.53		kN/m
Qf	Floor Live Load	0.60		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	1.27		kN/m
Wd	Wind Down	0.61		kN/m
Wh	Wind Horizontal	0.55		kPa

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-095-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3325.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	18%
Maximum Base Reactions	3.18 (Down) kN/m
	0.00 (Up) kN/m

SPECIAL LOADING

Location	Qty	G	Qr	Wd	Wu	S	Qf
mm		kN	kN	kN	kN	kN	kN
LOADS FROM SUPPORTED WALLS							
289	1	0.30	0.30	0.30	0.60	0.00	0.00

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

OPENING DESIGN

No opening on this panel

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

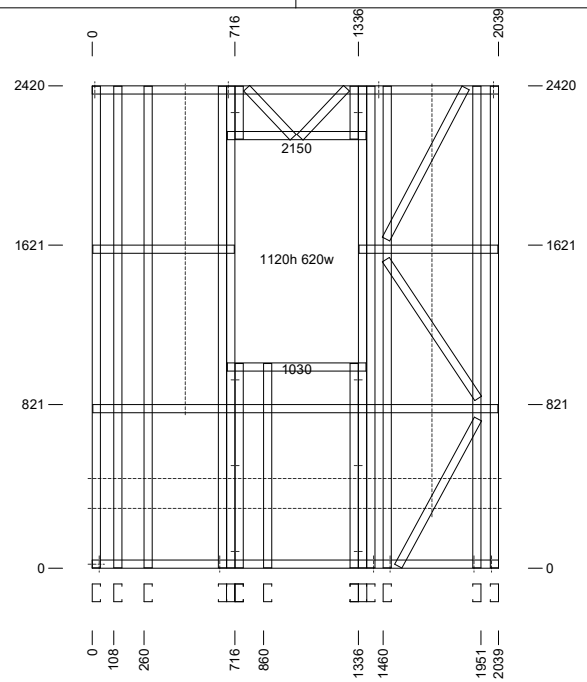
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 1053w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-095-550	3	1025mm	89S41-095-550	1	2033mm	89S41-095-550	2	2039mm	89S41-095-550	10	2416mm
89S41-095-550	2	696mm	89S41-095-550	1	698mm	89S41-095-550	1	710mm	89S41-095-550	1	836mm

89S41-095-550	2	265mm	89S41-095-550	2	339mm		
89S41-095-550	1	839mm	89S41-095-550	1	857mm		

Assembly Weight	57.0kg	FRAMECAD 10g-19mm XDrive	150		

FRAMECAD®



<<< Joins S7

Quantity Required = 1 Mark as S8 Header Engineering = Passed

Joins S9 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

Location	Qty	G	Qr	Wd	Wu	S	Qf
mm		kN	kN	kN	kN	kN	kN

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.92		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	2.25		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
716	2	0.71	0.00	0	0
1336	2	0.71	0.00	0	0

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-095-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3675.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	16%
Maximum Base Reactions	4.80 (Down) kN/m
	0.00 (Up) kN/m

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1120h 620w	716	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & FRAMECAD Hold Down Fix

WALL NOTE

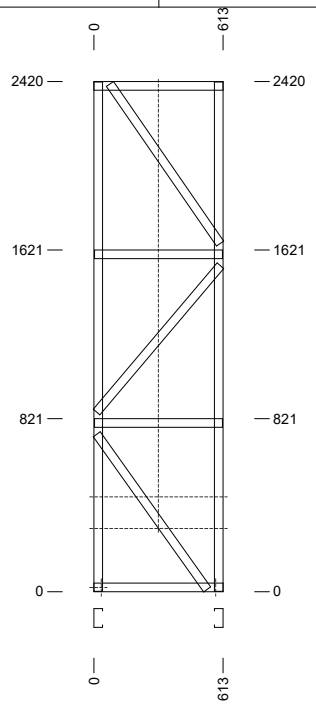
Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010
Wall Type:	Structural	Envelope:	2420h 2039w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018

Wind speed:	LOW	Company: FRAMECAD	Dwg Name: Unit 19 Bak	Sheet 8 of 16	Project: Unit 19 Type F
Wall Location:	External				Job Number:

89S41-095-550 2 2416mm	89S41-095-550 2 607mm	89S41-095-550 2 613mm	89S41-095-550 1 904mm	89S41-095-550 1 910mm	89S41-095-550 1 920mm
Assembly Weight 14.3kg	FRAMECAD 10g-19mm XDrive 28				

FRAMECAD®



<<< Joins S8

Quantity Required = 1 Mark as S9 Header Engineering = Passed

Joins N1 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	3.28		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	7.40		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-095-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	1825.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	33%
Maximum Base Reactions	15.36 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

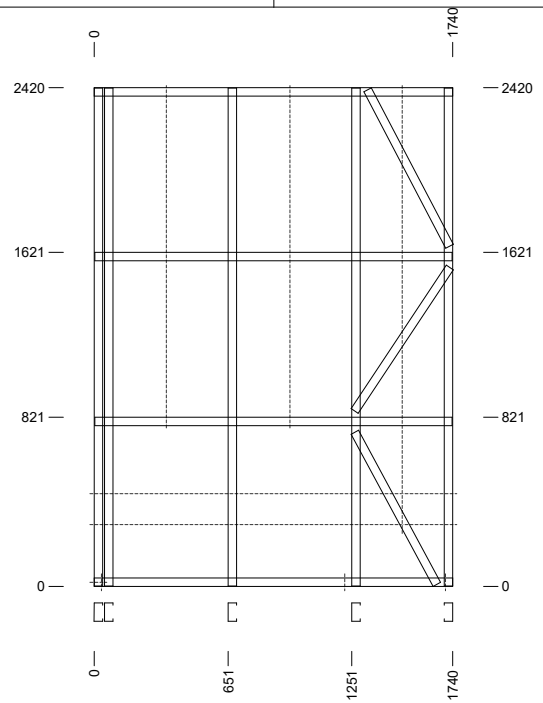
WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 613w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550 2 1734mm	89S41-075-550 2 1740mm	89S41-075-550 5 2416mm	89S41-075-550 1 835mm	89S41-075-550 1 839mm	89S41-075-550 1 856mm
Assembly Weight 24.6kg	FRAMECAD 10g-19mm XDrive 52				

FRAMECAD®



<<< Joins S11

Quantity Required = 1 Mark as S10 Header Engineering = Passed

Joins N2 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	1.96		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	3.38		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2900.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	21%
Maximum Base Reactions	8.06 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

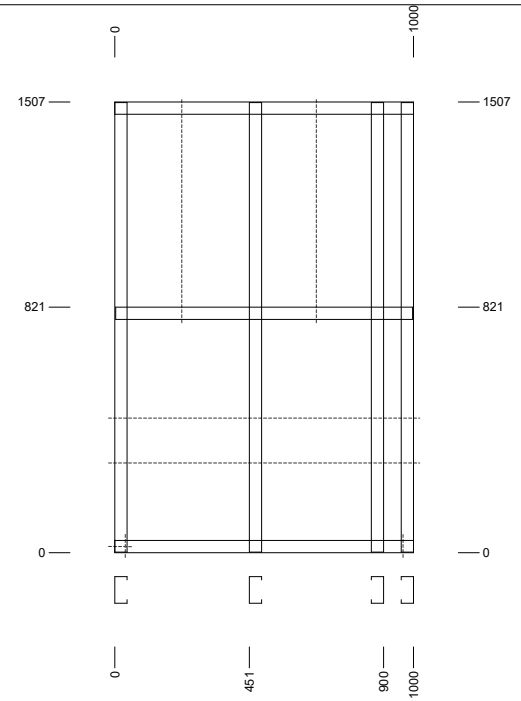
PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 1740w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550	2	1000mm	89S41-075-550	4 1503mm	89S41-075-550	1	994mm
Assembly Weight	10.3kg		FRAMECAD 10g-19mm XDrive	24			



<<< Joins S3

Quantity Required = 1 Mark as S11 Header Engineering = Passed

Joins S10 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.33		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	1467.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	8575.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	7%
Maximum Base Reactions	0.40 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

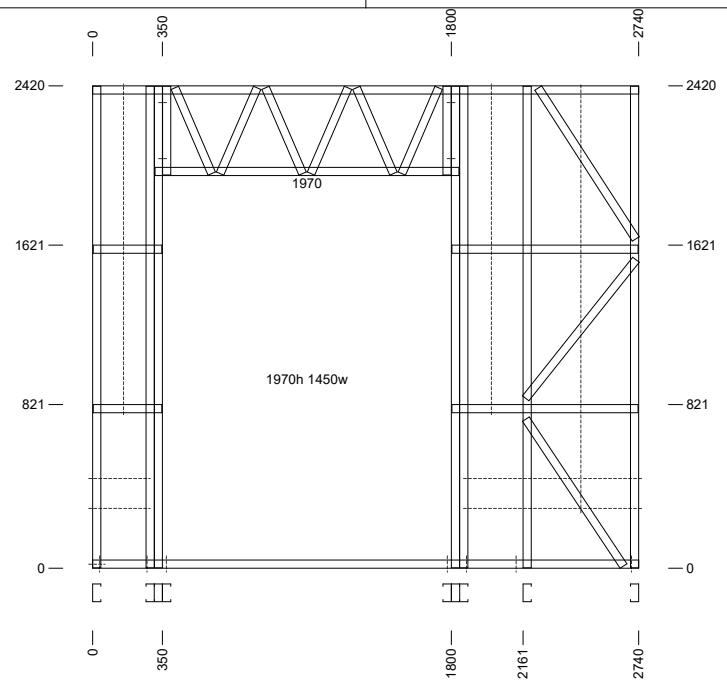
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	1507h 1000w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550	1	1526mm	89S41-075-550	7	2416mm	89S41-075-550	2	2740mm	89S41-075-550	2	344mm
89S41-075-550	4	469mm	89S41-075-550	1	885mm	89S41-075-550	1	888mm	89S41-075-550	1	902mm

89S41-075-550	2	445mm	89S41-075-550	2	468mm		
89S41-075-550	2	934mm					

Assembly Weight	37.4kg	FRAMECAD 10g-19mm XDrive	112		

FRAMECAD®



<<< Joins S1

Quantity Required = 1 Mark as N1 Header Engineering = Passed

Joins S4 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
350	2	0.00	0.00	0	0
1800	2	0.00	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.64 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1970h 1450w	350	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

WALL NOTE

Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

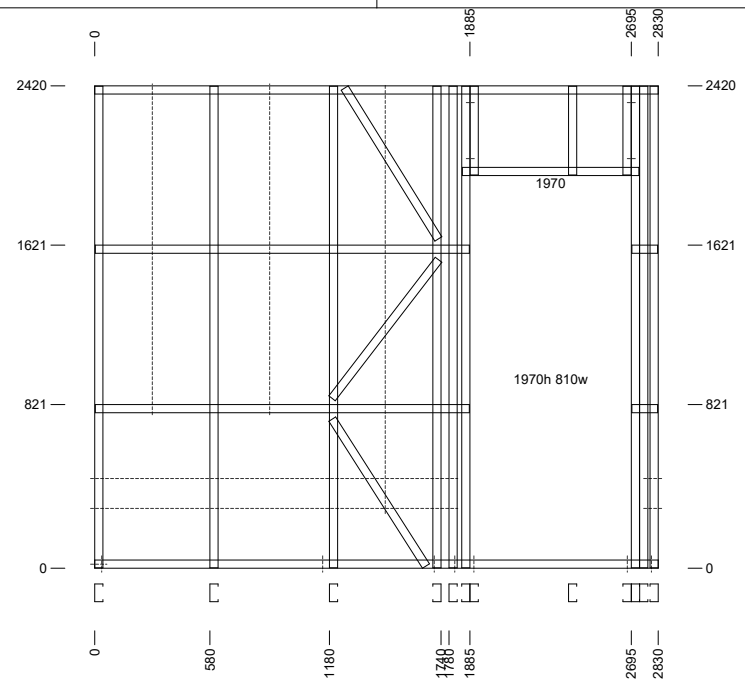
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010
Wall Type:	Non Load Bearing	Envelope:	2420h 2740w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018

Wind speed:	LOW				
Wall Location:	Internal				

89S41-075-550	2	129mm	89S41-075-550	2	1879mm	89S41-075-550	9	2416mm	89S41-075-550	2	2830mm	89S41-075-550	3	445mm	89S41-075-550	1	875mm
89S41-075-550	1	877mm	89S41-075-550	1	886mm	89S41-075-550	1	891mm									

Assembly Weight	41.4kg	FRAMECAD 10g-19mm XDrive	108

FRAMECAD®



<<< Joins S4

Quantity Required = 1 Mark as N2 Header Engineering = Passed

Joins S10 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
1885	2	0.00	0.00	0	0
2695	2	0.00	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.64 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1970h 810w	1885	Empty Head	None	0	2(S)2(H)	Passed	No design	No design	

WALL NOTE

Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

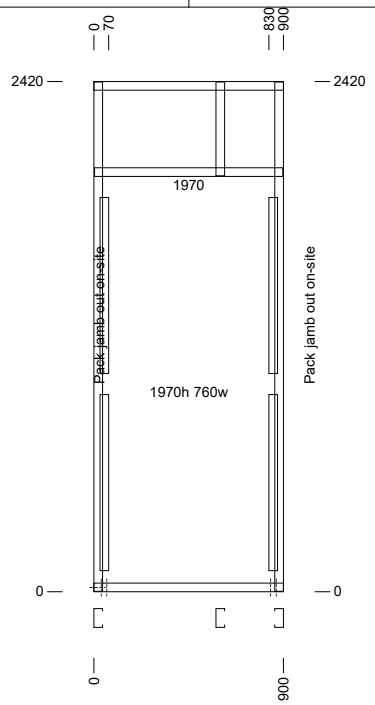
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010
Wall Type:	Non Load Bearing	Envelope:	2420h 2830w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018

Wind speed:	LOW			
Wall Location:	Internal			

89S41-075-550	2	2416mm	89S41-075-550	1	445mm	89S41-075-550	4	835mm	89S41-075-550	1	894mm	89S41-075-550	2	900mm

Assembly Weight	12.9kg	FRAMECAD 10g-19mm XDrive	16		

FRAMECAD®



<<< Joins N1

Quantity Required = 1 Mark as N3 Header Engineering = Passed

Joins N2 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
70	2	0.00	0.00	0	0
830	2	0.00	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb		As specified for header

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.64 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

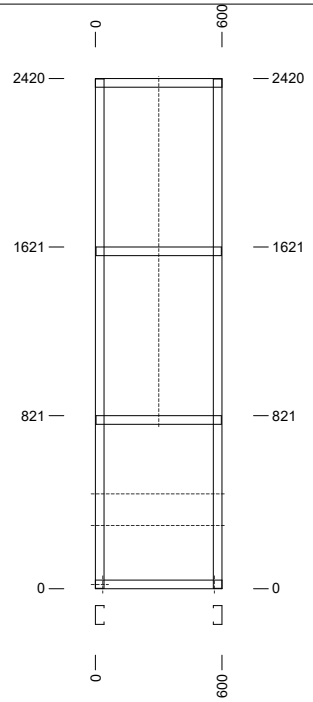
Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1970h 760w	70	Empty Head	None	0	2(S)2(H)	Passed	No design	No design	

WALL NOTE

Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2420h 900w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550 2 2416mm	89S41-075-550 2 594mm	89S41-075-550 2 600mm
Assembly Weight 8.2kg	FRAMECAD 10g-19mm XDrive 16	



<<< Joins N5

Quantity Required = 1 Mark as N4 Header Engineering = Passed

Joins S11 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.64 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

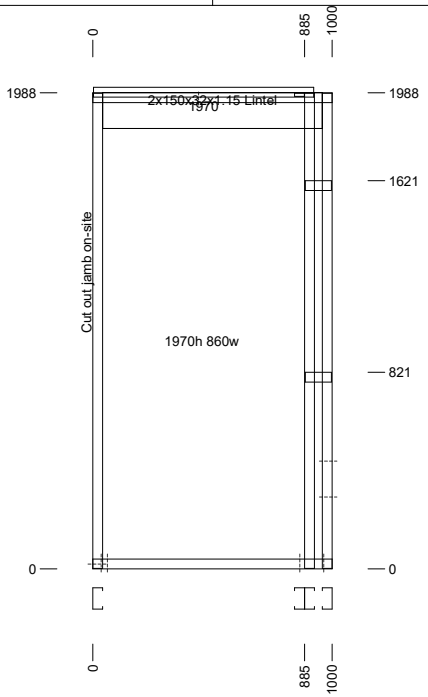
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2420h 600w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

150x32x1.15 Lintel	2	918mm	89S41-095-550	2	1000mm	89S41-095-550	2	109mm	89S41-095-550	1	13mm	89S41-095-550	3	1984mm	89S41-095-550	1	920mm

Assembly Weight	16.2kg	FRAMECAD 10g-16mm Flathead	30	FRAMECAD 10g-19mm XDrive	18

FRAMECAD®



<<< Joins S3

Quantity Required = 1 Mark as N5 Header Engineering = Passed

Joins N4 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.44		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
25	2	0.00	0.00	0	0
885	2	0.00	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header
Muliti-Lintel to Plates	FRAMECAD 10g-16mm Flathead	150 mm Centres along Plate
Lintel to Jamb	FRAMECAD 10g-16mm Flathead	2 screws per each jamb, minimm of 4 screws total on each side
Lintel to Web	FRAMECAD 10g-16mm Flathead	2 screws per each web,

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-095-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	1948.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	6075.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	7%
Maximum Base Reactions	0.53 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1970h 860w	25	Webbed with Lintels	2x150x32x1.15 Lintel	0	2(S)2(H)	Amended	No design	No design	

WALL NOTE

Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	0	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2011h 1000w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

Stud Design for Panel S1

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S1

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.99	kN/m
Live Load (Q1 = max(Q2,Q3))	2.45	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	2.45	kN/m
Live Load (Q4 = Q2+Q3)	2.45	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	5686.8	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3581.3	mm
0.9G + 1.0Wu + 1.0Wh	3956.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3575	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	17	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

JOIST BEAM POINT LOAD (included in UDL)

Load Location	Stud qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow (S) kN	Wind Up (W kN	Floor Live (Qf) kN

Stud Design for Panel S2

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S2

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	1.49	kN/m
Live Load (Q1 = max(Q2,Q3))	1.89	kN/m
Roof Live Load (Q2)	0.15	kN/m
Floor Live Load (Q3)	1.89	kN/m
Live Load (Q4 = Q2+Q3)	2.04	kN/m
Wind Up Load (Wu)	0.36	kN/m
Wind Down Load (Wd)	0.16	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	5982.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3331.3	mm
0.9G + 1.0Wu + 1.0Wh	3906.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3325	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	18	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

POINT LOAD

Load Location	Stud Qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow(S) kN	Wind Up (Wu) kN	Floor Live(Q3) kN
1825	1	0.20	0.00	0.00	0.00	0.00
3046	1	0.20	0.00	0.00	0.00	0.00
640	1	1.60	0.30	0.00	0.60	2.60
871	1	0.10	0.00	0.00	0.10	0.00

Stud Design for Panel S3

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S3

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.64	kN/m
Live Load (Q1 = max(Q2,Q3))	0.33	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.33	kN/m
Live Load (Q4 = Q2+Q3)	0.33	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3956.3	mm
0.9G + 1.0Wu + 1.0Wh	4156.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3950	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	15	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

POINT LOAD

Load Location	Stud Qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow(S) kN	Wind Up (Wu) kN	Floor Live(Q3) kN
979	0	0.20	0.00	0.00	0.00	0.30
1600	0	0.20	0.00	0.00	0.00	0.30

Stud Design for Panel S4

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S4

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	2.31	kN/m
Live Load (Q1 = max(Q2,Q3))	3.78	kN/m
Roof Live Load (Q2)	0.19	kN/m
Floor Live Load (Q3)	3.78	kN/m
Live Load (Q4 = Q2+Q3)	3.97	kN/m
Wind Up Load (Wu)	0.49	kN/m
Wind Down Load (Wd)	0.22	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	6053.0	mm
1.2G + 1.5Q3	3275.9	mm
1.2G + 0.4Q3 + 1.0S	6455.4	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2681.3	mm
0.9G + 1.0Wu + 1.0Wh	3831.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2675	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	22	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

Stud Design for Panel S5

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S5

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.86	kN/m
Live Load (Q1 = max(Q2,Q3))	0.23	kN/m
Roof Live Load (Q2)	0.23	kN/m
Floor Live Load (Q3)	0.08	kN/m
Live Load (Q4 = Q2+Q3)	0.31	kN/m
Wind Up Load (Wu)	0.55	kN/m
Wind Down Load (Wd)	0.25	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3931.3	mm
0.9G + 1.0Wu + 1.0Wh	4381.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3925	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	15	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

Stud Design for Panel S6

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S6

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.88	kN/m
Live Load (Q1 = max(Q2,Q3))	0.60	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.60	kN/m
Live Load (Q4 = Q2+Q3)	0.60	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3931.3	mm
0.9G + 1.0Wu + 1.0Wh	4006.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3925	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	15	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

Stud Design for Panel S7

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S7

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	1.52	kN/m
Live Load (Q1 = max(Q2,Q3))	0.60	kN/m
Roof Live Load (Q2)	0.53	kN/m
Floor Live Load (Q3)	0.60	kN/m
Live Load (Q4 = Q2+Q3)	1.13	kN/m
Wind Up Load (Wu)	1.27	kN/m
Wind Down Load (Wd)	0.61	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3331.3	mm
0.9G + 1.0Wu + 1.0Wh	4481.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3325	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	18	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

POINT LOAD

Load Location	Stud Qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow(S) kN	Wind Up (Wu) kN	Floor Live(Q3) kN
289	1	0.30	0.30	0.00	0.60	0.00

Stud Design for Panel S8

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S8

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.92	kN/m
Live Load (Q1 = max(Q2,Q3))	2.25	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	2.25	kN/m
Live Load (Q4 = Q2+Q3)	2.25	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	6174.4	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3681.3	mm
0.9G + 1.0Wu + 1.0Wh	4006.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3675	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	16	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

JOIST BEAM POINT LOAD (included in UDL)

Load Location	Stud qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow (S) kN	Wind Up (W kN	Floor Live (Qf) kN

Stud Design for Panel S9

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S9

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	3.28	kN/m
Live Load (Q1 = max(Q2,Q3))	7.40	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	7.40	kN/m
Live Load (Q4 = Q2+Q3)	7.40	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	4010.0	mm
1.2G + 1.5Q3	1839.3	mm
1.2G + 0.4Q3 + 1.0S	4010.3	mm
1.2G + 1.5P1	6607.0	mm
1.2G + 0.4Q3 + Wd + Wh	2160.3	mm
0.9G + 1.0Wu + 1.0Wh	3231.3	mm
0.44Wh	4410.9	mm
P2	4083.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	1825	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	33	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	27.66	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

Stud Design for Panel S10

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S10

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Structural	
Dead Load (G)	1.96	kN/m
Live Load (Q1 = max(Q2,Q3))	3.38	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	3.38	kN/m
Live Load (Q4 = Q2+Q3)	3.38	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	5845.0	mm
1.2G + 1.5Q3	2916.9	mm
1.2G + 0.4Q3 + 1.0S	5844.8	mm
1.2G + 1.5P1	8503.0	mm
1.2G + 0.4Q3 + Wd + Wh	3144.8	mm
0.9G + 1.0Wu + 1.0Wh	4313.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2900	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	21	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel S11

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S11

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Structural	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.33	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	9000.0	mm
0.9G + 1.0Wu + 1.0Wh	9000.0	mm
0.44Wh	9000.0	mm
P2	8577.5	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	1467	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	8575	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	7	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	21.65	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N1

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N1

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	6063.3	mm
0.9G + 1.0Wu + 1.0Wh	6063.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N2

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N2

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	6063.3	mm
0.9G + 1.0Wu + 1.0Wh	6063.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N3

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N3

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	6063.3	mm
0.9G + 1.0Wu + 1.0Wh	6063.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N4

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N4

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	6063.3	mm
0.9G + 1.0Wu + 1.0Wh	6063.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N5

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N5

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.44	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	9000.0	mm
0.9G + 1.0Wu + 1.0Wh	9000.0	mm
0.44Wh	9000.0	mm
P2	6095.6	mm

DESIGN RESULTS:

Stud Material	89S41-095-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	1948	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	6075	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	7	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.95	mm
Service Hole Width	34.0	mm
Yield Strength	550	MPa
Tensile Strength	550	MPa

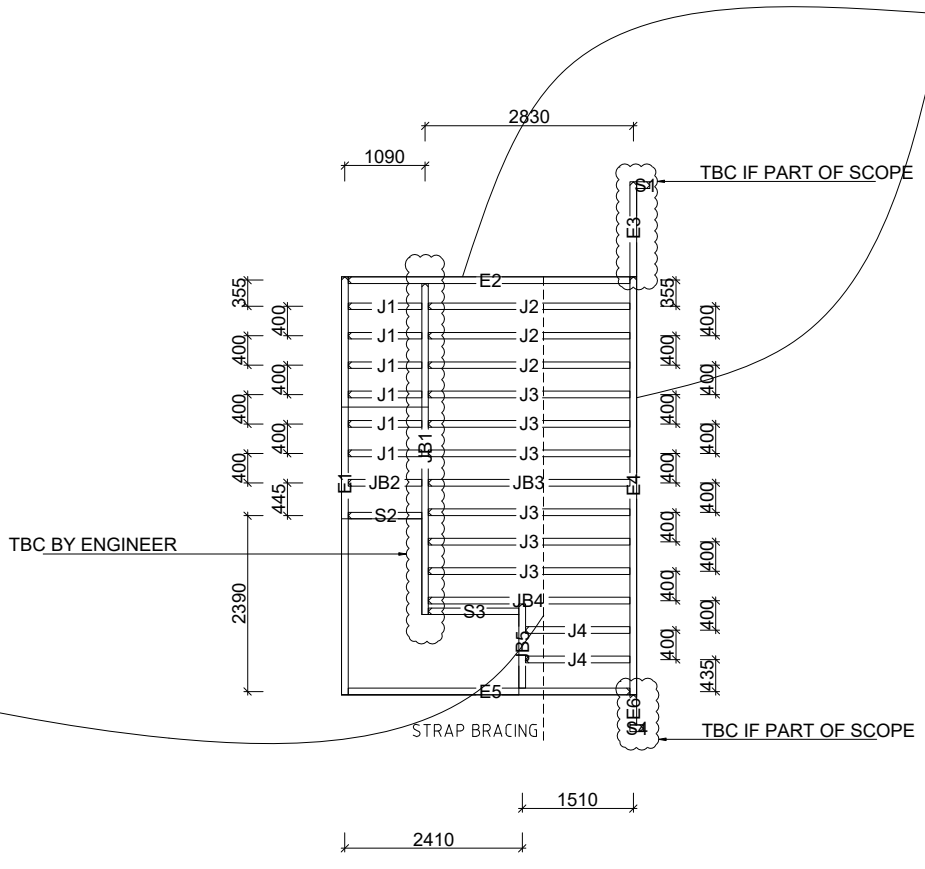
SECTION PROPERTIES (SINGLE STUD):

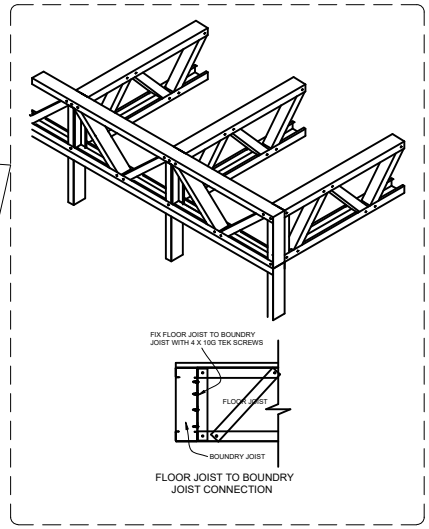
Gross Area	176.65	mm^2
Section Mass	1.425	kg/m
Centroid Left	12.9	mm
Centroid Top	44.0	mm
Second Moment of Inertia Ix	224850	mm^4
Second Moment of Inertia Iy	41508	mm^4
Radius of Gyration rx	35.7	mm
Radius of Gyration ry	15.3	mm
Shear Centre xo	32.6	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	50.9	mm
Torsion Constant J	53	mm^4
Warping Constant Iw	72.90	mm^6

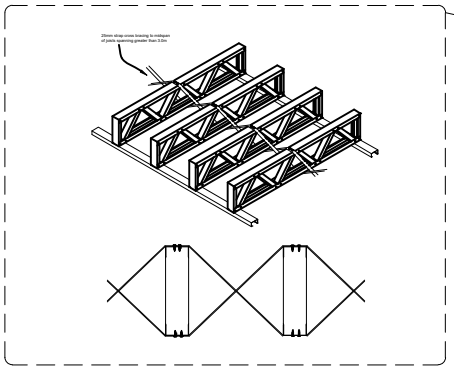
SECTION CAPACITIES (SINGLE STUD):

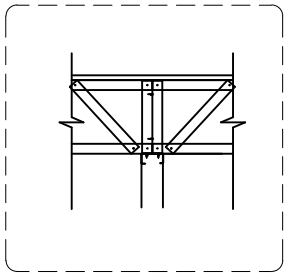
Shear Capacity ΦvVv	5.17	kN
Tension Capacity ΦtNt	59.10	kN
Compression Capacity ΦcNs	38.74	kN
Compression Capacity ΦcNc	29.27	kN
Bending Capacity ΦbMsx-	2063	Nm
Bending Capacity ΦbMbx-	1774	Nm
Bending Capacity ΦbMsx	2063	Nm
Bending Capacity ΦbMbx	1774	Nm

Floor Member Summary			
E1	WJ89095H	1	5680
E2	WJ89095H	1	3830
E3	WJ89095H	1	7380
E4	WJ89095H	1	3830
J1	WJ89095H	6	1000
J2	WJ89095H	3	2740
J3	WJ89095H	6	2740
J4	WJ89095H	2	1420
JB1	WJ89095H	1	4500
JB2	WJ89095H	1	1000
JB3	WJ89095H	1	2740
JB4	WJ89095H	1	2740
JB5	WJ89095H	1	1145
S1	WJ89095H	1	180
S2	WJ89095H	1	1000
S3	WJ89095H	1	1230
S4	WJ89095H	1	180
	FRAMECAD BATTEN 22	9	4800
	FRAMECAD BATTEN 22	1	6100
	FRAMECAD 10g-19mm HWH Hex		500









FIRST FLOOR LEVEL JOIST LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD

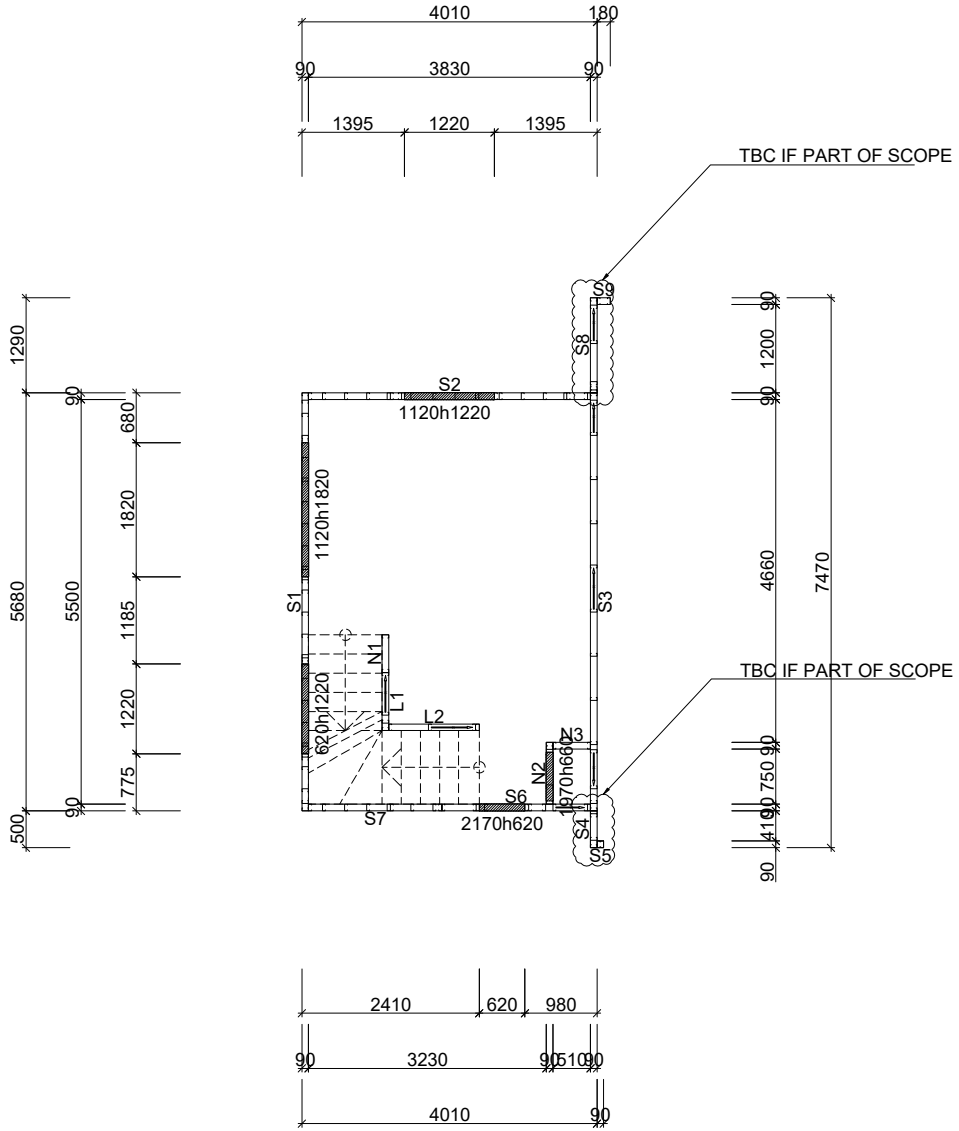
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 19 Type F 107 Blockhouse Bay Road	Ralph Lao	12-10-2021	1 : 100		
	DWG FILE Unit 19 Bak	VIEW NAME 2 of 7	ON A4-Sheet		

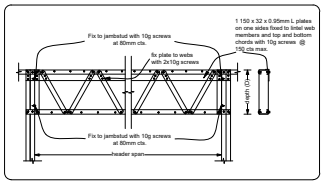
Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.





FIRST FLOOR LEVEL LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

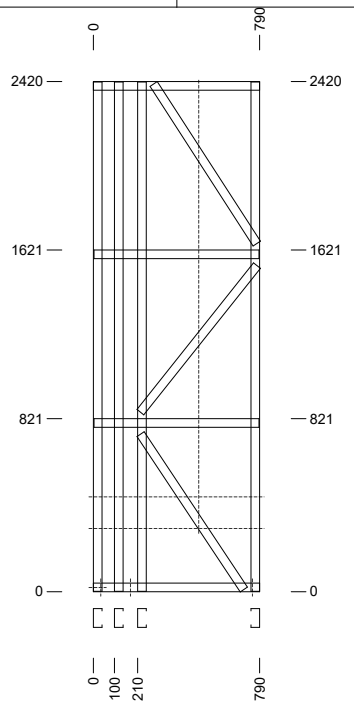
FRAMECAD®

JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 19 Type F 107 Blockhouse Bay Road	Ralph Lao	12-10-2021	1 : 100		
	DWG FILE Unit 19 Bak	VIEW NAME 3 of 7	ON A4-Sheet		

89S41-075-550	4	2416mm	89S41-075-550	2	784mm	89S41-075-550	2	790mm	89S41-075-550	1	885mm	89S41-075-550	1	888mm	89S41-075-550	1	902mm

Assembly Weight	17.7kg	FRAMECAD 10g-19mm XDrive	44

FRAMECAD®



<<< Joins L2

Quantity Required = 1 Mark as L1 Header Engineering = Passed

Joins N1 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	1.48		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	2.24		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	17%
Maximum Base Reactions	5.77 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

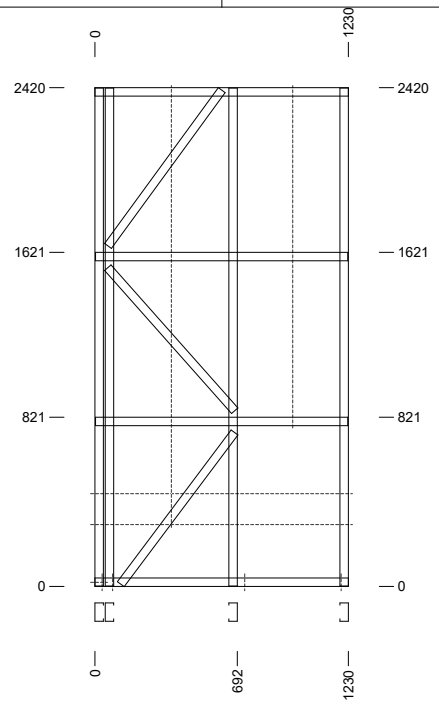
Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2420h 790w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550	2	1224mm	89S41-075-550	2	1230mm	89S41-075-550	4	2416mm	89S41-075-550	1	920mm	89S41-075-550	1	928mm	89S41-075-550	1	936mm

Assembly Weight	19.8kg	FRAMECAD 10g-19mm XDrive	44

FRAMECAD®



<<< Joins

Quantity Required = 1 Mark as L2 Header Engineering = Passed

Joins L1 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.68		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.30		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	12%
Maximum Base Reactions	1.90 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

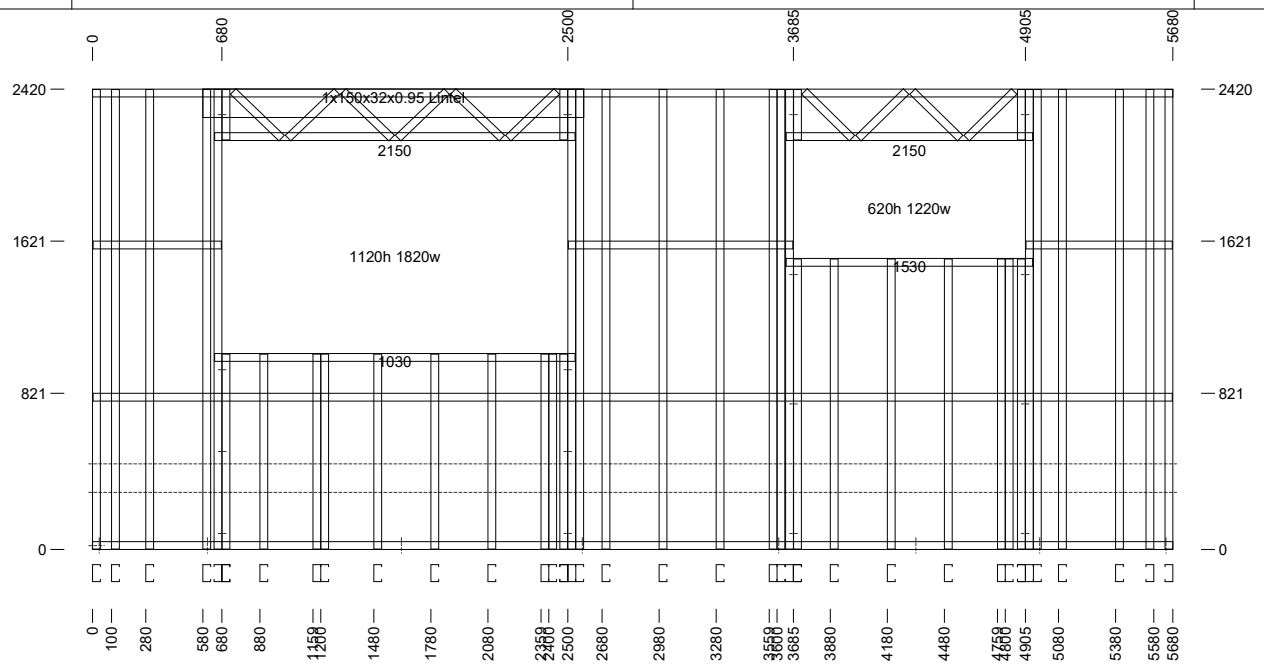
Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2420h 1230w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

150x32x0.95 Lintel	1	2004mm	89S41-075-550	10	1025mm	89S41-075-550	1	1179mm	89S41-075-550	2	1296mm	89S41-075-550	7	1525mm	89S41-075-550	2	1896mm
89S41-075-550	19	2416mm	89S41-075-550	4	265mm	89S41-075-550	2	349mm	89S41-075-550	2	350mm	89S41-075-550	2	353mm	89S41-075-550	4	354mm
89S41-075-550	1	5674mm	89S41-075-550	2	5680mm	89S41-075-550	1	674mm	89S41-075-550	1	769mm						

Assembly Weight	114.0kg	FRAMECAD 10g-16mm Flathead	40	FRAMECAD 10g-19mm XDrive	358

FRAMECAD



<<< Joins S2

Quantity Required = 1 Mark as S1 Header Engineering = Passed

Joins S7 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	1.12		kN/m
Qr	Roof Live	0.15		kN/m
Qf	Floor Live Load	1.65		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.36		kN/m
Wd	Wind Down	0.16		kN/m
Wh	Wind Horizontal	0.55		kPa

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2450.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	24%
Maximum Base Reactions	4.14 (Down) kN/m
	0.00 (Up) kN/m

SPECIAL LOADING

Location mm	Qty	G kN	Qr kN	Wd kN	Wu kN	S kN	Qf kN
LOADS FROM SUPPORTED WALLS							
3685	1	0.00	0.00	0.00	0.00	0.00	0.00
4906	1	0.00	0.00	0.00	0.00	0.00	0.00
2110	0	0.10	0.00	0.00	0.10	0.00	0.00
2731	1	0.10	0.00	0.00	0.10	0.00	0.00
180	1	0.10	0.00	0.00	0.10	0.00	0.00
801	0	0.10	0.00	0.00	0.10	0.00	0.00

JAMB STUD ACTIONS

Location mm	StudQty	Vertical (kN) Down	Vertical (kN) UpLift	Lateral (kN) Down	Lateral (kN) UpLift
3685	2	0.82	0.00	0	0
4905	2	0.82	0.00	0	0
680	2	5.83	0.00	0	0
2500	2	5.83	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header
Lintel to Plates	FRAMECAD 10g-16mm Flathead	150 mm Centres along Plate
Lintel to Jamb	FRAMECAD 10g-16mm Flathead	2 screws per each jamb, minimm of 4 screws total on each side
Lintel to Web	FRAMECAD 10g-16mm Flathead	2 screws per each web,

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
620h 1220w	3685	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	
1120h 1820w	680	Webbed with Lintels	1x150x32x0.95 Lintel	0	2(S)2(H)	Passed	No design	No design	

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog
' Height '	denotes nominal panel height				
' Nog '	denotes maximum spacing				

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & FRAMECAD Hold Down Fix

WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010
Wall Type:	Structural	Envelope:	2421h 5680w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018

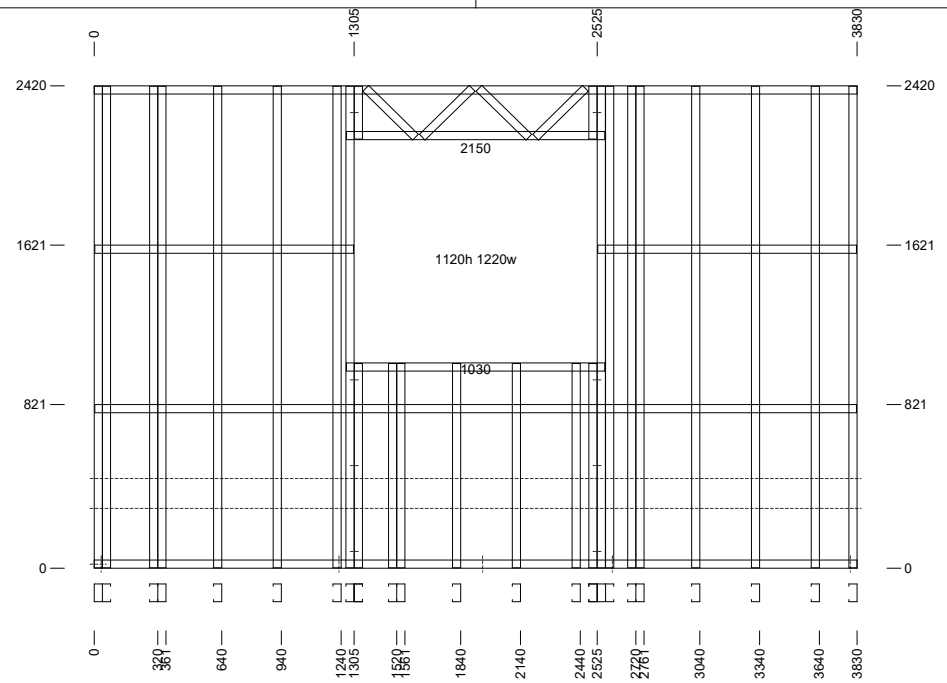
Wind speed:	LOW	Company: FRAMECAD	Dwg Name: Unit 19 Bak	Sheet 3 of 14	Project: Unit 19 Type F
Wall Location:	External				Job Number:

89S41-075-550	7	1025mm	89S41-075-550	2	1296mm	89S41-075-550	2	1299mm	89S41-075-550	16	2416mm
89S41-075-550	2	350mm	89S41-075-550	1	3824mm	89S41-075-550	2	3830mm			

89S41-075-550	2	265mm	89S41-075-550	2	349mm

Assembly Weight	73.5kg	FRAMECAD 10g-19mm XDrive	218

FRAMECAD®



<<< Joins S3

Quantity Required = 1 Mark as S2 Header Engineering = Passed

Joins S1 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	1.25		kN/m
Qr	Roof Live	0.53		kN/m
Qf	Floor Live Load	0.60		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	1.27		kN/m
Wd	Wind Down	0.61		kN/m
Wh	Wind Horizontal	0.55		kPa

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2400.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	25%
Maximum Base Reactions	2.86 (Down) kN/m
	0.00 (Up) kN/m

SPECIAL LOADING

Location mm	Qty	G kN	Qr kN	Wd kN	Wu kN	S kN	Qf kN
LOADS FROM SUPPORTED WALLS							
289	1	0.30	0.30	0.30	0.60	0.00	0.00
1510	0	0.30	0.30	0.30	0.60	0.00	0.00
2319	0	0.40	0.30	0.30	0.70	0.00	0.00
3540	1	0.40	0.30	0.30	0.70	0.00	0.00

JAMB STUD ACTIONS

Location mm	StudQty	Vertical (kN) Down	UpLift	Lateral (kN) Down	UpLift
1305	2	1.53	-0.09	0	0
2525	2	1.53	-0.09	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1120h 1220w	1305	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height

' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & FRAMECAD Hold Down Fix

WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

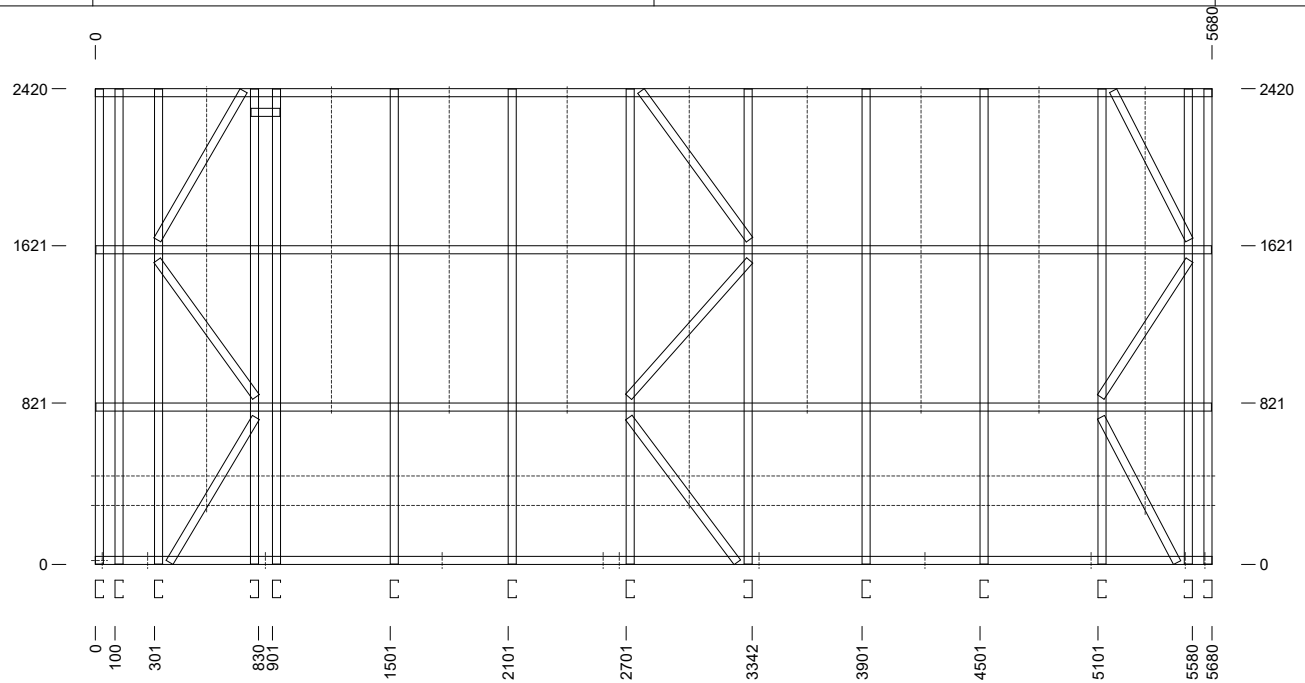
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 3830w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	1	147mm	89S41-075-550	14	2416mm	89S41-075-550	2	5674mm	89S41-075-550	2	5680mm
89S41-075-550	1	852mm	89S41-075-550	2	858mm	89S41-075-550	1	876mm	89S41-075-550	1	920mm

89S41-075-550	1	830mm	89S41-075-550	1	834mm		
89S41-075-550	1	928mm	89S41-075-550	1	936mm		

Assembly Weight	73.6kg	FRAMECAD 10g-19mm XDrive	152		

FRAMECAD®



<<< Joins S4

Quantity Required = 1 Mark as S3 Header Engineering = Passed

Joins S8 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	1.38		kN/m
Qr	Roof Live	0.19		kN/m
Qf	Floor Live Load	2.15		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.48		kN/m
Wd	Wind Down	0.22		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2300.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	26%
Maximum Base Reactions	5.20 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

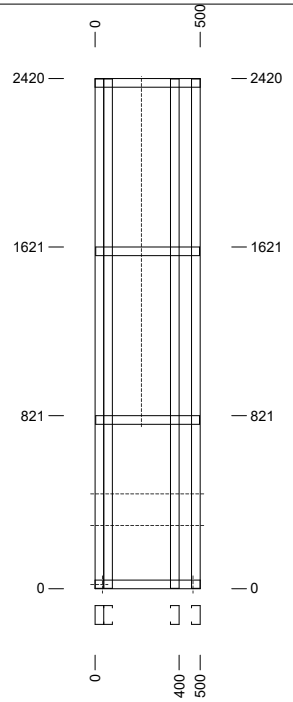
WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 5680w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	4	2416mm	89S41-075-550	2	494mm	89S41-075-550	2	500mm
Assembly Weight	13.3kg		FRAMECAD 10g-19mm XDrive	32				

FRAMECAD®



<<< Joins S3

Quantity Required = 1 Mark as S4 Header Engineering = Passed

Joins >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.28		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.03		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2900.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	21%
Maximum Base Reactions	0.71 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

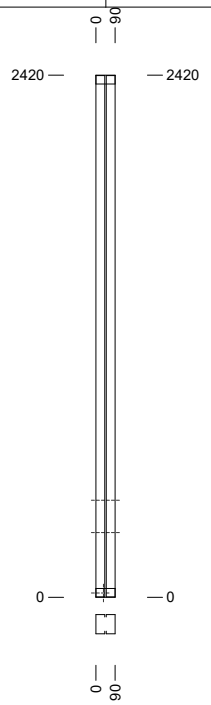
No opening on this panel

WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 500w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	2	2416mm	89S41-075-550	2	90mm
Assembly Weight		5.7kg			



<<< Joins S4

Quantity Required = 1 Mark as S5 Header Engineering = Passed

Joins >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.43		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.30		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2775.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	22%
Maximum Base Reactions	1.29 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

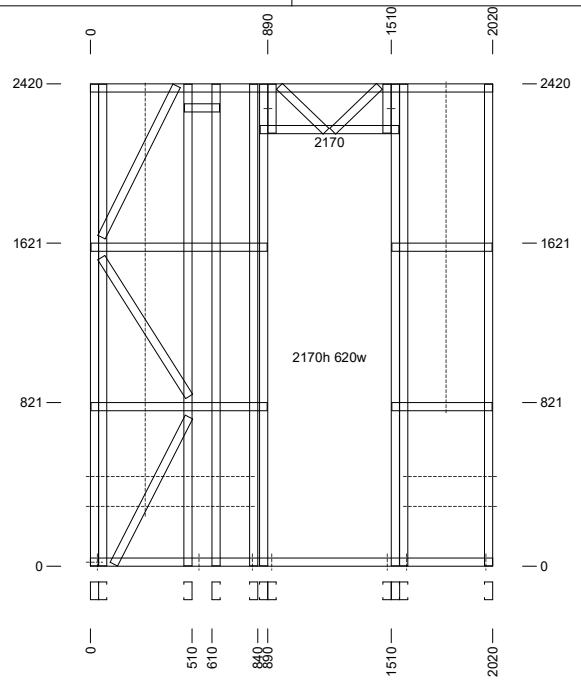
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 90w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	1	176mm	89S41-075-550	2	2020mm	89S41-075-550	9	2416mm	89S41-075-550	2	245mm
89S41-075-550	1	696mm	89S41-075-550	1	824mm	89S41-075-550	1	829mm	89S41-075-550	1	847mm

89S41-075-550	2	324mm	89S41-075-550	2	504mm	
89S41-075-550	2	884mm				

Assembly Weight	37.7kg	FRAMECAD 10g-19mm XDrive	112

FRAMECAD®



<<< Joins S3

Quantity Required = 1 Mark as S6 Header Engineering = Passed

Joins S7 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.39		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.31		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2800.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	21%
Maximum Base Reactions	1.26 (Down) kN/m
	0.00 (Up) kN/m

SPECIAL LOADING

Location	Qty	G	Qr	Wd	Wu	S	Qf
mm		kN	kN	kN	kN	kN	kN
LOADS FROM SUPPORTED WALLS							
1511	1	0.00	0.00	0.00	0.00	0.00	0.00
890	0	0.00	0.00	0.00	0.00	0.00	0.00

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
890	2	0.87	0.00	0	0
1510	2	0.87	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
2170h 620w	890	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog
' Height '	denotes nominal panel height				
' Nog '	denotes maximum spacing				

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

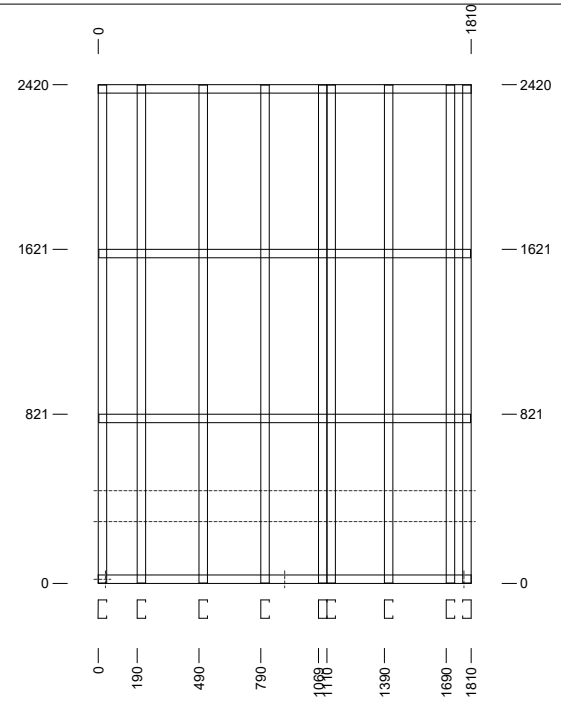
PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & FRAMECAD Hold Down Fix

WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 2020w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	2	1804mm	89S41-075-550	2 1810mm	89S41-075-550	9 2416mm
Assembly Weight	33.0kg		FRAMECAD 10g-19mm XDrive	72		



<<< Joins S1

Quantity Required = 1 Mark as S7 Header Engineering = Passed

Joins S6 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.26		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2925.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	20%
Maximum Base Reactions	0.64 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

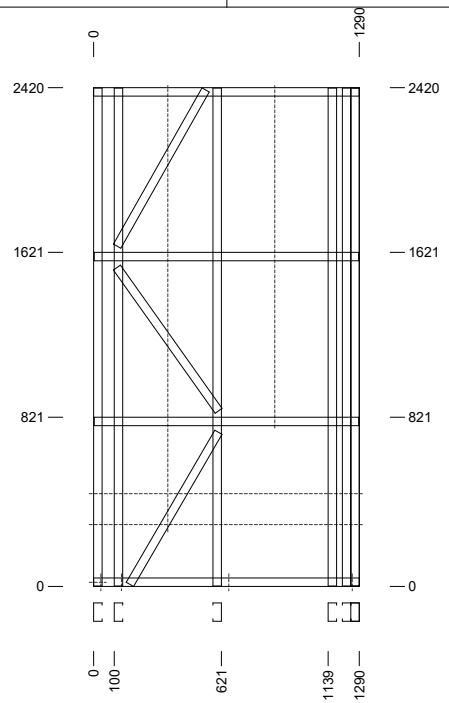
WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 1810w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550 2 1284mm	89S41-075-550 2 1290mm	89S41-075-550 7 2416mm	89S41-075-550 1 853mm	89S41-075-550 1 854mm	89S41-075-550 1 871mm
Assembly Weight 28.1kg	FRAMECAD 10g-19mm XDrive 60				

FRAMECAD®



<<< Joins S9

Quantity Required = 1 Mark as S8 Header Engineering = Passed

Joins S2 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.57		kN/m
Qr	Roof Live	0.23		kN/m
Qf	Floor Live Load	0.04		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.55		kN/m
Wd	Wind Down	0.25		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2675.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	22%
Maximum Base Reactions	1.37 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

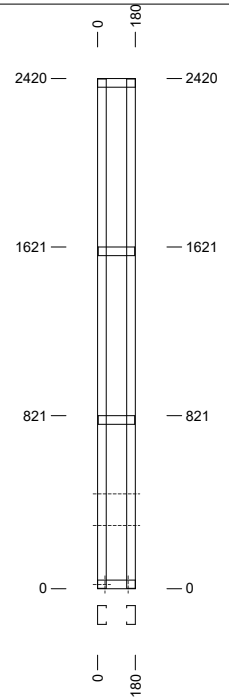
WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 1290w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	2	174mm	89S41-075-550	2	180mm	89S41-075-550	2	2416mm
Assembly Weight	6.3kg		FRAMECAD 10g-19mm XDrive	16				

FRAMECAD®



<<< Joins

Quantity Required = 1 Mark as S9 Header Engineering = Passed

Joins S8 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.44		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.30		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Structural
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2775.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	22%
Maximum Base Reactions	1.30 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

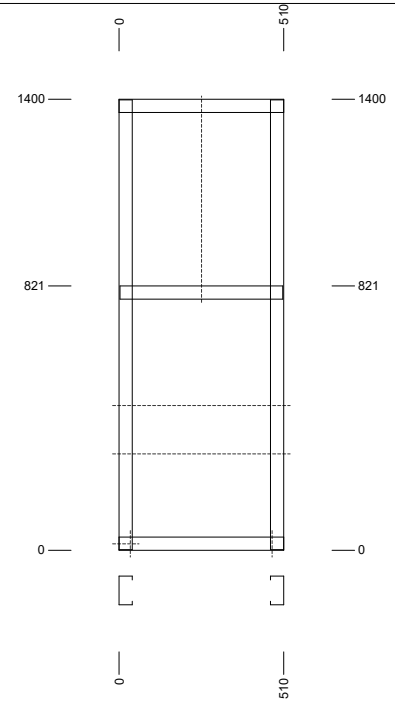
No opening on this panel

WALL NOTE

Top Plate not designed to distribute vertical load to ends.
Plate or Floor system to be specified by Engineer to distribute loads to studs
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Structural	Envelope:	2420h 180w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550 2 1396mm	89S41-075-550 1 504mm	89S41-075-550 2 510mm
Assembly Weight 4.9kg	FRAMECAD 10g-19mm XDrive 12	



<<< Joins

Quantity Required = 1 Mark as N1 Header Engineering = Passed

Joins L1 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

'Height' denotes nominal panel height
'Nog' denotes maximum spacing

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.31		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	1360.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	9000.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	7%
Maximum Base Reactions	0.37 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

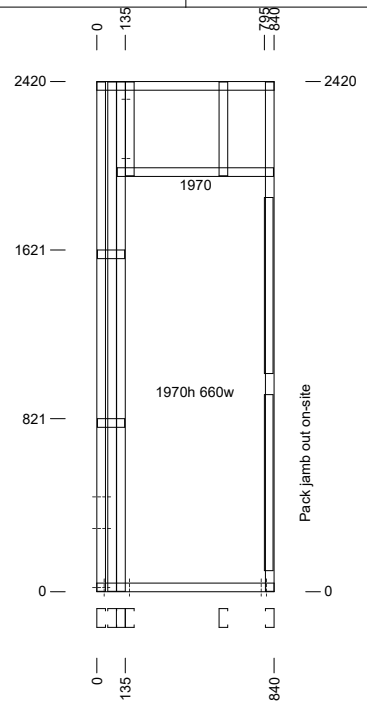
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	1400h 510w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550	2	129mm	89S41-075-550	4	2416mm	89S41-075-550	2	445mm	89S41-075-550	1	740mm	89S41-075-550	2	835mm	89S41-075-550	2	840mm

Assembly Weight	17.0kg	FRAMECAD 10g-19mm XDrive	44

FRAMECAD®



<<< Joins N3

Quantity Required = 1 Mark as N2 Header Engineering = Passed

Joins S6 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
135	2	0.00	0.00	0	0
795	2	0.00	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.64 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1970h 660w	135	Empty Head	None	0	2(S)2(H)	Passed	No design	No design	

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

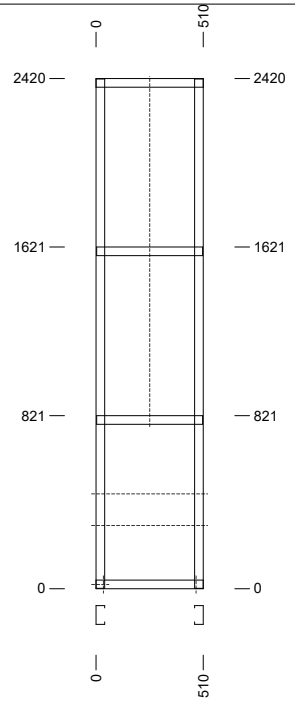
PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2420h 840w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550	2	2416mm	89S41-075-550	2	504mm	89S41-075-550	2	510mm
Assembly Weight	7.8kg		FRAMECAD 10g-19mm XDrive	16				



<<< Joins S3

Quantity Required = 1 Mark as N3 Header Engineering = Passed

Joins N2 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.64 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	2715	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2420h 510w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

Stud Design for Panel L1

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L1

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Load Bearing	
Dead Load (G)	1.48	kN/m
Live Load (Q1 = max(Q2,Q3))	2.24	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	2.24	kN/m
Live Load (Q4 = Q2+Q3)	2.24	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	7473.0	mm
1.2G + 1.5Q3	3888.0	mm
1.2G + 0.4Q3 + 1.0S	7473.4	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3463.3	mm
0.9G + 1.0Wu + 1.0Wh	4613.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	17	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel L2

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L2

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Load Bearing	
Dead Load (G)	0.68	kN/m
Live Load (Q1 = max(Q2,Q3))	0.30	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.30	kN/m
Live Load (Q4 = Q2+Q3)	0.30	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	4988.3	mm
0.9G + 1.0Wu + 1.0Wh	5313.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	12	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel S1

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S1

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	1.12	kN/m
Live Load (Q1 = max(Q2,Q3))	1.65	kN/m
Roof Live Load (Q2)	0.15	kN/m
Floor Live Load (Q3)	1.65	kN/m
Live Load (Q4 = Q2+Q3)	1.80	kN/m
Wind Up Load (Wu)	0.36	kN/m
Wind Down Load (Wd)	0.16	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	8959.0	mm
1.2G + 1.5Q3	5228.9	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2461.8	mm
0.9G + 1.0Wu + 1.0Wh	2786.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2450	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	24	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

POINT LOAD

Load Location	Stud Qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow(S) kN	Wind Up (Wu) kN	Floor Live(Q3) kN
3685	1	0.00	0.00	0.00	0.00	0.00
4906	1	0.00	0.00	0.00	0.00	0.00
2110	0	0.10	0.00	0.00	0.10	0.00
2731	1	0.10	0.00	0.00	0.10	0.00
180	1	0.10	0.00	0.00	0.10	0.00
801	0	0.10	0.00	0.00	0.10	0.00

Stud Design for Panel S2

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S2

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	1.25	kN/m
Live Load (Q1 = max(Q2,Q3))	0.60	kN/m
Roof Live Load (Q2)	0.53	kN/m
Floor Live Load (Q3)	0.60	kN/m
Live Load (Q4 = Q2+Q3)	1.13	kN/m
Wind Up Load (Wu)	1.27	kN/m
Wind Down Load (Wd)	0.61	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	7877.0	mm
1.2G + 1.5Q3	8320.4	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2411.8	mm
0.9G + 1.0Wu + 1.0Wh	3086.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2400	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	25	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

POINT LOAD

Load Location	Stud Qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow(S) kN	Wind Up (Wu) kN	Floor Live(Q3) kN
289	1	0.30	0.30	0.00	0.60	0.00
1510	0	0.30	0.30	0.00	0.60	0.00
2319	0	0.40	0.30	0.00	0.70	0.00
3540	1	0.40	0.30	0.00	0.70	0.00

Stud Design for Panel S3

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S3

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	1.38	kN/m
Live Load (Q1 = max(Q2,Q3))	2.15	kN/m
Roof Live Load (Q2)	0.19	kN/m
Floor Live Load (Q3)	2.15	kN/m
Live Load (Q4 = Q2+Q3)	2.34	kN/m
Wind Up Load (Wu)	0.48	kN/m
Wind Down Load (Wd)	0.22	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	7129.0	mm
1.2G + 1.5Q3	4091.2	mm
1.2G + 0.4Q3 + 1.0S	7936.8	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2311.8	mm
0.9G + 1.0Wu + 1.0Wh	2736.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2300	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	26	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel S4

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S4

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.28	kN/m
Live Load (Q1 = max(Q2,Q3))	0.03	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.03	kN/m
Live Load (Q4 = Q2+Q3)	0.03	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2911.8	mm
0.9G + 1.0Wu + 1.0Wh	2961.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2900	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	21	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel S5

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S5

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.43	kN/m
Live Load (Q1 = max(Q2,Q3))	0.30	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.30	kN/m
Live Load (Q4 = Q2+Q3)	0.30	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2786.8	mm
0.9G + 1.0Wu + 1.0Wh	2911.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2775	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	22	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel S6

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S6

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.39	kN/m
Live Load (Q1 = max(Q2,Q3))	0.31	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.31	kN/m
Live Load (Q4 = Q2+Q3)	0.31	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2811.8	mm
0.9G + 1.0Wu + 1.0Wh	2911.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2800	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	21	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

POINT LOAD

Load Location	Stud Qty	Dead Load (G) kN	Roof Live (Qr) kN	Snow(S) kN	Wind Up (Wu) kN	Floor Live(Q3) kN
1511	1	0.00	0.00	0.00	0.00	0.00
890	0	0.00	0.00	0.00	0.00	0.00

Stud Design for Panel S7

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S7

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.26	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2936.8	mm
0.9G + 1.0Wu + 1.0Wh	2961.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2925	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	20	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel S8

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S8

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.57	kN/m
Live Load (Q1 = max(Q2,Q3))	0.23	kN/m
Roof Live Load (Q2)	0.23	kN/m
Floor Live Load (Q3)	0.04	kN/m
Live Load (Q4 = Q2+Q3)	0.27	kN/m
Wind Up Load (Wu)	0.55	kN/m
Wind Down Load (Wd)	0.25	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2686.8	mm
0.9G + 1.0Wu + 1.0Wh	3086.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2675	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	22	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel S9

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: S9

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Structural	
Dead Load (G)	0.44	kN/m
Live Load (Q1 = max(Q2,Q3))	0.30	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.30	kN/m
Live Load (Q4 = Q2+Q3)	0.30	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2786.8	mm
0.9G + 1.0Wu + 1.0Wh	2886.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2775	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	22	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N1

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N1

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.31	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	9000.0	mm
0.9G + 1.0Wu + 1.0Wh	9000.0	mm
0.44Wh	9000.0	mm
P2	9980.3	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	1360	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	9000	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	7	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	21.77	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N2

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N2

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	6063.3	mm
0.9G + 1.0Wu + 1.0Wh	6063.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N3

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N3

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	6063.3	mm
0.9G + 1.0Wu + 1.0Wh	6063.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

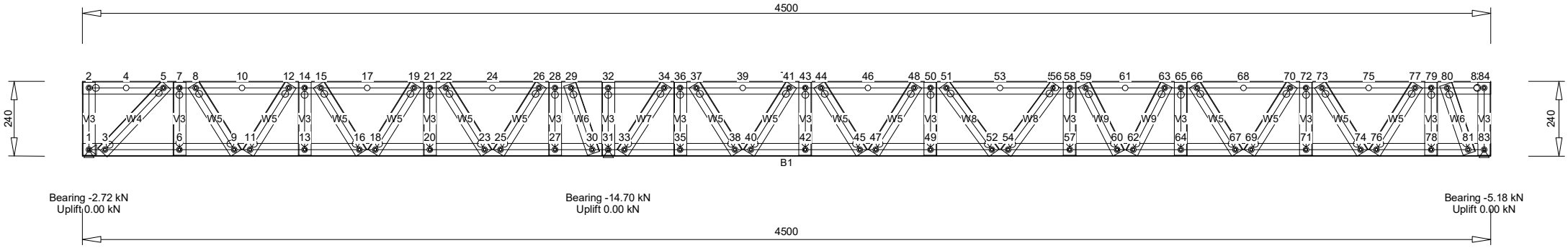
SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

B1	89S41-095-550	1	4500	T2	89S41-095-550	1	4500	V3	89S41-095-550	14	235	W4	89S41-095-550	1	297	W5	89S41-095-550	14	258	W6	89S41-095-550	2	234
W7	89S41-095-550	1	260	W8	89S41-095-550	2	271	W9	89S41-095-550	2	247												

Assembly Weight	25.7kg	FRAMECAD 10g-16mm Flathead	144	FRAMECAD 10g-19mm XDrive	144

FRAMECAD



Beam Type WJ89095H Mark as JB1 Quantity Required = 1 Engineering Status = 97%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.46	17%	(8)
3-5	-4.35	0.00	16%	(8)
6-7	-0.07	0.31	1%	(21)
8-9	-0.57	1.30	2%	(20)
11-12	-1.27	0.35	5%	(20)
13-14	0.00	0.46	1%	(7)
15-16	-4.06	0.00	15%	(7)
18-19	0.00	4.05	7%	(7)
20-21	0.00	0.42	1%	(7)
22-23	-8.04	0.00	30%	(7)
25-26	0.00	8.60	15%	(7)
27-28	-6.21	0.00	23%	(7)
29-30	-3.75	0.25	14%	(8)
31-32	-1.56	3.20	6%	(17)
33-34	-8.10	0.00	30%	(9)
35-36	-4.51	0.00	17%	(7)
37-38	0.00	10.79	18%	(7)
40-41	-10.11	0.00	38%	(7)
42-43	0.00	0.31	1%	(15)
44-45	0.00	6.27	11%	(7)
47-48	-5.98	0.00	22%	(7)
49-50	-0.04	0.21	0%	(14)
51-52	0.00	3.51	6%	(7)
54-55	-3.23	0.00	12%	(7)
57-58	-0.03	0.29	1%	(13)
59-60	-0.89	1.00	3%	(13)
62-63	-0.82	0.92	3%	(12)
64-65	-0.08	0.19	0%	(12)
66-67	-3.41	0.00	13%	(9)
69-70	0.00	3.81	6%	(9)
71-72	-0.05	0.24	0%	(11)
73-74	-6.66	0.00	25%	(9)
76-77	0.00	7.58	13%	(9)
78-79	-2.68	0.00	10%	(9)
80-81	-5.45	0.00	20%	(9)
83-84	0.00	1.35	72%	(9)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.62	0.00	37%	(21)
5-8	-3.59	0.00	18%	(21)
8-12	-3.91	0.00	23%	(21)
12-15	-4.21	0.01	16%	(8)
15-19	-2.23	0.67	31%	(7)
19-22	-1.66	1.32	38%	(7)
22-26	0.00	5.06	76%	(7)
26-29	0.00	9.32	35%	(7)
29-32	0.00	10.43	54%	(8)
32-34	0.00	10.43	97%	(9)
34-37	0.00	6.19	49%	(9)
37-41	-1.04	0.71	96%	(7)
41-44	-5.01	0.00	48%	(7)
44-48	-8.30	0.00	55%	(9)
48-51	-11.43	0.00	43%	(9)
51-55	-13.49	0.00	53%	(9)
55-59	-15.37	0.00	58%	(9)
59-63	-15.28	0.00	57%	(9)
63-66	-14.98	0.00	56%	(9)
66-70	-13.18	0.00	54%	(9)
70-73	-11.18	0.00	42%	(9)
73-77	-7.68	0.00	60%	(9)
77-80	-3.68	0.00	36%	(9)
80-84	-1.95	0.00	64%	(9)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	3.59	40%	(8)
6-9	0.00	3.59	11%	(21)
9-13	0.00	4.21	12%	(4)
13-16	0.00	4.21	30%	(7)
16-20	-1.22	2.23	15%	(7)
20-23	-1.22	1.76	49%	(7)
23-27	-9.32	0.05	44%	(7)
27-30	-9.32	0.00	96%	(7)
30-33	-10.35	0.00	39%	(7)
33-35	-6.12	0.00	82%	(7)
35-38	-6.12	0.00	42%	(7)
38-42	-0.64	5.01	64%	(9)
42-45	0.00	5.01	26%	(6)
45-49	0.00	11.43	43%	(7)
49-52	0.00	11.43	34%	(6)
52-57	0.00	15.37	40%	(9)
57-60	0.00	15.37	36%	(6)
60-64	0.00	15.28	35%	(6)
64-67	0.00	14.98	39%	(9)
67-71	0.00	13.18	30%	(6)
71-74	0.00	11.18	45%	(9)
74-78	0.00	7.68	35%	(9)
78-81	0.00	3.68	35%	(9)
81-83	0.00	1.95	3%	(9)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
3155.0	S2	0.03	0.15	0.00
4455.0	S3	0.04	0.18	0.00
310.0	J2	0.18	0.82	0.00
710.0	J2	0.18	0.82	0.00
1110.0	J2	0.18	0.82	0.00
1510.0	J3	0.18	0.82	0.00
1910.0	J3	0.18	0.82	0.00
2310.0	J3	0.18	0.82	0.00
2710.0	JB3	0.09	0.41	0.00
3110.0	J3	0.18	0.82	0.00
3510.0	J3	0.18	0.82	0.00
3910.0	J3	0.18	0.82	0.00
4310.0	JB4	0.11	0.50	0.00
2710.0	JB2	0.03	0.15	0.00
2310.0	J1	0.06	0.30	0.00
1910.0	J1	0.06	0.30	0.00
1510.0	J1	0.06	0.30	0.00
1110.0	J1	0.06	0.30	0.00
710.0	J1	0.06	0.30	0.00
310.0	J1	0.06	0.30	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	37%
LC2	(G+Q)	68%
LC3-LC6	Patch(G+0.4Q)	37%
LC3-LC6	Patch(G+Q)	68%
LC7	(1.2G+1.5Q)	96%
LC8-LC9	Patch(1.2G+1.5Q)	97%
LC10-LC21	(1.2G+1.5P)	58%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	2.25	57	Span/360,12.0	4.61	29%
LC2	4.13	57	Span/240,12.0	6.9	35%
Summary for Patch Loading cases (LC3 - LC6) :					
Critical case inPatch(G+0.4Q):					
LC6	4.16	57	Span/240,12.0	6.9	36%
Critical case inPatch(G+Q):					
LC5	2.26	57	Span/360,12.0	4.61	29%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

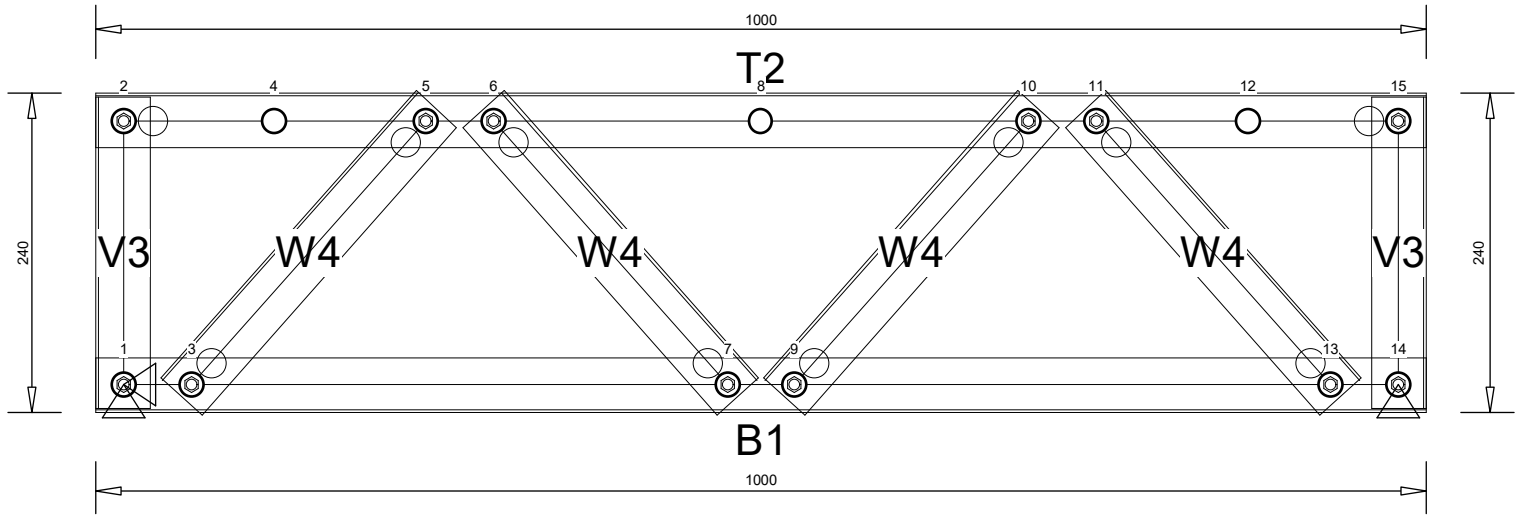
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	7.10
Design Code:	AS/NZS 4600:2018				

Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14
Ground Snow Load (kPa) :	0.00		
Factored Drag Load (kN/m) :	0.00		

Top Chord Dead Load (kPa) :	0.32
Top Chord Live Load (kPa) :	1.50
Design Point Load (kN) :	1.8

B1	89S41-095-550	1	1000	T2	89S41-095-550	1	1000	V3	89S41-095-550	2	235	W4	89S41-095-550	4	289
Assembly Weight		5.2kg		FRAMECAD 10g-16mm Flathead		24		FRAMECAD 10g-19mm XDrive		24					

FRAMECAD



Beam Type WJ89095H Mark as JB2 Quantity Required = 1 Engineering Status = 20%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.04	0.19	11%	(5)
3-5	-2.63	0.00	10%	(5)
6-7	-0.82	0.97	3%	(5)
9-10	-0.78	0.96	3%	(4)
11-13	-2.49	0.00	9%	(4)
14-15	-0.09	0.10	11%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.40	0.00	14%	(5)
5-10	-2.14	0.00	11%	(5)
10-15	-1.96	0.00	8%	(5)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	2.16	7%	(5)
7-13	0.00	1.96	10%	(4)
13-14	0.00	0.32	20%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	1%
LC2	(G+Q)	2%
LC3	(1.2G+1.5Q)	3%
LC4	(1.2G+1.5P)	20%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

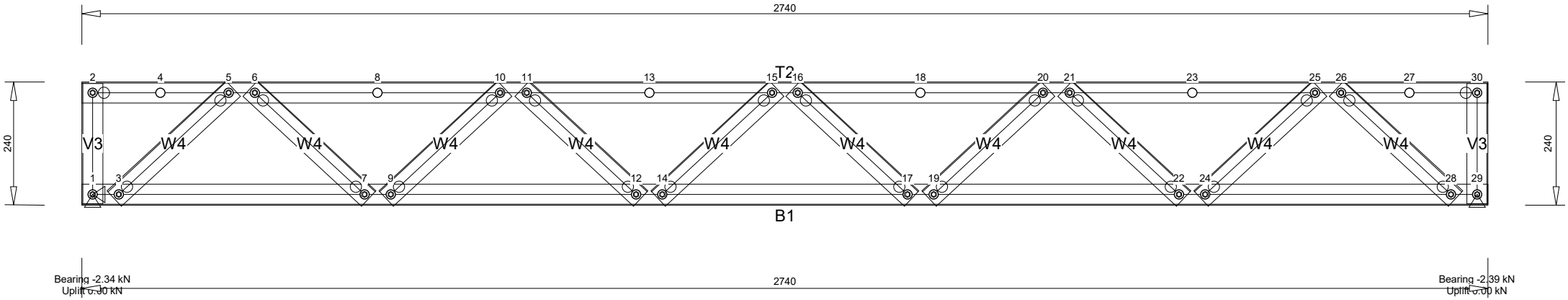
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32				
		Top Chord Live Load (kPa) :	1.50				
		Design Point Load (kN) :	1.8				

B1	89S41-095-550	1	2740	T2	89S41-095-550	1	2740	V3	89S41-095-550	2	235	W4	89S41-095-550	10	316
Assembly Weight		13.0kg		FRAMECAD 10g-16mm Flathead		48		FRAMECAD 10g-19mm XDrive		48					

FRAMECAD



Beam Type WJ89095H Mark as JB3 Quantity Required = 1 Engineering Status = 30%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.21	13%	(8)
3-5	-3.82	0.00	14%	(8)
6-7	0.00	1.88	3%	(7)
9-10	-1.73	0.11	7%	(7)
11-12	-0.43	1.29	2%	(6)
14-15	-1.12	0.60	4%	(6)
16-17	-1.05	0.67	4%	(6)
19-20	-0.50	1.22	2%	(6)
21-22	-1.66	0.23	6%	(5)
24-25	-0.07	1.79	3%	(5)
26-28	-3.52	0.00	13%	(4)
29-30	-0.04	0.11	16%	(4)
15-20	-5.01	0.00	19%	(6)
20-25	-4.18	0.00	16%	(5)
25-30	-3.00	0.00	11%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.47	0.00	19%	(8)
5-10	-3.31	0.00	17%	(8)
10-15	-4.25	0.00	16%	(7)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.30	30%	(8)
7-12	0.00	4.28	12%	(7)
12-17	0.00	5.04	12%	(6)
17-22	0.00	4.27	12%	(5)
22-28	0.00	3.01	11%	(4)
28-29	0.00	0.44	1%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	4%
LC2	(G+Q)	7%
LC3	(1.2G+1.5Q)	10%
LC4-LC8	(1.2G+1.5P)	30%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.28	15	Span/360,12.0	7.5	4%
LC2	0.49	15	Span/240,12.0	11.2	4%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

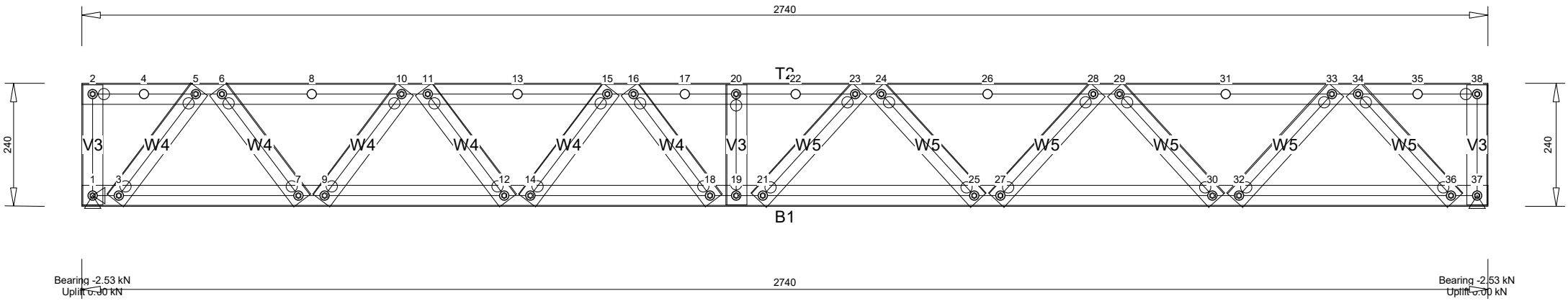
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	1.50
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	2740	T2	89S41-095-550	1	2740	V3	89S41-095-550	3	235	W4	89S41-095-550	6	273	W5	89S41-095-550	6	293

Assembly Weight	13.7kg	FRAMECAD 10g-16mm Flathead	60	FRAMECAD 10g-19mm XDrive	60

FRAMECAD®



Beam Type WJ89095H Mark as JB4 Quantity Required = 1 Engineering Status = 32%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.32	13%	(10)
3-5	-3.73	0.00	14%	(10)
6-7	0.00	2.13	4%	(9)
9-10	-2.02	0.00	8%	(3)
11-12	-0.01	1.72	3%	(8)
14-15	-1.63	0.10	6%	(3)
16-18	-0.35	1.19	2%	(6)
19-20	-1.38	0.00	5%	(3)
21-23	-0.77	1.12	3%	(6)
24-25	-1.38	0.36	5%	(3)
27-28	-0.15	1.51	3%	(6)
29-30	-1.87	0.00	7%	(3)
32-33	0.00	1.99	3%	(5)
34-36	-3.52	0.00	13%	(4)
37-38	-0.02	0.15	16%	(4)
5-10	-3.04	0.00	17%	(10)
10-15	-5.09	0.00	19%	(3)
15-20	-6.79	0.00	25%	(3)
20-23	-6.79	0.00	25%	(3)
23-28	-6.18	0.00	23%	(3)
28-33	-4.28	0.00	16%	(5)
33-38	-2.81	0.00	12%	(5)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.49	0.00	21%	(10)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	2.78	32%	(10)
7-12	0.00	4.10	13%	(3)
12-18	0.00	6.10	16%	(3)
18-21	0.00	6.81	13%	(3)
21-25	0.00	6.20	15%	(3)
25-30	0.00	5.27	13%	(5)
30-36	0.00	3.04	13%	(4)
36-37	0.00	0.45	1%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN
1275.0	JB5	0.15	0.69	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	10%
LC2	(G+Q)	18%
LC3	(1.2G+1.5Q)	25%
LC4-LC10	(1.2G+1.5P)	32%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.65	20	Span/360,12.0	7.5	9%
LC2	1.17	20	Span/240,12.0	11.2	10%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

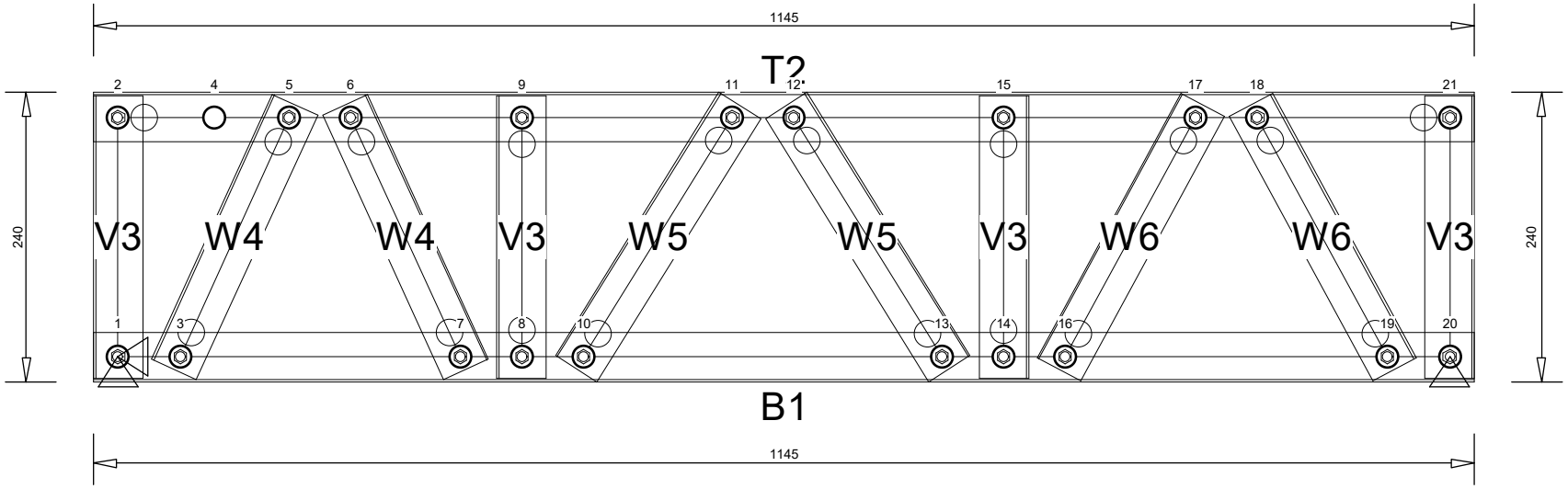
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.50	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	1.50
		Design Point Load (kN) :	1.8

B1	89S41-095-550	1	1145	T2	89S41-095-550	1	1145	V3	89S41-095-550	4	235	W4	89S41-095-550	2	243	W5	89S41-095-550	2	258	W6	89S41-095-550	2	250

Assembly Weight	6.8kg	FRAMECAD 10g-16mm Flathead	40	FRAMECAD 10g-19mm XDrive	40

FRAMECAD



Bearing -2.31 kN
Uplift 0.00 kN

Bearing -2.32 kN
Uplift 0.00 kN

Beam Type WJ89095H Mark as JB5 Quantity Required = 1 Engineering Status = 28%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.41	12%	(8)
3-5	-3.15	0.00	12%	(8)
6-7	0.00	2.47	4%	(7)
8-9	-2.36	0.00	9%	(7)
10-11	-1.31	0.81	5%	(5)
12-13	-1.12	1.01	4%	(7)
14-15	-2.45	0.00	9%	(5)
16-17	0.00	2.42	4%	(5)
18-19	-2.80	0.00	11%	(5)
20-21	-0.05	0.36	12%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.44	0.00	21%	(7)
5-9	-2.62	0.00	14%	(8)
9-11	-2.63	0.00	13%	(7)
11-15	-2.80	0.00	13%	(5)
15-17	-2.81	0.00	14%	(5)
17-21	-1.65	0.00	19%	(5)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	1.77	28%	(8)
7-10	0.00	2.65	9%	(7)
10-13	0.00	2.29	16%	(5)
13-16	0.00	2.82	8%	(5)
16-19	0.00	1.66	15%	(4)
19-20	0.00	0.35	22%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
100.0	S3	0.04	0.18	0.00
355.0	J4	0.09	0.43	0.00
755.0	J4	0.09	0.43	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	6%
LC2	(G+Q)	11%
LC3	(1.2G+1.5Q)	15%
LC4-LC8	(1.2G+1.5P)	28%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.10	12	Span/360,12.0	3.07	3%
LC2	0.19	12	Span/240,12.0	4.60	4%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

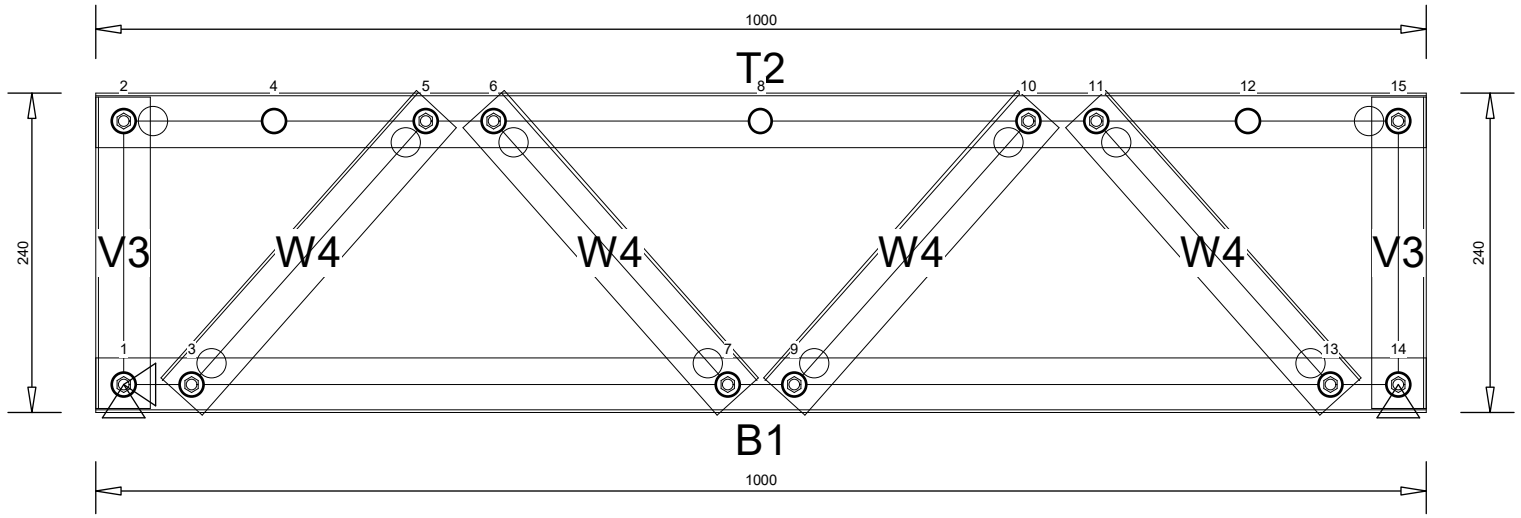
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.70	Ground Snow Load (kPa) :	0.00	Top Chord Live Load (kPa) :	1.50
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Design Point Load (kN) :	1.8

B1	89S41-095-550	6	1000	T2	89S41-095-550	6	1000	V3	89S41-095-550	12	235	W4	89S41-095-550	24	289
Assembly Weight		5.2kg		FRAMECAD 10g-16mm Flathead		144		FRAMECAD 10g-19mm XDrive		144					

FRAMECAD



Bearing -1.85 kN
Uplift 0.00 kN

Bearing -1.98 kN
Uplift 0.00 kN

Beam Type WJ89095H Mark as J1 Quantity Required = 6 Engineering Status = 21%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.07	0.18	11%	(5)
3-5	-2.69	0.00	10%	(5)
6-7	-0.80	0.98	3%	(5)
9-10	-0.77	0.97	3%	(4)
11-13	-2.54	0.00	10%	(4)
14-15	-0.09	0.10	12%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.41	0.00	15%	(5)
5-10	-2.19	0.00	11%	(5)
10-15	-2.00	0.00	9%	(5)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	2.20	7%	(5)
7-13	0.00	2.01	10%	(4)
13-14	0.00	0.33	21%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	2%
LC2	(G+Q)	4%
LC3	(1.2G+1.5Q)	6%
LC4	(1.2G+1.5P)	21%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.00	0	Span/0,0.00	0.00	0%
LC2	0.00	0	Span/0,0.00	0.00	0%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

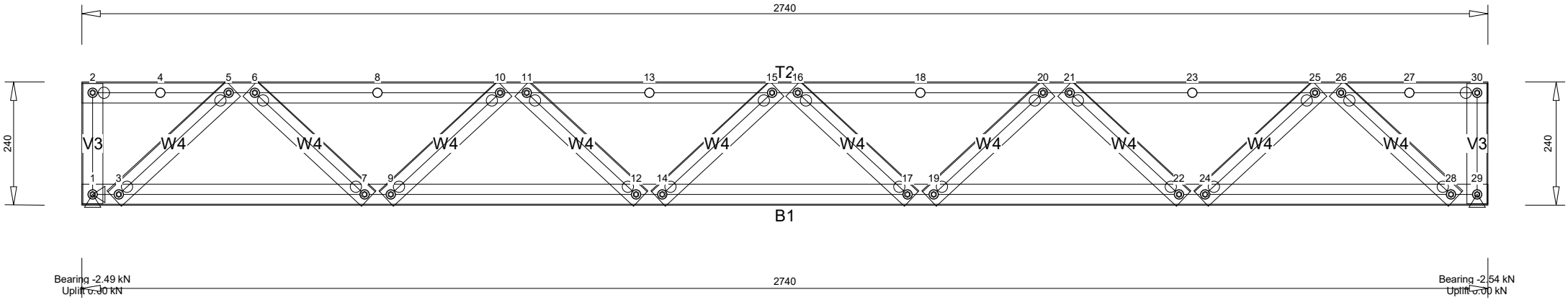
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	1.50
		Design Point Load (kN) :	1.8

B1	89S41-095-550	3	2740	T2	89S41-095-550	3	2740	V3	89S41-095-550	6	235	W4	89S41-095-550	30	316
Assembly Weight		13.0kg		FRAMECAD 10g-16mm Flathead		144		FRAMECAD 10g-19mm XDrive		144					

FRAMECAD®



Beam Type WJ89095H Mark as J2 Quantity Required = 3 Engineering Status = 32%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.21	14%	(8)
3-5	-4.04	0.00	15%	(8)
6-7	0.00	2.05	3%	(7)
9-10	-1.88	0.00	7%	(7)
11-12	-0.36	1.36	2%	(6)
14-15	-1.15	0.57	4%	(6)
16-17	-1.08	0.64	4%	(6)
19-20	-0.43	1.29	2%	(6)
21-22	-1.81	0.09	7%	(5)
24-25	0.00	1.97	3%	(5)
26-28	-3.76	0.00	14%	(4)
29-30	-0.03	0.12	16%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.50	0.00	20%	(8)
5-10	-3.62	0.00	18%	(8)
10-15	-4.90	0.00	18%	(3)
15-20	-5.51	0.00	21%	(6)
20-25	-4.60	0.00	17%	(5)
25-30	-3.18	0.00	13%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.49	32%	(8)
7-12	0.00	4.70	13%	(7)
12-17	0.00	5.53	13%	(6)
17-22	0.00	4.91	13%	(5)
22-28	0.00	3.29	13%	(4)
28-29	0.00	0.44	28%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	8%
LC2	(G+Q)	14%
LC3	(1.2G+1.5Q)	20%
LC4-LC8	(1.2G+1.5P)	32%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.53	15	Span/360,12.0	7.5	7%
LC2	0.95	15	Span/240,12.0	11.2	8%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

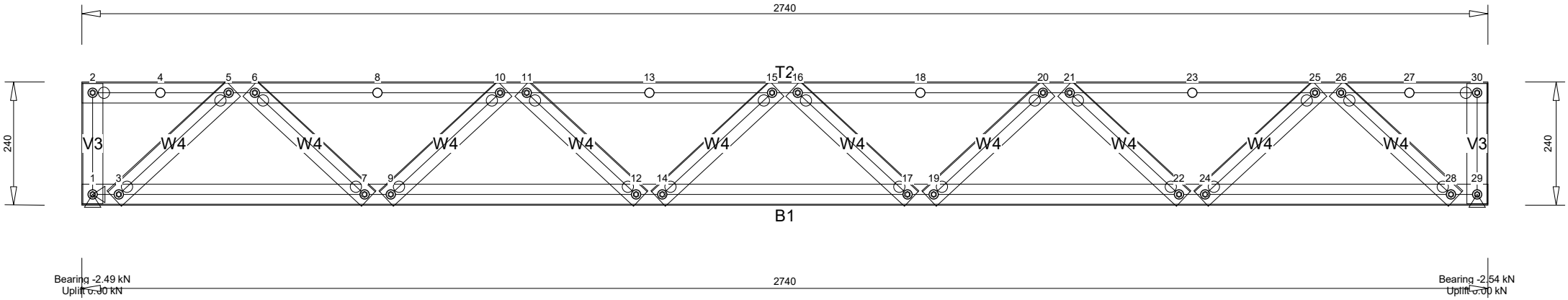
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	1.50
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	6	2740	T2	89S41-095-550	6	2740	V3	89S41-095-550	12	235	W4	89S41-095-550	60	316
Assembly Weight		13.0kg		FRAMECAD 10g-16mm Flathead		288		FRAMECAD 10g-19mm XDrive		288					

FRAMECAD



Beam Type WJ89095H Mark as J3 Quantity Required = 6 Engineering Status = 32%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.21	14%	(8)
3-5	-4.04	0.00	15%	(8)
6-7	0.00	2.05	3%	(7)
9-10	-1.88	0.00	7%	(7)
11-12	-0.36	1.36	2%	(6)
14-15	-1.15	0.57	4%	(6)
16-17	-1.08	0.64	4%	(6)
19-20	-0.43	1.29	2%	(6)
21-22	-1.81	0.09	7%	(5)
24-25	0.00	1.96	3%	(5)
26-28	-3.74	0.00	14%	(4)
29-30	-0.03	0.12	17%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.50	0.00	20%	(8)
5-10	-3.62	0.00	18%	(8)
10-15	-4.90	0.00	18%	(3)
15-20	-5.51	0.00	21%	(6)
20-25	-4.60	0.00	17%	(5)
25-30	-3.20	0.00	13%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.49	32%	(8)
7-12	0.00	4.70	13%	(7)
12-17	0.00	5.53	13%	(6)
17-22	0.00	4.91	13%	(5)
22-28	0.00	3.29	12%	(4)
28-29	0.00	0.47	1%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	8%
LC2	(G+Q)	14%
LC3	(1.2G+1.5Q)	20%
LC4-LC8	(1.2G+1.5P)	32%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.53	15	Span/360,12.0	7.5	7%
LC2	0.95	15	Span/240,12.0	11.2	8%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

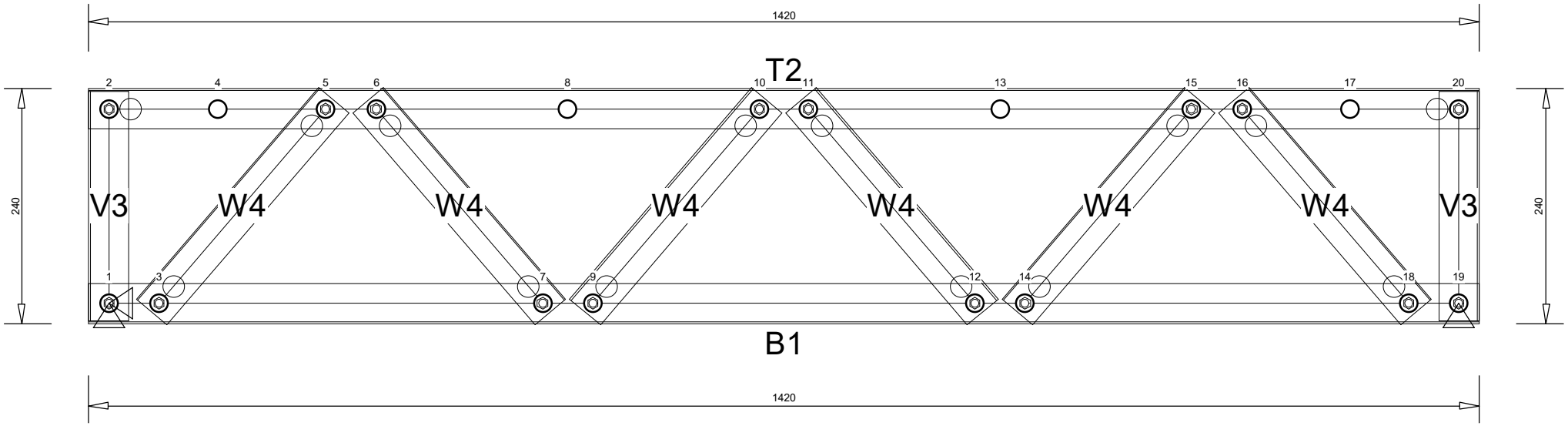
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	1.50
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	2	1420	T2	89S41-095-550	2	1420	V3	89S41-095-550	4	235	W4	89S41-095-550	12	286
Assembly Weight	7.2kg			FRAMECAD 10g-16mm Flathead		64		FRAMECAD 10g-19mm XDrive		64					

FRAMECAD



Bearing -2.13 kN
Uplift 0.00 kN

Bearing -2.22 kN
Uplift 0.00 kN

Beam Type WJ89095H Mark as J4 Quantity Required = 2 Engineering Status = 28%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.04	0.22	12%	(6)
3-5	-3.15	0.00	12%	(6)
6-7	-0.29	1.21	2%	(5)
9-10	-1.03	0.51	4%	(5)
11-12	-0.99	0.58	4%	(5)
14-15	-0.37	1.15	2%	(5)
16-18	-2.89	0.00	11%	(4)
19-20	-0.07	0.10	14%	(4)
7-12	0.00	2.46	8%	(5)
12-18	0.00	2.26	11%	(4)
18-19	0.00	0.38	1%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.43	0.00	17%	(6)
5-10	-2.47	0.00	14%	(6)
10-15	-2.44	0.00	9%	(5)
15-20	-2.26	0.00	8%	(5)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	2.49	28%	(6)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	3%
LC2	(G+Q)	6%
LC3	(1.2G+1.5Q)	8%
LC4-LC6	(1.2G+1.5P)	28%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.06	8	Span/360,12.0	3.83	2%
LC2	0.11	8	Span/240,12.0	5.7	2%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

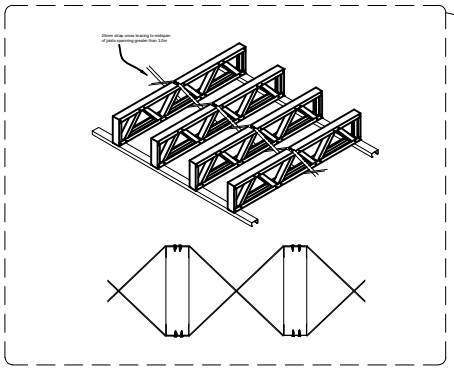
Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

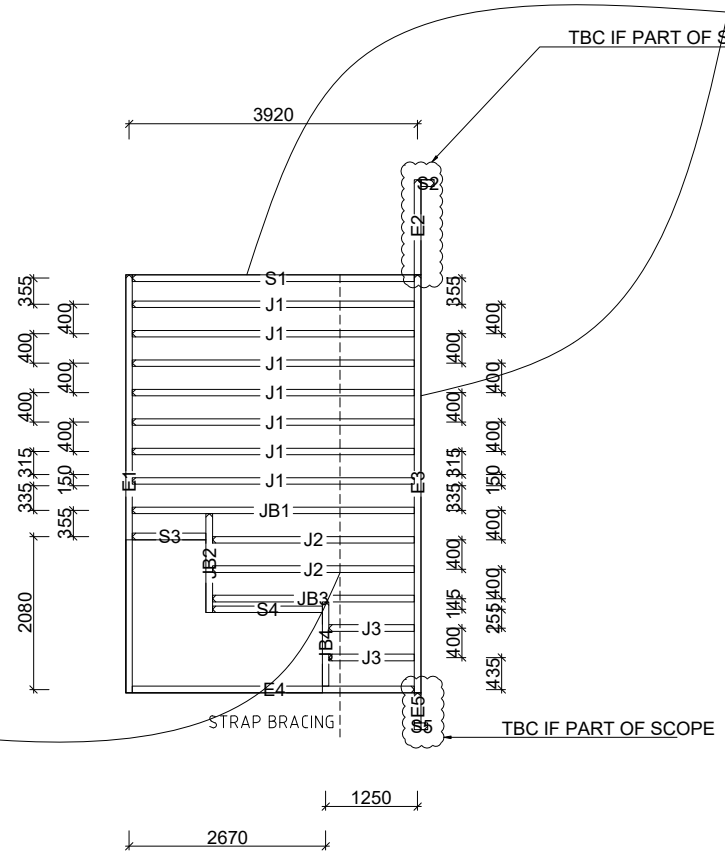
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

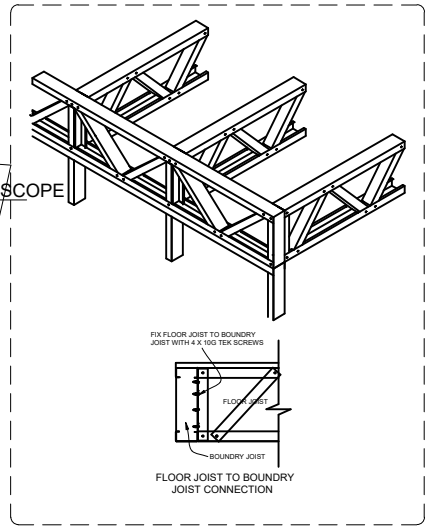
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	1.50
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

Floor Member Summary			
E1	WJ89095H	1	5680
E2	WJ89095H	1	1290
E3	WJ89095H	1	5680
E4	WJ89095H	1	3830
E5	WJ89095H	1	410
J1	WJ89095H	7	3830
J2	WJ89095H	2	2740
J3	WJ89095H	2	1160
JB1	WJ89095H	1	3830
JB2	WJ89095H	1	1345
JB3	WJ89095H	1	2740
JB4	WJ89095H	1	1145
S1	WJ89095H	1	3830
S2	WJ89095H	1	180
S3	WJ89095H	1	1000
S4	WJ89095H	1	1490
S5	WJ89095H	1	180







SECOND FLOOR LEVEL JOIST LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD®

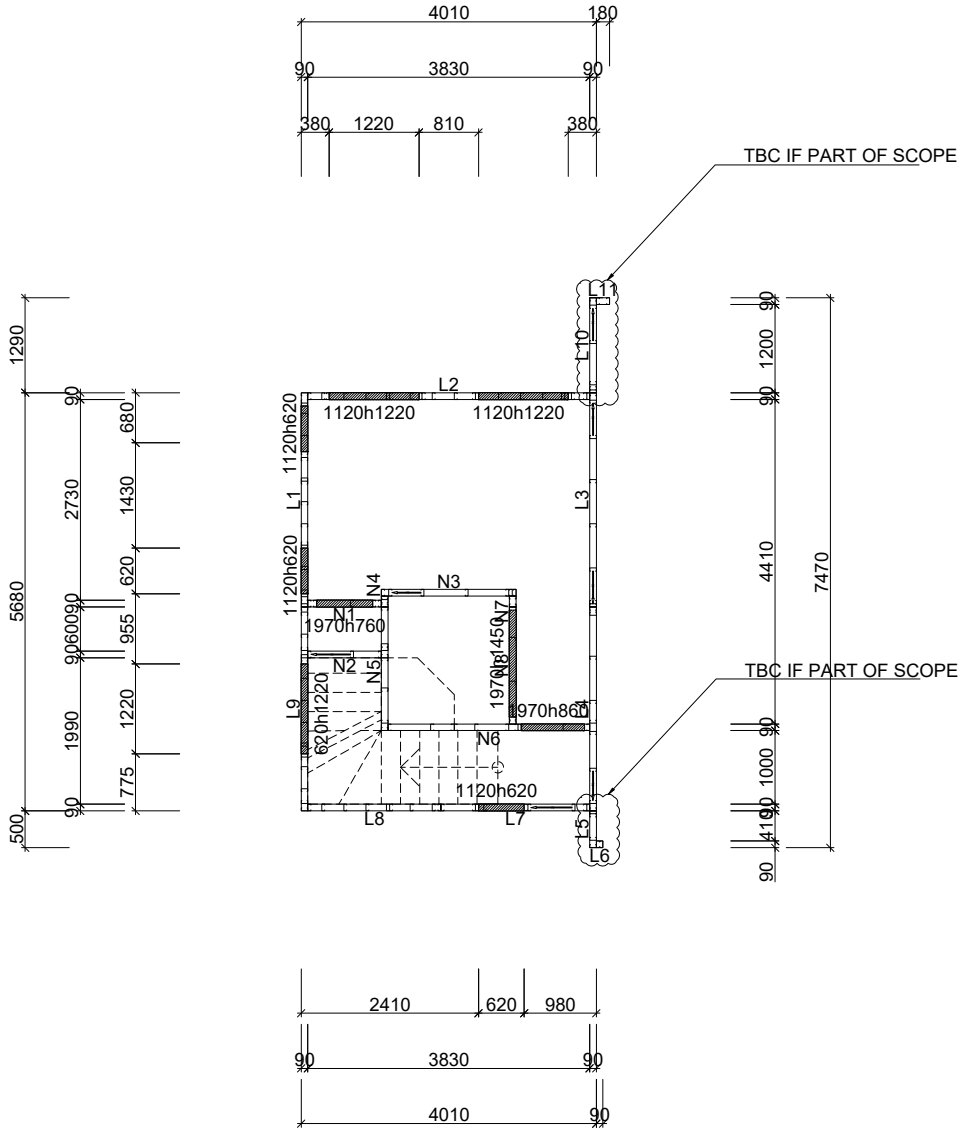
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 19 Type F 107 Blockhouse Bay Road	Ralph Lao	12-10-2021	1 : 100		
	DWG FILE Unit 19 Bak	VIEW NAME 4 of 7	ON A4-Sheet		

Design Summary	
Floor Type	Concrete
Roof Load	Auto
System	FC_SFSNZ
Wind Load	LOW

NOTE:

1. ALL GROUND FLOOR LINTELS IF NOT SPECIFIED SHALL BE TYPE A2 LINTELS AS PER NASH STANDARD PART 2.
2. ALL INTERNAL WALL FRAMING SHALL BE 89LC75 G550 STUDS @ 600 CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.
3. ALL WALL FRAMING BEHIND BRICK VENEER CLADDING SHALL BE 89LC95 G550 @ 600CRS WITH NOGS @ 800 CRS UNLESS NOTED OTHERWISE.

NOTE: ENGINEER TO MARK-UP ADDITIONAL BRACING COMPONENTS.



SECOND FLOOR LEVEL LAYOUT

DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD

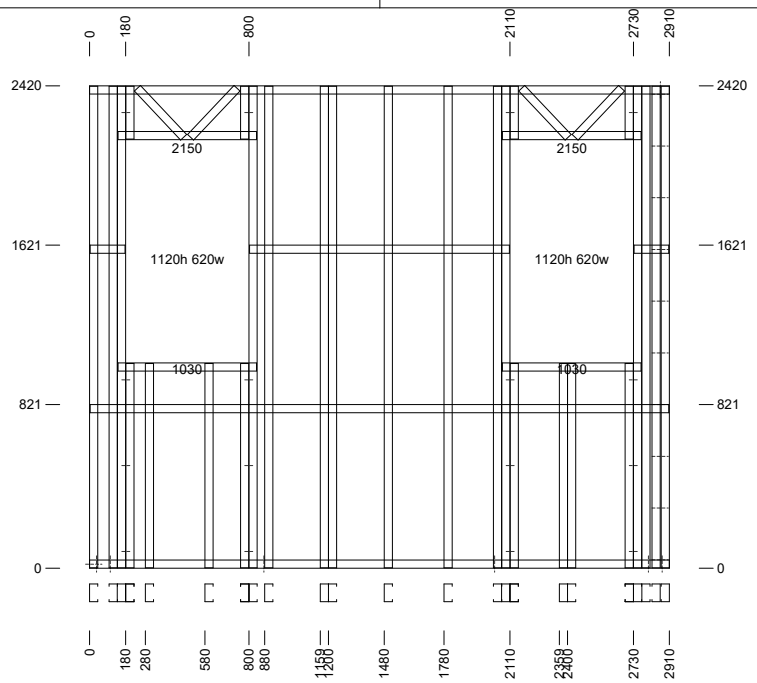
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 19 Type F 107 Blockhouse Bay Road	Ralph Lao	12-10-2021	1 : 100		
	DWG FILE Unit 19 Bak	VIEW NAME 5 of 7	ON A4-Sheet		

89S41-075-550	8	1025mm	89S41-075-550	1	1304mm	89S41-075-550	2	174mm	89S41-075-550	15	2416mm
89S41-075-550	2	2910mm	89S41-075-550	4	339mm	89S41-075-550	4	696mm			

89S41-075-550	4	265mm	89S41-075-550	1	2904mm

Assembly Weight	68.4kg	FRAMECAD 10g-19mm XDrive	268

FRAMECAD®



<<< Joins L2

Quantity Required = 1 Mark as L1 Header Engineering = Passed

Joins L9 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.38		kN/m
Qr	Roof Live	0.29		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.71		kN/m
Wd	Wind Down	0.32		kN/m
Wh	Wind Horizontal	0.55		kPa

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2725.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	22%
Maximum Base Reactions	1.22 (Down) kN/m
	0.12 (Up) kN/m

SPECIAL LOADING

Location	Qty	G	Qr	Wd	Wu	S	Qf
mm		kN	kN	kN	kN	kN	kN
TRUSS GIRDER AND BEAM BEARER POINT LOAD							
2845	1	1.65	1.26	1.40	3.08	0.00	0.00

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
2110	2	0.69	-0.05	0	0
2730	2	0.69	-0.05	0	0
180	2	0.69	-0.05	0	0
800	2	0.69	-0.05	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1120h 620w	2110	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	
1120h 620w	180	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog
' Height '	denotes nominal panel height				
' Nog '	denotes maximum spacing				

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & FRAMECAD Hold Down Fix

WALL NOTE

Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

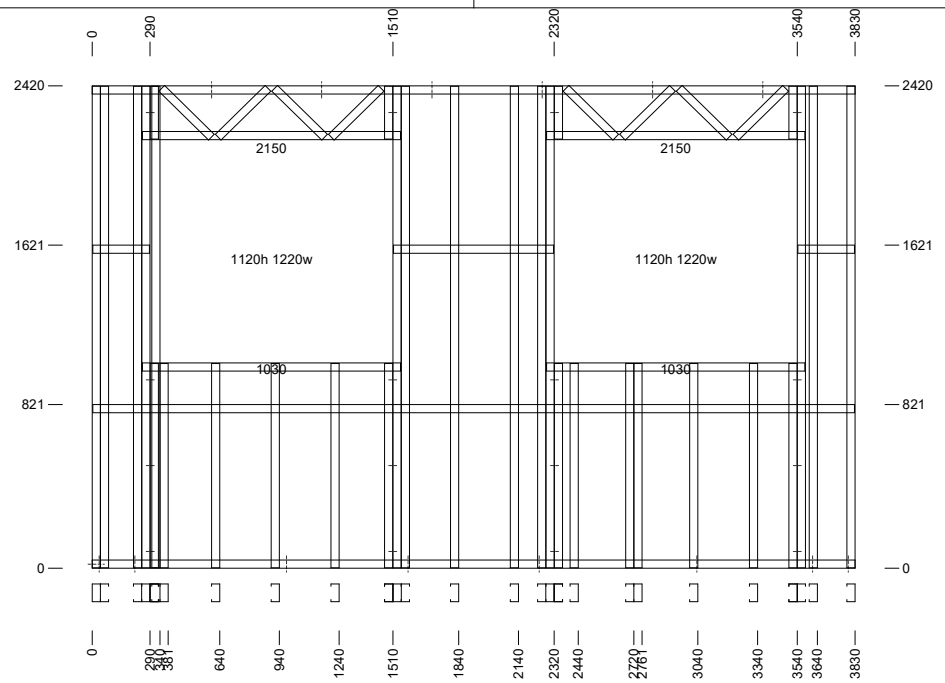
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2420h 2910w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	13	1025mm	89S41-075-550	4	1296mm	89S41-075-550	14	2416mm	89S41-075-550	4	265mm
89S41-075-550	4	350mm	89S41-075-550	1	3824mm	89S41-075-550	2	3830mm	89S41-075-550	1	804mm

89S41-075-550	2	284mm	89S41-075-550	4	349mm		

Assembly Weight	78.7kg	FRAMECAD 10g-19mm XDrive	288

FRAMECAD®



<<< Joins L10

Quantity Required = 1 Mark as L2 Header Engineering = Passed

Joins L1 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.70		kN/m
Qr	Roof Live	0.53		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	1.27		kN/m
Wd	Wind Down	0.61		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
290	2	1.05	-0.33	0	0
1510	2	1.02	-0.31	0	0
2320	2	1.09	-0.35	0	0
3540	2	1.07	-0.35	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & FRAMECAD Hold Down Fix

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2625.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	23%
Maximum Base Reactions	1.99 (Down) kN/m
	0.40 (Up) kN/m

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1120h 1220w	290	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	
1120h 1220w	2320	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

WALL NOTE

Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

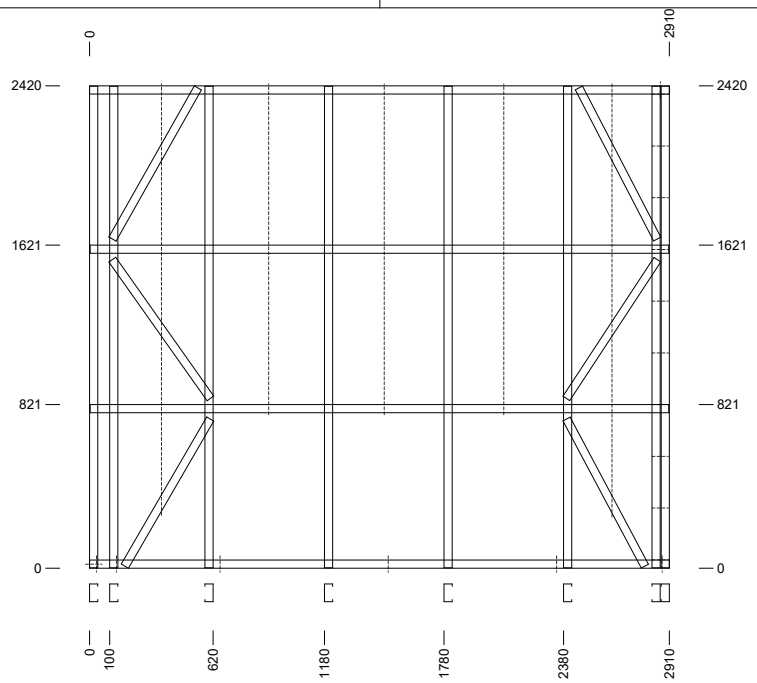
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2420h 3830w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	8	2416mm	89S41-075-550	2	2904mm	89S41-075-550	2	2910mm	89S41-075-550	1	833mm
89S41-075-550	2	854mm	89S41-075-550	1	871mm						

89S41-075-550	1	837mm	89S41-075-550	1	853mm

Assembly Weight	41.1kg	FRAMECAD 10g-19mm XDrive	108

FRAMECAD®



<<< Joins L10

Quantity Required = 1 Mark as L3 Header Engineering = Passed

Joins L4 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.47		kN/m
Qr	Roof Live	0.38		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.92		kN/m
Wd	Wind Down	0.42		kN/m
Wh	Wind Horizontal	0.55		kPa

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2650.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	23%
Maximum Base Reactions	1.46 (Down) kN/m
	0.25 (Up) kN/m

SPECIAL LOADING

Location	Qty	G	Qr	Wd	Wu	S	Qf
mm		kN	kN	kN	kN	kN	kN
TRUSS GIRDER AND BEAM BEARER POINT LOAD							
2845	1	1.65	1.26	1.40	3.08	0.00	0.00

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

OPENING DESIGN

No opening on this panel

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

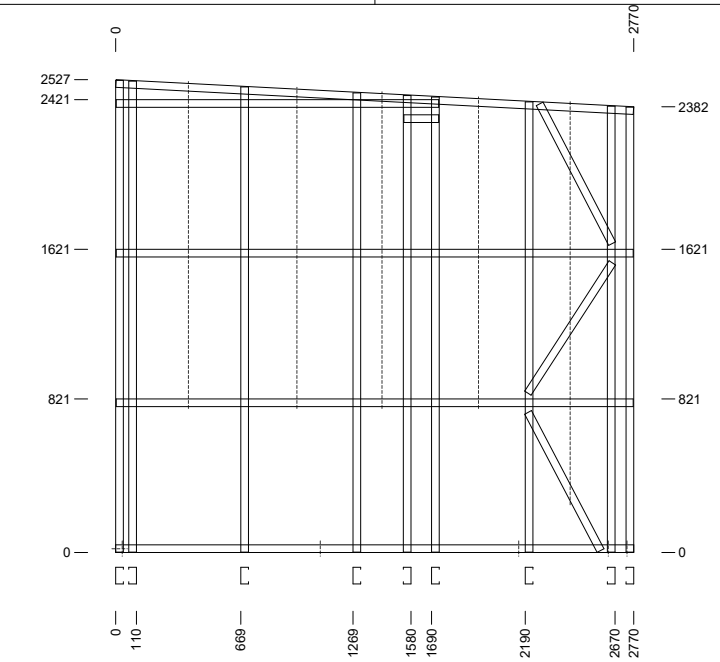
Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2420h 2910w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	1 1725mm	89S41-075-550	1 186mm	89S41-075-550	1 2378mm	89S41-075-550	1 2383mm	89S41-075-550	1 2406mm	89S41-075-550	1 2433mm
89S41-075-550	1 2441mm	89S41-075-550	1 2455mm	89S41-075-550	1 2486mm	89S41-075-550	1 2518mm	89S41-075-550	1 2521mm	89S41-075-550	2 2764mm
89S41-075-550	1 2770mm	89S41-075-550	1 2772mm	89S41-075-550	1 830mm	89S41-075-550	1 834mm	89S41-075-550	1 841mm		

Assembly Weight	42.8kg	FRAMECAD 10g-19mm XDrive	100

FRAMECAD



<<< Joins L3

Quantity Required = 1 Mark as L4 Header Engineering = Passed

Joins L5 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2415.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2975.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	20%
Maximum Base Reactions	0.32 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

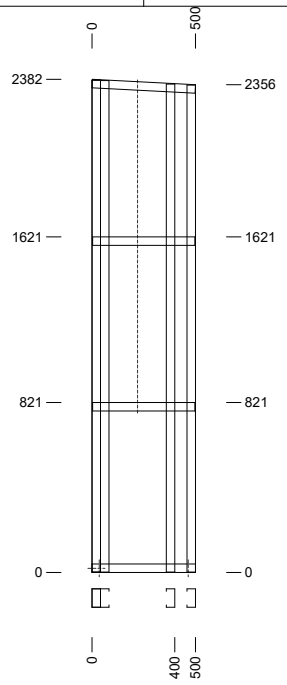
Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2527h 2770w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550 1 2352mm 89S41-075-550 1 500mm	89S41-075-550 1 2357mm	89S41-075-550 1 2374mm	89S41-075-550 2 2376mm	89S41-075-550 2 494mm	89S41-075-550 1 499mm

Assembly Weight	15.8kg	FRAMECAD 10g-19mm XDrive	32

FRAMECAD®



<<< Joins L4

Quantity Required = 1 Mark as L5 Header Engineering = Passed

Joins >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.26		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2329.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3200.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	19%
Maximum Base Reactions	0.31 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

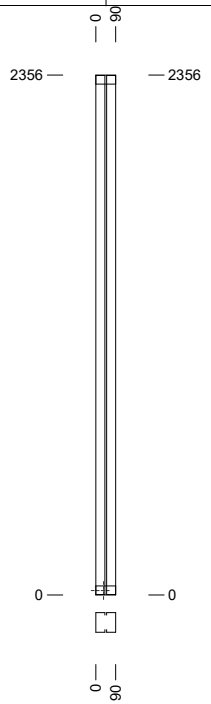
PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2382h 500w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	2	2352mm	89S41-075-550	2	90mm
Assembly Weight		5.6kg			



<<< Joins L5

Quantity Required = 1 Mark as L6 Header Engineering = Passed

Joins >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.26		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2316.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	18%
Maximum Base Reactions	0.31 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

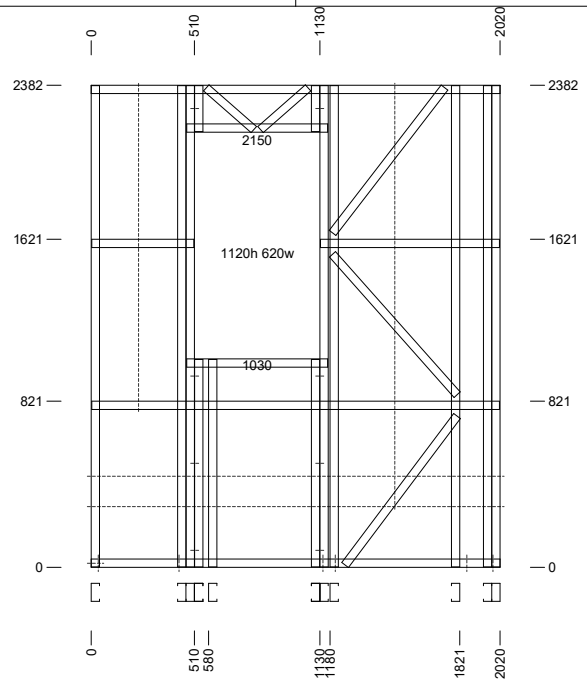
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2356h 90w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	3	1025mm	89S41-075-550	1	2014mm	89S41-075-550	2	2020mm	89S41-075-550	2	227mm
89S41-075-550	1	504mm	89S41-075-550	2	696mm	89S41-075-550	1	884mm	89S41-075-550	1	906mm

89S41-075-550	8	2378mm	89S41-075-550	2	312mm		
89S41-075-550	1	920mm	89S41-075-550	1	928mm		

Assembly Weight	39.6kg	FRAMECAD 10g-19mm XDrive	134		

FRAMECAD®



<<< Joins L8

Quantity Required = 1 Mark as L7 Header Engineering = Passed

Joins L5 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.26		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
510	2	0.62	0.00	0	0
1130	2	0.62	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & FRAMECAD Hold Down Fix

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2342.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3175.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	19%
Maximum Base Reactions	0.31 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

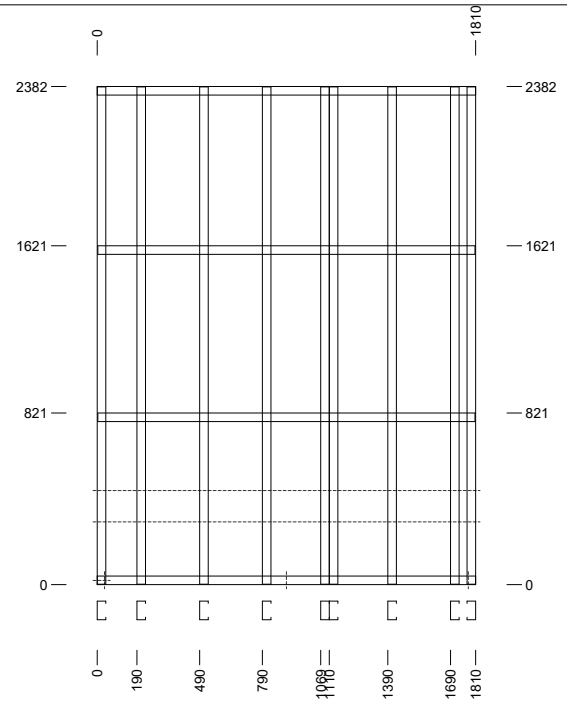
Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1120h 620w	510	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

WALL NOTE

Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2382h 2020w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	2 1804mm	89S41-075-550	2 1810mm	89S41-075-550	9 2378mm
Assembly Weight	32.6kg	FRAMECAD 10g-19mm XDrive	72		



<<< Joins L9

Quantity Required = 1 Mark as L8 Header Engineering = Passed

Joins L7 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.26		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2342.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3175.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	19%
Maximum Base Reactions	0.31 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

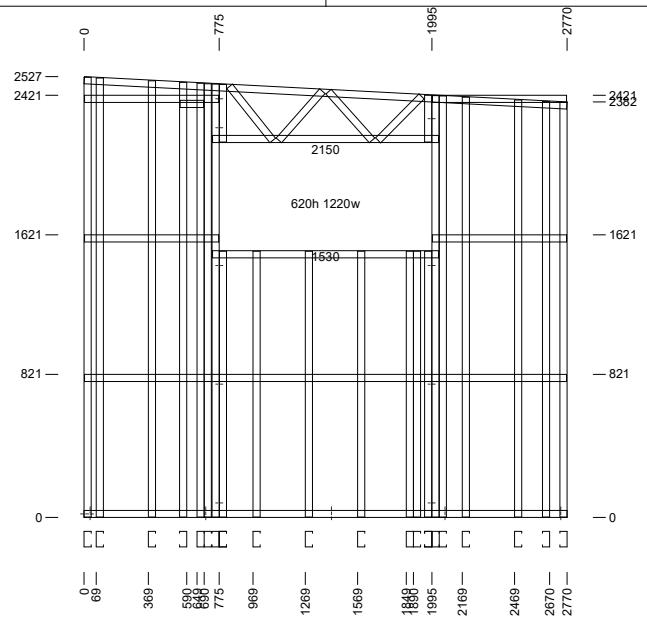
Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2382h 1810w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	2 1296mm	89S41-075-550	1 135mm	89S41-075-550	7 1525mm	89S41-075-550	1 2378mm	89S41-075-550	1 2383mm	89S41-075-550	1 2392mm
89S41-075-550	1 2408mm	89S41-075-550	1 2414mm	89S41-075-550	1 2417mm	89S41-075-550	1 2483mm	89S41-075-550	1 2485mm	89S41-075-550	1 2487mm
89S41-075-550	1 2492mm	89S41-075-550	1 2502mm	89S41-075-550	1 2518mm	89S41-075-550	1 2521mm	89S41-075-550	1 268mm	89S41-075-550	1 2764mm
89S41-075-550	1 2770mm	89S41-075-550	1 2772mm	89S41-075-550	1 330mm	89S41-075-550	1 354mm	89S41-075-550	1 374mm	89S41-075-550	1 376mm
89S41-075-550	1 396mm	89S41-075-550	4 769mm								

Assembly Weight	67.0kg	FRAMECAD 10g-19mm XDrive	218

FRAMECAD®



<<< Joins L1

Quantity Required = 1 Mark as L9 Header Engineering = Passed

Joins L8 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
775	2	0.62	0.00	0	0
1995	2	0.62	0.00	0	0

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2415.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2975.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	20%
Maximum Base Reactions	0.32 (Down) kN/m
	0.00 (Up) kN/m

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
620h 1220w	775	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height

' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & FRAMECAD Hold Down Fix

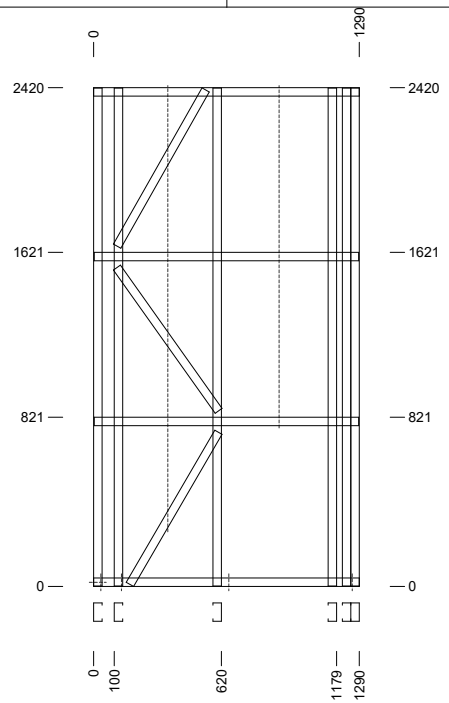
WALL NOTE

Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2527h 2770w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550 2 1284mm	89S41-075-550 2 1290mm	89S41-075-550 6 2416mm	89S41-075-550 1 853mm	89S41-075-550 1 854mm	89S41-075-550 1 871mm
Assembly Weight 25.3kg	FRAMECAD 10g-19mm XDrive 60				

FRAMECAD®



<<< Joins L11

Quantity Required = 1 Mark as L10 Header Engineering = Passed

Joins L3 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.28		kN/m
Qr	Roof Live	0.23		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.55		kN/m
Wd	Wind Down	0.25		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	2800.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	21%
Maximum Base Reactions	1.01 (Down) kN/m
	0.05 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

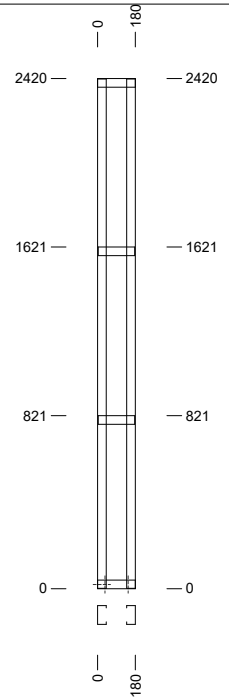
WALL NOTE

Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2420h 1290w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	2	174mm	89S41-075-550	2	180mm	89S41-075-550	2	2416mm
Assembly Weight		6.3kg	FRAMECAD 10g-19mm XDrive		16			

FRAMECAD®



<<< Joins

Quantity Required = 1 Mark as L11 Header Engineering = Passed

Joins L10 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.27		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.55		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3075.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	19%
Maximum Base Reactions	0.32 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

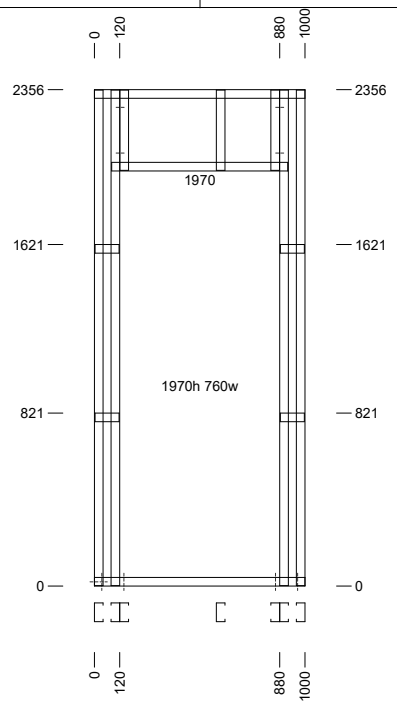
Top Plate designed to support detailed joist or truss only.
Plate or Floor system to be specified by Engineer to distributed loads from walls above to stud
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Load Bearing	Envelope:	2420h 180w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	External

89S41-075-550	2	1000mm	89S41-075-550	4	114mm	89S41-075-550	4	2352mm	89S41-075-550	3	381mm	89S41-075-550	1	836mm

Assembly Weight	15.8kg	FRAMECAD 10g-19mm XDrive	56		

FRAMECAD®



<<< Joins L9

Quantity Required = 1 Mark as N1 Header Engineering = Passed

Joins N4 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.52		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2316.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3425.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	9%
Maximum Base Reactions	0.62 (Down) kN/m
	0.00 (Up) kN/m

SPECIAL LOADING

No Point Load Applied

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
120	2	0.00	0.00	0	0
880	2	0.00	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1970h 760w	120	Empty Head	None	0	2(S)2(H)	Passed	No design	No design	

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height

' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

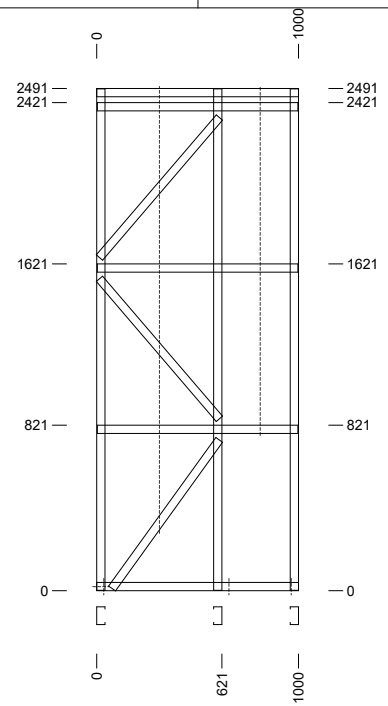
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2356h 1000w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550	2	1000mm	89S41-075-550	3	2487mm	89S41-075-550	1	908mm	89S41-075-550	2	914mm	89S41-075-550	3	994mm

Assembly Weight	17.3kg	FRAMECAD 10g-19mm XDrive	42		

FRAMECAD®



<<< Joins L9

Quantity Required = 1 Mark as N2 Header Engineering = Passed

Joins N5 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.55		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2451.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3000.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.66 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

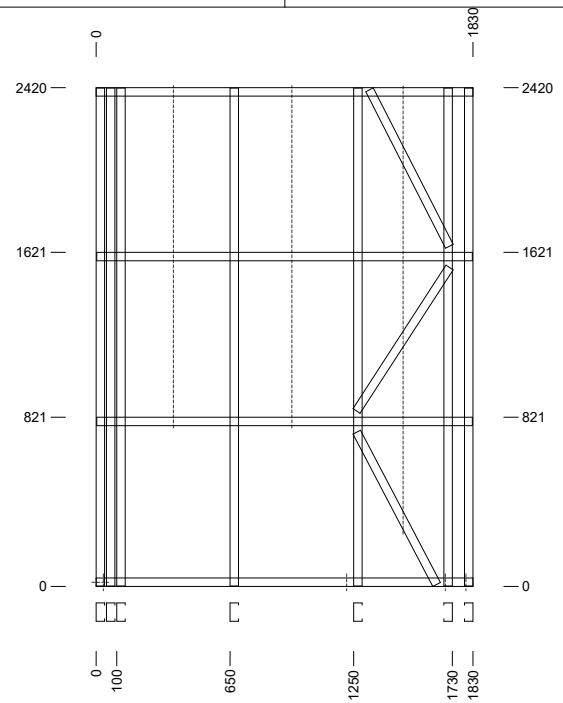
WALL NOTE

Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2491h 1000w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550 2 1824mm	89S41-075-550 2 1830mm	89S41-075-550 7 2416mm	89S41-075-550 1 830mm	89S41-075-550 1 834mm	89S41-075-550 1 852mm
Assembly Weight 30.5kg	FRAMECAD 10g-19mm XDrive 68				

FRAMECAD®



<<< Joins N7

Quantity Required = 1 Mark as N3 Header Engineering = Passed

Joins N4 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.64 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

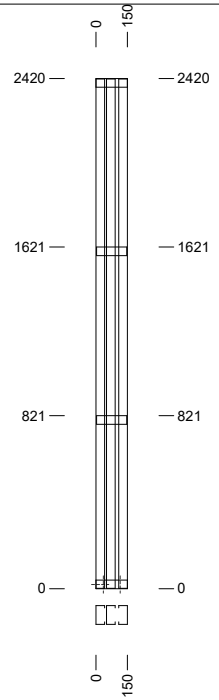
WALL NOTE

Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2420h 1830w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550	2	144mm	89S41-075-550	2	150mm	89S41-075-550	3	2416mm
Assembly Weight		8.9kg	FRAMECAD 10g-19mm XDrive		24			

FRAMECAD®



<<< Joins N3

Quantity Required = 1 Mark as N4 Header Engineering = Passed

Joins N5 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.64 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

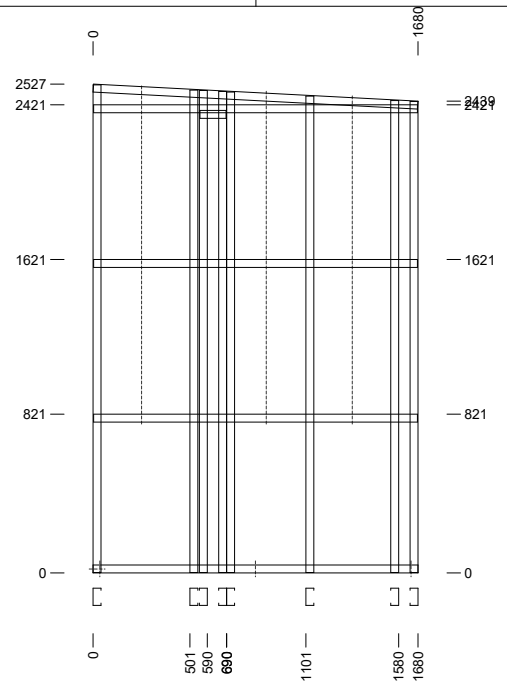
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2420h 150w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550 1 135mm 89S41-075-550 1 2485mm	89S41-075-550 3 1674mm 89S41-075-550 1 2487mm	89S41-075-550 2 1680mm 89S41-075-550 1 2492mm	89S41-075-550 1 2435mm 89S41-075-550 1 2495mm	89S41-075-550 1 2441mm 89S41-075-550 1 2521mm	89S41-075-550 1 2464mm

Assembly Weight	32.3kg	FRAMECAD 10g-19mm XDrive	84

FRAMECAD®



<<< Joins N4

Quantity Required = 1 Mark as N5 Header Engineering = Passed

Joins N6 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.55		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2443.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3025.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.66 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

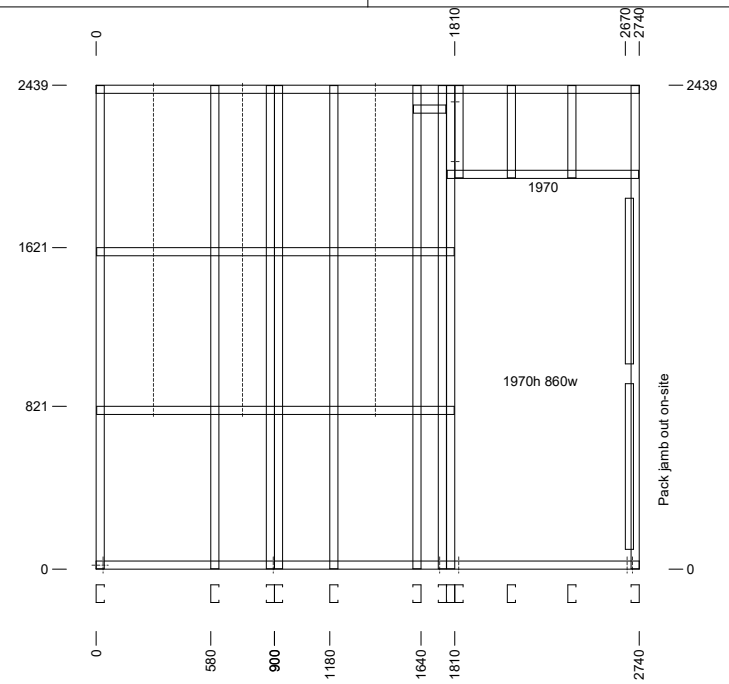
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2527h 1680w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550 1 163mm 89S41-075-550 1 965mm	89S41-075-550 2 1804mm	89S41-075-550 9 2435mm	89S41-075-550 2 2740mm	89S41-075-550 3 464mm	89S41-075-550 2 835mm

Assembly Weight	40.1kg	FRAMECAD 10g-19mm XDrive	92

FRAMECAD®



<<< Joins N5

Quantity Required = 1 Mark as N6 Header Engineering = Passed

Joins L4 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.54		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
1810	2	0.00	0.00	0	0
2670	2	0.00	0.00	0	0

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings	
PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2399.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3200.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.65 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1970h 860w	1810	Empty Head	None	0	2(S)2(H)	Passed	No design	No design	

WALL NOTE

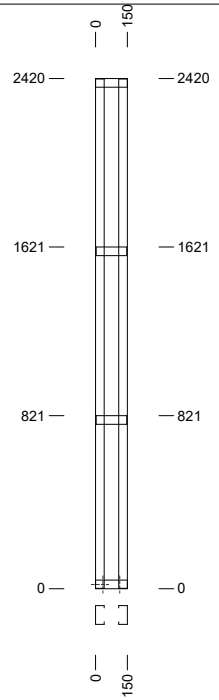
Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010
Wall Type:	Non Load Bearing	Envelope:	2439h 2740w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018

Wind speed:	LOW	Company: FRAMECAD	Dwg Name: Unit 19 Bak	Sheet 17 of 19	Project: Unit 19 Type F
Wall Location:	Internal				Job Number:

89S41-075-550	2	144mm	89S41-075-550	2	150mm	89S41-075-550	2	2416mm
Assembly Weight		6.2kg	FRAMECAD 10g-19mm XDrive		16			

FRAMECAD



<<< Joins N3

Quantity Required = 1 Mark as N7 Header Engineering = Passed

Joins N8 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.53		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

No Point Load Applied

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height
' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2380.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3250.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.64 (Down) kN/m
	0.00 (Up) kN/m

OPENING DESIGN

No opening on this panel

WALL NOTE

Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

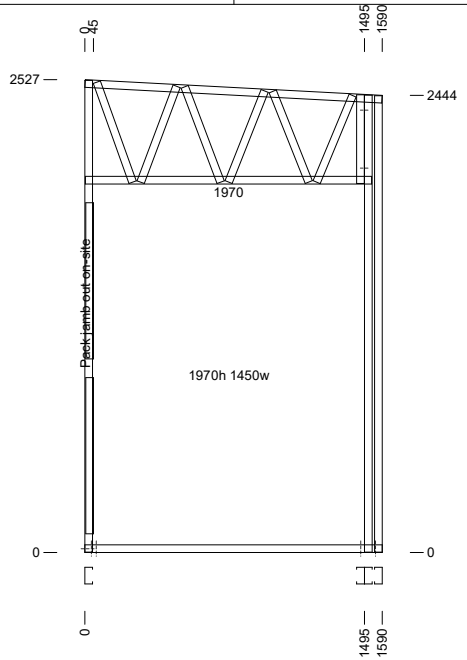
Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2420h 150w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

89S41-075-550	1	1530mm	89S41-075-550	2	1590mm	89S41-075-550	1	2440mm	89S41-075-550	1	2443mm
89S41-075-550	1	501mm	89S41-075-550	1	522mm	89S41-075-550	1	524mm	89S41-075-550	1	545mm
89S41-075-550	2	835mm									

89S41-075-550	1	2521mm	89S41-075-550	1	474mm
89S41-075-550	1	547mm	89S41-075-550	1	568mm

Assembly Weight	19.9kg	FRAMECAD 10g-19mm XDrive	48

FRAMECAD



<<< Joins N7

Quantity Required = 1 Mark as N8 Header Engineering = Passed

Joins N6 >>>

LOADS & DESIGN FACTORS

WIND Factors

Terrain Factor	1.00
Shielding Factor	1.00
Topography Factor	1.00

SPECIAL LOADING

No Point Load Applied

DESIGN LOADING

Case	Type	Total	Eccen	Unit
G	Gravity(Dead)	0.00		kN/m
Qr	Roof Live	0.00		kN/m
Qf	Floor Live Load	0.00		kN/m
Sw	Self Weight	0.55		kN/m
P	Concentrated Live	1.1		kN
Wu	Wind Up	0.00		kN/m
Wd	Wind Down	0.00		kN/m
Wh	Wind Horizontal	0.28		kPa

JAMB STUD ACTIONS

Location	StudQty	Vertical (kN)		Lateral (kN)	
mm		Down	UpLift	Down	UpLift
45	2	0.00	0.00	0	0
1495	2	0.00	0.00	0	0

STUD DESIGN

Results for Uniform Loads

Stud Material	89S41-075-550
Stud Spacing Type	Single Absolute
Nominal Wall Height	2446.0mm
Nominal Noggin Spacing	821.0mm
Max Nominal Stud Spacing	3025.0mm
Actual Nominal Stud Spacing	600.0mm
Stud Engineering Compliance	10%
Maximum Base Reactions	0.66 (Down) kN/m
	0.00 (Up) kN/m

FASTENERS

Connection Type:	Fastener Name:	Number:
Stud to Plate	FRAMECAD 10g-19mm XDrive	2 (one each side)
Web to Plate & Head		
Minimum	FRAMECAD 10g-19mm XDrive	2 (one each side)
Additional	FRAMECAD 10g-16mm Flathead	As specified for header
Jack Stud to jamb	FRAMECAD 10g-19mm XDrive	As specified for header

OPENING DESIGN

Note 1 - Jamb Screws: (S) denotes Sill, (H) denotes Head.

Code	Location	Type	Lintel/Beam	Additional Screws	Jamb Screws	Header Status	Sill Status	Head Status	Warning
1970h 1450w	45	Webbed Head	None	0	2(S)2(H)	Passed	No design	No design	

BRACING

Inplane	Provide Nogs and Solid Bracing as shown
Out-of Plane:	Provide Restraint at Top and Bottom of Panel
	Additional Stud Restraint Height: None

kx	Lx	ky	Ly	kt	Lt
0.8	Height	0.8	Nog	1.0	Nog

' Height ' denotes nominal panel height

' Nog ' denotes maximum spacing

BASE FIXING

As Specified by Engineer for Design Reactions

Minimum Fixings

PanelUsage Type	Non Load Bearing
Panel Base(Floor) type	Concrete
Minimum	TITAN THD10X80 @ 1200mm centres
Panel Ends	TITAN THD10X80 & 50mm Flat Washer
Jamb Stud	TITAN THD10X80 & 50mm Flat Washer

WALL NOTE

Base Plate not designed for vertical loads
Structural support be to provided under each stud.
Wall and Header are not designed for concentrated loads in Structural Wall

Framing System Name:	FC_SFSNZ	Panel RL (mm) :	5430	Direction:		Loading Code:	NASH NZ 2010	Wind speed:	LOW
Wall Type:	Non Load Bearing	Envelope:	2527h 1590w	Zone:	Not Used	Steel Design Code:	AS/NZS 4600:2018	Wall Location:	Internal

Stud Design for Panel L1

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L1

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.38	kN/m
Live Load (Q1 = max(Q2,Q3))	0.29	kN/m
Roof Live Load (Q2)	0.29	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.29	kN/m
Wind Up Load (Wu)	0.71	kN/m
Wind Down Load (Wd)	0.32	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2736.8	mm
0.9G + 1.0Wu + 1.0Wh	3086.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2725	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	22	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

TRUSS GIRDER POINT LOAD

Load Location	Stud qty	Dead Load (G) kN	Live Roof(Qr) kN	Snow (S) kN	Wind Up (Wu) kN	Wind Down (Wd) kN
2845	1	1.65	1.26	0.00	3.08	1.40

Stud Design for Panel L2

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L2

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.70	kN/m
Live Load (Q1 = max(Q2,Q3))	0.53	kN/m
Roof Live Load (Q2)	0.53	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.53	kN/m
Wind Up Load (Wu)	1.27	kN/m
Wind Down Load (Wd)	0.61	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2636.8	mm
0.9G + 1.0Wu + 1.0Wh	3086.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2625	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	23	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel L3

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L3

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.47	kN/m
Live Load (Q1 = max(Q2,Q3))	0.38	kN/m
Roof Live Load (Q2)	0.38	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.38	kN/m
Wind Up Load (Wu)	0.92	kN/m
Wind Down Load (Wd)	0.42	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2661.8	mm
0.9G + 1.0Wu + 1.0Wh	3086.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2650	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	23	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

TRUSS GIRDER POINT LOAD

Load Location	Stud qty	Dead Load (G) kN	Live Roof(Qr) kN	Snow (S) kN	Wind Up (Wu) kN	Wind Down (Wd) kN
2845	1	1.65	1.26	0.00	3.08	1.40

Stud Design for Panel L4

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L4

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2998.5	mm
0.9G + 1.0Wu + 1.0Wh	2998.5	mm
0.44Wh	3370.1	mm
P2	3146.2	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2415	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2975	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	20	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.88	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel L5

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L5

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.26	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3223.2	mm
0.9G + 1.0Wu + 1.0Wh	3223.2	mm
0.44Wh	3755.9	mm
P2	3402.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2329	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3200	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	19	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	20.09	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel L6

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L6

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.26	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3259.7	mm
0.9G + 1.0Wu + 1.0Wh	3259.7	mm
0.44Wh	3820.0	mm
P2	3441.5	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2316	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	18	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	20.12	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel L7

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L7

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.26	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3187.2	mm
0.9G + 1.0Wu + 1.0Wh	3187.2	mm
0.44Wh	3693.3	mm
P2	3364.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2342	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3175	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	19	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	20.06	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel L8

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L8

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.26	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3187.2	mm
0.9G + 1.0Wu + 1.0Wh	3187.2	mm
0.44Wh	3693.3	mm
P2	3364.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2342	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3175	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	19	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	20.06	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel L9

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L9

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2998.5	mm
0.9G + 1.0Wu + 1.0Wh	2998.5	mm
0.44Wh	3370.1	mm
P2	3146.2	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2415	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2975	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	20	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.88	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel L10

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L10

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.28	kN/m
Live Load (Q1 = max(Q2,Q3))	0.23	kN/m
Roof Live Load (Q2)	0.23	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.23	kN/m
Wind Up Load (Wu)	0.55	kN/m
Wind Down Load (Wd)	0.25	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	2811.8	mm
0.9G + 1.0Wu + 1.0Wh	3086.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	2800	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	21	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel L11

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: L11

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	External	
Usage Type	Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.55	kPa
Panel Self Weight	0.27	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	3086.8	mm
0.9G + 1.0Wu + 1.0Wh	3086.8	mm
0.44Wh	3520.1	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3075	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	19	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N1

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N1

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.52	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	6403.1	mm
0.9G + 1.0Wu + 1.0Wh	6403.1	mm
0.44Wh	7503.6	mm
P2	3441.5	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2316	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3425	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	9	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	20.12	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N2

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N2

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.55	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	5716.2	mm
0.9G + 1.0Wu + 1.0Wh	5716.2	mm
0.44Wh	6329.2	mm
P2	3008.1	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2451	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3000	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.79	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N3

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N3

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	6063.3	mm
0.9G + 1.0Wu + 1.0Wh	6063.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N4

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N4

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	6063.3	mm
0.9G + 1.0Wu + 1.0Wh	6063.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N5

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N5

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.55	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	5753.0	mm
0.9G + 1.0Wu + 1.0Wh	5753.0	mm
0.44Wh	6390.4	mm
P2	3037.2	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2443	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3025	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.81	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N6

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N6

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.54	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	5966.2	mm
0.9G + 1.0Wu + 1.0Wh	5966.2	mm
0.44Wh	6748.9	mm
P2	3206.7	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2399	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3200	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.92	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N7

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N7

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.53	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	6063.3	mm
0.9G + 1.0Wu + 1.0Wh	6063.3	mm
0.44Wh	6914.4	mm
P2	3258.9	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2380	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3250	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.97	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

Stud Design for Panel N8

Company:	FRAMECAD	Tab Name:	Layouts
Project:	Unit 19 Type F 107 Blockhouse Bay Road	Dwg Name:	Unit 19 Bak
		Detailer:	Ralph Lao
		Print Date:	13-10-2021
Job Number:		Page No:	1

Panel Label: N8

DESIGN LOADING:

Steel Design Code	AS/NZS 4600:2018	
Loading Code:	NASH NZ 2010	
Wind Speed (NZ)	LOW	
Wall Location	Internal	
Usage Type	Non Load Bearing	
Dead Load (G)	0.00	kN/m
Live Load (Q1 = max(Q2,Q3))	0.00	kN/m
Roof Live Load (Q2)	0.00	kN/m
Floor Live Load (Q3)	0.00	kN/m
Live Load (Q4 = Q2+Q3)	0.00	kN/m
Wind Up Load (Wu)	0.00	kN/m
Wind Down Load (Wd)	0.00	kN/m
Wind Horizontal Load (Wh)	0.28	kPa
Panel Self Weight	0.55	kN/m
Applied Point Load (P)	1.1	kN
Impact Load (P2)	0.7	kN

LOAD CASE RESULTS: (single stud):	Max Stud Spacing	
1.2G + 1.5Q2 + 0.4Q3	9000.0	mm
1.2G + 1.5Q3	9000.0	mm
1.2G + 0.4Q3 + 1.0S	9000.0	mm
1.2G + 1.5P1	9000.0	mm
1.2G + 0.4Q3 + Wd + Wh	5741.9	mm
0.9G + 1.0Wu + 1.0Wh	5741.9	mm
0.44Wh	6372.0	mm
P2	3028.5	mm

DESIGN RESULTS:

Stud Material	89S41-075-550	
Stud Spacing Type	Single Absolute	
Nominal Wall Height	2446	mm
Nominal Noggin Spacing	821	mm
Max Nominal Stud Spacing	3025	mm
Actual Nominal Stud Spacing	600	mm
Stud Engineering Compliance	10	%
Manually Altered	No	

SECTION DIMENSIONS (SINGLE STUD):

Section Shape	LC	
Section Height	89.0	mm
Section Width	41.0	mm
Lip Length	11.5	mm
Inside Radius	2.00	mm
Material Thickness	0.75	mm
Service Hole Width	34.0	mm
Yield Strength	495	MPa
Tensile Strength	495	MPa

SECTION PROPERTIES (SINGLE STUD):

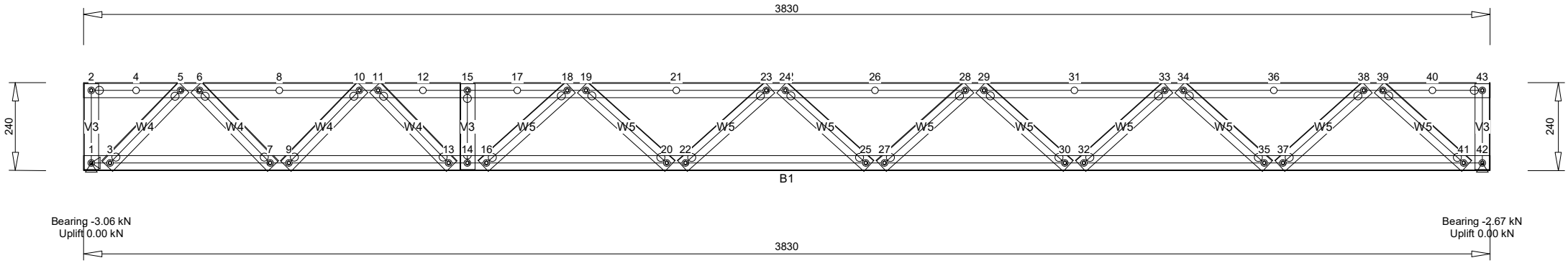
Gross Area	140.19	mm^2
Section Mass	1.142	kg/m
Centroid Left	13.0	mm
Centroid Top	44.1	mm
Second Moment of Inertia Ix	179439	mm^4
Second Moment of Inertia Iy	33353	mm^4
Radius of Gyration rx	35.8	mm
Radius of Gyration ry	15.4	mm
Shear Centre xo	32.8	mm
Shear Centre yo	0.00	mm
Polar Gyration ro1	51.1	mm
Torsion Constant J	26	mm^4
Warping Constant Iw	58.85	mm^6

SECTION CAPACITIES (SINGLE STUD):

Shear Capacity ΦvVv	3.23	kN
Tension Capacity ΦtNt	42.23	kN
Compression Capacity ΦcNs	26.41	kN
Compression Capacity ΦcNc	19.80	kN
Bending Capacity ΦbMsx-	1380	Nm
Bending Capacity ΦbMbx-	1202	Nm
Bending Capacity ΦbMsx	1380	Nm
Bending Capacity ΦbMbx	1202	Nm

B1	89S41-095-550	1	3830	T2	89S41-095-550	1	3830	V3	89S41-095-550	3	235	W4	89S41-095-550	4	301	W5	89S41-095-550	10	321
Assembly Weight		18.3kg		FRAMECAD 10g-16mm Flathead		68		FRAMECAD 10g-19mm XDrive		68									

FRAMECAD



Beam Type WJ89095H Mark as JB1 Quantity Required = 1 Engineering Status = 51%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.29	16%	(11)
3-5	-5.01	0.00	19%	(3)
6-7	0.00	4.78	8%	(3)
9-10	-4.88	0.00	18%	(3)
11-13	0.00	4.20	7%	(3)
14-15	-2.76	0.00	10%	(3)
16-18	-1.57	0.53	6%	(8)
19-20	-0.81	1.18	3%	(3)
22-23	-0.92	1.02	3%	(7)
24-25	-1.53	0.58	6%	(3)
27-28	-0.42	1.61	3%	(3)
29-30	-2.10	0.10	8%	(3)
32-33	0.00	2.20	4%	(3)
34-35	-2.70	0.00	10%	(3)
37-38	0.00	2.74	5%	(3)
39-41	-4.09	0.00	15%	(4)
42-43	-0.01	0.14	17%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.59	0.00	26%	(3)
5-10	-7.33	0.00	30%	(3)
10-15	-13.64	0.00	51%	(3)
15-18	-13.64	0.00	51%	(3)
18-23	-13.50	0.00	51%	(3)
23-28	-12.14	0.00	46%	(3)
28-33	-9.82	0.00	37%	(3)
33-38	-6.64	0.00	25%	(3)
38-43	-3.49	0.00	15%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	4.07	21%	(3)
7-13	0.00	10.77	33%	(3)
13-16	0.00	13.68	31%	(2)
16-20	0.00	13.53	35%	(2)
20-25	0.00	12.93	35%	(2)
25-30	0.00	11.04	34%	(2)
30-35	0.00	8.28	27%	(2)
35-41	0.00	4.65	15%	(2)
41-42	0.00	0.46	30%	(4)

SPECIAL LOADING

Location	Source	G kN	Q kN	S kN
mm				
1045.0	JB2	0.30	1.42	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	22%
LC2	(G+Q)	36%
LC3	(1.2G+1.5Q)	51%
LC4-LC11	(1.2G+1.5P)	33%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	2.35	23	Span/360,12.0	10.5	22%
LC2	4.23	23	Span/240,12.0	12.0	35%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

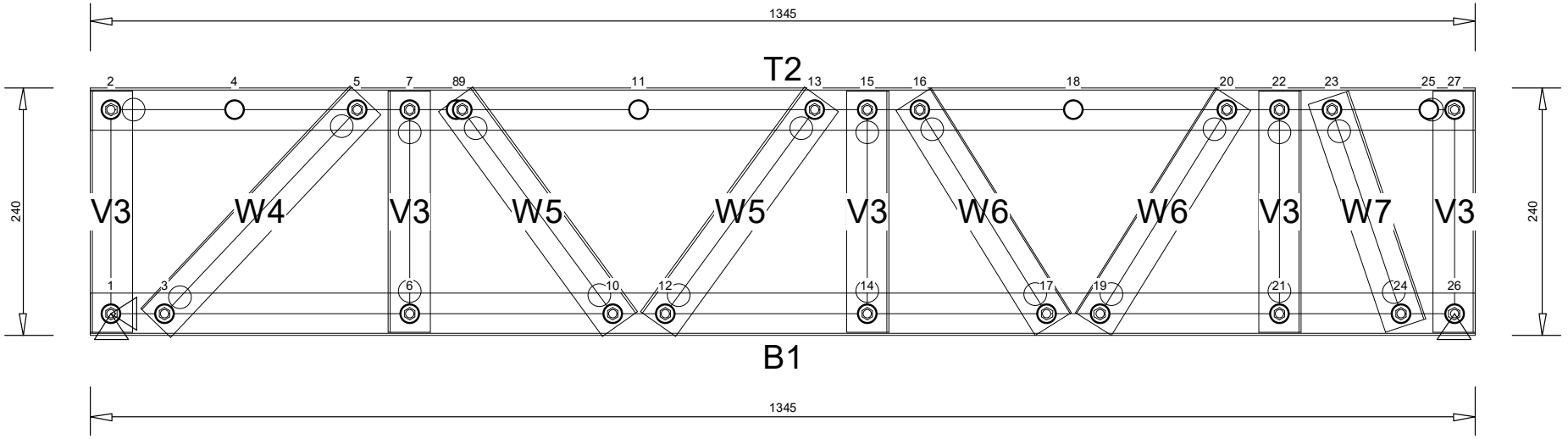
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.90	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	1.50
		Design Point Load (kN) :	1.8

B1	89S41-095-550	1	1345	T2	89S41-095-550	1	1345	V3	89S41-095-550	5	235	W4	89S41-095-550	1	297	W5	89S41-095-550	2	271	W6	89S41-095-550	2	258
W7	89S41-095-550	1	234																				

Assembly Weight	7.8kg	FRAMECAD 10g-16mm Flathead	44	FRAMECAD 10g-19mm XDrive	44

FRAMECAD



Beam Type WJ89095H Mark as JB2 Quantity Required = 1 Engineering Status = 41%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.48	17%	(3)
3-5	-4.21	0.00	16%	(3)
6-7	-0.06	0.25	0%	(6)
9-10	-0.56	1.19	2%	(6)
12-13	-1.19	0.36	4%	(5)
14-15	0.00	0.34	1%	(5)
16-17	-2.46	0.00	9%	(3)
19-20	0.00	2.85	5%	(3)
21-22	-1.15	0.02	4%	(3)
23-24	-3.19	0.00	12%	(4)
26-27	0.00	0.44	35%	(3)
16-20	-3.38	0.00	23%	(3)
20-23	-1.88	0.00	15%	(3)
23-27	-0.96	0.00	31%	(3)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.63	0.00	39%	(3)
5-9	-3.52	0.00	23%	(3)
9-13	-4.07	0.00	25%	(3)
13-16	-4.67	0.00	17%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-6	0.00	3.55	41%	(3)
6-10	0.00	3.55	10%	(6)
10-14	0.00	4.69	14%	(3)
14-17	0.00	4.68	18%	(3)
17-21	0.00	3.39	18%	(3)
21-24	0.00	1.89	18%	(3)
24-26	0.00	0.96	2%	(3)

SPECIAL LOADING

Location	Source	G kN	Q kN	S kN
mm				
310.0	S3	0.03	0.15	0.00
1300.0	S4	0.05	0.22	0.00
355.0	J2	0.18	0.82	0.00
755.0	J2	0.18	0.82	0.00
1155.0	JB3	0.11	0.50	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	16%
LC2	(G+Q)	29%
LC3	(1.2G+1.5Q)	41%
LC4-LC6	(1.2G+1.5P)	39%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.34	11	Span/360,12.0	3.62	9%
LC2	0.63	11	Span/240,12.0	5.4	12%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

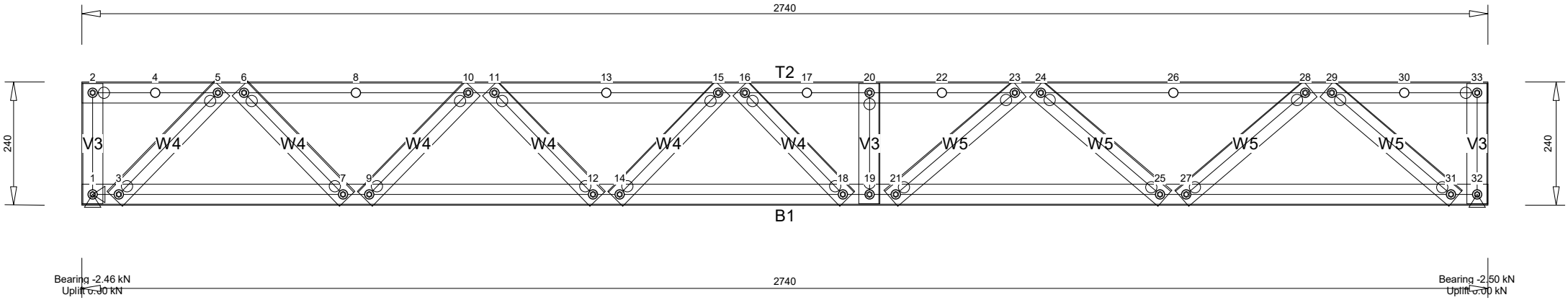
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	1.70
Design Code:	AS/NZS 4600:2018				

Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	1.50
Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	2740	T2	89S41-095-550	1	2740	V3	89S41-095-550	3	235	W4	89S41-095-550	6	301	W5	89S41-095-550	4	330

Assembly Weight	13.3kg	FRAMECAD 10g-16mm Flathead	52	FRAMECAD 10g-19mm XDrive	52

FRAMECAD®



Beam Type WJ89095H Mark as JB3 Quantity Required = 1 Engineering Status = 28%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.24	14%	(9)
3-5	-3.85	0.00	14%	(9)
6-7	0.00	2.05	3%	(8)
9-10	-1.92	0.00	7%	(8)
11-12	-0.18	1.52	3%	(7)
14-15	-1.29	0.36	5%	(7)
16-18	-0.64	0.91	2%	(7)
19-20	-1.40	0.00	5%	(6)
21-23	-0.42	1.55	3%	(7)
24-25	-2.04	0.06	8%	(3)
27-28	0.00	2.08	4%	(3)
29-31	-3.89	0.00	15%	(4)
32-33	-0.03	0.11	16%	(4)
10-15	-5.03	0.00	19%	(3)
15-20	-6.39	0.00	24%	(3)
20-23	-6.39	0.00	24%	(3)
23-28	-5.25	0.00	20%	(3)
28-33	-3.39	0.00	13%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.52	0.00	20%	(9)
5-10	-3.39	0.00	18%	(9)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.24	12%	(9)
7-12	0.00	4.47	13%	(8)
12-18	0.00	5.88	15%	(7)
18-21	0.00	6.41	13%	(3)
21-25	0.00	5.26	15%	(3)
25-31	0.00	3.71	13%	(4)
31-32	0.00	0.44	28%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN
1535.0	JB4	0.13	0.63	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	9%
LC2	(G+Q)	17%
LC3	(1.2G+1.5Q)	24%
LC4-LC9	(1.2G+1.5P)	28%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.61	17	Span/360,12.0	7.5	8%
LC2	1.09	17	Span/240,12.0	11.2	10%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

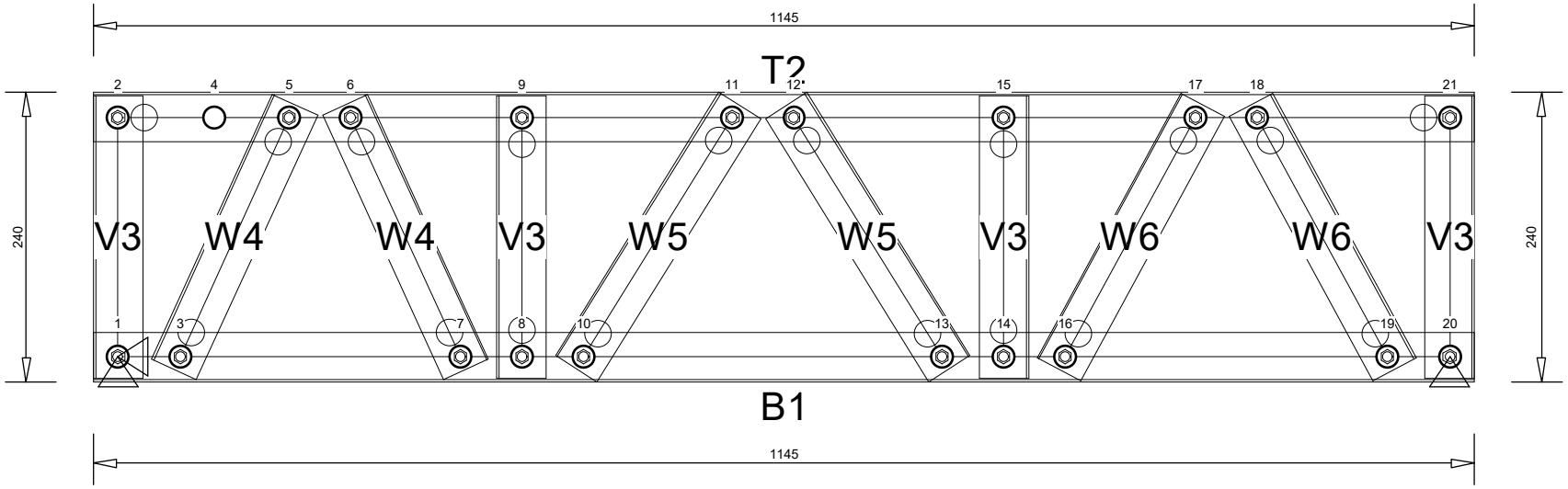
System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.40
Design Code:	AS/NZS 4600:2018				

Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	1.50
Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	1	1145	T2	89S41-095-550	1	1145	V3	89S41-095-550	4	235	W4	89S41-095-550	2	243	W5	89S41-095-550	2	258	W6	89S41-095-550	2	250

Assembly Weight	6.8kg	FRAMECAD 10g-16mm Flathead	40	FRAMECAD 10g-19mm XDrive	40

FRAMECAD



Bearing -2.29 kN
Uplift 0.00 kN

Bearing -2.29 kN
Uplift 0.00 kN

Beam Type WJ89095H Mark as JB4 Quantity Required = 1 Engineering Status = 28%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.40	12%	(8)
3-5	-3.11	0.00	12%	(8)
6-7	0.00	2.45	4%	(7)
8-9	-2.36	0.00	9%	(7)
10-11	-1.32	0.83	5%	(5)
12-13	-1.14	1.02	4%	(7)
14-15	-2.45	0.00	9%	(5)
16-17	-0.03	2.41	4%	(5)
18-19	-2.79	0.00	10%	(5)
20-21	-0.06	0.36	12%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.43	0.00	21%	(7)
5-9	-2.61	0.00	14%	(8)
9-11	-2.61	0.00	13%	(7)
11-15	-2.79	0.00	13%	(5)
15-17	-2.79	0.00	14%	(5)
17-21	-1.65	0.00	19%	(5)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	1.75	28%	(8)
7-10	0.00	2.64	9%	(7)
10-13	0.00	2.27	16%	(5)
13-16	0.00	2.80	8%	(5)
16-19	0.00	1.65	15%	(4)
19-20	0.00	0.34	22%	(4)

SPECIAL LOADING

Location mm	Source	G kN	Q kN	S kN
100.0	S4	0.05	0.22	0.00
355.0	J3	0.07	0.35	0.00
755.0	J3	0.07	0.35	0.00

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	5%
LC2	(G+Q)	10%
LC3	(1.2G+1.5Q)	14%
LC4-LC8	(1.2G+1.5P)	28%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.09	11	Span/360,12.0	3.07	3%
LC2	0.16	11	Span/240,12.0	4.60	4%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

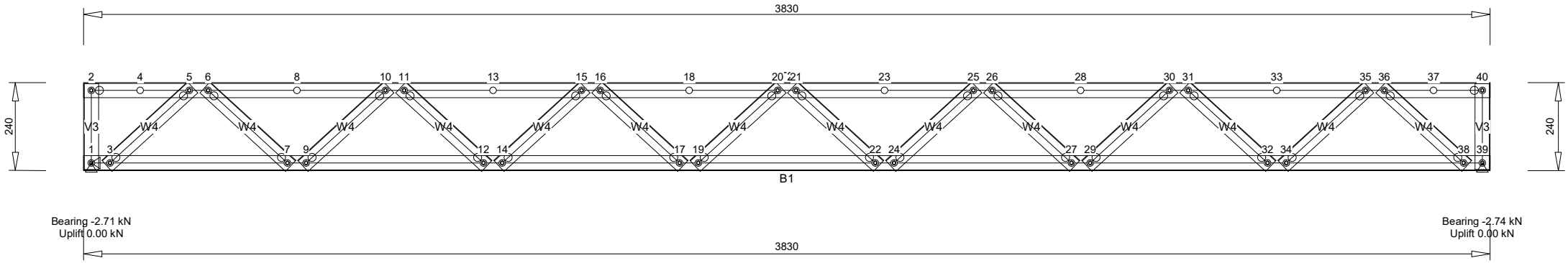
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	200	Floor Usage:	Joist Beam	Bottom Chord Dead Load (kPa) :	0.14
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.60	Ground Snow Load (kPa) :	0.00	Top Chord Live Load (kPa) :	1.50
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00	Design Point Load (kN) :	1.8

B1	89S41-095-550	7	3830	T2	89S41-095-550	7	3830	V3	89S41-095-550	14	235	W4	89S41-095-550	98	317
Assembly Weight		18.0kg		FRAMECAD 10g-16mm Flathead		448		FRAMECAD 10g-19mm XDrive		448					

FRAMECAD



Beam Type WJ89095H Mark as J1 Quantity Required = 7 Engineering Status = 39%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.23	16%	(10)
3-5	-4.42	0.00	17%	(10)
6-7	0.00	2.80	5%	(3)
9-10	-2.71	0.00	10%	(3)
11-12	0.00	1.96	3%	(8)
14-15	-1.75	0.11	7%	(8)
16-17	-0.50	1.37	2%	(7)
19-20	-1.17	0.70	4%	(7)
21-22	-1.08	0.78	4%	(7)
24-25	-0.58	1.28	2%	(7)
26-27	-1.67	0.19	6%	(6)
29-30	0.00	1.88	3%	(6)
31-32	-2.72	0.00	10%	(3)
34-35	0.00	2.82	5%	(3)
36-38	-4.14	0.00	16%	(4)
39-40	-0.01	0.14	17%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.57	0.00	22%	(10)
5-10	-5.04	0.00	21%	(10)
10-15	-8.32	0.00	31%	(3)
15-20	-9.96	0.00	37%	(3)
20-25	-10.30	0.00	39%	(3)
25-30	-9.49	0.00	36%	(3)
30-35	-7.03	0.00	26%	(3)
35-40	-3.51	0.00	18%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.87	13%	(10)
7-12	0.00	7.07	22%	(2)
12-17	0.00	9.52	27%	(2)
17-22	0.00	10.33	28%	(2)
22-27	0.00	9.98	28%	(2)
27-32	0.00	8.34	23%	(2)
32-38	0.00	5.05	15%	(4)
38-39	0.00	0.47	31%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	18%
LC2	(G+Q)	28%
LC3	(1.2G+1.5Q)	39%
LC4-LC10	(1.2G+1.5P)	32%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	1.89	20	Span/360,12.0	10.5	18%
LC2	3.39	20	Span/240,12.0	12.0	28%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

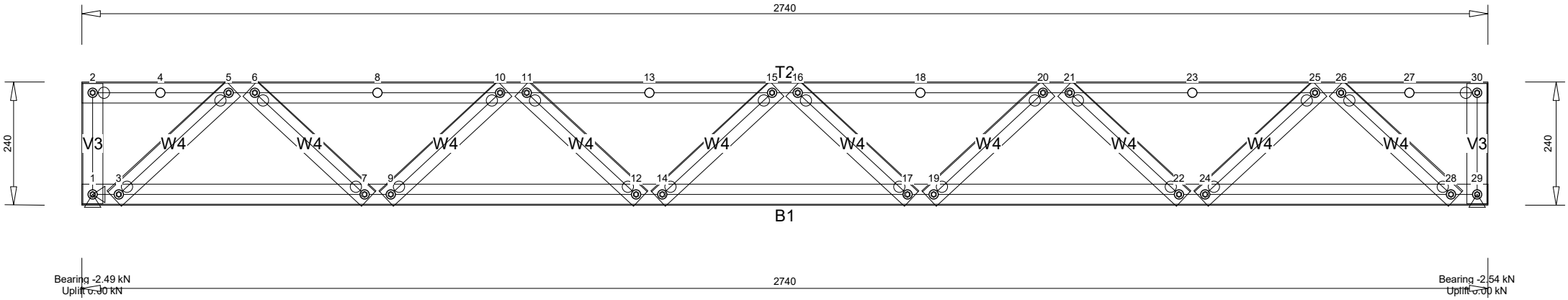
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	1.50
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	2	2740	T2	89S41-095-550	2	2740	V3	89S41-095-550	4	235	W4	89S41-095-550	20	316
Assembly Weight		13.0kg		FRAMECAD 10g-16mm Flathead		96		FRAMECAD 10g-19mm XDrive		96					

FRAMECAD



Beam Type WJ89095H Mark as J2 Quantity Required = 2 Engineering Status = 28%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member where number of screw in a flange exceeds 2. or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.

Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing

Provide Intermediate Span Bracing at Maximum2.4 mcenters

Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)

' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	0.00	0.21	15%	(8)
3-5	-4.02	0.00	15%	(8)
6-7	0.00	2.04	3%	(7)
9-10	-1.88	0.00	7%	(7)
11-12	-0.36	1.36	2%	(6)
14-15	-1.15	0.57	4%	(6)
16-17	-1.08	0.64	4%	(6)
19-20	-0.43	1.29	2%	(6)
21-22	-1.81	0.09	7%	(5)
24-25	0.00	1.97	3%	(5)
26-28	-3.76	0.00	14%	(4)
29-30	-0.03	0.12	16%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.53	0.00	20%	(8)
5-10	-3.62	0.00	18%	(8)
10-15	-4.90	0.00	18%	(3)
15-20	-5.51	0.00	21%	(6)
20-25	-4.60	0.00	17%	(5)
25-30	-3.18	0.00	13%	(3)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	3.51	11%	(8)
7-12	0.00	4.70	13%	(7)
12-17	0.00	5.53	13%	(6)
17-22	0.00	4.91	13%	(5)
22-28	0.00	3.29	13%	(4)
28-29	0.00	0.44	28%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	8%
LC2	(G+Q)	14%
LC3	(1.2G+1.5Q)	20%
LC4-LC8	(1.2G+1.5P)	28%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.53	15	Span/360,12.0	7.5	7%
LC2	0.95	15	Span/240,12.0	11.2	8%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides, Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

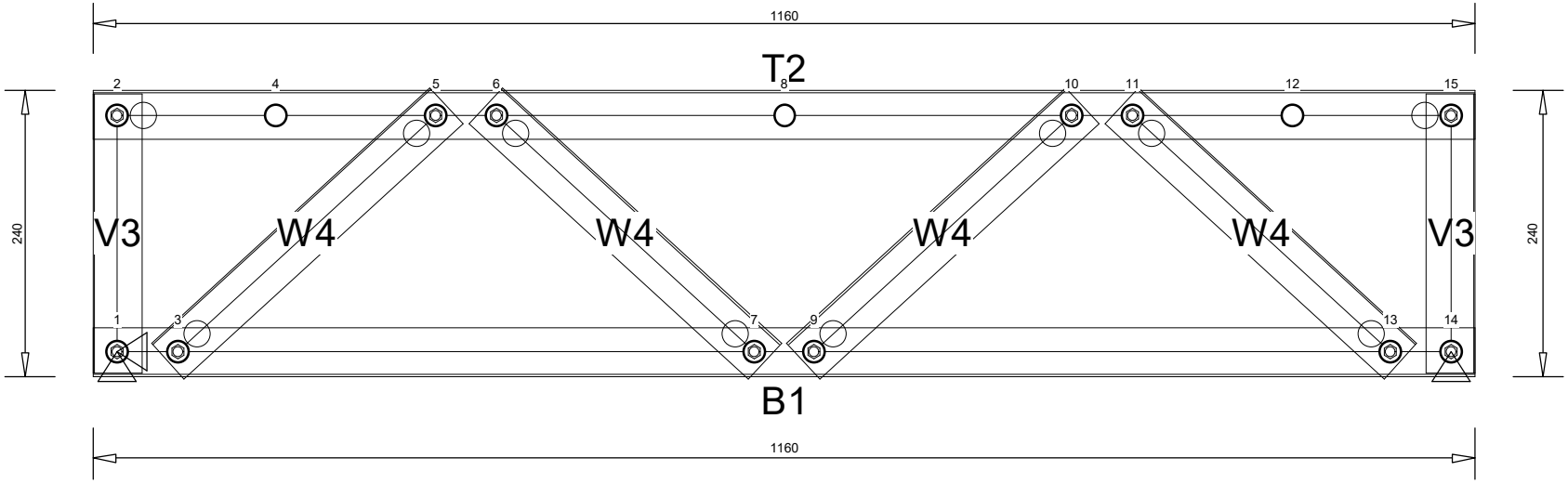
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist	Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00			Top Chord Live Load (kPa) :	1.50
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00			Design Point Load (kN) :	1.8

B1	89S41-095-550	2	1160	T2	89S41-095-550	2	1160	V3	89S41-095-550	4	235	W4	89S41-095-550	8	317
Assembly Weight		5.8kg		FRAMECAD 10g-16mm Flathead		48		FRAMECAD 10g-19mm XDrive		48					

FRAMECAD



Beam Type WJ89095H Mark as J3 Quantity Required = 2 Engineering Status = 26%

Minimum number of fasteners required is 4 (per joint)

FLOOR NOTES:1.Joists and Bearers NOT designed for any applied wall loads. 2.Engineer to specify any strengthening required to transfer loads from walls above..

LOADS & DESIGN FACTORS

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Floor Live Load
P	Concentrated Live

FASTENERS

Type:	Name	Min.Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	2/Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Intermediate Span Bracing at Maximum2.4 mcenters
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.0	Panel	1.0	Rest.	1.0	Panel
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-0.09	0.15	11%	(5)
3-5	-2.98	0.00	11%	(5)
6-7	-0.87	1.06	3%	(5)
9-10	-0.87	1.04	3%	(4)
11-13	-2.80	0.00	11%	(4)
14-15	-0.09	0.08	13%	(4)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-5	-0.40	0.00	15%	(5)
5-10	-2.59	0.00	12%	(5)
10-15	-2.43	0.00	9%	(4)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-7	0.00	2.60	26%	(5)
7-13	0.00	2.43	8%	(4)
13-14	0.00	0.37	1%	(4)

SPECIAL LOADING

Location	Source	G	Q	S
mm		kN	kN	kN

DESIGN LOAD COMBINATIONS

LC1	(G+0.4Q)	3%
LC2	(G+Q)	5%
LC3	(1.2G+1.5Q)	7%
LC4	(1.2G+1.5P)	13%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.06	8	Span/360,12.0	3.11	2%
LC2	0.11	8	Span/240,12.0	4.66	2%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Member:Provide 2 fasteners at each end & each crossing member and at maximum300mm(12") centres along member length.

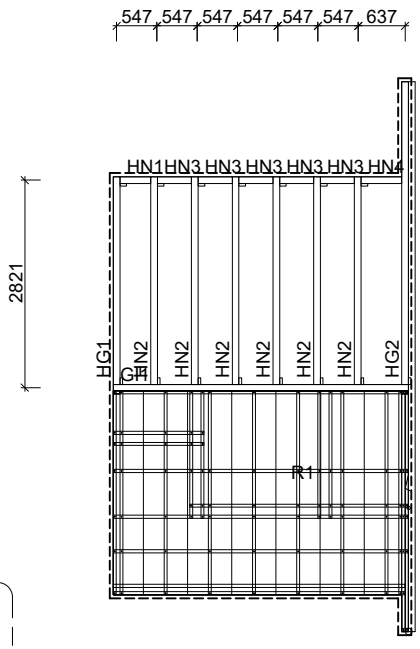
Plate:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

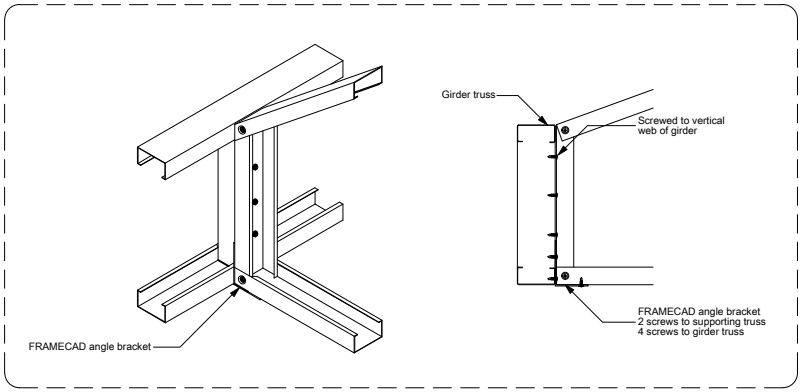
Node: Plate:

System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	300	Joist Spacing (mm) :	400	Floor Usage:	Joist
Loading Code:	NASH NZ 2010	Bottom Chord Restraint (mm) :	600	Add. supported Area (m²) :	0.00	Ground Snow Load (kPa) :	0.00
Design Code:	AS/NZS 4600:2018					Factored Drag Load (kN/m) :	0.00

Bottom Chord Dead Load (kPa) :	0.14	Top Chord Dead Load (kPa) :	0.32
		Top Chord Live Load (kPa) :	1.50
		Design Point Load (kN) :	1.8

Truss Design Summary	
System Name	FC_SFSNZ
Design Code	AS/NZS 4600:2018
Loading Code	NASH NZ 2010
Roof Load	SHEET
Wind Speed	LOW
Snow Load	0.00
Roof Pitch	3.000
Roof Pitch	0.000
BC Restraints	600





ROOF FRAMING LAYOUT

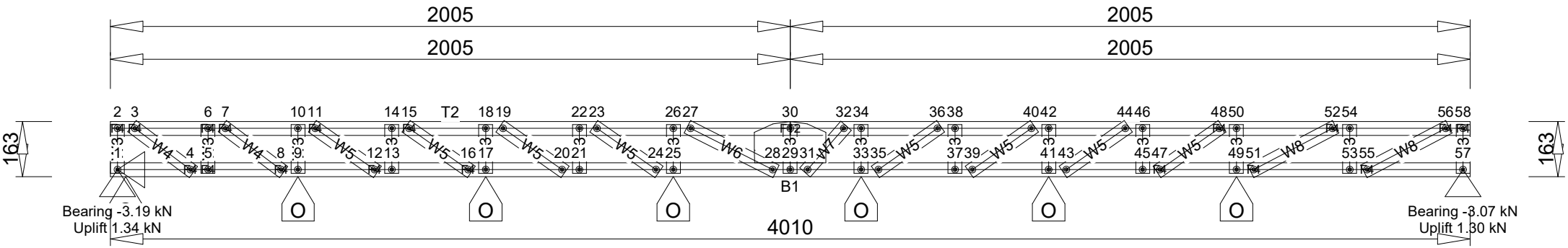
DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD	JOB DETAILS Unit 19 Type F 107 Blockhouse Bay Road	DRAWN Ralph Lao	DATE DRAWN 12-10-2021	SCALE 1 : 100	JOB REFERENCE	REVISION
		DWG FILE Unit 19 Bak	VIEW NAME 6 of 7	ON A4-Sheet		

B1	89S41-075-550	1 4010mm	T2	89S41-075-550	2 2004mm	W3	89S41-075-550	15 144mm	W4	89S41-075-550	2 226mm
W5	89S41-075-550	4 235mm	W6	89S41-075-550	1 293mm	W7	89S41-075-550	1 184mm	W8	89S41-075-550	2 284mm

Assembly Weight	15.5kg	FRAMECAD 10g-16mm Flathead	46	FRAMECAD 10g-19mm XDrive	116	FRAMECAD 1.15mm Apex/Heel Plate	2

FRAMECAD®



Quantity Required = 1 Mark as GI1 Engineering Status = Failed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors
SNOW Factors
No Snow Load Apply
Wind Pressure Factors

Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type:	Name	Qty
Main:	FRAMECAD 10g-19mm XDrive (SJ)	2
Sub:	FRAMECAD 10g-16mm Flathead(SJ)	Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-6	-6.44	2.70	61%	(5)
6-10	-12.70	5.33	78%	(5)
10-14	-17.58	7.38	108%	(5)
14-18	-21.77	9.14	134%	(5)
18-22	-24.50	10.29	150%	(5)
22-26	-26.50	11.12	163%	(5)
26-30	-27.55	11.56	169%	(5)
30-32	-27.55	11.56	169%	(5)
32-36	-27.09	11.37	166%	(5)
36-40	-25.45	10.69	156%	(5)
40-44	-23.18	9.73	142%	(5)
44-48	-19.46	8.18	119%	(5)
48-52	-15.05	6.32	92%	(5)
52-56	-7.75	3.26	63%	(5)
56-58	0.00	0.00	36%	(5)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-4	0.00	0.00	22%	(5)
4-8	-2.70	6.44	64%	(5)
8-12	-5.33	12.70	56%	(5)
12-16	-7.38	17.58	72%	(2)
16-20	-9.14	21.77	84%	(2)
20-24	-10.29	24.50	93%	(2)
24-28	-11.12	26.50	97%	(2)
28-31	-11.56	27.55	97%	(2)
31-33	-11.37	27.09	97%	(2)
33-37	-11.37	27.09	96%	(2)
37-41	-10.69	25.45	90%	(2)
41-45	-9.73	23.18	80%	(2)
45-49	-8.18	19.46	67%	(2)
49-53	-6.32	15.05	57%	(5)
53-57	-3.26	7.75	29%	(5)

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-3.56	1.52	22%	(5)
3-4	-3.37	8.02	21%	(6)
5-6	-5.28	2.26	32%	(5)
7-8	-3.27	7.80	20%	(6)
9-10	-3.68	1.60	23%	(5)
11-12	-2.50	5.96	15%	(6)
13-14	-3.18	1.38	19%	(5)
15-16	-2.14	5.11	13%	(6)
17-18	-2.14	0.95	13%	(4)
19-20	-1.40	3.33	9%	(6)
21-22	-1.67	0.74	10%	(4)
23-24	-1.02	2.44	6%	(6)
25-26	-0.66	0.32	4%	(4)
27-28	-0.49	1.18	3%	(6)
29-30	-0.57	0.27	3%	(4)
31-32	-0.29	0.70	2%	(6)
33-34	-0.50	0.25	3%	(4)
35-36	-0.83	2.00	5%	(6)
37-38	-1.38	0.62	8%	(4)
39-40	-1.16	2.77	7%	(6)
41-42	-1.81	0.81	11%	(4)
43-44	-1.90	4.54	12%	(6)
45-46	-2.86	1.25	18%	(5)
47-48	-2.26	5.38	14%	(6)
49-50	-3.13	1.37	19%	(5)
51-52	-3.46	8.26	21%	(6)
53-54	-4.35	1.89	27%	(5)

Warning: the table size is not big enough!

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	66%
LC2	(G)	97%
LC3	(max(1.0Q,0.7S))	77%
LC4	(1.2G+1.5Q)	167%
LC5	(1.2G+Wd)	169%
LC6	(0.9G+Wu)	71%
LC7	(1.2G+1.0S)	84%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	9.9	29	Span/250,15.0	15.0	65.7%
LC2	11.7	29	Span/300,12.0	12.0	97.2%
LC3	9.2	29	Span/300,12.0	12.0	76.9%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.

Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

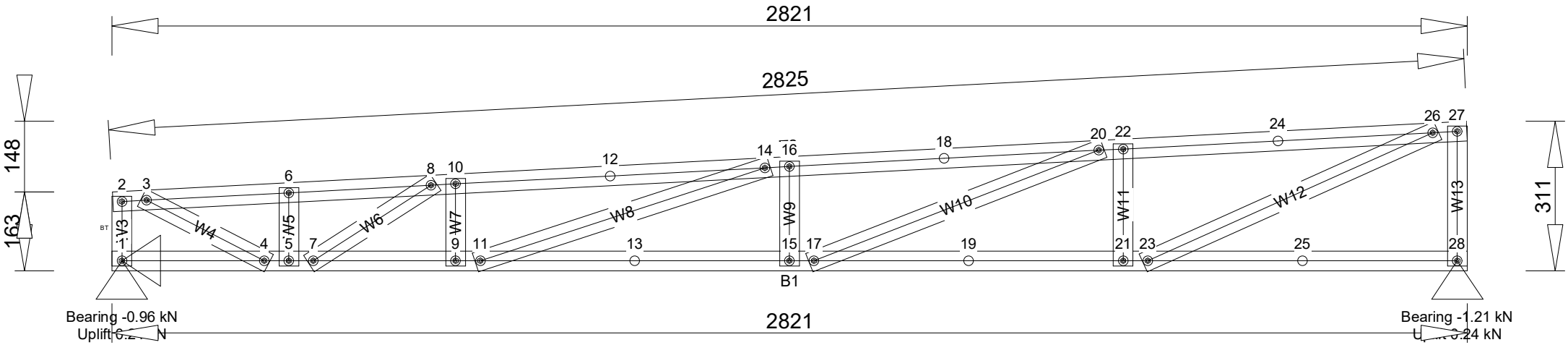
Node:	Plate:
30	FRAMECAD 1.15mm Apex/Heel Plate

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	900	Roof Load Type:	SHEET
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	6.7	Ground Snow Load (kPa):	0.00
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW

Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12		
Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25		
Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10		

B1	89S41-075-550	6 2821mm	T2	89S41-075-550	6 2821mm	W3	89S41-075-550	6 145mm	W4	89S41-075-550	6 297mm	W5	89S41-075-550	6 163mm
W6	89S41-075-550	6 313mm	W7	89S41-075-550	6 182mm	W8	89S41-075-550	6 645mm	W9	89S41-075-550	6 218mm	W10	89S41-075-550	6 657mm
W11	89S41-075-550	6 254mm	W12	89S41-075-550	6 672mm	W13	89S41-075-550	6 291mm						
Assembly Weight	10.8kg		FRAMECAD 10g-19mm XDrive	264										

FRAMECAD



Quantity Required = 6 Mark as HN2 Engineering Status = Passed

Minimum number of fasteners required is 2 per joint

LOADS & DESIGN FACTORS

WIND Factors	
SNOW Factors	
No Snow Load Apply	
Wind Pressure Factors	
Wup Bottom Chord	0.2
Wup Top Chord	0.9
Wdown Bottom Chord	0.3
Wdown Top Chord	0.4

DESIGN LOADING

Load Cases:	Type
G	Gravity(Dead)
Q	Roof Live
P	Concentrated Live
S	Snow
Wu	Wind Up
Wd	Wind Down

FASTENERS

Type: Name Qty
Main: FRAMECAD 10g-19mm XDrive (SJ) 2
Sub: FRAMECAD 10g-16mm Flathead(SJ) Refer DWG

F# denotes total number fasteners in each member at joint.

Provide plate or reinforcing member
where number of screw in a flange exceeds 2.
or where screw spacing requirement can not be met.

Min Screws Spacing: 3 x Diameter.
Min Edge Distance: 2.2d for End Edge, or 1.5d for Side Edge.

BRACING

Provide Chord Restraints at specified spacing
Provide Rail Restraints at ends & over supports
Roof System Bracing to be Specified by Engineer
Member Effective Lengths for Design

Type	Kx	Lx	Ky	Ly	Kt	Lt
Chords	1.00	Panel	1.00	Rest.	1.00	Min(Lx,Ly)
Web	1.0	Panel	1.0	Panel	1.0	Panel

' Panel 'denotes distance between panel points (joints)
' Rest. 'denotes lateral restraint spacing

MAXIMUM MEMBER AXIAL FORCES AND CRITICAL STRUCTURAL DESIGN INDEX

(All member actions are factored as per specified load combination)

Top Chord

Member	Com. kN	Ten. kN	CSI	LC
2-6	-2.19	0.51	19%	(11)
6-8	-2.19	0.51	21%	(11)
8-14	-3.91	0.78	51%	(11)
14-20	-3.93	0.86	51%	(12)
20-26	-2.67	0.55	47%	(13)
26-27	-0.01	0.06	13%	(13)

Bottom Chord

Member	Com. kN	Ten. kN	CSI	LC
1-4	-0.04	0.02	12%	(11)
4-7	-0.55	2.20	12%	(11)
7-9	-0.80	3.85	23%	(11)
9-15	-0.88	3.89	40%	(8)
15-21	-0.88	3.89	37%	(9)
21-28	-0.55	2.66	31%	(10)

Web

Member	Com. kN	Ten. kN	CSI	LC
1-2	-1.10	0.27	7%	(11)
3-4	-0.57	2.47	6%	(11)
5-6	-0.18	0.10	1%	(4)
7-8	-2.03	0.31	12%	(8)
9-10	-0.07	0.91	2%	(8)
11-14	-1.34	0.08	8%	(9)
15-16	-0.68	0.24	4%	(11)
17-20	-0.35	2.20	5%	(11)
21-22	-1.13	0.27	7%	(12)
23-26	-0.60	2.92	7%	(12)
27-28	-1.18	0.26	7%	(13)

SPECIAL LOADING

No Point Load Applied

DESIGN LOAD COMBINATIONS

LC1	(0.44Wu)	5%
LC2	(G)	5%
LC3	(max(1.0Q,0.7S))	4%
LC4	(1.2G+1.5Q)	13%
LC5	(1.2G+Wd)	13%
LC6	(0.9G+Wu)	7%
LC7	(1.2G+1.0S)	7%
LC8-LC13	(1.2G+1.5P)	51%

DEFLECTION

LC	Max mm	Node ID	Criteria mm	Critical mm	CSI
LC1	0.34	15	Span/250,15.0	11.1	3.0%
LC2	0.41	13	Span/300,12.0	9.3	4.5%
LC3	0.34	12	Span/300,20.0	9.3	3.7%

REINFORCING PLATES & MEMBERS

Notes: Plates Fixed on Both Sides,
Reinforcing Chord member may Substitute Plate.

Fasteners: FRAMECAD 10-g 16m Flathead

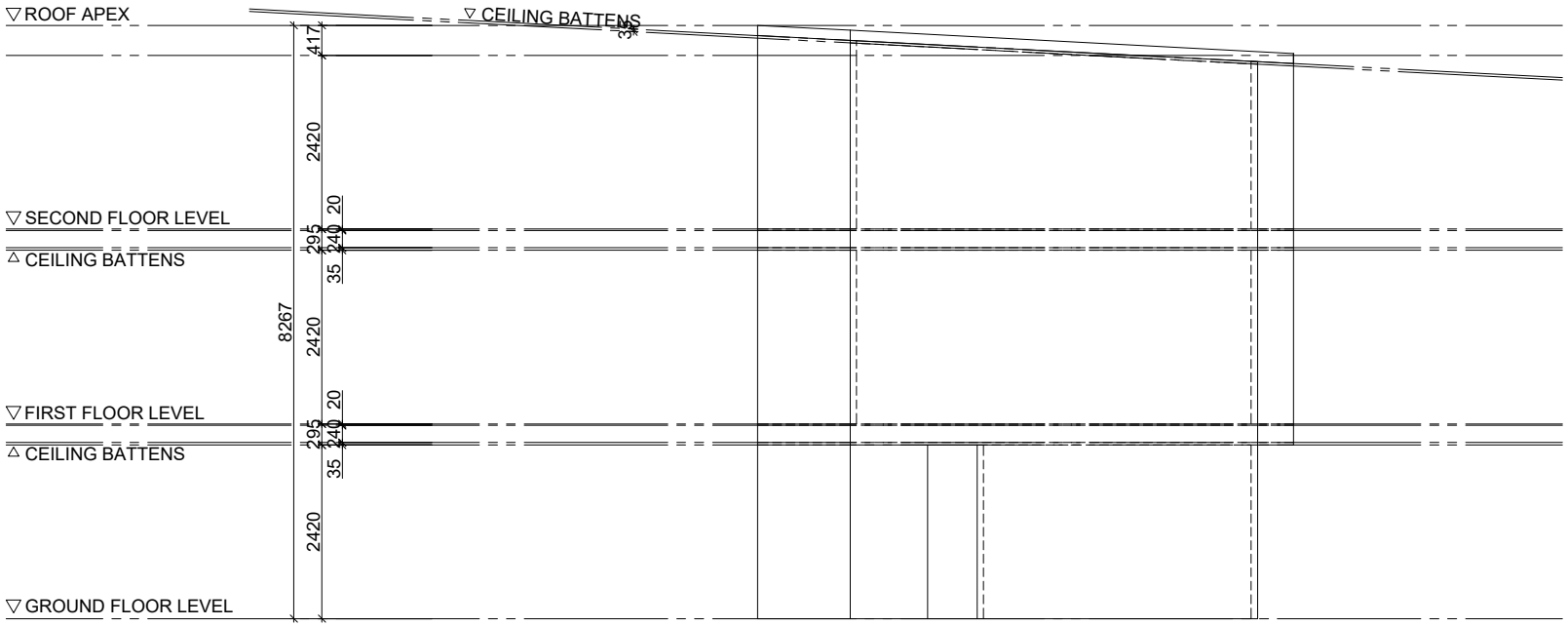
Members:Provide 2 fasteners at each end & each crossing member and at maximum 300mm(12") centres along member length.

Plates:Provide 2 fasteners at plate edges & each crossing member and at maximum 50mm(2") centres along member length.

Node: Plate:

Framing System Name:	FC_SFSNZ	Top Chord Restraint (mm) :	1200	Truss Spacing (mm) :	554	Roof Load Type:	SHEET
Loading Code:	NASH NZ 2010	Horizontal Chord Restraint (mm) :	N/A	Add. supported Area (m²) :	0.0	Ground Snow Load (kPa):	0.00
Design Code:	AS/NZS 4600:2018	Bottom Chord Restraint (mm) :	600	Shuttered Conditions:	No	Wind speed:	LOW

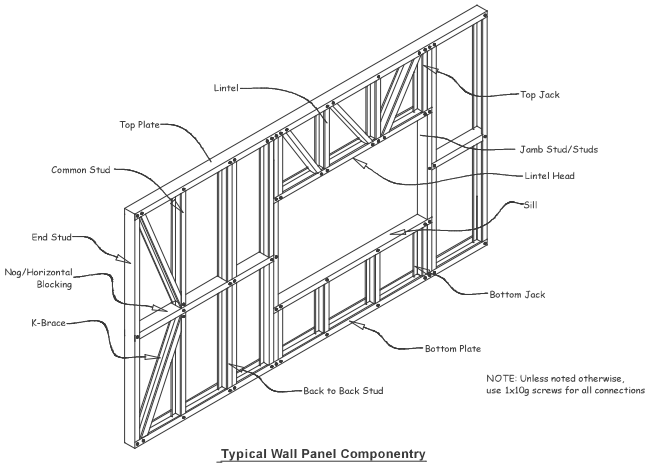
Bottom Chord Dead Load (kPa):	0.14	Top Chord Dead Load (kPa):	0.12		
Bottom Chord Live Load (kPa):	0.00	Top Chord Live Load (kPa):	0.25		
Bottom Chord Service Load (kPa):	0.00	Concentrated Live Load (kN) :	1.10		



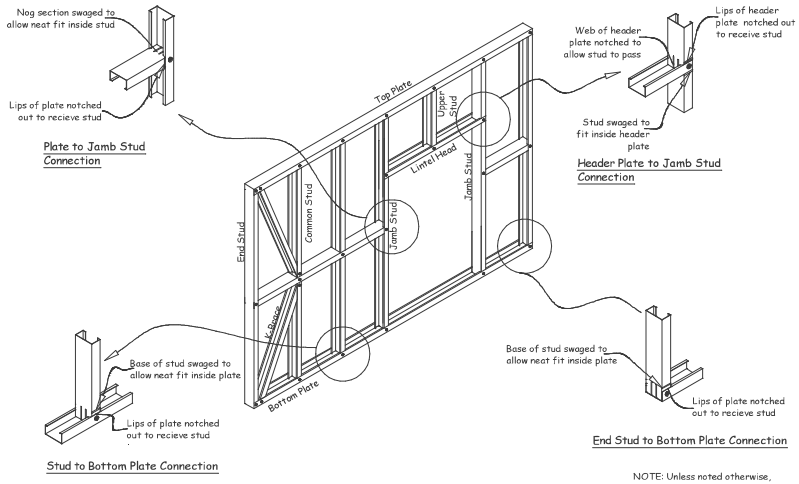
DO NOT SCALE.
IF IN DOUBT, ASK.

FRAMECAD®

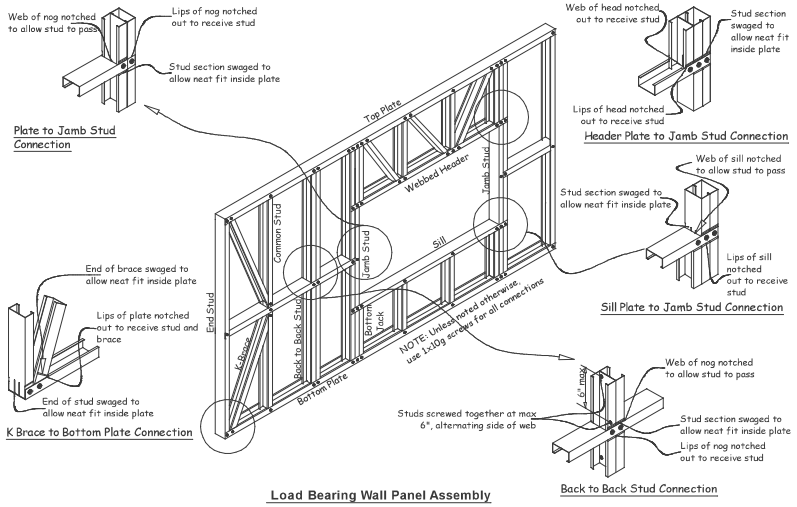
JOB DETAILS	DRAWN	DATE DRAWN	SCALE	JOB REFERENCE	REVISION
Unit 19 Type F 107 Blockhouse Bay Road	Ralph Lao	12-10-2021	1 : 100		
	DWG FILE Unit 19 Bak	VIEW NAME 7 of 7	ON A4-Sheet		



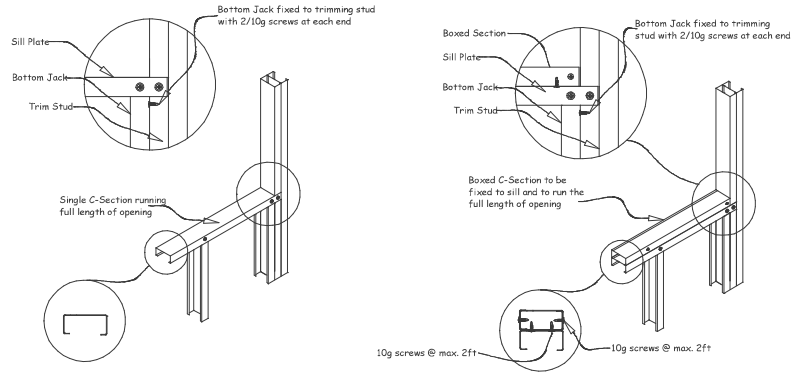
Typical Wall Panel Componentry



Non-Load Bearing Wall Panel Assembly



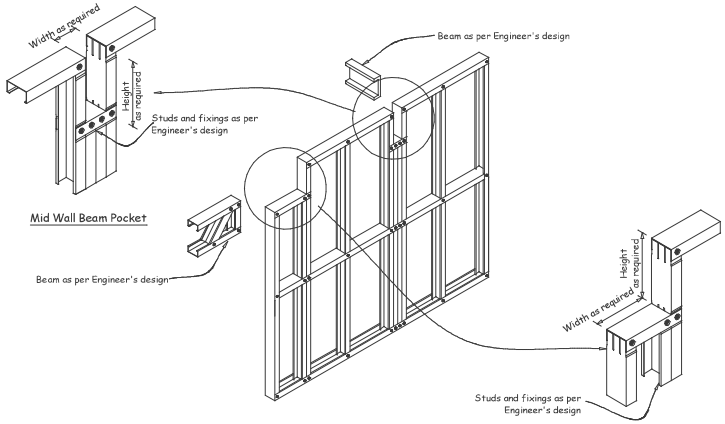
Load Bearing Wall Panel Assembly



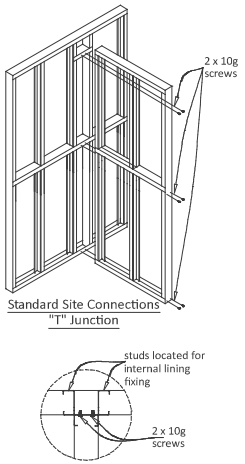
Window Sill Framing

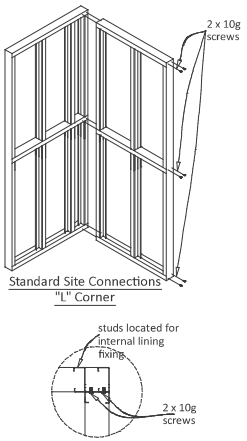
FRAMECAD

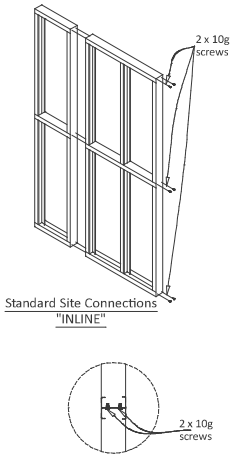
STEEL FRAME SOLUTIONS	108B HARRIS RD EAST TAMAKI AUCKLAND WWW.STEELFRAMESOLUTIONS.CO.NZ	JOB DETAILS TYPICAL CONNECTION DETAILS		DRAWN John Varela	DATE DRAWN 25-09-2020	SCALE 1 : 50	JOB REFERENCE	REVISION
				DWG FILE Connection details-Rev	VIEW NAME 1 of 5	ON A3-Sheet		



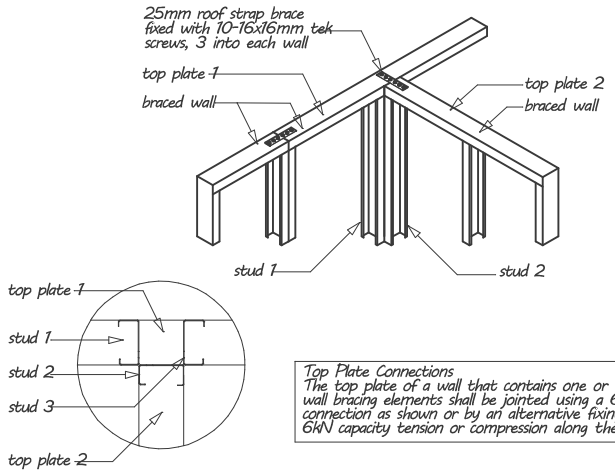
Beam Pocket Framing



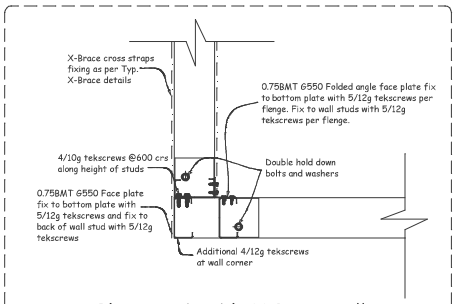




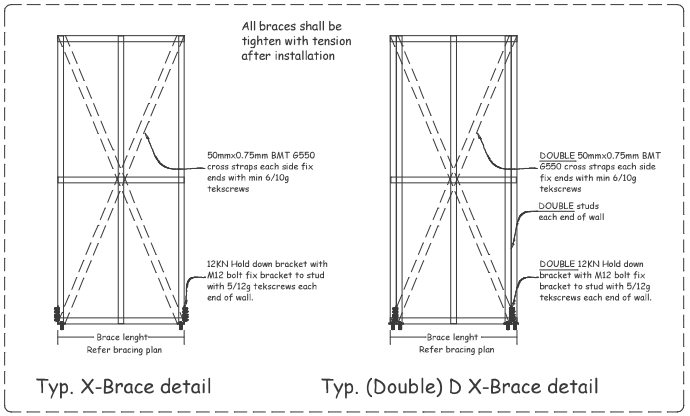
Minimum Wall to Wall Connection



Top Plate Connections
The top plate of a wall that contains one or more wall bracing elements shall be jointed using a 6kN connection as shown or by an alternative fixing of 6kN capacity tension or compression along the plate



Plan view Double X-Brace wall corner hod down arrangement

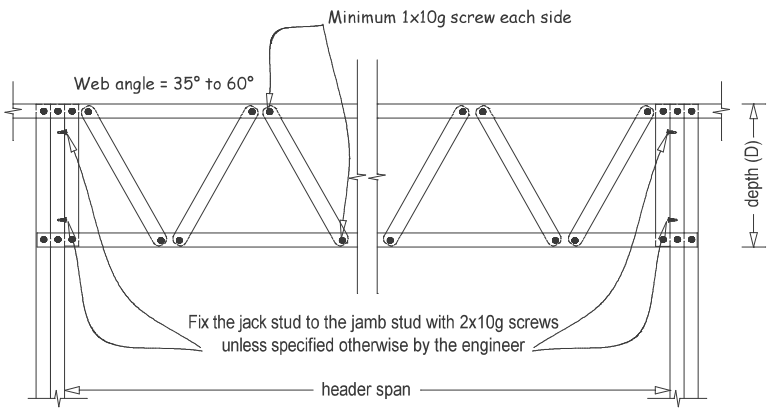


Typ. X-Brace detail

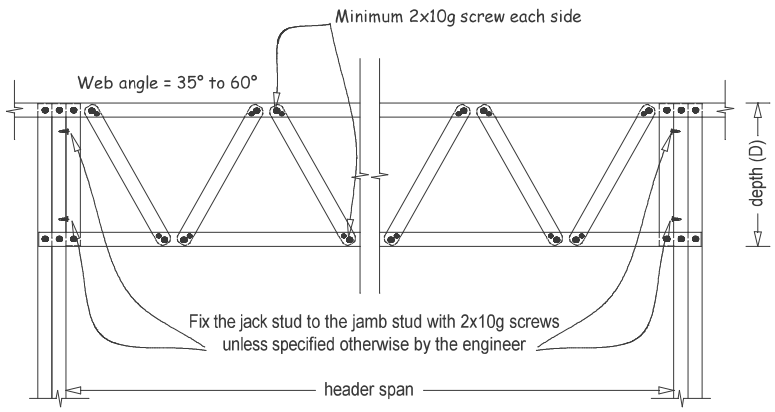
Typ. (Double) D X-Brace detail

FRAMECAD

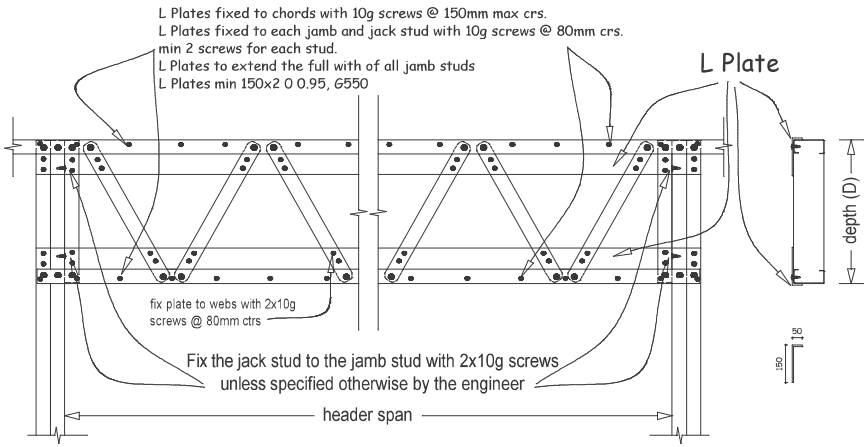
STEEL FRAME SOLUTIONS	108B HARRIS RD EAST TAMAKI AUCKLAND WWW.STEELFRAMESOLUTIONS.CO.NZ	JOB DETAILS TYPICAL CONNECTION DETAILS		DRAWN John Varela	DATE DRAWN 25-09-2020	SCALE 1 : 50	JOB REFERENCE	REVISION
				DWG FILE Connection details-Rev	VIEW NAME 2 of 5	ON A3-Sheet		



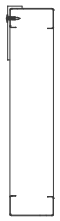
Type A lintels with single screw connection on each side



Type A lintels with double screw connection on each side



Type C lintels - with L plates on one side, top & bottom



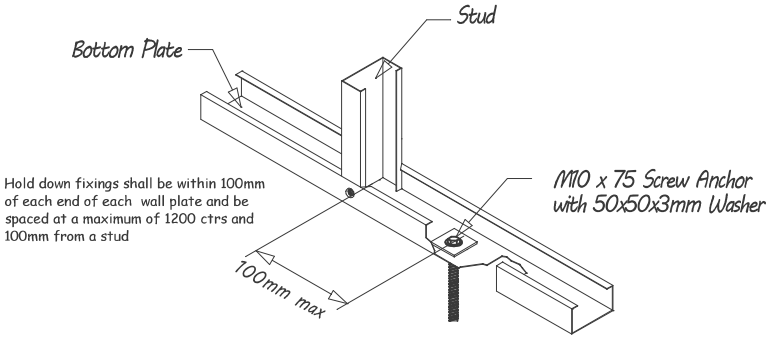
Type C1 lintels - with L plates on one side, top only

Type C2 lintels - with L plates on both sides, top only

Type C2 lintels - with L plates on both sides, top & bottom

FRAMECAD

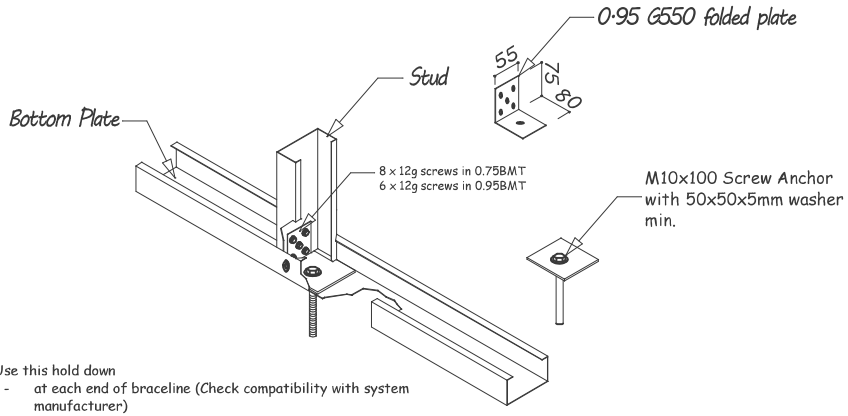
STEEL FRAME SOLUTIONS	108B HARRIS RD EAST TAMAKI AUCKLAND WWW.STEELFRAMESOLUTIONS.CO.NZ	JOB DETAILS TYPICAL CONNECTION DETAILS		DRAWN John Varela	DATE DRAWN 25-09-2020	SCALE 1 : 50	JOB REFERENCE	REVISION
				DWG FILE Connection details-Rev	VIEW NAME 3 of 5	ON A3-Sheet		



Hold down fixings shall be within 100mm of each end of each wall plate and be spaced at a maximum of 1200 ctrs and 100mm from a stud

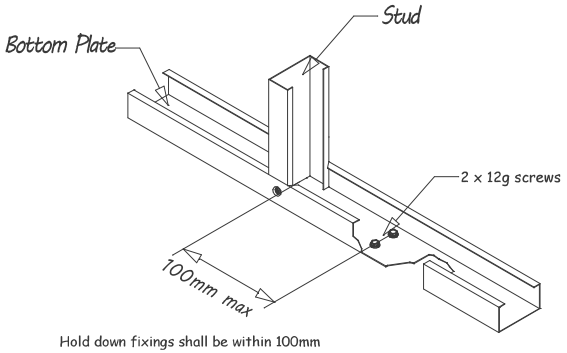
Use this hold down
- at each location unless specified otherwise
- 1 tie down to each stud at each side of beam pockets

Type D Tie Down



Use this hold down
- at each end of braceline (Check compatibility with system manufacturer)
- jamb studs
- at each end of standard K brace (2 screws at each end)

Type E Tie Down

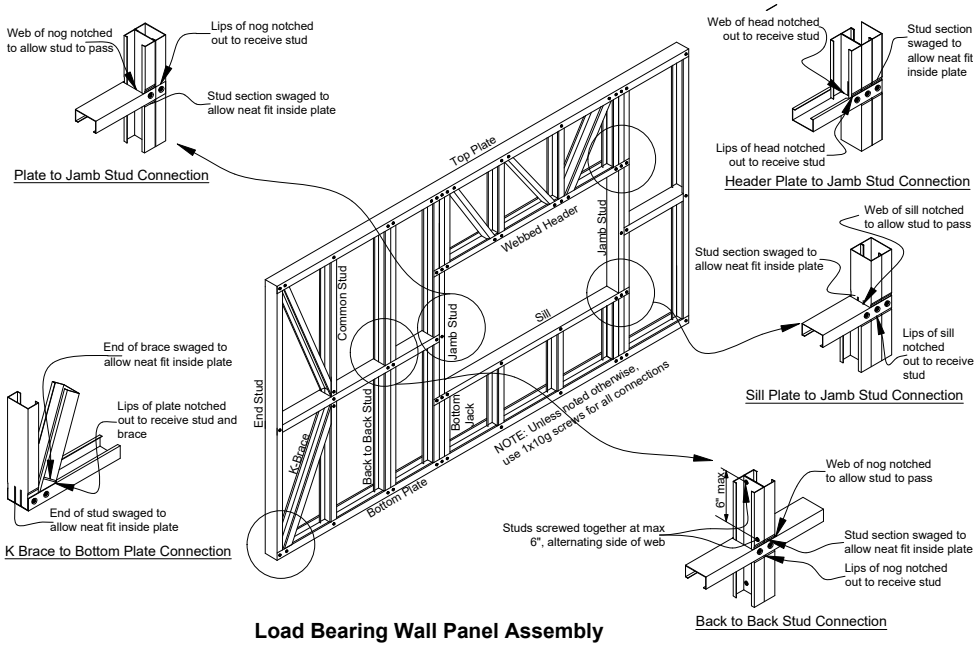


Hold down fixings shall be within 100mm of each end of each wall plate and be spaced at a maximum of 1200 ctrs and 100mm from a stud

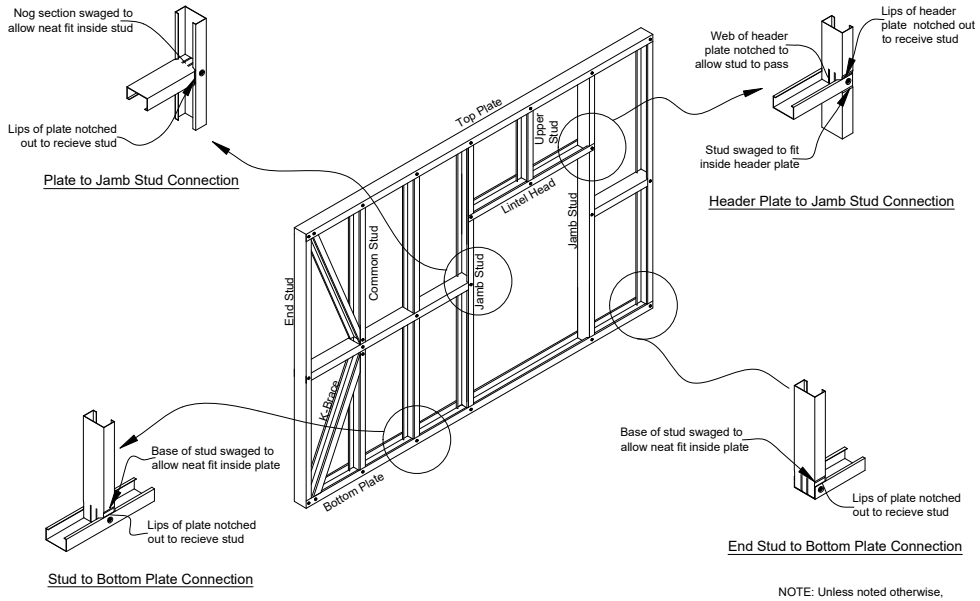
Non Load Bearing Wall Hold Down

FRAMECAD

	108B HARRIS RD EAST TAMAKI AUCKLAND WWW.STEELFRAMESOLUTIONS.CO.NZ	JOB DETAILS TYPICAL CONNECTION DETAILS		DRAWN John Varela	DATE DRAWN 25-09-2020	SCALE 1 : 50	JOB REFERENCE	REVISION
				DWG FILE Connection details-Rev	VIEW NAME 4 of 5	ON A3-Sheet		

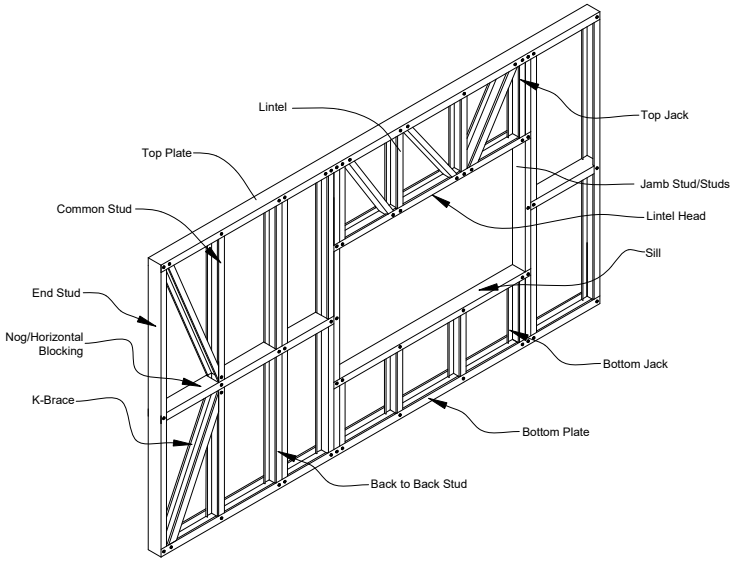


Load Bearing Wall Panel Assembly

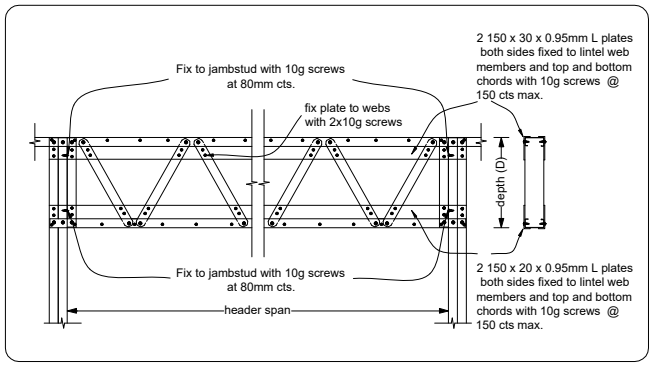


Non-Load Bearing Wall Panel Assembly

NOTE: Unless noted otherwise, use 1x10g screws for all connections

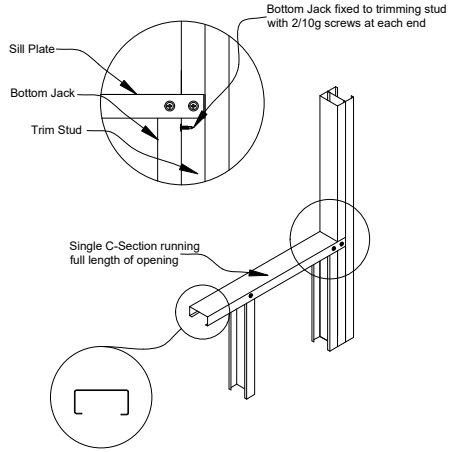


Typical Wall Panel Componentry

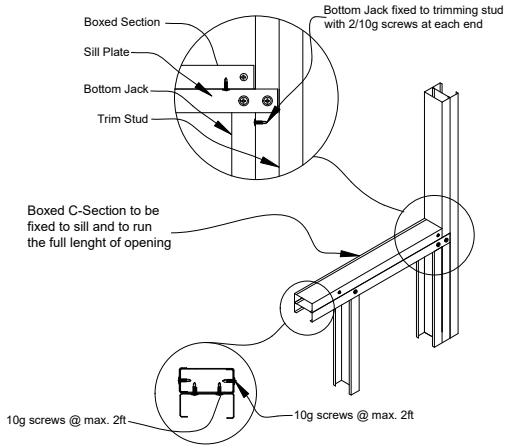


FRAMECAD

C:\Users\OEM\Desktop\SFS\LOGOS\final sfshf.JPG	108B HARRIS RD EAST TAMAKI AUCKLAND WWW.STEELFRAMESOLUTIONS.CO.NZ	JOB DETAILS Steel Frame Connection Details	TYPICAL WALL FRAME DETAILS	DRAWN Nilo	DATE DRAWN 05-10-2021	SCALE 1 : 100	JOB REFERENCE 00	REVISION
				DWG FILE Other Connection Details	VIEW NAME 1 of 6	ON A4-Sheet		

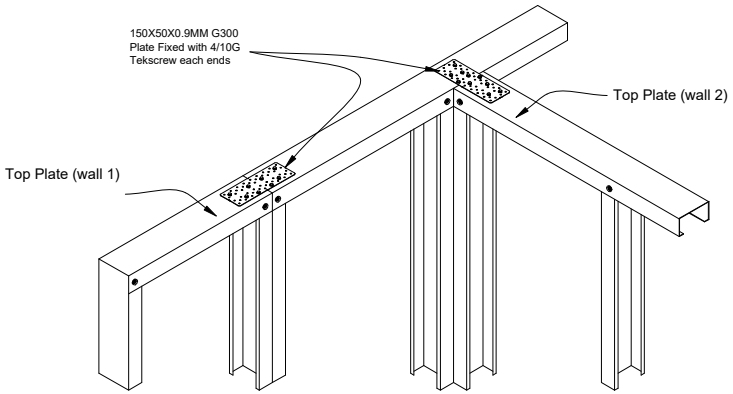


Openings with Standard Sill

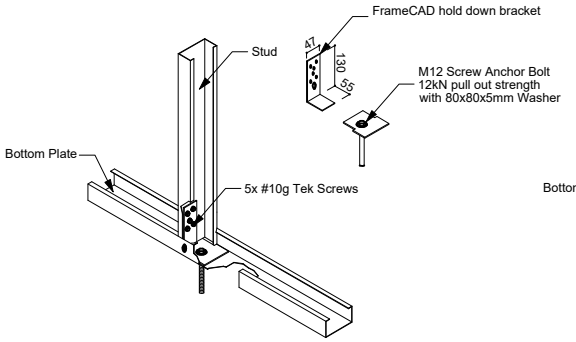


Openings with Boxed Sill

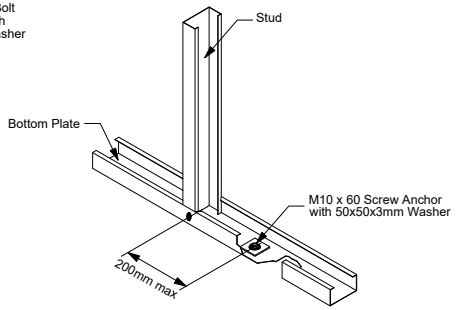
Window Sill Framing



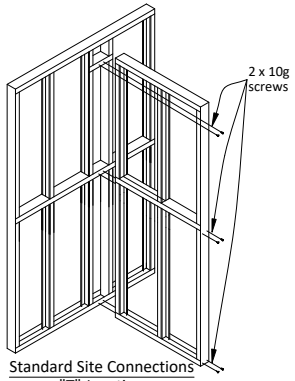
Bracing Wall Top Plate to Top Plate Connection



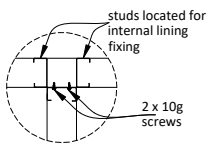
Type E concrete floor tie down
(12kN Bracing Hold Down)

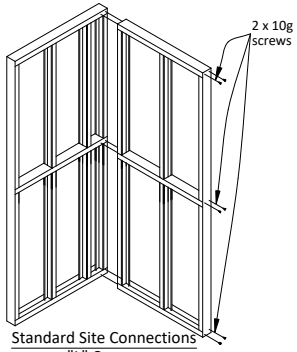


Type D Standard concrete slab tie down

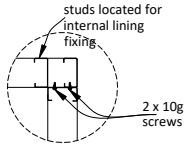


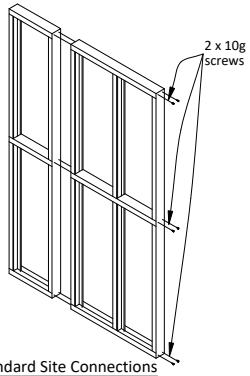
Standard Site Connections
"T" Junction



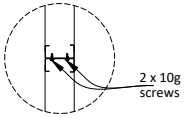


Standard Site Connections
"L" Corner





Standard Site Connections
"INLINE"

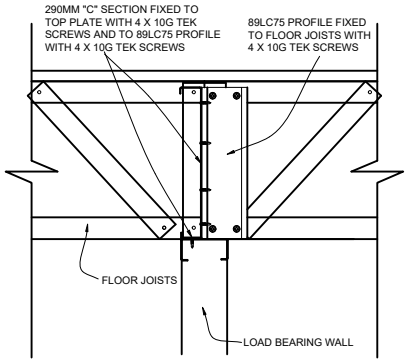


General Wall to Wall Connection

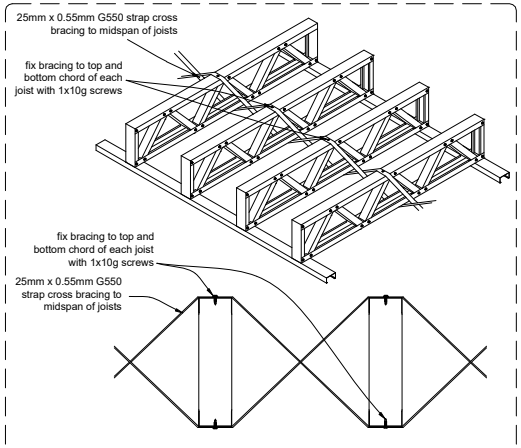
FRAMECAD

TYPE C

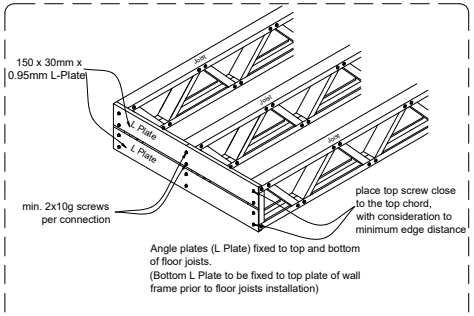
C:\Users\OEM\Desktop\SFS\LOGOS\final sfshf.JPG	108B HARRIS RD EAST TAMAKI AUCKLAND WWW.STEELFRAMESOLUTIONS.CO.NZ	JOB DETAILS Steel Frame Connection Details	TYPICAL WALL FRAME DETAILS	DRAWN Nilo	DATE DRAWN 05-10-2021	SCALE 1 : 100	JOB REFERENCE 00	REVISION
				DWG FILE Other Connection Details	VIEW NAME 2 of 6	ON A4-Sheet		



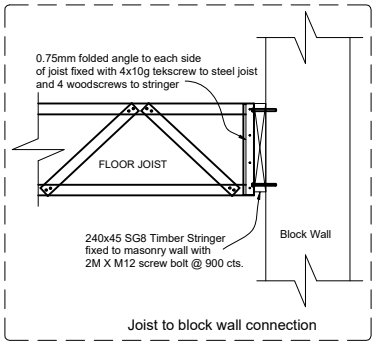
Blocking connection detail
Load Bearing Wall



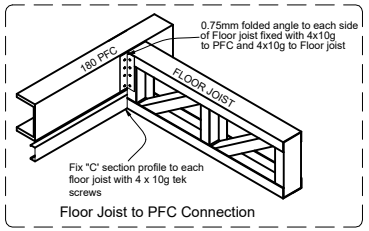
Webbed Joists with Steel Strap Blocking



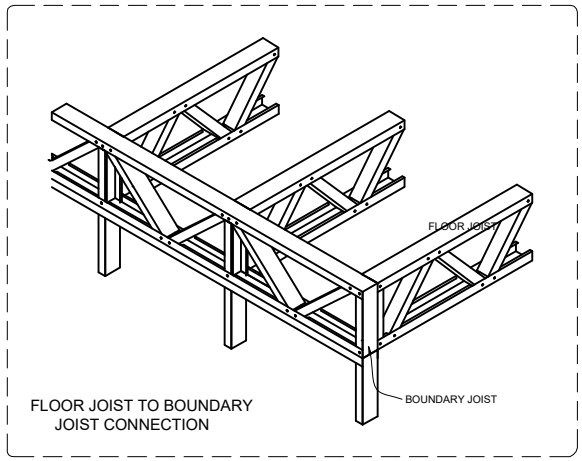
Webbed Joists with double L Plate
End Bracing



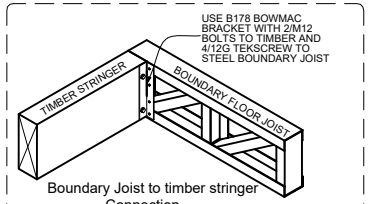
Joist to block wall connection



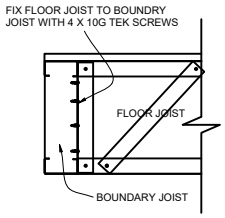
Floor Joist to PFC Connection



FLOOR JOIST TO BOUNDARY
JOIST CONNECTION

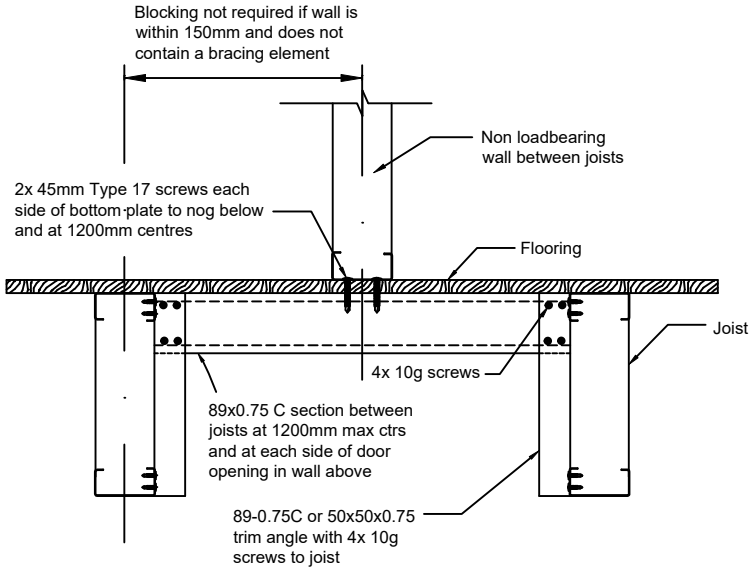


Boundary Joist to timber stringer
Connection

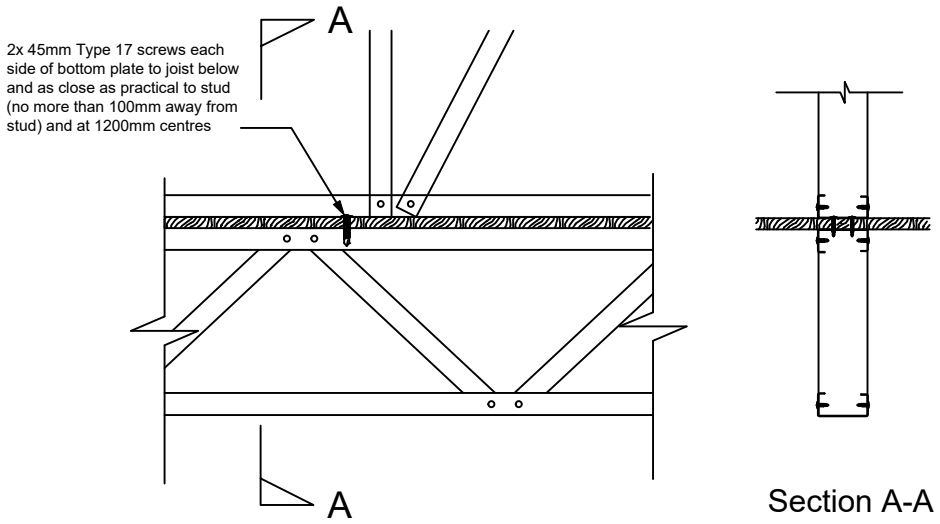


FRAMECAD

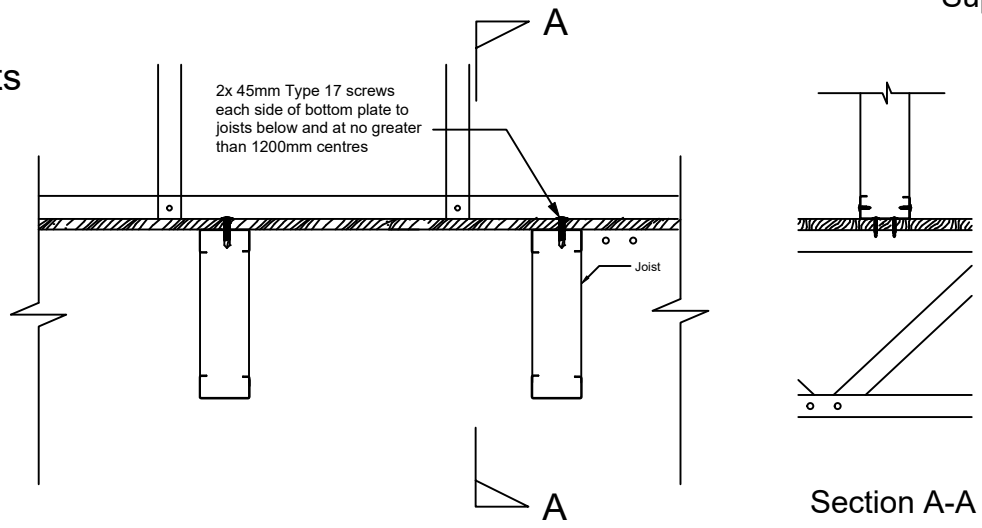
C:\Users\OEM\Desktop\SFS\LOGOS\final sfshf.JPG	108B HARRIS RD EAST TAMAKI AUCKLAND WWW.STEELFRAMESOLUTIONS.CO.NZ	JOB DETAILS Steel Frame Connection Details	FLOOR JOIST CONNECTION DETAILS	DRAWN Nilo	DATE DRAWN 05-10-2021	SCALE 1 : 100	JOB REFERENCE 00	REVISION
				DWG FILE Other Connection Details	VIEW NAME 3 of 6	ON A4-Sheet		



Non Loadbearing Wall Supported Between Joists



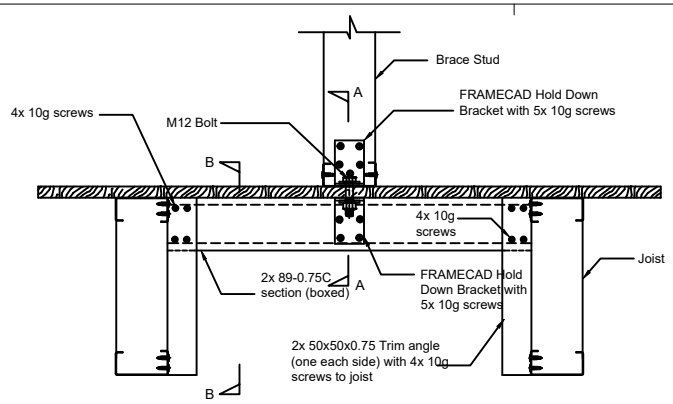
Non Loadbearing Wall Supported Along Joist

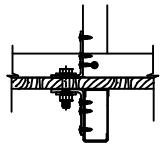


Non Loadbearing Wall Supported Across Joists

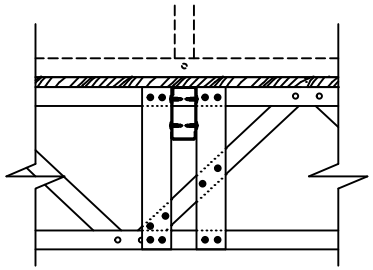
FRAMECAD

C:\Users\OEM\Desktop\SFS\LOGOS\final sfshf.JPG	108B HARRIS RD EAST TAMAKI AUCKLAND WWW.STEELFRAMESOLUTIONS.CO.NZ	JOB DETAILS Steel Frame Connection Details	FLOOR JOIST CONNECTION DETAILS	DRAWN Nilo	DATE DRAWN 05-10-2021	SCALE 1 : 100	JOB REFERENCE 00	REVISION
				DWG FILE Other Connection Details	VIEW NAME 4 of 6	ON A4-Sheet		



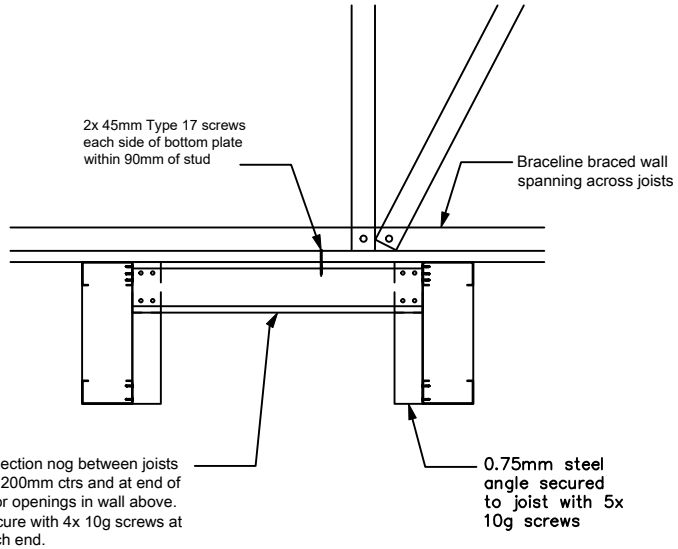


Section A-A

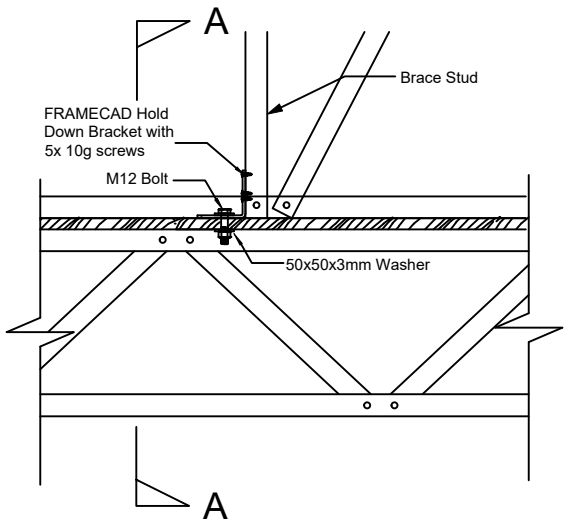


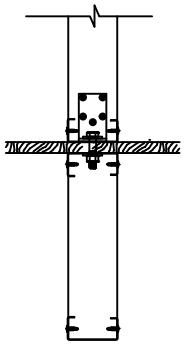
Section B-B

Internal Braced Wall Supported Between Joists (12kN Connector - Braceline Brace)



Internal Braced Wall Supported Across Joists (12kN Connector - Braceline Brace)



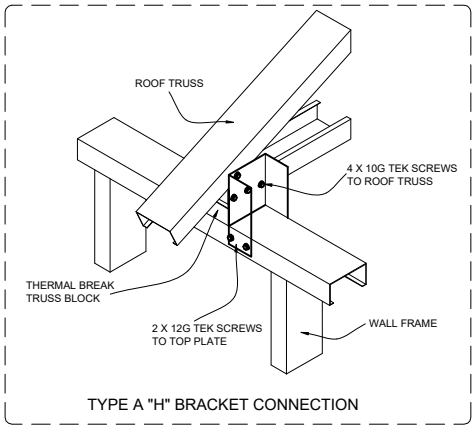


Section A-A

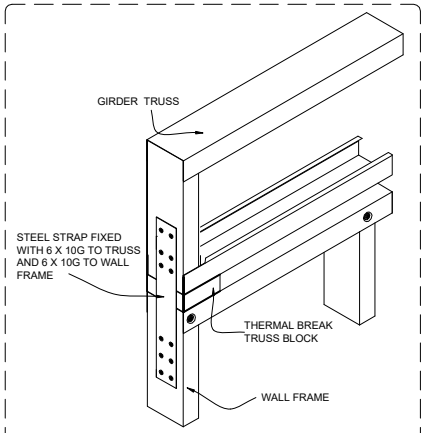
Braced Wall Supported Along Joist (8kN - 12kN Connection)

FRAMECAD

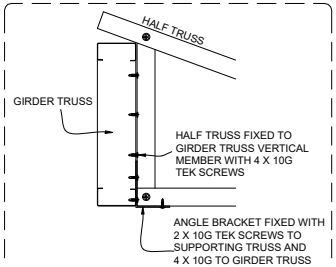
C:\Users\OEM\Desktop\SFS\LOGOS\final sfshf.JPG	108B HARRIS RD EAST TAMAKI AUCKLAND WWW.STEELFRAMESOLUTIONS.CO.NZ	JOB DETAILS Steel Frame Connection Details	FLOOR JOIST CONNECTION DETAILS	DRAWN Nilo	DATE DRAWN 05-10-2021	SCALE 1 : 100	JOB REFERENCE 00	REVISION
				DWG FILE Other Connection Details	VIEW NAME 5 of 6	ON A4-Sheet		



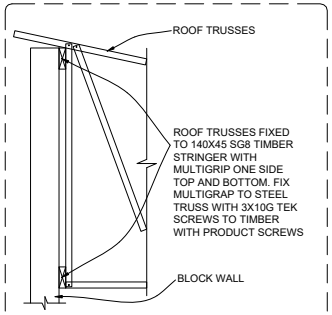
TYPE A "H" BRACKET CONNECTION



PARALLEL TRUSS CONNECTION



HALF TRUSS TO GIRDER TRUSS
CONNECTION



HALF TRUSS TO INTERTENANCY
WALL CONNECTION

FRAMECAD

C:\Users\OEM\Desktop\SFS\LOGOS\final sfshf.JPG	108B HARRIS RD EAST TAMAKI AUCKLAND WWW.STEELFRAMESOLUTIONS.CO.NZ	JOB DETAILS Steel Frame Connection Details	ROOF TRUSS CONNECTION DETAILS	DRAWN Nilo	DATE DRAWN 05-10-2021	SCALE 1 : 100	JOB REFERENCE 00	REVISION
				DWG FILE Other Connection Details	VIEW NAME 6 of 6	ON A4-Sheet		