emajineer
the possibilities are endless

Structural Concepts

Detailed Engineering Evaluation

Quantitative Report

Victoria Park Visitors Centre

Victoria Park Road, Christchurch

Prepared For

Christchurch City Council

Ref: 1676

23 January 2012

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ISSUED 4:38:34 PM 6/03/2012

VICTORIA PARK VISITORS CENTRE

VICTORIA PARK ROAD, CHRISTCHURCH

DETAILED ENGINEERING EVALUATION

23 January 2012

FOR

CHRISTCHURCH CITY COUNCIL

Appendices

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DETAILED ENGINEERING EVALUATION
23 January 2012

FOR:
VICTORIA PARK VISITORS CENTRE

AT:
VICTORIA PARK ROAD, CHRISTCHURCH

1.0 Preamble

This report covers our assessment of the structural condition of the Victoria Park Visitors Centre building at Victoria Park Road, Christchurch, following the magnitude 6.3 earthquakes on 2nd February 2011 and that of the 13 June 2011. Our assessment is based on a visual inspection of the outside and inside where it was deemed to be safe to enter. This was carried out in August 2012.

This report describes the damage observed, and comments on remedial work options for both temporary securing of the building, and long term repair where appropriate. This report does not cover structural strength details in full detail or detailed specification of remedial works but does provide some investigation and assumptions that will allow an assessment to be made as to whether to reconstruct or demolish.

A Detailed Engineering Evaluation Procedure (DEEP) has recently been developed by CERA to provide consistent, comprehensive and auditable guidelines which help restore confidence in the remaining building stock in Canterbury. We have used these guidelines to form the basis for our detailed engineering evaluation.
The DEEP process follows a two step process, firstly a qualitative assessment then a quantitative assessment, if necessary.
The qualitative assessment involves visual review of the structure and its conditions in order to ascertain whether the structure does or does not fall within required capacity limitations without completing any complex analysis.

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The quantitative assessment involves analytically calculating the capacity of the structure in terms of the current code requirements ie. to estimate the percentage of new building strength available (%NBS).
The overall objective of this assessment is to determine if a strengthening solution is required or not.

More specifically, this report covers:

- Describes the existing building, its construction, and structural system
- Outlines the level of investigation undertaken and where information was obtained
- Summarises earthquake damage caused by the recent Canterbury earthquakes
- Reviews the building's performance in the recent Canterbury earthquakes
- Identifies critical structural weaknesses
- Assesses the building's seismic strength relative to New Building Standard (NBS), commonly referred to as "current code"
- Proposes earthquake strengthening work to bring the building as close as practically possible to 67% of current code

2.0 Scope of Investigation

In August 2011, we visually inspected the building including:
The exterior from ground level
The interior

The following records have also been obtained and reviewed:
Drawings, and specifications showing portions of the building.
Intrusive investigations have not been completed on this occassion.
This report is based on our assessment of the building at the time stated. Photos attached in Appendix A are indicative of the damage and findings. Any subsequent loading by aftershocks, or high winds, may initiate further damage.

3.0 Building Description

General description:
The Victoria Park Visitors Centre is constructed in two parts including a a central octagonal brick structure with light roof and a lean to structure that surrounds the inner core constructed with stone walls and large windows

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with a sarked roof. In 1995 the building was fully enclosed with windows and doors installed to the stone walls.
The building was being used as a Visitors Centre, but is currently unoccupied due to earthquake damage. The main occupancy classification in NZS1170 is C3 and importance level of 2. The occupant load is calculated at 89 as classified by the Building Code Clause C table 2.2.

Roof construction:
Galvanised iron roofing on sarking on timber rafters and framing.

Outer External Wall construction:
380mm thick solid stone walls with timber frame infill incorporating windows and doors.

Internal Wall construction:
350mm thick solid brickwalls incorporating arch doorways and windows.

Floor construction:
Concrete with stone foundation on rock support. Some settlement has occurred in west wall foundations which is historical.

4.0 Structural System

Gravity Structural System:
The gravity structural system can be described as simple beam and post/wall support.

Lateral Structural System:
The lateral structural system can be described as face loaded walls supported at foundation level and ceiling/roof level with nominal diaphragms in the form of sarking boards taking loads back to the interior brick walls and external stone walls acting in-plane. Load then transfers to concrete/stone foundations to the ground (rock).

5.0 Strength

The strength of the building has been determined as a % NBS using methodologies provided by NZSEE. A “Preliminary Detailed Assessment”, which

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includes calculations, has been completed as opposed to an IEP ("Initial Evaluation Procedure") as this is deemed more accurate and the IEP would provide an inaccurate %NBS purely because of the buildings age. Our assessments are as follows:

Before September 2010:
The strength of the building before September 2010 is estimated as

Across	
Hazard factor 0.22 (pre 19th May 2011)	67% NBS
Hazard factor 0.3 (post 19th May 2011)	49% NBS
Along	
Hazard factor 0.22 (pre 19th May 2011)	67% NBS
Hazard factor 0.3 (post 19th May 2011)	49% NBS
The Building as a Whole prior to 22 Feb 2011	49% NBS

On day of inspection:
The strength of the building on the day of inspection is estimated as

Across		
Hazard factor 0.3 (post 19th May 2011)	25% NBS	(estimated only)
Along		
Hazard factor 0.3 (post 19th May 2011)	25% NBS	(estimated only)
The Building as a Whole on day of inspection	25% NBS	

It must be understood that this strength is based on the overall building strength and not individual elements. It is clear that some individual elements in fact have an even lower strength due to local cracking etc and as low as 15% in places (such as the upper window columns). Furthermore this estimate is based on the fact that there is now significant cracking and lose of adhesion between bricks thus making the structure vulnerable as was shown at the bases of the columns and arches with the continual loosening of the bricks and arches.

6.0 Areas of Structural Vulnerability

The building is reasonably sound however some structural vulnerabiities were found in parts and are in need of strengthening which includes:

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- Proper full roof diaphragms
- Lack of continuity between diaphragms and walls.
- Lack of a proper tie around the octagonal beam at roof level.
- In-plane loading of brick walls at upper window level where tension forces can develop.

7.0 Damage Description

Damage caused by the February and June earthquakes to the Victoria Park Visitors Centre is described below. Damage described is that observed on the day. Refer to Appendix B for marked-up drawings indicating damaged locations.

i. General Damage:
General damage includes minor superficial cracking window and door timber joinery

ii. General Damage to Exterior Stone Walls:
General damage includes minor cracking of stone walls. Ties between walls and roof have been severed and joints between wall plates/fascia boards have been severed.

iii. Damage to Brick Walls at Upper Level Windows:
Cracking has occurred to the brickwork adjacent the upper level windows. This area should be supported temporarily with plywood and strapping.

iv. Damage to Main Lower Brick Walls Lintel Supports:
Cracking has occurred to the lower brick walls at the lower levels in almost all piers. Damage has occurred at the rigid fixing points i the brickwork where it supports the flexible display panels. This has also caused camage to lintels.

v. Damage to Archways:
The internal archways show signs of dislodging and have cracks appearing due to tension forces.

vii. Other damage:
Cracked glass to some windows.
Minor damage to timber joinery.

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8.0 Immediate Securing of the Building

The following works are required to mitigate immediate hazards, temporarily secure the building, and provide weather tightness:
Restrict access to persons necessary for inspection, deconstruction and reconstruction. This will safeguard the public from any potential local collapse or falling debris.
Provide temporary support and bracing to the cracked upper window brickwork by lining with plywood and strapping.
Further calculations and detail confirming this is still required and should be discussed in conjunction with the Contractor who will carrying out this work and yourselves.
Due care, safety equipment and precautions must be taken when carrying out the above work. Maintain awareness of fall hazards and escape routes if entering the building.

9.0 Long Term Repair

This section of the report outlines options for repair to restore the building to a minimum 67% NBS. In most areas over 100%NBS is obtained especially where we have added new elements. This is due to the fact that minimum fixing requirements for new elements mean strengths are higher than required by calculation. We are of the opinion that if the repair costs were within acceptable budget and the building was deemed significant enough to repair then obtaining 100% NBS is possible. Options for repair and/or strengthening will ultimately need to be discussed with the owner, and will be subject to revised local authority legislation.

<u>Requirements to bring the building up to 67%NBS include:</u>

i. Upper Masonry Walls and Roof Support:

Rake out and remove any loose mortar in masonry wall mortar lines.
Seal all cracks in stone face to the outer wall with a pressure injected epoxy (e.g. Sikadur injectokit and Sikadur52$^{0)}$, or similar)where cracks are less than 0.2mm in width.
Repair cracks in the masonry internal with that are less than 3mm width by filling cracks with grout and stitching with Helifix Helibars in accordance with Helifix specifications.
Install new Steel frames (bents) at upper level.

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ii. Roof Diaphragms:

Install new 12mm plywood diaphragms over roofs and tie to brick walls and stone walls.
Install new steel ring beam (tie) at lower roof level to inner brick wall.

iii. Outer Stone Walls:

Remove all old sealants etc. and rake out any loose mortar in Seal all cracks in stone face to the outer wall with a pressure injected epoxy (e.g. Sikadur injectokit and Sikadur52⁰), or similar).

iv. Inner Section Masonry Walls:

Rake out and remove any loose mortar in masonry wall mortar lines.
Seal all cracks in stone face to the outer wall with a pressure injected epoxy (e.g. Sikadur injectokit and Sikadur52⁰), or similar)where cracks are less than 0.2mm in width.
Repair cracks in the masonry internal with that are less than 3mm width by filling cracks with grout and stitching with Helifix Helibars in accordance with Helifix specifications.
Repair all cracked arch lintels by stitching with Helifix Helibars and Cemties in accordance with Helifix specifications.
Install new steel channel strengthening elements by pinning to inner face of arch and column.
Repair damaged bricks where display panel locating bolts have damaged brickwork by removing damaged bricks and replacing.
Reinstall display panels with new fixing detail.

v. General Damage:

Repair general damage to timber joinery etc using good tradesman acceptable methodologies.

<u>Requirements to bring the building up to 33%NBS include:</u>

i. Upper Masonry Walls and Roof Support:

Rake out and remove any loose mortar in masonry wall mortar lines.
Seal all cracks in stone face to the outer wall with a pressure injected epoxy (e.g. Sikadur injectokit and Sikadur52⁰), or similar)where cracks are less than 0.2mm in width.
Repair cracks in the masonry internal with that are less than 3mm width by filling cracks with grout and stitching with Helifix Helibars in accordance with Helifix specifications.

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ii. Roof Diaphragms:

Tie the existing diaphragms back to brick walls and stone walls with new specifically designed details.
Install new steel ring beam (tie) at lower roof and upper level to inner brick wall.

iii. Outer Stone Walls:

Remove all old sealants etc. and rake out any loose mortar in Seal all cracks in stone face to the outer wall with a pressure injected epoxy (e.g. Sikadur injectokit and Sikadur52⁰), or similar).

iv. Inner Section Masonry Walls:

Rake out and remove any loose mortar in masonry wall mortar lines.
Seal all cracks in stone face to the outer wall with a pressure injected epoxy (e.g. Sikadur injectokit and Sikadur52⁰), or similar)where cracks are less than 0.2mm in width.
Repair cracks in the masonry internal with that are less than 3mm width by filling cracks with grout and stitching with Helifix Helibars in accordance with Helifix specifications.
Repair all cracked arch lintels by stitching with Helifix Helibars and Cemties in accordance with Helifix specifications.
Repair damaged bricks where display panel locating bolts have damaged brickwork by removing damaged bricks and replacing.
Reinstall display panels with new fixing detail.

v. General Damage:

Repair general damage to timber joinery etc using good tradesman acceptable methodologies.

The costs associated with the repairs would require the appropriate professional to visit the site to view the extent of damage. At this stage we have not provided any specific detailing for repair works but can so at your request.

10.0 Elements Not Inspected

The following is a list of elements not specifically inspected:

- Foundations below ground level (there is no sign of damage or movement to this area due to seismic activity)

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- Soils (Although the building appears to be founded on rock a geotechnical investigation or assessment and report by an experienced Geotechnical Engineer is recommended)

11.0 Applicability

Recommendations and opinions in this report are based on data and records obtained from Christchurch City Council and nondestructive visual inspections. Although there is nothing to suggest otherwise, as the nature and continuity of the structure hidden from sight (e.g. reinforcing steel, bolt depths etc.) is inferred, it must be appreciated that actual conditions could vary.
Findings presented in this report are for the sole use of the client. The findings may not contain sufficient information for use by other parties, and as such should not be relied upon unless discussed with Structural Concepts Ltd. We have exercised our services in a professional manner using a degree of care and skill normally, under similar circumstances, by reputable consultants practicing in this field at this time. No other warranty, expressed or implied, is made as to the professional advice presented in this report.

Prepared By:

Garry Newton
BE (Civil), MIPENZ(Civil, Structural), CPEng, IntPE
Director

APPENDIX A

VICTORIA PARK VISITORS CENTRE CHRISTCHURCH

PHOTOGRAPHS

Please note that the photographs provided in this report are not high quality and are for providing information that shows the indicative damage found around the building for structural engineering assessment only.

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26/04/2011 10:24

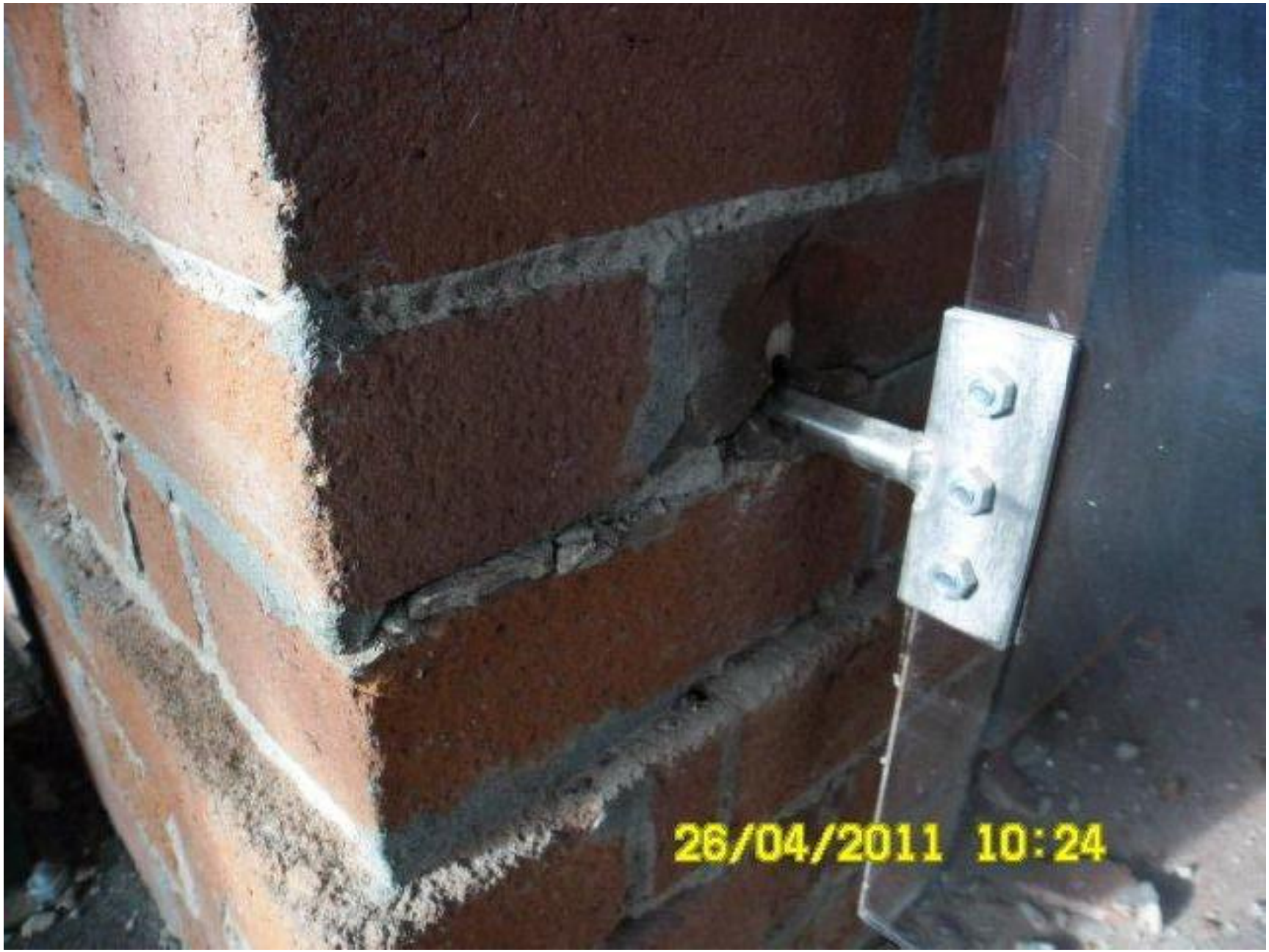

26/04/2011 10:24


26/04/2011 10:24


UNSAFE
DO NOT ENTER OR OCCUPY
(THIS PLACARD IS NOT A DEMOLITION ORDER)
WARNING:
This building
seriously damaged and is unsafe. Do not
enter. Entry may result in death or injury. The damage observed from
external inspection is as described below :-
Enter only with specific written authorisation from Territorial Authority
acting under the authority of the Civil Defence Emergency
Management Controller.
Facility/ Tenancy Name and Address
This facility was inspected pursuant to the Civil Defence
Emergency Management Act 2002
Inspector ID:
Acting under the authority of the Civil Defence Emergency
Management Controller:
Date:
Time:
Contact for information: ph. (03) 941 8999
or
TXT: 021 02069178 with following details: Address, Placard
colour, contact name, contact phone number
Do Not Remove this Placard. Placed on Behalf of the Civil Defence Emergency Management Controller
Under the Authority of the Civil Defence Emergency Man
26/04/2011 10:22

26/04/2011 10:28


26/04/2011 10:24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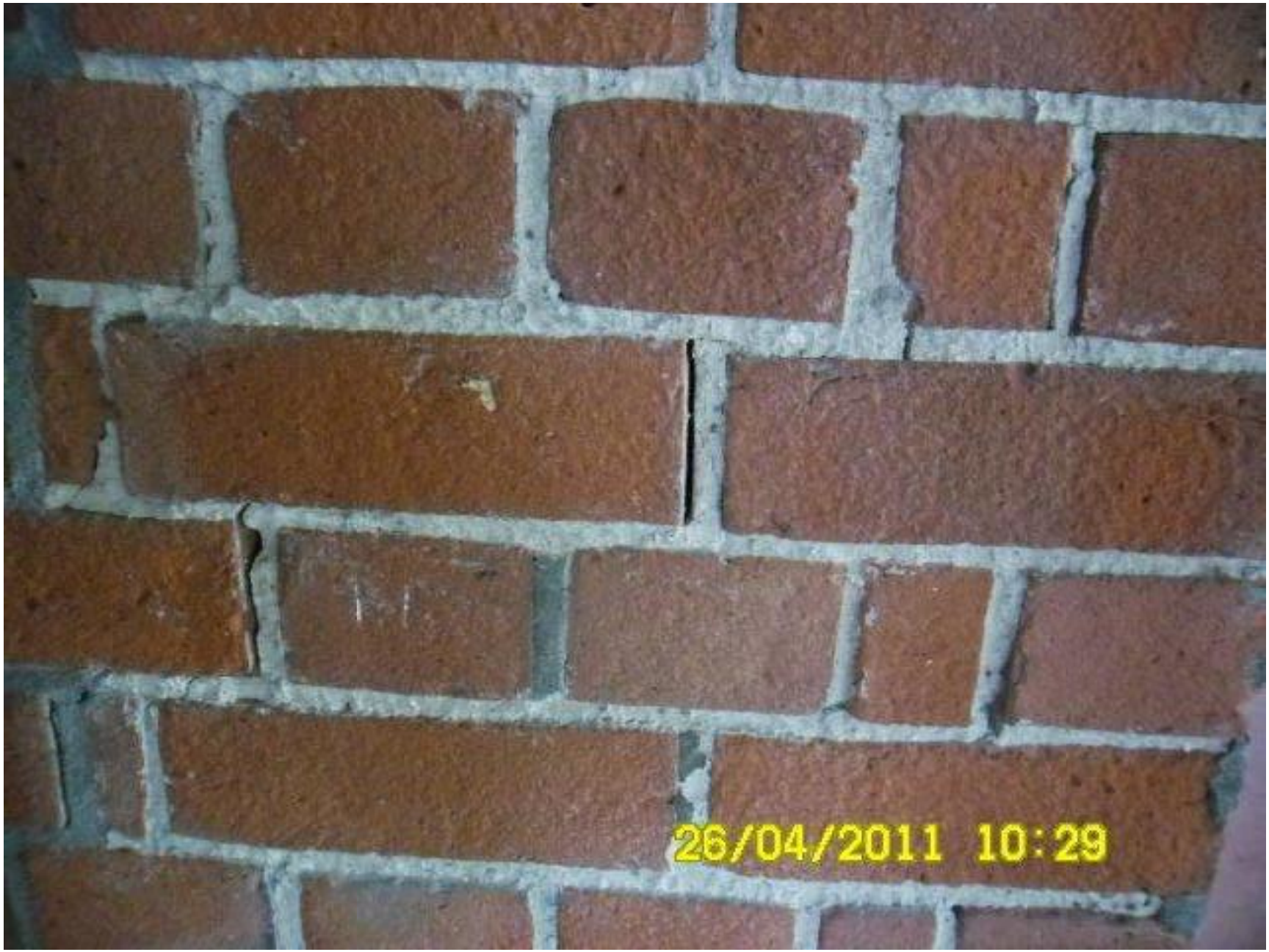
26/04/2011 10:29

26/04/2011 10:30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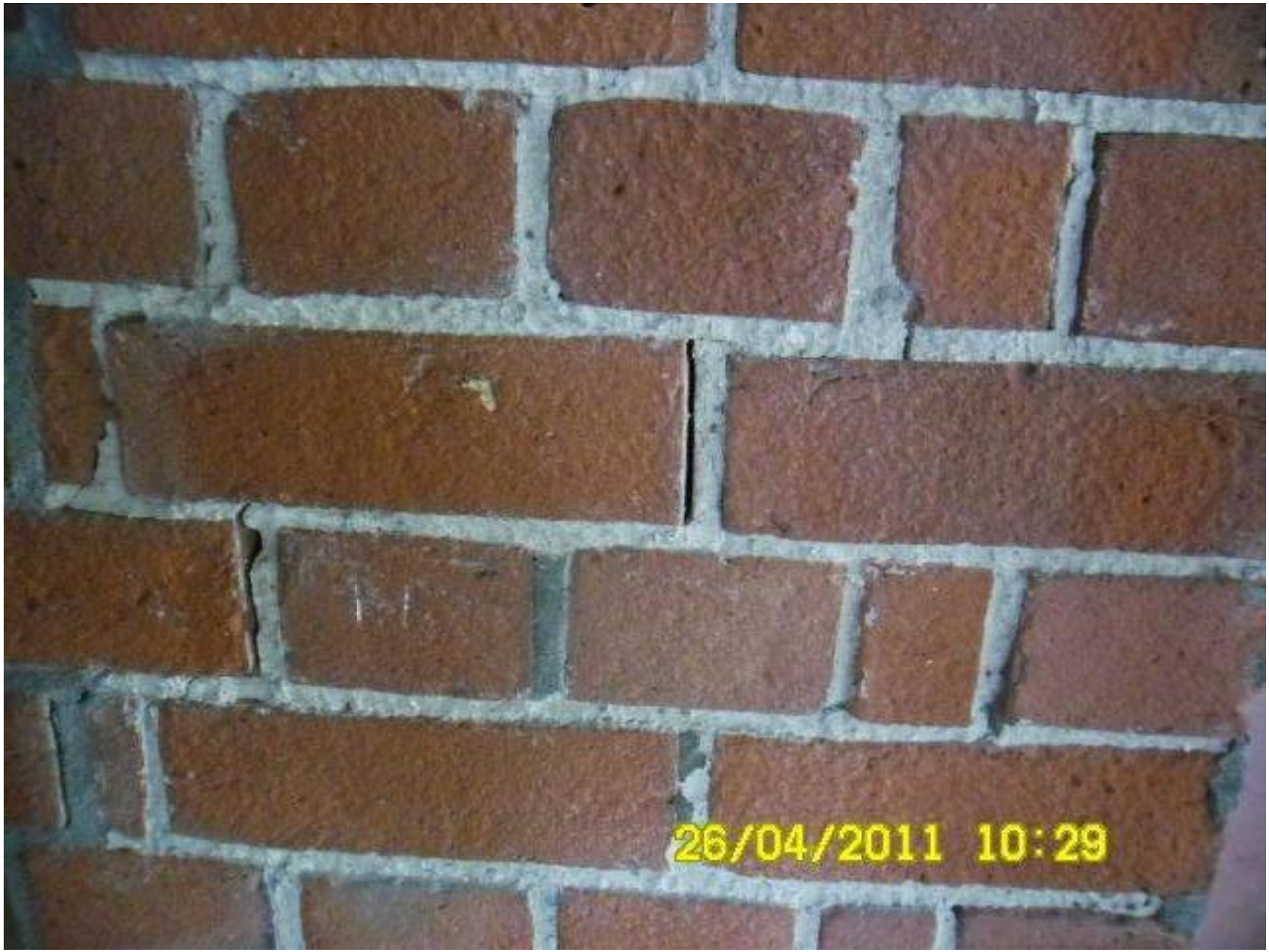
PUSH BAR TO OPEN
29/04/2011 10:32

26/04/2011 10:38

26/04/2011 10:38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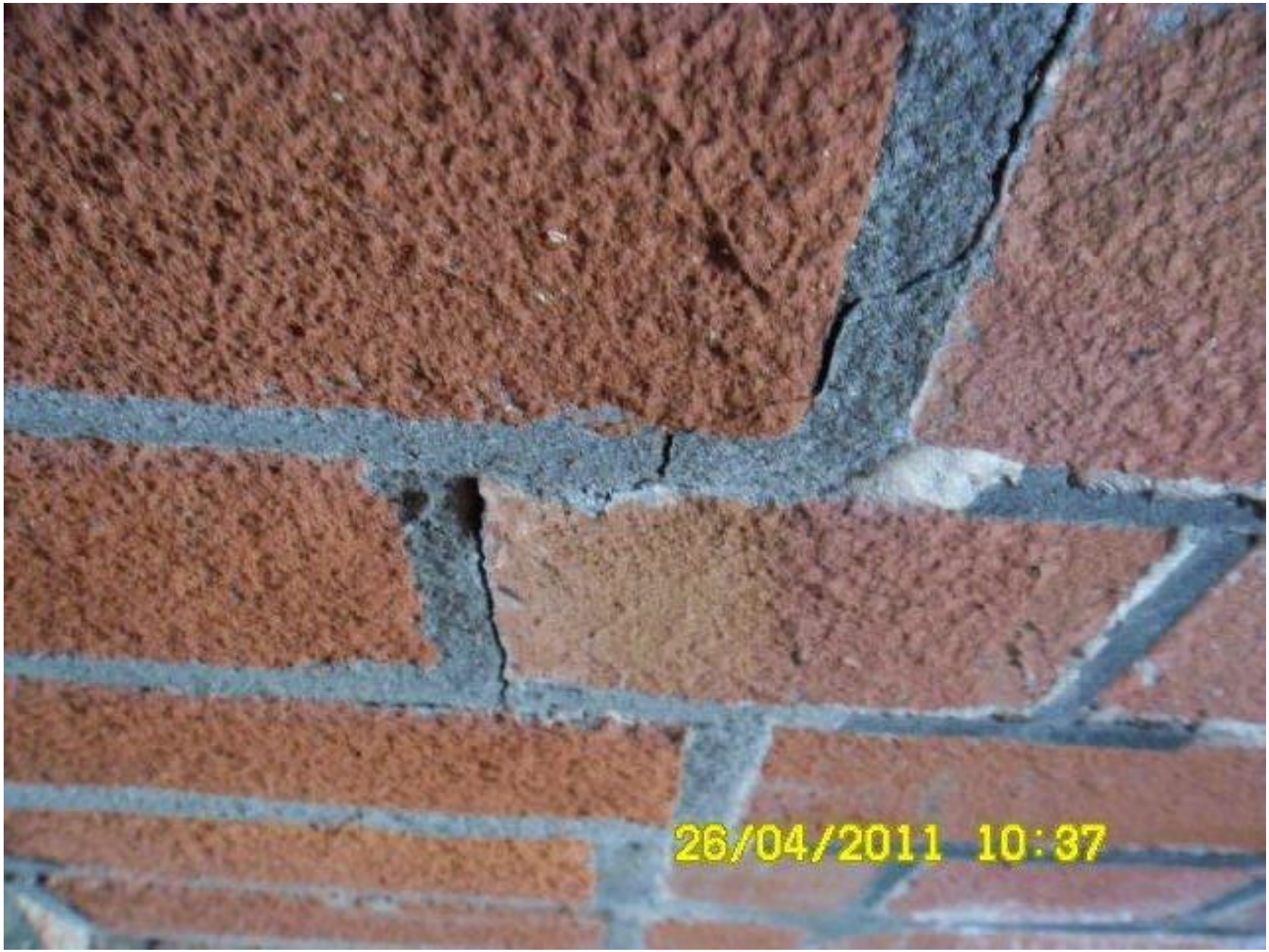
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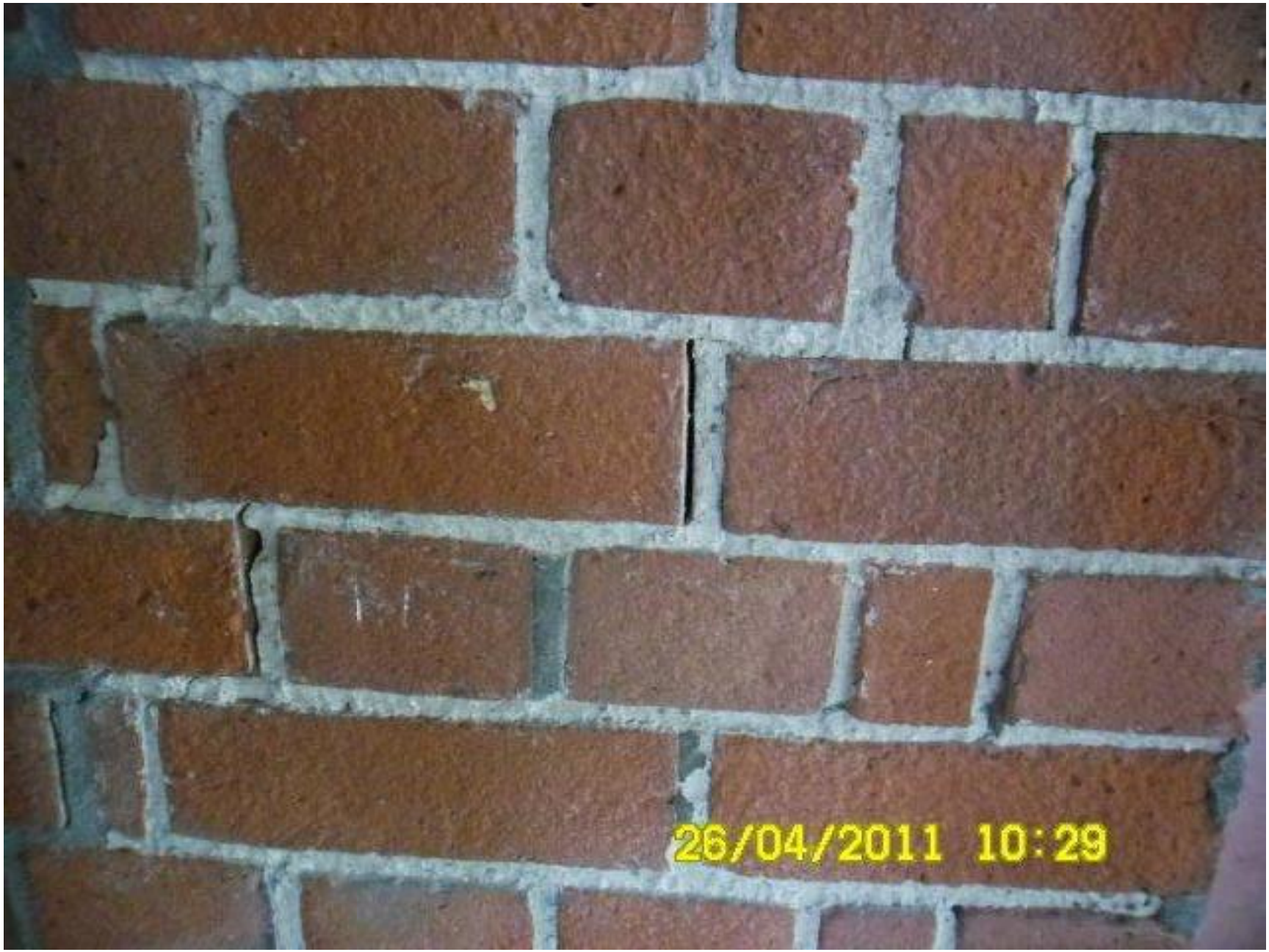
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26/04/2011 10:31

PUSH BAR TO OPEN
29/04/2011 10:32

26/04/2011 10:38

26/04/2011 10:38

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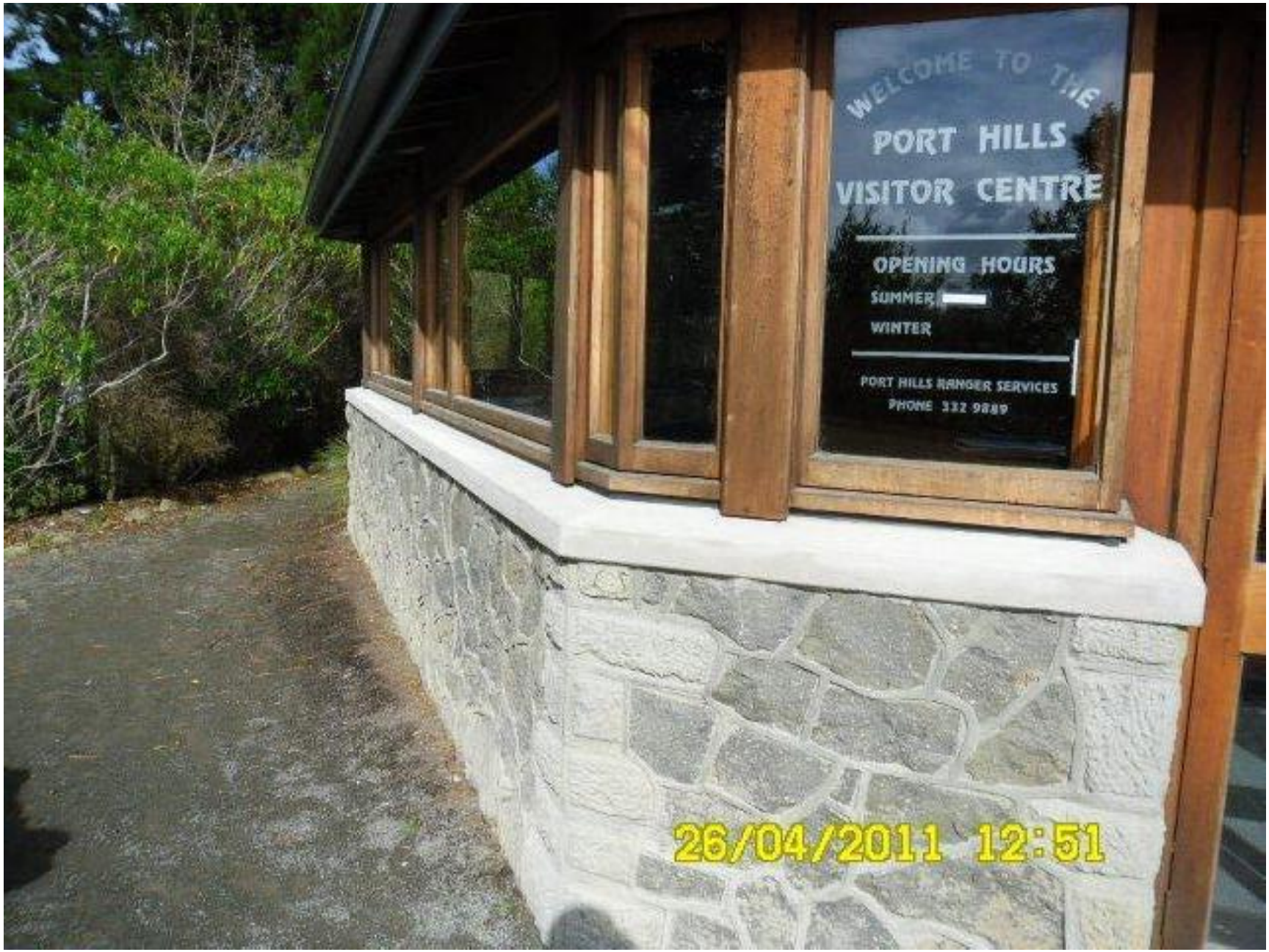
26/04/2011 10:36

26/04/2011 10:37

26/04/2011 10:50

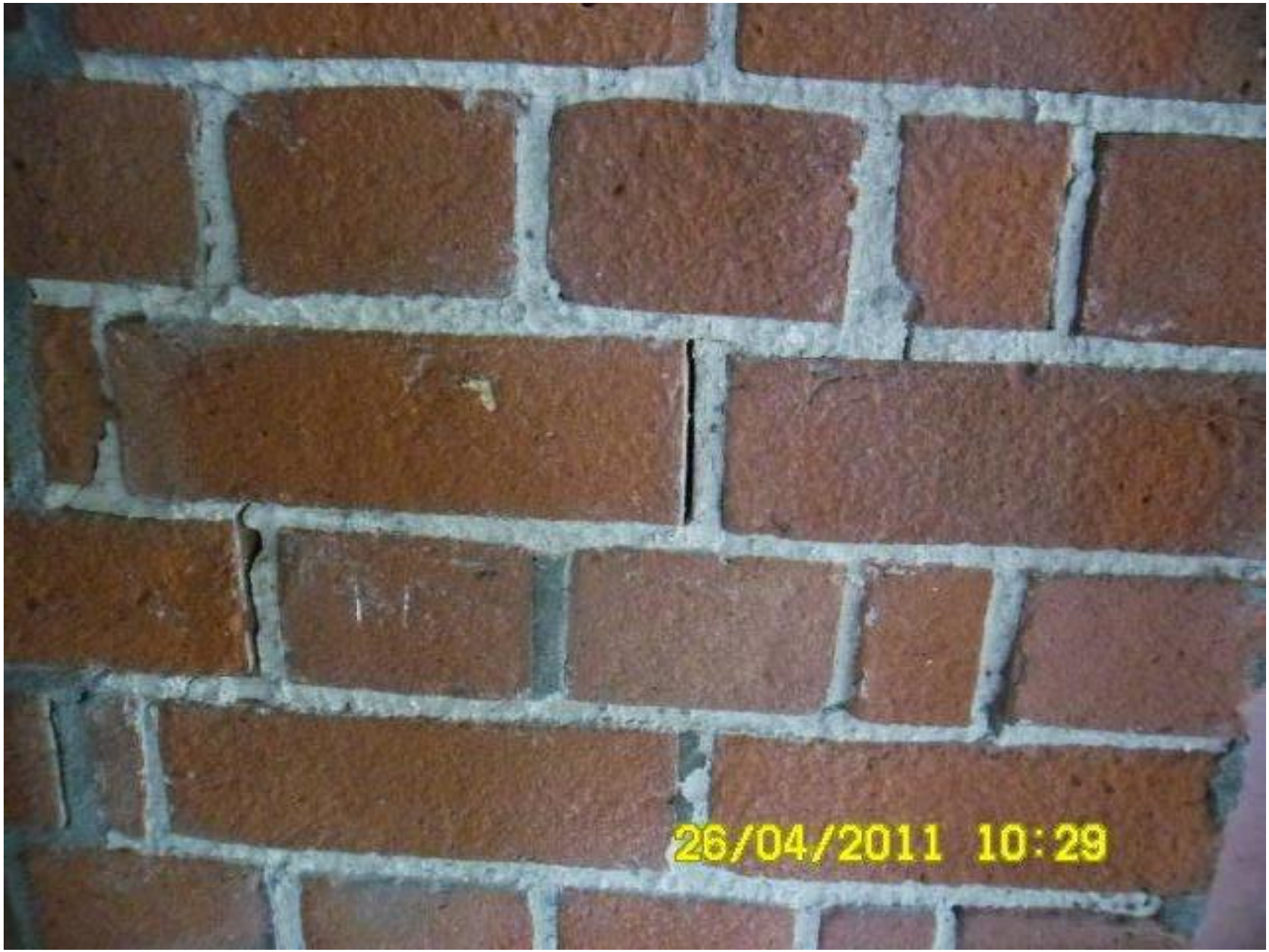

WELCOME TO THE
PORT HILLS
VISITOR CENTRE
OPENING HOURS
SUMMER
WINTER
PORT HILLS RANGER SERVICES
PHONE 332 9889
26/04/2011 12:51


26/04/2011 12:52

26/04/2011 12:58

26/04/2011 12:54

26/04/2011 12:54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PUSH BAR TO OPEN
29/04/2011 10:32

26/04/2011 10:32

26/04/2011 10:38

26/04/2011 10:38

26/04/2011 10:36

26/04/2011 12:58

26/04/2011 10:48

26/04/2011 10:50

APPENDIX B

VICTORIA PARK VISITORS CENTRE CHRISTCHURCH

MARKED-UP DRAWING INDICATING DAMAGED LOCATIONS

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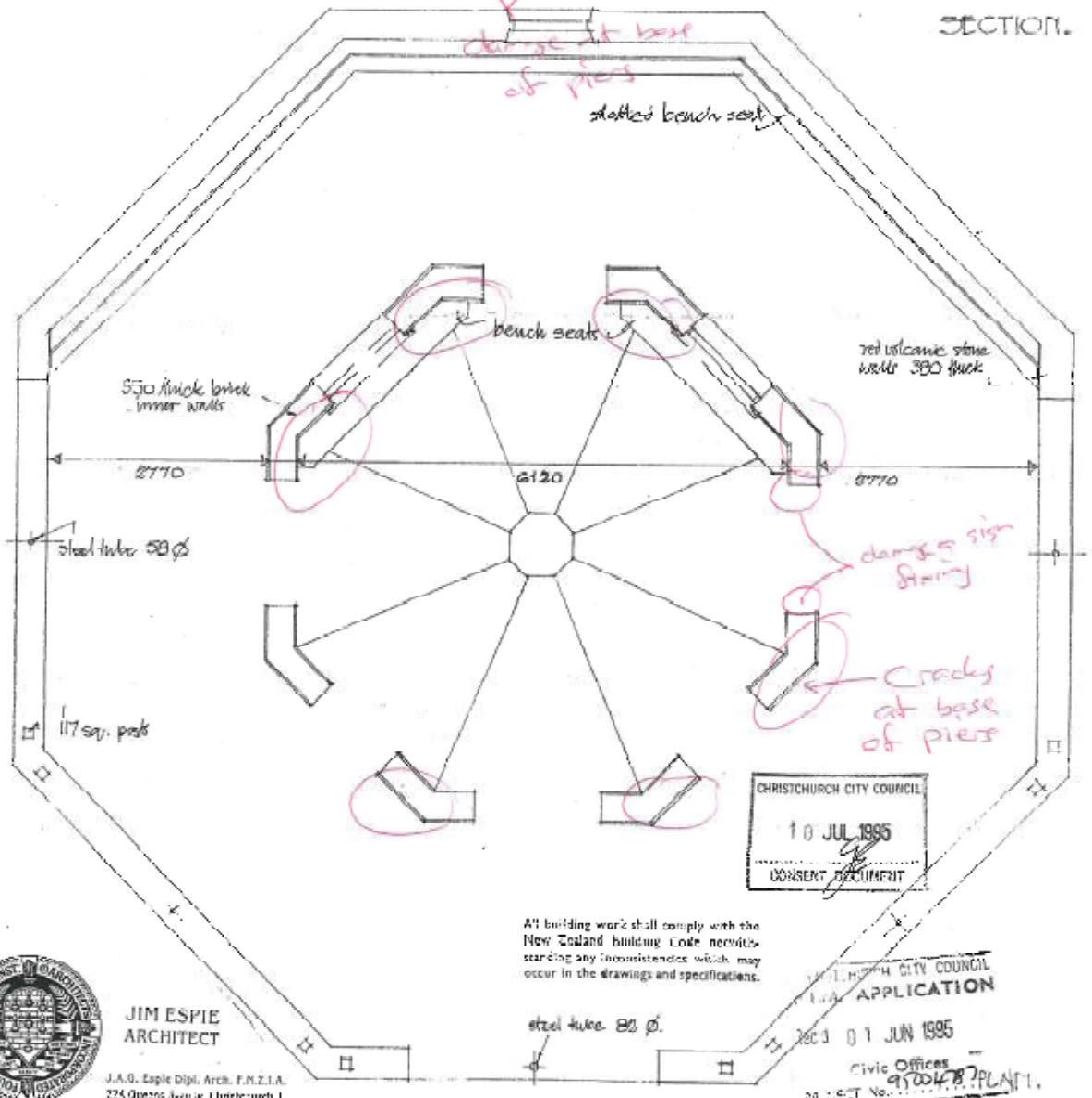
KIOSK AT VICTORIA PARK, CHRISTCHURCH, AS EXISTING.

Scale : 1 : 50.

27 January 1984.

SECTION.



CHRISTCHURCH CITY COUNCIL
10 JUL 1985
CONSENT DEPARTMENT

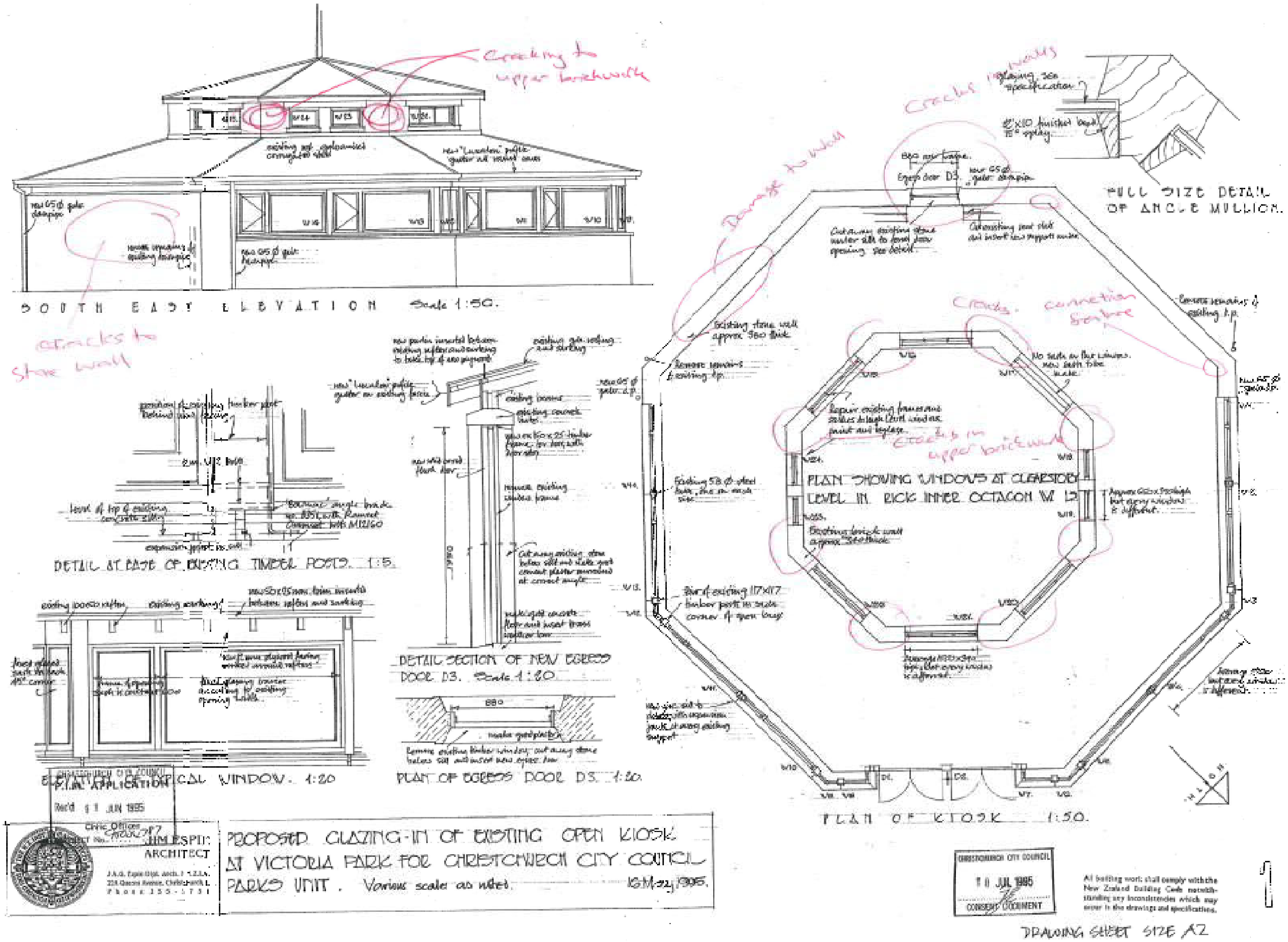
All building work shall comply with the New Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.

CHRISTCHURCH CITY COUNCIL
APPLICATION
01 JUN 1985
Civic Offices
95004 PLAN 1.

JIM ESPIE
ARCHITECT

J.A.G. Espie Dipl. Arch. F.N.Z.I.A.
224 Queens Avenue Christchurch 1
Phone 3xx-xxxx

DRAWING SHEET SIZE A3


SOUTH EAST ELEVATION Scale 1:50.
Cracking to upper brickwork
cracks to stone wall
DETAIL AT BASE OF EXISTING TIMBER POSTS. 1:5
DETAIL SECTION OF NEW EGRESS DOOR D3. Scale 1:20
PLAN OF EGRESS DOOR D3. 1:20
ELEVATION OF TYPICAL WINDOW. 1:20
FULL SIZE DETAIL OF ANGLE MULLION.
PLAN SHOWING WINDOWS AT CLEARSTORY LEVEL IN BRICK INNER OCTAGON W 13
PLAN OF KIOSK 1:50.
Damage to wall
Cracks in upper brickwork
Cracks. connection to base
Existing stone wall approx 380 thick
Existing brick wall approx 300 thick
Egress door D3.
CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 11 JUN 1995
JIM ESPIE
ARCHITECT
PROPOSED GLAZING-IN OF EXISTING OPEN KIOSK AT VICTORIA PARK FOR CHRISTCHURCH CITY COUNCIL PARKS UNIT. Various scales as noted. 16 May 1995.
CHRISTCHURCH CITY COUNCIL
11 JUL 1995
CONSENT DOCUMENT
All building work shall comply with the New Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.
DRAWING SHEET SIZE A2

APPENDIX C

VICTORIA PARK VISITORS CENTRE CHRISTCHURCH

FLOOR PLANS

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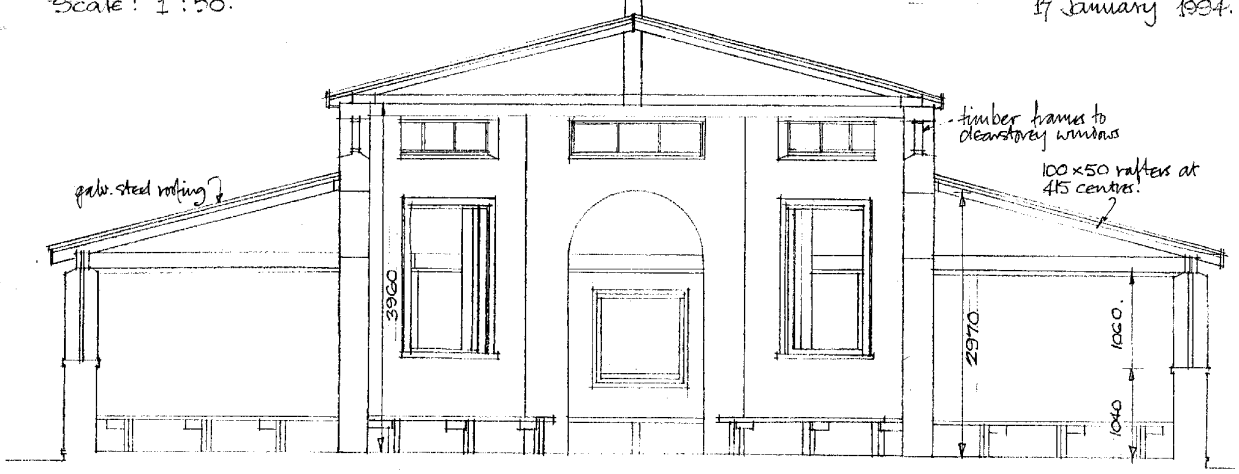
KIOSK AT VICTORIA PARK, CHRISTCHURCH, AS EXISTING.

Scale: 1:50.

17 January 1994.



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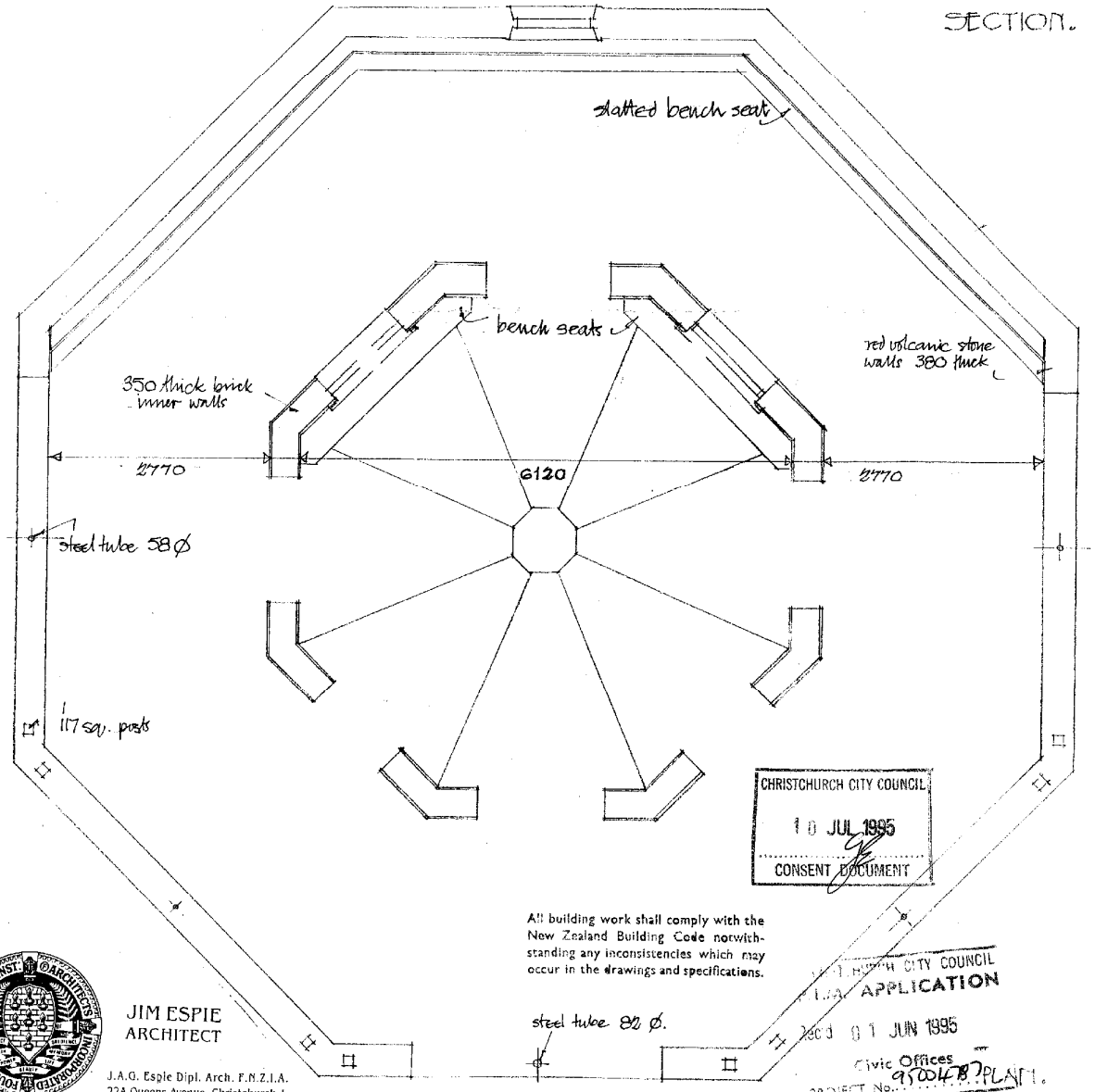

CHRISTCHURCH CITY COUNCIL
10 JUL 1995
CONSENT DOCUMENT

All building work shall comply with the New Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.

CHRISTCHURCH CITY COUNCIL
B.I.A. APPLICATION
Rec'd 01 JUN 1995
Civic Offices
PROJECT No. 95001478 PLAN.

JIM ESPIE
ARCHITECT

J.A.G. Espie Dipl. Arch. F.N.Z.I.A.
22A Queens Avenue, Christchurch 1.
Phone 355-5751

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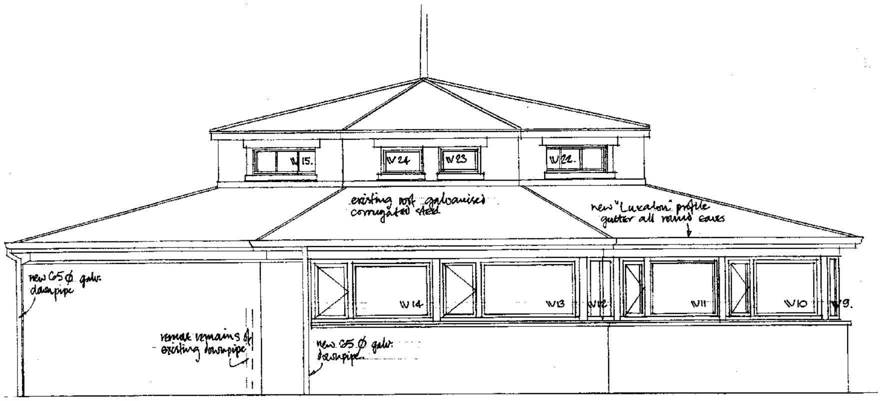
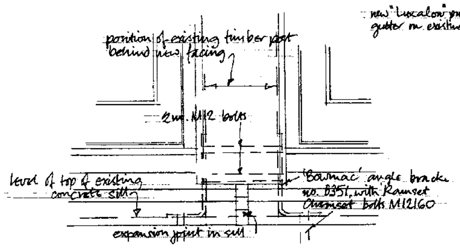
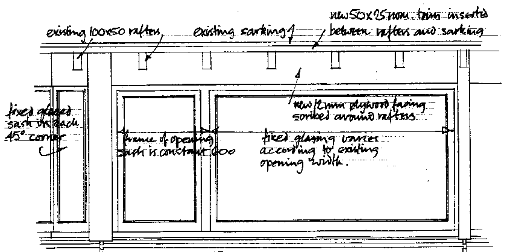


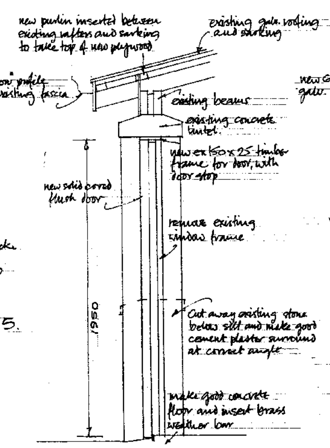
SOUTH EAST ELEVATION Scale 1:50.



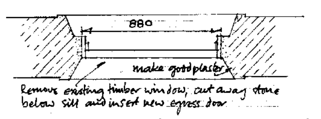
DETAIL AT BASE OF EXISTING TIMBER POSTS. 1:5.



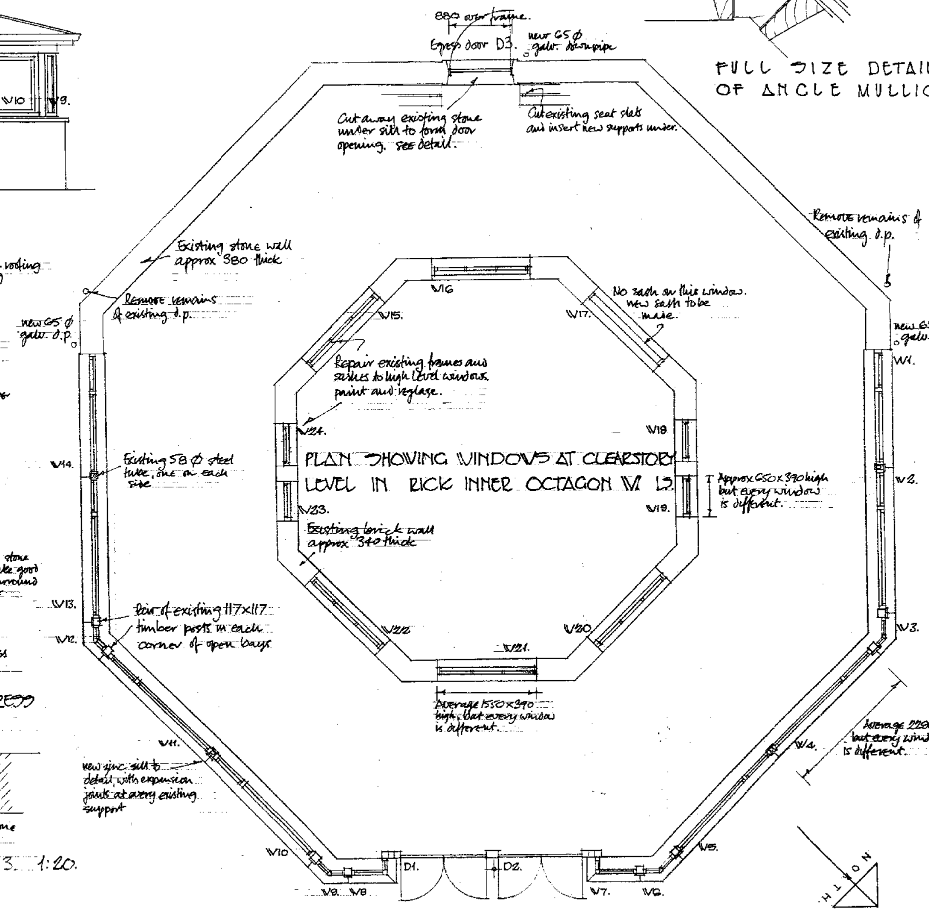
ELEVATION OF TYPICAL WINDOW. 1:20



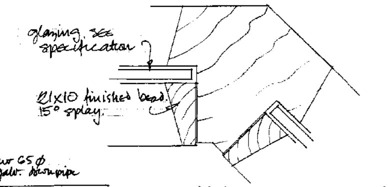
DETAIL SECTION OF NEW EGRESS DOOR D3. Scale 1:20.



PLAN OF EGRESS DOOR D3. 1:20.



PLAN OF KIOSK 1:50.



FULL SIZE DETAIL OF ANGLE MULLION.

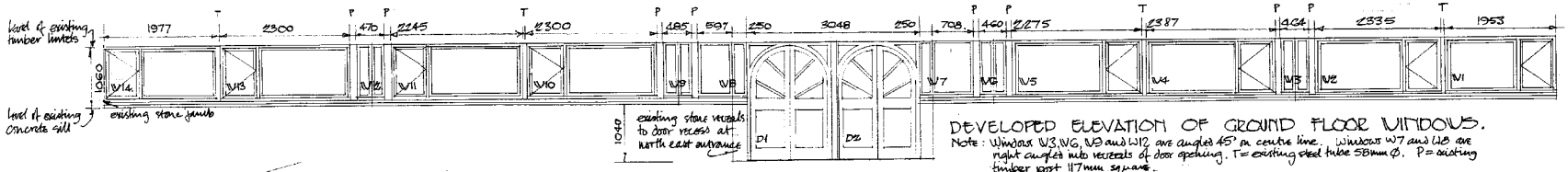
JIM ESPIE
ARCHITECT
J.A.G. Espie Dipl. Arch. F.N.Z.I.A.
22A Queens Avenue, Christchurch 1.
Phone 355-5751

PROPOSED GLAZING-IN OF EXISTING OPEN KIOSK AT VICTORIA PARK FOR CHRISTCHURCH CITY COUNCIL PARKS UNIT. Various scales as noted. 16 May 1995.

All building work shall comply with the New Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.

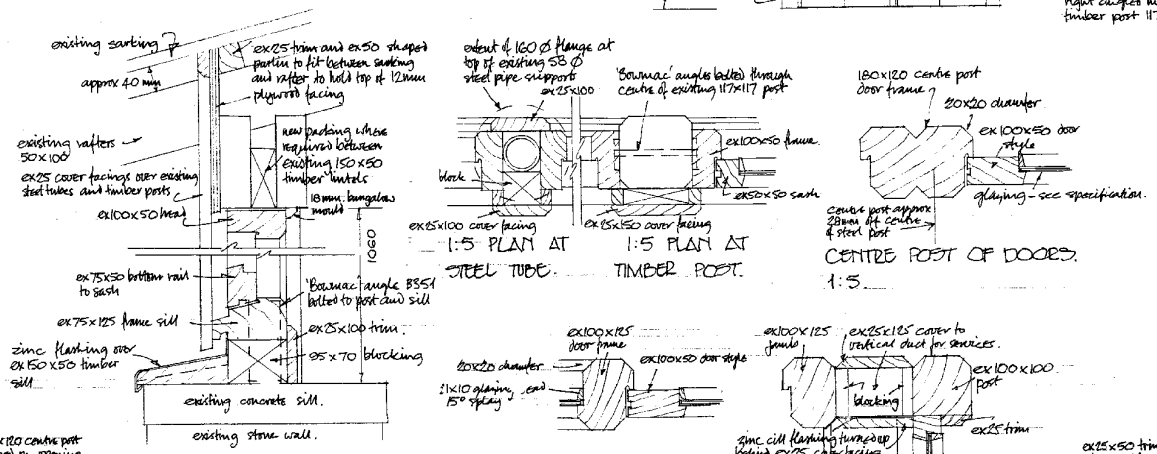
DRAWING SHEET SIZE A2

1



DEVELOPED ELEVATION OF GROUND FLOOR WINDOWS.

Note: Windows W3, W6, W9 and W12 are angled 45° on centre line. Windows W7 and W8 are right angled into reveals of door opening. T = existing steel tube 58mm Ø. P = existing timber post 117mm square.



1:5 SECTION OF WINDOW.

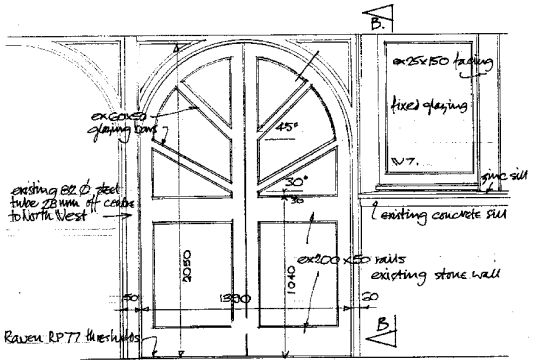
1:5 PLAN AT STEEL TUBE.

1:5 PLAN AT TIMBER POST.

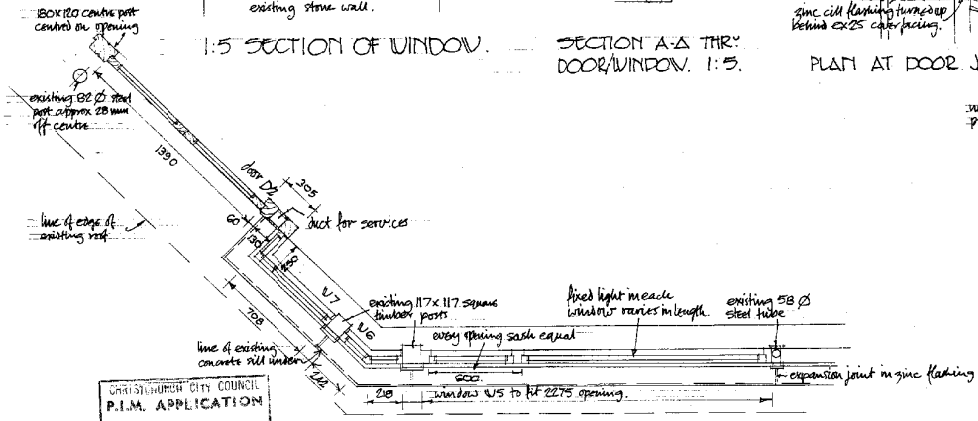
CENTRE POST OF DOORS. 1:5

SECTION A-A THRU DOOR/WINDOW. 1:5.

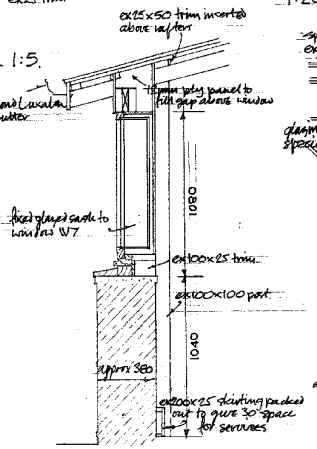
PLAN AT DOOR JAMB. 1:5.



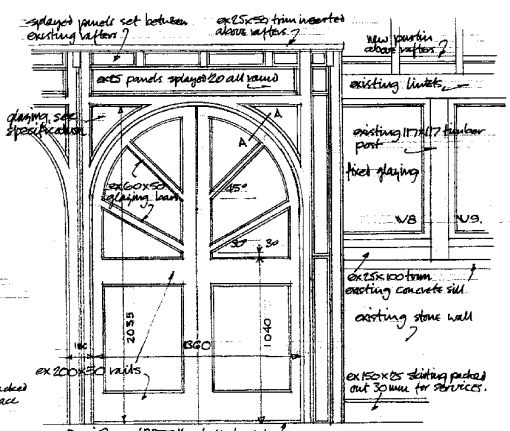
1:20 EXTERNAL ELEVATION OF DOOR D2.



1:20 PLAN OF DOOR D2 AND WINDOWS W5, 6 AND 7.



1:20 SECTION B-B.



2 no. Raven RP77 thresholds back to back on floor and RP4T on doors

1:20 INTERNAL ELEVATION OF DOOR D1.

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 01 JUN 1995
Civic Offices
PROJECT No. 95040787

CHRISTCHURCH CITY COUNCIL
10 JUL 1995
CONSENT DOCUMENT

JIM ESPIE
ARCHITECT
J.A.G. Espie Dipl. Arch. F.N.Z.I.A.
22A Queens Avenue, Christchurch 1.
Phone 355-3751

PROPOSED GLAZING-IN OF EXISTING OPEN KIOSK AT VICTORIA PARK FOR CHRISTCHURCH CITY COUNCIL PARKS UNIT. Various scales as noted. 16 May 1995.

All building work shall comply with the New Zealand Building Code notwithstanding any inconsistencies which may occur in the drawing and specifications.

2

DRAWING SHEET SIZE A2.

APPENDIX D

VICTORIA PARK VISITORS CENTRE CHRISTCHURCH

L2 REPORT

55 Dunlop Road, Onekawa, Napier
PO Box 3315, Napier, 4142, New Zealand
P (06) 842 0111 F (06) 842 0113
Einfo@structuralconcepts.co.nz

PRK 1829-005

Christchurch Eq. RAPID Assessment Form - LEVEL 1

Inspector Initials: Andrew Blake
Territorial Authority: Christchurch City
Date of Inspection: 14/3/2011
Time: 10:50
Exterior Only: ☐
Exterior and Interior: ☑

Building Name: Visitor Centre (5)
Short Name:
Address: Victoria Park
GPS Co-ordinates: S° E°
Contact Name:
Contact Phone:

Storeys at and above ground level: 1
Below ground level: 0
Total gross floor area (m²):
Year built:
No of residential Units: X

Photo Taken: (Yes) No

Type of Construction

- ☐ Timber frame
- ☐ Steel frame
- ☐ Tilt-up concrete
- ☐ Concrete frame
- ☐ RC frame with masonry infill
- ☐ Concrete shear wall
- ☐ Unreinforced masonry
- ☐ Reinforced masonry
- ☐ Confined masonry
- ☐ Other:

Primary Occupancy

- ☐ Dwelling
- ☐ Other residential
- ☑ Public assembly
- ☐ School
- ☐ Religious
- ☐ Commercial/ Offices
- ☐ Industrial
- ☐ Government
- ☐ Heritage Listed
- ☐ Other

Investigate the building for the conditions listed below:

Overall Hazards / Damage	Minor/None	Moderate	Severe	Comments
Collapse, partial collapse, off foundation	☑	☐	☐	Central Masonry Section has damage and moved bricks, gauged brick arches of concrete.
Building or storey leaning	☑	☐	☐	
Wall or other structural damage	☐	☐	☑	Glass information boards - bolts pulled out. Roof beam seating needs to be checked.
Overhead falling hazard	☐	☐	☑	
Ground movement, settlement, slips	☑	☐	☐	Some mortar cracking to external walls.
Neighbouring building hazard	☑	☐	☐	Fire door to rear jammed.
Other	☑	☐	☐	

Choose a posting based on the evaluation and team judgement. Severe conditions affecting the whole building are grounds for an UNSAFE posting. Localised Severe and overall Moderate conditions may require a RESTRICTED USE. Place INSPECTED placard at main entrance. Post all other placards at every significant entrance.

INSPECTED	RESTRICTED USE	UNSAFE
GREEN ☐	*YELLOW* ☐	*RED* ☑

Record any restriction on use or entry:

Further Action Recommended:

Tick the boxes below only if further actions are recommended

- ☐ Barricades are needed (state location):
- ☐ Level 2 or detailed engineering evaluation recommended
  - ☐ Structural ☐ Geotechnical ☐ Other:
- ☐ Other recommendations:

Estimated Overall Building Damage (Exclude Contents)

None	☐		
0-1 %	☐	31-60 %	☐
2-10 %	☐	61-99 %	☐
11-30 %	☐	100 %	☐

Sign here on completion:
Date & Time: 14/3/2011
ID: 10:50

Inspection ID _____ *(Office Use Only)*

Christchurch Eq RAPID Assessment Form - LEVEL 2

Inspector Initials Territorial Authority	Andrea Blake Christchurch City	Date Time	14/3/2011 10:50	Final Posting (e.g. UNSAFE)	R1

Building Name Visitor Centre
Short Name
Address Victoria Park
GPS Co-ordinates S° E°
Contact Name
Contact Phone
Storeys at and above ground level 1 Below ground level 0
Total gross floor area (m^2) Year built
No of residential Units X
Photo Taken Yes No

Type of Construction

- ☐ Timber frame
- ☐ Steel frame
- ☐ Tilt-up concrete
- ☐ Concrete frame
- ☐ RC frame with masonry infill
- ☐ Concrete shear wall
- ☐ Unreinforced masonry
- ☐ Reinforced masonry
- ☐ Confined masonry
- ☐ Other:

Primary Occupancy

- ☐ Dwelling
- ☐ Other residential
- ☐ Public assembly
- ☐ School
- ☐ Religious
- ☐ Commercial/ Offices
- ☐ Industrial
- ☐ Government
- ☐ Heritage Listed
- ☐ Other

Investigate the building for the conditions listed on page 1 and 2, and check the appropriate column. A sketch may be added on page 3

Overall Hazards / Damage	Minor/None	Moderate	Severe	Comments
Collapse, partial collapse, off foundation	☐	☐	☐	See page 1.
Building or storey leaning	☐	☐	☐	
Wall or other structural damage	☐	☐	☐	
Overhead falling hazard	☐	☐	☐	
Ground movement, settlement, slips	☐	☐	☐	
Neighbouring building hazard	☐	☐	☐	
Electrical, gas, sewerage, water, hazmats	☐	☐	☐	

Record any existing placard on this building: **Existing Placard Type (e.g. UNSAFE)**

Choose a new posting based on the new evaluation and team judgement. Severe conditions affecting the whole building are grounds for an UNSAFE posting. Localised Severe and overall Moderate conditions may require a RESTRICTED USE. Place INSPECTED placard at main entrance. Post all other placards at every significant entrance. Transfer the chosen posting to the top of this page.

INSPECTED		RESTRICTED USE		UNSAFE		
GREEN	*G1* *G2*	*YELLOW*	*Y1* *Y2*	*RED*	*R1* (circled) *R2* *R3*	

Record any restriction on use or entry:

Further Action Recommended:

Tick the boxes below only if further actions are recommended

- ☐ Barricades are needed (state location):
- ☐ Detailed engineering evaluation recommended
  - ☐ Structural ☐ Geotechnical ☐ Other:
- ☐ Other recommendations:

Estimated Overall Building Damage (Exclude Contents)

None	☐		
0-1 %	☐	31-60 %	☐
2-10 %	☐	61-99 %	☐
11-30 %	☐	100 %	☐

Sign here on completion
Date & Time 14/3/2011 10:50
ID

Inspection ID: _____ *(Office Use Only)*

PROP1:

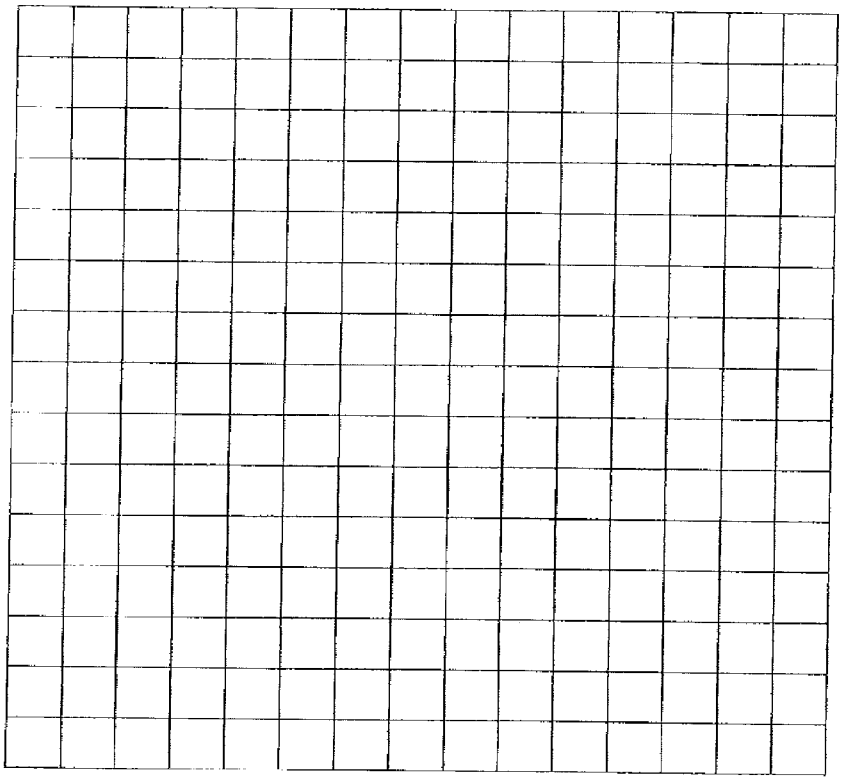
Structural Hazards/ Damage	Minor/None	Moderate	Severe	Comments
Foundations	☐	☐	☐	
Roofs, floors (vertical load)	☐	☐	☐	
Columns, pilasters, corbels	☐	☐	☐	
Diaphragms, horizontal bracing	☐	☐	☐	
Pre-cast connections	☐	☐	☐	
Beam	☐	☐	☐	
Non-structural Hazards / Damage				
Parapets, ornamentation	☐	☐	☐	
Cladding, glazing	☐	☐	☐	
Ceilings, light fixtures	☐	☐	☐	
Interior walls, partitions	☐	☐	☐	
Elevators	☐	☐	☐	
Stairs/ Exits	☐	☐	☐	
Utilities (eg. gas, electricity, water)	☐	☐	☐	
Other	☐	☐	☐	
Geotechnical Hazards / Damage				
Slope failure, debris	☐	☐	☐	
Ground movement, fissures	☐	☐	☐	
Soil bulging, liquefaction	☐	☐	☐	

General Comment

Usability Category

Damage Intensity	Posting	Usability Category	Remarks
Light damage *Low risk*	Inspected (Green)	G1. Occupiable, no immediate further investigation required	
		G2. Occupiable, repairs required	
Medium damage *Medium risk*	Restricted Use (Yellow)	Y1. Short term entry	
		Y2. No entry to parts until repaired or demolished	
Heavy damage *High risk*	Unsafe (Red)	R1. Significant damage: repairs, strengthening possible	Concern about Unreinforced Masonry Section. Building Repairs to be made before re-assessment.
		R2. Severe damage: demolition likely	
		R3. At risk from adjacent premises or from ground failure	

Sketch (optional)
Provide a sketch of the entire building or damage points. Indicate damage points.

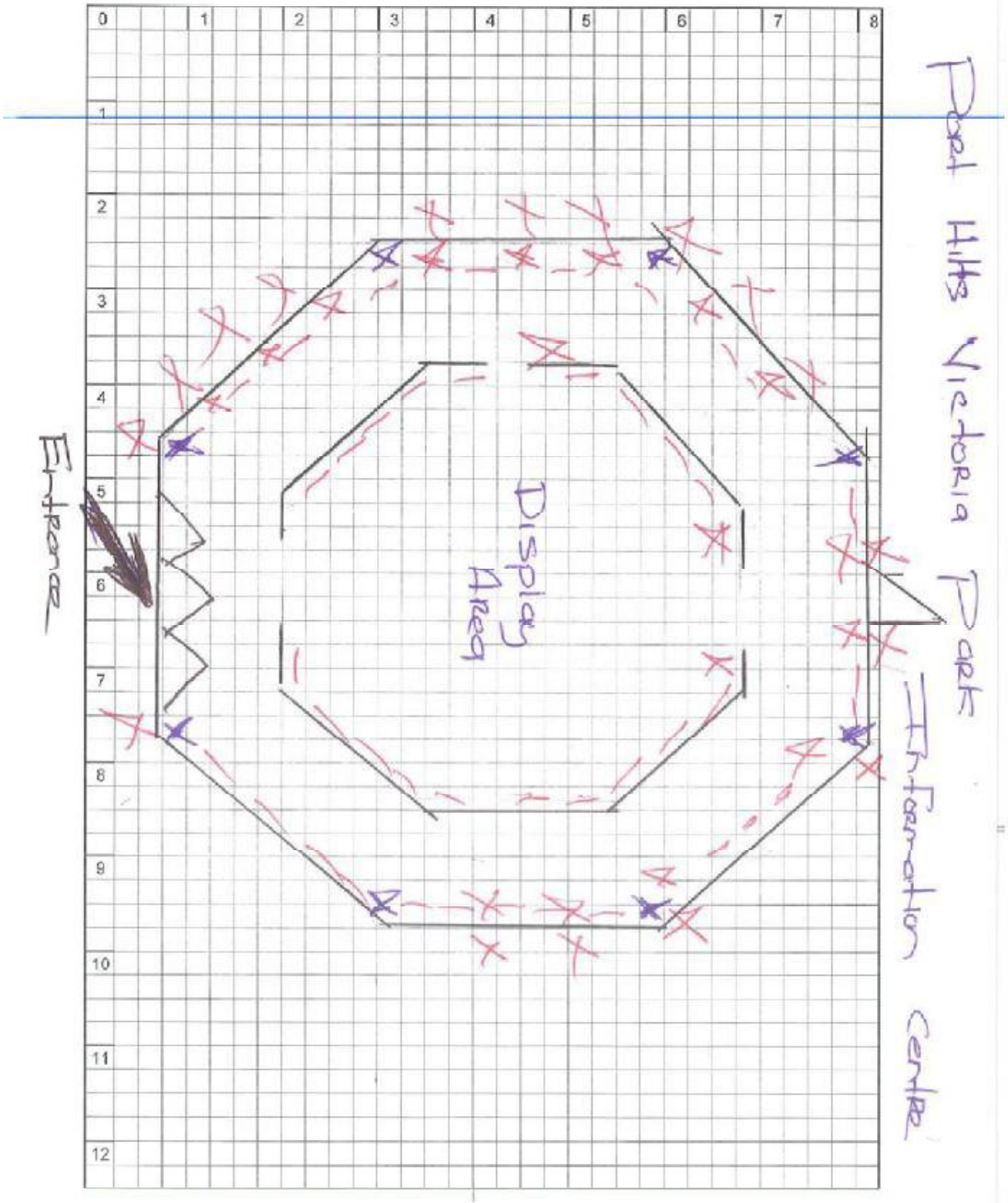


Recommendations for Repair and Reconstruction or Demolition (Optional)

Investigate and repair masonry section at centre of building. Check gauged arches, and circular arches. Check bearing of roof beam on brickwork. Repair cracks in brickwork and steel bolts have been displaced. Remove glass display panels - repair where bolts have pulled out of brickwork. — reassess when repairs complete.

 Inspection ID: _____ *(Office Use Only)*

Site Plan



Scale 1:50

APPENDIX E

VICTORIA PARK VISITORS CENTRE CHRISTCHURCH

DESIGN FEATURES REPORT

55 Dunlop Road, Onekawa, Napier
PO Box 3315, Napier, 4142, New Zealand
P (06) 842 0111 F (06) 842 0113
Einfo@structuralconcepts.co.nz

Design Features Report

Scope

In general terms, the scope of work is as follows:
Provide design check for unreinforced stone/brick structure and assess strength in terms of current NBS

Means of compliance

The following standards have been used:
- NZS 1170.0:2002
- NZS 1170.1:2002
- NZS 1170.5:2004 with a zone factor of 0.3
- NZS 3602:2003

NZSEE - Assessment & Improvement of URM Buildings for Earthquake Resistance Feb 2011
NZSEE - Assessment & Improvement of URM Buildings for Earthquake Resistance Feb 2006, where the newer version is incomplete or not applicable.
Guidance from FEMA 356, 2000

THE STRUCTURE

General

The building is a single storey octagonal structure consisting of stone walls to the outer octagonal ring extending 2.1m high, with unreinforced brick walls to an inner octagonal ring extending 4.0m in height. It has timber framed roof structure with corrugated iron roofing over a nominal sarking roof diaphragm at lower and upper levels. The building is shown in the attached plans in appendix C and is approximately 125m2 of ground floor. The building was first constructed in the early 1900's as the inner octagonal structure with the outer stone walls and roof structures aded at a later date. Joinery and windows were added in 1995.

Chosen Design Life	50 Years
Chosen Importance Level	2
Annual Probability of exceedance (inverse) Ultimate	500
Annual Probability of exceedance (inverse) Service	25

Design Features Report

Gravity structure

Load paths: → → →

Trusses/rafters | roof diaphragm | Walls | foundations

Lateral load resisting structure

Across the building

Roof → roof diaphragm → In-plane Masonry or Stone walls → foundations

Along the building

Roof → roof diaphragm → In-plane Masonry or Stone walls → foundations

Significant Design Features

The significant design features in thsi building include:

1. the connections between diaphragm and walls to stone and brick walls.
2. the installation of a complete tie ring at the lower and upper roof levels around the brick walls

SOIL CONDITIONS

A Soils investigation and report with recommendations is recomended. A present we have assumed from our own observations that there are no significant soil issues that affect the structural performance of this building.

DESIGN LOADS

Vertical loads

All Dead loads are listed on the gravity loads sheet at the front of these calculations.

All Live loads are listed on the gravity loads sheet at the front of these calculations.

Lateral Loads

Wind

Site wind speed NA Ult (m/s)

Seismic loads

Analysis methodology

The seismic analysis has been completed in accordance with NZS 1170.5:2004. Design Spectra are in accordance with NZS 1170.5:2004 for site sub soil class B. Analysis has been completed using the Equivalent Static Method for bracing.

Across the building

Structural ductility factor (Ultimate)	μ	2.00
Structural Performance factor (Ultimate)	Sp	0.70

Along the building

Structural ductility factor (Ultimate)	μ	2.00
Structural Performance factor (Ultimate)	Sp	0.70

SOFTWARE

The following computer applications were used for the design:

Analysis type	Software used
Stuctural analysis	Excel 2009
Structural design	Excel 2009

Significant or Special Construction Features

Diaphragm connections.
Continuous tie ring at roof levels.

APPENDIX F

VICTORIA PARK VISITORS CENTRE CHRISTCHURCH

PRELIMINARY CALCULATIONS

55 Dunlop Road, Onekawa, Napier
PO Box 3315, Napier, 4142, New Zealand
P (06) 842 0111 F (06) 842 0113
Einfo@structuralconcepts.co.nz

emajineer
Structural Concepts

Client: Christchurch City Council

Project: Victoria Park Visitors Centre
Victoria Park Rd, Christchurch

Ref: 1676

Date: 21-Jan-12

CALCULATIONS

BY GARRY NEWTON
BE (Civil) , MIPENZ(Civil, Structural), CPEng, IntPE(NZ)

CONTENTS

55 Dunlop Road, Onekawa, Napier
PO Box 3315, Napier, 4142, New Zealand
P (06) 842 0111 F (06) 842 0113
E info@structuralconcepts.co.nz

www.structuralconcepts.co.nz

Design Features Report

Scope

In general terms, the scope of work is as follows:
Provide design check for unreinforced stone/brick structure and assess strength in terms of current NBS

Means of compliance

The following standards have been used:
- NZS 1170.0:2002
- NZS 1170.1:2002
- NZS 1170.5:2004 with a zone factor of 0.3
- NZS 3602:2003

NZSEE - Assessment & Improvement of URM Buildings for Earthquake Resistance Feb 2011
NZSEE - Assessment & Improvement of URM Buildings for Earthquake Resistance Feb 2006, where the newer version is incomplete or not applicable.
Guidance from FEMA 356, 2000

THE STRUCTURE

General

The building is a single storey octagonal structure consisting of stone walls to the outer octagonal ring extending 2.1m high, with unreinforced brick walls to an inner octagonal ring extending 4.0m in height. It has timber framed roof structure with corrugated iron roofing over a nominal sarking roof diaphragm at lower and upper levels. The building is shown in the attached plans in appendix C and is approximately 125m2 of ground floor. The building was first constructed in the early 1900's as the inner octagonal structure with the outer stone walls and roof structures aded at a later date. Joinery and windows were added in 1995.

Chosen Design Life	50 Years
Chosen Importance Level	2
Annual Probability of exceedance (inverse) Ultimate	500
Annual Probability of exceedance (inverse) Service	25

Design Features Report

Gravity structure

Load paths: → → →

Trusses/rafters | roof diaphragm | Walls | foundations

Lateral load resisting structure

Across the building

Roof → roof diaphragm → In-plane Masonry or Stone walls → foundations

Along the building

Roof → roof diaphragm → In-plane Masonry or Stone walls → foundations

Significant Design Features

The significant design features in thsi building include:

1. the connections between diaphragm and walls to stone and brick walls.
2. the installation of a complete tie ring at the lower and upper roof levels around the brick walls

SOIL CONDITIONS

A Soils investigation and report with recommendations is recomended. A present we have assumed from our own observations that there are no significant soil issues that affect the structural performance of this building.

DESIGN LOADS

Vertical loads

All Dead loads are listed on the gravity loads sheet at the front of these calculations.

All Live loads are listed on the gravity loads sheet at the front of these calculations.

Lateral Loads

Wind

Site wind speed NA Ult (m/s)

Seismic loads

Analysis methodology

The seismic analysis has been completed in accordance with NZS 1170.5:2004. Design Spectra are in accordance with NZS 1170.5:2004 for site sub soil class B. Analysis has been completed using the Equivalent Static Method for bracing.

Across the building

Structural ductility factor (Ultimate)	μ	2.00
Structural Performance factor (Ultimate)	Sp	0.70

Along the building

Structural ductility factor (Ultimate)	μ	2.00
Structural Performance factor (Ultimate)	Sp	0.70

SOFTWARE

The following computer applications were used for the design:

Analysis type	Software used
Stuctural analysis	Excel 2009
Structural design	Excel 2009

Significant or Special Construction Features

Diaphragm connections.
Continuous tie ring at roof levels.

emajineer
Structural Concepts

Client: Christchurch City Council
Project: Victoria Park Visitors Centre
Victoria Park Rd, Christchurch
Subject: Gravity Loads

Ref: 1676
Date: 21/1/12
BY: GN

Sheet No.: 5

Loads

Roof

Corr/Trimdek Galv	0.061
Timber 15.6	0.069
Purlins 05 1.2	0.011
25mm Sarking	0.246
	0.387 kPa
0.387 / Cos 10 =	0.393 kPa

External Stone Walls

380 Stone	9.500
	9.500 kPa

Internal 350 Brick Walls

350 Med Brick	7.700
	7.700 kPa

Live loads

R2 Roofs	0.25	kPa

emajineer
Structural Concepts

Client: Christchurch City Council
Project: Victoria Park Visitors Centre
Victoria Park Rd, Christchurch
Subject: EQ Static 1170.5

Ref: 1676
Date: 21/1/12
BY: GN

Seismic Loads to NZS 1170.5

Sheet No.: 6

Ref:	Design	Output

Design working live 50 Years

Importance level 2

Annual Probability of exceedance (inverse) Ultimate 500

Annual Probability of exceedance (inverse) Service 25

Element			Area/length	Load Kpa	Total kN
Roof			200.00	0.39	78.68
			300.00	7.70	2310.00
			1.00	0.30	0.30
			0.00	0.30	0.00
			0.00	0.30	0.00
			0.00	0.30	0.00
	1.00	0.40	0.00	0.00	0.00

2388.98 kN

Live load reduction

Total floor area 0.0

$$.3+\frac{3}{\sqrt{A}} = 1.000$$

But not less than .5

Internal 350 Brick Walls

Total building weight
2388.98 kN

emajineer
Structural Concepts

Client: Christchurch City Council
Project: Victoria Park Visitors Centre
Victoria Park Rd, Christchurch
Subject: EQ Static 1170.5

Ref: 1676
Date: 21/1/12
BY: GN

Sheet No.: 7

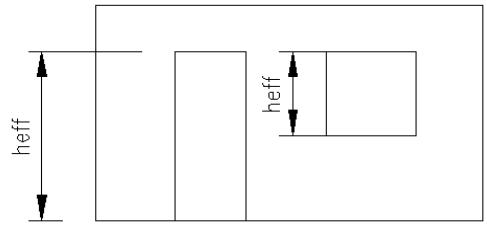
Ref:	Design				Output
	Soil type				
	A. Strong Rock & B. Rock				
	Across the building				
	Period of building across the building		0.40		
	Does the seismic bracing have ductile capabilities but is designed as nominally ductile				☑
	Structural ductility factor (Ultimate)	m =	2.00		
	Structural ductility factor (Service SLS1)	m =	1.25		
	Hazard Factor Christchurch	Z =	0.3		
	Return period factor	Ru =	1.00		
	Return period factor	Rs =	0.25		
	Structural Performance factor (Ultimate)	Sp =	0.70		
	Structural Performance factor (Service)	Sp =	0.70		
	Spectral Shape Factor (across)	Ch(T) =	1.89		
	Near Fault factor	N(T,D) =	1.0	n/a	
	Elastic site spectra (Ultimate)	C(T) =	0.57		
	Elastic site spectra (Service)	C(T) =	0.14		
	Ultimate	km =	1.57		
	Service	km =	1.14		
	Ultimate				
	Horizontal design action coefficients (Across)	Cd(T1) =	0.25	But not less than 0.030Ru	
	Ultimate force across the building	Cd(T1) x Wi =	603.39	kN Total	
	Service				
	Horizontal design action coefficients (Across)	Cd(T1) =	0.09		
	Service force across the building	Cd(T1) x Wi =	207.42	kN Total	
	Along the building				
	Period of building along the building		0.40		
	Does the seismic bracing have ductile capabilities but is designed as nominally ductile				☑
	Structural ductility factor (Ultimate)	m =	2.00		
	Structural ductility factor (Service SLS1)	m =	1.25		
	Structural Performance factor (Ultimate)	Sp =	0.70		
	Spectral Shape Factor (across)	Ch(T) =	1.89		
	Near Fault factor	N(T,D) =	1.0		
	Elastic site spectra (Ultimate)	C(T) =	0.57		
	Elastic site spectra (Service)	C(T) =	0.14		
	Ultimate	km =	1.57		
	Service	km =	1.14		
	Ultimate				
	Horizontal design action coefficients (Across)	Cd(T1) =	0.25	But not less than 0.030Ru	
	Ultimate force along the building	Cd(T1) x Wi =	603.39	kN Total	
	Service				
	Horizontal design action coefficients (Across)	Cd(T1) =	0.09		
	Service force across the building	Cd(T1) x Wi =	207.42	kN Total	

emajineer Structural Concepts

Client: Christchurch City Council
Project: Victoria Park Visitors Centre
Victoria Park Rd, Christchurch
Subject: Masonry Inplane Loading (Main)

Ref: 1676
Date: 21/1/12
BY: GN

In-Plane strength of walls and piers to FEMA URM seismic guidelines — Sheet No.: 8

Ref:	Design				Output
	The following calculation follows the FEMA 273 guild lines for seismic rehabilitation of existing unreinforced masonry buildings (URM). This calculation is for piers or walls between window and door openings. Typically these piers are limited by diagonal tension in the panel or toe compressive stress, but bed-joint sliding shear or expected rocking strength can also limit the capacity.				
					
	Effective height and pier geometry may vary in the same wall assembly				
	Expected axial gravity force on pier		P_{CE}	54.92 kN	
	Pier dimentions				
	Effective height of pier		h_{eff}	2.60 m	
	Pier length (net mortared length)		L	1.00 m	
	Pier thickness (net mortared width)		T_m	330 mm	
	Net mortared area			330000 mm²	
	Average bed-joint shear strength		V_{te}	1.25 Mpa	
(7-1)	Expected shear strength	$\frac{0.75\left(0.75vte+\frac{Pce}{An}\right)}{1.5}$	= V_{me}	0.552 Mpa	
	Expected lateral strength is the lesser of:-				
(7-3)	Bed-joint shear strength	$V_{me} \times A_n$ =	Q_{CE}	182.1 kN	
	a = 0.5 for cantilever or 1.0 for fixed pier		a	1.0	
(7-4)	Expected rocking strength	$.9\alpha Pce\left(\frac{L}{heff}\right)$ =	Q_{CE}	19.0 kN	
	Masonry compressive strength		f_m	4.0 Mpa	
	Diagonal tension strength				
	$V_{me} = f_{dt}$ in eq. (7-5) only		f_{dt}	0.552 Mpa	
	Vertical axial compressive stress		f_a	0.166 Mpa	
	Aspect ratio	(L / heff) =		0.38	

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Structural Concepts

Client: Christchurch City Council
Project: Victoria Park Visitors Centre
Victoria Park Rd, Christchurch
Subject: Masonry Inplane Loading (Main)

Ref: 1676
Date: 21/1/12
BY: GN

In-Plane strength of walls and piers continued

Sheet No.: 9

Ref:	Design				Output
	Expected lateral strength of pier is lesser of:-				
(7-5)	Diagonal tenson stress				
	$Vdt = fdt.An\left(\frac{L}{heff}\right)\sqrt{1+\frac{fa}{fdt}}$	=	Q_{CL}	79.9 kN	
(7-6)	Toe compressive stress				
	$Vtc = \alpha Pcl\left(\frac{L}{heff}\right)\left(1-\frac{fa}{0.7\,fm}\right)$	=	Q_{CL}	19.9 kN	
	The govening lateral force for this pier is			19.0 kN	
	Actural force on pier is			38.7 kN	
	% of NBS, proportion of NZS1170.5		%NBS	49 %	
				Moderate hazard	

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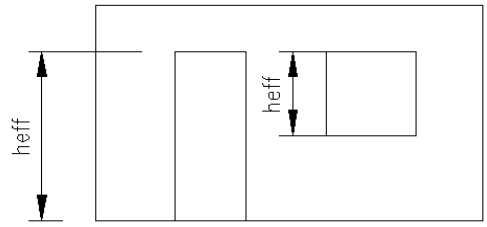
Client: Christchurch City Council
Project: Victoria Park Visitors Centre
Victoria Park Rd, Christchurch
Subject: Masonry Inplane Loading (Upper)

Ref: 1676
Date: 21/1/12
BY: GN

In-Plane strength of walls and piers to FEMA URM seismic guidelines — Sheet No.: 10

Ref:	Design				Output
	The following calculation follows the FEMA 273 guild lines for seismic rehabilitation of existing unreinforced masonry buildings (URM). This calculation is for piers or walls between window and door openings. Typically these piers are limited by diagonal tension in the panel or toe compressive stress, but bed-joint sliding shear or expected rocking strength can also limit the capacity.				
					
	Effective height and pier geometry may vary in the same wall assembly				
	Expected axial gravity force on pier		P_{CE}	15	kN
	Pier dimentions				
	Effective height of pier		h_{eff}	1.00	m
	Pier length (net mortared length)		L	1.00	m
	Pier thickness (net mortared width)		T_m	330	mm
	Net mortared area			330000	mm²
	Average bed-joint shear strength		V_{te}	1.25	Mpa
(7-1)	Expected shear strength $\frac{0.75\left(0.75vte+\frac{Pce}{An}\right)}{1.5}$	=	Vme	0.491	Mpa
	Expected lateral strength is the lesser of:-				
(7-3)	Bed-joint shear strength	$V_{me} \times A_n$ =	Q_{CE}	162.2	kN
	a = 0.5 for cantilever or 1.0 for fixed pier		a	1.0	
(7-4)	Expected rocking strength $.9\alpha Pce\left(\frac{L}{heff}\right)$	=	Q_{CE}	13.5	kN
	Masonry compressive strength		f_m	4.0	Mpa
	Diagonal tension strength				
	$V_{me} = f_{dt}$ in eq. (7-5) only		f_{dt}	0.491	Mpa
	Vertical axial compressive stress		f_a	0.045	Mpa
	Aspect ratio	(L / heff) =		1.00	

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Client: Christchurch City Council
Project: Victoria Park Visitors Centre
Victoria Park Rd, Christchurch
Subject: Masonry Inplane Loading (Upper)

Ref: 1676
Date: 21/1/12
BY: GN

In-Plane strength of walls and piers continued

Sheet No.: 11

Ref:	Design				Output
	Expected lateral strength of pier is lesser of:-				
(7-5)	Diagonal tenson stress				
	$Vdt = fdt.An\left(\frac{L}{heff}\right)\sqrt{1+\frac{fa}{fdt}}$	=	Q_{CL}	169.5 kN	
(7-6)	Toe compressive stress				
	$Vtc = \alpha Pcl\left(\frac{L}{heff}\right)\left(1-\frac{fa}{0.7\,fm}\right)$	=	Q_{CL}	14.8 kN	
	The govening lateral force for this pier is			13.5 kN	
	Actural force on pier is			19.5 kN	
	% of NBS, proportion of NZS1170.5		%NBS	69 %	
				Low Hazard	

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Client: Christchurch City Council | Ref: 1676
Project: Victoria Park Visitors Centre | Date: 21/1/12
Victoria Park Rd, Christchurch | BY: GN
Subject: Check Lower Inner Masonry Walls for face loads

Vertically spanning wall panel out-of-plane dynamic loads to NZSEE | Sheet No.: 12

Ref:	Design				Output
	Height of the upper most seismic mass	hn	4.0	m	
	Height of support for wall (from ground level)	hi	0.0	m	
	Mass of masonry used in design		22.0	kN/m³	
	Height of panel between supports	h	3.0	m	
	Length of panel between supporting walls	L	1.1	m	
	Thickness of wall	t_{nom}	350.0	mm	
	Weight acting on top of the panel	P	59.0	kN	
	Assuming a hinge forms at mid height of the panel we have:-				
	Weight of top part of panel	Wt	12.7	kN	
	Weight of Bottom part of panel	Wb	12.7	kN	
(3)	Effective thickness of wall (.975 - 0.025P/W) =	t	320.9	mm	
	Eccentricities				
	Eccentricity of P measured from centroid of Wt	e_p	160.5	mm	
	Eccentricity of bott pivot measured from centroid of Wb	e_b	160.5	mm	
	Eccentricity of mid-height pivot measured centroid of Wt	e_t	160.5	mm	
	Eccentricity of mid-height pivot measured centroid of Wb	e_o	160.5	mm	
	Mid-Height deflection				
10(7)	$\frac{bh}{2a}$ = Di				
	Where:-				
	$b = W_b.e_b + Wt(e_o+e_b+e_t) + P(e_o+e_b+e_t+e_p) - C(W_by_b + W_tY_t)$				
	$a = W_b.y_b + Wt(h/2 + Y_t) + Ph$				
	Interstorey slope divided by storey height	C	0.01	% Drift	
	Vertical Eccentricity of Wt to top pivot	Y_t	750	mm	
	Vertical Eccentricity of Wb to bottom pivot	Y_b	750	mm	
10(8)	Coefficient for formula 10(8)	b	45834.5		
10(9)	Coefficient for formula 10(9)	a	215115		
10(7)	Instability deflection is:- $\frac{bh}{2a}$ =	Di	320	mm	
	Maximum usable deflection is	.6Di	191.8	mm	
10(10)	Approximate period of vibration	Tp	0.884	s	
	Seismic coefficient for elastically responding part				
	Design working live		50 Years		
	Importance level				
	Annual Probability of exceedance (inverse) Ultimate		500		
	Soil type: A. Strong Rock & B. Rock	Location: Christchurch			
	For Parts				
	Floor acceleration is such to causing yielding of part See table C8.2				
(8)	Structural ductility of part (Table C8.2)	mp=	1.00		NZSEE recommendation

emajineer Structural Concepts

Client: Christchurch City Council | Ref: 1676
Project: Victoria Park Visitors Centre | Date: 21/1/12
Victoria Park Rd, Christchurch | BY: GN
Subject: Check Lower Inner Masonry Walls for face loads

Vertically spanning wall panel out-of-plane continued | Sheet No.: 13

Ref:	Design				Output
T 3.3	Hazard Factor	Z =	0.3		
T 3.5	Return period factor	Ru =	1.00		
T 3.1	Spectral Shape Factor for parts	Ch(0) =	1.00		
T 3.7	Near Fault factor	N(T,D) =	1.0		
	Site Hazard coefficient Ch(0) x Z x R x N(T,D) =	C(0) =	0.30		
T. 8.1	Part risk factor	Rp	1.0		
8.3	Floor height coefficient				
	Eq 8.3(1) $\left(1+\frac{hi}{6}\right)$	Chi	1.000		
	Eq 8.3(2) $\left(1+10\frac{hi}{hn}\right)$	Chi	1.0		
		Chi	1.000		
	Period of part	Tp	0.88	Sec	
8.4	Part spectral shape coefficient	Ci(Tp)	1.7		
8.2	Design response coefficient for wall				
	C(0).Chi.Ci(Tp) =	Cp(Tp)	0.52		
(9)	Participation factor for rocking system				
	Rotational inertia of the mass				
	$Jbo + Jto + \frac{1}{g}\left[Wb\left[eb^2 + yb^2\right] + Wt\left[(eo+eb+et)^2 + yt^2\right] + P\left[(eo+eb+et+ep)^2\right]\right] + Janc$				
	And is:-	J	4277		
10(12)	Participation factor $\frac{(Wb.yb + Wt.yt)h}{2Jg}$ =	g	0.681		
	Displacement response $\frac{\gamma(Tp/2\pi)^2.Dp(Tp).Rp.g}{}$ =	Dph	0.067		
	% of NBS, proportion of NZS1170.5 $[(1.2)(0.6)\Delta i]/Dph$ =	%NBS	343.3	%	
			Low Hazard		NZSEE guidelines

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Client: Christchurch City Council | Ref: 1676
Project: Victoria Park Visitors Centre | Date: 21/1/12
Victoria Park Rd, Christchurch | BY: GN
Subject: Check Upper Masonry Section for face loading

Vertically spanning wall panel out-of-plane dynamic loads to NZSEE | Sheet No.: 14

Ref:	Design					Output
	Height of the upper most seismic mass		hn	4.0	m	
	Height of support for wall (from ground level)		hi	3.0	m	
	Mass of masonry used in design			22	kN/m³	
	Height of panel between supports		h	1.20	m	
	Length of panel between supporting walls		L	2.00	m	
	Thickness of wall		t_{nom}	350.00	mm	
	Weight acting on top of the panel		P	2.40	kN	
	Assuming a hinge forms at mid height of the panel we have:-					
	Weight of top part of panel		Wt	4.6	kN	
	Weight of Bottom part of panel		Wb	4.6	kN	
(3)	Effective thickness of wall	(.975 - 0.025P/W) =	t	339.0	mm	
	Eccentricities					
	Eccentricity of P measured from centroid of Wt		e_p	169.5	mm	
	Eccentricity of bott pivot measured from centroid of Wb		e_b	169.5	mm	
	Eccentricity of mid-height pivot measured centroid of Wt		e_t	169.5	mm	
	Eccentricity of mid-height pivot measured centroid of Wb		e_o	169.5	mm	
	Mid-Height deflection					
10(7)	$\frac{bh}{2a}$ = Di					
	Where:-					
	$b = W_b.e_b + Wt(e_o+e_b+e_t) + P(e_o+e_b+e_t+e_p) - C(W_by_b + W_tY_t)$					
	$a = W_b.y_b + Wt(h/2 + Y_t) + Ph$					
	Interstorey slope divided by storey height		C	0.01	% Drift	
	Vertical Eccentricity of Wt to top pivot		Y_t	300	mm	
	Vertical Eccentricity of Wb to bottom pivot		Y_b	300	mm	
10(8)	Coefficient for formula 10(8)		b	4731.5		
10(9)	Coefficient for formula 10(9)		a	8424		
10(7)	Instability deflection is:-	$\frac{bh}{2a}$ =	Di	337	mm	
	Maximum usable deflection is		.6Di	202.2	mm	
10(10)	Approximate period of vibration		Tp	1.250	s	
	Seismic coefficient for elastically responding part					
	Design working live			50 Years		
	Importance level			2		
	Annual Probability of exceedance (inverse) Ultimate			500		
	Soil type: A. Strong Rock & B. Rock	Location: Christchurch				
	For Parts					
	Floor acceleration is such to causing yielding of part See table C8.2					
(8)	Structural ductility of part (Table C8.2)		mp=	1.00		NZSEE recommendation

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Client: Christchurch City Council — Ref: 1676
Project: Victoria Park Visitors Centre — Date: 21/1/12
Victoria Park Rd, Christchurch — BY: GN
Subject: Check Upper Masonry Section for face loading

Vertically spanning wall panel out-of-plane continued — Sheet No.: 15

Ref:	Design				Output
T 3.3	Hazard Factor	Z =	0.3		
T 3.5	Return period factor	Ru =	1.00		
T 3.1	Spectral Shape Factor for parts	Ch(0) =	1.00		
T 3.7	Near Fault factor	N(T,D) =	1.0		
	Site Hazard coefficient Ch(0) x Z x R x N(T,D) =	C(0) =	0.30		
T. 8.1	Part risk factor	Rp	1.0		
8.3	Floor height coefficient				
	Eq 8.3(1) $\left(1+\frac{hi}{6}\right)$	Chi	1.500		
	Eq 8.3(2) $\left(1+10\frac{hi}{hn}\right)$	Chi	8.5		
		Chi	1.500		
	Period of part	Tp	1.25	Sec	
8.4	Part spectral shape coefficient	Ci(Tp)	1.0		
8.2	Design response coefficient for wall				
	C(0).Chi.Ci(Tp) =	Cp(Tp)	0.45		
(9)	Participation factor for rocking system				
	Rotational inertia of the mass				
	$Jbo + Jto + \frac{1}{g}\left[Wb\left[eb^2 + yb^2\right] + Wt\left[(eo+eb+et)^2 + yt^2\right] + P\left[(eo+eb+et+ep)^2\right]\right] + Janc$				
	And is:-	J	335		
10(12)	Participation factor $\frac{(Wb.yb + Wt.yt)h}{2Jg}$ =	g	0.506		
	Displacement response $\frac{\gamma(Tp/2\pi)^2.Dp(Tp).Rp.g}{}$ =	Dph	0.086		
	% of NBS, proportion of NZS1170.5 $[(1.2)(0.6)\Delta i]/Dph$ =	%NBS	281.3	%	
			Low Hazard		NZSEE guidelines

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Structural Concepts

Client: Christchurch City Council
Project: Victoria Park Visitors Centre
Victoria Park Rd, Christchurch
Subject: Check Stone Walls for face loading

Ref: 1676
Date: 21/1/12
BY: GN

Vertically spanning wall panel out-of-plane dynamic loads to NZSEE

Sheet No.: 16

Ref:	Design					Output
	Height of the upper most seismic mass		hn	2.1	m	
	Height of support for wall (from ground level)		hi	0.0	m	
	Mass of masonry used in design			22	kN/m³	
	Height of panel between supports		h	2.1	m	
	Length of panel between supporting walls		L	4.50	m	
	Thickness of wall		t_{nom}	350.00	mm	
	Weight acting on top of the panel		P	5.40	kN	
	Assuming a hinge forms at mid height of the panel we have:-					
	Weight of top part of panel		Wt	36.4	kN	
	Weight of Bottom part of panel		Wb	36.4	kN	
(3)	Effective thickness of wall	(.975 - 0.025P/W) =	t	340.6	mm	
	Eccentricities					
	Eccentricity of P measured from centroid of Wt		e_p	170.3	mm	
	Eccentricity of bott pivot measured from centroid of Wb		e_b	170.3	mm	
	Eccentricity of mid-height pivot measured centroid of Wt		e_t	170.3	mm	
	Eccentricity of mid-height pivot measured centroid of Wb		e_o	170.3	mm	
	Mid-Height deflection					
10(7)	$\frac{bh}{2a}$ = Di					
	Where:-					
	$b = W_b.e_b + Wt(e_o+e_b+e_t) + P(e_o+e_b+e_t+e_p) - C(W_by_b + W_tY_t)$					
	$a = W_b.y_b + Wt(h/2 + Y_t) + Ph$					
	Interstorey slope divided by storey height		C	0.01	% Drift	
	Vertical Eccentricity of Wt to top pivot		Y_t	1050	mm	
	Vertical Eccentricity of Wb to bottom pivot		Y_b	1050	mm	
10(8)	Coefficient for formula 10(8)		b	27698.3		
10(9)	Coefficient for formula 10(9)		a	175486.5		
10(7)	Instability deflection is:-	$\frac{bh}{2a}$ =	Di	331	mm	
	Maximum usable deflection is		.6Di	198.9	mm	
10(10)	Approximate period of vibration		Tp	1.461	s	
	Seismic coefficient for elastically responding part					
	Design working live			50 Years		
	Importance level			2		
	Annual Probability of exceedance (inverse) Ultimate			500		
	Soil type: A. Strong Rock & B. Rock	Location: Christchurch				
	For Parts					
	Floor acceleration is such to causing yielding of part See table C8.2					
(8)	Structural ductility of part (Table C8.2)		mp=	1.00		NZSEE recommendation

emajineer Structural Concepts

Client: Christchurch City Council | Ref: 1676
Project: Victoria Park Visitors Centre | Date: 21/1/12
Victoria Park Rd, Christchurch | BY: GN
Subject: Check Stone Walls for face loading

Vertically spanning wall panel out-of-plane continued | Sheet No.: 17

Ref:	Design				Output
T 3.3	Hazard Factor	Z =	0.3		
T 3.5	Return period factor	Ru =	1.00		
T 3.1	Spectral Shape Factor for parts	Ch(0) =	1.00		
T 3.7	Near Fault factor	N(T,D) =	1.0		
	Site Hazard coefficient Ch(0) x Z x R x N(T,D) =	C(0) =	0.30		
T. 8.1	Part risk factor	Rp	1.0		
8.3	Floor height coefficient				
	Eq 8.3(1) $\left(1+\frac{hi}{6}\right)$	Chi	1.000		
	Eq 8.3(2) $\left(1+10\frac{hi}{hn}\right)$	Chi	1.0		
		Chi	1.000		
	Period of part	Tp	1.46	Sec	
8.4	Part spectral shape coefficient	Ci(Tp)	0.6		
8.2	Design response coefficient for wall				
	C(0).Chi.Ci(Tp) =	Cp(Tp)	0.17		
(9)	Participation factor for rocking system				
	Rotational inertia of the mass				
	$Jbo + Jto + \frac{1}{g}\left[Wb\left[eb^2 + yb^2\right] + Wt\left[(eo+eb+et)^2 + yt^2\right] + P\left[(eo+eb+et+ep)^2\right]\right] + Janc$				
	And is:-	J	9525		
10(12)	Participation factor $\frac{(Wb.yb + Wt.yt)h}{2Jg}$ =	g	1.717		
	Displacement response $\frac{\gamma(Tp/2\pi)^2.Dp(Tp).Rp.g}{}$ =	Dph	0.154		
	% of NBS, proportion of NZS1170.5 $[(1.2)(0.6)\Delta i]/Dph$ =	%NBS	154.9	%	
			Low Hazard		NZSEE guidelines

ANALYSIS STATUS REPORT

Job name ..... 1676 120121 sga
Location ..... F:\Engineers\Garry Newton Ltd\1676\Design\Computer Analysis

Length units	m
Section property units	mm
Material strength units	MPa
Mass density units	T/m^3
Temperature units	Celsius
Force units	kN
Moment units	kNm
Mass units	T
Acceleration units	g's
Translation units	mm
Stress units	MPa

Nodes	152	(32765)
Members	224	(32765)
Plates	0	(32765)
Restrained nodes	8	(32765)
Nodes with spring restraints	0	(32765)
Section properties	3	(999)
Material properties	1	(999)
Constrained nodes	0	(32765)
Member offsets	0	(32765)
Node loads	24	(32765)
Prescribed node displacements	0	(32765)
Member concentrated loads	0	(32765)
Member distributed forces	96	(32765)
Member distributed torsions	0	(32765)
Thermal loads	0	(32765)
Member prestress loads	0	(32765)
Plate pressure loads	0	(32765)
Self weight load cases	1	(999)
Combination load cases	3	(999)
Load cases with titles	5	(999)
Lumped masses	0	(32765)
Spectral load cases	0	(999)
Static analysis	Y	
Dynamic analysis	N	
Response analysis	N	
Buckling analysis	N	
Ill-conditioned	N	
Non-linear convergence	Y	
Frontwidth	54	
Total degrees of freedom	864	
Static load cases	2	(999)
Mass load cases	1	(999)

NODE COORDINATES (m)

Node	X Coord	Y Coord	Z Coord
1	0.000	0.000	3.410
2	2.411	0.000	2.411
3	3.410	0.000	0.000
4	2.411	0.000	-2.411
5	0.000	0.000	-3.410
6	-2.411	0.000	-2.411
7	-3.410	0.000	0.000
8	-2.411	0.000	2.411
9	0.000	2.300	3.410
10	2.411	2.300	2.411
11	3.410	2.300	0.000
12	2.411	2.300	-2.411
13	0.000	2.300	-3.410
14	-2.411	2.300	-2.411
15	-3.410	2.300	0.000
16	-2.411	2.300	2.411
17	0.000	3.300	3.410
18	2.411	3.300	2.411
19	3.410	3.300	0.000
20	2.411	3.300	-2.411
21	0.000	3.300	-3.410
22	-2.411	3.300	-2.411
23	-3.410	3.300	0.000
24	-2.411	3.300	2.411
25	0.000	3.900	3.410
26	2.411	3.900	2.411
27	3.410	3.900	0.000
28	2.411	3.900	-2.411
29	0.000	3.900	-3.410
30	-2.411	3.900	-2.411
31	-3.410	3.900	0.000
32	-2.411	3.900	2.411
34	0.402	2.800	3.244
35	0.804	3.040	3.077
36	1.206	3.100	2.911
37	1.607	3.040	2.744
38	2.009	2.800	2.578
39	2.578	2.800	2.009
40	2.744	3.040	1.607
41	2.911	3.100	1.206
42	3.077	3.040	0.804
43	3.244	2.800	0.402
44	3.244	2.800	-0.402
45	3.077	3.040	-0.804
46	2.911	3.100	-1.206
47	2.744	3.040	-1.607
48	2.578	2.800	-2.009
49	2.009	2.800	-2.578
50	1.607	3.040	-2.744
51	1.206	3.100	-2.911
52	0.804	3.040	-3.077
53	0.402	2.800	-3.244
54	-0.402	2.800	-3.244
55	-0.804	3.040	-3.077
56	-1.206	3.100	-2.911
57	-1.607	3.040	-2.744
58	-2.009	2.800	-2.578
59	-2.578	2.800	-2.009
60	-2.744	3.040	-1.607
61	-2.911	3.100	-1.206
62	-3.077	3.040	-0.804
63	-3.244	2.800	-0.402
64	-3.244	2.800	0.402
65	-3.077	3.040	0.804
66	-2.911	3.100	1.206
67	-2.744	3.040	1.607
68	-2.578	2.800	2.009
69	-2.009	2.800	2.578
70	-1.607	3.040	2.744
71	-1.206	3.100	2.911
72	-0.804	3.040	3.077
73	-0.402	2.800	3.244
82	0.402	3.300	3.244
83	0.804	3.300	3.077
84	1.206	3.300	2.911
85	1.607	3.300	2.744
86	2.009	3.300	2.578
87	2.578	3.300	2.009
88	2.744	3.300	1.607
89	2.911	3.300	1.206
90	3.077	3.300	0.804
91	3.244	3.300	0.402
92	3.244	3.300	-0.402
93	3.077	3.300	-0.804
94	2.911	3.300	-1.206
95	2.744	3.300	-1.607
96	2.578	3.300	-2.009
97	2.009	3.300	-2.578
98	1.607	3.300	-2.744
99	1.206	3.300	-2.911
100	0.804	3.300	-3.077
101	0.402	3.300	-3.244
102	-0.402	3.300	-3.244
103	-0.804	3.300	-3.077
104	-1.206	3.300	-2.911
105	-1.607	3.300	-2.744
106	-2.009	3.300	-2.578
107	-2.578	3.300	-2.009
108	-2.744	3.300	-1.607
109	-2.911	3.300	-1.206
110	-3.077	3.300	-0.804
111	-3.244	3.300	-0.402
112	-3.244	3.300	0.402
113	-3.077	3.300	0.804
114	-2.911	3.300	1.206
115	-2.744	3.300	1.607
116	-2.578	3.300	2.009
117	-2.009	3.300	2.578
118	-1.607	3.300	2.744
119	-1.206	3.300	2.911
120	-0.804	3.300	3.077
121	-0.402	3.300	3.244
122	0.402	3.900	3.244
123	0.804	3.900	3.077
124	1.206	3.900	2.911
125	1.607	3.900	2.744
126	2.009	3.900	2.578
127	2.578	3.900	2.009
128	2.744	3.900	1.607
129	2.911	3.900	1.206
130	3.077	3.900	0.804
131	3.244	3.900	0.402
132	3.244	3.900	-0.402
133	3.077	3.900	-0.804
134	2.911	3.900	-1.206
135	2.744	3.900	-1.607
136	2.578	3.900	-2.009
137	2.009	3.900	-2.578
138	1.607	3.900	-2.744
139	1.206	3.900	-2.911
140	0.804	3.900	-3.077
141	0.402	3.900	-3.244
142	-0.402	3.900	-3.244
143	-0.804	3.900	-3.077
144	-1.206	3.900	-2.911
145	-1.607	3.900	-2.744
146	-2.009	3.900	-2.578
147	-2.578	3.900	-2.009
148	-2.744	3.900	-1.607
149	-2.911	3.900	-1.206
150	-3.077	3.900	-0.804
151	-3.244	3.900	-0.402
152	-3.244	3.900	0.402
153	-3.077	3.900	0.804
154	-2.911	3.900	1.206
155	-2.744	3.900	1.607
156	-2.578	3.900	2.009
157	-2.009	3.900	2.578
158	-1.607	3.900	2.744
159	-1.206	3.900	2.911
160	-0.804	3.900	3.077
161	-0.402	3.900	3.244

MEMBER DATA (deg,kNm/rad,m)
---------- (F=Fixed, R=Released) (*=Cable length)

Memb	Dir Angle	Dir Node	Dir Axis	Memb Type	Node A	Node B	Sect	Mat	Node A Fixity	Node B Fixity	Length
1	157.50			Norm	1	9	2	1	FFFFFF	FFFFFF	2.300
2	-157.50			Norm	2	10	2	1	FFFFFF	FFFFFF	2.300
3	-112.50			Norm	3	11	2	1	FFFFFF	FFFFFF	2.300
4	-67.50			Norm	4	12	2	1	FFFFFF	FFFFFF	2.300
5	-22.50			Norm	5	13	2	1	FFFFFF	FFFFFF	2.300
6	22.50			Norm	6	14	2	1	FFFFFF	FFFFFF	2.300
7	67.50			Norm	7	15	2	1	FFFFFF	FFFFFF	2.300
8	112.50			Norm	8	16	2	1	FFFFFF	FFFFFF	2.300
9	0.00			Comp	9	34	1	1	FFFFFF	FFFFFF	0.663
10	0.00			Comp	10	39	1	1	FFFFFF	FFFFFF	0.663
11	0.00			Comp	11	44	1	1	FFFFFF	FFFFFF	0.663
12	0.00			Comp	12	49	1	1	FFFFFF	FFFFFF	0.663
13	0.00			Comp	13	54	1	1	FFFFFF	FFFFFF	0.663
14	0.00			Comp	14	59	1	1	FFFFFF	FFFFFF	0.663
15	0.00			Norm	15	64	1	1	FFFFFF	FFFFFF	0.663
16	0.00			Comp	16	69	1	1	FFFFFF	FFFFFF	0.663
17	157.50			Norm	9	17	2	1	FFFFFF	FFFFFF	1.000
18	-157.50			Norm	10	18	2	1	FFFFFF	FFFFFF	1.000
19	-112.50			Norm	11	19	2	1	FFFFFF	FFFFFF	1.000
20	-67.50			Norm	12	20	2	1	FFFFFF	FFFFFF	1.000
21	-22.50			Norm	13	21	2	1	FFFFFF	FFFFFF	1.000
22	22.50			Norm	14	22	2	1	FFFFFF	FFFFFF	1.000
23	67.50			Norm	15	23	2	1	FFFFFF	FFFFFF	1.000
24	112.50			Norm	16	24	2	1	FFFFFF	FFFFFF	1.000
25	0.00			Norm	17	82	1	1	FFFFFF	FFFFFF	0.435
26	0.00			Norm	18	87	1	1	FFFFFF	FFFFFF	0.435
27	0.00			Norm	19	92	1	1	FFFFFF	FFFFFF	0.435
28	0.00			Norm	20	97	1	1	FFFFFF	FFFFFF	0.435
29	0.00			Norm	21	102	1	1	FFFFFF	FFFFFF	0.435
30	0.00			Norm	22	107	1	1	FFFFFF	FFFFFF	0.435
31	0.00			Norm	23	112	1	1	FFFFFF	FFFFFF	0.435
32	0.00			Norm	24	117	1	1	FFFFFF	FFFFFF	0.435
33	157.50			Norm	17	25	2	1	FFFFFF	FFFFFF	0.600
34	-157.50			Norm	18	26	2	1	FFFFFF	FFFFFF	0.600
35	-112.50			Norm	19	27	2	1	FFFFFF	FFFFFF	0.600
36	-67.50			Norm	20	28	2	1	FFFFFF	FFFFFF	0.600
37	-22.50			Norm	21	29	2	1	FFFFFF	FFFFFF	0.600
38	22.50			Norm	22	30	2	1	FFFFFF	FFFFFF	0.600
39	67.50			Norm	23	31	2	1	FFFFFF	FFFFFF	0.600
40	112.50			Norm	24	32	2	1	FFFFFF	FFFFFF	0.600
41	0.00			Norm	25	122	1	1	FFFFFF	FFFFFF	0.435
42	0.00			Norm	26	127	1	1	FFFFFF	FFFFFF	0.435
43	0.00			Norm	27	132	1	1	FFFFFF	FFFFFF	0.435
44	0.00			Norm	28	137	1	1	FFFFFF	FFFFFF	0.435
45	0.00			Norm	29	142	1	1	FFFFFF	FFFFFF	0.435
46	0.00			Norm	30	147	1	1	FFFFFF	FFFFFF	0.435
47	0.00			Norm	31	152	1	1	FFFFFF	FFFFFF	0.435
48	0.00			Norm	32	157	1	1	FFFFFF	FFFFFF	0.435
49	0.00			Comp	34	35	1	1	FFFFFF	FFFFFF	0.497

Memb	Dir Angle	Dir Node	Dir Axis	Memb Type	Node A	Node B	Sect	Mat	Node A Fixity	Node B Fixity	Length
50	0.00			Comp	35	36	1	1	FFFFFF	FFFFFF	0.439
51	0.00			Comp	36	37	1	1	FFFFFF	FFFFFF	0.439
52	0.00			Comp	37	38	1	1	FFFFFF	FFFFFF	0.497
53	0.00			Comp	38	10	1	1	FFFFFF	FFFFFF	0.663
54	0.00			Comp	39	40	1	1	FFFFFF	FFFFFF	0.497
55	0.00			Comp	40	41	1	1	FFFFFF	FFFFFF	0.439
56	0.00			Comp	41	42	1	1	FFFFFF	FFFFFF	0.439
57	0.00			Comp	42	43	1	1	FFFFFF	FFFFFF	0.497
58	0.00			Comp	43	11	1	1	FFFFFF	FFFFFF	0.663
59	0.00			Comp	44	45	1	1	FFFFFF	FFFFFF	0.497
60	0.00			Comp	45	46	1	1	FFFFFF	FFFFFF	0.439
61	0.00			Comp	46	47	1	1	FFFFFF	FFFFFF	0.439
62	0.00			Comp	47	48	1	1	FFFFFF	FFFFFF	0.497
63	0.00			Comp	48	12	1	1	FFFFFF	FFFFFF	0.663
64	0.00			Comp	49	50	1	1	FFFFFF	FFFFFF	0.497
65	0.00			Comp	50	51	1	1	FFFFFF	FFFFFF	0.439
66	0.00			Comp	51	52	1	1	FFFFFF	FFFFFF	0.439
67	0.00			Comp	52	53	1	1	FFFFFF	FFFFFF	0.497
68	0.00			Comp	53	13	1	1	FFFFFF	FFFFFF	0.663
69	0.00			Comp	54	55	1	1	FFFFFF	FFFFFF	0.497
70	0.00			Comp	55	56	1	1	FFFFFF	FFFFFF	0.439
71	0.00			Comp	56	57	1	1	FFFFFF	FFFFFF	0.439
72	0.00			Comp	57	58	1	1	FFFFFF	FFFFFF	0.497
73	0.00			Comp	58	14	1	1	FFFFFF	FFFFFF	0.663
74	0.00			Comp	59	60	1	1	FFFFFF	FFFFFF	0.497
75	0.00			Comp	60	61	1	1	FFFFFF	FFFFFF	0.439
76	0.00			Comp	61	62	1	1	FFFFFF	FFFFFF	0.439
77	0.00			Comp	62	63	1	1	FFFFFF	FFFFFF	0.497
78	0.00			Norm	63	15	1	1	FFFFFF	FFFFFF	0.663
79	0.00			Comp	64	65	1	1	FFFFFF	FFFFFF	0.497
80	0.00			Comp	65	66	1	1	FFFFFF	FFFFFF	0.439
81	0.00			Comp	66	67	1	1	FFFFFF	FFFFFF	0.439
82	0.00			Comp	67	68	1	1	FFFFFF	FFFFFF	0.497
83	0.00			Comp	68	16	1	1	FFFFFF	FFFFFF	0.663
84	0.00			Comp	69	70	1	1	FFFFFF	FFFFFF	0.497
85	0.00			Comp	70	71	1	1	FFFFFF	FFFFFF	0.439
86	0.00			Comp	71	72	1	1	FFFFFF	FFFFFF	0.439
87	0.00			Comp	72	73	1	1	FFFFFF	FFFFFF	0.497
88	0.00			Comp	73	9	1	1	FFFFFF	FFFFFF	0.663
97	0.00			Norm	82	83	1	1	FFFFFF	FFFFFF	0.435
98	0.00			Norm	83	84	1	1	FFFFFF	FFFFFF	0.435
99	0.00			Norm	84	85	1	1	FFFFFF	FFFFFF	0.435
100	0.00			Norm	85	86	1	1	FFFFFF	FFFFFF	0.435
101	0.00			Norm	86	18	1	1	FFFFFF	FFFFFF	0.435
102	0.00			Norm	87	88	1	1	FFFFFF	FFFFFF	0.435
103	0.00			Norm	88	89	1	1	FFFFFF	FFFFFF	0.435
104	0.00			Norm	89	90	1	1	FFFFFF	FFFFFF	0.435
105	0.00			Norm	90	91	1	1	FFFFFF	FFFFFF	0.435
106	0.00			Norm	91	19	1	1	FFFFFF	FFFFFF	0.435
107	0.00			Norm	92	93	1	1	FFFFFF	FFFFFF	0.435
108	0.00			Norm	93	94	1	1	FFFFFF	FFFFFF	0.435
109	0.00			Norm	94	95	1	1	FFFFFF	FFFFFF	0.435
110	0.00			Norm	95	96	1	1	FFFFFF	FFFFFF	0.435
111	0.00			Norm	96	20	1	1	FFFFFF	FFFFFF	0.435
112	0.00			Norm	97	98	1	1	FFFFFF	FFFFFF	0.435
113	0.00			Norm	98	99	1	1	FFFFFF	FFFFFF	0.435
114	0.00			Norm	99	100	1	1	FFFFFF	FFFFFF	0.435
115	0.00			Norm	100	101	1	1	FFFFFF	FFFFFF	0.435
116	0.00			Norm	101	21	1	1	FFFFFF	FFFFFF	0.435
117	0.00			Norm	102	103	1	1	FFFFFF	FFFFFF	0.435
118	0.00			Norm	103	104	1	1	FFFFFF	FFFFFF	0.435
119	0.00			Norm	104	105	1	1	FFFFFF	FFFFFF	0.435
120	0.00			Norm	105	106	1	1	FFFFFF	FFFFFF	0.435
121	0.00			Norm	106	22	1	1	FFFFFF	FFFFFF	0.435
122	0.00			Norm	107	108	1	1	FFFFFF	FFFFFF	0.435
123	0.00			Norm	108	109	1	1	FFFFFF	FFFFFF	0.435
124	0.00			Norm	109	110	1	1	FFFFFF	FFFFFF	0.435
125	0.00			Norm	110	111	1	1	FFFFFF	FFFFFF	0.435
126	0.00			Norm	111	23	1	1	FFFFFF	FFFFFF	0.435
127	0.00			Norm	112	113	1	1	FFFFFF	FFFFFF	0.435
128	0.00			Norm	113	114	1	1	FFFFFF	FFFFFF	0.435
129	0.00			Norm	114	115	1	1	FFFFFF	FFFFFF	0.435
130	0.00			Norm	115	116	1	1	FFFFFF	FFFFFF	0.435
131	0.00			Norm	116	24	1	1	FFFFFF	FFFFFF	0.435
132	0.00			Norm	117	118	1	1	FFFFFF	FFFFFF	0.435
133	0.00			Norm	118	119	1	1	FFFFFF	FFFFFF	0.435
134	0.00			Norm	119	120	1	1	FFFFFF	FFFFFF	0.435
135	0.00			Norm	120	121	1	1	FFFFFF	FFFFFF	0.435
136	0.00			Norm	121	17	1	1	FFFFFF	FFFFFF	0.435
137	-112.50			Norm	86	38	3	1	FFFFFF	FFFFFF	0.500
138	-67.50			Norm	37	85	3	1	FFFFFF	FFFFFF	0.260
139	-67.50			Norm	36	84	3	1	FFFFFF	FFFFFF	0.200
140	-67.50			Norm	35	83	3	1	FFFFFF	FFFFFF	0.260
141	-67.50			Norm	34	82	3	1	FFFFFF	FFFFFF	0.500
142	-22.50			Norm	39	87	3	1	FFFFFF	FFFFFF	0.500
143	-22.50			Norm	40	88	3	1	FFFFFF	FFFFFF	0.260
144	-22.50			Norm	41	89	3	1	FFFFFF	FFFFFF	0.200
145	-22.50			Norm	42	90	3	1	FFFFFF	FFFFFF	0.260
146	-22.50			Norm	43	91	3	1	FFFFFF	FFFFFF	0.500
147	-112.50			Norm	69	117	3	1	FFFFFF	FFFFFF	0.500
148	-112.50			Norm	70	118	3	1	FFFFFF	FFFFFF	0.260
149	-112.50			Norm	71	119	3	1	FFFFFF	FFFFFF	0.200
150	-112.50			Norm	72	120	3	1	FFFFFF	FFFFFF	0.260
151	-112.50			Norm	73	121	3	1	FFFFFF	FFFFFF	0.500
152	-22.50			Norm	63	111	3	1	FFFFFF	FFFFFF	0.500
153	-22.50			Norm	62	110	3	1	FFFFFF	FFFFFF	0.260
154	-22.50			Norm	61	109	3	1	FFFFFF	FFFFFF	0.200
155	-22.50			Norm	60	108	3	1	FFFFFF	FFFFFF	0.260
156	-22.50			Norm	59	107	3	1	FFFFFF	FFFFFF	0.500
157	-67.50			Norm	58	106	3	1	FFFFFF	FFFFFF	0.500
158	-67.50			Norm	57	105	3	1	FFFFFF	FFFFFF	0.260
159	-67.50			Norm	56	104	3	1	FFFFFF	FFFFFF	0.200
160	-67.50			Norm	55	103	3	1	FFFFFF	FFFFFF	0.260
161	-67.50			Norm	54	102	3	1	FFFFFF	FFFFFF	0.500
162	-112.50			Norm	53	101	3	1	FFFFFF	FFFFFF	0.500
163	-112.50			Norm	52	100	3	1	FFFFFF	FFFFFF	0.260
164	-112.50			Norm	51	99	3	1	FFFFFF	FFFFFF	0.200
165	-112.50			Norm	50	98	3	1	FFFFFF	FFFFFF	0.260
166	-112.50			Norm	49	97	3	1	FFFFFF	FFFFFF	0.500
167	-157.50			Norm	64	112	3	1	FFFFFF	FFFFFF	0.500
168	-157.50			Norm	65	113	3	1	FFFFFF	FFFFFF	0.260
169	-157.50			Norm	66	114	3	1	FFFFFF	FFFFFF	0.200
170	-157.50			Norm	67	115	3	1	FFFFFF	FFFFFF	0.260
171	-157.50			Norm	68	116	3	1	FFFFFF	FFFFFF	0.500
172	-157.50			Norm	44	92	3	1	FFFFFF	FFFFFF	0.500
173	-157.50			Norm	45	93	3	1	FFFFFF	FFFFFF	0.260
174	-157.50			Norm	46	94	3	1	FFFFFF	FFFFFF	0.200
175	-157.50			Norm	47	95	3	1	FFFFFF	FFFFFF	0.260
176	-157.50			Norm	48	96	3	1	FFFFFF	FFFFFF	0.500
177	0.00			Norm	122	123	1	1	FFFFFF	FFFFFF	0.435
178	0.00			Norm	123	124	1	1	FFFFFF	FFFFFF	0.435
179	0.00			Norm	124	125	1	1	FFFFFF	FFFFFF	0.435
180	0.00			Norm	125	126	1	1	FFFFFF	FFFFFF	0.435
181	0.00			Norm	126	26	1	1	FFFFFF	FFFFFF	0.435
182	0.00			Norm	127	128	1	1	FFFFFF	FFFFFF	0.435
183	0.00			Norm	128	129	1	1	FFFFFF	FFFFFF	0.435
184	0.00			Norm	129	130	1	1	FFFFFF	FFFFFF	0.435
185	0.00			Norm	130	131	1	1	FFFFFF	FFFFFF	0.435
186	0.00			Norm	131	27	1	1	FFFFFF	FFFFFF	0.435
187	0.00			Norm	132	133	1	1	FFFFFF	FFFFFF	0.435
188	0.00			Norm	133	134	1	1	FFFFFF	FFFFFF	0.435
189	0.00			Norm	134	135	1	1	FFFFFF	FFFFFF	0.435
190	0.00			Norm	135	136	1	1	FFFFFF	FFFFFF	0.435
191	0.00			Norm	136	28	1	1	FFFFFF	FFFFFF	0.435
192	0.00			Norm	137	138	1	1	FFFFFF	FFFFFF	0.435
193	0.00			Norm	138	139	1	1	FFFFFF	FFFFFF	0.435
194	0.00			Norm	139	140	1	1	FFFFFF	FFFFFF	0.435
195	0.00			Norm	140	141	1	1	FFFFFF	FFFFFF	0.435
196	0.00			Norm	141	29	1	1	FFFFFF	FFFFFF	0.435
197	0.00			Norm	142	143	1	1	FFFFFF	FFFFFF	0.435
198	0.00			Norm	143	144	1	1	FFFFFF	FFFFFF	0.435
199	0.00			Norm	144	145	1	1	FFFFFF	FFFFFF	0.435
200	0.00			Norm	145	146	1	1	FFFFFF	FFFFFF	0.435
201	0.00			Norm	146	30	1	1	FFFFFF	FFFFFF	0.435
202	0.00			Norm	147	148	1	1	FFFFFF	FFFFFF	0.435
203	0.00			Norm	148	149	1	1	FFFFFF	FFFFFF	0.435
204	0.00			Norm	149	150	1	1	FFFFFF	FFFFFF	0.435
205	0.00			Norm	150	151	1	1	FFFFFF	FFFFFF	0.435
206	0.00			Norm	151	31	1	1	FFFFFF	FFFFFF	0.435
207	0.00			Norm	152	153	1	1	FFFFFF	FFFFFF	0.435
208	0.00			Norm	153	154	1	1	FFFFFF	FFFFFF	0.435
209	0.00			Norm	154	155	1	1	FFFFFF	FFFFFF	0.435
210	0.00			Norm	155	156	1	1	FFFFFF	FFFFFF	0.435
211	0.00			Norm	156	32	1	1	FFFFFF	FFFFFF	0.435
212	0.00			Norm	157	158	1	1	FFFFFF	FFFFFF	0.435
213	0.00			Norm	158	159	1	1	FFFFFF	FFFFFF	0.435
214	0.00			Norm	159	160	1	1	FFFFFF	FFFFFF	0.435
215	0.00			Norm	160	161	1	1	FFFFFF	FFFFFF	0.435
216	0.00			Norm	161	25	1	1	FFFFFF	FFFFFF	0.435
217	-157.50			Norm	151	111	3	1	FFFFFF	FFFFFF	0.600
218	-157.50			Norm	147	107	3	1	FFFFFF	FFFFFF	0.600
219	-112.50			Norm	146	106	3	1	FFFFFF	FFFFFF	0.600
220	-112.50			Norm	142	102	3	1	FFFFFF	FFFFFF	0.600
221	-67.50			Norm	141	101	3	1	FFFFFF	FFFFFF	0.600
222	-67.50			Norm	137	97	3	1	FFFFFF	FFFFFF	0.600
223	-22.50			Norm	136	96	3	1	FFFFFF	FFFFFF	0.600
224	-22.50			Norm	132	92	3	1	FFFFFF	FFFFFF	0.600
225	-157.50			Norm	131	91	3	1	FFFFFF	FFFFFF	0.600
226	-157.50			Norm	127	87	3	1	FFFFFF	FFFFFF	0.600
227	-112.50			Norm	126	86	3	1	FFFFFF	FFFFFF	0.600
229	-112.50			Norm	122	82	3	1	FFFFFF	FFFFFF	0.600
230	-67.50			Norm	161	121	3	1	FFFFFF	FFFFFF	0.600
231	-67.50			Norm	157	117	3	1	FFFFFF	FFFFFF	0.600
232	-157.50			Norm	116	156	3	1	FFFFFF	FFFFFF	0.600
233	-22.50			Norm	152	112	3	1	FFFFFF	FFFFFF	0.600

NODE RESTRAINTS (kN/m,kNm/rad)
---------- (F=Fixed, R=Released, S=Spring, *=General)

Node	Rest Code	X Axial Stiffness	Y Axial Stiffness	Z Axial Stiffness	X Rotation Stiffness	Y Rotation Stiffness	Z Rotation Stiffness
1	FFFFFF						
2	FFFFFF						
3	FFFFFF						
4	FFFFFF						
5	FFFFFF						
6	FFFFFF						
7	FFFFFF						
8	FFFFFF						

SECTION PROPERTIES (mm,mm^2,mm^4,deg)

Sect	Section Name	Mark	Angle	Type	Flipped	Source
1	350x350 brick	B1	Not applicable		No	Standard shape
2	brick col	C1	Not applicable		No	Shape builder
3	strut	S3	Not applicable		No	Standard shape

Sect	Area of Section	Torsion Constant	Y-Axis Mom of In	Z-Axis Mom of In	Y-Axis Shr Area	Z-Axis Shr Area	Princ Angle
1	1.2250E+05	2.1134E+09	1.2505E+09	1.2505E+09	INFINITE	INFINITE	0.00
2	2.9919E+05	0.0000E+00	3.7790E+09	1.5669E+10	INFINITE	INFINITE	-22.11
3	1.5750E+05	3.3760E+09	2.6578E+09	1.6078E+09	INFINITE	INFINITE	0.00

Sect	Section Shape	D	B/Bt	Bb/Hf	Tw	Tf
1	Rectangle	350.000	350.000			
3	Rectangle	350.000	450.000			

MATERIAL PROPERTIES (MPa,T/m^3,strain/degC)

Matl	Material Name	Young's Modulus	Poisson's Ratio	Mass Density	Coeff of Expansion	Concrete Strength
1	MASONRY	1.3500E+04	0.20	2.5000E+00	1.000E-05	25.00

NODE LOADS (kN,kNm)

Load Case	Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
2	9	6.000	0.000	0.000	0.000	0.000	0.000
	10	6.000	0.000	0.000	0.000	0.000	0.000
	11	6.000	0.000	0.000	0.000	0.000	0.000
	12	6.000	0.000	0.000	0.000	0.000	0.000
	13	6.000	0.000	0.000	0.000	0.000	0.000
	14	6.000	0.000	0.000	0.000	0.000	0.000
	15	6.000	0.000	0.000	0.000	0.000	0.000
	16	6.000	0.000	0.000	0.000	0.000	0.000
	17	13.000	0.000	0.000	0.000	0.000	0.000
	18	13.000	0.000	0.000	0.000	0.000	0.000
	19	13.000	0.000	0.000	0.000	0.000	0.000
	20	13.000	0.000	0.000	0.000	0.000	0.000
	21	13.000	0.000	0.000	0.000	0.000	0.000
	22	13.000	0.000	0.000	0.000	0.000	0.000
	23	13.000	0.000	0.000	0.000	0.000	0.000
	24	13.000	0.000	0.000	0.000	0.000	0.000
	25	6.000	0.000	0.000	0.000	0.000	0.000
	26	6.000	0.000	0.000	0.000	0.000	0.000
	27	6.000	0.000	0.000	0.000	0.000	0.000
	28	6.000	0.000	0.000	0.000	0.000	0.000
	29	6.000	0.000	0.000	0.000	0.000	0.000
	30	6.000	0.000	0.000	0.000	0.000	0.000
	31	6.000	0.000	0.000	0.000	0.000	0.000
	32	6.000	0.000	0.000	0.000	0.000	0.000

MEMBER DISTRIBUTED FORCES (m,kN/m)

Load Case	Memb	Sub Load	Axes Sys	Start Position	Finish Position	X Start/ Finish	Y Start/ Finish	Z Start/ Finish
1	25	1	GI	0.000%	100.000%	0.000	-1.200	0.000
						0.000	-1.200	0.000

Load Case	Memb	Sub Load	Axes Sys	Start Position	Finish Position	X Start/ Finish	Y Start/ Finish	Z Start/ Finish	Load Case	Memb	Sub Load	Axes Sys	Start Position	Finish Position	X Start/ Finish	Y Start/ Finish	Z Start/ Finish
	26	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		126	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	27	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		127	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	28	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		128	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	29	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		129	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	30	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		130	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	31	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		131	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	32	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		132	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	41	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		133	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	42	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		134	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	43	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		135	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	44	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		136	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	45	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		177	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	46	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		178	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	47	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		179	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	48	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		180	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	97	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		181	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	98	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		182	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	99	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		183	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	100	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		184	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	101	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		185	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	102	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		186	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	103	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		187	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	104	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		188	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	105	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		189	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	106	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		190	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	107	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		191	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	108	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		192	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	109	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		193	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	110	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		194	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	111	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		195	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	112	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		196	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	113	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		197	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	114	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		198	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	115	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		199	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	116	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		200	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	117	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		201	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	118	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		202	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	119	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		203	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	120	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		204	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	121	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		205	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	122	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		206	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	123	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		207	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	124	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		208	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000
	125	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000		209	1	GI	0.000%	100.000%	0.000 0.000	-1.200 -1.200	0.000 0.000

Load Case	Memb	Sub Load	Axes Sys	Start Position	Finish Position	X Start/ Finish	Y Start/ Finish	Z Start/ Finish
	210	1	GI	0.000%	100.000%	0.000	-1.200	0.000
						0.000	-1.200	0.000
	211	1	GI	0.000%	100.000%	0.000	-1.200	0.000
						0.000	-1.200	0.000
	212	1	GI	0.000%	100.000%	0.000	-1.200	0.000
						0.000	-1.200	0.000
	213	1	GI	0.000%	100.000%	0.000	-1.200	0.000
						0.000	-1.200	0.000
	214	1	GI	0.000%	100.000%	0.000	-1.200	0.000
						0.000	-1.200	0.000
	215	1	GI	0.000%	100.000%	0.000	-1.200	0.000
						0.000	-1.200	0.000
	216	1	GI	0.000%	100.000%	0.000	-1.200	0.000
						0.000	-1.200	0.000

SELF WEIGHT (g's)

Load Case	X-Axis Accel'n	Y-Axis Accel'n	Z-Axis Accel'n
1	0.000	-1.000	0.000

COMBINATION LOAD CASES

Load case 11: G+E

1.000 * Load case 1: G
1.000 * Load case 2: Estatic

Load case 12: G+E40%

1.000 * Load case 1: G
0.400 * Load case 2: Estatic

Load case 13: G+0.67E

1.000 * Load case 1: G
0.670 * Load case 2: Estatic

LOAD CASE TITLES

Load Case	Title
1	G
2	Estatic
11	G+E
12	G+E40%
13	G+0.67E

NODE DISPLACEMENTS (mm,rad)

Load case 1 (Non-linear): G
Non-linear effects: P-Δ, P-δ, 3 Iterations, 99.992% Convergence

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	-0.036	0.035	0.000	0.000	0.000
10	0.025	-0.036	0.025	0.000	0.000	0.000
11	0.035	-0.036	0.000	0.000	0.000	0.000
12	0.025	-0.036	-0.025	0.000	0.000	0.000
13	0.000	-0.036	-0.035	0.000	0.000	0.000
14	-0.025	-0.036	-0.025	0.000	0.000	0.000
15	-0.035	-0.036	0.000	0.000	0.000	0.000
16	-0.025	-0.036	0.025	0.000	0.000	0.000
17	0.000	-0.042	0.009	0.000	0.000	0.000
18	0.006	-0.042	0.006	0.000	0.000	0.000
19	0.009	-0.042	0.000	0.000	0.000	0.000
20	0.006	-0.042	-0.006	0.000	0.000	0.000
21	0.000	-0.042	-0.009	0.000	0.000	0.000
22	-0.006	-0.042	-0.006	0.000	0.000	0.000
23	-0.009	-0.042	0.000	0.000	0.000	0.000
24	-0.006	-0.042	0.006	0.000	0.000	0.000
25	0.000	-0.043	-0.010	0.000	0.000	0.000
26	-0.007	-0.043	-0.007	0.000	0.000	0.000
27	-0.010	-0.043	0.000	0.000	0.000	0.000
28	-0.007	-0.043	0.007	0.000	0.000	0.000
29	0.000	-0.043	0.010	0.000	0.000	0.000
30	0.007	-0.043	0.007	0.000	0.000	0.000
31	0.010	-0.043	0.000	0.000	0.000	0.000
32	0.007	-0.043	-0.007	0.000	0.000	0.000
34	0.001	-0.048	0.024	0.000	0.000	0.000
35	0.001	-0.056	0.016	0.000	0.000	0.000
36	0.005	-0.061	0.013	0.000	0.000	0.000
37	0.010	-0.056	0.013	0.000	0.000	0.000
38	0.016	-0.048	0.018	0.000	0.000	0.000
39	0.017	-0.048	0.016	0.000	0.000	0.000
40	0.013	-0.056	0.011	0.000	0.000	0.000
41	0.013	-0.061	0.006	0.000	0.000	0.000
42	0.016	-0.056	0.002	0.000	0.000	0.000
43	0.024	-0.048	0.001	0.000	0.000	0.000
44	0.024	-0.048	-0.001	0.000	0.000	0.000
45	0.016	-0.056	-0.001	0.000	0.000	0.000
46	0.013	-0.061	-0.005	0.000	0.000	0.000
47	0.013	-0.056	-0.010	0.000	0.000	0.000
48	0.018	-0.048	-0.016	0.000	0.000	0.000
49	0.016	-0.048	-0.017	0.000	0.000	0.000
50	0.011	-0.056	-0.013	0.000	0.000	0.000
51	0.006	-0.061	-0.013	0.000	0.000	0.000
52	0.002	-0.056	-0.016	0.000	0.000	0.000
53	0.001	-0.048	-0.024	0.000	0.000	0.000
54	-0.001	-0.048	-0.024	0.000	0.000	0.000
55	-0.001	-0.056	-0.016	0.000	0.000	0.000
56	-0.005	-0.061	-0.013	0.000	0.000	0.000
57	-0.010	-0.056	-0.013	0.000	0.000	0.000
58	-0.016	-0.048	-0.018	0.000	0.000	0.000
59	-0.017	-0.048	-0.016	0.000	0.000	0.000
60	-0.013	-0.056	-0.011	0.000	0.000	0.000
61	-0.013	-0.061	-0.006	0.000	0.000	0.000
62	-0.016	-0.056	-0.002	0.000	0.000	0.000
63	-0.024	-0.048	-0.001	0.000	0.000	0.000
64	-0.024	-0.048	0.001	0.000	0.000	0.000
65	-0.016	-0.056	0.001	0.000	0.000	0.000
66	-0.013	-0.061	0.005	0.000	0.000	0.000
67	-0.013	-0.056	0.010	0.000	0.000	0.000
68	-0.018	-0.048	0.016	0.000	0.000	0.000
69	-0.016	-0.048	0.017	0.000	0.000	0.000
70	-0.011	-0.056	0.013	0.000	0.000	0.000
71	-0.006	-0.061	0.013	0.000	0.000	0.000
72	-0.002	-0.056	0.016	0.000	0.000	0.000
73	-0.001	-0.048	0.024	0.000	0.000	0.000
82	0.001	-0.049	0.009	0.000	0.000	0.000
83	0.002	-0.056	0.008	0.000	0.000	0.000
84	0.003	-0.060	0.008	0.000	0.000	0.000
85	0.004	-0.056	0.008	0.000	0.000	0.000
86	0.005	-0.049	0.007	0.000	0.000	0.000
87	0.007	-0.049	0.005	0.000	0.000	0.000
88	0.008	-0.056	0.004	0.000	0.000	0.000
89	0.008	-0.060	0.004	0.000	0.000	0.000
90	0.008	-0.056	0.003	0.000	0.000	0.000
91	0.009	-0.049	0.002	0.000	0.000	0.000
92	0.009	-0.049	-0.001	0.000	0.000	0.000
93	0.008	-0.056	-0.002	0.000	0.000	0.000
94	0.008	-0.060	-0.003	0.000	0.000	0.000
95	0.008	-0.056	-0.004	0.000	0.000	0.000
96	0.007	-0.049	-0.005	0.000	0.000	0.000
97	0.005	-0.049	-0.007	0.000	0.000	0.000
98	0.004	-0.056	-0.008	0.000	0.000	0.000
99	0.004	-0.060	-0.008	0.000	0.000	0.000
100	0.003	-0.056	-0.008	0.000	0.000	0.000
101	0.002	-0.049	-0.009	0.000	0.000	0.000
102	-0.001	-0.049	-0.009	0.000	0.000	0.000
103	-0.002	-0.056	-0.008	0.000	0.000	0.000
104	-0.003	-0.060	-0.008	0.000	0.000	0.000
105	-0.004	-0.056	-0.008	0.000	0.000	0.000
106	-0.005	-0.049	-0.007	0.000	0.000	0.000
107	-0.007	-0.049	-0.005	0.000	0.000	0.000
108	-0.008	-0.056	-0.004	0.000	0.000	0.000
109	-0.008	-0.060	-0.004	0.000	0.000	0.000
110	-0.008	-0.056	-0.003	0.000	0.000	0.000
111	-0.009	-0.049	-0.002	0.000	0.000	0.000
112	-0.009	-0.049	0.001	0.000	0.000	0.000
113	-0.008	-0.056	0.002	0.000	0.000	0.000
114	-0.008	-0.060	0.003	0.000	0.000	0.000
115	-0.008	-0.056	0.004	0.000	0.000	0.000
116	-0.007	-0.049	0.005	0.000	0.000	0.000
117	-0.005	-0.049	0.007	0.000	0.000	0.000
118	-0.004	-0.056	0.008	0.000	0.000	0.000
119	-0.004	-0.060	0.008	0.000	0.000	0.000
120	-0.003	-0.056	0.008	0.000	0.000	0.000
121	-0.002	-0.049	0.009	0.000	0.000	0.000
122	-0.001	-0.050	-0.010	0.000	0.000	0.000
123	-0.002	-0.057	-0.009	0.000	0.000	0.000
124	-0.004	-0.061	-0.008	0.000	0.000	0.000
125	-0.005	-0.057	-0.008	0.000	0.000	0.000
126	-0.007	-0.050	-0.007	0.000	0.000	0.000
127	-0.007	-0.050	-0.006	0.000	0.000	0.000
128	-0.008	-0.057	-0.005	0.000	0.000	0.000
129	-0.008	-0.061	-0.003	0.000	0.000	0.000
130	-0.009	-0.057	-0.002	0.000	0.000	0.000
131	-0.010	-0.050	0.000	0.000	0.000	0.000
132	-0.010	-0.050	0.001	0.000	0.000	0.000
133	-0.009	-0.057	0.002	0.000	0.000	0.000
134	-0.008	-0.061	0.004	0.000	0.000	0.000
135	-0.008	-0.057	0.005	0.000	0.000	0.000
136	-0.007	-0.050	0.007	0.000	0.000	0.000
137	-0.006	-0.050	0.007	0.000	0.000	0.000
138	-0.005	-0.057	0.008	0.000	0.000	0.000
139	-0.003	-0.061	0.008	0.000	0.000	0.000
140	-0.002	-0.057	0.009	0.000	0.000	0.000
141	0.000	-0.050	0.010	0.000	0.000	0.000
142	0.001	-0.050	0.010	0.000	0.000	0.000
143	0.002	-0.057	0.009	0.000	0.000	0.000
144	0.004	-0.061	0.008	0.000	0.000	0.000
145	0.005	-0.057	0.008	0.000	0.000	0.000
146	0.007	-0.050	0.007	0.000	0.000	0.000
147	0.007	-0.050	0.006	0.000	0.000	0.000
148	0.008	-0.057	0.005	0.000	0.000	0.000
149	0.008	-0.061	0.003	0.000	0.000	0.000
150	0.009	-0.057	0.002	0.000	0.000	0.000
151	0.010	-0.050	0.000	0.000	0.000	0.000
152	0.010	-0.050	-0.001	0.000	0.000	0.000
153	0.009	-0.057	-0.002	0.000	0.000	0.000
154	0.008	-0.061	-0.004	0.000	0.000	0.000
155	0.008	-0.057	-0.005	0.000	0.000	0.000
156	0.007	-0.050	-0.007	0.000	0.000	0.000
157	0.006	-0.050	-0.007	0.000	0.000	0.000
158	0.005	-0.057	-0.008	0.000	0.000	0.000
159	0.003	-0.061	-0.008	0.000	0.000	0.000
160	0.002	-0.057	-0.009	0.000	0.000	0.000
161	0.000	-0.050	-0.010	0.000	0.000	0.000

Load case 2 (Non-linear): Estatic
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.994% Convergence

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000
9	0.432	0.000	0.055	0.000	0.000	0.000
10	0.485	-0.009	0.035	0.000	0.000	0.000
11	0.484	-0.012	0.001	0.000	0.000	0.000
12	0.488	-0.009	-0.035	0.000	0.000	0.000
13	0.433	0.000	-0.057	0.000	0.000	0.000
14	0.397	0.008	-0.014	0.000	0.000	0.000
15	0.408	0.015	0.000	0.000	0.000	0.000
16	0.398	0.008	0.013	0.000	0.000	0.000
17	0.589	0.009	0.006	0.000	0.000	0.000
18	0.619	-0.004	0.017	0.000	0.000	0.000
19	0.631	-0.011	0.001	0.000	0.000	0.000
20	0.621	-0.004	-0.017	0.000	0.000	0.000
21	0.591	0.009	-0.007	0.000	0.000	0.000
22	0.581	0.015	0.010	0.000	0.000	0.000
23	0.563	0.016	0.000	0.000	0.000	0.000
24	0.580	0.015	-0.010	0.000	0.000	0.000
25	0.643	0.011	-0.012	0.000	0.000	0.000
26	0.669	-0.003	0.012	0.000	0.000	0.000
27	0.689	-0.010	0.001	0.000	0.000	0.000
28	0.670	-0.003	-0.011	0.000	0.000	0.000
29	0.645	0.011	0.013	0.000	0.000	0.000
30	0.648	0.017	0.022	0.000	0.000	0.000
31	0.633	0.016	0.000	0.000	0.000	0.000
32	0.645	0.017	-0.022	0.000	0.000	0.000
34	0.573	-0.017	0.008	0.000	0.000	0.000
35	0.610	0.002	-0.002	0.000	0.000	0.000
36	0.604	0.037	0.005	0.000	0.000	0.000

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
37	0.598	0.053	0.010	0.000	0.000	0.000
38	0.573	0.038	0.017	0.000	0.000	0.000
39	0.582	-0.015	0.006	0.000	0.000	0.000
40	0.604	-0.007	-0.005	0.000	0.000	0.000
41	0.608	0.009	0.000	0.000	0.000	0.000
42	0.600	0.015	-0.001	0.000	0.000	0.000
43	0.570	0.008	-0.002	0.000	0.000	0.000
44	0.570	0.008	0.004	0.000	0.000	0.000
45	0.601	0.015	0.002	0.000	0.000	0.000
46	0.609	0.008	0.001	0.000	0.000	0.000
47	0.606	-0.007	0.005	0.000	0.000	0.000
48	0.584	-0.015	-0.006	0.000	0.000	0.000
49	0.576	0.038	-0.018	0.000	0.000	0.000
50	0.600	0.052	-0.010	0.000	0.000	0.000
51	0.607	0.036	-0.005	0.000	0.000	0.000
52	0.612	0.001	0.002	0.000	0.000	0.000
53	0.575	-0.017	-0.010	0.000	0.000	0.000
54	0.538	0.047	-0.033	0.000	0.000	0.000
55	0.572	0.061	-0.017	0.000	0.000	0.000
56	0.584	0.043	-0.011	0.000	0.000	0.000
57	0.591	0.008	-0.014	0.000	0.000	0.000
58	0.554	-0.010	-0.011	0.000	0.000	0.000
59	0.500	0.028	-0.011	0.000	0.000	0.000
60	0.536	0.031	-0.007	0.000	0.000	0.000
61	0.543	0.020	-0.008	0.000	0.000	0.000
62	0.535	0.002	-0.016	0.000	0.000	0.000
63	0.493	-0.005	0.001	0.000	0.000	0.000
64	0.493	-0.005	-0.001	0.000	0.000	0.000
65	0.534	0.003	0.015	0.000	0.000	0.000
66	0.542	0.020	0.008	0.000	0.000	0.000
67	0.535	0.031	0.007	0.000	0.000	0.000
68	0.500	0.028	0.010	0.000	0.000	0.000
69	0.554	-0.010	0.010	0.000	0.000	0.000
70	0.590	0.009	0.013	0.000	0.000	0.000
71	0.582	0.044	0.010	0.000	0.000	0.000
72	0.571	0.061	0.016	0.000	0.000	0.000
73	0.537	0.047	0.031	0.000	0.000	0.000
82	0.594	-0.017	0.006	0.000	0.000	0.000
83	0.593	0.000	0.010	0.000	0.000	0.000
84	0.595	0.036	0.014	0.000	0.000	0.000
85	0.603	0.052	0.015	0.000	0.000	0.000
86	0.613	0.034	0.016	0.000	0.000	0.000
87	0.622	-0.015	0.014	0.000	0.000	0.000
88	0.624	-0.007	0.013	0.000	0.000	0.000
89	0.625	0.008	0.012	0.000	0.000	0.000
90	0.626	0.014	0.008	0.000	0.000	0.000
91	0.628	0.006	0.004	0.000	0.000	0.000
92	0.629	0.006	-0.002	0.000	0.000	0.000
93	0.627	0.014	-0.007	0.000	0.000	0.000
94	0.626	0.008	-0.011	0.000	0.000	0.000
95	0.625	-0.007	-0.013	0.000	0.000	0.000
96	0.624	-0.015	-0.013	0.000	0.000	0.000
97	0.615	0.033	-0.016	0.000	0.000	0.000
98	0.605	0.051	-0.015	0.000	0.000	0.000
99	0.597	0.036	-0.014	0.000	0.000	0.000
100	0.595	0.000	-0.011	0.000	0.000	0.000
101	0.596	-0.017	-0.007	0.000	0.000	0.000
102	0.588	0.043	-0.004	0.000	0.000	0.000
103	0.582	0.059	0.003	0.000	0.000	0.000
104	0.579	0.043	0.009	0.000	0.000	0.000
105	0.580	0.007	0.012	0.000	0.000	0.000
106	0.585	-0.010	0.011	0.000	0.000	0.000
107	0.575	0.027	0.007	0.000	0.000	0.000
108	0.569	0.030	0.008	0.000	0.000	0.000
109	0.566	0.020	0.009	0.000	0.000	0.000
110	0.563	0.002	0.006	0.000	0.000	0.000
111	0.562	-0.002	0.003	0.000	0.000	0.000
112	0.562	-0.002	-0.003	0.000	0.000	0.000
113	0.563	0.002	-0.006	0.000	0.000	0.000
114	0.565	0.020	-0.009	0.000	0.000	0.000
115	0.569	0.030	-0.009	0.000	0.000	0.000
116	0.574	0.027	-0.007	0.000	0.000	0.000
117	0.584	-0.010	-0.011	0.000	0.000	0.000
118	0.579	0.008	-0.012	0.000	0.000	0.000
119	0.577	0.044	-0.009	0.000	0.000	0.000
120	0.581	0.060	-0.003	0.000	0.000	0.000
121	0.586	0.044	0.004	0.000	0.000	0.000
122	0.641	-0.018	-0.005	0.000	0.000	0.000
123	0.646	-0.022	-0.001	0.000	0.000	0.000
124	0.652	0.005	0.003	0.000	0.000	0.000
125	0.657	0.033	0.007	0.000	0.000	0.000
126	0.661	0.030	0.010	0.000	0.000	0.000
127	0.673	-0.015	0.013	0.000	0.000	0.000
128	0.678	-0.017	0.012	0.000	0.000	0.000
129	0.682	-0.005	0.010	0.000	0.000	0.000
130	0.686	0.007	0.008	0.000	0.000	0.000
131	0.688	0.005	0.005	0.000	0.000	0.000
132	0.688	0.005	-0.004	0.000	0.000	0.000
133	0.686	0.006	-0.007	0.000	0.000	0.000
134	0.683	-0.005	-0.009	0.000	0.000	0.000
135	0.679	-0.017	-0.011	0.000	0.000	0.000
136	0.674	-0.015	-0.012	0.000	0.000	0.000
137	0.663	0.030	-0.009	0.000	0.000	0.000
138	0.658	0.032	-0.006	0.000	0.000	0.000
139	0.653	0.004	-0.002	0.000	0.000	0.000
140	0.648	-0.023	0.002	0.000	0.000	0.000
141	0.643	-0.018	0.006	0.000	0.000	0.000
142	0.644	0.040	0.020	0.000	0.000	0.000
143	0.644	0.040	0.024	0.000	0.000	0.000
144	0.644	0.012	0.026	0.000	0.000	0.000
145	0.643	-0.015	0.026	0.000	0.000	0.000
146	0.642	-0.012	0.026	0.000	0.000	0.000
147	0.647	0.026	0.021	0.000	0.000	0.000
148	0.645	0.023	0.017	0.000	0.000	0.000
149	0.642	0.008	0.013	0.000	0.000	0.000
150	0.638	-0.004	0.009	0.000	0.000	0.000
151	0.634	-0.001	0.005	0.000	0.000	0.000
152	0.634	-0.001	-0.005	0.000	0.000	0.000
153	0.637	-0.004	-0.009	0.000	0.000	0.000
154	0.640	0.008	-0.013	0.000	0.000	0.000
155	0.644	0.023	-0.017	0.000	0.000	0.000
156	0.645	0.026	-0.021	0.000	0.000	0.000
157	0.640	-0.011	-0.025	0.000	0.000	0.000
158	0.641	-0.015	-0.026	0.000	0.000	0.000
159	0.642	0.013	-0.025	0.000	0.000	0.000
160	0.642	0.041	-0.023	0.000	0.000	0.000
161	0.642	0.040	-0.019	0.000	0.000	0.000

Load case 11 (Non-linear): G+E
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.938% Convergence

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000
9	0.419	-0.036	0.084	0.000	0.000	0.000
10	0.489	-0.045	0.056	0.000	0.000	0.000
11	0.493	-0.049	0.001	0.000	0.000	0.000
12	0.493	-0.045	-0.056	0.000	0.000	0.000
13	0.421	-0.036	-0.087	0.000	0.000	0.000
14	0.368	-0.027	-0.034	0.000	0.000	0.000
15	0.373	-0.021	0.009	0.000	0.000	0.000
16	0.368	-0.027	0.033	0.000	0.000	0.000
17	0.568	-0.036	0.018	0.000	0.000	0.000
18	0.601	-0.049	0.026	0.000	0.000	0.000
19	0.607	-0.054	0.001	0.000	0.000	0.000
20	0.604	-0.049	-0.025	0.000	0.000	0.000
21	0.570	-0.036	-0.019	0.000	0.000	0.000
22	0.558	-0.029	0.003	0.000	0.000	0.000
23	0.547	-0.027	0.000	0.000	0.000	0.000
24	0.557	-0.029	-0.004	0.000	0.000	0.000
25	0.622	-0.036	-0.017	0.000	0.000	0.000
26	0.637	-0.049	0.006	0.000	0.000	0.000
27	0.645	-0.055	0.001	0.000	0.000	0.000
28	0.638	-0.049	-0.005	0.000	0.000	0.000
29	0.624	-0.036	0.018	0.000	0.000	0.000
30	0.637	-0.029	0.027	0.000	0.000	0.000
31	0.631	-0.028	-0.001	0.000	0.000	0.000
32	0.635	-0.029	-0.027	0.000	0.000	0.000
34	0.548	-0.074	0.037	0.000	0.000	0.000
35	0.592	-0.063	0.016	0.000	0.000	0.000
36	0.588	-0.028	0.021	0.000	0.000	0.000
37	0.584	-0.007	0.026	0.000	0.000	0.000
38	0.565	-0.013	0.036	0.000	0.000	0.000
39	0.574	-0.072	0.032	0.000	0.000	0.000
40	0.592	-0.073	0.008	0.000	0.000	0.000
41	0.593	-0.056	0.005	0.000	0.000	0.000
42	0.586	-0.044	0.003	0.000	0.000	0.000
43	0.563	-0.042	0.000	0.000	0.000	0.000
44	0.563	-0.042	0.002	0.000	0.000	0.000
45	0.587	-0.044	-0.001	0.000	0.000	0.000
46	0.594	-0.057	-0.004	0.000	0.000	0.000
47	0.594	-0.074	-0.007	0.000	0.000	0.000
48	0.577	-0.072	-0.031	0.000	0.000	0.000
49	0.568	-0.013	-0.036	0.000	0.000	0.000
50	0.586	-0.007	-0.026	0.000	0.000	0.000
51	0.590	-0.028	-0.021	0.000	0.000	0.000
52	0.595	-0.064	-0.017	0.000	0.000	0.000
53	0.550	-0.074	-0.039	0.000	0.000	0.000
54	0.518	-0.004	-0.055	0.000	0.000	0.000
55	0.550	0.001	-0.033	0.000	0.000	0.000
56	0.560	-0.020	-0.024	0.000	0.000	0.000
57	0.566	-0.056	-0.028	0.000	0.000	0.000
58	0.517	-0.067	-0.026	0.000	0.000	0.000
59	0.472	-0.021	-0.023	0.000	0.000	0.000
60	0.512	-0.024	-0.014	0.000	0.000	0.000
61	0.521	-0.037	-0.012	0.000	0.000	0.000
62	0.512	-0.053	-0.019	0.000	0.000	0.000
63	0.466	-0.052	-0.001	0.000	0.000	0.000
64	0.466	-0.051	0.001	0.000	0.000	0.000
65	0.512	-0.053	0.018	0.000	0.000	0.000
66	0.520	-0.037	0.012	0.000	0.000	0.000
67	0.512	-0.024	0.013	0.000	0.000	0.000
68	0.472	-0.021	0.022	0.000	0.000	0.000
69	0.516	-0.066	0.025	0.000	0.000	0.000
70	0.565	-0.055	0.027	0.000	0.000	0.000
71	0.559	-0.020	0.024	0.000	0.000	0.000
72	0.549	0.002	0.032	0.000	0.000	0.000
73	0.516	-0.003	0.053	0.000	0.000	0.000
82	0.573	-0.073	0.019	0.000	0.000	0.000
83	0.573	-0.064	0.022	0.000	0.000	0.000
84	0.575	-0.028	0.026	0.000	0.000	0.000
85	0.583	-0.008	0.027	0.000	0.000	0.000
86	0.594	-0.018	0.026	0.000	0.000	0.000
87	0.603	-0.071	0.023	0.000	0.000	0.000
88	0.604	-0.073	0.020	0.000	0.000	0.000
89	0.603	-0.057	0.017	0.000	0.000	0.000
90	0.603	-0.044	0.013	0.000	0.000	0.000
91	0.605	-0.045	0.006	0.000	0.000	0.000
92	0.605	-0.045	-0.004	0.000	0.000	0.000
93	0.604	-0.045	-0.011	0.000	0.000	0.000
94	0.604	-0.057	-0.016	0.000	0.000	0.000
95	0.605	-0.073	-0.019	0.000	0.000	0.000
96	0.605	-0.071	-0.022	0.000	0.000	0.000
97	0.597	-0.019	-0.026	0.000	0.000	0.000
98	0.585	-0.008	-0.026	0.000	0.000	0.000
99	0.578	-0.029	-0.026	0.000	0.000	0.000
100	0.576	-0.065	-0.023	0.000	0.000	0.000
101	0.575	-0.074	-0.019	0.000	0.000	0.000
102	0.566	-0.009	-0.015	0.000	0.000	0.000
103	0.559	0.000	-0.007	0.000	0.000	0.000
104	0.556	-0.021	-0.001	0.000	0.000	0.000
105	0.558	-0.057	0.003	0.000	0.000	0.000
106	0.561	-0.066	0.003	0.000	0.000	0.000
107	0.553	-0.023	0.003	0.000	0.000	0.000
108	0.550	-0.025	0.005	0.000	0.000	0.000
109	0.547	-0.038	0.006	0.000	0.000	0.000
110	0.546	-0.053	0.004	0.000	0.000	0.000
111	0.546	-0.051	0.001	0.000	0.000	0.000
112	0.546	-0.051	-0.002	0.000	0.000	0.000
113	0.546	-0.053	-0.004	0.000	0.000	0.000
114	0.546	-0.037	-0.007	0.000	0.000	0.000
115	0.549	-0.025	-0.006	0.000	0.000	0.000
116	0.552	-0.023	-0.003	0.000	0.000	0.000
117	0.560	-0.065	-0.004	0.000	0.000	0.000
118	0.556	-0.056	-0.003	0.000	0.000	0.000
119	0.554	-0.020	0.000	0.000	0.000	0.000
120	0.557	0.001	0.007	0.000	0.000	0.000
121	0.564	-0.008	0.015	0.000	0.000	0.000
122	0.620	-0.074	-0.010	0.000	0.000	0.000
123	0.623	-0.086	-0.006	0.000	0.000	0.000
124	0.626	-0.061	-0.001	0.000	0.000	0.000
125	0.629	-0.028	0.003	0.000	0.000	0.000
126	0.631	-0.023	0.006	0.000	0.000	0.000
127	0.639	-0.071	0.007	0.000	0.000	0.000
128	0.641	-0.081	0.007	0.000	0.000	0.000
129	0.643	-0.072	0.006	0.000	0.000	0.000
130	0.645	-0.054	0.006	0.000	0.000	0.000
131	0.645	-0.047	0.005	0.000	0.000	0.000
132	0.645	-0.047	-0.003	0.000	0.000	0.000
133	0.645	-0.054	-0.004	0.000	0.000	0.000
134	0.644	-0.072	-0.005	0.000	0.000	0.000
135	0.642	-0.081	-0.005	0.000	0.000	0.000
136	0.640	-0.071	-0.006	0.000	0.000	0.000
137	0.633	-0.023	-0.005	0.000	0.000	0.000
138	0.631	-0.029	-0.002	0.000	0.000	0.000
139	0.628	-0.062	0.002	0.000	0.000	0.000
140	0.625	-0.086	0.007	0.000	0.000	0.000
141	0.622	-0.074	0.012	0.000	0.000	0.000
142	0.624	-0.013	0.024	0.000	0.000	0.000
143	0.626	-0.020	0.027	0.000	0.000	0.000
144	0.628	-0.054	0.029	0.000	0.000	0.000
145	0.630	-0.078	0.030	0.000	0.000	0.000
146	0.631	-0.067	0.030	0.000	0.000	0.000
147	0.638	-0.025	0.025	0.000	0.000	0.000
148	0.638	-0.034	0.021	0.000	0.000	0.000
149	0.636	-0.052	0.015	0.000	0.000	0.000
150	0.634	-0.061	0.010	0.000	0.000	0.000
151	0.632	-0.051	0.005	0.000	0.000	0.000

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
152	0.631	-0.051	-0.006	0.000	0.000	0.000
153	0.633	-0.060	-0.011	0.000	0.000	0.000
154	0.634	-0.052	-0.016	0.000	0.000	0.000
155	0.636	-0.034	-0.021	0.000	0.000	0.000
156	0.636	-0.025	-0.025	0.000	0.000	0.000
157	0.628	-0.066	-0.029	0.000	0.000	0.000
158	0.627	-0.078	-0.029	0.000	0.000	0.000
159	0.626	-0.053	-0.028	0.000	0.000	0.000
160	0.624	-0.020	-0.027	0.000	0.000	0.000
161	0.622	-0.012	-0.023	0.000	0.000	0.000

Load case 12 (Non-linear): G+E40%
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.941% Convergence

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000
9	0.160	-0.036	0.051	0.000	0.000	0.000
10	0.197	-0.040	0.033	0.000	0.000	0.000
11	0.208	-0.041	0.001	0.000	0.000	0.000
12	0.199	-0.040	-0.033	0.000	0.000	0.000
13	0.160	-0.036	-0.052	0.000	0.000	0.000
14	0.129	-0.032	-0.027	0.000	0.000	0.000
15	0.126	-0.030	0.000	0.000	0.000	0.000
16	0.129	-0.032	0.026	0.000	0.000	0.000
17	0.214	-0.041	0.014	0.000	0.000	0.000
18	0.229	-0.045	0.013	0.000	0.000	0.000
19	0.234	-0.047	0.001	0.000	0.000	0.000
20	0.230	-0.045	-0.012	0.000	0.000	0.000
21	0.216	-0.041	-0.014	0.000	0.000	0.000
22	0.209	-0.038	-0.003	0.000	0.000	0.000
23	0.207	-0.036	0.000	0.000	0.000	0.000
24	0.209	-0.038	0.002	0.000	0.000	0.000
25	0.236	-0.042	-0.011	0.000	0.000	0.000
26	0.236	-0.047	-0.002	0.000	0.000	0.000
27	0.238	-0.049	0.000	0.000	0.000	0.000
28	0.237	-0.047	0.003	0.000	0.000	0.000
29	0.238	-0.042	0.012	0.000	0.000	0.000
30	0.248	-0.039	0.014	0.000	0.000	0.000
31	0.250	-0.037	0.000	0.000	0.000	0.000
32	0.247	-0.039	-0.014	0.000	0.000	0.000
34	0.204	-0.064	0.032	0.000	0.000	0.000
35	0.225	-0.065	0.017	0.000	0.000	0.000
36	0.225	-0.049	0.016	0.000	0.000	0.000
37	0.225	-0.038	0.018	0.000	0.000	0.000
38	0.221	-0.035	0.024	0.000	0.000	0.000
39	0.219	-0.058	0.023	0.000	0.000	0.000
40	0.229	-0.067	0.010	0.000	0.000	0.000
41	0.231	-0.062	0.004	0.000	0.000	0.000
42	0.230	-0.052	0.002	0.000	0.000	0.000
43	0.227	-0.046	0.001	0.000	0.000	0.000
44	0.227	-0.046	0.000	0.000	0.000	0.000
45	0.231	-0.053	-0.001	0.000	0.000	0.000
46	0.232	-0.062	-0.003	0.000	0.000	0.000
47	0.230	-0.067	-0.009	0.000	0.000	0.000
48	0.221	-0.058	-0.022	0.000	0.000	0.000
49	0.222	-0.035	-0.023	0.000	0.000	0.000
50	0.226	-0.038	-0.018	0.000	0.000	0.000
51	0.226	-0.049	-0.016	0.000	0.000	0.000
52	0.226	-0.065	-0.018	0.000	0.000	0.000
53	0.205	-0.064	-0.033	0.000	0.000	0.000
54	0.195	-0.032	-0.035	0.000	0.000	0.000
55	0.207	-0.035	-0.022	0.000	0.000	0.000
56	0.210	-0.046	-0.018	0.000	0.000	0.000
57	0.210	-0.062	-0.019	0.000	0.000	0.000
58	0.183	-0.060	-0.020	0.000	0.000	0.000
59	0.172	-0.038	-0.017	0.000	0.000	0.000
60	0.190	-0.044	-0.011	0.000	0.000	0.000
61	0.194	-0.052	-0.009	0.000	0.000	0.000
62	0.189	-0.056	-0.007	0.000	0.000	0.000
63	0.168	-0.048	-0.001	0.000	0.000	0.000
64	0.168	-0.048	0.001	0.000	0.000	0.000
65	0.189	-0.056	0.006	0.000	0.000	0.000
66	0.194	-0.052	0.008	0.000	0.000	0.000
67	0.189	-0.044	0.010	0.000	0.000	0.000
68	0.171	-0.038	0.017	0.000	0.000	0.000
69	0.183	-0.060	0.019	0.000	0.000	0.000
70	0.210	-0.061	0.019	0.000	0.000	0.000
71	0.209	-0.045	0.017	0.000	0.000	0.000
72	0.206	-0.034	0.022	0.000	0.000	0.000
73	0.194	-0.031	0.034	0.000	0.000	0.000
82	0.216	-0.063	0.014	0.000	0.000	0.000
83	0.217	-0.065	0.015	0.000	0.000	0.000
84	0.218	-0.049	0.016	0.000	0.000	0.000
85	0.221	-0.038	0.015	0.000	0.000	0.000
86	0.226	-0.038	0.014	0.000	0.000	0.000
87	0.230	-0.059	0.012	0.000	0.000	0.000
88	0.231	-0.066	0.010	0.000	0.000	0.000
89	0.232	-0.062	0.009	0.000	0.000	0.000
90	0.232	-0.053	0.007	0.000	0.000	0.000
91	0.233	-0.048	0.003	0.000	0.000	0.000
92	0.233	-0.048	-0.002	0.000	0.000	0.000
93	0.232	-0.053	-0.006	0.000	0.000	0.000
94	0.232	-0.062	-0.008	0.000	0.000	0.000
95	0.232	-0.066	-0.009	0.000	0.000	0.000
96	0.231	-0.059	-0.011	0.000	0.000	0.000
97	0.227	-0.038	-0.013	0.000	0.000	0.000
98	0.222	-0.038	-0.015	0.000	0.000	0.000
99	0.219	-0.050	-0.015	0.000	0.000	0.000
100	0.218	-0.065	-0.015	0.000	0.000	0.000
101	0.218	-0.063	-0.014	0.000	0.000	0.000
102	0.213	-0.035	-0.012	0.000	0.000	0.000
103	0.210	-0.035	-0.008	0.000	0.000	0.000
104	0.209	-0.046	-0.006	0.000	0.000	0.000
105	0.209	-0.061	-0.004	0.000	0.000	0.000
106	0.210	-0.060	-0.003	0.000	0.000	0.000
107	0.208	-0.040	-0.002	0.000	0.000	0.000
108	0.207	-0.044	0.000	0.000	0.000	0.000
109	0.207	-0.052	0.000	0.000	0.000	0.000
110	0.207	-0.056	0.000	0.000	0.000	0.000
111	0.207	-0.049	0.000	0.000	0.000	0.000
112	0.207	-0.049	0.000	0.000	0.000	0.000
113	0.207	-0.056	-0.001	0.000	0.000	0.000
114	0.206	-0.052	-0.001	0.000	0.000	0.000
115	0.206	-0.044	-0.001	0.000	0.000	0.000
116	0.207	-0.040	0.001	0.000	0.000	0.000
117	0.209	-0.060	0.003	0.000	0.000	0.000
118	0.209	-0.061	0.004	0.000	0.000	0.000
119	0.208	-0.046	0.005	0.000	0.000	0.000
120	0.209	-0.035	0.008	0.000	0.000	0.000
121	0.212	-0.034	0.012	0.000	0.000	0.000
122	0.235	-0.063	-0.009	0.000	0.000	0.000
123	0.235	-0.072	-0.007	0.000	0.000	0.000
124	0.235	-0.064	-0.005	0.000	0.000	0.000
125	0.235	-0.047	-0.004	0.000	0.000	0.000
126	0.234	-0.040	-0.002	0.000	0.000	0.000
127	0.237	-0.059	-0.001	0.000	0.000	0.000
128	0.238	-0.067	0.000	0.000	0.000	0.000
129	0.238	-0.066	0.001	0.000	0.000	0.000
130	0.238	-0.057	0.001	0.000	0.000	0.000
131	0.238	-0.050	0.002	0.000	0.000	0.000
132	0.238	-0.050	-0.001	0.000	0.000	0.000
133	0.238	-0.057	0.000	0.000	0.000	0.000
134	0.239	-0.066	0.000	0.000	0.000	0.000
135	0.239	-0.068	0.001	0.000	0.000	0.000
136	0.238	-0.059	0.002	0.000	0.000	0.000
137	0.235	-0.040	0.003	0.000	0.000	0.000
138	0.236	-0.048	0.004	0.000	0.000	0.000
139	0.236	-0.064	0.006	0.000	0.000	0.000
140	0.236	-0.073	0.007	0.000	0.000	0.000
141	0.236	-0.063	0.009	0.000	0.000	0.000
142	0.238	-0.037	0.013	0.000	0.000	0.000
143	0.240	-0.044	0.014	0.000	0.000	0.000
144	0.242	-0.061	0.015	0.000	0.000	0.000
145	0.244	-0.069	0.015	0.000	0.000	0.000
146	0.246	-0.060	0.014	0.000	0.000	0.000
147	0.249	-0.041	0.013	0.000	0.000	0.000
148	0.250	-0.049	0.010	0.000	0.000	0.000
149	0.250	-0.058	0.008	0.000	0.000	0.000
150	0.250	-0.058	0.005	0.000	0.000	0.000
151	0.250	-0.050	0.002	0.000	0.000	0.000
152	0.250	-0.050	-0.003	0.000	0.000	0.000
153	0.250	-0.058	-0.005	0.000	0.000	0.000
154	0.249	-0.057	-0.008	0.000	0.000	0.000
155	0.249	-0.048	-0.011	0.000	0.000	0.000
156	0.248	-0.041	-0.013	0.000	0.000	0.000
157	0.245	-0.060	-0.015	0.000	0.000	0.000
158	0.243	-0.069	-0.015	0.000	0.000	0.000
159	0.241	-0.061	-0.014	0.000	0.000	0.000
160	0.239	-0.044	-0.014	0.000	0.000	0.000
161	0.237	-0.037	-0.013	0.000	0.000	0.000

Load case 13 (Non-linear): G+0.67E
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.939% Convergence

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
1	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000
9	0.276	-0.036	0.067	0.000	0.000	0.000
10	0.329	-0.042	0.045	0.000	0.000	0.000
11	0.334	-0.045	0.001	0.000	0.000	0.000
12	0.331	-0.042	-0.045	0.000	0.000	0.000
13	0.277	-0.036	-0.068	0.000	0.000	0.000
14	0.236	-0.030	-0.030	0.000	0.000	0.000
15	0.238	-0.026	0.000	0.000	0.000	0.000
16	0.236	-0.039	0.029	0.000	0.000	0.000
17	0.373	-0.039	0.017	0.000	0.000	0.000
18	0.397	-0.047	0.021	0.000	0.000	0.000
19	0.398	-0.051	0.001	0.000	0.000	0.000
20	0.398	-0.047	-0.021	0.000	0.000	0.000
21	0.375	-0.039	-0.017	0.000	0.000	0.000
22	0.367	-0.034	0.000	0.000	0.000	0.000
23	0.361	-0.032	0.000	0.000	0.000	0.000
24	0.366	-0.034	0.000	0.000	0.000	0.000
25	0.410	-0.039	-0.013	0.000	0.000	0.000
26	0.416	-0.048	0.003	0.000	0.000	0.000
27	0.416	-0.052	0.001	0.000	0.000	0.000
28	0.417	-0.048	-0.002	0.000	0.000	0.000
29	0.411	-0.039	0.013	0.000	0.000	0.000
30	0.423	-0.035	0.019	0.000	0.000	0.000
31	0.422	-0.033	0.000	0.000	0.000	0.000
32	0.422	-0.035	-0.019	0.000	0.000	0.000
34	0.358	-0.068	0.035	0.000	0.000	0.000
35	0.391	-0.064	0.018	0.000	0.000	0.000
36	0.388	-0.040	0.020	0.000	0.000	0.000
37	0.386	-0.024	0.024	0.000	0.000	0.000
38	0.375	-0.025	0.031	0.000	0.000	0.000
39	0.381	-0.067	0.031	0.000	0.000	0.000
40	0.391	-0.072	0.011	0.000	0.000	0.000
41	0.392	-0.061	0.005	0.000	0.000	0.000
42	0.388	-0.050	0.003	0.000	0.000	0.000
43	0.375	-0.045	0.001	0.000	0.000	0.000
44	0.375	-0.045	0.001	0.000	0.000	0.000
45	0.388	-0.050	-0.002	0.000	0.000	0.000
46	0.393	-0.061	-0.004	0.000	0.000	0.000
47	0.393	-0.072	-0.010	0.000	0.000	0.000
48	0.383	-0.067	-0.030	0.000	0.000	0.000
49	0.378	-0.026	-0.031	0.000	0.000	0.000
50	0.388	-0.024	-0.024	0.000	0.000	0.000
51	0.390	-0.040	-0.020	0.000	0.000	0.000
52	0.393	-0.064	-0.018	0.000	0.000	0.000
53	0.360	-0.068	-0.036	0.000	0.000	0.000
54	0.341	-0.019	-0.044	0.000	0.000	0.000
55	0.361	-0.018	-0.028	0.000	0.000	0.000
56	0.368	-0.035	-0.021	0.000	0.000	0.000
57	0.371	-0.059	-0.024	0.000	0.000	0.000
58	0.334	-0.063	-0.022	0.000	0.000	0.000
59	0.307	-0.030	-0.019	0.000	0.000	0.000
60	0.335	-0.035	-0.012	0.000	0.000	0.000
61	0.341	-0.044	-0.010	0.000	0.000	0.000
62	0.336	-0.055	-0.012	0.000	0.000	0.000
63	0.303	-0.050	-0.001	0.000	0.000	0.000
64	0.303	-0.050	0.001	0.000	0.000	0.000
65	0.336	-0.055	0.011	0.000	0.000	0.000
66	0.341	-0.044	0.009	0.000	0.000	0.000
67	0.335	-0.034	0.011	0.000	0.000	0.000
68	0.307	-0.030	0.019	0.000	0.000	0.000
69	0.333	-0.063	0.022	0.000	0.000	0.000
70	0.370	-0.058	0.023	0.000	0.000	0.000
71	0.366	-0.034	0.021	0.000	0.000	0.000
72	0.360	-0.018	0.027	0.000	0.000	0.000
73	0.339	-0.019	0.043	0.000	0.000	0.000
82	0.377	-0.068	0.018	0.000	0.000	0.000
83	0.377	-0.064	0.020	0.000	0.000	0.000
84	0.379	-0.040	0.022	0.000	0.000	0.000
85	0.384	-0.025	0.022	0.000	0.000	0.000
86	0.392	-0.030	0.022	0.000	0.000	0.000
87	0.398	-0.066	0.019	0.000	0.000	0.000
88	0.397	-0.072	0.016	0.000	0.000	0.000
89	0.396	-0.061	0.014	0.000	0.000	0.000
90	0.396	-0.050	0.010	0.000	0.000	0.000
91	0.397	-0.047	0.004	0.000	0.000	0.000
92	0.397	-0.048	-0.003	0.000	0.000	0.000
93	0.396	-0.050	-0.009	0.000	0.000	0.000
94	0.397	-0.061	-0.013	0.000	0.000	0.000
95	0.398	-0.072	-0.015	0.000	0.000	0.000
96	0.399	-0.067	-0.018	0.000	0.000	0.000
97	0.393	-0.030	-0.021	0.000	0.000	0.000
98	0.385	-0.025	-0.022	0.000	0.000	0.000
99	0.380	-0.040	-0.022	0.000	0.000	0.000

Node	X-Axis Transl'n	Y-Axis Transl'n	Z-Axis Transl'n	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation
100	0.379	-0.064	-0.020	0.000	0.000	0.000
101	0.378	-0.068	-0.018	0.000	0.000	0.000
102	0.372	-0.023	-0.014	0.000	0.000	0.000
103	0.367	-0.019	-0.008	0.000	0.000	0.000
104	0.365	-0.035	-0.004	0.000	0.000	0.000
105	0.366	-0.059	-0.001	0.000	0.000	0.000
106	0.368	-0.063	0.000	0.000	0.000	0.000
107	0.364	-0.032	0.000	0.000	0.000	0.000
108	0.362	-0.035	0.003	0.000	0.000	0.000
109	0.361	-0.045	0.003	0.000	0.000	0.000
110	0.360	-0.055	0.002	0.000	0.000	0.000
111	0.361	-0.050	0.000	0.000	0.000	0.000
112	0.360	-0.050	-0.001	0.000	0.000	0.000
113	0.360	-0.054	-0.002	0.000	0.000	0.000
114	0.360	-0.044	-0.003	0.000	0.000	0.000
115	0.361	-0.035	-0.003	0.000	0.000	0.000
116	0.363	-0.032	-0.001	0.000	0.000	0.000
117	0.367	-0.062	0.000	0.000	0.000	0.000
118	0.365	-0.059	0.001	0.000	0.000	0.000
119	0.363	-0.035	0.004	0.000	0.000	0.000
120	0.365	-0.019	0.008	0.000	0.000	0.000
121	0.370	-0.023	0.014	0.000	0.000	0.000
122	0.408	-0.068	-0.008	0.000	0.000	0.000
123	0.409	-0.078	-0.005	0.000	0.000	0.000
124	0.411	-0.063	-0.001	0.000	0.000	0.000
125	0.412	-0.039	0.001	0.000	0.000	0.000
126	0.412	-0.033	0.003	0.000	0.000	0.000
127	0.416	-0.066	0.003	0.000	0.000	0.000
128	0.417	-0.075	0.003	0.000	0.000	0.000
129	0.417	-0.070	0.003	0.000	0.000	0.000
130	0.417	-0.057	0.003	0.000	0.000	0.000
131	0.416	-0.049	0.003	0.000	0.000	0.000
132	0.416	-0.049	-0.002	0.000	0.000	0.000
133	0.417	-0.057	-0.002	0.000	0.000	0.000
134	0.418	-0.071	-0.002	0.000	0.000	0.000
135	0.417	-0.076	-0.002	0.000	0.000	0.000
136	0.417	-0.067	-0.002	0.000	0.000	0.000
137	0.414	-0.033	-0.002	0.000	0.000	0.000
138	0.413	-0.040	0.000	0.000	0.000	0.000
139	0.412	-0.063	0.002	0.000	0.000	0.000
140	0.411	-0.079	0.005	0.000	0.000	0.000
141	0.410	-0.068	0.009	0.000	0.000	0.000
142	0.411	-0.026	0.017	0.000	0.000	0.000
143	0.414	-0.034	0.019	0.000	0.000	0.000
144	0.416	-0.058	0.020	0.000	0.000	0.000
145	0.417	-0.073	0.021	0.000	0.000	0.000
146	0.419	-0.063	0.021	0.000	0.000	0.000
147	0.424	-0.034	0.018	0.000	0.000	0.000
148	0.425	-0.042	0.015	0.000	0.000	0.000
149	0.424	-0.055	0.011	0.000	0.000	0.000
150	0.423	-0.059	0.007	0.000	0.000	0.000
151	0.422	-0.050	0.003	0.000	0.000	0.000
152	0.422	-0.050	-0.004	0.000	0.000	0.000
153	0.423	-0.059	-0.008	0.000	0.000	0.000
154	0.423	-0.055	-0.012	0.000	0.000	0.000
155	0.423	-0.042	-0.015	0.000	0.000	0.000
156	0.423	-0.034	-0.018	0.000	0.000	0.000
157	0.417	-0.063	-0.021	0.000	0.000	0.000
158	0.416	-0.073	-0.021	0.000	0.000	0.000
159	0.414	-0.058	-0.020	0.000	0.000	0.000
160	0.412	-0.033	-0.019	0.000	0.000	0.000
161	0.409	-0.026	-0.017	0.000	0.000	0.000

MEMBER FORCES AND MOMENTS (kN,kNm)

Load case 1 (Non-linear): G
Non-linear effects: P-Δ, P-δ, 3 Iterations, 99.992% Convergence

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	71.425	-1.012	2.444	0.000	-2.507	1.028
	9	54.554	-1.012	2.444	0.000	3.117	-1.301
2	2	71.425	-1.012	2.444	0.000	-2.507	1.028
	10	54.554	-1.012	2.444	0.000	3.117	-1.301
3	3	71.425	-1.012	2.444	0.000	-2.507	1.028
	11	54.554	-1.012	2.444	0.000	3.117	-1.301
4	4	71.425	-1.012	2.444	0.000	-2.507	1.028
	12	54.554	-1.012	2.444	0.000	3.117	-1.301
5	5	71.425	-1.012	2.444	0.000	-2.507	1.028
	13	54.554	-1.012	2.444	0.000	3.117	-1.301
6	6	71.425	-1.012	2.444	0.000	-2.507	1.028
	14	54.554	-1.012	2.444	0.000	3.117	-1.301
7	7	71.425	-1.012	2.444	0.000	-2.507	1.028
	15	54.554	-1.012	2.444	0.000	3.117	-1.301
8	8	71.425	-1.012	2.444	0.000	-2.507	1.028
	16	54.554	-1.012	2.444	0.000	3.117	-1.301
9	9	13.831	3.854	0.260	0.143	-0.321	-1.394
	34	12.329	2.547	0.260	0.143	-0.149	0.727
10	10	13.831	3.854	0.260	0.143	-0.321	-1.394
	39	12.329	2.547	0.260	0.143	-0.149	0.727
11	11	13.831	3.854	0.260	0.143	-0.321	-1.394
	44	12.329	2.547	0.260	0.143	-0.149	0.727
12	12	13.831	3.854	0.260	0.143	-0.321	-1.394
	49	12.329	2.547	0.260	0.143	-0.149	0.727
13	13	13.831	3.854	0.260	0.143	-0.321	-1.394
	54	12.329	2.547	0.260	0.143	-0.149	0.727
14	14	13.831	3.854	0.260	0.143	-0.321	-1.394
	59	12.329	2.547	0.260	0.143	-0.149	0.727
15	15	13.831	3.854	0.260	0.143	-0.321	-1.394
	64	12.329	2.547	0.260	0.143	-0.149	0.727
16	16	13.831	3.854	0.260	0.143	-0.321	-1.394
	69	12.329	2.547	0.260	0.143	-0.149	0.727
17	9	28.631	0.619	-1.475	0.000	1.556	-0.659
	17	21.296	0.619	-1.475	0.000	0.081	-0.040
18	10	28.631	0.619	-1.475	0.000	1.556	-0.659
	18	21.296	0.619	-1.475	0.000	0.081	-0.040
19	11	28.631	0.619	-1.475	0.000	1.556	-0.659
	19	21.296	0.619	-1.475	0.000	0.081	-0.040
20	12	28.631	0.619	-1.475	0.000	1.556	-0.659
	20	21.296	0.619	-1.475	0.000	0.081	-0.040
21	13	28.631	0.619	-1.475	0.000	1.556	-0.659
	21	21.296	0.619	-1.475	0.000	0.081	-0.040
22	14	28.631	0.619	-1.475	0.000	1.556	-0.659
	22	21.296	0.619	-1.475	0.000	0.081	-0.040
23	15	28.631	0.619	-1.475	0.000	1.556	-0.659
	23	21.296	0.619	-1.475	0.000	0.081	-0.040
24	16	28.631	0.619	-1.475	0.000	1.556	-0.659
	24	21.296	0.619	-1.475	0.000	0.081	-0.040
25	17	-4.826	5.009	-0.208	-0.037	0.064	-0.929
	82	-4.826	3.181	-0.208	-0.037	-0.026	0.852
26	18	-4.826	5.009	-0.208	-0.037	0.064	-0.929
	87	-4.826	3.181	-0.208	-0.037	-0.026	0.852
27	19	-4.826	5.009	-0.208	-0.037	0.064	-0.929
	92	-4.826	3.181	-0.208	-0.037	-0.026	0.852
28	20	-4.826	5.009	-0.208	-0.037	0.064	-0.929
	97	-4.826	3.181	-0.208	-0.037	-0.026	0.852
29	21	-4.826	5.009	-0.208	-0.037	0.064	-0.929
	102	-4.826	3.181	-0.208	-0.037	-0.026	0.852
30	22	-4.826	5.009	-0.208	-0.037	0.064	-0.929
	107	-4.826	3.181	-0.208	-0.037	-0.026	0.852
31	23	-4.826	5.009	-0.208	-0.037	0.064	-0.929
	112	-4.826	3.181	-0.208	-0.037	-0.026	0.852
32	24	-4.826	5.009	-0.208	-0.037	0.064	-0.929
	117	-4.826	3.181	-0.208	-0.037	-0.026	0.852
33	17	11.267	-0.650	1.582	0.000	-0.512	0.209
	25	6.866	-0.650	1.582	0.000	0.436	-0.182
34	18	11.267	-0.650	1.582	0.000	-0.512	0.209
	26	6.866	-0.650	1.582	0.000	0.436	-0.182
35	19	11.267	-0.650	1.582	0.000	-0.512	0.209
	27	6.866	-0.650	1.582	0.000	0.436	-0.182
36	20	11.267	-0.650	1.582	0.000	-0.512	0.209
	28	6.866	-0.650	1.582	0.000	0.436	-0.182
37	21	11.267	-0.650	1.582	0.000	-0.512	0.209
	29	6.866	-0.650	1.582	0.000	0.436	-0.182
38	22	11.267	-0.650	1.582	0.000	-0.512	0.209
	30	6.866	-0.650	1.582	0.000	0.436	-0.182
39	23	11.267	-0.650	1.582	0.000	-0.512	0.209
	31	6.866	-0.650	1.582	0.000	0.436	-0.182
40	24	11.267	-0.650	1.582	0.000	-0.512	0.209
	32	6.866	-0.650	1.582	0.000	0.436	-0.182
41	25	2.112	3.432	-0.052	-0.008	0.023	-0.636
	122	2.112	1.604	-0.052	-0.008	0.000	0.459
42	26	2.112	3.432	-0.052	-0.008	0.023	-0.636
	127	2.112	1.604	-0.052	-0.008	0.000	0.459
43	27	2.112	3.432	-0.052	-0.008	0.023	-0.636
	132	2.112	1.604	-0.052	-0.008	0.000	0.459
44	28	2.112	3.432	-0.052	-0.008	0.023	-0.636
	137	2.112	1.604	-0.052	-0.008	0.000	0.459
45	29	2.112	3.432	-0.052	-0.008	0.023	-0.636
	142	2.112	1.604	-0.052	-0.008	0.000	0.459
46	30	2.112	3.432	-0.052	-0.008	0.023	-0.636
	147	2.112	1.604	-0.052	-0.008	0.000	0.459
47	31	2.112	3.432	-0.052	-0.008	0.023	-0.636
	152	2.112	1.604	-0.052	-0.008	0.000	0.459
48	32	2.112	3.432	-0.052	-0.008	0.023	-0.636
	157	2.112	1.604	-0.052	-0.008	0.000	0.459
49	34	4.289	2.243	0.036	0.031	-0.027	-0.453
	35	3.568	0.937	0.036	0.031	-0.009	0.337
50 - Compression-only member has been disabled							
51 - Compression-only member has been disabled							
52	37	3.577	-0.938	-0.036	-0.031	-0.009	0.337
	38	4.298	-2.244	-0.036	-0.031	-0.027	-0.454
53	38	12.330	-2.538	-0.261	-0.144	-0.149	0.726
	10	13.832	-3.845	-0.261	-0.144	-0.322	-1.389
54	39	4.289	2.243	0.036	0.031	-0.027	-0.453
	40	3.568	0.937	0.036	0.031	-0.009	0.337
55 - Compression-only member has been disabled							
56 - Compression-only member has been disabled							
57	42	3.577	-0.938	-0.036	-0.031	-0.009	0.337
	43	4.298	-2.244	-0.036	-0.031	-0.027	-0.454
58	43	12.330	-2.538	-0.261	-0.144	-0.149	0.726
	11	13.832	-3.845	-0.261	-0.144	-0.322	-1.389
59	44	4.289	2.243	0.036	0.031	-0.027	-0.453
	45	3.568	0.937	0.036	0.031	-0.009	0.337
60 - Compression-only member has been disabled							
61 - Compression-only member has been disabled							
62	47	3.577	-0.938	-0.036	-0.031	-0.009	0.337
	48	4.298	-2.244	-0.036	-0.031	-0.027	-0.454
63	48	12.330	-2.538	-0.261	-0.144	-0.149	0.726
	12	13.832	-3.845	-0.261	-0.144	-0.322	-1.389
64	49	4.289	2.243	0.036	0.031	-0.027	-0.453
	50	3.568	0.937	0.036	0.031	-0.009	0.337
65 - Compression-only member has been disabled							
66 - Compression-only member has been disabled							
67	52	3.577	-0.938	-0.036	-0.031	-0.009	0.337
	53	4.298	-2.244	-0.036	-0.031	-0.027	-0.454

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
68	53	12.330	-2.538	-0.261	-0.144	-0.149	0.726
	13	13.832	-3.845	-0.261	-0.144	-0.322	-1.389
69	54	4.289	2.243	0.036	0.031	-0.027	-0.453
	55	3.568	0.937	0.036	0.031	-0.009	0.337
70 - Compression-only member has been disabled							
71 - Compression-only member has been disabled							
72	57	3.577	-0.938	-0.036	-0.031	-0.009	0.337
	58	4.298	-2.244	-0.036	-0.031	-0.027	-0.454
73	58	12.330	-2.538	-0.261	-0.144	-0.149	0.726
	14	13.832	-3.845	-0.261	-0.144	-0.322	-1.389
74	59	4.289	2.243	0.036	0.031	-0.027	-0.453
	60	3.568	0.937	0.036	0.031	-0.009	0.337
75 - Compression-only member has been disabled							
76 - Compression-only member has been disabled							
77	62	3.577	-0.938	-0.036	-0.031	-0.009	0.337
	63	4.298	-2.244	-0.036	-0.031	-0.027	-0.454
78	63	12.330	-2.538	-0.261	-0.144	-0.149	0.726
	15	13.832	-3.845	-0.261	-0.144	-0.322	-1.389
79	64	4.289	2.243	0.036	0.031	-0.027	-0.453
	65	3.568	0.937	0.036	0.031	-0.009	0.337
80 - Compression-only member has been disabled							
81 - Compression-only member has been disabled							
82	67	3.577	-0.938	-0.036	-0.031	-0.009	0.337
	68	4.298	-2.244	-0.036	-0.031	-0.027	-0.454
83	68	12.330	-2.538	-0.261	-0.144	-0.149	0.726
	16	13.832	-3.845	-0.261	-0.144	-0.322	-1.389
84	69	4.289	2.243	0.036	0.031	-0.027	-0.453
	70	3.568	0.937	0.036	0.031	-0.009	0.337
85 - Compression-only member has been disabled							
86 - Compression-only member has been disabled							
87	72	3.577	-0.938	-0.036	-0.031	-0.009	0.337
	73	4.298	-2.244	-0.036	-0.031	-0.027	-0.454
88	73	12.330	-2.538	-0.261	-0.144	-0.149	0.726
	9	13.832	-3.845	-0.261	-0.144	-0.322	-1.389
97	82	-5.340	3.819	-0.036	-0.022	-0.001	-0.854
	83	-5.340	1.990	-0.036	-0.022	-0.017	0.409
98	83	-2.758	2.859	0.000	0.000	-0.010	0.123
	84	-2.758	1.030	0.000	0.000	-0.010	0.969
99	84	-2.758	-1.036	0.000	0.000	-0.010	0.969
	85	-2.758	-2.865	0.000	0.000	-0.010	0.120
100	85	-5.348	-1.991	0.036	0.022	-0.017	0.409
	86	-5.348	-3.820	0.036	0.022	-0.001	-0.855
101	86	-4.829	-3.191	0.209	0.037	-0.027	0.854
	18	-4.829	-5.020	0.209	0.037	0.064	-0.932
102	87	-5.340	3.819	-0.036	-0.022	-0.001	-0.854
	88	-5.340	1.990	-0.036	-0.022	-0.017	0.409
103	88	-2.758	2.859	0.000	0.000	-0.010	0.123
	89	-2.758	1.030	0.000	0.000	-0.010	0.969
104	89	-2.758	-1.036	0.000	0.000	-0.010	0.969
	90	-2.758	-2.865	0.000	0.000	-0.010	0.120
105	90	-5.348	-1.991	0.036	0.022	-0.017	0.409
	91	-5.348	-3.820	0.036	0.022	-0.001	-0.855
106	91	-4.829	-3.191	0.209	0.037	-0.027	0.854
	19	-4.829	-5.020	0.209	0.037	0.064	-0.932
107	92	-5.340	3.819	-0.036	-0.022	-0.001	-0.854
	93	-5.340	1.990	-0.036	-0.022	-0.017	0.409
108	93	-2.758	2.859	0.000	0.000	-0.010	0.123
	94	-2.758	1.030	0.000	0.000	-0.010	0.969
109	94	-2.758	-1.036	0.000	0.000	-0.010	0.969
	95	-2.758	-2.865	0.000	0.000	-0.010	0.120
110	95	-5.348	-1.991	0.036	0.022	-0.017	0.409
	96	-5.348	-3.820	0.036	0.022	-0.001	-0.855
111	96	-4.829	-3.191	0.209	0.037	-0.027	0.854
	20	-4.829	-5.020	0.209	0.037	0.064	-0.932
112	97	-5.340	3.819	-0.036	-0.022	-0.001	-0.854
	98	-5.340	1.990	-0.036	-0.022	-0.017	0.409
113	98	-2.758	2.859	0.000	0.000	-0.010	0.123
	99	-2.758	1.030	0.000	0.000	-0.010	0.969
114	99	-2.758	-1.036	0.000	0.000	-0.010	0.969
	100	-2.758	-2.865	0.000	0.000	-0.010	0.120
115	100	-5.348	-1.991	0.036	0.022	-0.017	0.409
	101	-5.348	-3.820	0.036	0.022	-0.001	-0.855
116	101	-4.829	-3.191	0.209	0.037	-0.027	0.854
	21	-4.829	-5.020	0.209	0.037	0.064	-0.932
117	102	-5.340	3.819	-0.036	-0.022	-0.001	-0.854
	103	-5.340	1.990	-0.036	-0.022	-0.017	0.409
118	103	-2.758	2.859	0.000	0.000	-0.010	0.123
	104	-2.758	1.030	0.000	0.000	-0.010	0.969
119	104	-2.758	-1.036	0.000	0.000	-0.010	0.969
	105	-2.758	-2.865	0.000	0.000	-0.010	0.120
120	105	-5.348	-1.991	0.036	0.022	-0.017	0.409
	106	-5.348	-3.820	0.036	0.022	-0.001	-0.855
121	106	-4.829	-3.191	0.209	0.037	-0.027	0.854
	22	-4.829	-5.020	0.209	0.037	0.064	-0.932
122	107	-5.340	3.819	-0.036	-0.022	-0.001	-0.854
	108	-5.340	1.990	-0.036	-0.022	-0.017	0.409
123	108	-2.758	2.859	0.000	0.000	-0.010	0.123
	109	-2.758	1.030	0.000	0.000	-0.010	0.969
124	109	-2.758	-1.036	0.000	0.000	-0.010	0.969
	110	-2.758	-2.865	0.000	0.000	-0.010	0.120
125	110	-5.348	-1.991	0.036	0.022	-0.017	0.409
	111	-5.348	-3.820	0.036	0.022	-0.001	-0.855
126	111	-4.829	-3.191	0.209	0.037	-0.027	0.854
	23	-4.829	-5.020	0.209	0.037	0.064	-0.932
127	112	-5.340	3.819	-0.036	-0.022	-0.001	-0.854
	113	-5.340	1.990	-0.036	-0.022	-0.017	0.409
128	113	-2.758	2.859	0.000	0.000	-0.010	0.123
	114	-2.758	1.030	0.000	0.000	-0.010	0.969
129	114	-2.758	-1.036	0.000	0.000	-0.010	0.969
	115	-2.758	-2.865	0.000	0.000	-0.010	0.120
130	115	-5.348	-1.991	0.036	0.022	-0.017	0.409
	116	-5.348	-3.820	0.036	0.022	-0.001	-0.855
131	116	-4.829	-3.191	0.209	0.037	-0.027	0.854
	24	-4.829	-5.020	0.209	0.037	0.064	-0.932
132	117	-5.340	3.819	-0.036	-0.022	-0.001	-0.854
	118	-5.340	1.990	-0.036	-0.022	-0.017	0.409
133	118	-2.758	2.859	0.000	0.000	-0.010	0.123
	119	-2.758	1.030	0.000	0.000	-0.010	0.969
134	119	-2.758	-1.036	0.000	0.000	-0.010	0.969
	120	-2.758	-2.865	0.000	0.000	-0.010	0.120
135	120	-5.348	-1.991	0.036	0.022	-0.017	0.409
	121	-5.348	-3.820	0.036	0.022	-0.001	-0.855
136	121	-4.829	-3.191	0.209	0.037	-0.027	0.854
	17	-4.829	-5.020	0.209	0.037	0.064	-0.932
137	86	4.997	0.225	3.499	-0.019	-0.570	0.054
	38	6.928	0.225	3.499	-0.019	1.180	0.166
138	37	1.877	-0.036	2.590	-0.007	-0.384	0.032
	85	0.873	-0.036	2.590	-0.007	0.289	0.022
139	36	-1.294	0.000	0.000	0.000	0.000	0.000
	84	-2.066	0.000	0.000	0.000	0.000	0.000
140	35	1.872	-0.036	-2.582	0.007	0.385	0.032
	83	0.868	-0.036	-2.582	0.007	-0.287	0.022
141	34	6.938	-0.224	-3.499	0.019	1.180	0.166
	82	5.007	-0.224	-3.499	0.019	-0.569	0.054
142	39	6.938	-0.224	-3.499	0.019	1.180	0.166
	87	5.007	-0.224	-3.499	0.019	-0.569	0.054
143	40	1.872	-0.036	-2.582	0.007	0.385	0.032
	88	0.868	-0.036	-2.582	0.007	-0.287	0.022
144	41	-1.294	0.000	0.000	0.000	0.000	0.000
	89	-2.066	0.000	0.000	0.000	0.000	0.000
145	42	1.877	-0.036	2.590	-0.007	-0.384	0.032
	90	0.873	-0.036	2.590	-0.007	0.289	0.022
146	43	6.928	-0.225	3.499	-0.019	-1.180	0.166
	91	4.997	-0.225	3.499	-0.019	0.570	0.054
147	69	6.938	-0.224	-3.499	0.019	1.180	0.166
	117	5.007	-0.224	-3.499	0.019	-0.569	0.054
148	70	1.872	-0.036	-2.582	0.007	0.385	0.032
	118	0.868	-0.036	-2.582	0.007	-0.287	0.022
149	71	-1.294	0.000	0.000	0.000	0.000	0.000
	119	-2.066	0.000	0.000	0.000	0.000	0.000
150	72	1.877	-0.036	2.590	-0.007	-0.384	0.032
	120	0.873	-0.036	2.590	-0.007	0.289	0.022
151	73	6.928	-0.225	3.499	-0.019	-1.180	0.166
	121	4.997	-0.225	3.499	-0.019	0.570	0.054
152	63	6.928	0.225	-3.499	-0.019	1.180	-0.166
	111	4.997	0.225	-3.499	-0.019	-0.570	-0.054
153	62	1.877	0.036	-2.590	-0.007	0.384	-0.032
	110	0.873	0.036	-2.590	-0.007	-0.289	-0.022
154	61	-1.294	0.000	0.000	0.000	0.000	0.000
	109	-2.066	0.000	0.000	0.000	0.000	0.000
155	60	1.872	0.036	2.582	0.007	-0.385	-0.032
	108	0.868	0.036	2.582	0.007	0.287	-0.022
156	59	6.938	0.224	3.499	0.019	-1.180	-0.166
	107	5.007	0.224	3.499	0.019	0.569	-0.054
157	58	6.928	0.225	-3.499	-0.019	1.180	-0.166
	106	4.997	0.225	-3.499	-0.019	-0.570	-0.054
158	57	1.877	0.036	-2.590	-0.007	0.384	-0.032
	105	0.873	0.036	-2.590	-0.007	-0.289	-0.022
159	56	-1.294	0.000	0.000	0.000	0.000	0.000
	104	-2.066	0.000	0.000	0.000	0.000	0.000
160	55	1.872	0.036	2.582	0.007	-0.385	-0.032
	103	0.868	0.036	2.582	0.007	0.287	-0.022
161	54	6.938	0.224	3.499	0.019	-1.180	-0.166
	102	5.007	0.224	3.499	0.019	0.569	-0.054
162	53	6.928	0.225	-3.499	-0.019	1.180	-0.166
	101	4.997	0.225	-3.499	-0.019	-0.570	-0.054
163	52	1.877	0.036	-2.590	-0.007	0.384	-0.032
	100	0.873	0.036	-2.590	-0.007	-0.289	-0.022
164	51	-1.294	0.000	0.000	0.000	0.000	0.000
	99	-2.066	0.000	0.000	0.000	0.000	0.000
165	50	1.872	0.036	2.582	0.007	-0.385	-0.032
	98	0.868	0.036	2.582	0.007	0.287	-0.022
166	49	6.938	0.224	3.499	0.019	-1.180	-0.166
	97	5.007	0.224	3.499	0.019	0.569	-0.054

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
167	64	6.938	-0.224	-3.499	0.019	1.180	0.166
	112	5.007	-0.224	-3.499	0.019	-0.569	0.054
168	65	1.872	-0.036	-2.582	0.007	0.385	0.032
	113	0.868	-0.036	-2.582	0.007	-0.287	0.022
169	66	-1.294	0.000	0.000	0.000	0.000	0.000
	114	-2.066	0.000	0.000	0.000	0.000	0.000
170	67	1.877	-0.036	2.590	-0.007	-0.384	0.032
	115	0.873	-0.036	2.590	-0.007	0.289	0.022
171	68	6.928	-0.225	3.499	-0.019	-1.180	0.166
	116	4.997	-0.225	3.499	-0.019	0.570	0.054
172	44	6.938	0.224	3.499	0.019	-1.180	-0.166
	92	5.007	0.224	3.499	0.019	0.569	-0.054
173	45	1.872	0.036	2.582	0.007	-0.385	-0.032
	93	0.868	0.036	2.582	0.007	0.287	-0.022
174	46	-1.294	0.000	0.000	0.000	0.000	0.000
	94	-2.066	0.000	0.000	0.000	0.000	0.000
175	47	1.877	0.036	-2.590	-0.007	0.384	-0.032
	95	0.873	0.036	-2.590	-0.007	-0.289	-0.022
176	48	6.928	0.225	-3.499	-0.019	1.180	-0.166
	96	4.997	0.225	-3.499	-0.019	-0.570	-0.054
177	122	6.125	3.656	0.000	0.000	-0.006	-0.811
	123	6.125	1.828	0.000	0.000	-0.006	0.382
178	123	6.125	1.828	0.000	0.000	-0.006	0.382
	124	6.125	-0.001	0.000	0.000	-0.006	0.779
179	124	6.125	-0.001	0.000	0.000	-0.006	0.779
	125	6.125	-1.829	0.000	0.000	-0.006	0.381
180	125	6.125	-1.829	0.000	0.000	-0.006	0.381
	126	6.125	-3.657	0.000	0.000	-0.006	-0.812
181	126	2.107	-1.606	0.052	0.008	0.000	0.459
	26	2.107	-3.434	0.052	0.008	0.023	-0.637
182	127	6.125	3.656	0.000	0.000	-0.006	-0.811
	128	6.125	1.828	0.000	0.000	-0.006	0.382
183	128	6.125	1.828	0.000	0.000	-0.006	0.382
	129	6.125	-0.001	0.000	0.000	-0.006	0.779
184	129	6.125	-0.001	0.000	0.000	-0.006	0.779
	130	6.125	-1.829	0.000	0.000	-0.006	0.381
185	130	6.125	-1.829	0.000	0.000	-0.006	0.381
	131	6.125	-3.657	0.000	0.000	-0.006	-0.812
186	131	2.107	-1.606	0.052	0.008	0.000	0.459
	27	2.107	-3.434	0.052	0.008	0.023	-0.637
187	132	6.125	3.656	0.000	0.000	-0.006	-0.811
	133	6.125	1.828	0.000	0.000	-0.006	0.382
188	133	6.125	1.828	0.000	0.000	-0.006	0.382
	134	6.125	-0.001	0.000	0.000	-0.006	0.779
189	134	6.125	-0.001	0.000	0.000	-0.006	0.779
	135	6.125	-1.829	0.000	0.000	-0.006	0.381
190	135	6.125	-1.829	0.000	0.000	-0.006	0.381
	136	6.125	-3.657	0.000	0.000	-0.006	-0.812
191	136	2.107	-1.606	0.052	0.008	0.000	0.459
	28	2.107	-3.434	0.052	0.008	0.023	-0.637
192	137	6.125	3.656	0.000	0.000	-0.006	-0.811
	138	6.125	1.828	0.000	0.000	-0.006	0.382
193	138	6.125	1.828	0.000	0.000	-0.006	0.382
	139	6.125	-0.001	0.000	0.000	-0.006	0.779
194	139	6.125	-0.001	0.000	0.000	-0.006	0.779
	140	6.125	-1.829	0.000	0.000	-0.006	0.381
195	140	6.125	-1.829	0.000	0.000	-0.006	0.381
	141	6.125	-3.657	0.000	0.000	-0.006	-0.812
196	141	2.107	-1.606	0.052	0.008	0.000	0.459
	29	2.107	-3.434	0.052	0.008	0.023	-0.637
197	142	6.125	3.656	0.000	0.000	-0.006	-0.811
	143	6.125	1.828	0.000	0.000	-0.006	0.382
198	143	6.125	1.828	0.000	0.000	-0.006	0.382
	144	6.125	-0.001	0.000	0.000	-0.006	0.779
199	144	6.125	-0.001	0.000	0.000	-0.006	0.779
	145	6.125	-1.829	0.000	0.000	-0.006	0.381
200	145	6.125	-1.829	0.000	0.000	-0.006	0.381
	146	6.125	-3.657	0.000	0.000	-0.006	-0.812
201	146	2.107	-1.606	0.052	0.008	0.000	0.459
	30	2.107	-3.434	0.052	0.008	0.023	-0.637
202	147	6.125	3.656	0.000	0.000	-0.006	-0.811
	148	6.125	1.828	0.000	0.000	-0.006	0.382
203	148	6.125	1.828	0.000	0.000	-0.006	0.382
	149	6.125	-0.001	0.000	0.000	-0.006	0.779
204	149	6.125	-0.001	0.000	0.000	-0.006	0.779
	150	6.125	-1.829	0.000	0.000	-0.006	0.381
205	150	6.125	-1.829	0.000	0.000	-0.006	0.381
	151	6.125	-3.657	0.000	0.000	-0.006	-0.812
206	151	2.107	-1.606	0.052	0.008	0.000	0.459
	31	2.107	-3.434	0.052	0.008	0.023	-0.637
207	152	6.125	3.656	0.000	0.000	-0.006	-0.811
	153	6.125	1.828	0.000	0.000	-0.006	0.382
208	153	6.125	1.828	0.000	0.000	-0.006	0.382
	154	6.125	-0.001	0.000	0.000	-0.006	0.779
209	154	6.125	-0.001	0.000	0.000	-0.006	0.779
	155	6.125	-1.829	0.000	0.000	-0.006	0.381
210	155	6.125	-1.829	0.000	0.000	-0.006	0.381
	156	6.125	-3.657	0.000	0.000	-0.006	-0.812
211	156	2.107	-1.606	0.052	0.008	0.000	0.459
	32	2.107	-3.434	0.052	0.008	0.023	-0.637
212	157	6.125	3.656	0.000	0.000	-0.006	-0.811
	158	6.125	1.828	0.000	0.000	-0.006	0.382
213	158	6.125	1.828	0.000	0.000	-0.006	0.382
	159	6.125	-0.001	0.000	0.000	-0.006	0.779
214	159	6.125	-0.001	0.000	0.000	-0.006	0.779
	160	6.125	-1.829	0.000	0.000	-0.006	0.381
215	160	6.125	-1.829	0.000	0.000	-0.006	0.381
	161	6.125	-3.657	0.000	0.000	-0.006	-0.812
216	161	2.107	-1.606	0.052	0.008	0.000	0.459
	25	2.107	-3.434	0.052	0.008	0.023	-0.637
217	151	2.052	-0.052	-4.017	0.006	1.271	-0.008
	111	4.369	-0.052	-4.017	0.006	-1.139	-0.039
218	147	2.052	-0.052	4.012	-0.006	-1.270	-0.008
	107	4.369	-0.052	4.012	-0.006	1.137	-0.039
219	146	2.052	-0.052	-4.017	0.006	1.271	-0.008
	106	4.369	-0.052	-4.017	0.006	-1.139	-0.039
220	142	2.052	-0.052	4.012	-0.006	-1.270	-0.008
	102	4.369	-0.052	4.012	-0.006	1.137	-0.039
221	141	2.052	-0.052	-4.017	0.006	1.271	-0.008
	101	4.369	-0.052	-4.017	0.006	-1.139	-0.039
222	137	2.052	-0.052	4.012	-0.006	-1.270	-0.008
	97	4.369	-0.052	4.012	-0.006	1.137	-0.039
223	136	2.052	-0.052	-4.017	0.006	1.271	-0.008
	96	4.369	-0.052	-4.017	0.006	-1.139	-0.039
224	132	2.052	-0.052	4.012	-0.006	-1.270	-0.008
	92	4.369	-0.052	4.012	-0.006	1.137	-0.039
225	131	2.052	0.052	4.017	0.006	-1.271	0.008
	91	4.369	0.052	4.017	0.006	1.139	0.039
226	127	2.052	0.052	-4.012	-0.006	1.270	0.008
	87	4.369	0.052	-4.012	-0.006	-1.137	0.039
227	126	2.052	0.052	4.017	0.006	-1.271	0.008
	86	4.369	0.052	4.017	0.006	1.139	0.039
229	122	2.052	0.052	-4.012	-0.006	1.270	0.008
	82	4.369	0.052	-4.012	-0.006	-1.137	0.039
230	161	2.052	0.052	4.017	0.006	-1.271	0.008
	121	4.369	0.052	4.017	0.006	1.139	0.039
231	157	2.052	0.052	-4.012	-0.006	1.270	0.008
	117	4.369	0.052	-4.012	-0.006	-1.137	0.039
232	116	4.369	-0.052	4.017	0.006	-1.139	0.039
	156	2.052	-0.052	4.017	0.006	1.271	0.008
233	152	2.052	0.052	-4.012	-0.006	1.270	0.008
	112	4.369	0.052	-4.012	-0.006	-1.137	0.039

Load case 2 (Non-linear): Estatic
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.994% Convergence

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	0.175	-37.971	-10.795	0.000	20.359	61.513
	9	0.175	-37.971	-10.795	0.000	-4.469	-25.821
2	2	16.534	-32.752	-1.830	0.000	4.539	51.560
	10	16.534	-32.752	-1.830	0.000	0.334	-23.777
3	3	21.927	-4.933	11.643	0.000	-17.498	7.475
	11	21.927	-4.933	11.643	0.000	9.290	-3.876
4	4	16.502	24.365	21.657	0.000	-32.827	-39.528
	12	16.502	24.365	21.657	0.000	16.991	16.513
5	5	0.179	34.560	19.010	0.000	-28.681	-58.125
	13	0.179	34.560	19.010	0.000	15.041	21.364
6	6	-14.197	24.375	5.623	0.000	-8.297	-42.291
	14	-14.197	24.375	5.623	0.000	4.637	13.766
7	7	-26.884	3.752	-8.764	0.000	13.926	-6.032
	15	-26.884	3.752	-8.764	0.000	-6.221	2.594
8	8	-14.236	-21.123	-13.059	0.000	23.585	35.553
	16	-14.236	-21.123	-13.059	0.000	-6.445	-13.029
9 - Compression-only member has been disabled							
10 - Compression-only member has been disabled							
11	11	20.410	-1.539	-0.092	0.769	-1.124	-0.523
	44	20.410	-1.539	-0.092	0.769	-1.186	-1.544
12	12	54.642	-4.214	0.356	0.553	-0.636	-1.285
	49	54.642	-4.214	0.356	0.553	-0.402	-4.084
13	13	54.308	-5.728	1.312	0.026	-0.030	-0.752
	54	54.308	-5.728	1.312	0.026	0.843	-4.553
14	14	23.329	-3.946	1.350	-0.472	0.543	0.179
	59	23.329	-3.946	1.350	-0.472	1.440	-2.438
15	15	-13.825	-3.031	-0.108	-0.491	0.696	1.497
	64	-13.825	-3.031	-0.108	-0.491	0.624	-0.512
16 - Compression-only member has been disabled							
17	9	-37.075	7.763	-7.200	0.000	-4.482	-25.134
	17	-37.075	7.763	-7.200	0.000	-11.678	-17.366
18	10	-21.968	12.073	-3.771	0.000	-0.493	-22.560
	18	-21.968	12.073	-3.771	0.000	-4.265	-10.484
19	11	-6.854	1.774	-4.339	0.000	6.609	-2.795
	19	-6.854	1.774	-4.339	0.000	2.269	-1.020
20	12	-21.956	-5.791	-11.243	0.000	15.486	16.201
	20	-21.956	-5.791	-11.243	0.000	4.240	10.409
21	13	-37.035	-0.171	-10.619	0.000	14.482	20.860
	21	-37.035	-0.171	-10.619	0.000	3.862	20.683

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
22	14	-29.208	4.944	-4.059	0.000	5.272	13.383
	22	-29.208	4.944	-4.059	0.000	1.215	18.323
23	15	-2.003	-0.516	1.380	0.000	-3.713	1.568
	23	-2.003	-0.516	1.380	0.000	-2.333	1.053
24	16	-29.239	-0.473	-6.186	0.000	-5.707	-13.232
	24	-29.239	-0.473	-6.186	0.000	-11.888	-13.703
25	17	-18.560	-17.660	-0.045	-0.214	0.224	6.591
	82	-18.560	-17.660	-0.045	-0.214	0.204	-1.092
26	18	-15.296	-7.326	0.604	-0.035	-0.203	2.725
	87	-15.296	-7.326	0.604	-0.035	0.060	-0.462
27	19	-13.480	-1.349	1.439	-0.074	-0.352	0.031
	92	-13.480	-1.349	1.439	-0.074	0.274	-0.556
28	20	-19.201	-4.856	0.182	-0.014	-0.214	0.553
	97	-19.201	-4.856	0.182	-0.014	-0.135	-1.559
29	21	-12.986	-4.070	-2.027	0.111	0.218	0.388
	102	-12.986	-4.070	-2.027	0.111	-0.664	-1.382
30	22	-1.121	-0.557	-3.414	0.219	0.695	-0.088
	107	-1.121	-0.557	-3.414	0.219	-0.789	-0.331
31	23	11.262	-1.193	-1.189	0.122	0.149	0.688
	112	11.262	-1.193	-1.189	0.122	-0.368	0.170
32	24	-11.106	-17.354	-0.995	-0.199	0.693	6.503
	117	-11.106	-17.354	-0.995	-0.199	0.260	-1.046
33	17	-15.359	20.290	8.827	0.000	-6.984	-13.232
	25	-15.359	20.290	8.827	0.000	-1.687	-1.057
34	18	-9.806	15.604	2.669	0.000	-2.299	-9.120
	26	-9.806	15.604	2.669	0.000	-0.698	0.243
35	19	-4.166	1.922	-4.363	0.000	2.422	-1.075
	27	-4.166	1.922	-4.363	0.000	-0.196	0.079
36	20	-9.781	-12.885	-8.921	0.000	4.686	8.058
	28	-9.781	-12.885	-8.921	0.000	-0.667	0.327
37	21	-15.328	-20.791	-7.877	0.000	4.277	14.432
	29	-15.328	-20.791	-7.877	0.000	-0.449	1.956
38	22	-11.316	-15.630	-1.703	0.000	1.193	11.897
	30	-11.316	-15.630	-1.703	0.000	0.171	2.518
39	23	0.388	-1.537	3.401	0.000	-2.063	0.932
	31	0.388	-1.537	3.401	0.000	-0.022	0.009
40	24	-11.331	12.103	9.558	0.000	-7.378	-9.152
	32	-11.331	12.103	9.558	0.000	-1.643	-1.890
41	25	16.869	-9.840	-0.056	-0.070	-0.064	2.726
	122	16.869	-9.840	-0.056	-0.070	-0.089	-1.554
42	26	-0.714	-3.641	-0.639	-0.114	0.101	1.035
	127	-0.714	-3.641	-0.639	-0.114	-0.177	-0.549
43	27	-17.197	-2.079	-1.317	-0.026	0.318	0.208
	132	-17.197	-2.079	-1.317	-0.026	-0.255	-0.696
44	28	-21.817	-6.140	-0.432	0.119	0.100	0.895
	137	-21.817	-6.140	-0.432	0.119	-0.088	-1.775
45	29	-13.669	-5.502	0.823	0.289	-0.058	0.824
	142	-13.669	-5.502	0.823	0.289	0.300	-1.569
46	30	3.813	-1.009	1.715	0.331	-0.251	0.152
	147	3.813	-1.009	1.715	0.331	0.495	-0.287
47	31	16.631	0.173	1.641	0.087	-0.697	0.254
	152	16.631	0.173	1.641	0.087	0.017	0.329
48	32	24.714	-10.321	0.892	0.040	-0.261	2.843
	157	24.714	-10.321	0.892	0.040	0.127	-1.646
49 - Compression-only member has been disabled							
50	35	11.644	-11.061	0.272	-0.056	-0.036	1.681
	36	11.644	-11.061	0.272	-0.056	0.084	-3.176
51	36	37.499	-8.014	0.222	-0.091	-0.039	-0.976
	37	37.499	-8.014	0.222	-0.091	0.058	-4.496
52	37	51.195	3.744	0.216	-0.159	-0.087	-3.483
	38	51.195	3.744	0.216	-0.159	0.020	-1.621
53	38	54.831	4.365	-0.355	-0.542	-0.390	-4.115
	10	54.831	4.365	-0.355	-0.542	-0.624	-1.217
54 - Compression-only member has been disabled							
55	40	2.474	-3.979	0.470	-0.120	-0.119	0.446
	41	2.474	-3.979	0.470	-0.120	0.087	-1.302
56	41	12.489	-3.318	0.409	-0.172	-0.137	-0.464
	42	12.489	-3.318	0.409	-0.172	0.043	-1.921
57	42	18.736	1.244	0.043	-0.354	-0.283	-1.388
	43	18.736	1.244	0.043	-0.354	-0.261	-0.770
58	43	20.467	1.599	0.079	-0.771	-1.180	-1.555
	11	20.467	1.599	0.079	-0.771	-1.125	-0.495
59	44	18.624	-1.225	-0.057	0.358	-0.261	-0.772
	45	18.624	-1.225	-0.057	0.358	-0.290	-1.381
60	45	12.350	3.321	-0.426	0.177	0.045	-1.920
	46	12.350	3.321	-0.426	0.177	-0.143	-0.461
61	46	2.360	3.948	-0.488	0.125	0.090	-1.296
	47	2.360	3.948	-0.488	0.125	-0.125	0.438
62 - Compression-only member has been disabled							
63 - Compression-only member has been disabled							
64	49	50.873	-3.695	-0.225	0.163	0.019	-1.625
	50	50.873	-3.695	-0.225	0.163	-0.093	-3.462
65	50	37.121	8.013	-0.232	0.094	0.058	-4.489
	51	37.121	8.013	-0.232	0.094	-0.044	-0.970
66	51	11.351	10.974	-0.282	0.060	0.085	-3.159
	52	11.351	10.974	-0.282	0.060	-0.039	1.660
67 - Compression-only member has been disabled							
68 - Compression-only member has been disabled							
69	54	52.826	-3.880	-0.166	-0.216	0.370	-1.603
	55	52.826	-3.880	-0.166	-0.216	0.289	-3.532
70	55	39.767	7.995	0.292	-0.119	0.032	-4.412
	56	39.767	7.995	0.292	-0.119	0.161	-0.901
71	56	13.508	11.470	0.313	-0.102	0.004	-3.149
	57	13.508	11.470	0.313	-0.102	0.141	1.888
72 - Compression-only member has been disabled							
73 - Compression-only member has been disabled							
74	59	25.096	-1.823	-0.328	-0.402	0.504	-0.741
	60	25.096	-1.823	-0.328	-0.402	0.342	-1.646
75	60	18.922	4.060	0.222	-0.173	-0.026	-2.014
	61	18.922	4.060	0.222	-0.173	0.071	-0.231
76	61	6.005	5.333	0.414	-0.093	-0.128	-1.315
	62	6.005	5.333	0.414	-0.093	0.054	1.027
77 - Compression-only member has been disabled							
78	63	-13.896	3.014	0.122	0.493	0.616	-0.513
	15	-13.896	3.014	0.122	0.493	0.698	1.485
79 - Compression-only member has been disabled							
80	65	6.124	-5.363	-0.389	0.087	0.047	1.035
	66	6.124	-5.363	-0.389	0.087	-0.124	-1.320
81	66	19.056	-4.053	-0.201	0.165	0.064	-0.234
	67	19.056	-4.053	-0.201	0.165	-0.025	-2.013
82	67	25.193	1.843	0.348	0.401	0.332	-1.653
	68	25.193	1.843	0.348	0.401	0.504	-0.737
83	68	23.367	4.000	-1.329	0.485	1.440	-2.448
	16	23.367	4.000	-1.329	0.485	0.557	0.203
84 - Compression-only member has been disabled							
85	70	13.796	-11.555	-0.308	0.100	0.138	1.909
	71	13.796	-11.555	-0.308	0.100	0.003	-3.165
86	71	40.136	-7.995	-0.287	0.118	0.157	-0.907
	72	40.136	-7.995	-0.287	0.118	0.031	-4.419
87	72	53.138	3.930	0.172	0.219	0.287	-3.552
	73	53.138	3.930	0.172	0.219	0.371	-1.598
88	73	54.483	5.873	-1.299	-0.009	0.854	-4.584
	9	54.483	5.873	-1.299	-0.009	-0.010	-0.687
97	82	10.648	-21.206	-0.008	-0.203	0.053	9.352
	83	10.648	-21.206	-0.008	-0.203	0.049	0.127
98	83	-2.399	-11.840	-0.280	-0.081	0.093	1.838
	84	-2.399	-11.840	-0.280	-0.081	-0.029	-3.312
99	84	-25.405	-8.143	-0.230	-0.063	0.072	-0.911
	85	-25.405	-8.143	-0.230	-0.063	-0.028	-4.453
100	85	-35.986	0.247	-0.224	0.034	0.042	-2.715
	86	-35.986	0.247	-0.224	0.034	-0.055	-2.608
101	86	-18.868	4.837	-0.172	0.014	-0.128	-1.565
	18	-18.868	4.837	-0.172	0.014	-0.203	0.538
102	87	-3.248	-8.258	0.081	-0.384	-0.122	3.867
	88	-3.248	-8.258	0.081	-0.384	-0.087	0.275
103	88	-6.242	-4.654	-0.389	-0.159	0.048	0.608
	89	-6.242	-4.654	-0.389	-0.159	-0.122	-1.416
104	89	-15.166	-3.264	-0.328	-0.113	0.060	-0.469
	90	-15.166	-3.264	-0.328	-0.113	-0.083	-1.889
105	90	-20.253	-0.296	0.037	0.074	0.060	-1.099
	91	-20.253	-0.296	0.037	0.074	0.076	-1.228
106	91	-13.341	1.338	-1.437	0.079	0.273	-0.558
	19	-13.341	1.338	-1.437	0.079	-0.352	0.024
107	92	-20.396	0.316	-0.031	-0.069	0.078	-1.233
	93	-20.396	0.316	-0.031	-0.069	0.064	-1.096
108	93	-15.278	3.263	0.338	0.119	-0.085	-1.888
	94	-15.278	3.263	0.338	0.119	0.062	-0.469
109	94	-6.376	4.652	0.400	0.166	-0.127	-1.415
	95	-6.376	4.652	0.400	0.166	0.047	0.609
110	95	-3.498	8.240	-0.088	0.399	-0.093	0.298
	96	-3.498	8.240	-0.088	0.399	-0.132	3.883
111	96	-15.568	7.319	-0.627	0.045	0.059	-0.452
	20	-15.568	7.319	-0.627	0.045	-0.214	2.732
112	97	-36.316	-0.197	0.233	-0.034	-0.059	-2.619
	98	-36.316	-0.197	0.233	-0.034	0.042	-2.704
113	98	-25.667	8.134	0.239	0.067	-0.031	-4.446
	99	-25.667	8.134	0.239	0.067	0.073	-0.908
114	99	-2.733	11.824	0.290	0.085	-0.033	-3.305
	100	-2.733	11.824	0.290	0.085	0.093	1.838
115	100	10.011	21.144	0.008	0.213	0.046	0.184
	101	10.011	21.144	0.008	0.213	0.049	9.382
116	101	-19.225	17.637	0.032	0.219	0.204	-1.068
	21	-19.225	17.637	0.032	0.219	0.218	6.605
117	102	-30.861	-0.620	0.341	-0.002	-0.203	-2.418
	103	-30.861	-0.620	0.341	-0.002	-0.055	-2.687
118	103	-21.035	8.149	-0.118	-0.090	0.078	-4.361
	104	-21.035	8.149	-0.118	-0.090	0.027	-0.817
119	104	2.318	11.985	-0.138	-0.125	0.153	-3.240
	105	2.318	11.985	-0.138	-0.125	0.093	1.974
120	105	17.266	21.503	0.175	-0.288	0.246	-0.024
	106	17.266	21.503	0.175	-0.288	0.322	9.329
121	106	-11.770	17.335	0.998	0.194	0.262	-1.022
	22	-11.770	17.335	0.998	0.194	0.695	6.518

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
122	107	-11.353	0.096	0.225	0.110	-0.209	-1.150
	108	-11.353	0.096	0.225	0.110	-0.111	-1.109
123	108	-6.689	4.016	-0.325	-0.097	0.043	-1.954
	109	-6.689	4.016	-0.325	-0.097	-0.098	-0.207
124	109	4.823	6.160	-0.517	-0.129	0.063	-1.426
	110	4.823	6.160	-0.517	-0.129	-0.162	1.254
125	110	11.501	10.623	-0.103	-0.322	-0.096	0.545
	111	11.501	10.623	-0.103	-0.322	-0.140	5.166
126	111	11.075	1.198	1.185	-0.130	-0.366	0.173
	23	11.075	1.198	1.185	-0.130	0.149	0.694
127	112	11.763	-10.632	0.107	0.301	-0.149	5.143
	113	11.763	-10.632	0.107	0.301	-0.102	0.518
128	113	4.963	-6.156	0.497	0.120	-0.160	1.252
	114	4.963	-6.156	0.497	0.120	0.056	-1.426
129	114	-6.561	-4.013	0.309	0.088	-0.095	-0.208
	115	-6.561	-4.013	0.309	0.088	0.039	-1.954
130	115	-11.186	-0.074	-0.241	-0.120	-0.106	-1.112
	116	-11.186	-0.074	-0.241	-0.120	-0.210	-1.144
131	116	-0.955	0.555	3.416	-0.230	-0.793	-0.334
	24	-0.955	0.555	3.416	-0.230	0.693	-0.093
132	117	17.899	-21.562	-0.172	0.283	0.316	9.299
	118	17.899	-21.562	-0.172	0.283	0.241	-0.081
133	118	2.653	-12.000	0.137	0.123	0.090	1.974
	119	2.653	-12.000	0.137	0.123	0.150	-3.246
134	119	-20.768	-8.157	0.116	0.087	0.026	-0.820
	120	-20.768	-8.157	0.116	0.087	0.077	-4.368
135	120	-30.525	0.668	-0.343	-0.003	-0.054	-2.697
	121	-30.525	0.668	-0.343	-0.003	-0.203	-2.407
136	121	-12.639	4.056	2.040	-0.118	-0.663	-1.390
	17	-12.639	4.056	2.040	-0.118	0.224	0.374
137	86	17.049	0.571	-7.352	-0.059	1.181	0.236
	38	17.049	0.571	-7.352	-0.059	-2.494	0.521
138	37	8.390	-0.006	10.581	0.069	-1.013	0.099
	85	8.390	-0.006	10.581	0.069	1.738	0.098
139	36	3.696	-0.050	23.006	0.102	-2.200	0.028
	84	3.696	-0.050	23.006	0.102	2.401	0.018
140	35	9.367	0.272	13.046	0.043	-1.681	0.051
	83	9.367	0.272	13.046	0.043	1.711	0.122
141	34	0.000	0.000	0.000	0.000	0.000	0.000
	82	0.000	0.000	0.000	0.000	0.000	0.000
142	39	0.000	0.000	0.000	0.000	0.000	0.000
	87	0.000	0.000	0.000	0.000	0.000	0.000
143	40	3.604	0.470	2.994	0.135	-0.446	0.103
	88	3.604	0.470	2.994	0.135	0.333	0.225
144	41	1.390	-0.061	8.924	0.182	-0.838	0.058
	89	1.390	-0.061	8.924	0.182	0.947	0.046
145	42	2.969	-0.366	5.087	0.143	-0.533	0.282
	90	2.969	-0.366	5.087	0.143	0.790	0.187
146	43	6.430	0.036	-2.365	0.136	0.785	0.960
	91	6.430	0.036	-2.365	0.136	-0.397	0.978
147	69	0.000	0.000	0.000	0.000	0.000	0.000
	117	0.000	0.000	0.000	0.000	0.000	0.000
148	70	9.562	-0.308	15.246	-0.151	-1.909	-0.080
	118	9.562	-0.308	15.246	-0.151	2.054	-0.160
149	71	3.842	0.021	23.422	-0.123	-2.258	-0.040
	119	3.842	0.021	23.422	-0.123	2.426	-0.036
150	72	8.825	0.459	9.757	-0.131	-0.867	-0.210
	120	8.825	0.459	9.757	-0.131	1.670	-0.091
151	73	15.021	-1.470	-8.233	-0.348	2.986	-0.267
	121	15.021	-1.470	-8.233	-0.348	-1.130	-1.003
152	63	-12.462	-0.122	6.847	-0.032	-0.513	0.788
	111	-12.462	-0.122	6.847	-0.032	2.911	0.726
153	62	4.463	0.414	6.677	0.066	-1.027	0.085
	110	4.463	0.414	6.677	0.066	0.709	0.193
154	61	2.144	-0.192	11.512	0.161	-1.084	0.071
	109	2.144	-0.192	11.512	0.161	1.219	0.033
155	60	3.920	-0.551	4.664	0.154	-0.367	0.350
	108	3.920	-0.551	4.664	0.154	0.845	0.207
156	59	4.483	1.678	-4.564	0.342	1.697	0.800
	107	4.483	1.678	-4.564	0.342	-0.585	1.640
157	58	0.000	0.000	0.000	0.000	0.000	0.000
	106	0.000	0.000	0.000	0.000	0.000	0.000
158	57	9.517	0.313	14.948	0.154	-1.888	0.082
	105	9.517	0.313	14.948	0.154	1.998	0.163
159	56	3.837	-0.020	23.353	0.125	-2.248	0.040
	104	3.837	-0.020	23.353	0.125	2.423	0.036
160	55	8.769	-0.458	9.826	0.134	-0.880	0.207
	103	8.769	-0.458	9.826	0.134	1.675	0.088
161	54	15.091	1.478	-8.161	0.353	2.950	0.251
	102	15.091	1.478	-8.161	0.353	-1.130	0.991
162	53	0.000	0.000	0.000	0.000	0.000	0.000
	101	0.000	0.000	0.000	0.000	0.000	0.000
163	52	9.320	-0.282	12.744	-0.047	-1.660	-0.054
	100	9.320	-0.282	12.744	-0.047	1.654	-0.127
164	51	3.690	0.051	22.934	-0.106	-2.190	-0.029
	99	3.690	0.051	22.934	-0.106	2.397	-0.019
165	50	8.331	0.006	10.649	-0.073	-1.027	-0.102
	98	8.331	0.006	10.649	-0.073	1.742	-0.100
166	49	17.117	0.581	-7.284	0.059	2.458	-0.533
	97	17.117	0.581	-7.284	0.059	-1.183	-0.243
167	64	-12.419	0.108	6.787	0.039	-0.512	-0.793
	112	-12.419	0.108	6.787	0.039	2.881	-0.738
168	65	4.475	-0.389	6.800	-0.058	-1.035	-0.079
	113	4.475	-0.389	6.800	-0.058	0.733	-0.181
169	66	2.143	0.188	11.524	-0.151	-1.086	-0.070
	114	2.143	0.188	11.524	-0.151	1.218	-0.032
170	67	3.939	0.549	4.624	-0.145	-0.361	-0.351
	115	3.939	0.549	4.624	-0.145	0.842	-0.208
171	68	4.447	-1.677	-4.593	-0.332	1.711	-0.810
	116	4.447	-1.677	-4.593	-0.332	-0.585	-1.649
172	44	6.464	-0.036	-2.340	-0.143	0.772	-0.961
	92	6.464	-0.036	-2.340	-0.143	-0.398	-0.979
173	45	2.947	0.370	5.118	-0.150	-0.539	-0.283
	93	2.947	0.370	5.118	-0.150	0.792	-0.187
174	46	1.389	0.062	8.903	-0.189	-0.834	-0.059
	94	1.389	0.062	8.903	-0.189	0.946	-0.047
175	47	3.588	-0.488	2.877	-0.141	-0.438	-0.107
	95	3.588	-0.488	2.877	-0.141	0.310	-0.234
176	48	0.000	0.000	0.000	0.000	0.000	0.000
	96	0.000	0.000	0.000	0.000	0.000	0.000
177	122	-12.338	-6.294	-0.092	-0.059	0.063	5.527
	123	-12.338	-6.294	-0.092	-0.059	0.022	2.789
178	123	-12.338	-6.294	-0.092	-0.059	0.022	2.789
	124	-12.338	-6.294	-0.092	-0.059	-0.018	0.052
179	124	-12.338	-6.294	-0.092	-0.059	-0.018	0.052
	125	-12.338	-6.294	-0.092	-0.059	-0.058	-2.685
180	125	-12.338	-6.294	-0.092	-0.059	-0.058	-2.685
	126	-12.338	-6.294	-0.092	-0.059	-0.098	-5.423
181	126	-22.105	6.165	0.426	-0.114	-0.085	-1.787
	26	-22.105	6.165	0.426	-0.114	0.101	0.894
182	127	-12.763	-2.708	-0.115	-0.079	0.005	2.351
	128	-12.763	-2.708	-0.115	-0.079	-0.046	1.173
183	128	-12.763	-2.708	-0.115	-0.079	-0.046	1.173
	129	-12.763	-2.708	-0.115	-0.079	-0.096	-0.005
184	129	-12.763	-2.708	-0.115	-0.079	-0.096	-0.005
	130	-12.763	-2.708	-0.115	-0.079	-0.146	-1.183
185	130	-12.763	-2.708	-0.115	-0.079	-0.146	-1.183
	131	-12.763	-2.708	-0.115	-0.079	-0.196	-2.361
186	131	-17.309	2.087	1.323	0.031	-0.257	-0.700
	27	-17.309	2.087	1.323	0.031	0.318	0.208
187	132	-12.621	2.720	0.118	0.087	-0.201	-2.366
	133	-12.621	2.720	0.118	0.087	-0.150	-1.183
188	133	-12.621	2.720	0.118	0.087	-0.150	-1.183
	134	-12.621	2.720	0.118	0.087	-0.098	0.000
189	134	-12.621	2.720	0.118	0.087	-0.098	0.000
	135	-12.621	2.720	0.118	0.087	-0.047	1.183
190	135	-12.621	2.720	0.118	0.087	-0.047	1.183
	136	-12.621	2.720	0.118	0.087	0.005	2.367
191	136	-0.552	3.641	0.657	0.119	-0.186	-0.540
	28	-0.552	3.641	0.657	0.119	0.100	1.044
192	137	-11.986	6.319	0.098	0.063	-0.105	-5.432
	138	-11.986	6.319	0.098	0.063	-0.063	-2.683
193	138	-11.986	6.319	0.098	0.063	-0.063	-2.683
	139	-11.986	6.319	0.098	0.063	-0.020	0.065
194	139	-11.986	6.319	0.098	0.063	-0.020	0.065
	140	-11.986	6.319	0.098	0.063	0.022	2.813
195	140	-11.986	6.319	0.098	0.063	0.022	2.813
	141	-11.986	6.319	0.098	0.063	0.065	5.561
196	141	17.251	9.826	0.074	0.071	-0.090	-1.531
	29	17.251	9.826	0.074	0.071	-0.058	2.743
197	142	-3.954	6.139	-0.067	-0.055	0.193	-5.233
	143	-3.954	6.139	-0.067	-0.055	0.163	-2.563
198	143	-3.954	6.139	-0.067	-0.055	0.163	-2.563
	144	-3.954	6.139	-0.067	-0.055	0.134	0.107
199	144	-3.954	6.139	-0.067	-0.055	0.134	0.107
	145	-3.954	6.139	-0.067	-0.055	0.105	2.777
200	145	-3.954	6.139	-0.067	-0.055	0.105	2.777
	146	-3.954	6.139	-0.067	-0.055	0.075	5.448
201	146	25.082	10.306	-0.890	-0.045	0.136	-1.623
	30	25.082	10.306	-0.890	-0.045	-0.251	2.860
202	147	9.481	2.821	-0.245	-0.025	0.257	-2.283
	148	9.481	2.821	-0.245	-0.025	0.150	-1.056
203	148	9.481	2.821	-0.245	-0.025	0.150	-1.056
	149	9.481	2.821	-0.245	-0.025	0.044	0.171
204	149	9.481	2.821	-0.245	-0.025	0.044	0.171
	150	9.481	2.821	-0.245	-0.025	-0.063	1.399
205	150	9.481	2.821	-0.245	-0.025	-0.063	1.399
	151	9.481	2.821	-0.245	-0.025	-0.170	2.626
206	151	16.753	-0.215	-1.655	-0.096	0.023	0.344
	31	16.753	-0.215	-1.655	-0.096	-0.697	0.250
207	152	9.343	-2.808	0.236	0.013	-0.164	2.609
	153	9.343	-2.808	0.236	0.013	-0.061	1.388
208	153	9.343	-2.808	0.236	0.013	-0.061	1.388
	154	9.343	-2.808	0.236	0.013	0.042	0.166
209	154	9.343	-2.808	0.236	0.013	0.042	0.166
	155	9.343	-2.808	0.236	0.013	0.144	-1.055

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
210	155	9.343	-2.808	0.236	0.013	0.144	-1.055
	156	9.343	-2.808	0.236	0.013	0.247	-2.277
211	156	3.706	1.009	-1.744	-0.340	0.498	-0.291
	32	3.706	1.009	-1.744	-0.340	-0.261	0.149
212	157	-4.291	-6.114	0.068	0.051	0.072	5.413
	158	-4.291	-6.114	0.068	0.051	0.102	2.754
213	158	-4.291	-6.114	0.068	0.051	0.102	2.754
	159	-4.291	-6.114	0.068	0.051	0.131	0.095
214	159	-4.291	-6.114	0.068	0.051	0.131	0.095
	160	-4.291	-6.114	0.068	0.051	0.161	-2.565
215	160	-4.291	-6.114	0.068	0.051	0.161	-2.565
	161	-4.291	-6.114	0.068	0.051	0.191	-5.224
216	161	-13.944	5.519	-0.844	-0.290	0.303	-1.580
	25	-13.944	5.519	-0.844	-0.290	-0.064	0.820
217	151	-3.037	1.410	7.273	0.193	-2.282	0.071
	111	-3.037	1.410	7.273	0.193	2.082	0.917
218	147	3.831	1.961	5.668	-0.238	-1.996	0.356
	107	3.831	1.961	5.668	-0.238	1.405	1.532
219	146	4.167	0.823	29.036	0.061	-7.070	-0.011
	106	4.167	0.823	29.036	0.061	10.352	0.483
220	142	11.641	0.890	9.715	-0.107	-3.664	0.344
	102	11.641	0.890	9.715	-0.107	2.166	0.878
221	141	3.507	0.024	29.236	-0.155	-7.092	-0.008
	101	3.507	0.024	29.236	-0.155	10.450	0.007
222	137	12.458	-0.530	9.832	-0.017	-3.656	0.056
	97	12.458	-0.530	9.832	-0.017	2.243	-0.262
223	136	0.921	-0.539	12.069	-0.191	-2.907	-0.031
	96	0.921	-0.539	12.069	-0.191	4.335	-0.355
224	132	4.799	-1.435	4.576	0.053	-1.670	-0.113
	92	4.799	-1.435	4.576	0.053	1.075	-0.974
225	131	4.796	1.438	4.547	-0.061	-1.661	0.111
	91	4.796	1.438	4.547	-0.061	1.067	0.973
226	127	0.932	0.524	12.048	0.182	-2.900	0.035
	87	0.932	0.524	12.048	0.182	4.329	0.349
227	126	12.459	0.518	9.766	0.013	-3.636	-0.055
	86	12.459	0.518	9.766	0.013	2.224	0.256
229	122	3.546	-0.037	29.208	0.151	-7.081	0.011
	82	3.546	-0.037	29.208	0.151	10.444	-0.011
230	161	11.633	-0.913	9.653	0.112	-3.644	-0.341
	121	11.633	-0.913	9.653	0.112	2.148	-0.888
231	157	4.207	-0.823	29.005	-0.055	-7.059	0.011
	117	4.207	-0.823	29.005	-0.055	10.344	-0.482
232	116	3.818	1.979	5.637	0.251	-1.396	-1.539
	156	3.818	1.979	5.637	0.251	1.986	-0.352
233	152	-2.981	-1.405	7.288	-0.181	-2.280	-0.074
	112	-2.981	-1.405	7.288	-0.181	2.092	-0.917

Load case 11 (Non-linear): G+E
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.938% Convergence

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	71.828	-38.714	-9.144	0.000	18.177	61.351
	9	54.957	-38.714	-9.144	0.000	-2.861	-27.721
2	2	87.462	-33.401	-0.362	0.000	2.732	51.309
	10	70.591	-33.401	-0.362	0.000	1.920	-25.550
3	3	94.972	-5.656	13.414	0.000	-19.032	8.083
	11	78.101	-5.656	13.414	0.000	11.863	-4.943
4	4	87.428	23.783	23.162	0.000	-33.952	-38.085
	12	70.557	23.783	23.162	0.000	19.362	16.627
5	5	71.831	33.913	20.708	0.000	-30.129	-56.470
	13	54.960	33.913	20.708	0.000	17.516	21.556
6	6	56.519	24.116	7.609	0.000	-10.250	-41.350
	14	39.648	24.116	7.609	0.000	7.245	14.136
7	7	44.881	2.849	-6.587	0.000	11.634	-5.087
	15	28.010	2.849	-6.587	0.000	-3.532	1.473
8	8	56.480	-22.350	-11.477	0.000	21.546	36.263
	16	39.609	-22.350	-11.477	0.000	-4.871	-15.151
9 - Compression-only member has been disabled							
10 - Compression-only member has been disabled							
11	11	33.054	2.830	0.217	0.879	-1.340	-2.039
	44	31.552	1.523	0.217	0.879	-1.198	-0.598
12	12	66.715	0.865	0.263	0.734	-0.844	-2.962
	49	65.213	-0.441	0.263	0.734	-0.670	-2.827
13	13	66.874	-0.689	1.191	0.219	-0.251	-2.429
	54	65.372	-1.995	1.191	0.219	0.543	-3.324
14	14	36.344	1.048	1.235	-0.277	0.318	-1.497
	59	34.843	-0.259	1.235	-0.277	1.141	-1.237
15	15	-1.147	1.620	0.074	-0.366	0.470	-0.059
	64	-2.649	0.314	0.074	-0.366	0.518	0.582
16 - Compression-only member has been disabled							
17	9	3.358	11.124	-6.022	0.000	-3.222	-25.410
	17	-3.977	11.124	-6.022	0.000	-9.244	-14.287
18	10	18.086	15.171	-2.748	0.000	0.766	-22.710
	18	10.751	15.171	-2.748	0.000	-1.982	-7.541
19	11	24.520	2.290	-5.578	0.000	7.707	-3.253
	19	17.185	2.290	-5.578	0.000	2.131	-0.965
20	12	18.094	-8.708	-12.697	0.000	16.477	15.396
	20	10.759	-8.708	-12.697	0.000	3.782	6.689
21	13	3.397	-3.384	-12.150	0.000	15.563	20.146
	21	-3.938	-3.384	-12.150	0.000	3.413	16.762
22	14	9.979	1.883	-5.530	0.000	6.485	12.851
	22	2.643	1.883	-5.530	0.000	0.954	14.736
23	15	27.661	-0.134	0.465	0.000	-2.557	1.078
	23	20.326	-0.134	0.465	0.000	-2.096	0.947
24	16	9.946	2.738	-5.071	0.000	-4.483	-13.734
	24	2.611	2.738	-5.071	0.000	-9.556	-10.997
25	17	-17.594	-5.474	-0.020	-0.211	0.158	3.633
	82	-17.594	-7.302	-0.020	-0.211	0.150	0.853
26	18	-14.690	4.442	0.636	-0.005	-0.287	-0.121
	87	-14.690	2.613	0.636	-0.005	-0.010	1.413
27	19	-19.600	4.507	0.973	-0.109	-0.145	-1.051
	92	-19.600	2.679	0.973	-0.109	0.278	0.512
28	20	-24.524	0.610	0.539	-0.123	-0.296	-0.421
	97	-24.524	-1.218	0.539	-0.123	-0.062	-0.552
29	21	-18.327	1.332	-1.641	0.012	0.154	-0.580
	102	-18.327	-0.497	-1.641	0.012	-0.560	-0.398
30	22	-5.328	4.439	-2.928	0.117	0.596	-0.968
	107	-5.328	2.611	-2.928	0.117	-0.678	0.566
31	23	7.477	4.219	-1.340	0.080	0.247	-0.363
	112	7.477	2.390	-1.340	0.080	-0.336	1.074
32	24	-10.100	-5.370	-0.886	-0.199	0.592	3.610
	117	-10.100	-7.199	-0.886	-0.199	0.206	0.876
33	17	0.142	17.587	9.735	0.000	-6.544	-11.271
	25	-4.259	17.587	9.735	0.000	-0.703	-0.719
34	18	5.670	12.905	3.651	0.000	-1.941	-7.191
	26	1.269	12.905	3.651	0.000	0.250	0.551
35	19	8.141	0.967	-2.070	0.000	1.579	-0.723
	27	3.740	0.967	-2.070	0.000	0.337	-0.143
36	20	5.706	-11.644	-6.332	0.000	3.585	6.420
	28	1.305	-11.644	-6.332	0.000	-0.214	-0.567
37	21	0.181	-19.498	-5.336	0.000	3.210	12.716
	29	-4.220	-19.498	-5.336	0.000	0.008	1.017
38	22	3.556	-15.023	0.251	0.000	0.382	10.511
	30	-0.845	-15.023	0.251	0.000	0.532	1.497
39	23	11.885	-2.154	4.905	0.000	-2.498	1.107
	31	7.484	-2.154	4.905	0.000	0.444	-0.185
40	24	3.532	10.307	10.533	0.000	-6.989	-7.610
	32	-0.869	10.307	10.533	0.000	-0.670	-1.426
41	25	17.709	-2.495	-0.101	-0.071	-0.033	1.218
	122	17.709	-4.323	-0.101	-0.071	-0.077	-0.264
42	26	0.406	3.627	-0.557	-0.117	0.097	-0.435
	127	0.406	1.798	-0.557	-0.117	-0.145	0.745
43	27	-13.849	1.874	-1.274	-0.023	0.379	-0.538
	132	-13.849	0.046	-1.274	-0.023	-0.175	-0.121
44	28	-18.276	-2.332	-0.676	0.031	0.094	0.161
	137	-18.276	-4.161	-0.676	0.031	-0.200	-1.250
45	29	-10.412	-1.748	0.546	0.208	-0.027	0.094
	142	-10.412	-3.576	0.546	0.208	0.210	-1.063
46	30	6.145	2.133	1.420	0.247	-0.211	-0.455
	147	6.145	0.304	1.420	0.247	0.406	0.075
47	31	18.502	3.720	1.535	0.076	-0.605	-0.432
	152	18.502	1.891	1.535	0.076	0.062	0.789
48	32	25.568	-3.001	0.793	0.031	-0.220	1.338
	157	25.568	-4.829	0.793	0.031	0.125	-0.364
49 - Compression-only member has been disabled							
50	35	5.546	-8.163	0.300	-0.070	-0.053	1.390
	36	5.366	-9.469	0.300	-0.070	0.078	-2.481
51	36	31.281	-9.009	0.256	-0.109	-0.064	-0.319
	37	31.462	-10.315	0.256	-0.109	0.049	-4.562
52	37	51.557	2.035	0.173	-0.230	-0.143	-2.765
	38	52.277	0.729	0.173	-0.230	-0.057	-2.078
53	38	65.404	0.596	-0.259	-0.724	-0.662	-2.859
	10	66.905	-0.710	-0.259	-0.724	-0.832	-2.891
54 - Compression-only member has been disabled							
55 - Compression-only member has been disabled							
56	41	7.411	-4.593	0.424	-0.125	-0.113	0.192
	42	7.591	-5.899	0.424	-0.125	0.073	-2.111
57	42	20.428	-0.424	-0.018	-0.362	-0.216	-0.793
	43	21.149	-1.731	-0.018	-0.362	-0.224	-1.328
58	43	31.594	-1.461	-0.229	-0.881	-1.193	-0.608
	11	33.095	-2.768	-0.229	-0.881	-1.342	-2.008
59	44	21.055	1.743	0.008	0.365	-0.224	-1.329
	45	20.334	0.436	0.008	0.365	-0.221	-0.788
60	45	7.481	5.889	-0.439	0.129	0.075	-2.110
	46	7.301	4.583	-0.439	0.129	-0.118	0.189
61 - Compression-only member has been disabled							
62 - Compression-only member has been disabled							
63 - Compression-only member has been disabled							
64	49	51.953	-0.680	-0.183	0.233	-0.057	-2.081
	50	51.232	-1.987	-0.183	0.233	-0.148	-2.744
65	50	31.089	10.311	-0.265	0.113	0.048	-4.554
	51	30.909	9.005	-0.265	0.113	-0.068	-0.312
66	51	5.083	9.382	-0.309	0.072	0.079	-2.464
	52	5.263	8.076	-0.309	0.072	-0.056	1.369
67 - Compression-only member has been disabled							

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
68 - Compression-only member has been disabled							
69	54	54.380	-0.921	-0.140	-0.128	0.294	-2.064
	55	53.659	-2.227	-0.140	-0.128	0.227	-2.847
70	55	34.124	10.354	0.220	-0.089	0.035	-4.514
	56	33.944	9.048	0.220	-0.089	0.132	-0.253
71	56	7.408	9.987	0.239	-0.081	0.011	-2.483
	57	7.589	8.680	0.239	-0.081	0.116	1.616
72 - Compression-only member has been disabled							
73 - Compression-only member has been disabled							
74	59	26.915	1.092	-0.265	-0.314	0.426	-1.166
	60	26.194	-0.214	-0.265	-0.314	0.295	-0.948
75	60	14.259	6.069	0.198	-0.146	-0.013	-2.019
	61	14.079	4.763	0.198	-0.146	0.074	0.359
76	61	1.378	4.025	0.356	-0.084	-0.100	-0.689
	62	1.558	2.719	0.356	-0.084	0.057	0.792
77 - Compression-only member has been disabled							
78	63	-2.721	-0.325	-0.060	0.367	0.510	0.581
	15	-1.219	-1.632	-0.060	0.367	0.471	-0.067
79 - Compression-only member has been disabled							
80	65	1.678	-2.750	-0.332	0.078	0.050	0.800
	66	1.498	-4.057	-0.332	0.078	-0.096	-0.695
81	66	14.219	-4.758	-0.177	0.139	0.066	0.356
	67	14.399	-6.065	-0.177	0.139	-0.012	-2.020
82	67	26.302	0.234	0.283	0.311	0.285	-0.955
	68	27.023	-1.072	0.283	0.311	0.425	-1.163
83	68	34.888	0.320	-1.211	0.288	1.138	-1.249
	16	36.389	-0.987	-1.211	0.288	0.331	-1.469
84 - Compression-only member has been disabled							
85	70	7.870	-8.766	-0.234	0.079	0.113	1.637
	71	7.689	-10.072	-0.234	0.079	0.010	-2.499
86	71	34.311	-9.051	-0.215	0.087	0.129	-0.260
	72	34.491	-10.357	-0.215	0.087	0.035	-4.521
87	72	53.974	2.276	0.144	0.131	0.224	-2.867
	73	54.695	0.970	0.144	0.131	0.294	-2.060
88	73	65.551	2.145	-1.175	-0.203	0.549	-3.356
	9	67.052	0.839	-1.175	-0.203	-0.234	-2.361
97	82	4.247	-14.398	-0.005	-0.235	0.019	8.585
	83	4.247	-16.226	-0.005	-0.235	0.017	1.925
98	83	-2.047	-10.474	-0.304	-0.095	0.080	2.117
	84	-2.047	-12.302	-0.304	-0.095	-0.053	-2.837
99	84	-25.195	-8.523	-0.261	-0.067	0.064	-0.370
	85	-25.195	-10.351	-0.261	-0.067	-0.050	-4.474
100	85	-41.562	-2.748	-0.178	0.080	0.027	-2.015
	86	-41.562	-4.577	-0.178	0.080	-0.050	-3.609
101	86	-24.215	1.190	-0.537	0.123	-0.053	-0.558
	18	-24.215	-0.638	-0.537	0.123	-0.287	-0.439
102	87	-9.723	-1.854	0.166	-0.316	-0.162	3.098
	88	-9.723	-3.682	0.166	-0.316	-0.090	1.894
103	88	-9.496	-5.929	0.166	-0.316	-0.090	1.829
	89	-9.496	-7.758	0.166	-0.316	-0.018	-1.148
104	89	-16.121	-3.615	-0.259	-0.091	0.077	-0.063
	90	-16.121	-5.443	-0.259	-0.091	-0.035	-2.033
105	90	-27.088	-3.088	0.183	0.101	0.068	-0.500
	91	-27.088	-4.916	0.183	0.101	0.148	-2.241
106	91	-19.469	-2.708	-0.971	0.114	0.277	0.514
	19	-19.469	-4.536	-0.971	0.114	-0.145	-1.062
107	92	-27.230	4.932	-0.181	-0.097	0.150	-2.246
	93	-27.230	3.103	-0.181	-0.097	0.072	-0.499
108	93	-16.243	5.448	0.266	0.096	-0.037	-2.033
	94	-16.243	3.620	0.266	0.096	0.079	-0.061
109	94	-9.726	7.738	-0.173	0.328	-0.021	-1.127
	95	-9.726	5.910	-0.173	0.328	-0.096	1.841
110	95	-9.953	3.662	-0.173	0.328	-0.096	1.906
	96	-9.953	1.834	-0.173	0.328	-0.171	3.101
111	96	-14.922	-2.614	-0.654	0.014	-0.011	1.419
	20	-14.922	-4.443	-0.654	0.014	-0.296	-0.115
112	97	-41.865	4.624	0.187	-0.080	-0.054	-3.618
	98	-41.865	2.796	0.187	-0.080	0.027	-2.004
113	98	-25.436	10.339	0.269	0.070	-0.053	-4.466
	99	-25.436	8.511	0.269	0.070	0.064	-0.367
114	99	-2.365	12.283	0.313	0.099	-0.056	-2.829
	100	-2.365	10.455	0.313	0.099	0.080	2.116
115	100	3.637	16.160	0.004	0.244	0.014	1.979
	101	3.637	14.331	0.004	0.244	0.016	8.611
116	101	-18.222	7.279	0.010	0.216	0.150	0.876
	21	-18.222	5.451	0.010	0.216	0.154	3.645
117	102	-36.594	4.200	0.284	-0.040	-0.174	-3.440
	103	-36.594	2.372	0.284	-0.040	-0.051	-2.010
118	103	-20.925	10.420	-0.077	-0.076	0.063	-4.417
	104	-20.925	8.592	-0.077	-0.076	0.029	-0.283
119	104	2.761	12.540	-0.096	-0.100	0.127	-2.791
	105	2.761	10.711	-0.096	-0.100	0.085	2.266
120	105	11.149	16.698	0.144	-0.226	0.211	1.756
	106	11.149	14.869	0.144	-0.226	0.273	8.622
121	106	-10.734	7.180	0.891	0.195	0.208	0.898
	22	-10.734	5.351	0.891	0.195	0.596	3.624
122	107	-14.744	4.365	0.191	0.066	-0.179	-1.975
	108	-14.744	2.536	0.191	0.066	-0.096	-0.474
123	108	-5.001	6.038	-0.271	-0.089	0.044	-1.935
	109	-5.001	4.210	-0.271	-0.089	-0.074	0.294
124	109	6.379	6.280	-0.430	-0.115	0.067	-0.934
	110	6.379	4.452	-0.430	-0.115	-0.120	1.400
125	110	7.979	5.357	-0.074	-0.283	-0.053	1.830
	111	7.979	3.528	-0.074	-0.283	-0.085	3.762
126	111	7.294	-2.394	1.336	-0.088	-0.333	1.079
	23	7.294	-4.223	1.336	-0.088	0.247	-0.361
127	112	8.238	-3.542	0.078	0.263	-0.093	3.743
	113	8.238	-5.370	0.078	0.263	-0.059	1.804
128	113	6.515	-4.451	0.410	0.107	-0.119	1.398
	114	6.515	-6.279	0.410	0.107	0.060	-0.936
129	114	-4.882	-4.209	0.255	0.081	-0.071	0.293
	115	-4.882	-6.038	0.255	0.081	0.040	-1.936
130	115	-14.589	-2.515	-0.205	-0.074	-0.090	-0.477
	116	-14.589	-4.344	-0.205	-0.074	-0.180	-1.969
131	116	-5.174	-2.621	2.922	-0.126	-0.679	0.563
	24	-5.174	-4.449	2.922	-0.126	0.592	-0.974
132	117	11.760	-14.933	-0.140	0.221	0.266	8.595
	118	11.760	-16.761	-0.140	0.221	0.205	1.702
133	118	3.082	-10.729	0.094	0.097	0.083	2.267
	119	3.082	-12.557	0.094	0.097	0.124	-2.798
134	119	-20.676	-8.602	0.075	0.074	0.029	-0.286
	120	-20.676	-10.431	0.075	0.074	0.061	-4.425
135	120	-36.282	-2.326	-0.284	0.035	-0.050	-2.021
	121	-36.282	-4.154	-0.284	0.035	-0.173	-3.431
136	121	-18.002	0.474	1.645	-0.018	-0.557	-0.404
	17	-18.002	-1.354	1.645	-0.018	0.158	-0.596
137	86	22.406	0.432	-2.747	-0.051	0.592	0.529
	38	24.337	0.432	-2.747	-0.051	-0.781	0.745
138	37	8.607	-0.083	16.368	0.077	-1.797	0.169
	85	7.603	-0.083	16.368	0.077	2.459	0.147
139	36	4.552	-0.044	23.147	0.116	-2.162	0.037
	84	3.779	-0.044	23.147	0.116	2.467	0.029
140	35	6.756	0.300	6.294	0.062	-1.444	0.062
	83	5.752	0.300	6.294	0.062	0.192	0.140
141	34	-1.349	0.000	-0.177	0.000	-0.018	0.000
	82	-3.280	0.000	-0.177	0.000	-0.107	0.000
142	39	-1.349	0.000	-0.177	0.000	-0.018	0.000
	87	-3.280	0.000	-0.177	0.000	-0.107	0.000
143	40	-1.244	0.000	-0.226	0.000	-0.006	0.000
	88	-2.248	0.000	-0.226	0.000	-0.065	0.000
144	41	4.915	0.424	6.625	0.095	-0.240	0.140
	89	4.143	0.424	6.625	0.095	1.085	0.225
145	42	3.359	-0.442	10.967	0.103	-1.319	0.307
	90	2.355	-0.442	10.967	0.103	1.533	0.192
146	43	13.063	-0.211	1.953	0.097	-0.720	1.053
	91	11.132	-0.211	1.953	0.097	0.257	0.948
147	69	-1.349	0.000	-0.177	0.000	-0.018	0.000
	117	-3.280	0.000	-0.177	0.000	-0.107	0.000
148	70	7.036	-0.234	8.678	-0.123	-1.691	-0.063
	118	6.032	-0.234	8.678	-0.123	0.565	-0.124
149	71	4.727	0.019	23.759	-0.095	-2.240	-0.027
	119	3.955	0.019	23.759	-0.095	2.512	-0.023
150	72	9.109	0.359	15.606	-0.111	-1.654	-0.131
	120	8.105	0.359	15.606	-0.111	2.404	-0.038
151	73	22.473	-1.319	-3.715	-0.320	1.295	-0.025
	121	20.542	-1.319	-3.715	-0.320	-0.562	-0.685
152	63	-2.759	0.060	2.347	-0.058	0.635	0.626
	111	-4.690	0.060	2.347	-0.058	1.809	0.656
153	62	1.909	0.356	1.600	0.067	-0.846	0.075
	110	0.905	0.356	1.600	0.067	-0.430	0.168
154	61	2.843	-0.158	11.380	0.141	-1.048	0.058
	109	2.070	-0.158	11.380	0.141	1.228	0.026
155	60	4.506	-0.463	9.743	0.140	-1.072	0.275
	108	3.502	-0.463	9.743	0.140	1.461	0.155
156	59	12.159	1.500	0.026	0.319	0.071	0.562
	107	10.228	1.500	0.026	0.319	0.084	1.313
157	58	-1.349	0.000	-0.177	0.000	-0.018	0.000
	106	-3.280	0.000	-0.177	0.000	-0.107	0.000
158	57	6.990	0.239	8.388	0.126	-1.670	0.064
	105	5.986	0.239	8.388	0.126	0.510	0.127
159	56	4.720	-0.019	23.685	0.097	-2.229	0.027
	104	3.948	-0.019	23.685	0.097	2.508	0.023
160	55	9.052	-0.360	15.669	0.113	-1.667	0.129
	103	8.048	-0.360	15.669	0.113	2.407	0.036
161	54	22.547	1.331	-3.646	0.325	1.260	0.011
	102	20.616	1.331	-3.646	0.325	-0.563	0.678
162	53	-1.349	0.000	-0.177	0.000	-0.018	0.000
	101	-3.280	0.000	-0.177	0.000	-0.107	0.000
163	52	6.709	-0.309	6.002	-0.066	-1.423	-0.064
	100	5.705	-0.309	6.002	-0.066	0.137	-0.144
164	51	4.544	0.044	23.071	-0.120	-2.152	-0.038
	99	3.772	0.044	23.071	-0.120	2.462	-0.029
165	50	8.548	0.082	16.429	-0.080	-1.810	-0.171
	98	7.544	0.082	16.429	-0.080	2.462	-0.149

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
166	49	24.409	0.446	-2.681	0.051	0.746	-0.755
	97	22.478	0.446	-2.681	0.051	-0.594	-0.532
167	64	-2.713	-0.074	2.291	0.064	0.636	-0.631
	112	-4.644	-0.074	2.291	0.064	1.781	-0.668
168	65	1.923	-0.332	1.723	-0.060	-0.854	-0.070
	113	0.920	-0.332	1.723	-0.060	-0.406	-0.156
169	66	2.842	0.154	11.397	-0.131	-1.051	-0.056
	114	2.070	0.154	11.397	-0.131	1.228	-0.025
170	67	4.526	0.460	9.707	-0.130	-1.065	-0.275
	115	3.522	0.460	9.707	-0.130	1.459	-0.155
171	68	12.118	-1.494	-0.003	-0.308	0.086	-0.570
	116	10.187	-1.494	-0.003	-0.308	0.084	-1.318
172	44	13.107	0.209	1.967	-0.103	-0.731	-1.053
	92	11.176	0.209	1.967	-0.103	0.252	-0.949
173	45	3.349	0.447	10.987	-0.109	-1.322	-0.309
	93	2.345	0.447	10.987	-0.109	1.534	-0.193
174	46	4.891	-0.439	6.517	-0.099	-0.237	-0.144
	94	4.118	-0.439	6.517	-0.099	1.066	-0.232
175	47	-1.244	0.000	-0.226	0.000	-0.006	0.000
	95	-2.248	0.000	-0.226	0.000	-0.065	0.000
176	48	-1.349	0.000	-0.177	0.000	-0.018	0.000
	96	-3.280	0.000	-0.177	0.000	-0.107	0.000
177	122	-3.955	-2.823	-0.117	-0.038	0.054	4.895
	123	-3.955	-4.652	-0.117	-0.038	0.003	3.270
178	123	-3.955	-4.652	-0.117	-0.038	0.003	3.270
	124	-3.955	-6.480	-0.117	-0.038	-0.048	0.849
179	124	-3.955	-6.480	-0.117	-0.038	-0.048	0.849
	125	-3.955	-8.308	-0.117	-0.038	-0.098	-2.368
180	125	-3.955	-8.308	-0.117	-0.038	-0.098	-2.368
	126	-3.955	-10.137	-0.117	-0.038	-0.149	-6.379
181	126	-18.555	4.186	0.674	-0.025	-0.197	-1.262
	26	-18.555	2.357	0.674	-0.025	0.097	0.161
182	127	-4.385	0.669	-0.087	-0.088	0.006	1.828
	128	-4.385	-1.160	-0.087	-0.088	-0.031	1.721
183	128	-4.385	-1.160	-0.087	-0.088	-0.031	1.721
	129	-4.385	-2.988	-0.087	-0.088	-0.069	0.819
184	129	-4.385	-2.988	-0.087	-0.088	-0.069	0.819
	130	-4.385	-4.816	-0.087	-0.088	-0.107	-0.878
185	130	-4.385	-4.816	-0.087	-0.088	-0.107	-0.878
	131	-4.385	-6.645	-0.087	-0.088	-0.144	-3.371
186	131	-13.957	-0.038	1.279	0.028	-0.177	-0.125
	27	-13.957	-1.866	1.279	0.028	0.379	-0.539
187	132	-4.253	6.653	0.090	0.096	-0.150	-3.373
	133	-4.253	4.824	0.090	0.096	-0.111	-0.877
188	133	-4.253	4.824	0.090	0.096	-0.111	-0.877
	134	-4.253	2.996	0.090	0.096	-0.072	0.824
189	134	-4.253	2.996	0.090	0.096	-0.072	0.824
	135	-4.253	1.168	0.090	0.096	-0.033	1.730
190	135	-4.253	1.168	0.090	0.096	-0.033	1.730
	136	-4.253	-0.661	0.090	0.096	0.006	1.840
191	136	0.540	-1.809	0.570	0.121	-0.154	0.754
	28	0.540	-3.637	0.570	0.121	0.094	-0.431
192	137	-3.617	10.158	0.122	0.041	-0.156	-6.386
	138	-3.617	8.330	0.122	0.041	-0.103	-2.365
193	138	-3.617	8.330	0.122	0.041	-0.103	-2.365
	139	-3.617	6.502	0.122	0.041	-0.050	0.861
194	139	-3.617	6.502	0.122	0.041	-0.050	0.861
	140	-3.617	4.673	0.122	0.041	0.003	3.291
195	140	-3.617	4.673	0.122	0.041	0.003	3.291
	141	-3.617	2.845	0.122	0.041	0.056	4.926
196	141	18.065	4.301	0.116	0.072	-0.078	-0.242
	29	18.065	2.472	0.116	0.072	-0.027	1.231
197	142	4.210	10.027	-0.047	-0.063	0.150	-6.232
	143	4.210	8.198	-0.047	-0.063	0.129	-2.268
198	143	4.210	8.198	-0.047	-0.063	0.129	-2.268
	144	4.210	6.370	-0.047	-0.063	0.109	0.900
199	144	4.210	6.370	-0.047	-0.063	0.109	0.900
	145	4.210	4.542	-0.047	-0.063	0.089	3.274
200	145	4.210	4.542	-0.047	-0.063	0.089	3.274
	146	4.210	2.713	-0.047	-0.063	0.069	4.851
201	146	25.915	4.806	-0.794	-0.036	0.134	-0.341
	30	25.915	2.978	-0.794	-0.036	-0.211	1.351
202	147	15.586	6.462	-0.200	-0.043	0.226	-3.133
	148	15.586	4.633	-0.200	-0.043	0.139	-0.720
203	148	15.586	4.633	-0.200	-0.043	0.139	-0.720
	149	15.586	2.805	-0.200	-0.043	0.052	0.898
204	149	15.586	2.805	-0.200	-0.043	0.052	0.898
	150	15.586	0.977	-0.200	-0.043	-0.035	1.721
205	150	15.586	0.977	-0.200	-0.043	-0.035	1.721
	151	15.586	-0.852	-0.200	-0.043	-0.122	1.748
206	151	18.618	-1.936	-1.549	-0.085	0.069	0.804
	31	18.618	-3.764	-1.549	-0.085	-0.605	-0.436
207	152	15.450	0.863	0.191	0.032	-0.116	1.733
	153	15.450	-0.965	0.191	0.032	-0.033	1.711
208	153	15.450	-0.965	0.191	0.032	-0.033	1.711
	154	15.450	-2.794	0.191	0.032	0.050	0.893
209	154	15.450	-2.794	0.191	0.032	0.050	0.893
	155	15.450	-4.622	0.191	0.032	0.133	-0.720
210	155	15.450	-4.622	0.191	0.032	0.133	-0.720
	156	15.450	-6.450	0.191	0.032	0.215	-3.128
211	156	6.038	-0.303	-1.443	-0.254	0.407	0.072
	32	6.038	-2.131	-1.443	-0.254	-0.220	-0.458
212	157	3.885	-2.691	0.048	0.059	0.065	4.820
	158	3.885	-4.519	0.048	0.059	0.086	3.252
213	158	3.885	-4.519	0.048	0.059	0.086	3.252
	159	3.885	-6.348	0.048	0.059	0.106	0.888
214	159	3.885	-6.348	0.048	0.059	0.106	0.888
	160	3.885	-8.176	0.048	0.059	0.127	-2.271
215	160	3.885	-8.176	0.048	0.059	0.127	-2.271
	161	3.885	-10.005	0.048	0.059	0.148	-6.225
216	161	-10.680	3.593	-0.562	-0.208	0.212	-1.073
	25	-10.680	1.765	-0.562	-0.208	-0.033	0.092
217	151	-1.084	1.349	3.032	0.191	-0.944	0.042
	111	1.233	1.349	3.032	0.191	0.875	0.851
218	147	6.157	1.619	9.442	-0.181	-3.209	0.291
	107	8.474	1.619	9.442	-0.181	2.456	1.261
219	146	2.093	0.747	21.705	0.065	-5.193	-0.027
	106	4.410	0.747	21.705	0.065	7.830	0.421
220	142	13.603	0.593	14.622	-0.061	-5.169	0.271
	102	15.919	0.593	14.622	-0.061	3.604	0.626
221	141	1.456	0.006	21.682	-0.134	-5.168	-0.031
	101	3.773	0.006	21.682	-0.134	7.841	-0.027
222	137	14.319	-0.798	14.659	0.044	-5.136	-0.011
	97	16.636	-0.798	14.659	0.044	3.660	-0.489
223	136	-1.148	-0.481	4.792	-0.160	-1.086	-0.025
	96	1.169	-0.481	4.792	-0.160	1.789	-0.313
224	132	6.607	-1.364	9.597	0.025	-3.252	-0.119
	92	8.924	-1.364	9.597	0.025	2.506	-0.937
225	131	6.607	1.365	9.573	-0.032	-3.246	0.116
	91	8.924	1.365	9.573	-0.032	2.498	0.935
226	127	-1.129	0.470	4.790	0.152	-1.083	0.029
	87	1.187	0.470	4.790	0.152	1.791	0.311
227	126	14.322	0.791	14.600	-0.047	-5.118	0.012
	86	16.639	0.791	14.600	-0.047	3.643	0.487
229	122	1.500	-0.016	21.664	0.130	-5.160	0.034
	82	3.816	-0.016	21.664	0.130	7.839	0.024
230	161	13.598	-0.610	14.565	0.064	-5.151	-0.267
	121	15.914	-0.610	14.565	0.064	3.588	-0.632
231	157	2.138	-0.746	21.683	-0.060	-5.184	0.028
	117	4.455	-0.746	21.683	-0.060	7.826	-0.419
232	116	8.464	1.633	9.413	0.192	-2.448	-1.266
	156	6.147	1.633	9.413	0.192	3.200	-0.286
233	152	-1.028	-1.344	3.052	-0.179	-0.944	-0.044
	112	1.289	-1.344	3.052	-0.179	0.887	-0.851

Load case 12 (Non-linear): G+E40%
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.941% Convergence

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	71.522	-15.888	-2.656	0.000	5.955	24.391
	9	54.651	-15.888	-2.656	0.000	-0.154	-12.164
2	2	77.939	-13.560	1.076	0.000	-0.189	20.265
	10	61.068	-13.560	1.076	0.000	2.293	-10.935
3	3	81.268	-2.770	6.590	0.000	-8.743	3.695
	11	64.397	-2.770	6.590	0.000	6.430	-2.683
4	4	77.929	8.800	10.277	0.000	-14.320	-14.163
	12	61.058	8.800	10.277	0.000	9.332	6.080
5	5	71.522	13.137	9.284	0.000	-12.891	-21.550
	13	54.651	13.137	9.284	0.000	8.470	8.674
6	6	65.153	9.569	4.340	0.000	-5.384	-16.044
	14	48.282	9.569	4.340	0.000	4.596	5.973
7	7	60.930	0.567	-1.260	0.000	3.188	-1.426
	15	44.059	0.567	-1.260	0.000	0.282	-0.120
8	8	65.140	-9.806	-3.627	0.000	7.369	15.062
	16	48.268	-9.806	-3.627	0.000	-0.980	-7.497
9 - Compression-only member has been disabled							
10	10	6.570	3.228	0.502	0.432	-0.797	-0.909
	39	5.068	1.922	0.502	0.432	-0.465	0.798
11	11	21.195	3.539	0.306	0.404	-0.729	-1.667
	44	19.694	2.232	0.306	0.404	-0.527	0.245
12	12	33.457	2.818	0.299	0.257	-0.604	-1.966
	49	31.956	1.512	0.299	0.257	-0.406	-0.532
13	13	34.157	2.765	0.395	0.205	-0.236	-1.980
	54	32.655	1.459	0.395	0.205	0.027	-0.581
14	14	22.756	3.287	0.419	0.014	-0.016	-1.583
	59	21.254	1.981	0.419	0.014	0.263	0.163
15	15	7.367	3.408	0.149	-0.066	0.035	-0.951
	64	5.866	2.102	0.149	-0.066	0.134	0.875
16 - Compression-only member has been disabled							
17	9	25.498	6.396	-1.699	0.000	-0.509	-10.263
	17	18.163	6.396	-1.699	0.000	-2.209	-3.868
18	10	26.891	6.889	-0.524	0.000	0.409	-9.012
	18	19.556	6.889	-0.524	0.000	-0.116	-2.124
19	11	27.772	1.261	-3.048	0.000	3.857	-1.632
	19	20.436	1.261	-3.048	0.000	0.810	-0.371
20	12	26.906	-4.489	-5.236	0.000	6.605	6.039
	20	19.571	-4.489	-5.236	0.000	1.369	1.551

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
21	13	25.505	-3.244	-5.733	0.000	6.849	7.567
	21	18.169	-3.244	-5.733	0.000	1.115	4.325
22	14	27.395	-1.258	-3.253	0.000	3.462	4.941
	22	20.059	-1.258	-3.253	0.000	0.207	3.684
23	15	28.485	0.190	-0.395	0.000	-0.271	0.111
	23	21.150	0.190	-0.395	0.000	-0.668	0.302
24	16	27.385	3.251	-1.350	0.000	-1.046	-5.978
	24	20.050	3.251	-1.350	0.000	-2.399	-2.727
25	17	-6.378	5.002	-0.009	-0.069	0.023	-0.304
	82	-6.378	3.173	-0.009	-0.069	0.019	1.474
26	18	-6.114	5.155	0.063	-0.095	-0.021	-0.916
	87	-6.114	3.327	0.063	-0.095	0.006	0.928
27	19	-11.078	4.996	0.202	-0.072	-0.018	-1.015
	92	-11.078	3.167	0.202	-0.072	0.070	0.760
28	20	-12.721	4.052	0.062	-0.024	-0.020	-0.896
	97	-12.721	2.224	0.062	-0.024	0.007	0.469
29	21	-10.474	3.806	-0.423	-0.054	0.021	-0.816
	102	-10.474	1.977	-0.423	-0.054	-0.162	0.442
30	22	-4.808	4.574	-0.869	-0.013	0.175	-0.882
	107	-4.808	2.746	-0.869	-0.013	-0.203	0.710
31	23	0.850	4.739	-0.600	0.005	0.143	-0.756
	112	0.850	2.911	-0.600	0.005	-0.118	0.908
32	24	-3.374	5.059	-0.276	-0.085	0.174	-0.307
	117	-3.374	3.231	-0.276	-0.085	0.054	1.496
33	17	9.334	5.365	4.374	0.000	-2.323	-3.306
	25	4.933	5.365	4.374	0.000	0.301	-0.087
34	18	10.330	3.370	1.923	0.000	-0.671	-1.934
	26	5.928	3.370	1.923	0.000	0.482	0.087
35	19	10.430	-0.088	0.323	0.000	0.216	-0.118
	27	6.028	-0.088	0.323	0.000	0.410	-0.171
36	20	10.354	-3.708	-0.951	0.000	0.850	1.819
	28	5.953	-3.708	-0.951	0.000	0.279	-0.406
37	21	9.358	-6.933	-0.623	0.000	0.648	4.010
	29	4.957	-6.933	-0.623	0.000	0.274	-0.150
38	22	10.424	-5.641	1.244	0.000	-0.324	3.355
	30	6.022	-5.641	1.244	0.000	0.422	-0.029
39	23	11.668	-1.195	2.785	0.000	-1.214	0.527
	31	7.267	-1.195	2.785	0.000	0.456	-0.190
40	24	10.405	3.069	4.781	0.000	-2.546	-2.118
	32	6.004	3.069	4.781	0.000	0.322	-0.276
41	25	7.550	3.406	-0.037	-0.031	-0.007	-0.410
	122	7.550	1.578	-0.037	-0.031	-0.023	0.674
42	26	0.446	4.253	-0.530	-0.052	0.113	-0.720
	127	0.446	2.425	-0.530	-0.052	-0.117	0.733
43	27	-3.995	3.017	-0.544	-0.020	0.176	-0.633
	132	-3.995	1.188	-0.544	-0.020	-0.061	0.282
44	28	-5.545	1.685	-0.312	0.012	0.112	-0.458
	137	-5.545	-0.144	-0.312	0.012	-0.023	-0.122
45	29	-2.170	1.536	0.068	0.033	-0.005	-0.398
	142	-2.170	-0.293	0.068	0.033	0.024	-0.128
46	30	3.770	2.754	0.376	0.049	-0.053	-0.540
	147	3.770	0.926	0.376	0.049	0.111	0.260
47	31	8.348	3.624	0.525	0.023	-0.189	-0.585
	152	8.348	1.796	0.525	0.023	0.040	0.594
48	32	10.674	3.252	0.237	0.004	-0.055	-0.379
	157	10.674	1.424	0.237	0.004	0.048	0.638
49 - Compression-only member has been disabled							
50 - Compression-only member has been disabled							
51	36	9.155	-4.432	0.085	-0.034	-0.039	0.330
	37	9.336	-5.738	0.085	-0.034	-0.002	-1.903
52	37	21.171	-0.171	-0.050	-0.094	-0.078	-0.725
	38	21.892	-1.477	-0.050	-0.094	-0.103	-1.135
53	38	32.015	-1.458	-0.291	-0.255	-0.402	-0.542
	10	33.517	-2.764	-0.291	-0.255	-0.595	-1.940
54 - Compression-only member has been disabled							
55 - Compression-only member has been disabled							
56	41	0.992	-2.005	0.091	-0.033	-0.030	0.229
	42	1.172	-3.312	0.091	-0.033	0.010	-0.938
57	42	9.891	-0.975	-0.080	-0.136	-0.073	-0.032
	43	10.612	-2.281	-0.080	-0.136	-0.113	-0.841
58	43	19.716	-2.203	-0.312	-0.405	-0.524	0.240
	11	21.218	-3.510	-0.312	-0.405	-0.731	-1.653
59	44	10.567	2.287	0.076	0.138	-0.113	-0.841
	45	9.847	0.980	0.076	0.138	-0.075	-0.029
60	45	1.123	3.306	-0.098	0.035	0.011	-0.937
	46	0.942	2.000	-0.098	0.035	-0.032	0.228
61 - Compression-only member has been disabled							
62 - Compression-only member has been disabled							
63	48	5.048	-1.920	-0.518	-0.435	-0.466	0.797
	12	6.550	-3.226	-0.518	-0.435	-0.809	-0.908
64	49	21.790	1.489	0.049	0.094	-0.104	-1.136
	50	21.069	0.183	0.049	0.094	-0.080	-0.720
65	50	9.222	5.726	-0.087	0.035	-0.003	-1.900
	51	9.042	4.420	-0.087	0.035	-0.041	0.327
66 - Compression-only member has been disabled							
67 - Compression-only member has been disabled							
68 - Compression-only member has been disabled							
69	54	22.538	1.430	-0.054	0.005	0.070	-1.101
	55	21.817	0.124	-0.054	0.005	0.043	-0.715
70	55	10.184	5.758	0.020	-0.011	0.016	-1.860
	56	10.003	4.451	0.020	-0.011	0.025	0.382
71 - Compression-only member has been disabled							
72 - Compression-only member has been disabled							
73 - Compression-only member has been disabled							
74	59	12.498	2.007	-0.084	-0.067	0.121	-0.712
	60	11.778	0.701	-0.084	-0.067	0.080	-0.040
75	60	3.682	3.405	0.057	-0.031	0.002	-0.841
	61	3.502	2.098	0.057	-0.031	0.027	0.367
76 - Compression-only member has been disabled							
77 - Compression-only member has been disabled							
78	63	5.842	-2.103	-0.144	0.067	0.131	0.875
	15	7.344	-3.410	-0.144	0.067	0.035	-0.952
79 - Compression-only member has been disabled							
80 - Compression-only member has been disabled							
81	66	3.550	-2.103	-0.050	0.029	0.025	0.368
	67	3.730	-3.409	-0.050	0.029	0.003	-0.842
82	67	11.818	-0.695	0.089	0.066	0.076	-0.042
	68	12.539	-2.002	0.089	0.066	0.120	-0.712
83	68	21.272	-1.954	-0.408	-0.010	0.260	0.158
	16	22.773	-3.260	-0.408	-0.010	-0.011	-1.570
84 - Compression-only member has been disabled							
85 - Compression-only member has been disabled							
86	71	10.119	-4.463	-0.018	0.011	0.024	0.385
	72	10.299	-5.770	-0.018	0.011	0.016	-1.862
87	72	21.921	-0.112	0.054	-0.004	0.042	-0.720
	73	22.642	-1.418	0.054	-0.004	0.069	-1.100
88	73	32.714	-1.401	-0.387	-0.199	0.028	-0.592
	9	34.216	-2.707	-0.387	-0.199	-0.229	-1.952
97	82	-2.010	-1.759	-0.016	-0.082	-0.013	2.936
	83	-2.010	-3.587	-0.016	-0.082	-0.020	1.773
98	83	-1.784	-5.834	-0.016	-0.082	-0.020	1.708
	84	-1.784	-7.663	-0.016	-0.082	-0.027	-1.227
99	84	-10.159	-3.441	-0.100	-0.026	0.007	0.070
	85	-10.159	-5.269	-0.100	-0.026	-0.036	-1.824
100	85	-20.149	-2.856	0.034	0.025	-0.011	-0.404
	86	-20.149	-4.684	0.034	0.025	0.004	-2.044
101	86	-12.603	-2.243	-0.070	0.025	0.009	0.469
	18	-12.603	-4.071	-0.070	0.025	-0.021	-0.904
102	87	-6.497	3.180	0.025	-0.068	-0.040	0.348
	88	-6.497	1.352	0.025	-0.068	-0.029	1.333
103	88	-6.271	-0.896	0.025	-0.068	-0.029	1.268
	89	-6.271	-2.724	0.025	-0.068	-0.018	0.481
104	89	-6.891	-2.021	-0.066	-0.013	0.007	0.328
	90	-6.891	-3.850	-0.066	-0.013	-0.022	-0.949
105	90	-14.372	-2.662	0.105	0.065	-0.010	0.090
	91	-14.372	-4.491	0.105	0.065	0.036	-1.466
106	91	-11.029	-3.183	-0.200	0.074	0.069	0.761
	19	-11.029	-5.011	-0.200	0.074	-0.018	-1.021
107	92	-14.423	4.497	-0.104	-0.064	0.037	-1.468
	93	-14.423	2.669	-0.104	-0.064	-0.008	0.091
108	93	-6.936	3.851	0.069	0.015	-0.023	-0.948
	94	-6.936	2.023	0.069	0.015	0.007	0.329
109	94	-6.365	2.713	-0.029	0.074	-0.020	0.491
	95	-6.365	0.885	-0.029	0.074	-0.032	1.273
110	95	-6.591	-1.362	-0.029	0.074	-0.032	1.339
	96	-6.591	-3.191	-0.029	0.074	-0.045	0.348
111	96	-6.180	-3.336	-0.051	0.097	0.002	0.931
	20	-6.180	-5.164	-0.051	0.097	-0.020	-0.918
112	97	-20.273	4.699	-0.033	-0.024	0.003	-2.049
	98	-20.273	2.870	-0.033	-0.024	-0.011	-0.402
113	98	-10.267	5.272	0.103	0.027	-0.038	-1.824
	99	-10.267	3.444	0.103	0.027	0.007	0.072
114	99	-2.003	7.638	0.016	0.084	-0.028	-1.206
	100	-2.003	5.810	0.016	0.084	-0.021	1.719
115	100	-2.229	3.562	0.016	0.084	-0.021	1.784
	101	-2.229	1.734	0.016	0.084	-0.015	2.936
116	101	-6.589	-3.177	0.007	0.071	0.018	1.479
	21	-6.589	-5.005	0.007	0.071	0.021	-0.300
117	102	-17.946	4.539	0.094	-0.035	-0.058	-1.971
	103	-17.946	2.711	0.094	-0.035	-0.017	-0.394
118	103	-8.205	5.260	0.020	-0.019	0.009	-1.781
	104	-8.205	3.432	0.020	-0.019	0.018	0.109
119	104	1.007	7.789	0.040	-0.038	0.041	-1.304
	105	1.007	5.960	0.040	-0.038	0.059	1.686
120	105	0.781	3.713	0.040	-0.038	0.059	1.751
	106	0.781	1.884	0.040	-0.038	0.076	2.969
121	106	-3.593	-3.233	0.278	0.084	0.054	1.501
	22	-3.593	-5.062	0.278	0.084	0.175	-0.303
122	107	-8.416	4.217	0.069	0.003	-0.057	-1.313
	108	-8.416	2.388	0.069	0.003	-0.027	0.123

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
123	108	-1.625	3.811	-0.072	-0.027	0.013	-0.841
	109	-1.625	1.983	-0.072	-0.027	-0.019	0.419
124	109	1.468	3.121	-0.015	-0.073	0.004	0.215
	110	1.468	1.292	-0.015	-0.073	-0.002	1.175
125	110	1.242	-0.955	-0.015	-0.073	-0.002	1.240
	111	1.242	-2.783	-0.015	-0.073	-0.009	0.427
126	111	0.781	-2.914	0.599	-0.008	-0.117	0.909
	23	0.781	-4.742	0.599	-0.008	0.143	-0.756
127	112	1.340	2.775	0.017	0.066	-0.012	0.425
	113	1.340	0.947	0.017	0.066	-0.004	1.235
128	113	1.567	-1.301	0.017	0.066	-0.004	1.169
	114	1.567	-3.129	0.017	0.066	0.003	0.206
129	114	-1.573	-1.980	0.067	0.024	-0.018	0.418
	115	-1.573	-3.809	0.067	0.024	0.012	-0.841
130	115	-8.356	-2.381	-0.072	-0.006	-0.025	0.123
	116	-8.356	-4.210	-0.072	-0.006	-0.056	-1.311
131	116	-4.753	-2.758	0.864	0.010	-0.202	0.711
	24	-4.753	-4.586	0.864	0.010	0.174	-0.886
132	117	1.007	-1.909	-0.039	0.036	0.074	2.969
	118	1.007	-3.738	-0.039	0.036	0.057	1.740
133	118	1.233	-5.985	-0.039	0.036	0.057	1.675
	119	1.233	-7.814	-0.039	0.036	0.040	-1.326
134	119	-8.092	-3.429	-0.021	0.018	0.018	0.107
	120	-8.092	-5.257	-0.021	0.018	0.009	-1.782
135	120	-17.817	-2.696	-0.093	0.034	-0.016	-0.396
	121	-17.817	-4.524	-0.093	0.034	-0.057	-1.966
136	121	-10.351	-1.999	0.420	0.053	-0.160	0.442
	17	-10.351	-3.827	0.420	0.053	0.023	-0.825
137	86	11.311	0.241	1.459	0.026	-0.137	0.219
	38	13.241	0.241	1.459	0.026	0.593	0.339
138	37	3.418	-0.135	9.990	0.025	-1.178	0.086
	85	2.414	-0.135	9.990	0.025	1.420	0.050
139	36	4.994	0.085	8.375	0.034	-0.378	0.039
	84	4.222	0.085	8.375	0.034	1.297	0.056
140	35	-1.244	0.000	-0.226	0.000	-0.006	0.000
	83	-2.248	0.000	-0.226	0.000	-0.065	0.000
141	34	-1.349	0.000	-0.177	0.000	-0.018	0.000
	82	-3.280	0.000	-0.177	0.000	-0.107	0.000
142	39	4.165	-0.502	-1.561	0.021	0.852	0.634
	87	2.234	-0.502	-1.561	0.021	0.071	0.383
143	40	-1.244	0.000	-0.226	0.000	-0.006	0.000
	88	-2.248	0.000	-0.226	0.000	-0.065	0.000
144	41	1.475	0.091	0.619	0.025	-0.277	0.037
	89	0.703	0.091	0.619	0.025	-0.153	0.055
145	42	2.191	-0.172	7.481	0.012	-0.906	0.123
	90	1.187	-0.172	7.481	0.012	1.039	0.078
146	43	9.197	-0.231	3.089	0.006	-1.081	0.488
	91	7.266	-0.231	3.089	0.006	0.464	0.372
147	69	-1.349	0.000	-0.177	0.000	-0.018	0.000
	117	-3.280	0.000	-0.177	0.000	-0.107	0.000
148	70	-1.244	0.000	-0.226	0.000	-0.006	0.000
	118	-2.248	0.000	-0.226	0.000	-0.065	0.000
149	71	5.157	-0.018	9.325	-0.022	-0.432	-0.014
	119	4.385	-0.018	9.325	-0.022	1.433	-0.018
150	72	3.565	0.073	9.725	-0.025	-1.142	-0.004
	120	2.561	0.073	9.725	-0.025	1.386	0.015
151	73	13.421	-0.441	1.276	-0.106	-0.509	0.139
	121	11.490	-0.441	1.276	-0.106	0.129	-0.082
152	63	4.868	0.144	-1.932	-0.036	0.929	0.142
	111	2.938	0.144	-1.932	-0.036	-0.037	0.214
153	62	-1.244	0.000	-0.226	0.000	-0.006	0.000
	110	-2.248	0.000	-0.226	0.000	-0.065	0.000
154	61	1.910	0.057	3.093	0.023	-0.415	0.034
	109	1.138	0.057	3.093	0.023	0.204	0.046
155	60	2.427	-0.141	6.791	0.040	-0.801	0.066
	108	1.423	-0.141	6.791	0.040	0.965	0.030
156	59	9.540	0.503	2.482	0.109	-0.875	0.072
	107	7.610	0.503	2.482	0.109	0.366	0.324
157	58	-1.349	0.000	-0.177	0.000	-0.018	0.000
	106	-3.280	0.000	-0.177	0.000	-0.107	0.000
158	57	-1.244	0.000	-0.226	0.000	-0.006	0.000
	105	-2.248	0.000	-0.226	0.000	-0.065	0.000
159	56	5.129	0.020	9.212	0.023	-0.430	0.014
	104	4.357	0.020	9.212	0.023	1.413	0.019
160	55	3.553	-0.074	9.741	0.026	-1.145	0.003
	103	2.549	-0.074	9.741	0.026	1.388	-0.016
161	54	13.454	0.449	1.291	0.109	-0.520	-0.144
	102	11.524	0.449	1.291	0.109	0.126	0.081
162	53	-1.349	0.000	-0.177	0.000	-0.018	0.000
	101	-3.280	0.000	-0.177	0.000	-0.107	0.000
163	52	-1.244	0.000	-0.226	0.000	-0.006	0.000
	100	-2.248	0.000	-0.226	0.000	-0.065	0.000
164	51	4.967	-0.087	8.264	-0.036	-0.375	-0.040
	99	4.195	-0.087	8.264	-0.036	1.278	-0.057
165	50	3.406	0.136	10.006	-0.026	-1.180	-0.086
	98	2.402	0.136	10.006	-0.026	1.421	-0.051
166	49	13.271	0.250	1.474	-0.027	-0.604	-0.342
	97	11.341	0.250	1.474	-0.027	0.133	-0.217
167	64	4.885	-0.149	-1.949	0.038	0.930	-0.144
	112	2.954	-0.149	-1.949	0.038	-0.045	-0.219
168	65	-1.244	0.000	-0.226	0.000	-0.006	0.000
	113	-2.248	0.000	-0.226	0.000	-0.065	0.000
169	66	1.921	-0.050	3.140	-0.020	-0.416	-0.032
	114	1.149	-0.050	3.140	-0.020	0.212	-0.042
170	67	2.432	0.139	6.782	-0.036	-0.800	-0.066
	115	1.428	0.139	6.782	-0.036	0.964	-0.029
171	68	9.521	-0.497	2.476	-0.105	-0.870	-0.074
	116	7.590	-0.497	2.476	-0.105	0.368	-0.323
172	44	9.216	0.230	3.094	-0.008	-1.086	-0.488
	92	7.285	0.230	3.094	-0.008	0.461	-0.373
173	45	2.186	0.174	7.488	-0.015	-0.908	-0.124
	93	1.182	0.174	7.488	-0.015	1.039	-0.079
174	46	1.463	-0.098	0.571	-0.027	-0.276	-0.039
	94	0.691	-0.098	0.571	-0.027	-0.162	-0.059
175	47	-1.244	0.000	-0.226	0.000	-0.006	0.000
	95	-2.248	0.000	-0.226	0.000	-0.065	0.000
176	48	4.149	0.518	-1.549	-0.023	0.852	-0.637
	96	2.218	0.518	-1.549	-0.023	0.077	-0.378
177	122	3.359	0.913	-0.031	-0.022	0.009	1.619
	123	3.359	-0.915	-0.031	-0.022	-0.004	1.619
178	123	3.359	-0.915	-0.031	-0.022	-0.004	1.619
	124	3.359	-2.743	-0.031	-0.022	-0.018	0.823
179	124	3.359	-2.743	-0.031	-0.022	-0.018	0.823
	125	3.359	-4.572	-0.031	-0.022	-0.031	-0.768
180	125	3.359	-4.572	-0.031	-0.022	-0.031	-0.768
	126	3.359	-6.400	-0.031	-0.022	-0.044	-3.154
181	126	-5.646	0.153	0.315	-0.010	-0.023	-0.127
	26	-5.646	-1.675	0.315	-0.010	0.113	-0.459
182	127	2.391	2.488	0.009	-0.019	-0.050	0.217
	128	2.391	0.660	0.009	-0.019	-0.046	0.902
183	128	2.391	0.660	0.009	-0.019	-0.046	0.902
	129	2.391	-1.169	0.009	-0.019	-0.042	0.792
184	129	2.391	-1.169	0.009	-0.019	-0.042	0.792
	130	2.391	-2.997	0.009	-0.019	-0.038	-0.114
185	130	2.391	-2.997	0.009	-0.019	-0.038	-0.114
	131	2.391	-4.825	0.009	-0.019	-0.034	-1.816
186	131	-4.040	-1.183	0.546	0.023	-0.061	0.279
	27	-4.040	-3.012	0.546	0.023	0.176	-0.633
187	132	2.445	4.827	-0.008	0.023	-0.036	-1.815
	133	2.445	2.999	-0.008	0.023	-0.040	-0.113
188	133	2.445	2.999	-0.008	0.023	-0.040	-0.113
	134	2.445	1.170	-0.008	0.023	-0.043	0.794
189	134	2.445	1.170	-0.008	0.023	-0.043	0.794
	135	2.445	-0.658	-0.008	0.023	-0.046	0.905
190	135	2.445	-0.658	-0.008	0.023	-0.046	0.905
	136	2.445	-2.486	-0.008	0.023	-0.050	0.221
191	136	0.485	-2.440	0.532	0.053	-0.119	0.738
	28	0.485	-4.268	0.532	0.053	0.112	-0.721
192	137	3.481	6.406	0.032	0.023	-0.047	-3.154
	138	3.481	4.577	0.032	0.023	-0.033	-0.766
193	138	3.481	4.577	0.032	0.023	-0.033	-0.766
	139	3.481	2.749	0.032	0.023	-0.019	0.828
194	139	3.481	2.749	0.032	0.023	-0.019	0.828
	140	3.481	0.921	0.032	0.023	-0.005	1.626
195	140	3.481	0.921	0.032	0.023	-0.005	1.626
	141	3.481	-0.908	0.032	0.023	0.009	1.629
196	141	7.664	-1.593	0.042	0.031	-0.024	0.683
	29	7.664	-3.421	0.042	0.031	-0.005	-0.408
197	142	6.593	6.352	0.000	-0.027	0.029	-3.099
	143	6.593	4.524	0.000	-0.027	0.029	-0.734
198	143	6.593	4.524	0.000	-0.027	0.029	-0.734
	144	6.593	2.695	0.000	-0.027	0.029	0.836
199	144	6.593	2.695	0.000	-0.027	0.029	0.836
	145	6.593	0.867	0.000	-0.027	0.029	1.611
200	145	6.593	0.867	0.000	-0.027	0.029	1.611
	146	6.593	-0.961	0.000	-0.027	0.029	1.591
201	146	10.790	-1.440	-0.238	-0.006	0.051	0.647
	30	10.790	-3.268	-0.238	-0.006	-0.053	-0.377
202	147	9.860	4.748	-0.060	-0.029	0.074	-1.736
	148	9.860	2.919	-0.060	-0.029	0.048	-0.068
203	148	9.860	2.919	-0.060	-0.029	0.048	-0.068
	149	9.860	1.091	-0.060	-0.029	0.021	0.804
204	149	9.860	1.091	-0.060	-0.029	0.021	0.804
	150	9.860	-0.737	-0.060	-0.029	-0.005	0.881
205	150	9.860	-0.737	-0.060	-0.029	-0.005	0.881
	151	9.860	-2.566	-0.060	-0.029	-0.031	0.162
206	151	8.388	-1.814	-0.530	-0.026	0.042	0.600
	31	8.388	-3.643	-0.530	-0.026	-0.189	-0.587
207	152	9.807	2.569	0.056	0.025	-0.029	0.158
	153	9.807	0.740	0.056	0.025	-0.004	0.877
208	153	9.807	0.740	0.056	0.025	-0.004	0.877
	154	9.807	-1.088	0.056	0.025	0.020	0.802
209	154	9.807	-1.088	0.056	0.025	0.020	0.802
	155	9.807	-2.916	0.056	0.025	0.045	-0.069
210	155	9.807	-2.916	0.056	0.025	0.045	-0.069
	156	9.807	-4.745	0.056	0.025	0.070	-1.736

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
211	156	3.728	-0.923	-0.382	-0.051	0.111	0.258
	32	3.728	-2.752	-0.382	-0.051	-0.055	-0.541
212	157	6.471	0.967	0.000	0.025	0.028	1.580
	158	6.471	-0.861	0.000	0.025	0.028	1.604
213	158	6.471	-0.861	0.000	0.025	0.028	1.604
	159	6.471	-2.689	0.000	0.025	0.028	0.832
214	159	6.471	-2.689	0.000	0.025	0.028	0.832
	160	6.471	-4.518	0.000	0.025	0.028	-0.736
215	160	6.471	-4.518	0.000	0.025	0.028	-0.736
	161	6.471	-6.346	0.000	0.025	0.028	-3.099
216	161	-2.270	0.302	-0.072	-0.033	0.025	-0.133
	25	-2.270	-1.527	-0.072	-0.033	-0.007	-0.399
217	151	0.751	0.470	-1.472	0.073	0.438	-0.003
	111	3.068	0.470	-1.472	0.073	-0.445	0.279
218	147	3.822	0.436	6.090	-0.037	-1.996	0.078
	107	6.139	0.436	6.090	-0.037	1.658	0.339
219	146	-0.479	0.238	4.197	0.022	-0.943	-0.021
	106	1.838	0.238	4.197	0.022	1.575	0.122
220	142	6.645	0.068	8.763	0.004	-2.971	0.060
	102	8.962	0.068	8.763	0.004	2.287	0.100
221	141	-0.685	-0.009	4.183	-0.033	-0.946	-0.008
	101	1.631	-0.009	4.183	-0.033	1.564	-0.013
222	137	6.549	-0.344	9.027	-0.023	-3.032	-0.011
	97	8.866	-0.344	9.027	-0.023	2.384	-0.217
223	136	0.046	-0.540	-1.960	-0.069	0.517	-0.031
	96	2.363	-0.540	-1.960	-0.069	-0.659	-0.355
224	132	3.639	-0.536	6.440	0.024	-2.097	-0.043
	92	5.956	-0.536	6.440	0.024	1.767	-0.365
225	131	3.642	0.537	6.431	-0.027	-2.095	0.042
	91	5.959	0.537	6.431	-0.027	1.763	0.364
226	127	0.064	0.539	-1.945	0.067	0.515	0.033
	87	2.380	0.539	-1.945	0.067	-0.652	0.356
227	126	6.553	0.345	9.005	0.021	-3.027	0.011
	86	8.870	0.345	9.005	0.021	2.377	0.218
229	122	-0.664	0.007	4.190	0.032	-0.945	0.009
	82	1.652	0.007	4.190	0.032	1.569	0.013
230	161	6.648	-0.072	8.741	-0.003	-2.966	-0.058
	121	8.965	-0.072	8.741	-0.003	2.279	-0.101
231	157	-0.456	-0.237	4.203	-0.020	-0.942	0.022
	117	1.861	-0.237	4.203	-0.020	1.580	-0.121
232	116	6.138	0.438	6.079	0.041	-1.654	-0.339
	156	3.821	0.438	6.079	0.041	1.993	-0.076
233	152	0.773	-0.468	-1.459	-0.068	0.437	0.001
	112	3.090	-0.468	-1.459	-0.068	-0.439	-0.280

Load case 13 (Non-linear): G+0.67E
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.939% Convergence

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
1	1	71.790	-26.178	-5.571	0.000	11.436	41.034
	9	54.919	-26.178	-5.571	0.000	-1.381	-19.195
2	2	81.921	-22.548	0.272	0.000	1.190	34.217
	10	65.050	-22.548	0.272	0.000	1.830	-17.666
3	3	87.867	-4.061	9.647	0.000	-13.322	5.645
	11	70.996	-4.061	9.647	0.000	8.894	-3.707
4	4	81.899	15.691	16.005	0.000	-23.096	-24.958
	12	65.028	15.691	16.005	0.000	13.742	11.138
5	5	71.792	22.497	14.438	0.000	-20.667	-37.261
	13	54.921	22.497	14.438	0.000	12.553	14.499
6	6	61.175	16.082	5.773	0.000	-7.535	-27.403
	14	44.304	16.082	5.773	0.000	5.739	9.599
7	7	53.810	1.605	-3.689	0.000	7.030	-3.088
	15	36.939	1.605	-3.689	0.000	-1.466	0.608
8	8	61.148	-15.396	-7.162	0.000	13.753	24.550
	16	44.276	-15.396	-7.162	0.000	-2.731	-10.868
9 - Compression-only member has been disabled							
10 - Compression-only member has been disabled							
11	11	26.584	3.237	0.252	0.637	-0.980	-1.846
	44	25.082	1.930	0.252	0.637	-0.814	-0.134
12	12	48.627	2.249	0.138	0.552	-0.634	-2.533
	49	47.126	0.942	0.138	0.552	-0.543	-1.478
13	13	48.952	1.201	0.756	0.211	-0.242	-2.182
	54	47.450	-0.105	0.756	0.211	0.261	-1.821
14	14	28.693	2.326	0.777	-0.118	0.136	-1.552
	59	27.192	1.020	0.777	-0.118	0.652	-0.443
15	15	3.498	2.608	0.127	-0.204	0.232	-0.548
	64	1.996	1.301	0.127	-0.204	0.316	0.747
16 - Compression-only member has been disabled							
17	9	15.614	8.567	-3.637	0.000	-1.739	-17.111
	17	8.279	8.567	-3.637	0.000	-5.377	-8.545
18	10	25.299	11.200	-1.481	0.000	0.947	-15.232
	18	17.963	11.200	-1.481	0.000	-0.533	-4.034
19	11	26.642	1.747	-4.240	0.000	5.611	-2.370
	19	19.307	1.747	-4.240	0.000	1.372	-0.624
20	12	25.304	-6.821	-8.980	0.000	11.357	10.014
	20	17.968	-6.821	-8.980	0.000	2.378	3.194
21	13	15.639	-3.337	-8.643	0.000	10.783	13.255
	21	8.303	-3.337	-8.643	0.000	2.140	9.920
22	14	19.567	0.236	-4.215	0.000	4.769	8.447
	22	12.232	0.236	-4.215	0.000	0.552	8.685
23	15	28.263	0.042	0.001	0.000	-1.326	0.555
	23	20.927	0.042	0.001	0.000	-1.328	0.599
24	16	19.550	2.916	-3.036	0.000	-2.592	-9.387
	24	12.215	2.916	-3.036	0.000	-5.630	-6.472
25	17	-11.443	0.367	-0.011	-0.139	0.084	1.452
	82	-11.443	-1.461	-0.011	-0.139	0.079	1.214
26	18	-9.465	6.769	0.457	0.006	-0.232	-1.021
	87	-9.465	4.940	0.457	0.006	-0.033	1.526
27	19	-15.295	4.842	0.490	-0.084	-0.020	-1.045
	92	-15.295	3.014	0.490	-0.084	0.193	0.663
28	20	-18.147	2.228	0.499	-0.120	-0.237	-0.607
	97	-18.147	0.400	0.499	-0.120	-0.020	-0.035
29	21	-14.044	2.676	-0.969	-0.024	0.081	-0.708
	102	-14.044	0.848	-0.969	-0.024	-0.340	0.058
30	22	-4.979	4.583	-1.803	0.050	0.370	-0.931
	107	-4.979	2.754	-1.803	0.050	-0.415	0.665
31	23	3.787	4.558	-0.936	0.036	0.195	-0.588
	112	3.787	2.730	-0.936	0.036	-0.212	0.997
32	24	-6.445	0.355	-0.557	-0.135	0.367	1.465
	117	-6.445	-1.474	-0.557	-0.135	0.124	1.221
33	17	5.217	10.879	6.811	0.000	-4.231	-6.897
	25	0.816	10.879	6.811	0.000	-0.145	-0.369
34	18	8.945	7.669	2.703	0.000	-1.138	-4.132
	26	4.544	7.669	2.703	0.000	0.483	0.469
35	19	9.600	0.337	-0.638	0.000	0.780	-0.369
	27	5.199	0.337	-0.638	0.000	0.398	-0.167
36	20	8.971	-7.287	-3.374	0.000	2.034	3.697
	28	4.570	-7.287	-3.374	0.000	0.010	-0.675
37	21	5.246	-12.620	-2.736	0.000	1.799	7.942
	29	0.845	-12.620	-2.736	0.000	0.157	0.370
38	22	7.282	-9.875	0.802	0.000	-0.008	6.589
	30	2.881	-9.875	0.802	0.000	0.473	0.664
39	23	11.812	-1.639	3.775	0.000	-1.809	0.794
	31	7.411	-1.639	3.775	0.000	0.455	-0.189
40	24	7.263	6.327	7.378	0.000	-4.555	-4.594
	32	2.862	6.327	7.378	0.000	-0.128	-0.799
41	25	12.130	0.759	-0.082	-0.048	-0.014	0.317
	122	12.130	-1.070	-0.082	-0.048	-0.049	0.249
42	26	0.531	4.852	-0.349	-0.076	0.058	-0.782
	127	0.531	3.024	-0.349	-0.076	-0.094	0.931
43	27	-8.216	2.602	-0.852	-0.017	0.291	-0.609
	132	-8.216	0.774	-0.852	-0.017	-0.080	0.126
44	28	-11.070	-0.292	-0.541	-0.012	0.056	-0.137
	137	-11.070	-2.121	-0.541	-0.012	-0.180	-0.662
45	29	-5.896	0.069	0.278	0.113	-0.011	-0.177
	142	-5.896	-1.759	0.278	0.113	0.110	-0.545
46	30	4.876	2.458	0.865	0.139	-0.126	-0.502
	147	4.876	0.629	0.865	0.139	0.250	0.169
47	31	12.939	3.691	0.967	0.048	-0.368	-0.520
	152	12.939	1.863	0.967	0.048	0.053	0.688
48	32	17.424	0.406	0.495	0.016	-0.132	0.400
	157	17.424	-1.422	0.495	0.016	0.084	0.179
49 - Compression-only member has been disabled							
50	35	1.700	-4.506	0.206	-0.051	-0.043	0.834
	36	1.520	-5.812	0.206	-0.051	0.048	-1.431
51	36	18.885	-6.359	0.180	-0.079	-0.053	0.004
	37	19.065	-7.665	0.180	-0.079	0.026	-3.075
52	37	34.627	0.800	0.099	-0.178	-0.117	-1.614
	38	35.348	-0.506	0.099	-0.178	-0.068	-1.541
53	38	47.252	-0.837	-0.134	-0.546	-0.539	-1.500
	10	48.753	-2.144	-0.134	-0.546	-0.627	-2.485
54 - Compression-only member has been disabled							
55 - Compression-only member has been disabled							
56	41	3.772	-3.236	0.295	-0.081	-0.068	0.209
	42	3.952	-4.542	0.295	-0.081	0.062	-1.499
57	42	14.693	-0.716	-0.014	-0.251	-0.128	-0.390
	43	15.414	-2.023	-0.014	-0.251	-0.135	-1.070
58	43	25.111	-1.886	-0.260	-0.638	-0.811	-0.141
	11	26.612	-3.193	-0.260	-0.638	-0.981	-1.824
59	44	15.349	2.031	0.008	0.253	-0.135	-1.071
	45	14.628	0.725	0.008	0.253	-0.131	-0.386
60	45	3.878	4.535	-0.304	0.084	0.063	-1.497
	46	3.697	3.228	-0.304	0.084	-0.071	0.207
61 - Compression-only member has been disabled							
62 - Compression-only member has been disabled							
63 - Compression-only member has been disabled							
64	49	35.132	0.539	-0.106	0.179	-0.067	-1.543
	50	34.411	-0.768	-0.106	0.179	-0.120	-1.600
65	50	18.818	7.662	-0.186	0.081	0.026	-3.070
	51	18.638	6.356	-0.186	0.081	-0.056	0.008
66	51	1.334	5.754	-0.212	0.053	0.048	-1.419
	52	1.514	4.448	-0.212	0.053	-0.045	0.821
67 - Compression-only member has been disabled							
68 - Compression-only member has been disabled							

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
69	54	36.945	0.359	-0.087	-0.056	0.172	-1.535
	55	36.224	-0.947	-0.087	-0.056	0.129	-1.681
70	55	20.998	7.717	0.121	-0.048	0.025	-3.058
	56	20.817	6.410	0.121	-0.048	0.079	0.044
71	56	2.948	6.201	0.132	-0.046	0.011	-1.443
	57	3.128	4.895	0.132	-0.046	0.069	0.993
72 - Compression-only member has been disabled							
73 - Compression-only member has been disabled							
74	59	18.735	1.656	-0.191	-0.172	0.261	-0.918
	60	18.014	0.349	-0.191	-0.172	0.166	-0.420
75	60	8.182	4.761	0.117	-0.065	-0.001	-1.359
	61	8.001	3.454	0.117	-0.065	0.050	0.445
76 - Compression-only member has been disabled							
77 - Compression-only member has been disabled							
78	63	1.958	-1.308	-0.118	0.205	0.311	0.747
	15	3.459	-2.615	-0.118	0.205	0.232	-0.553
79 - Compression-only member has been disabled							
80 - Compression-only member has been disabled							
81	66	8.077	-3.459	-0.105	0.062	0.046	0.447
	67	8.257	-4.765	-0.105	0.062	-0.001	-1.359
82	67	18.073	-0.341	0.200	0.171	0.160	-0.423
	68	18.794	-1.647	0.200	0.171	0.259	-0.917
83	68	27.213	-0.980	-0.761	0.125	0.650	-0.450
	16	28.715	-2.286	-0.761	0.125	0.144	-1.532
84 - Compression-only member has been disabled							
85	70	3.313	-4.952	-0.128	0.045	0.067	1.007
	71	3.133	-6.258	-0.128	0.045	0.010	-1.454
86	71	21.062	-6.413	-0.117	0.047	0.077	0.040
	72	21.243	-7.719	-0.117	0.047	0.025	-3.063
87	72	36.437	0.979	0.089	0.057	0.127	-1.695
	73	37.158	-0.327	0.089	0.057	0.171	-1.533
88	73	47.570	0.207	-0.744	-0.201	0.265	-1.842
	9	49.072	-1.099	-0.744	-0.201	-0.231	-2.135
97	82	0.739	-7.385	-0.006	-0.167	0.000	5.492
	83	0.739	-9.214	-0.006	-0.167	-0.003	1.882
98	83	-1.245	-6.558	-0.212	-0.069	0.046	1.509
	84	-1.245	-8.387	-0.212	-0.069	-0.046	-1.741
99	84	-16.784	-5.829	-0.186	-0.045	0.037	-0.068
	85	-16.784	-7.658	-0.186	-0.045	-0.044	-3.001
100	85	-29.650	-2.832	-0.105	0.071	0.009	-1.117
	86	-29.650	-4.661	-0.105	0.071	-0.037	-2.747
101	86	-17.948	-0.421	-0.502	0.121	-0.013	-0.038
	18	-17.948	-2.250	-0.502	0.121	-0.232	-0.620
102	87	-8.606	0.786	0.141	-0.205	-0.122	1.719
	88	-8.606	-1.043	0.141	-0.205	-0.060	1.663
103	88	-8.379	-3.290	0.141	-0.205	-0.060	1.598
	89	-8.379	-5.119	0.141	-0.205	0.001	-0.231
104	89	-11.584	-2.817	-0.154	-0.056	0.057	0.154
	90	-11.584	-4.646	-0.154	-0.056	-0.010	-1.469
105	90	-20.809	-2.964	0.156	0.073	0.054	-0.180
	91	-20.809	-4.792	0.156	0.073	0.121	-1.866
106	91	-15.212	-3.036	-0.488	0.087	0.193	0.665
	19	-15.212	-4.865	-0.488	0.087	-0.020	-1.054
107	92	-20.896	4.802	-0.154	-0.071	0.123	-1.870
	93	-20.896	2.973	-0.154	-0.071	0.056	-0.179
108	93	-11.660	4.648	0.158	0.059	-0.011	-1.469
	94	-11.660	2.820	0.158	0.059	0.058	0.155
109	94	-8.528	5.104	-0.146	0.212	0.000	-0.217
	95	-8.528	3.275	-0.146	0.212	-0.064	1.606
110	95	-8.754	1.028	-0.146	0.212	-0.064	1.671
	96	-8.754	-0.800	-0.146	0.212	-0.128	1.720
111	96	-9.611	-4.941	-0.468	0.001	-0.034	1.530
	20	-9.611	-6.769	-0.468	0.001	-0.237	-1.017
112	97	-29.844	4.692	0.112	-0.070	-0.040	-2.753
	98	-29.844	2.863	0.112	-0.070	0.008	-1.110
113	98	-16.939	7.649	0.192	0.047	-0.047	-2.996
	99	-16.939	5.821	0.192	0.047	0.037	-0.066
114	99	-1.452	8.373	0.217	0.071	-0.048	-1.736
	100	-1.452	6.545	0.217	0.071	0.046	1.509
115	100	0.340	9.168	0.006	0.172	-0.005	1.917
	101	0.340	7.340	0.006	0.172	-0.003	5.508
116	101	-11.852	1.447	0.005	0.143	0.079	1.229
	21	-11.852	-0.381	0.005	0.143	0.081	1.461
117	102	-26.415	4.406	0.174	-0.038	-0.107	-2.643
	103	-26.415	2.578	0.174	-0.038	-0.031	-1.123
118	103	-13.987	7.731	-0.034	-0.045	0.036	-2.978
	104	-13.987	5.903	-0.034	-0.045	0.022	-0.013
119	104	1.992	8.585	-0.045	-0.057	0.076	-1.722
	105	1.992	6.757	-0.045	-0.057	0.056	1.615
120	105	5.444	9.602	0.087	-0.127	0.131	1.765
	106	5.444	7.774	0.087	-0.127	0.169	5.544
121	106	-6.859	1.461	0.561	0.133	0.126	1.235
	22	-6.859	-0.367	0.561	0.133	0.370	1.474
122	107	-11.079	4.288	0.153	0.040	-0.115	-1.594
	108	-11.079	2.460	0.153	0.040	-0.048	-0.126
123	108	-2.930	4.630	-0.155	-0.047	0.024	-1.306
	109	-2.930	2.802	-0.155	-0.047	-0.044	0.310
124	109	4.435	5.898	-0.038	-0.142	-0.003	-0.670
	110	4.435	4.069	-0.038	-0.142	-0.019	1.498
125	110	4.209	1.822	-0.038	-0.142	-0.019	1.563
	111	4.209	-0.006	-0.038	-0.142	-0.036	1.958
126	111	3.667	-2.729	0.933	-0.040	-0.211	0.998
	23	3.667	-4.557	0.933	-0.040	0.195	-0.586
127	112	4.377	-0.003	0.041	0.130	-0.041	1.952
	113	4.377	-1.831	0.041	0.130	-0.023	1.553
128	113	4.603	-4.079	0.041	0.130	-0.023	1.488
	114	4.603	-5.907	0.041	0.130	-0.005	-0.684
129	114	-2.836	-2.796	0.146	0.042	-0.042	0.309
	115	-2.836	-4.625	0.146	0.042	0.022	-1.305
130	115	-10.967	-2.448	-0.159	-0.045	-0.045	-0.127
	116	-10.967	-4.277	-0.159	-0.045	-0.115	-1.589
131	116	-4.875	-2.769	1.796	-0.056	-0.415	0.665
	24	-4.875	-4.598	1.796	-0.056	0.367	-0.937
132	117	5.846	-7.818	-0.084	0.124	0.164	5.528
	118	5.846	-9.646	-0.084	0.124	0.127	1.730
133	118	2.203	-6.769	0.044	0.055	0.055	1.616
	119	2.203	-8.598	0.044	0.055	0.074	-1.726
134	119	-13.827	-5.911	0.033	0.044	0.021	-0.015
	120	-13.827	-7.739	0.033	0.044	0.035	-2.983
135	120	-26.214	-2.548	-0.173	0.036	-0.030	-1.131
	121	-26.214	-4.376	-0.173	0.036	-0.106	-2.637
136	121	-13.834	-0.866	0.969	0.021	-0.338	0.055
	17	-13.834	-2.694	0.969	0.021	0.084	-0.720
137	86	16.749	0.233	-0.323	-0.032	0.203	0.460
	38	18.679	0.233	-0.323	-0.032	0.042	0.576
138	37	5.829	-0.081	12.866	0.053	-1.461	0.137
	85	4.825	-0.081	12.866	0.053	1.884	0.116
139	36	3.330	-0.025	15.539	0.082	-1.435	0.028
	84	2.558	-0.025	15.539	0.082	1.673	0.023
140	35	3.659	0.206	1.984	0.049	-0.888	0.045
	83	2.655	0.206	1.984	0.049	-0.373	0.098
141	34	-1.349	0.000	-0.177	0.000	-0.018	0.000
	82	-3.280	0.000	-0.177	0.000	-0.107	0.000
142	39	-1.349	0.000	-0.177	0.000	-0.018	0.000
	87	-3.280	0.000	-0.177	0.000	-0.107	0.000
143	40	-1.244	0.000	-0.226	0.000	-0.006	0.000
	88	-2.248	0.000	-0.226	0.000	-0.065	0.000
144	41	3.073	0.295	3.205	0.056	-0.257	0.090
	89	2.301	0.295	3.205	0.056	0.384	0.149
145	42	2.686	-0.309	9.224	0.063	-1.109	0.210
	90	1.682	-0.309	9.224	0.063	1.289	0.129
146	43	10.966	-0.245	2.540	0.054	-0.929	0.746
	91	9.035	-0.245	2.540	0.054	0.341	0.623
147	69	-1.349	0.000	-0.177	0.000	-0.018	0.000
	117	-3.280	0.000	-0.177	0.000	-0.107	0.000
148	70	3.881	-0.128	3.643	-0.072	-1.061	-0.035
	118	2.877	-0.128	3.643	-0.072	-0.114	-0.069
149	71	3.460	0.011	16.030	-0.053	-1.494	-0.014
	119	2.687	0.011	16.030	-0.053	1.711	-0.012
150	72	6.195	0.206	12.387	-0.066	-1.368	-0.062
	120	5.191	0.206	12.387	-0.066	1.853	-0.008
151	73	17.517	-0.834	-0.997	-0.203	0.309	0.065
	121	15.586	-0.834	-0.997	-0.203	-0.189	-0.353
152	63	1.415	0.118	0.018	-0.050	0.801	0.369
	111	-0.515	0.118	0.018	-0.050	0.810	0.428
153	62	-1.244	0.000	-0.226	0.000	-0.006	0.000
	110	-2.248	0.000	-0.226	0.000	-0.065	0.000
154	61	3.868	0.117	7.365	0.041	-0.493	0.071
	109	3.096	0.117	7.365	0.041	0.980	0.095
155	60	3.174	-0.308	8.149	0.072	-0.939	0.167
	108	2.170	-0.308	8.149	0.072	1.180	0.087
156	59	10.684	0.968	1.474	0.194	-0.475	0.293
	107	8.753	0.968	1.474	0.194	0.262	0.777
157	58	-1.349	0.000	-0.177	0.000	-0.018	0.000
	106	-3.280	0.000	-0.177	0.000	-0.107	0.000
158	57	3.849	0.132	3.452	0.074	-1.047	0.036
	105	2.846	0.132	3.452	0.074	-0.150	0.071
159	56	3.455	-0.011	15.979	0.054	-1.487	0.014
	104	2.682	-0.011	15.979	0.054	1.708	0.012
160	55	6.157	-0.208	12.428	0.068	-1.376	0.061
	103	5.153	-0.208	12.428	0.068	1.855	0.007
161	54	17.567	0.843	-0.951	0.207	0.285	-0.073
	102	15.637	0.843	-0.951	0.207	-0.190	0.349
162	53	-1.349	0.000	-0.177	0.000	-0.018	0.000
	101	-3.280	0.000	-0.177	0.000	-0.107	0.000
163	52	3.627	-0.212	1.792	-0.051	-0.875	-0.047
	100	2.623	-0.212	1.792	-0.051	-0.409	-0.102
164	51	3.325	0.025	15.487	-0.085	-1.428	-0.029
	99	2.552	0.025	15.487	-0.085	1.670	-0.024
165	50	5.790	0.080	12.905	-0.055	-1.469	-0.138
	98	4.786	0.080	12.905	-0.055	1.886	-0.118
166	49	18.730	0.245	-0.280	0.032	-0.065	-0.582
	97	16.799	0.245	-0.280	0.032	-0.205	-0.460

Memb	Node	Axial Force	Y-Axis Shear	Z-Axis Shear	X-Axis Torsion	Y-Axis Moment	Z-Axis Moment
167	64	1.440	-0.127	-0.013	0.053	0.801	-0.372
	112	-0.491	-0.127	-0.013	0.053	0.795	-0.436
168	65	-1.244	0.000	-0.226	0.000	-0.006	0.000
	113	-2.248	0.000	-0.226	0.000	-0.065	0.000
169	66	3.883	-0.105	7.439	-0.037	-0.495	-0.067
	114	3.111	-0.105	7.439	-0.037	0.993	-0.088
170	67	3.180	0.305	8.131	-0.067	-0.936	-0.166
	115	2.176	0.305	8.131	-0.067	1.178	-0.087
171	68	10.653	-0.961	1.463	-0.188	-0.467	-0.298
	116	8.722	-0.961	1.463	-0.188	0.265	-0.779
172	44	10.997	0.244	2.549	-0.058	-0.937	-0.745
	92	9.067	0.244	2.549	-0.058	0.338	-0.624
173	45	2.679	0.312	9.236	-0.066	-1.111	-0.211
	93	1.675	0.312	9.236	-0.066	1.290	-0.130
174	46	3.056	-0.304	3.132	-0.059	-0.255	-0.092
	94	2.284	-0.304	3.132	-0.059	0.372	-0.153
175	47	-1.244	0.000	-0.226	0.000	-0.006	0.000
	95	-2.248	0.000	-0.226	0.000	-0.065	0.000
176	48	-1.349	0.000	-0.177	0.000	-0.018	0.000
	96	-3.280	0.000	-0.177	0.000	-0.107	0.000
177	122	0.126	-0.742	-0.088	-0.016	0.030	3.068
	123	0.126	-2.571	-0.088	-0.016	-0.008	2.347
178	123	0.126	-2.571	-0.088	-0.016	-0.008	2.347
	124	0.126	-4.399	-0.088	-0.016	-0.046	0.831
179	124	0.126	-4.399	-0.088	-0.016	-0.046	0.831
	125	0.126	-6.227	-0.088	-0.016	-0.084	-1.480
180	125	0.126	-6.227	-0.088	-0.016	-0.084	-1.480
	126	0.126	-8.056	-0.088	-0.016	-0.122	-4.586
181	126	-11.254	2.137	0.542	0.016	-0.178	-0.669
	26	-11.254	0.309	0.542	0.016	0.058	-0.138
182	127	-0.150	1.582	-0.034	-0.055	-0.005	1.040
	128	-0.150	-0.246	-0.034	-0.055	-0.020	1.331
183	128	-0.150	-0.246	-0.034	-0.055	-0.020	1.331
	129	-0.150	-2.074	-0.034	-0.055	-0.035	0.826
184	129	-0.150	-2.074	-0.034	-0.055	-0.035	0.826
	130	-0.150	-3.903	-0.034	-0.055	-0.049	-0.474
185	130	-0.150	-3.903	-0.034	-0.055	-0.049	-0.474
	131	-0.150	-5.731	-0.034	-0.055	-0.064	-2.569
186	131	-8.287	-0.769	0.855	0.021	-0.081	0.123
	27	-8.287	-2.597	0.855	0.021	0.291	-0.609
187	132	-0.066	5.736	0.036	0.060	-0.067	-2.570
	133	-0.066	3.907	0.036	0.060	-0.052	-0.472
188	133	-0.066	3.907	0.036	0.060	-0.052	-0.472
	134	-0.066	2.079	0.036	0.060	-0.036	0.830
189	134	-0.066	2.079	0.036	0.060	-0.036	0.830
	135	-0.066	0.250	0.036	0.060	-0.021	1.336
190	135	-0.066	0.250	0.036	0.060	-0.021	1.336
	136	-0.066	-1.578	0.036	0.060	-0.005	1.047
191	136	0.614	-3.034	0.357	0.079	-0.099	0.937
	28	0.614	-4.862	0.357	0.079	0.056	-0.780
192	137	0.347	8.069	0.091	0.019	-0.127	-4.590
	138	0.347	6.241	0.091	0.019	-0.087	-1.478
193	138	0.347	6.241	0.091	0.019	-0.087	-1.478
	139	0.347	4.413	0.091	0.019	-0.048	0.839
194	139	0.347	4.413	0.091	0.019	-0.048	0.839
	140	0.347	2.584	0.091	0.019	-0.008	2.361
195	140	0.347	2.584	0.091	0.019	-0.008	2.361
	141	0.347	0.756	0.091	0.019	0.031	3.087
196	141	12.362	1.053	0.091	0.048	-0.051	0.264
	29	12.362	-0.776	0.091	0.048	-0.011	0.324
197	142	5.523	8.002	-0.021	-0.043	0.084	-4.506
	143	5.523	6.174	-0.021	-0.043	0.074	-1.423
198	143	5.523	6.174	-0.021	-0.043	0.074	-1.423
	144	5.523	4.345	-0.021	-0.043	0.065	0.865
199	144	5.523	4.345	-0.021	-0.043	0.065	0.865
	145	5.523	2.517	-0.021	-0.043	0.056	2.358
200	145	5.523	2.517	-0.021	-0.043	0.056	2.358
	146	5.523	0.688	-0.021	-0.043	0.047	3.055
201	146	17.649	1.405	-0.496	-0.019	0.089	0.194
	30	17.649	-0.424	-0.496	-0.019	-0.126	0.407
202	147	12.451	5.532	-0.123	-0.035	0.145	-2.379
	148	12.451	3.703	-0.123	-0.035	0.092	-0.371
203	148	12.451	3.703	-0.123	-0.035	0.092	-0.371
	149	12.451	1.875	-0.123	-0.035	0.038	0.843
204	149	12.451	1.875	-0.123	-0.035	0.038	0.843
	150	12.451	0.047	-0.123	-0.035	-0.015	1.261
205	150	12.451	0.047	-0.123	-0.035	-0.015	1.261
	151	12.451	-1.782	-0.123	-0.035	-0.069	0.883
206	151	13.011	-1.892	-0.976	-0.053	0.056	0.698
	31	13.011	-3.720	-0.976	-0.053	-0.368	-0.523
207	152	12.361	1.788	0.116	0.028	-0.065	0.874
	153	12.361	-0.040	0.116	0.028	-0.014	1.254
208	153	12.361	-0.040	0.116	0.028	-0.014	1.254
	154	12.361	-1.869	0.116	0.028	0.036	0.839
209	154	12.361	-1.869	0.117	0.028	0.036	0.839
	155	12.361	-3.697	0.117	0.028	0.087	-0.372
210	155	12.361	-3.697	0.116	0.028	0.087	-0.372
	156	12.361	-5.525	0.116	0.028	0.138	-2.377
211	156	4.806	-0.627	-0.878	-0.144	0.250	0.166
	32	4.806	-2.456	-0.878	-0.144	-0.132	-0.504
212	157	5.310	-0.675	0.022	0.040	0.044	3.035
	158	5.310	-2.503	0.022	0.040	0.054	2.344
213	158	5.310	-2.503	0.022	0.040	0.054	2.344
	159	5.310	-4.331	0.022	0.040	0.063	0.857
214	159	5.310	-4.331	0.022	0.040	0.063	0.857
	160	5.310	-6.160	0.022	0.040	0.073	-1.425
215	160	5.310	-6.160	0.022	0.040	0.073	-1.425
	161	5.310	-7.988	0.022	0.040	0.083	-4.502
216	161	-6.073	1.771	-0.287	-0.113	0.111	-0.552
	25	-6.073	-0.057	-0.287	-0.113	-0.014	-0.179
217	151	-0.110	0.853	0.560	0.125	-0.185	0.018
	111	2.207	0.853	0.560	0.125	0.150	0.530
218	147	4.902	0.988	7.574	-0.105	-2.548	0.174
	107	7.219	0.988	7.574	-0.105	1.996	0.767
219	146	0.716	0.474	12.126	0.043	-2.860	-0.024
	106	3.033	0.474	12.126	0.043	4.415	0.261
220	142	9.761	0.299	11.419	-0.026	-3.961	0.156
	102	12.078	0.299	11.419	-0.026	2.891	0.335
221	141	0.297	0.000	12.015	-0.082	-2.823	-0.029
	101	2.614	0.000	12.015	-0.082	4.386	-0.029
222	137	10.190	-0.632	11.417	0.053	-3.928	-0.031
	97	12.507	-0.632	11.417	0.053	2.922	-0.410
223	136	-1.456	-0.321	0.680	-0.094	-0.110	-0.019
	96	0.861	-0.321	0.680	-0.094	0.298	-0.211
224	132	4.962	-0.888	8.150	0.013	-2.695	-0.077
	92	7.279	-0.888	8.150	0.013	2.195	-0.610
225	131	4.962	0.889	8.137	-0.017	-2.692	0.076
	91	7.279	0.889	8.137	-0.017	2.190	0.609
226	127	-1.442	0.315	0.682	0.089	-0.109	0.021
	87	0.875	0.315	0.682	0.089	0.300	0.210
227	126	10.193	0.630	11.379	-0.055	-3.917	0.032
	86	12.509	0.630	11.379	-0.055	2.911	0.410
229	122	0.327	-0.006	12.005	0.079	-2.818	0.031
	82	2.644	-0.006	12.005	0.079	4.385	0.028
230	161	9.759	-0.309	11.383	0.028	-3.950	-0.153
	121	12.076	-0.309	11.383	0.028	2.880	-0.338
231	157	0.748	-0.473	12.115	-0.040	-2.855	0.024
	117	3.065	-0.473	12.115	-0.040	4.413	-0.259
232	116	7.215	0.995	7.555	0.112	-1.990	-0.768
	156	4.898	0.995	7.555	0.112	2.543	-0.171
233	152	-0.075	-0.851	0.577	-0.118	-0.186	-0.020
	112	2.242	-0.851	0.577	-0.118	0.160	-0.530

NODE REACTIONS (kN,kNm)

Load case 1 (Non-linear): G
Non-linear effects: P-Δ, P-δ, 3 Iterations, 99.992% Convergence

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	0.000	71.425	-2.645	-2.709	0.000	-0.009
2	-1.870	71.425	-1.870	-1.922	0.000	1.909
3	-2.645	71.425	0.000	-0.009	0.000	2.709
4	-1.870	71.425	1.870	1.909	0.000	1.922
5	0.000	71.425	2.645	2.709	0.000	0.009
6	1.870	71.425	1.870	1.922	0.000	-1.909
7	2.645	71.425	0.000	0.009	0.000	-2.709
8	1.870	71.425	-1.870	-1.909	0.000	-1.922
Load	0.000	-571.402	0.000	0.000	0.000	0.000
Reac	0.000	571.402	0.000	0.000	0.000	0.000
Equil	-2.039E-13	0.000E+00	-2.226E-13			
Resid	6.484E-14	2.640E-13	9.504E-14	1.976E-14	6.540E-15	2.093E-14

Load case 2 (Non-linear): Estatic
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.994% Convergence

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	-39.212	0.175	-4.558	-4.731	0.000	64.622
2	-29.558	16.534	14.224	23.925	0.000	45.898
3	-12.644	21.927	0.102	0.209	0.000	19.027
4	-29.332	16.502	-14.223	-23.957	0.000	45.455
5	-39.204	0.179	4.337	4.254	0.000	64.676
6	-20.368	-14.197	14.523	23.850	0.000	35.897
7	-9.533	-26.884	0.113	0.243	0.000	15.175
8	-20.148	-14.236	-14.518	-23.821	0.000	35.395
Load	200.000	0.000	0.000	0.000	0.000	0.000
Reac	-200.000	0.000	0.000	-0.028	0.000	326.144
Equil	0.000E+00	5.231E-13	-6.795E-13			
Resid	2.175E-11	3.073E-13	3.690E-12	3.082E-13	3.138E-13	1.503E-12

Load case 11 (Non-linear): G+E
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.938% Convergence

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	-39.266	71.828	-6.367	-6.685	0.000	63.637
2	-30.720	87.462	13.117	22.159	0.000	46.358
3	-14.557	94.972	0.092	0.185	0.000	20.676
4	-30.500	87.428	-13.109	-22.194	0.000	45.942
5	-39.256	71.831	6.153	6.225	0.000	63.701
6	-19.368	56.519	16.259	25.294	0.000	34.280
7	-7.176	44.881	0.112	0.247	0.000	12.695
8	-19.156	56.480	-16.256	-25.257	0.000	33.783
Load	200.000	-571.402	0.000	0.000	0.000	0.000
Reac	-200.000	571.402	0.000	-0.025	0.000	321.073
Equil	0.000E+00	0.000E+00	2.053E-12			
Resid	1.198E-11	7.425E-13	1.622E-12	2.924E-13	2.592E-13	1.044E-12

Load case 12 (Non-linear): G+E40%
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.941% Convergence

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	-15.695	71.522	-3.626	-3.832	0.000	24.813
2	-12.939	77.939	4.195	7.580	0.000	18.795
3	-7.149	81.268	0.037	0.068	0.000	9.492
4	-12.862	77.929	-4.197	-7.605	0.000	18.650
5	-15.690	71.522	3.550	3.663	0.000	24.843
6	-7.180	65.153	7.672	11.114	0.000	12.763
7	-1.381	60.930	0.041	0.098	0.000	3.491
8	-7.104	65.140	-7.672	-11.095	0.000	12.572
Load	80.000	-571.402	0.000	0.000	0.000	0.000
Reac	-80.000	571.402	0.000	-0.009	0.000	125.419

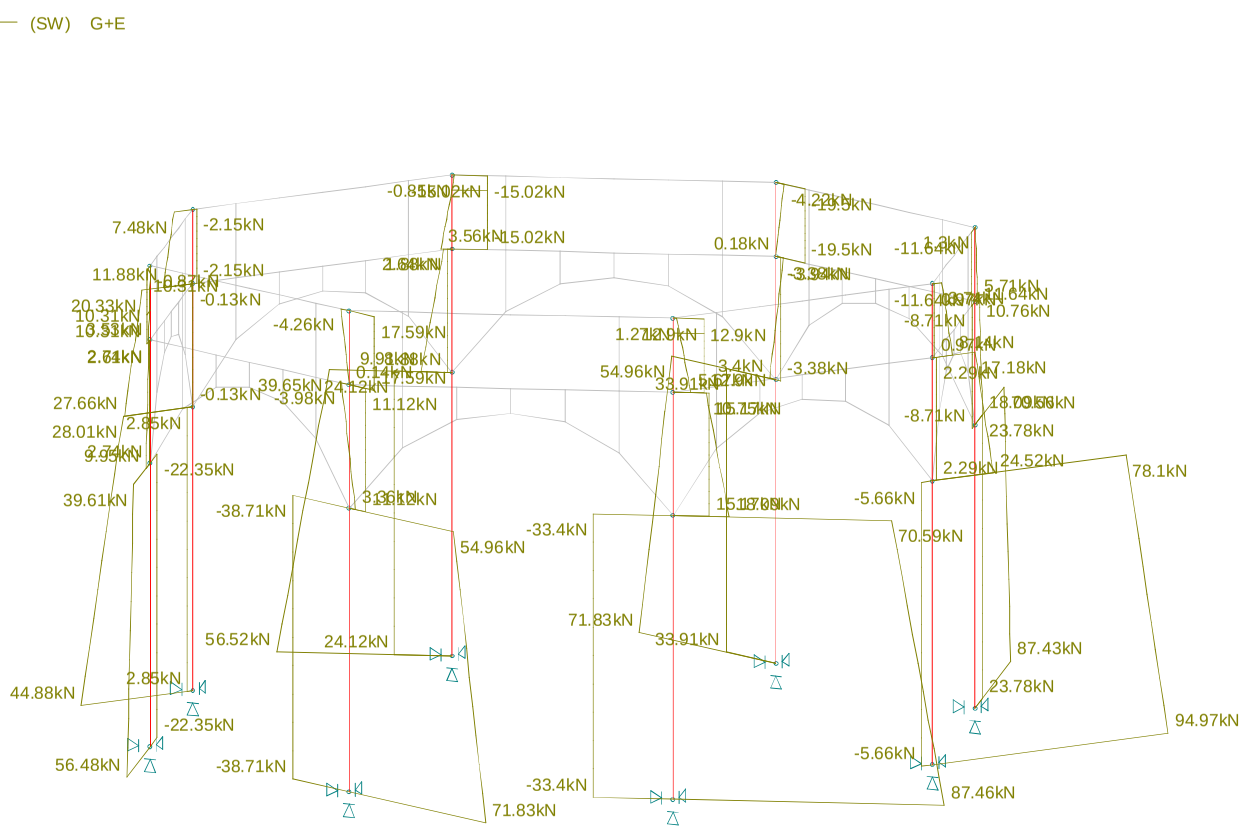
Equil	0.000E+00	0.000E+00	-5.203E-13			
Resid	2.215E-12	3.665E-13	7.123E-13	1.632E-13	8.138E-14	4.118E-13

Load case 13 (Non-linear): G+0.67E
Non-linear effects: P-Δ, P-δ, 4 Iterations, 99.939% Convergence

Node	X-Axis Force	Y-Axis Force	Z-Axis Force	X-Axis Moment	Y-Axis Moment	Z-Axis Moment
1	-26.317	71.790	-4.871	-5.138	0.000	42.287
2	-20.935	81.921	8.377	14.194	0.000	31.157
3	-10.467	87.867	0.060	0.117	0.000	14.468
4	-20.791	81.899	-8.372	-14.220	0.000	30.889
5	-26.310	71.792	4.730	4.835	0.000	42.334
6	-12.648	61.175	11.488	17.448	0.000	22.434
7	-4.022	53.810	0.071	0.163	0.000	7.676
8	-12.508	61.148	-11.483	-17.418	0.000	22.101
Load	134.000	-571.402	0.000	0.000	0.000	0.000
Reac	-134.000	571.402	0.000	-0.019	0.000	213.346

Equil	0.000E+00	0.000E+00	5.864E-12			
Resid	6.046E-12	3.499E-13	1.021E-12	2.238E-13	1.456E-13	4.912E-13

Load cases:
11 (SW) G+E



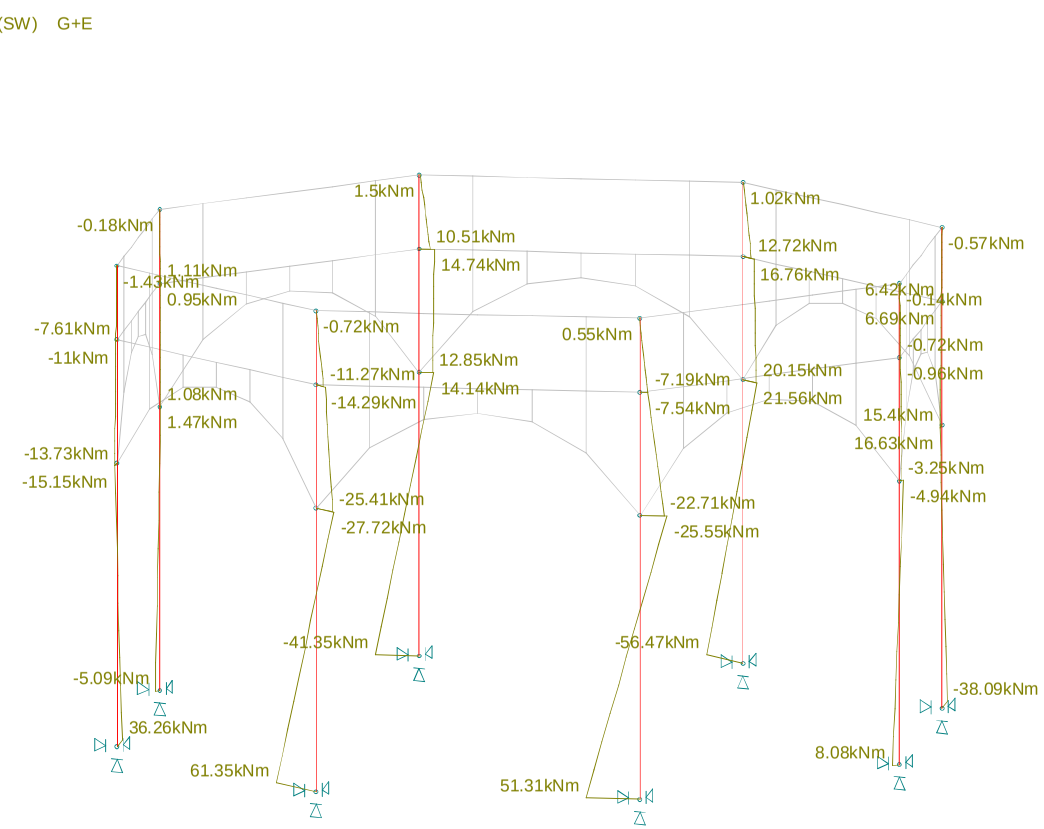
No general restraint

Materials:
1 MASONRY

Sections:
2 brick col

Job: F:\Engineers\Garry Newton Ltd\1676\De...\Computer Analysis\1676 120121 sga
Filter: column
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
Scales - Frame: 1:51, Load: None, Disp: None, Moment: None, Shear: 2.6624, Axial: 2.044723, Torsion: None

Load cases:
11 (SW) G+E

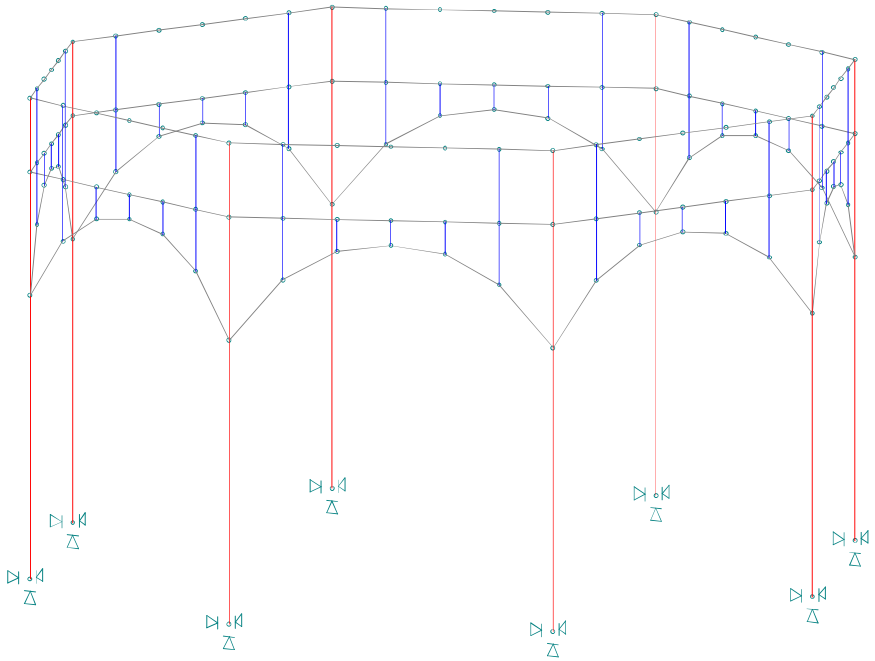


No general restraint

Materials:
1 MASONRY

Sections:
2 brick col

Job: F:\Engineers\Garry Newton Ltd\1676\De...\Computer Analysis\1676 120121 sga
Filter: column
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
Scales - Frame: 1:51, Load: None, Disp: None, Moment: 6, Shear: None, Axial: None, Torsion: None



Sections:
1 350x350 brick
2 brick col
3 strut

Materials:
1 MASONRY

No general restraint

Job: F:\Engineers\Garry Newton Ltd\1676\De...\Computer Analysis\1676 120121 sga
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
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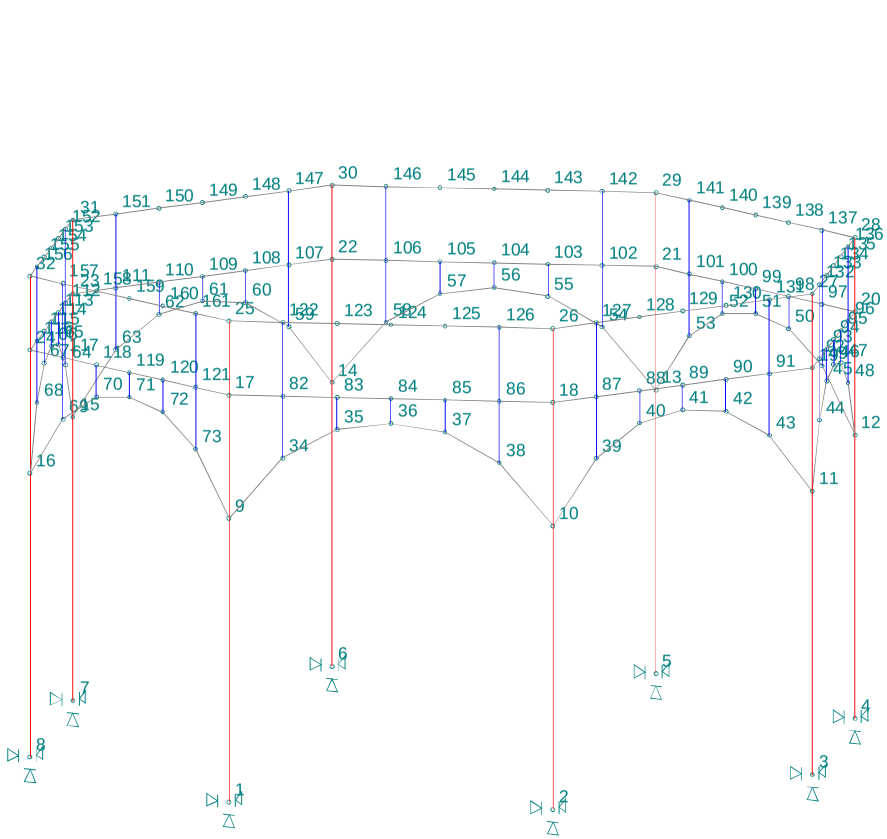

No general restraint

Materials:
1 MASONRY

Sections:
1 350x350 brick
2 brick col
3 strut

Job: F:\Engineers\Garry Newton Ltd\1676\De...\Computer Analysis\1676 120121 sga
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
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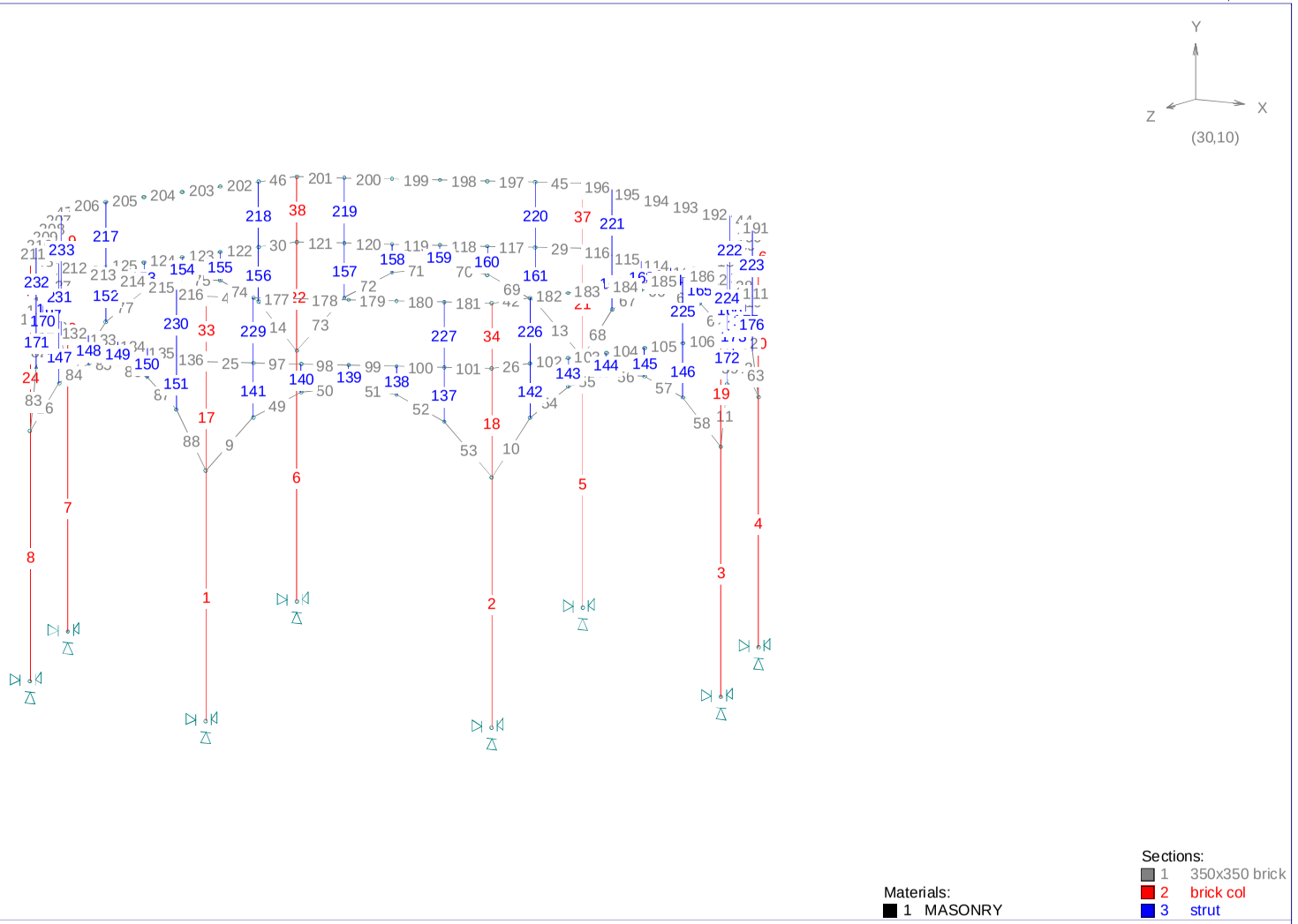
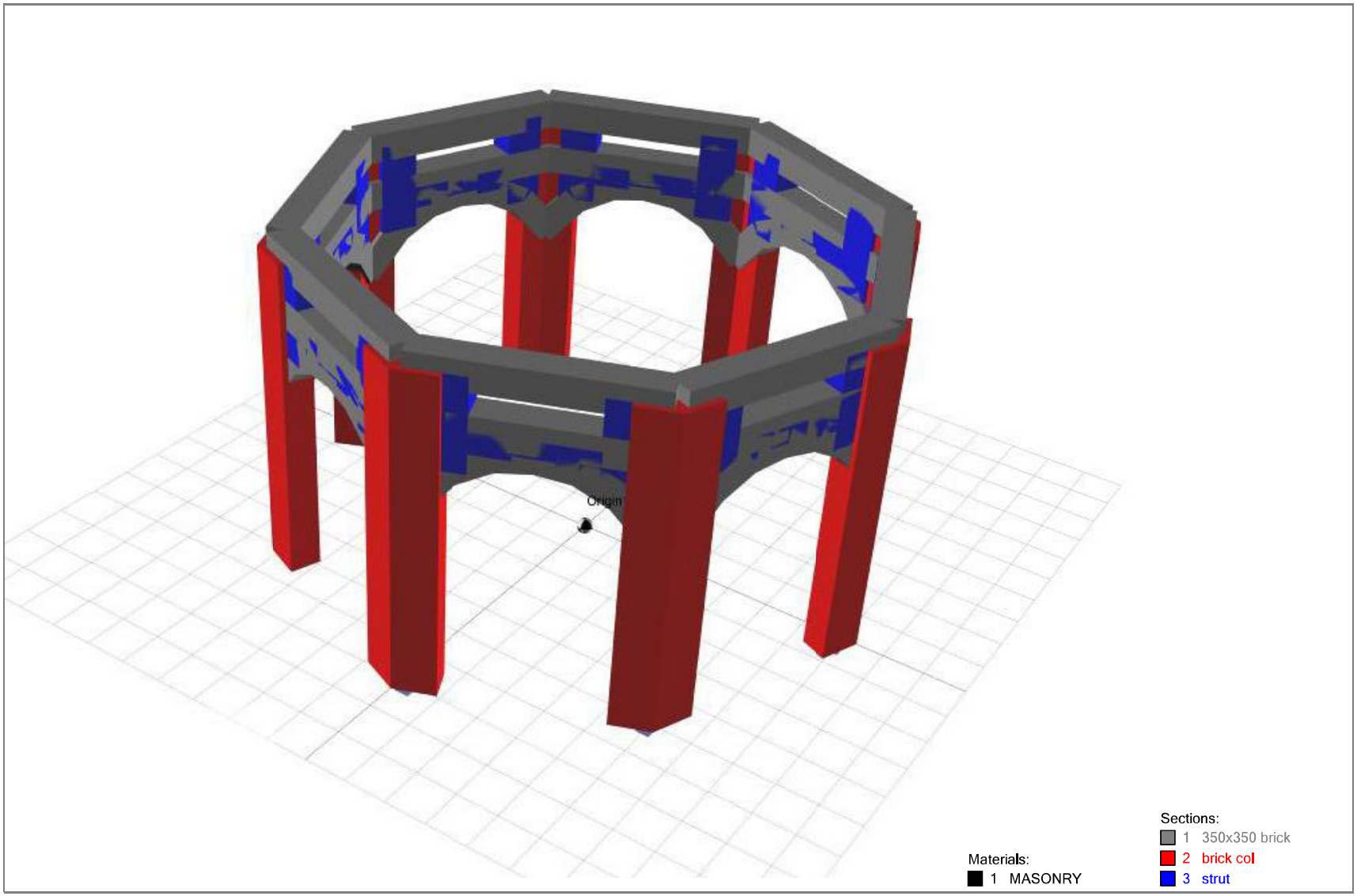


Job: F:\Engineers\Garry Newton Ltd\1676\De...\Computer Analysis\1676 120121 sga
Units - Len: m, Sec: mm, Mat: MPa, Dens: T/m^3, Temp: Celsius, Force: kN, Mom: kNm, Mass: T, Acc: g's, Trans: mm, Stress: MPa
Scales - Frame: 1:51, Load: None, Disp: None, Moment: None, Shear: None, Axial: None, Torsion: None

SPACE GASS 10.85 - F:\Engineers\Garry Newton Ltd\1676\Design\Computer Analysis\1676 120121 sga.SG

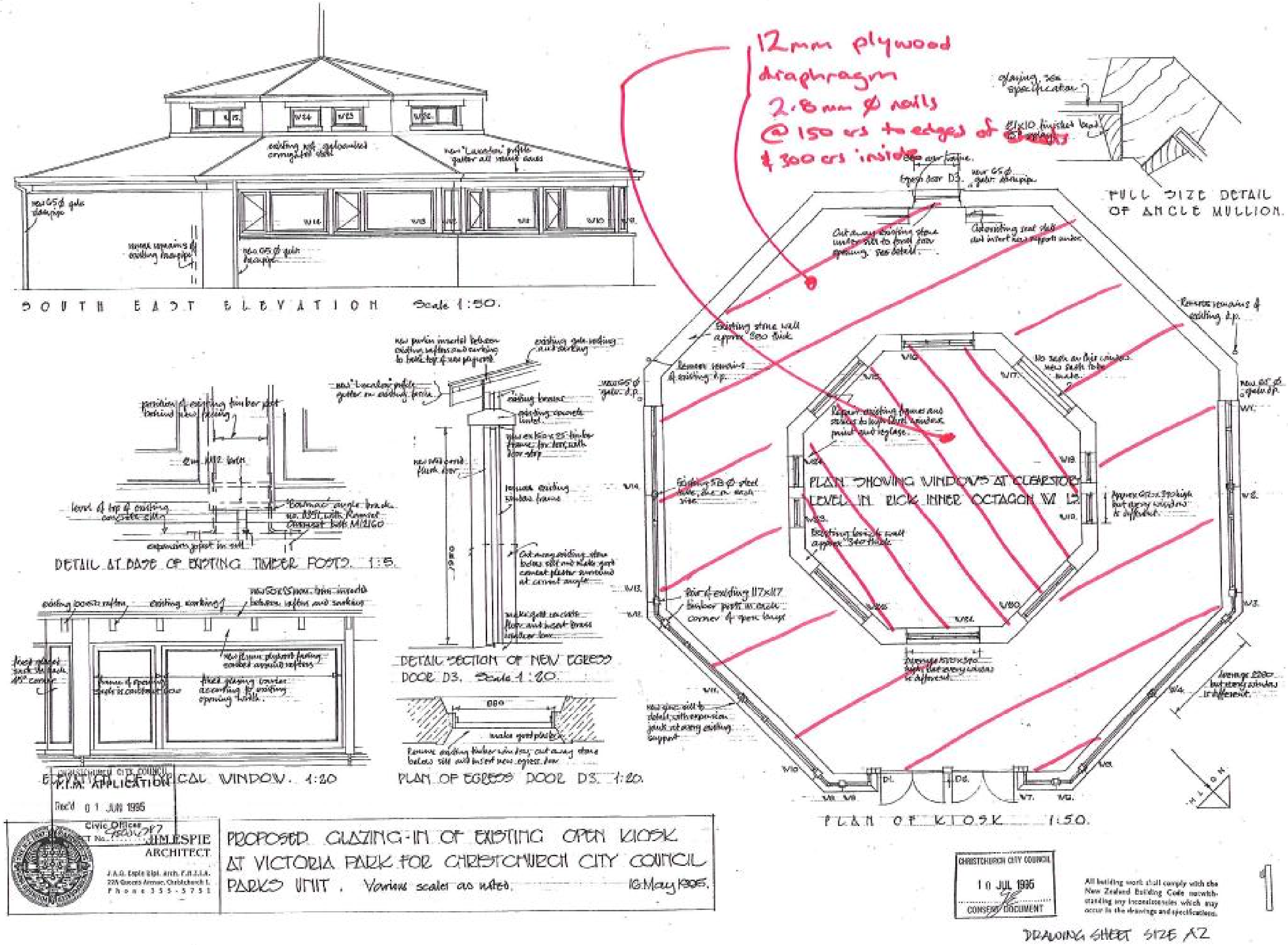


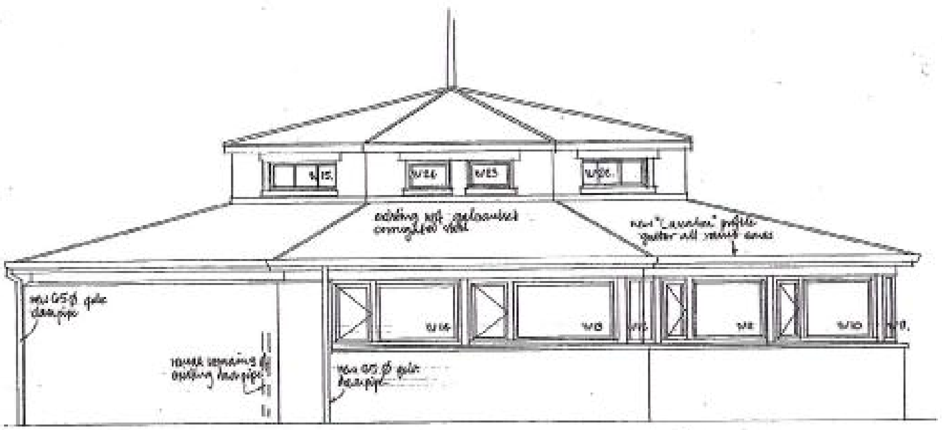
APPENDIX G

VICTORIA PARK VISITORS CENTRE CHRISTCHURCH

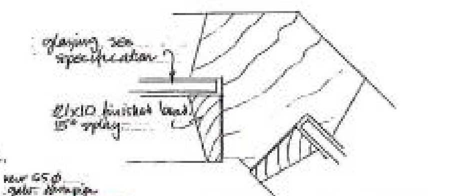
NEW WORKS and EXAMPLES

55 Dunlop Road, Onekawa, Napier
PO Box 3315, Napier, 4142, New Zealand
P (06) 842 0111 F (06) 842 0113
Einfo@structuralconcepts.co.nz

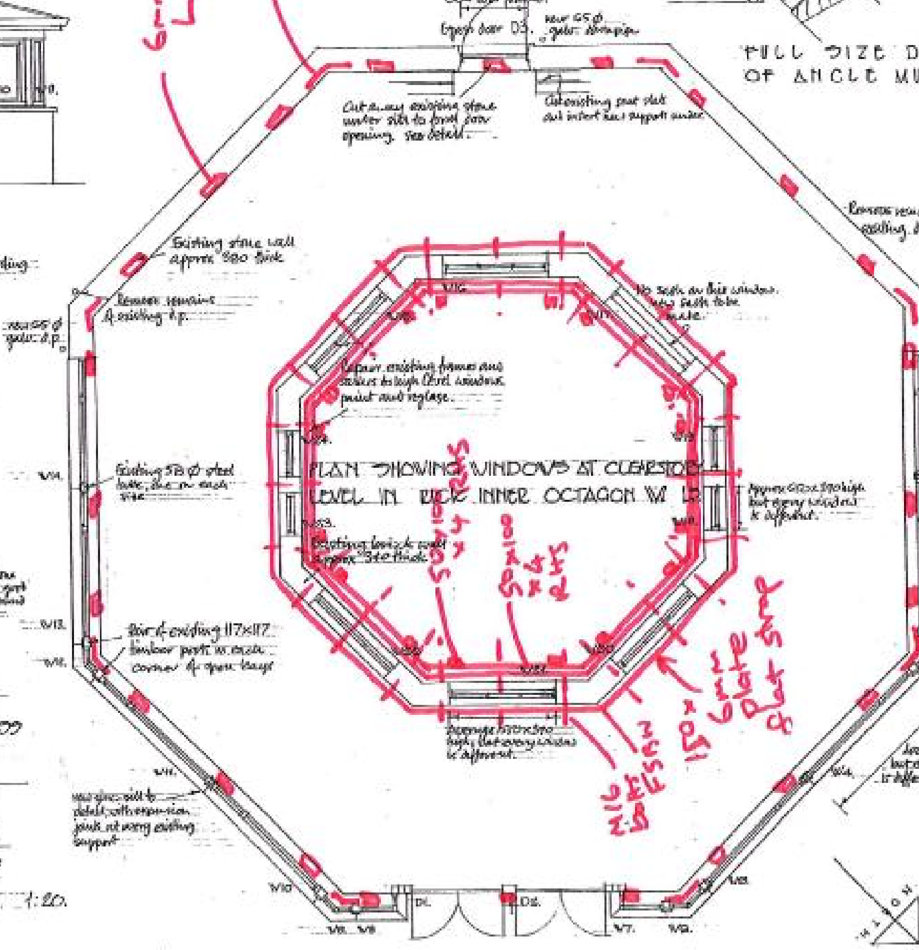

12mm plywood
draphragm
2.8mm ⌀ nails
@ 150 crs to edges of sheets
& 300 crs inside
SOUTH EAST ELEVATION Scale 1:50.
FULL SIZE DETAIL OF ANGLE MULLION.
DETAIL AT BASE OF EXISTING TIMBER POSTS. 1:5.
DETAIL SECTION OF NEW EGRESS DOOR D3. Scale 1:20.
PLAN OF EGRESS DOOR D3. 1:20.
ELEVATION OF TYPICAL WINDOW. 1:20
PLAN SHOWING WINDOWS AT CLEARSTOREY LEVEL IN BRICK INNER OCTAGON W1 - 12
PLAN OF KIOSK 1:50.
CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 01 JUN 1995
Civic Offices
J.A.G. ESPIE
ARCHITECT
PROPOSED GLAZING-IN OF EXISTING OPEN KIOSK
AT VICTORIA PARK FOR CHRISTCHURCH CITY COUNCIL
PARKS UNIT. Various scales as noted. 16 May 1995.
CHRISTCHURCH CITY COUNCIL
10 JUL 1995
CONSENT DOCUMENT
All building work shall comply with the New Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.
DRAWING SHEET SIZE A2
1



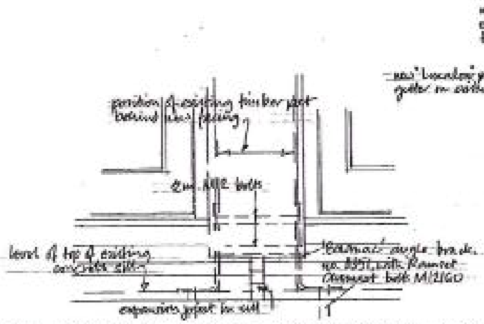
SOUTH EAST ELEVATION Scale 1:50.



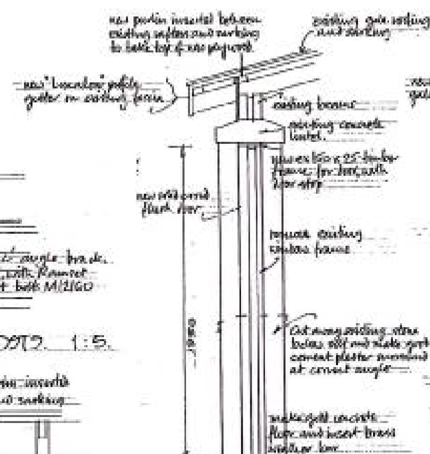
FULL SIZE DETAIL OF ANGLE MULLION.



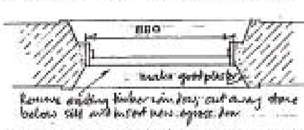
PLAN OF KIOSK 1:50.



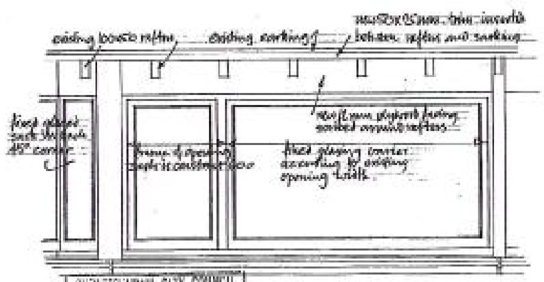
DETAIL AT BASE OF EXISTING TIMBER POSTS. 1:5.



DETAIL SECTION OF NEW EGRESS DOOR D3. Scale 1:20.



PLAN OF EGRESS DOOR D3. 1:20.



ELEVATION OF TYPICAL WINDOW. 1:20

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 01 JUN 1995
Civic Offices
Project No. 587

J. ESPIE
ARCHITECT

J.A.G. Espie Dipl. Arch. F.N.Z.I.A.
224 Queens Avenue, Christchurch 1.
Phone 355-3731

PROPOSED GLAZING-IN OF EXISTING OPEN KIOSK AT VICTORIA PARK FOR CHRISTCHURCH CITY COUNCIL PARKS UNIT. Various scales as noted. 16 May 1995.

CHRISTCHURCH CITY COUNCIL
10 JUL 1995
CONSENT DOCUMENT

All building work shall comply with the New Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.

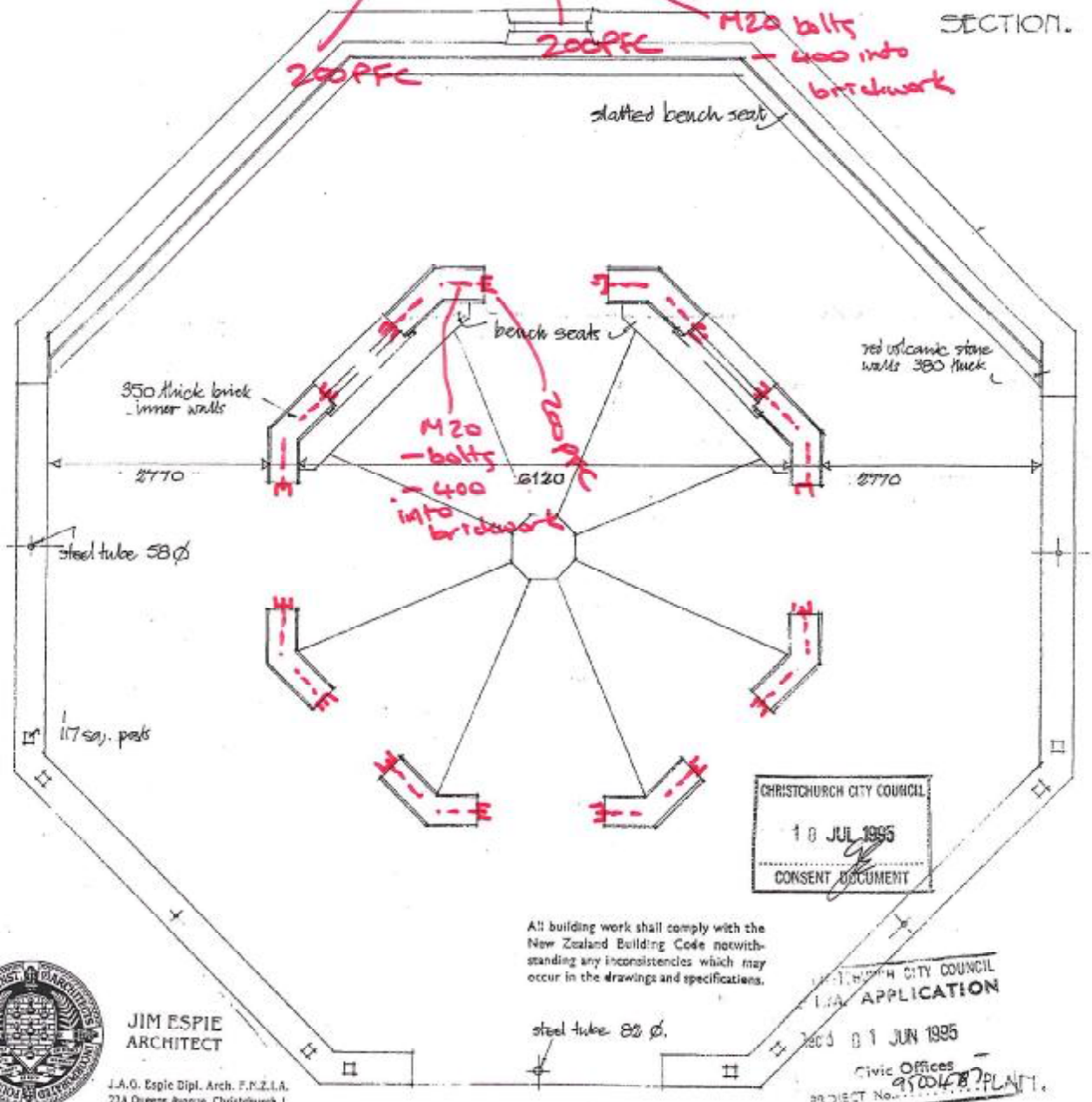
1

DRAWING SHEET SIZE A2

KIOSK AT VICTORIA PARK, CHRISTCHURCH, AS EXISTING.

Scale: 1:50. 17 January 1994.

SECTION.



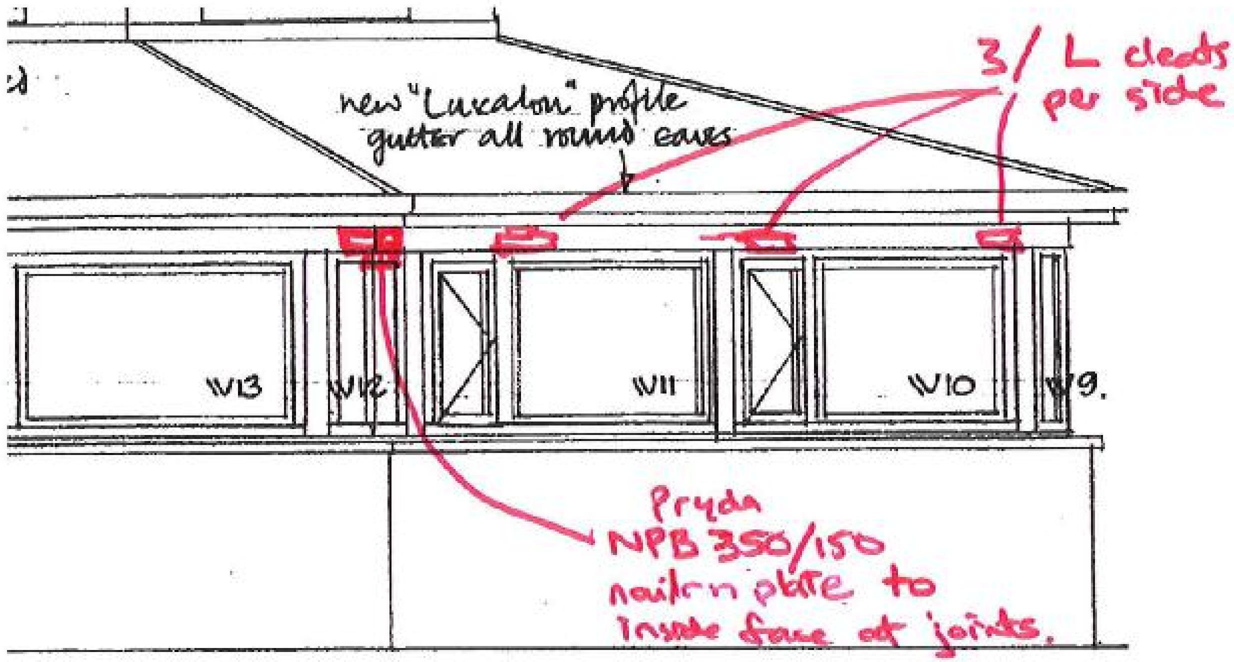
CHRISTCHURCH CITY COUNCIL
10 JUL 1995
CONSENT DOCUMENT

All building work shall comply with the New Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.

CHRISTCHURCH CITY COUNCIL
APPLICATION
Rec'd 01 JUN 1995
Civic Offices
PROJECT No. 950147 PLAN.

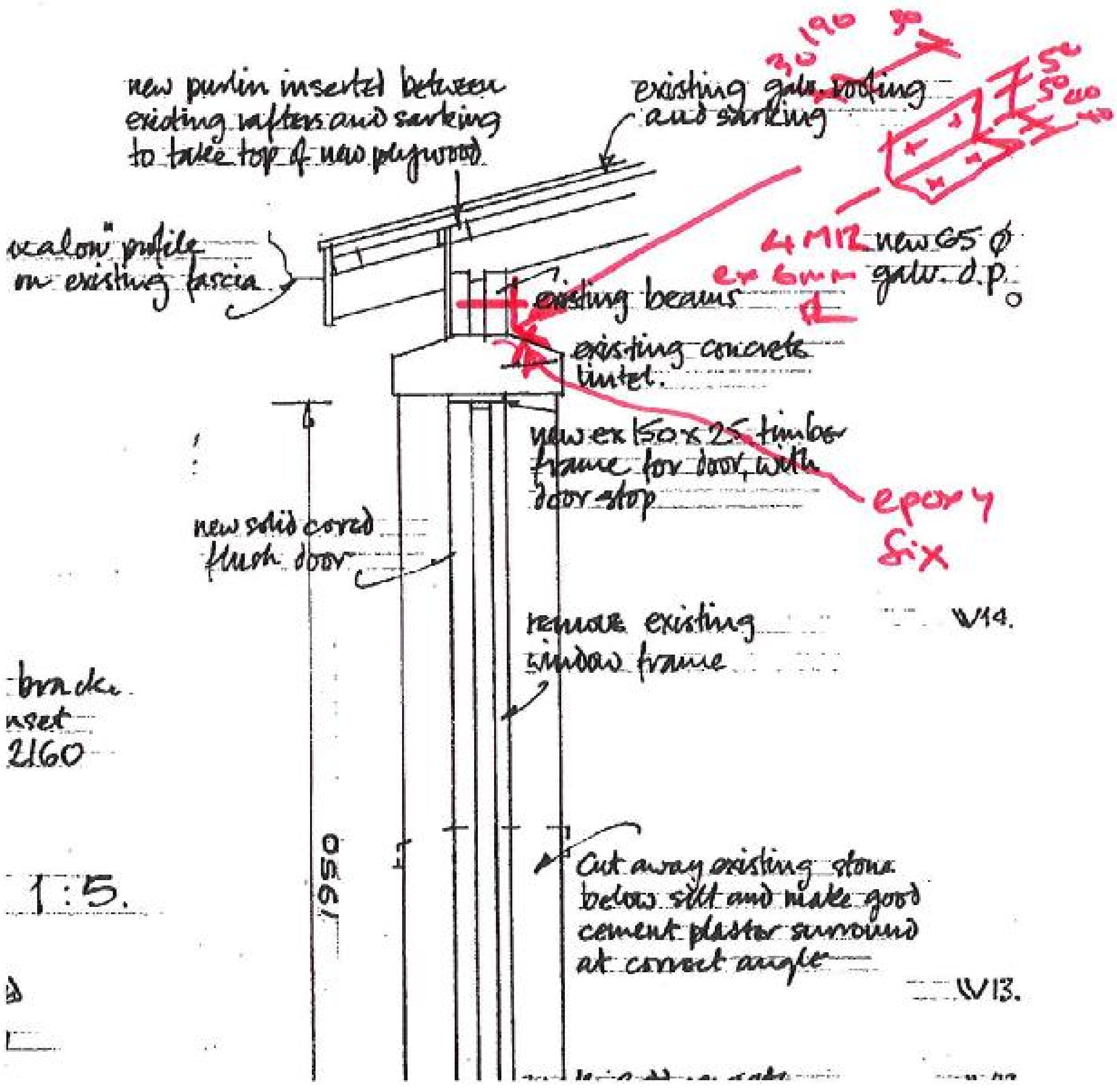
JIM ESPIE ARCHITECT
J.A.G. Espie Dipl. Arch. F.N.Z.I.A.
22A Queens Avenue, Christchurch 1.
Phone 355-5751

DRAWING SHEET SIZE A3



new "Lucalon" profile gutter all round eaves
3/ L cleats per side
W13
W12
W11
W10
W9.
Pryda NPB 350/150 nailon plate to inside face at joints.

N Scale 1:50.



new purlin inserted between existing rafters and sarking to take top of new plywood
existing galv. roofing and sarking
"Lucalon" profile on existing fascia
4 M12
ex 6mm
new 65 ø galv. d.p.
existing beams
existing concrete lintel.
new ex 150 x 25 timber frame for door, with door stop
epoxy fix
new solid cored flush door
remove existing window frame
W14.
bracket
inset
2160
1950
Cut away existing stone below sill and make good cement plaster surround at correct angle
1:5.
W13.