APPENDIX A

Test Notes

Table A.1 DP1 Test Notes

Cycle	Displacement (mm)	Shear Crack Width (mm)	Flexure Crack Width (mm)	Comments
1	-1	0.1 - 0.15		First shear crack at south end of web wall
1	+1	0.05 - 0.15		First shear crack in positive direction at north end of web
1	-1	0.15		Shear cracking
1	+1	0.2		Shear cracking
2	-2	0.05 - 0.25		More shear cracks in web
2	+2	0.1 - 0.25		More shear cracks in opposite direction
2	-2	0.1 - 0.25		Shear cracking
2	+2	0.1 - 0.25		Shear cracking
3	-3	0.1 - 0.2	0.05	First flexural crack on outside of south flange near top slab near web junction / continued shear cracking
3	+3	0.05 - 0.25	0.05	First flexural crack on outside of north flange near top slab near web junction / continued shear cracking
3	-3	0.25	0.05	Flexural crack at base of south flange
3	+3	0.25	0.05	Flexural crack at base of north flange
4	-4	0.25	0.1	Full width flexural crack at 1/2h on outside south flange extending through wall thickness
4	+4	0.3	0.1	Full width flexural crack at 1/3h on outside north flange extending through wall thickness
4	-4	0.25	0.1	No change in crack pattern
4	+4	0.3	0.1	No change in crack pattern
5	-5	0.3	0.3	Second full width flexural crack on south flange / new shear cracks
5	+5	0.35	0.2	Second full width flexural crack on north flange / new shear cracks
5	-5	0.35	0.35	Signs of surface spalling near north web toe
5	+5	0.35	0.35	Grinding of concrete at crack closure near south web toe
6	-6	0.35	0.35	Third full width flexural crack in south flange / concrete crushing at crack closures
6	+6	0.4	0.3	More shear cracking in web and flexural cracking in north flange
6	-6	0.35	0.4	Signs of crushing of concrete near north web toe
6	+6	0.4	0.3	Signs of crushing of concrete near south web toe
7	-7	0.4	0.4	Continued deterioration of concrete at crack closures
7	+7	0.4	0.35	Continued cracking due to shear and flexure
7	-7	0.4	0.45	More concrete deterioration
7	+7	0.45	0.4	Vertical cracks at web-flange south joint

Table A.1 Cont'd

Cycle	Displacement (mm)	Shear Crack Width (mm)	Flexure Crack Width (mm)	Comments
8	-8	0.45	0.5	Concrete crushing above north web toe at 1/2h of wall
8	+8	0.5	0.45	Concrete crushing near south web toe
8	-8	0.5	0.55	Crushing at compression toe
8	+8	0.5	0.5	Crushing at compression toe
9	-9	0.5	0.55	Continued crushing at toe area
9	+9	0.5	0.55	Flexural crack along north flange-top slab interface / continued crushing at toe area
9	-9	0.5	0.55	Flexural crack along south flange-top slab interface
9	+9	0.55	0.55	Crushing becoming more extensive in toe region
10	-10	0.55	0.6	New full width flexural crack on outside south flange / vertical crushing plane within north web toe
10	+10	0.6	0.6	Crushing within south toe region
10	-10	0.55	0.6	More concrete crushing
10	+10	0.6	0.6	Spalling evident throughout web wall
11	-11	0.6	0.8	Progressive crushing throughout web / north web toe highly stressed
11	+11	0.6	0.8	South web toe highly stressed / no new shear cracks more crushing throughout web section
11	-11	0.7	1.0	Extensive crushing
11	+11	0.6	0.8	Extensive crushing
12	-12	0.9	1.0	Severe damage in web / vertical crack on outside south flange near web junction
12	+12	0.9	0.9	Crushing throughout web continuing
12	-12	0.9	1.1	Four major vertical crushing planes concentrated at 1/2h of web wall / one at each toe and two near wall centre
12	+12	0.9	0.9	Concrete overlapping in south web toe region at crack closures
13	-13	1.0	1.0	Concrete crushing and spalling throughout
13	+13	1.0	0.9	Extensive crushing throughout / no new cracks
13	-13	1.0	1.0	Major spalling of concrete along vertical crushing planes
13	+13	1.0	0.8	Reinforcement exposed at vertical crushing planes
14	-14	1.0	0.7	Extensive crushing and spalling throughout
14	+14	1.0	0.9	Large sections of concrete crumbling off along web
15	+15			End of testing / six major crushing planes along 1/2h of web wall / voids extending through thickness of wall in two crushing planes / reinforcement exposed at each crushing plane

Table A.2 DP2 Test Notes

Cycle	Displacement (mm)	Shear Crack Width (mm)	Flexural Crack Width (mm)	Comments
1	-1	0.1		First shear crack from top right to bottom left of west web face / 45°
1	+1	0.1		First shear crack in positive direction
1	-1	0.1		New shear crack near tension toe
1	+1	0.1		Extensions of previous cracking of first excursion
2	-2	0.15	0.15	First flexural crack on south flange, 1/4 H above base / flexural crack near top slab on inside of south flange / shear cracking
2	+2	0.2	0.1	First flexural crack on north flange near top slab on inside face / shear cracking / vertical crack near centre of web wall near base slab – extension of shear crack
2	-2	0.2	0.2	Separation of south flange from base on west side
2	+2	0.2	0.1	Separation of north flange from base near outer tips
3	-3	0.25	0.25	Shear cracking evenly spaced / flexural cracking on south flange near web at 1/3 H and 2/3 H / U shaped crack at 3/4 H
3	+3	0.3	0.25	Shear cracking / flexural cracking on north flange near web wall / U shaped crack at 2/3 H from base / largest flexural crack near top slab
3	-3	0.25	0.3	Secondary shear cracking / flexural shear cracking at south tension toe near base slab
3	+3	0.3	0.3	Secondary shear cracking
4	-4	0.3	0.3	Secondary shear cracking / flexural cracking at 1/2 H / U-shaped on flange crack at 2/3 H
4	+4	0.3	0.3	Flexure-shear crack at north toe / flexural crack at 1/2 H / U shaped crack near web / vertical near web
4	-4	0.3	0.3	Shear cracking in upper NW corner / extensions of previous shear and flexural cracks / new flexural crack a 1/3 H
4	+4	0.3	0.3	Extensions of previous cracks / vertical cracking in flange near web
5	-5	0.35	0.35	Continued shear cracking / secondary shear cracking / flexural-shear cracking at south toe / cracking near web and flange tips
5	+5	0.35	0.4	Shear cracking throughout web / secondary shear cracking / slight base separation of flange / grinding of negative shear cracks
5	-5	0.35	0.4	Secondary shear cracking / flexural cracking near web wall
5	+5	0.34	0.4	Secondary shear cracking / maximum crack width near top slab

Table A.2 Cont'd

Cycle	Displacement (mm)	Shear Crack Width (mm)	Flexural Crack Width (mm)	Comments
6	-6	0.4	0.5	Shear cracking / flexural cracking near web / vertical cracking on south flange near web
6	+6	0.4	0.45	Shear cracking / flexural cracking near web
6	-6	0.4	0.5	Extensions of previous cracks / grinding of cracks in upper SE corner of web
6	+6	0.45	0.5	Extensions of previous cracks / secondary shear cracking
7	-7	0.5	0.55	Secondary shear cracking / extensions of previous cracks / pitch fork shape flexural cracking near tips
7	+7	0.5	0.7	Shear cracking / secondary shear cracking / extensions of previous cracks / maximum crack width near top slab
7	-7	0.5	0.6	Vertical cracking on north and south flange / secondary shear cracks
7	+7	0.5	0.7	Extensions of previous cracks / vertical cracking in south flange
8	-8	0.55	0.65	Extensions of previous cracking
8	+8	0.5	0.95	Shear cracking / vertical cracking in north flange / signs of concrete spalling near south compression toe / large flexural crack near top slab
8	-8	0.55	0.65	Extensions of previous cracks
8	+8	0.5	0.95	Extensions of previous cracks / secondary shear cracking
9	-9	0.6	0.7	Flexural cracking at 1/2 H on south flange / concrete crushing at south upper web corner / extensions of previous cracks
9	+9	0.5	1.0	Concrete crushing at north upper web corner / grinding of cracks / extensions of previous cracks
9	-9	0.6	0.7	Concrete crushing at south upper web corner, moving to centre of web along top two elements
9	+9	0.55	1.0	Continued crushing of upper web / crushing of concrete at the south toe / secondary shear cracking
10	-10	0.6	0.9	Shear cracking / progressive crushing of upper south corner, moving toward centre of web / concrete spalling at compression toe / flexural cracking at top of north flange / flexural cracking on south flange near web wall / maximum crack width near top slab
10	+10			Failure / shear sliding plane on upper web near top slab / punching of north flange wall at 2/3 H near web wall / maximum flexural cracks near top slab

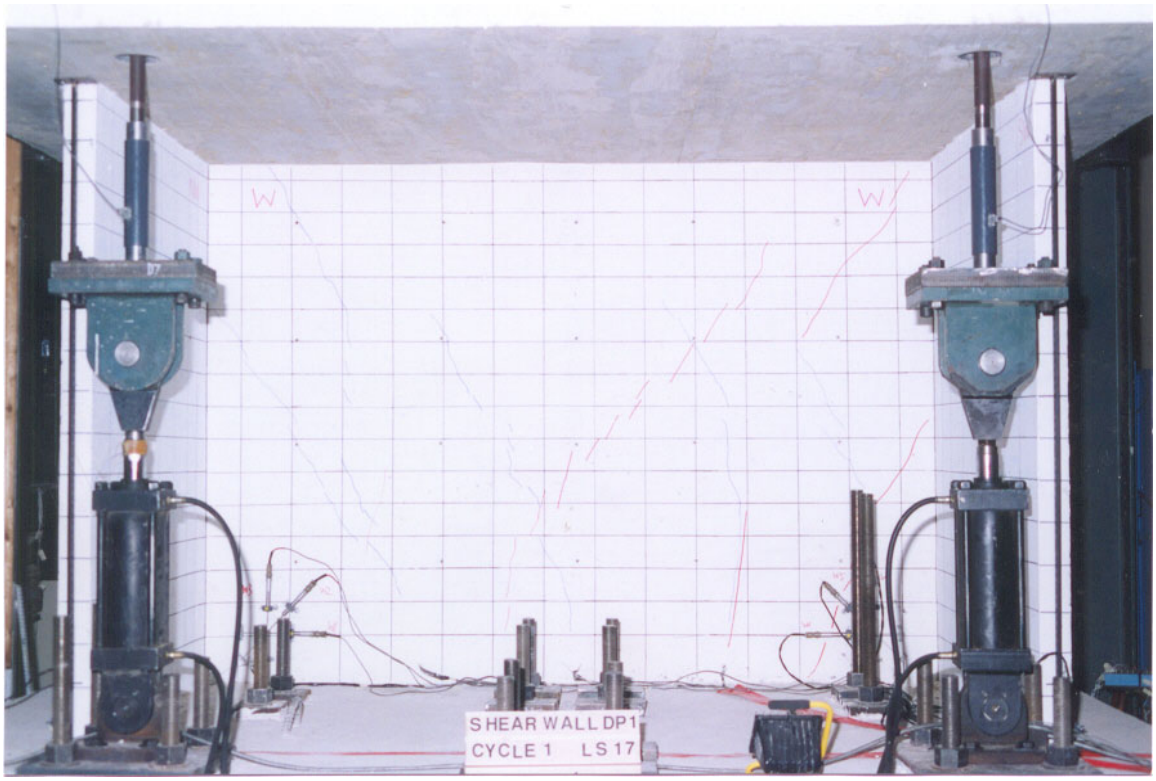

Figure B.1 DP1 Web Wall After 1 mm Lateral Displacement

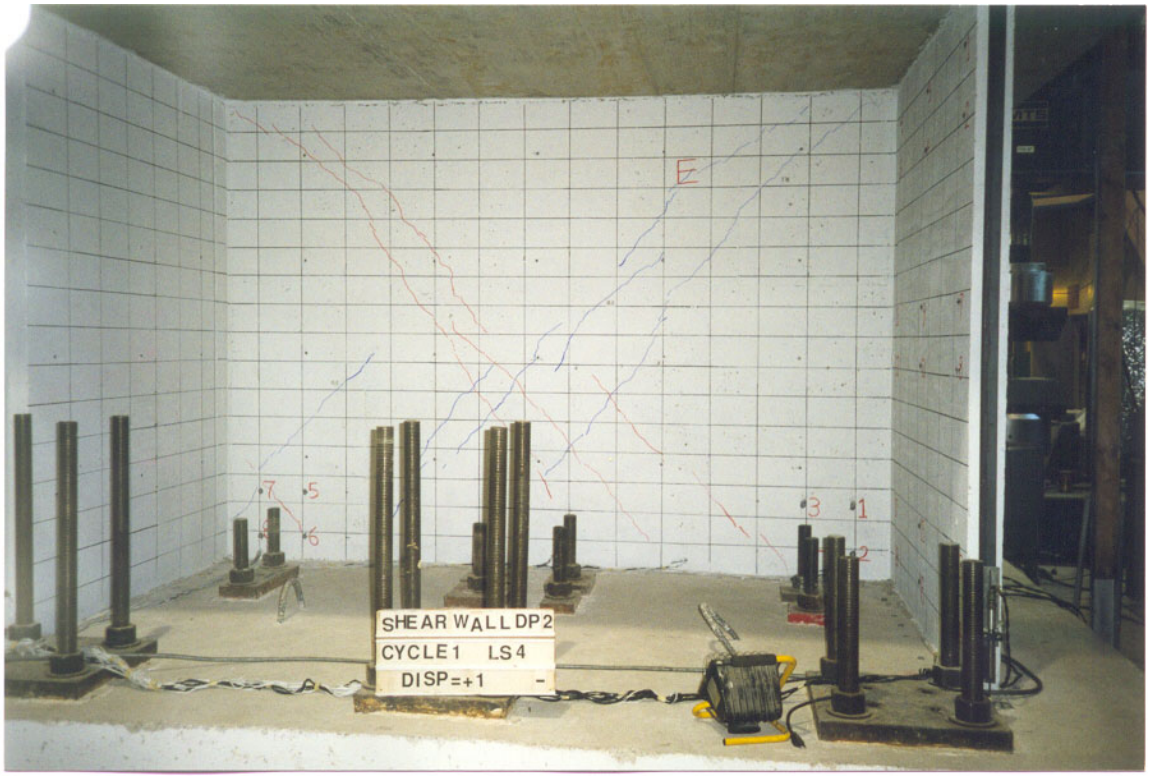

Figure B.2 DP2 Web Wall After 1 mm Lateral Displacement

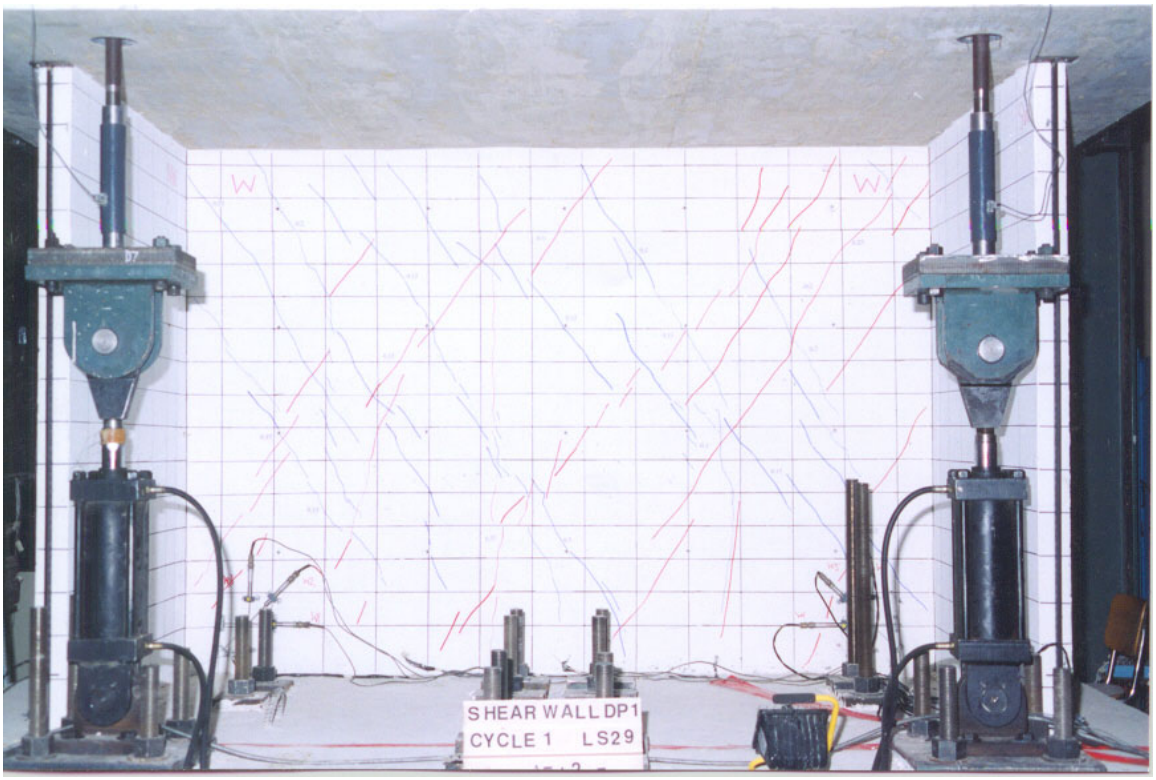

Figure B.3 DP1 Web Wall After 2 mm Lateral Displacement

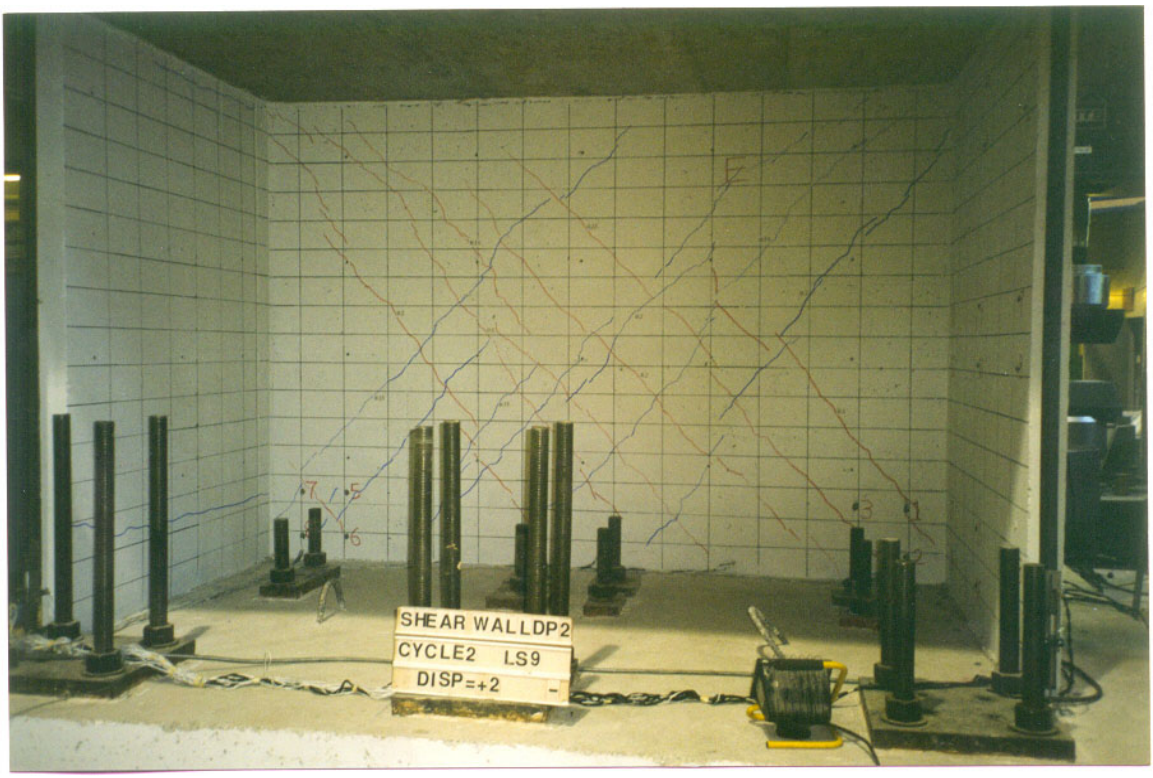

Figure B.4 DP2 Web Wall After 2 mm Lateral Displacement

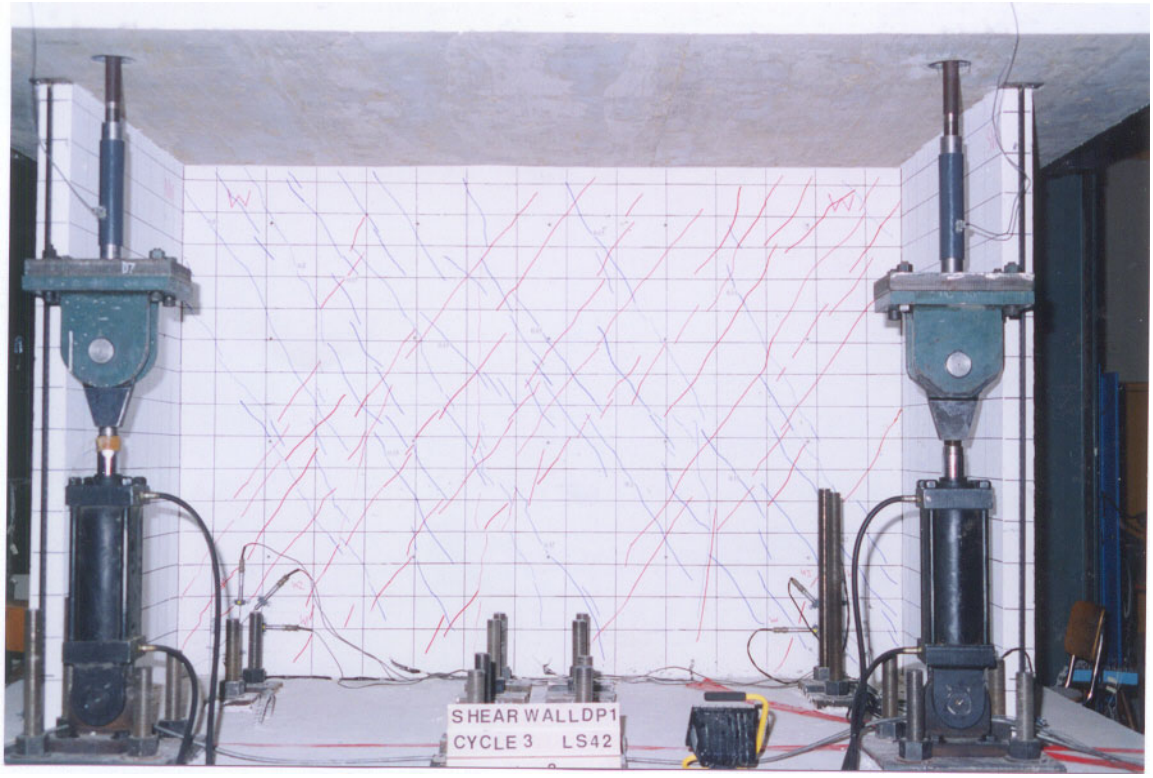

Figure B.5 DP1 Web Wall After 3 mm Lateral Displacement

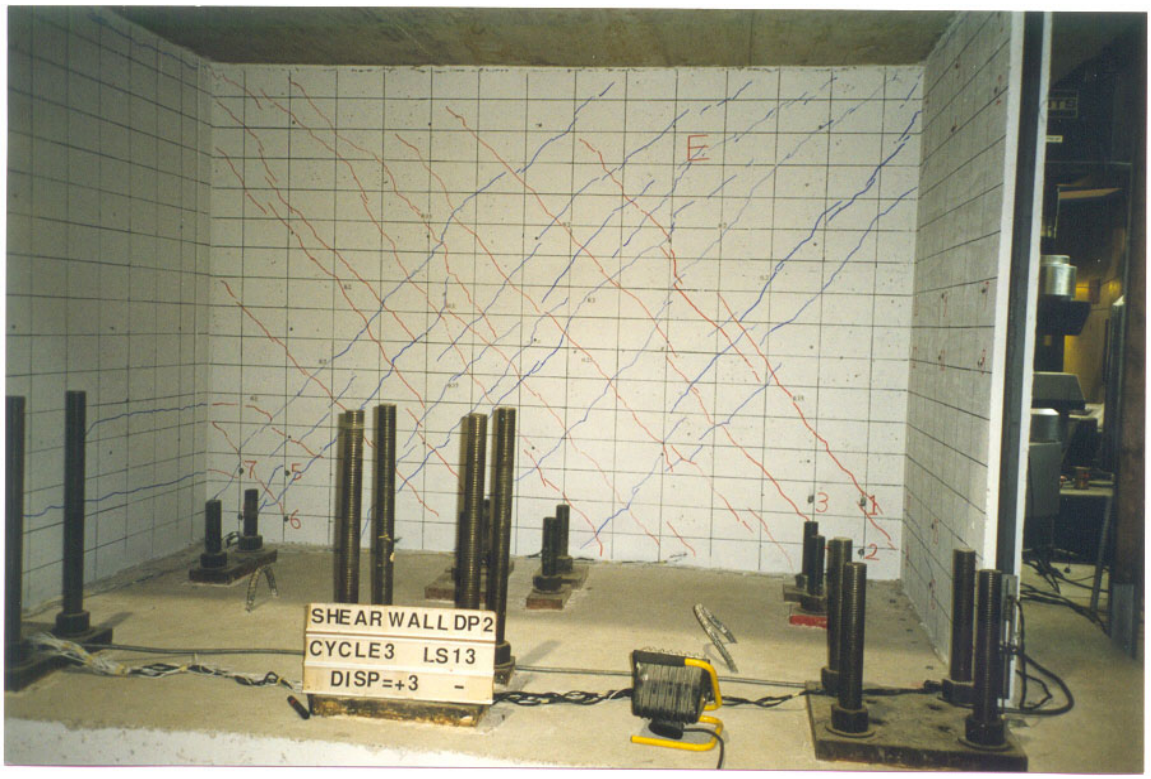

Figure B.6 DP2 Web Wall After 3 mm Lateral Displacement

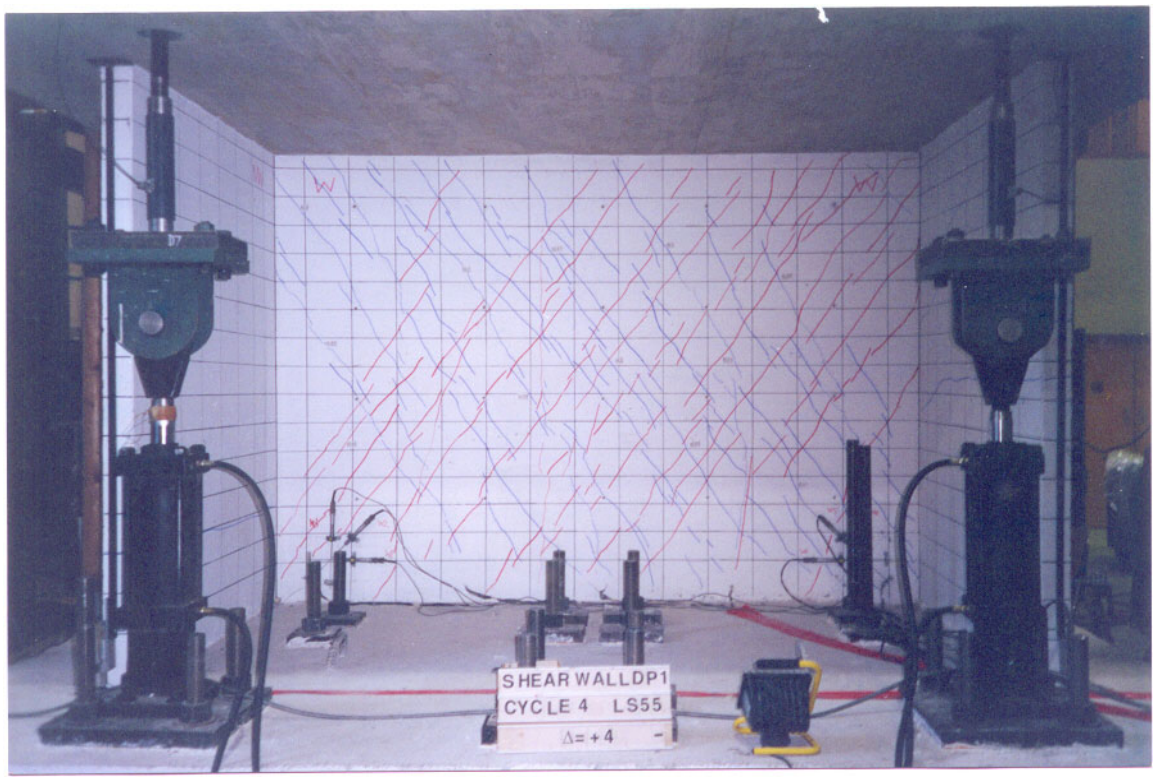

Figure B.7 DP1 Web Wall After 4 mm Lateral Displacement

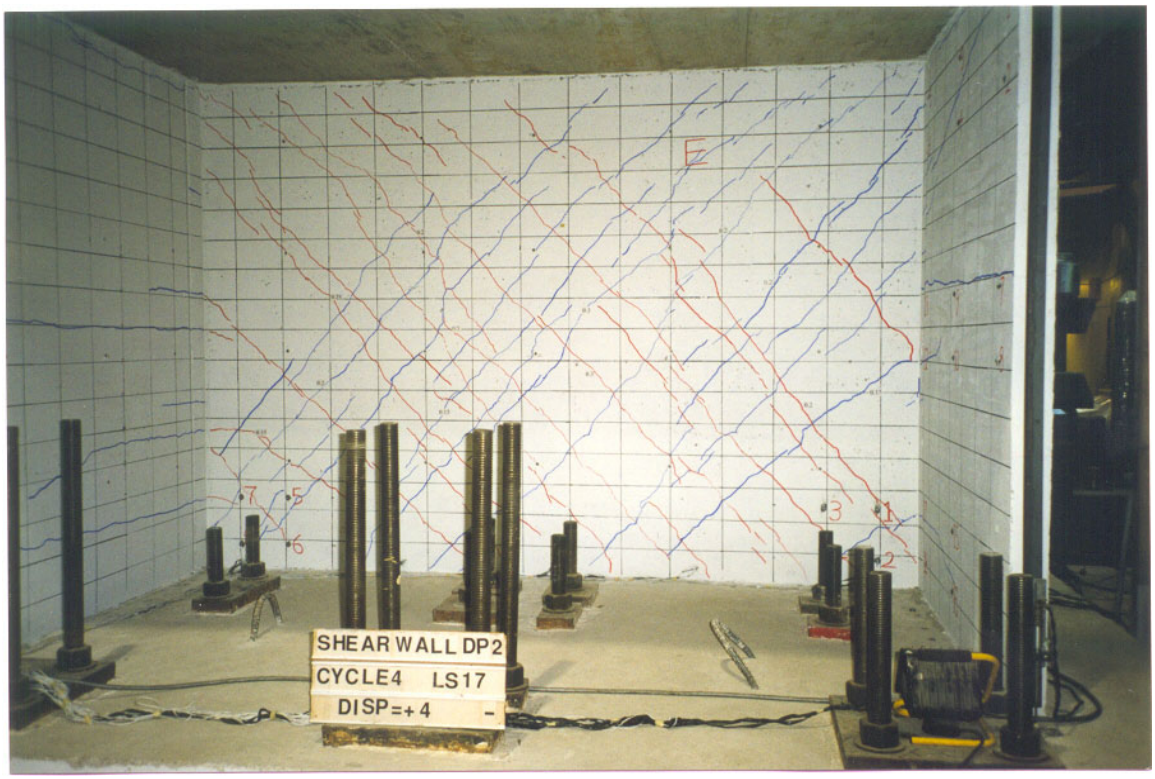

Figure B.8 DP2 Web Wall After 4 mm Lateral Displacement

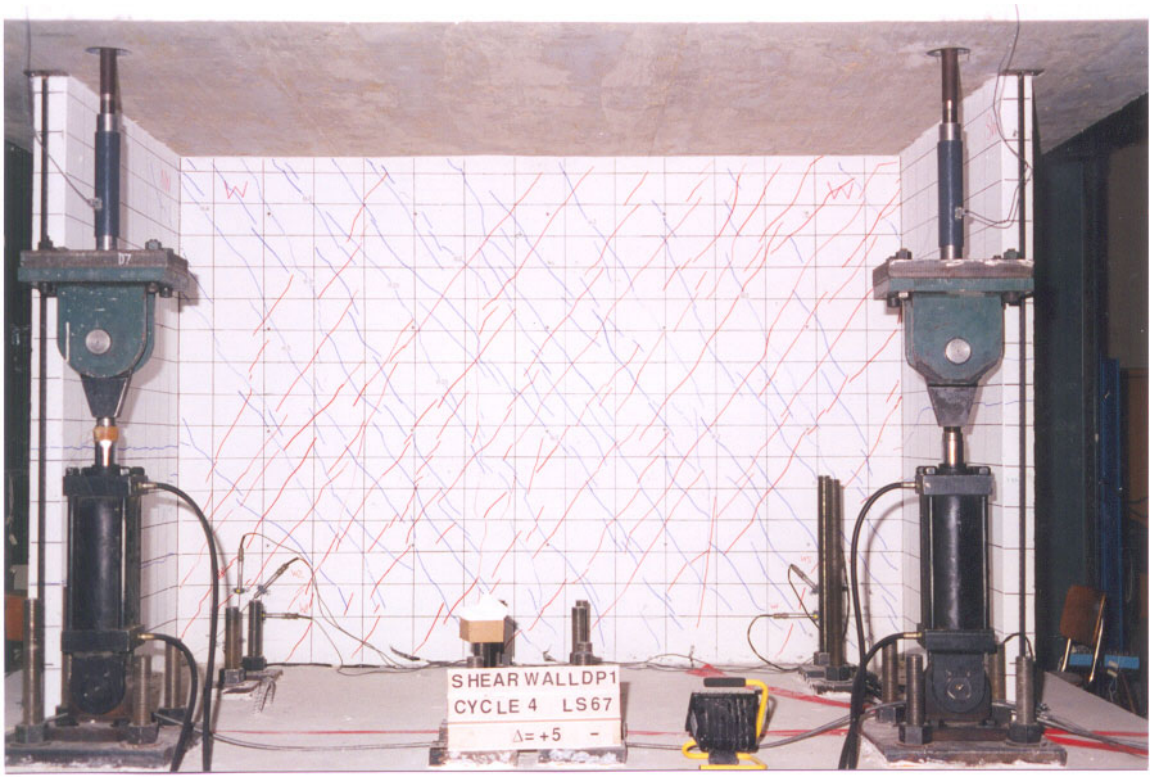

Figure B.9 DP1 Web Wall After 5 mm Lateral Displacement

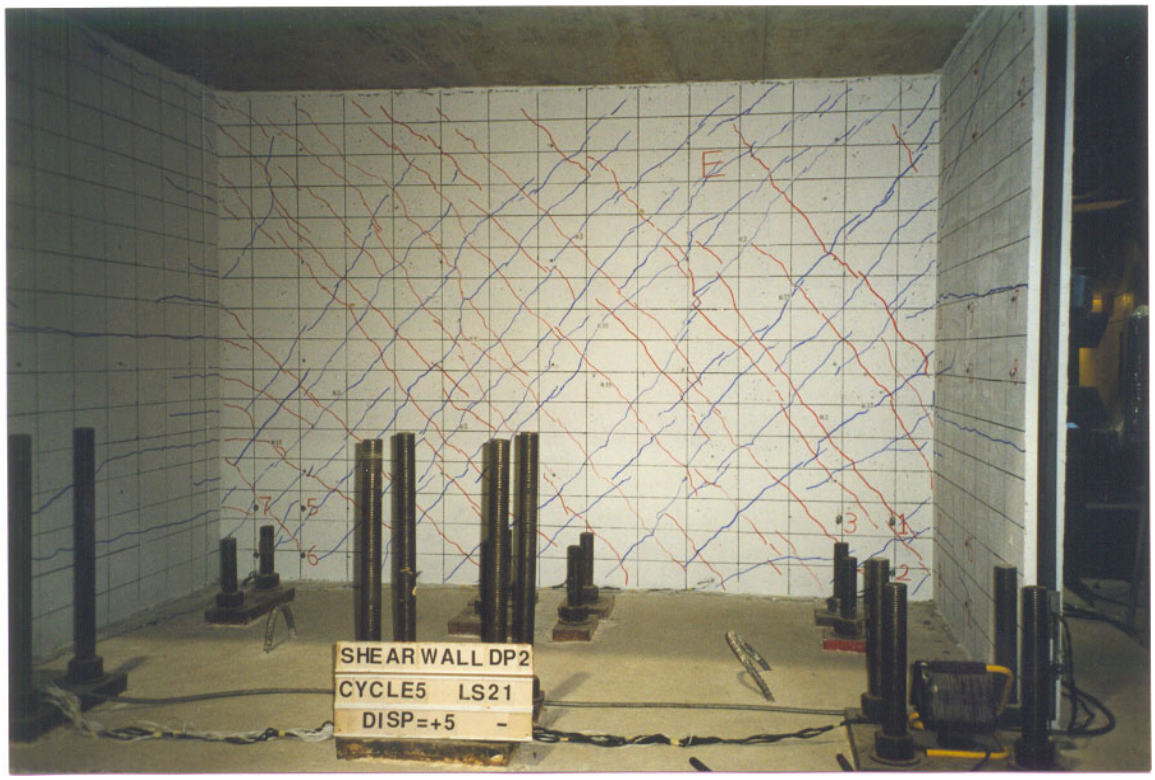

Figure B.10 DP2 Web Wall After 5 mm Lateral Displacement

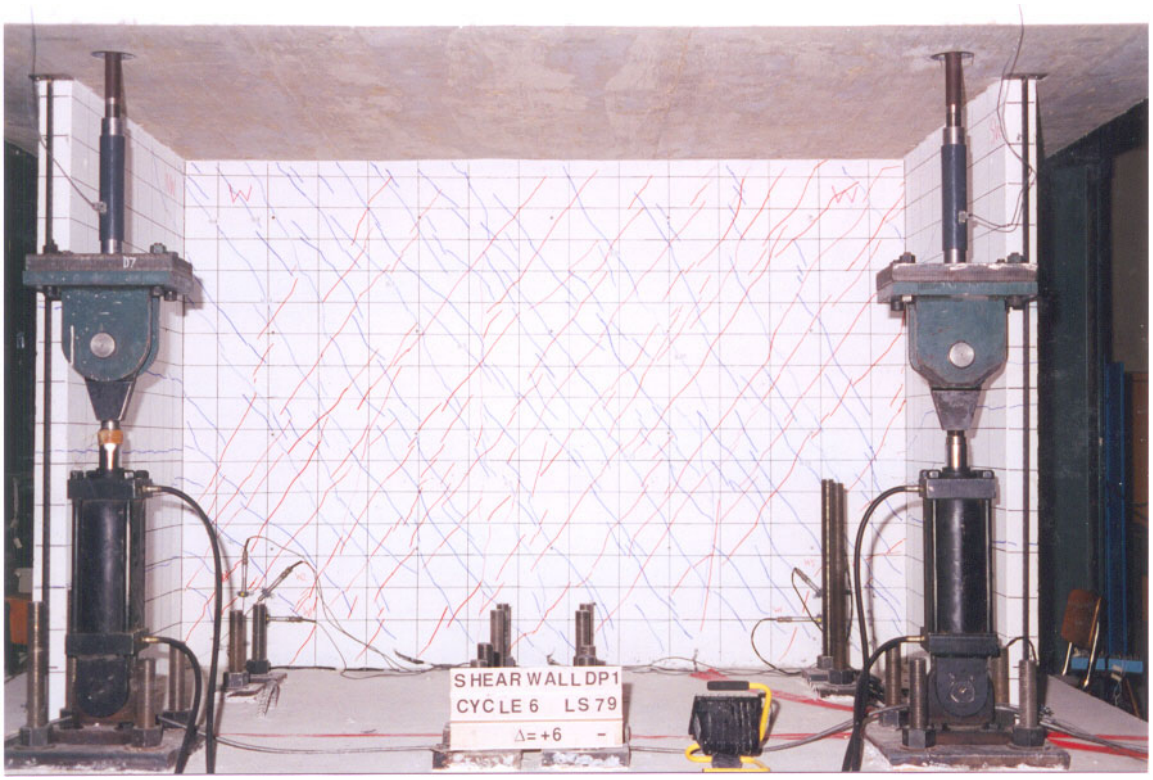

Figure B.11 DP1 Web Wall After 6 mm Lateral Displacement

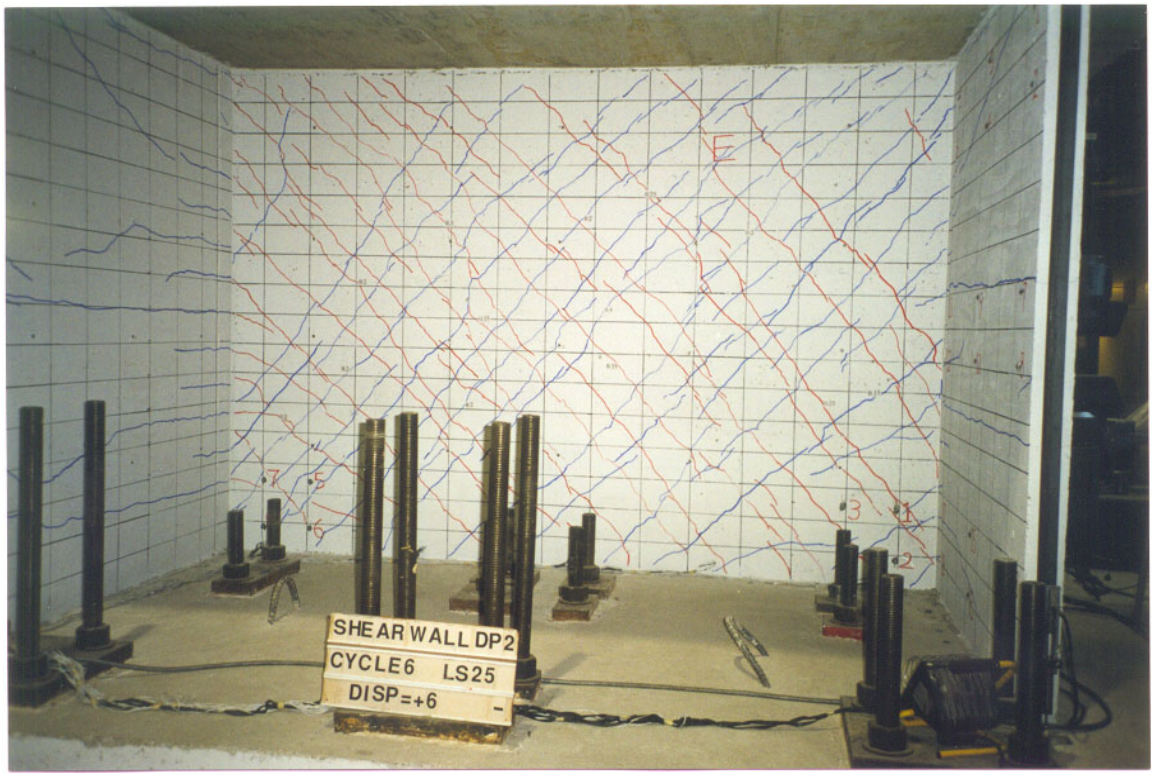

Figure B.12 DP2 Web Wall After 6 mm Lateral Displacement

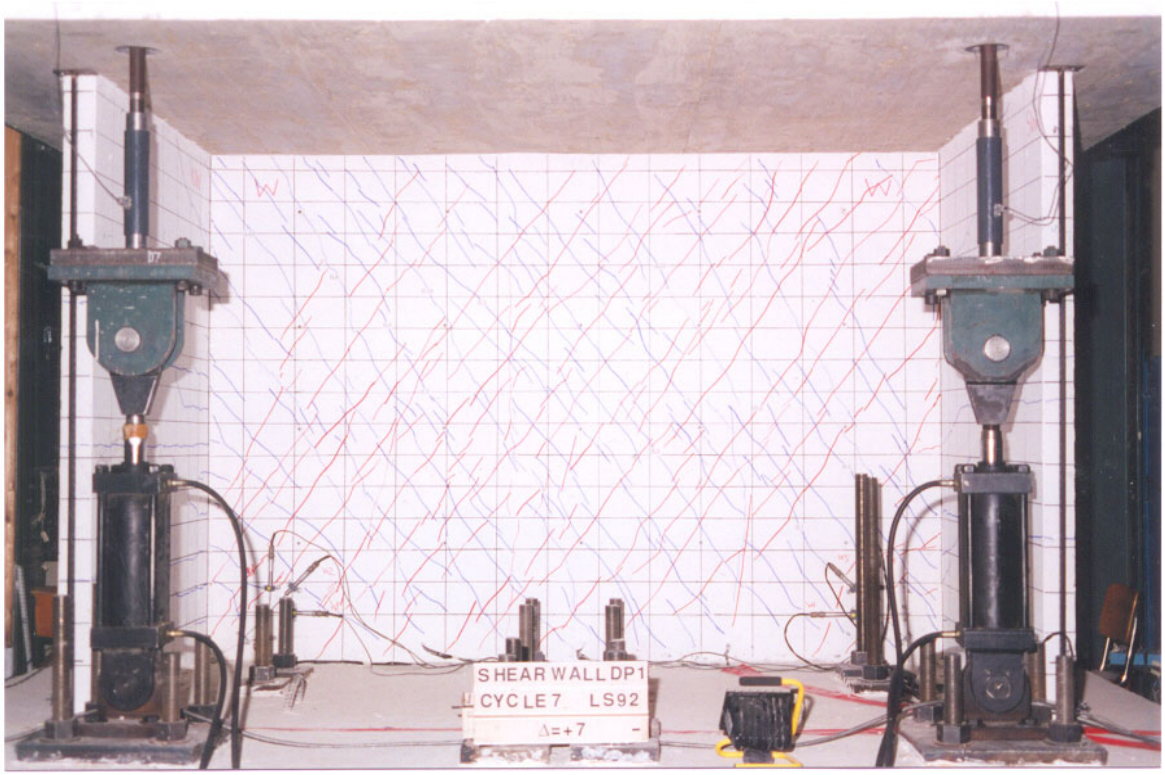

Figure B.13 DP1 Web Wall After 7 mm Lateral Displacement

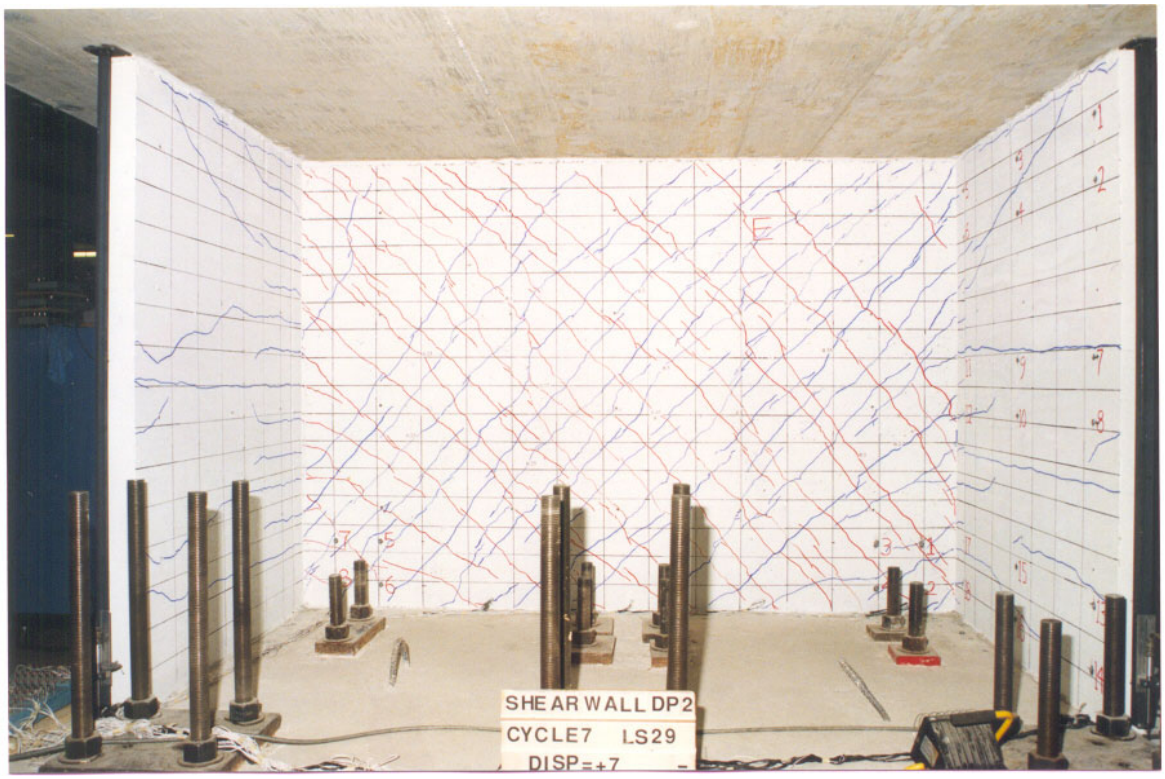

Figure B.14 DP2 Web Wall After 7 mm Lateral Displacement

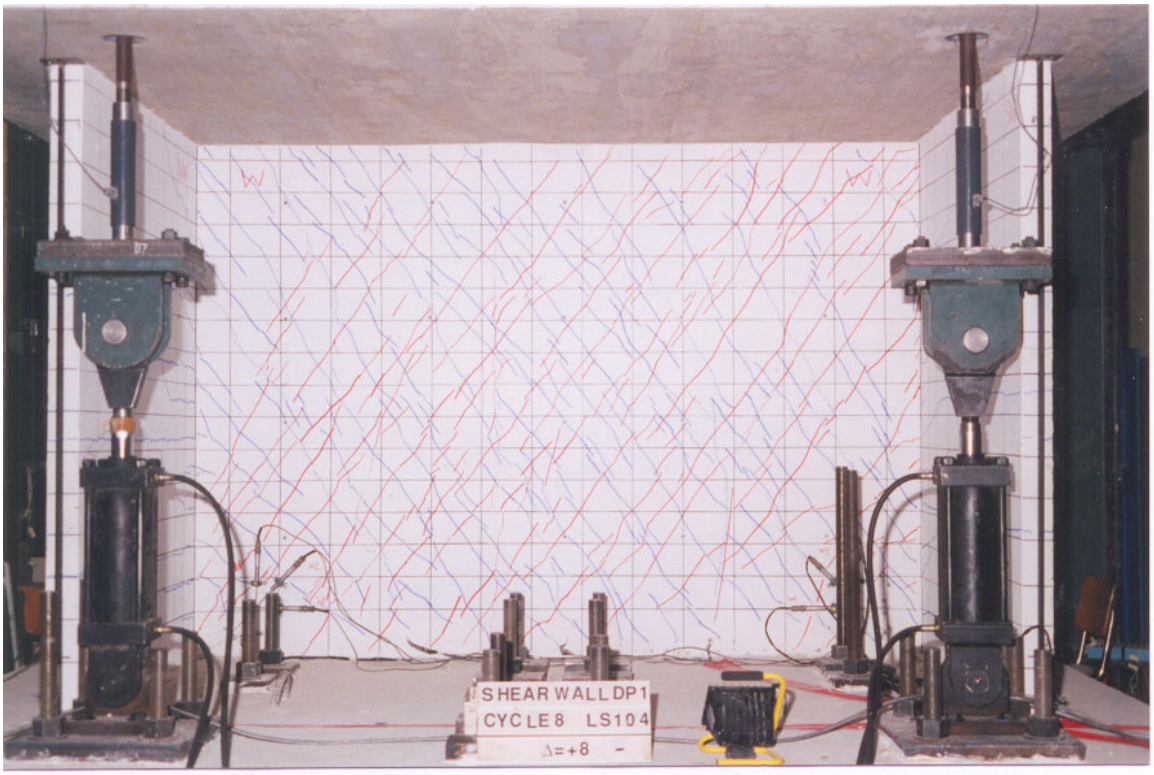

Figure B.15 DP1 Web Wall After 8 mm Lateral Displacement

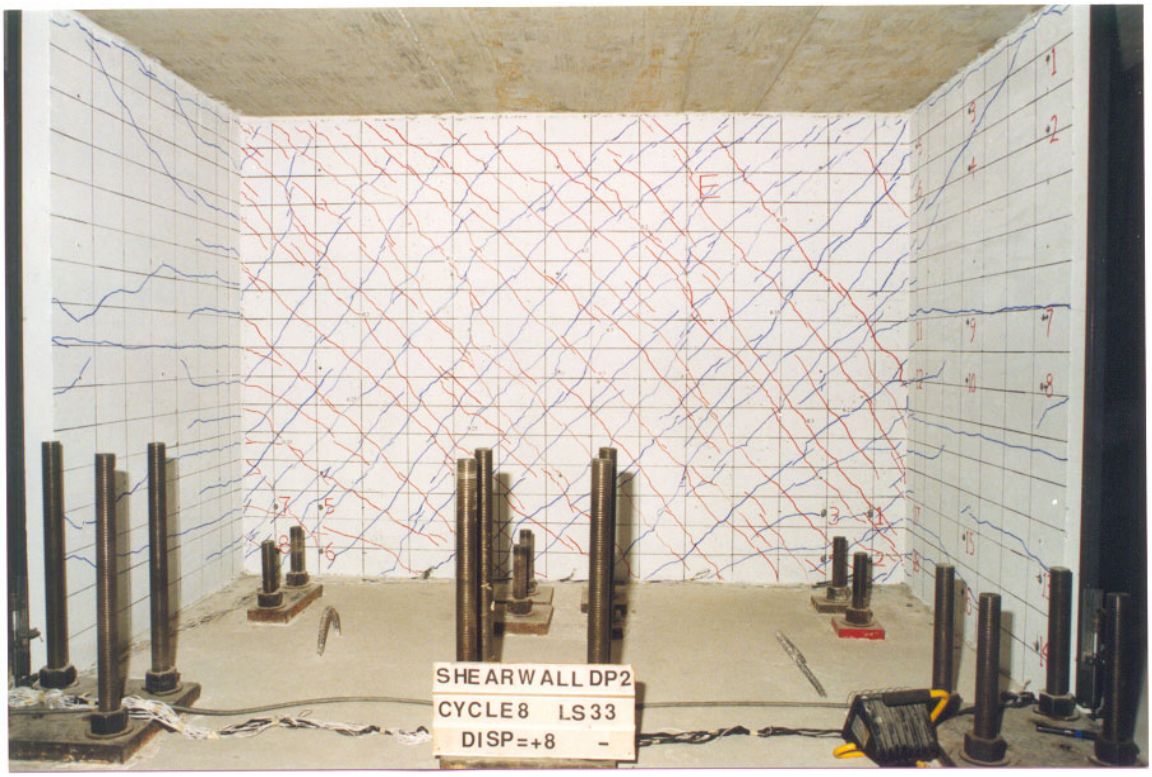

Figure B.16 DP2 Web Wall After 8 mm Lateral Displacement

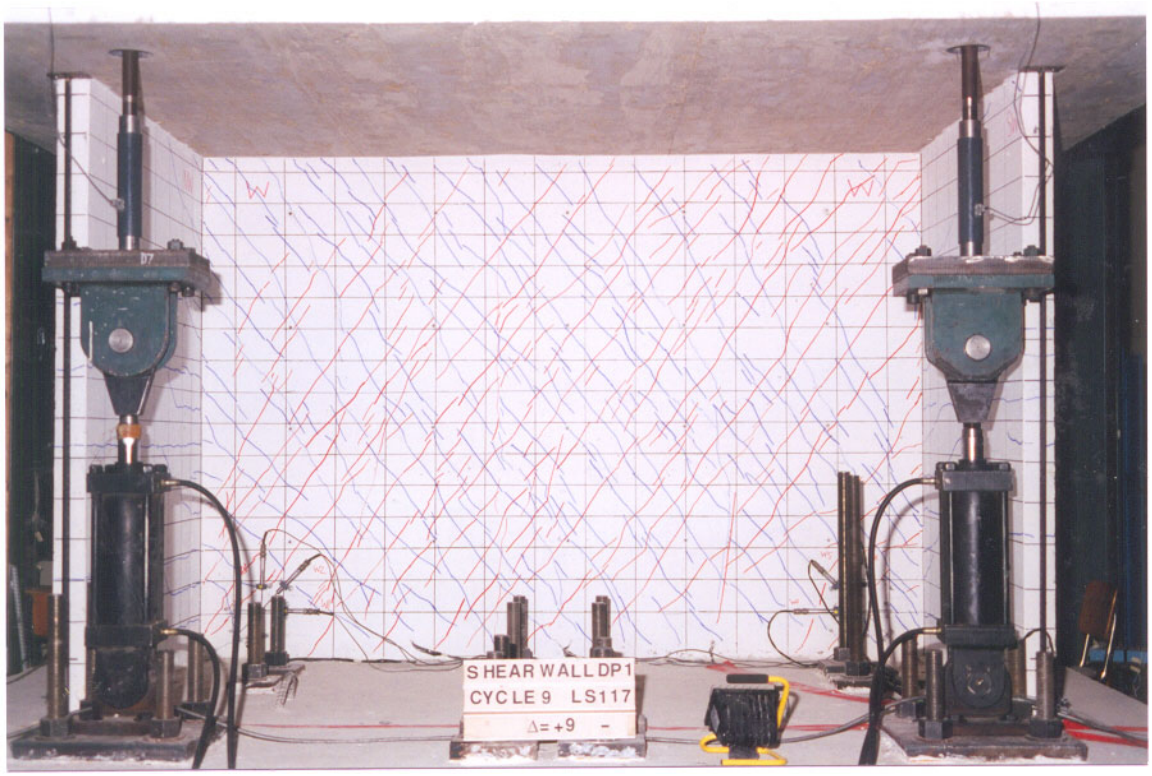

Figure B.17 DP1 Web Wall After 9 mm Lateral Displacement

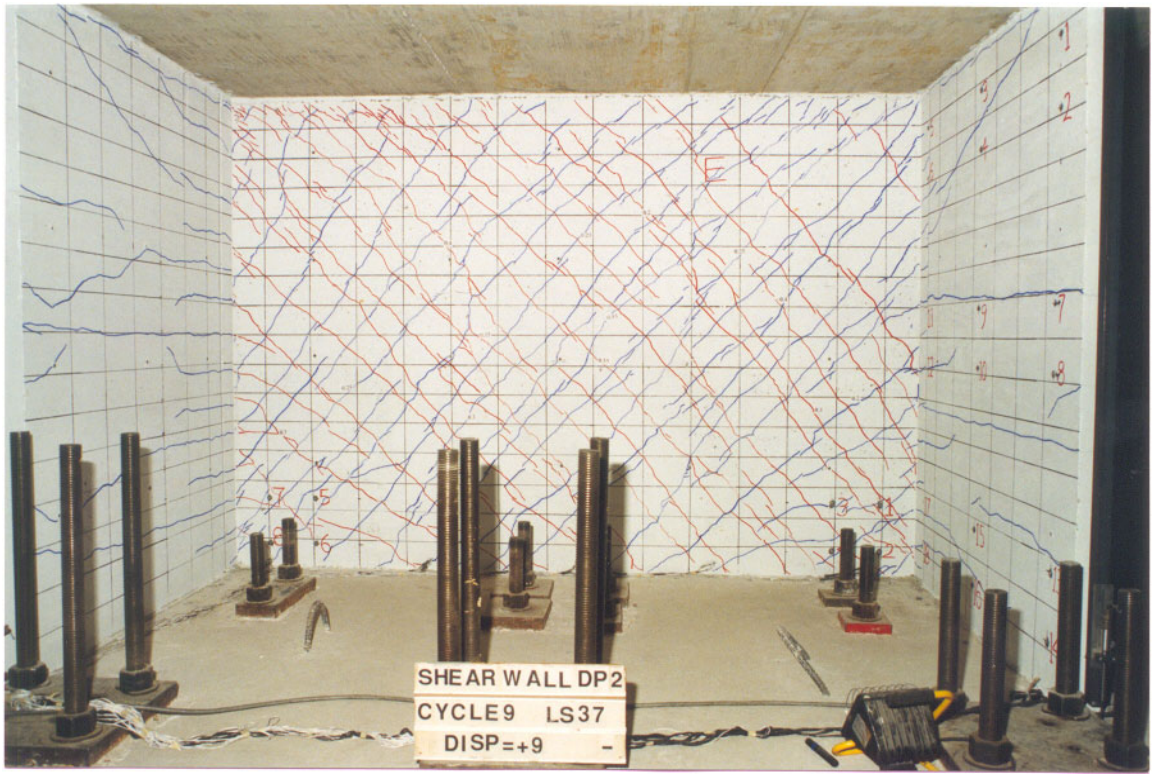

Figure B.18 DP2 Web Wall After 9 mm Lateral Displacement

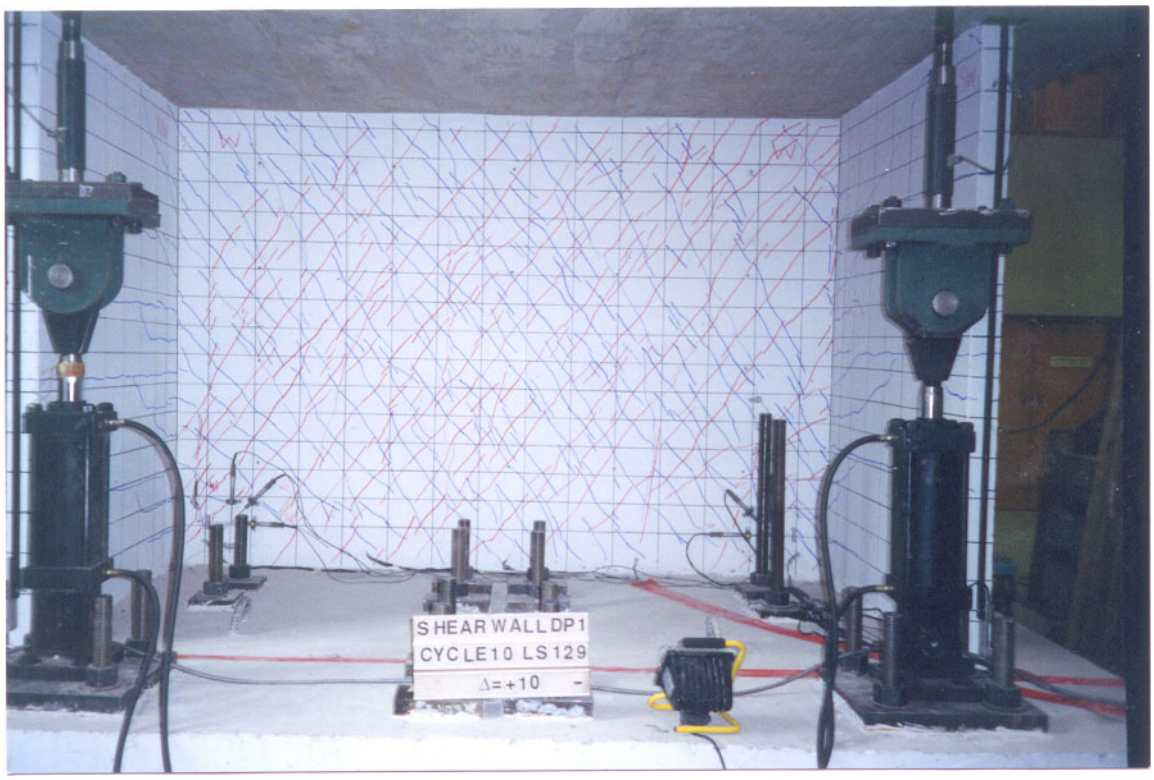

Figure B.19 DP1 Web Wall After 10 mm Lateral Displacement

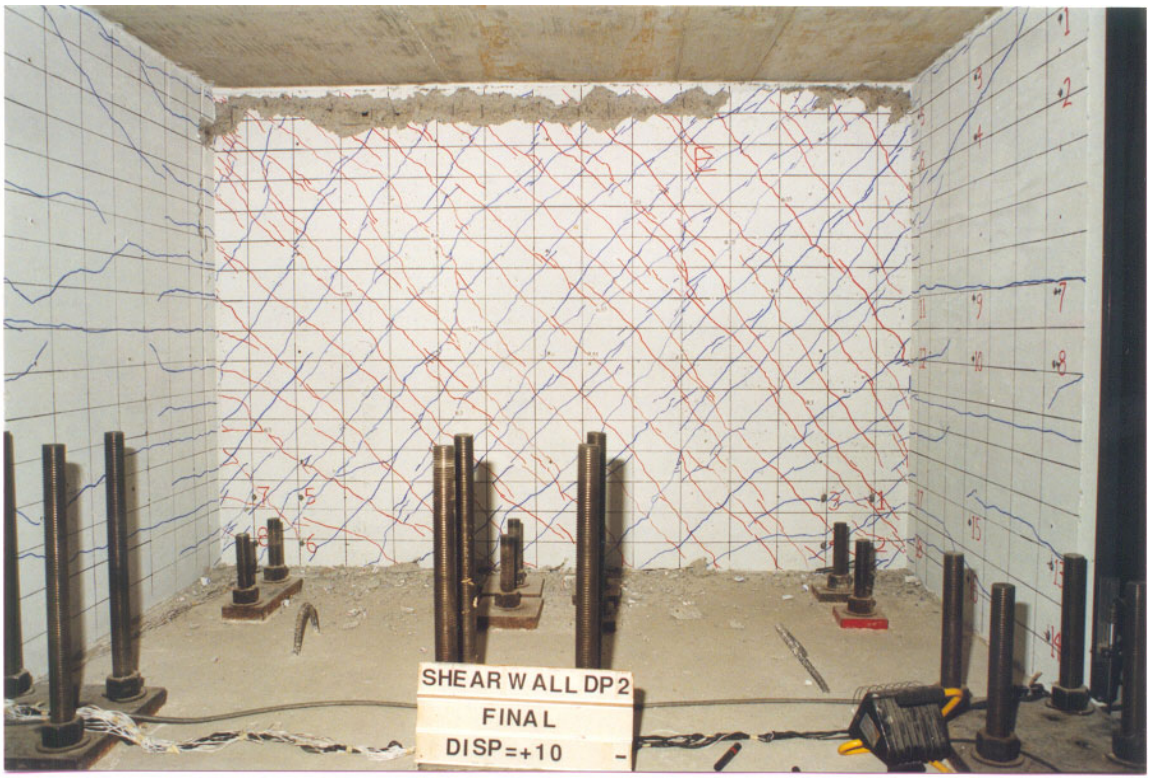

Figure B.20 DP2 Web Wall After 10 mm Lateral Displacement

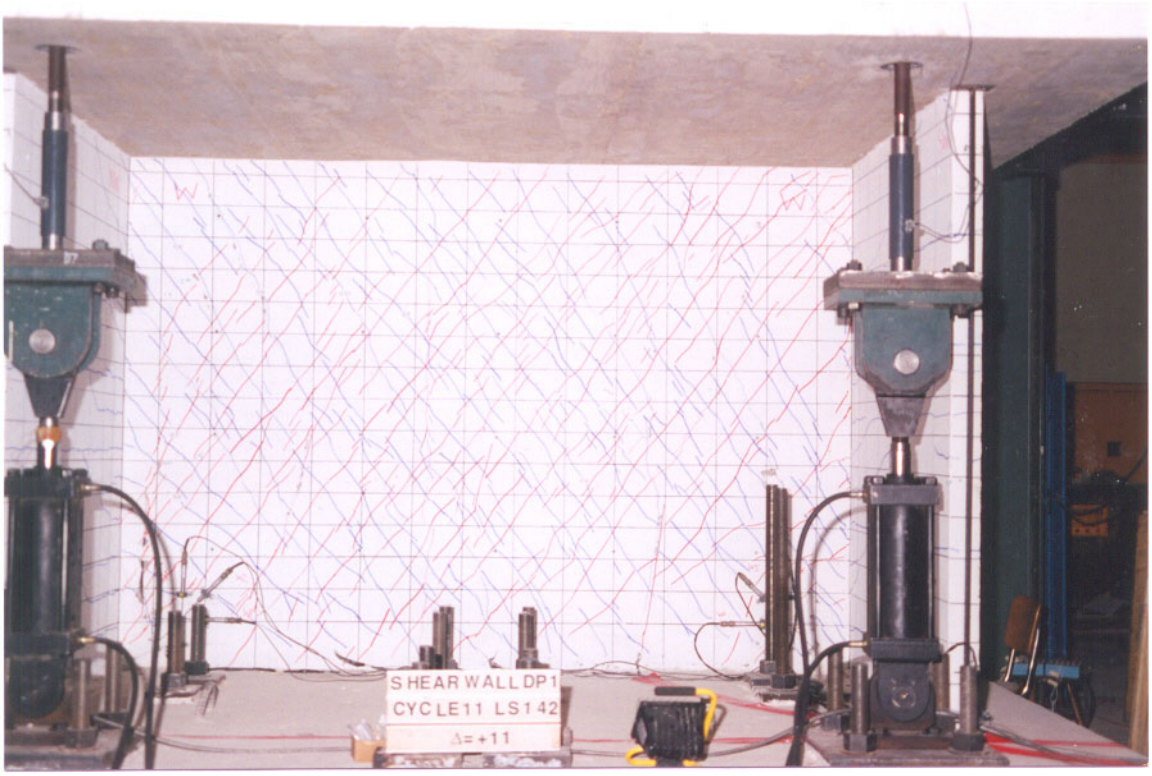

Figure B.21 DP1 Web Wall After 11 mm Lateral Displacement

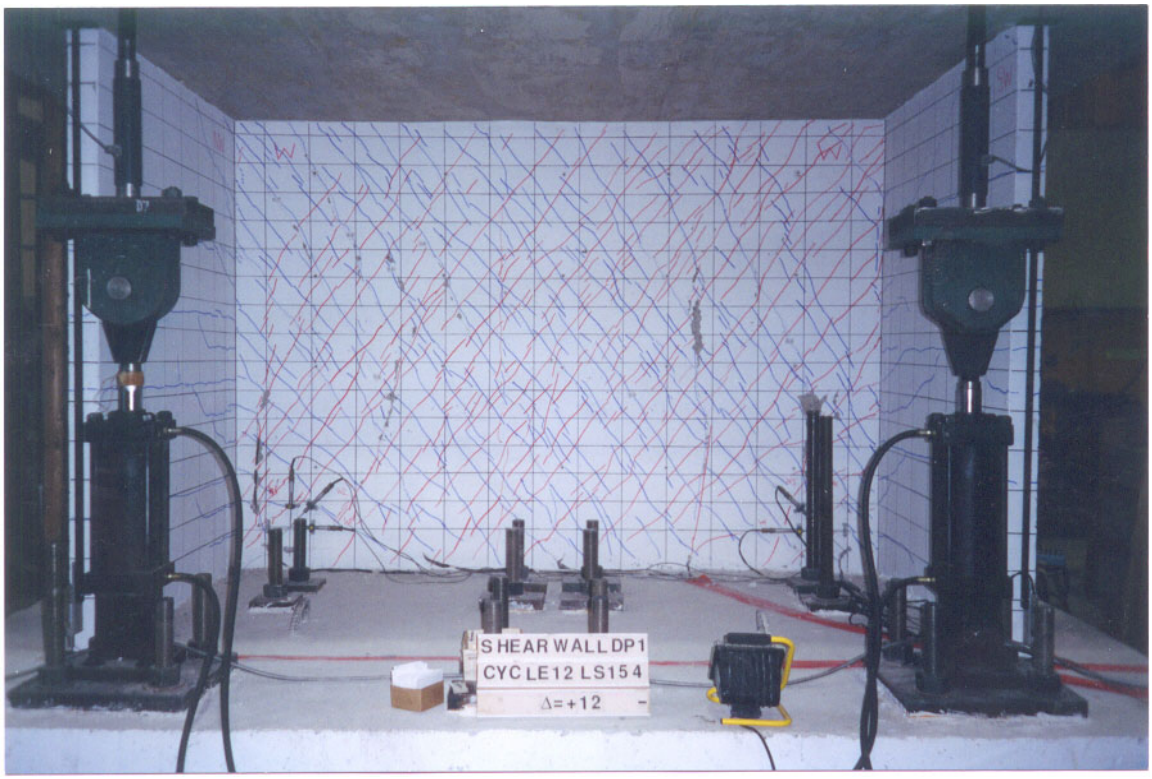

Figure B.22 DP1 Web Wall After 12 mm Lateral Displacement

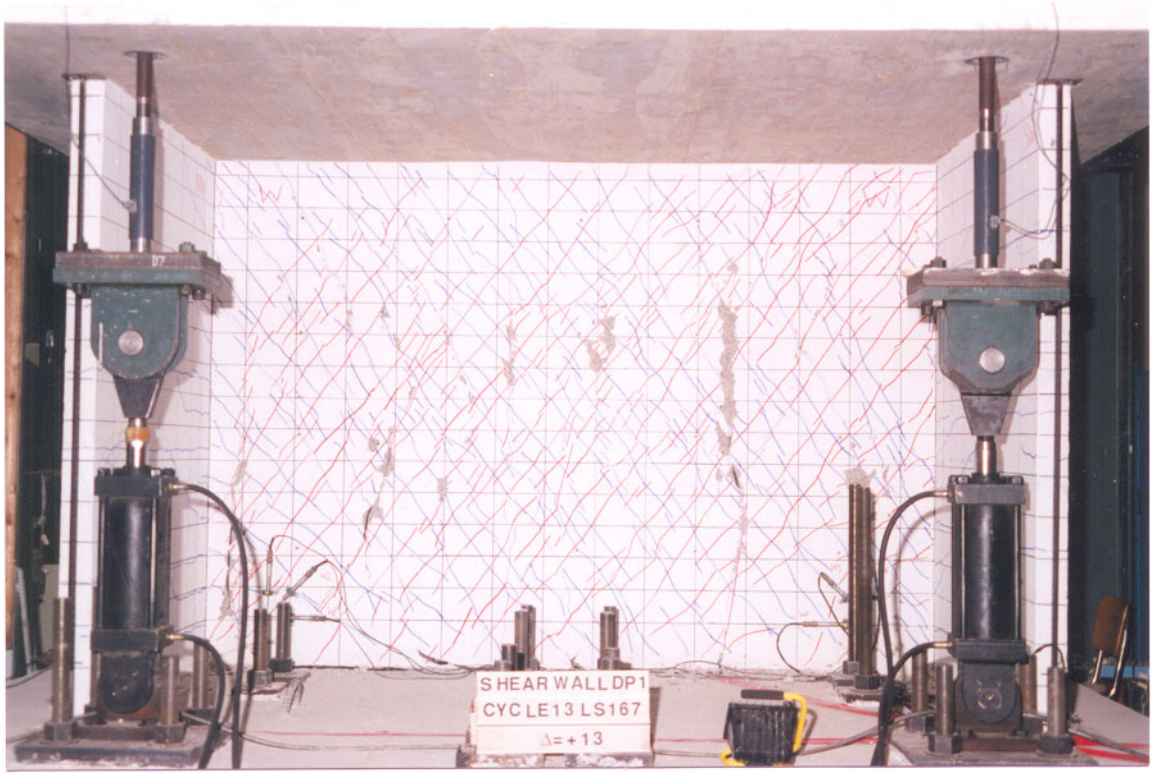

Figure B.23 DP1 Web Wall After 13 mm Lateral Displacement

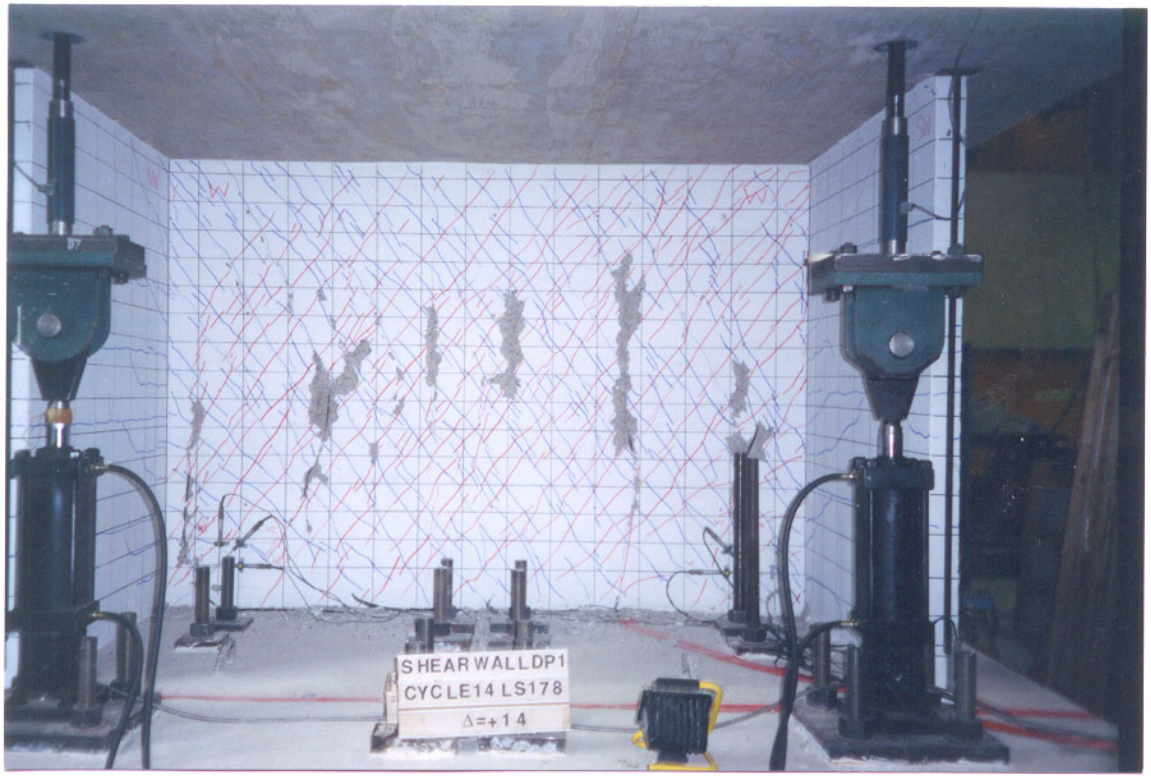

Figure B.24 DP1 Web Wall After 14 mm Lateral Displacement

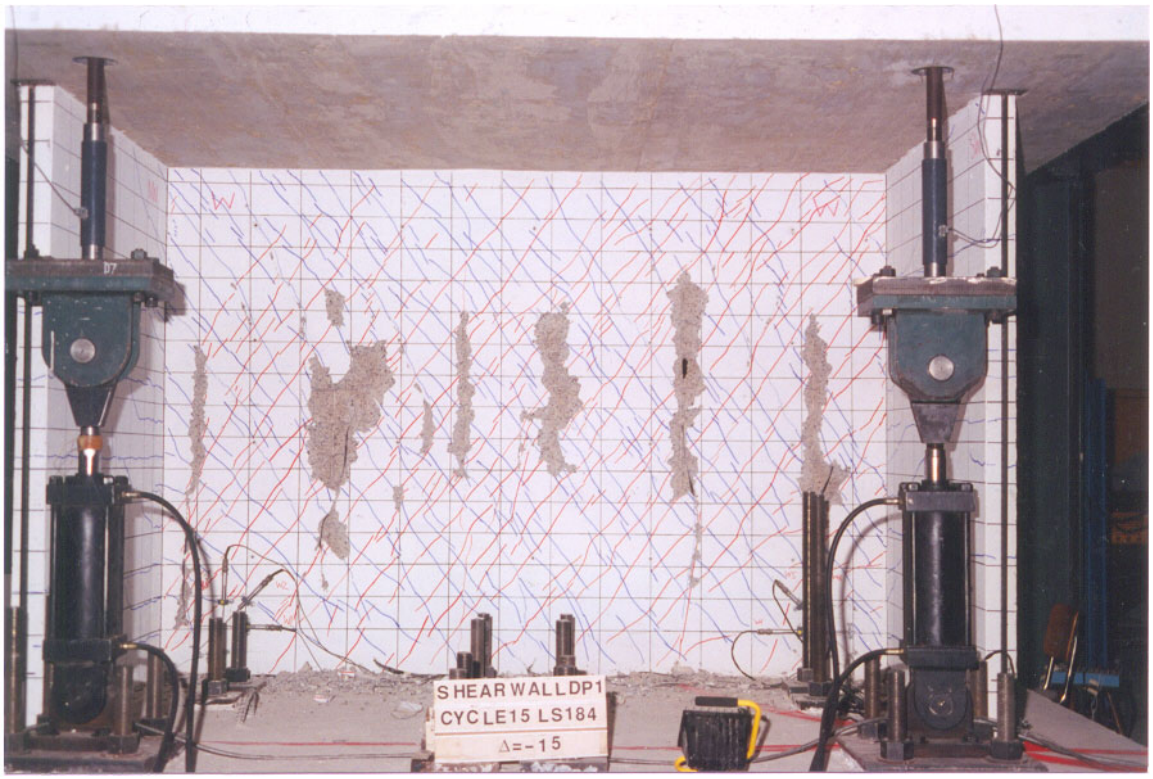

Figure B.25 DP1 Web Wall After 15 mm Lateral Displacement

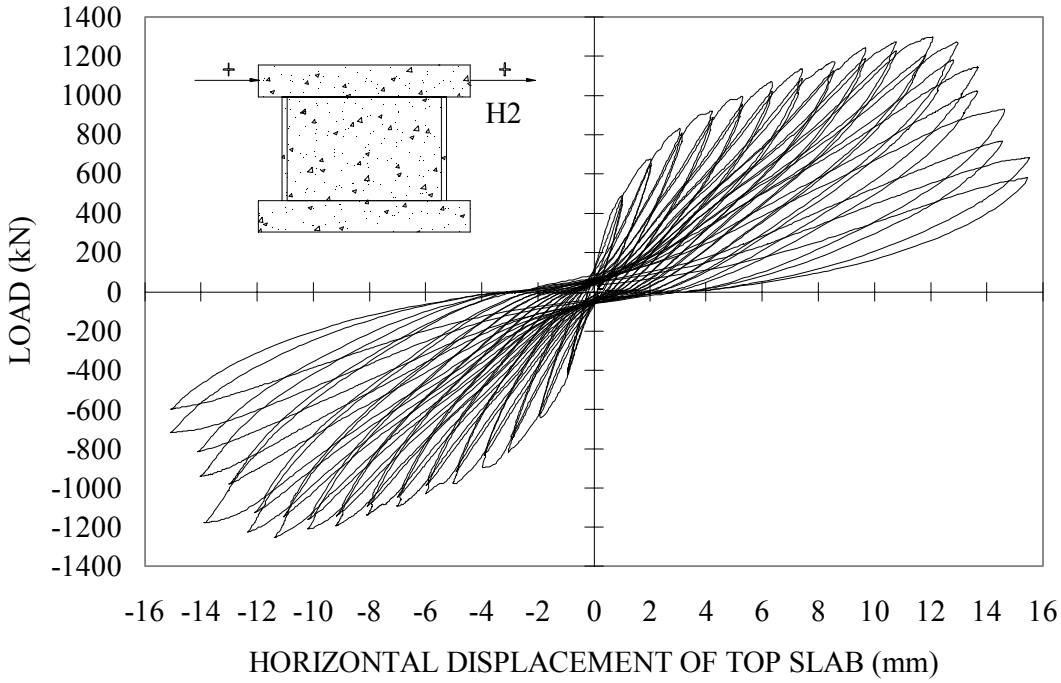

Figure C.1 DP1 H2 Response

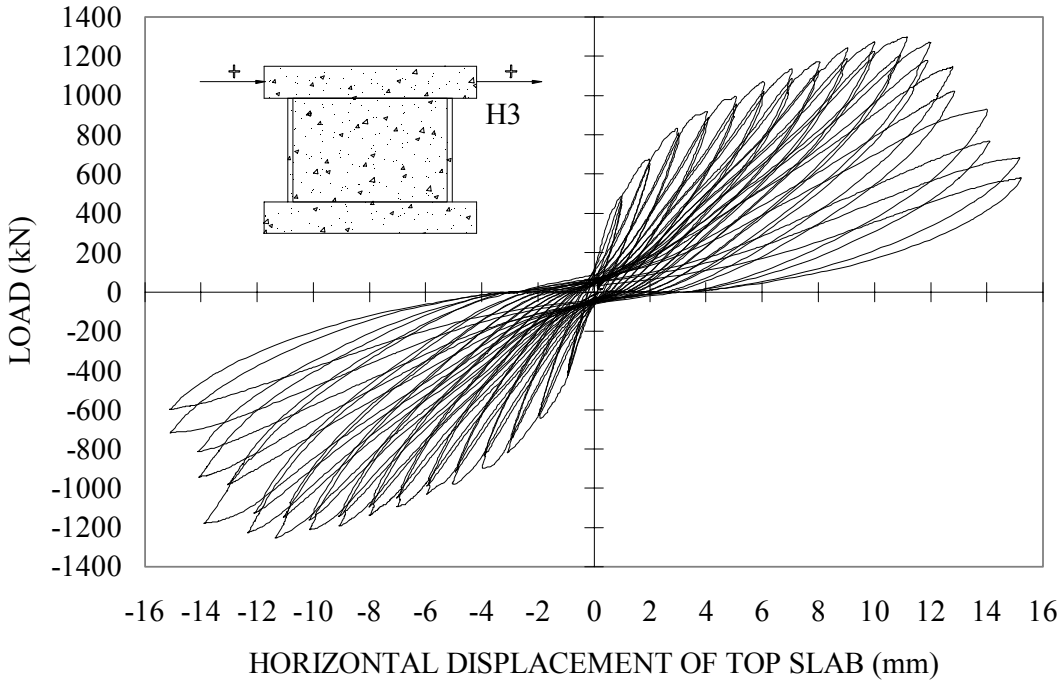

Figure C.2 DP1 H3 Response

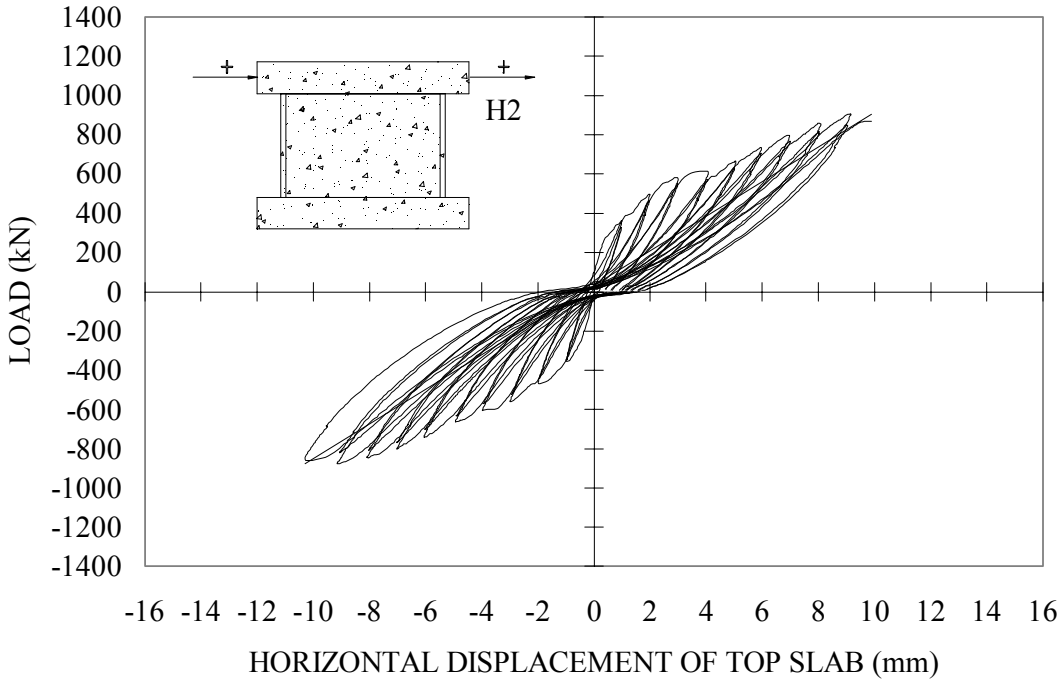

Figure C.3 DP2 H2 Response

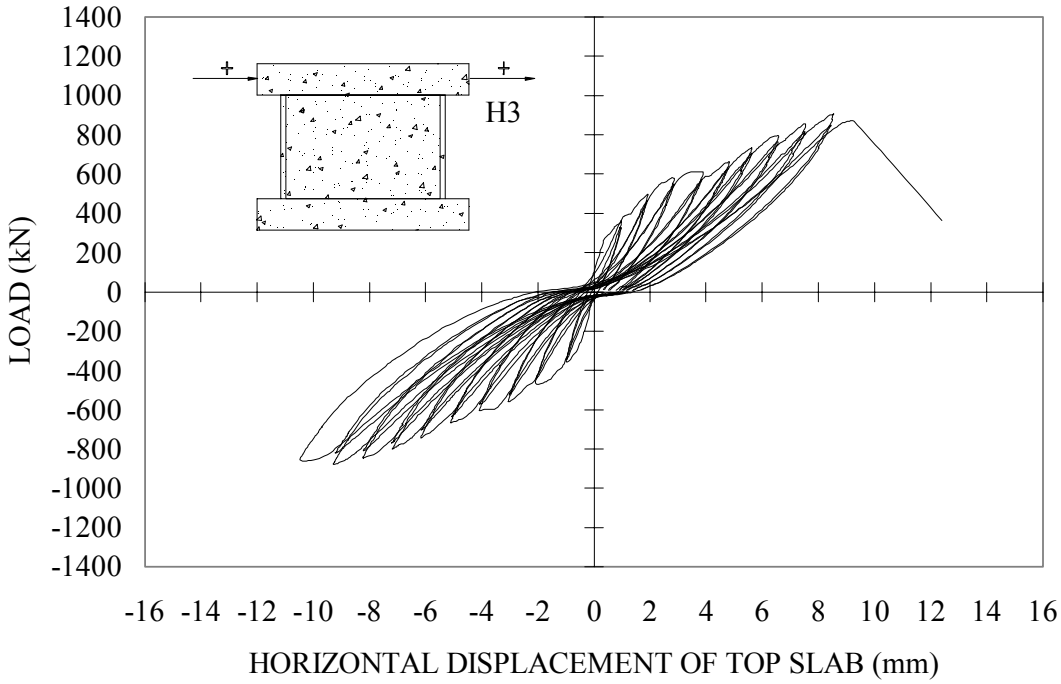

Figure C.4 DP2 H3 Response

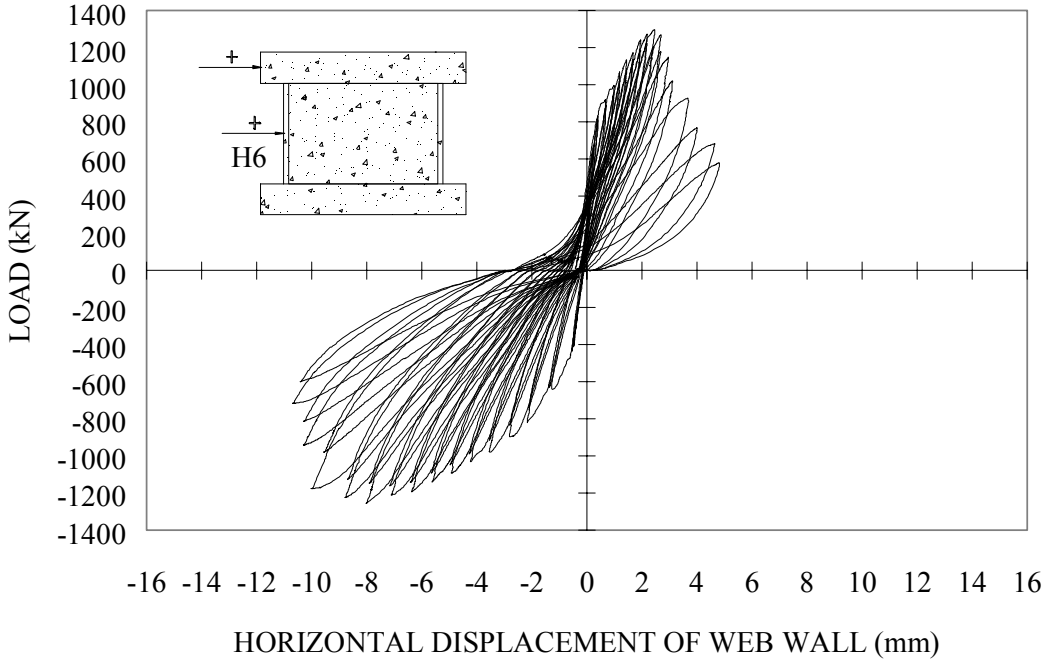

Figure C.5 DP1 H6 Response

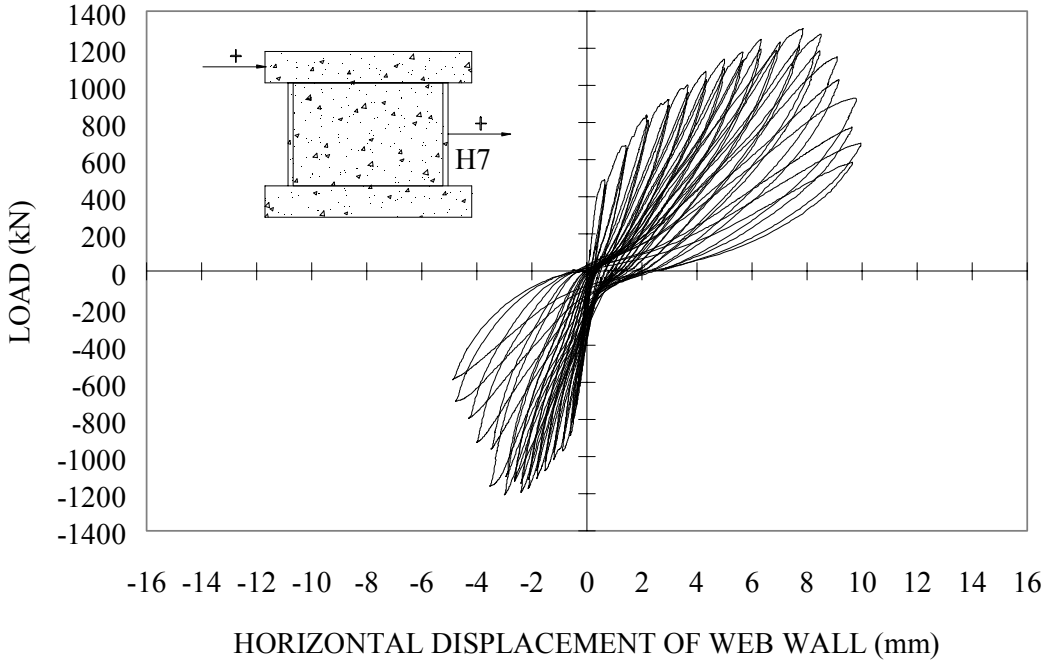

Figure C.6 DP1 H7 Response

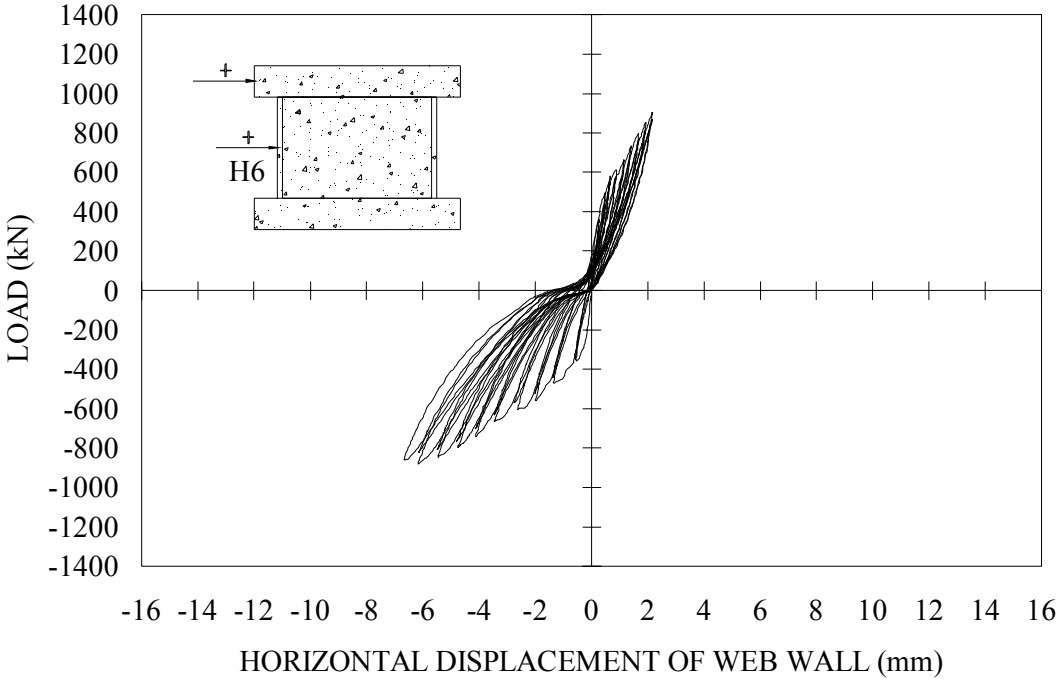

Figure C.7 DP2 H6 Response

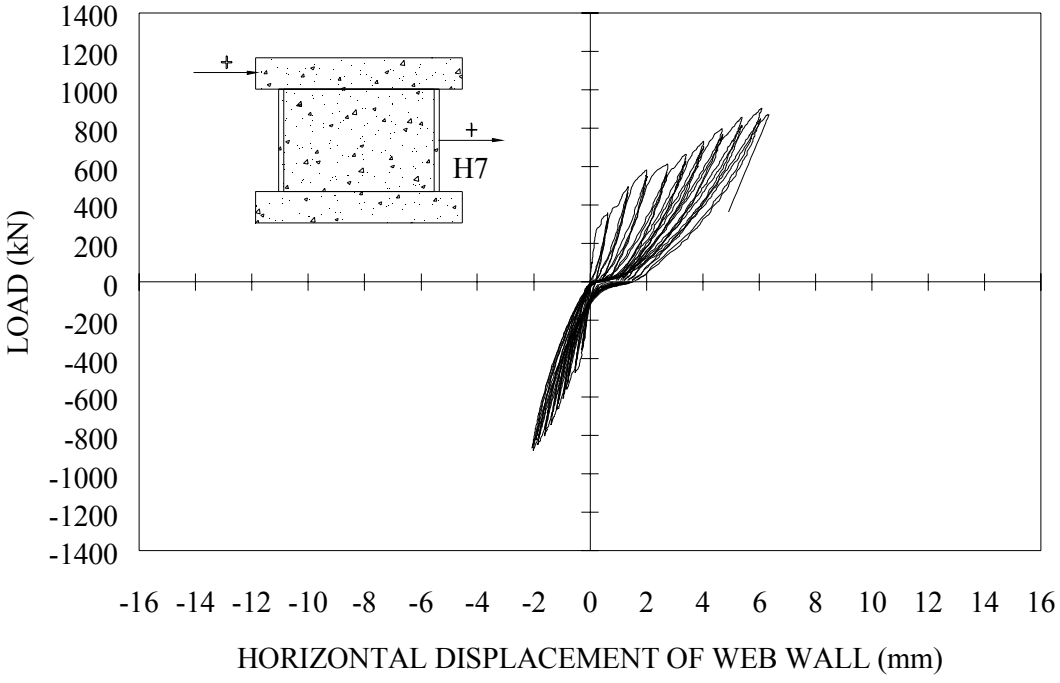

Figure C.8 DP2 H7 Response

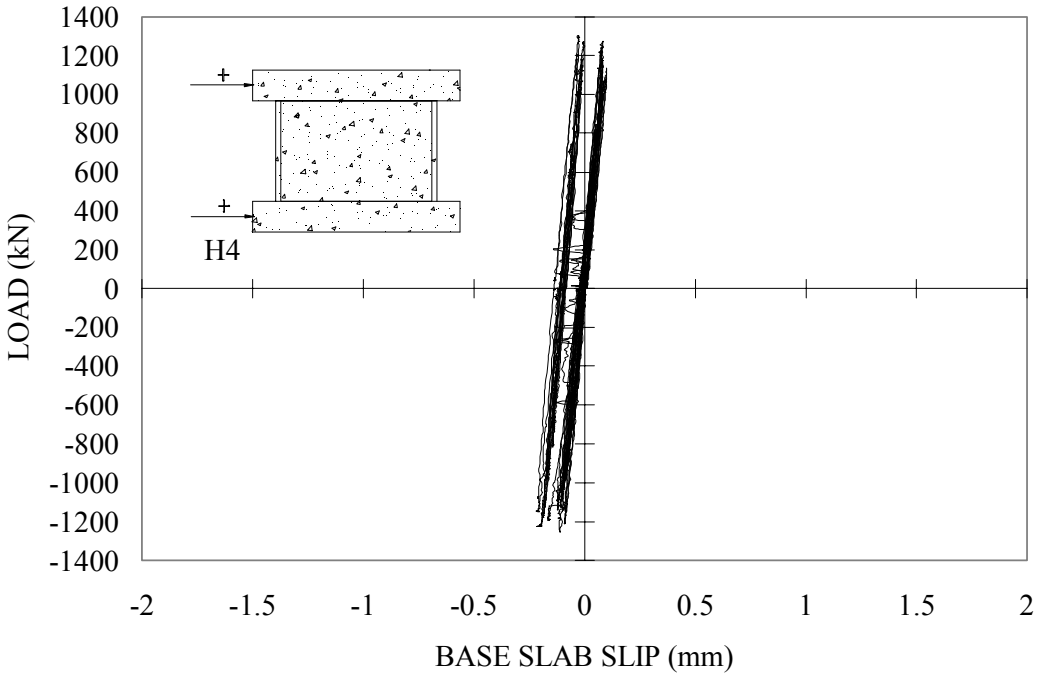

Figure C.9 DP1 H4 Response

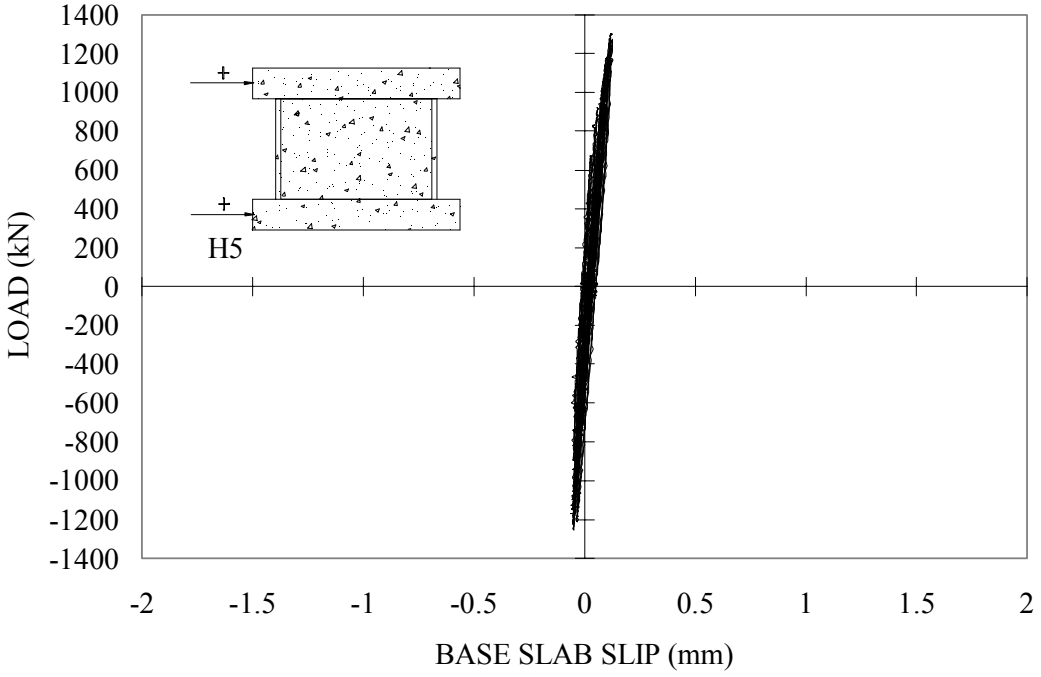

Figure C.10 DP1 H5 Response

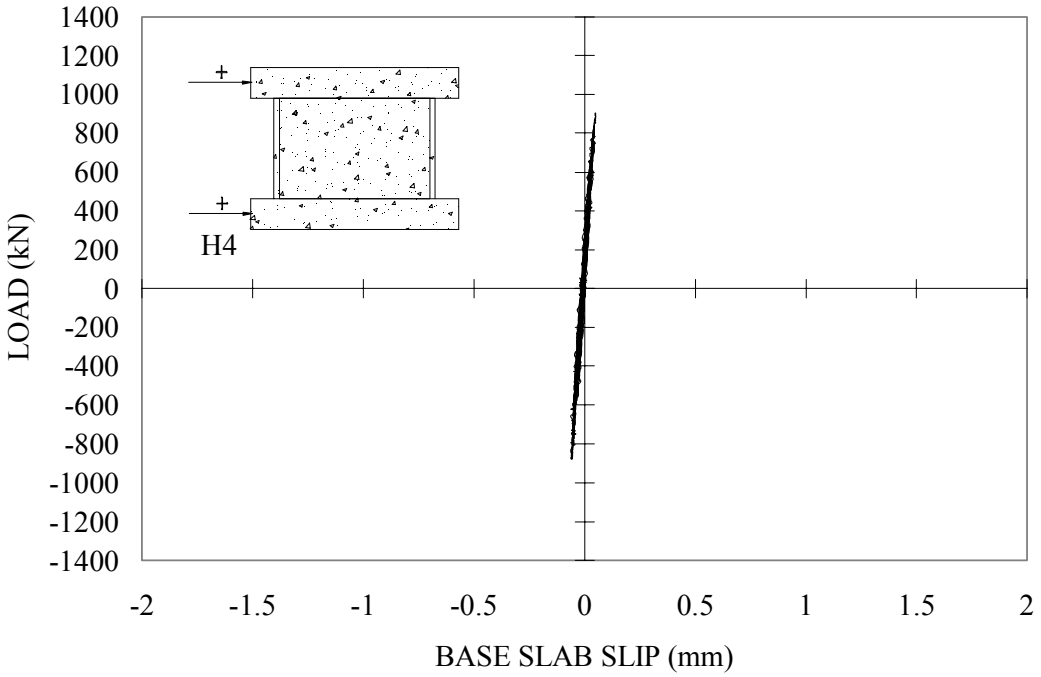

Figure C.11 DP2 H4 Response

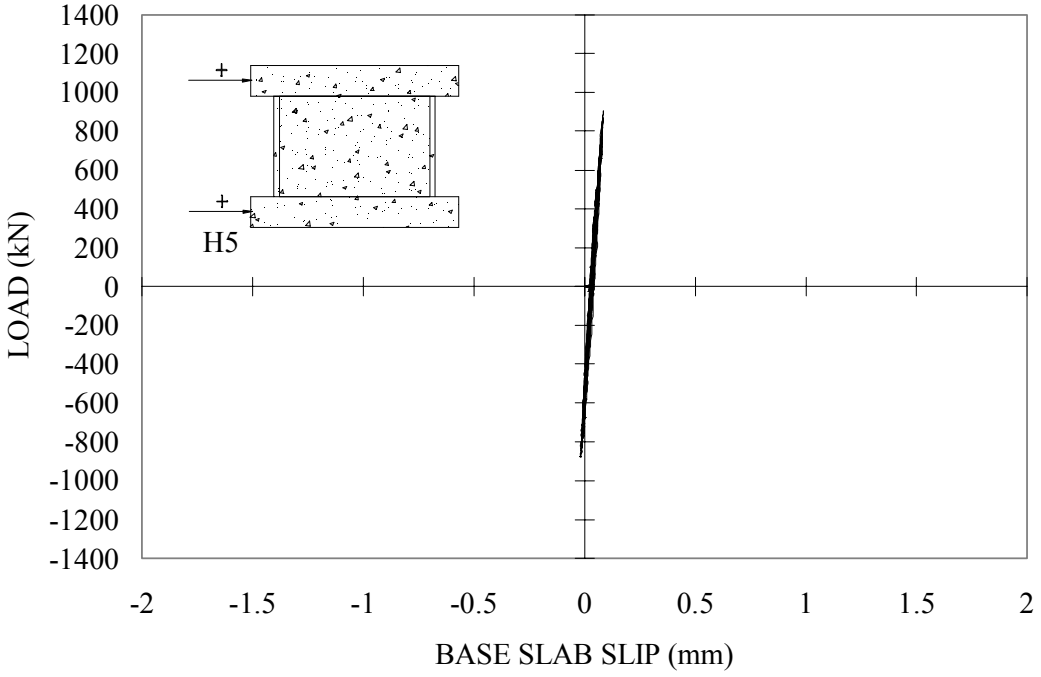

Figure C.12 DP2 H5 Response

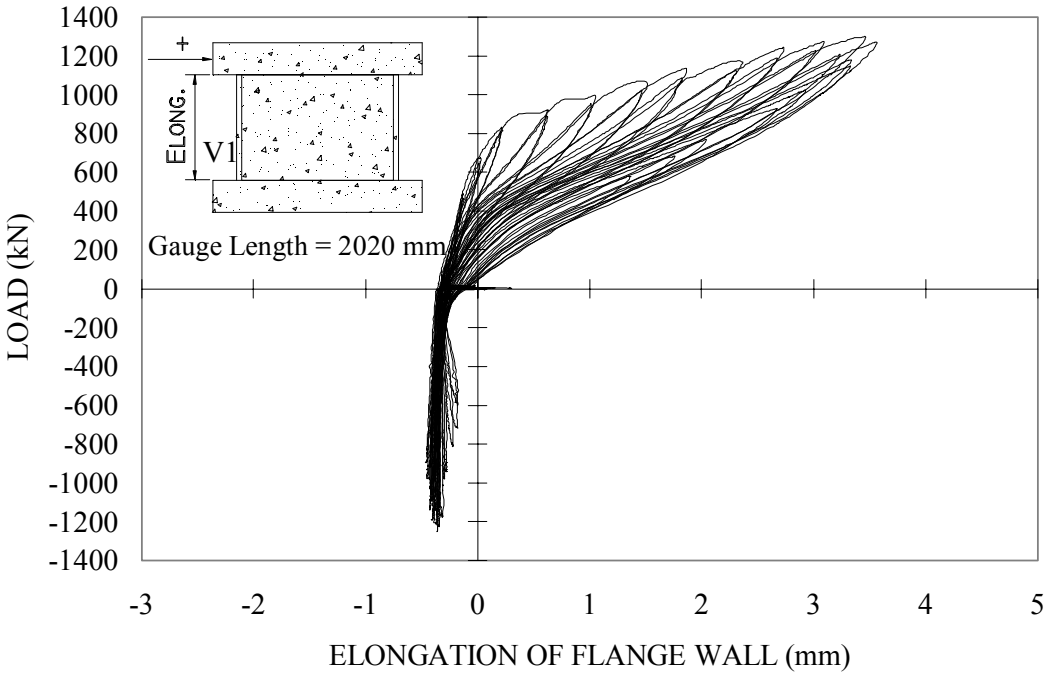

Figure C.13 DP1 V1 Response

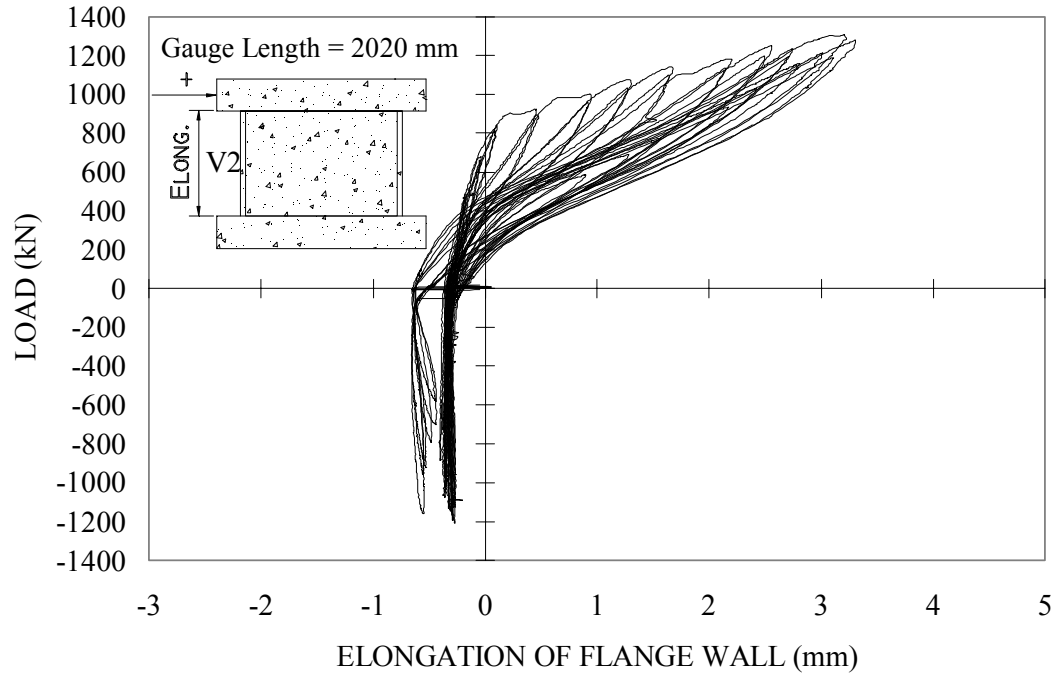

Figure C.14 DP1 V2 Response

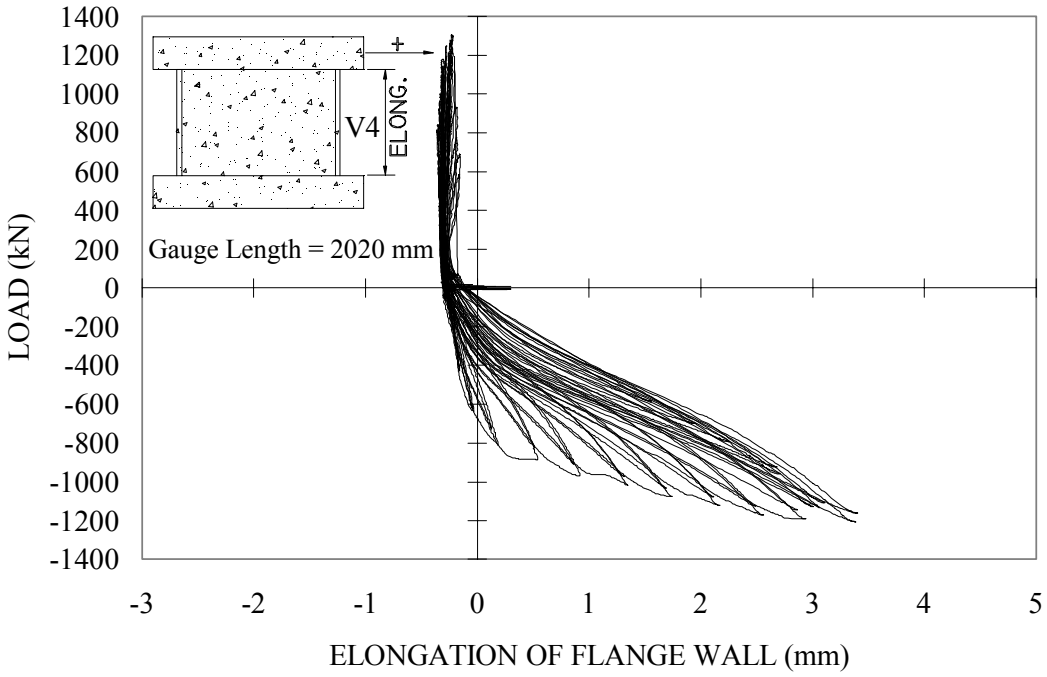

Figure C.15 DP1 V4 Response

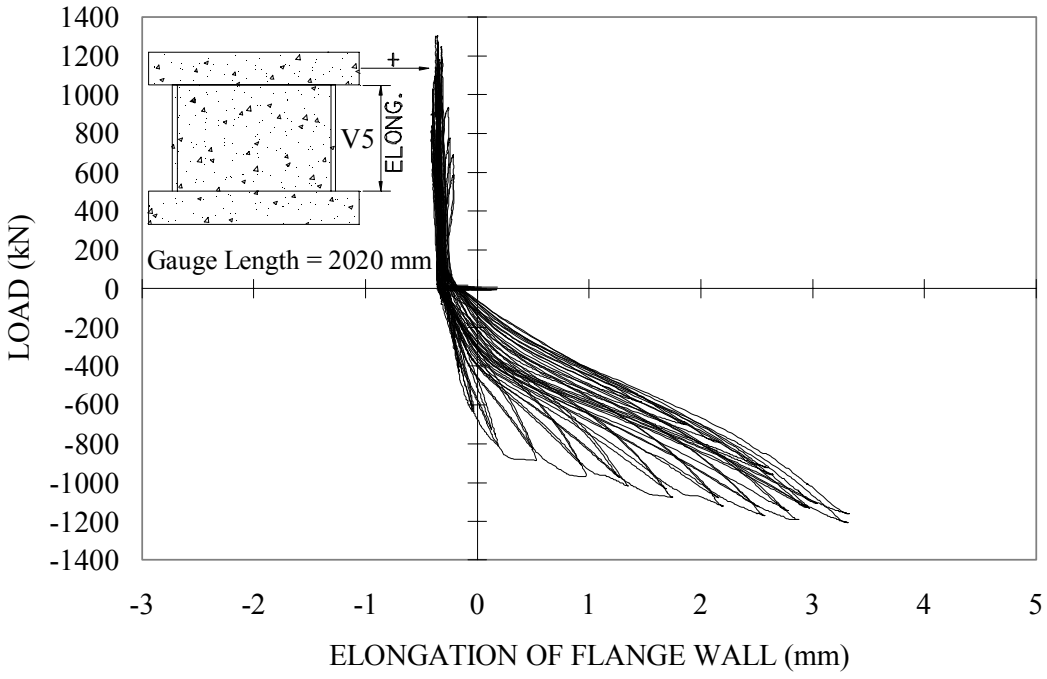

Figure C.16 DP1 V5 Response

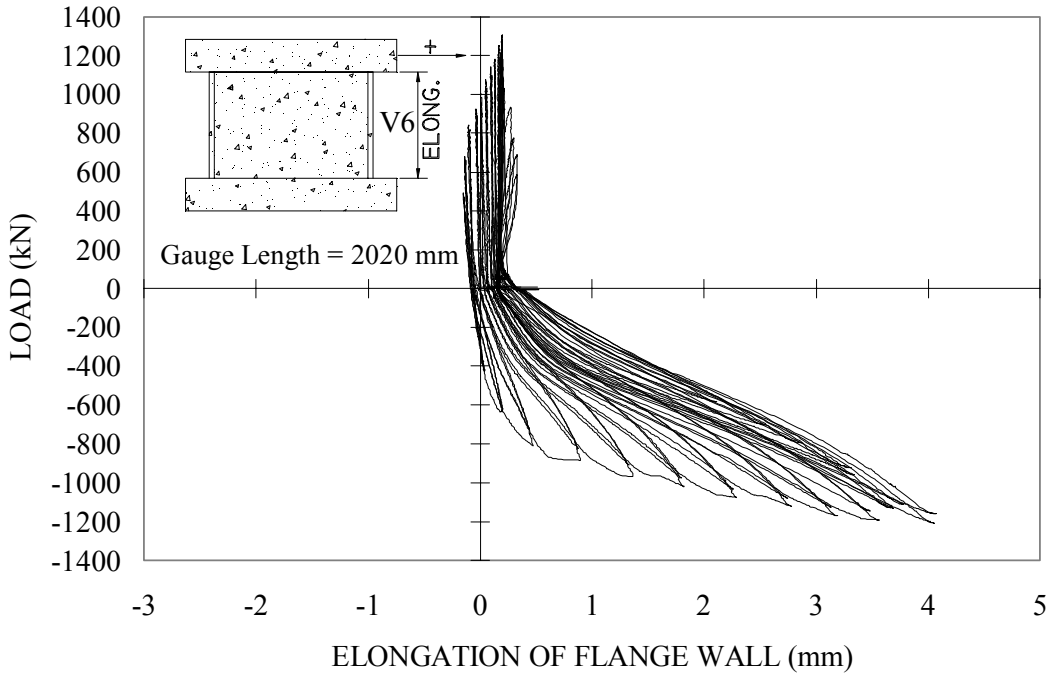

Figure C.17 DP1 V6 Response

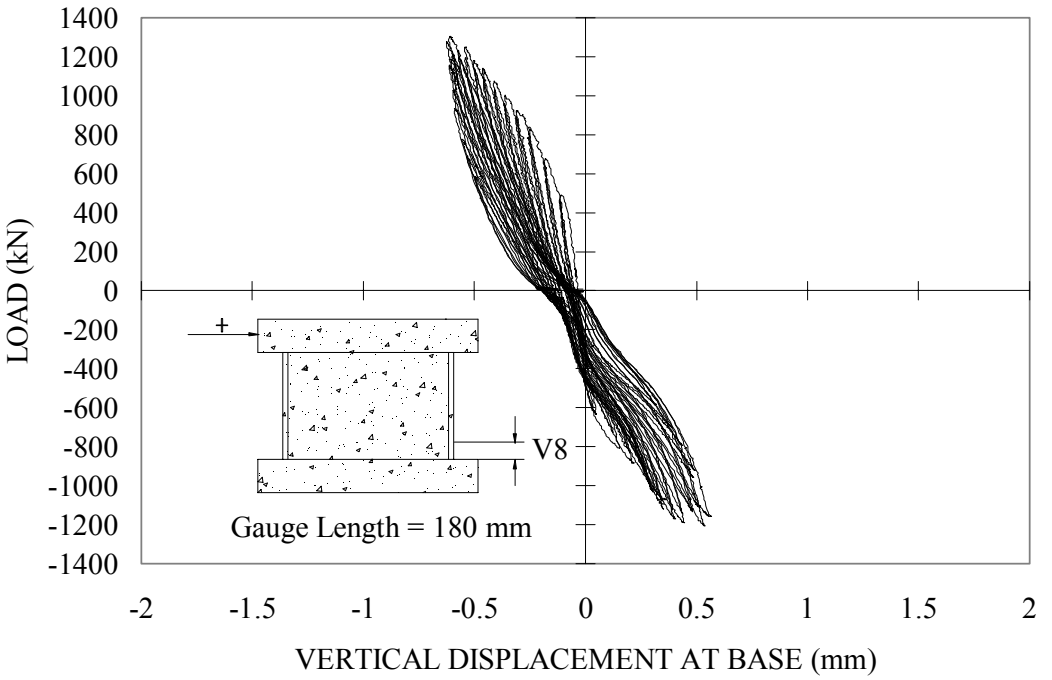

Figure C.18 DP1 V8 Response

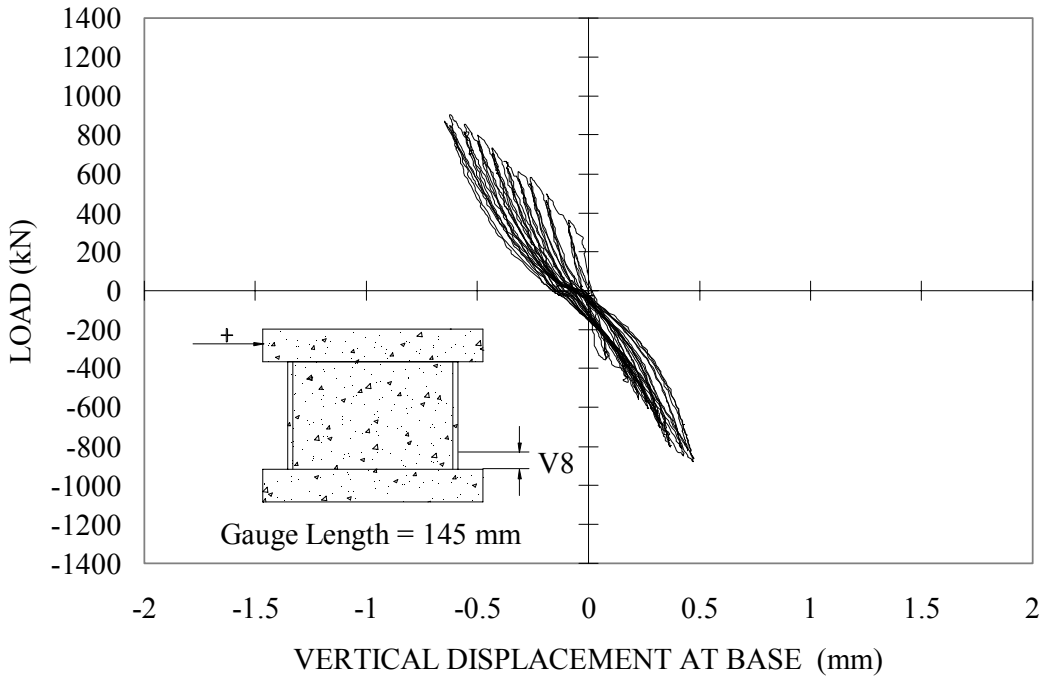

Figure C.19 DP2 V8 Response

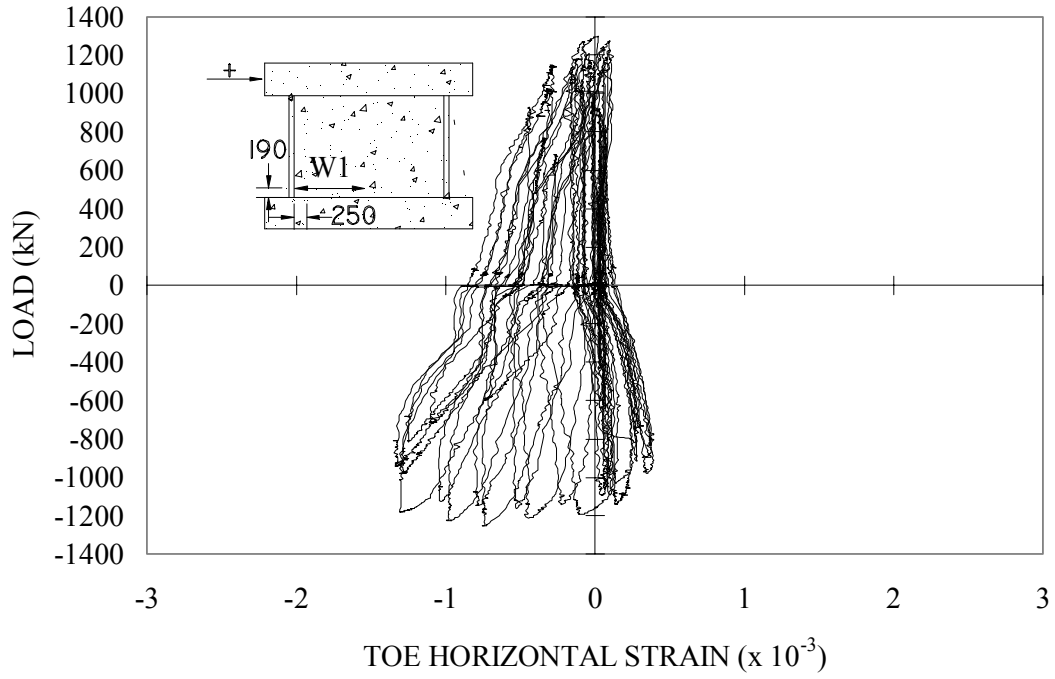

Figure D.1 DP1 W1 Response

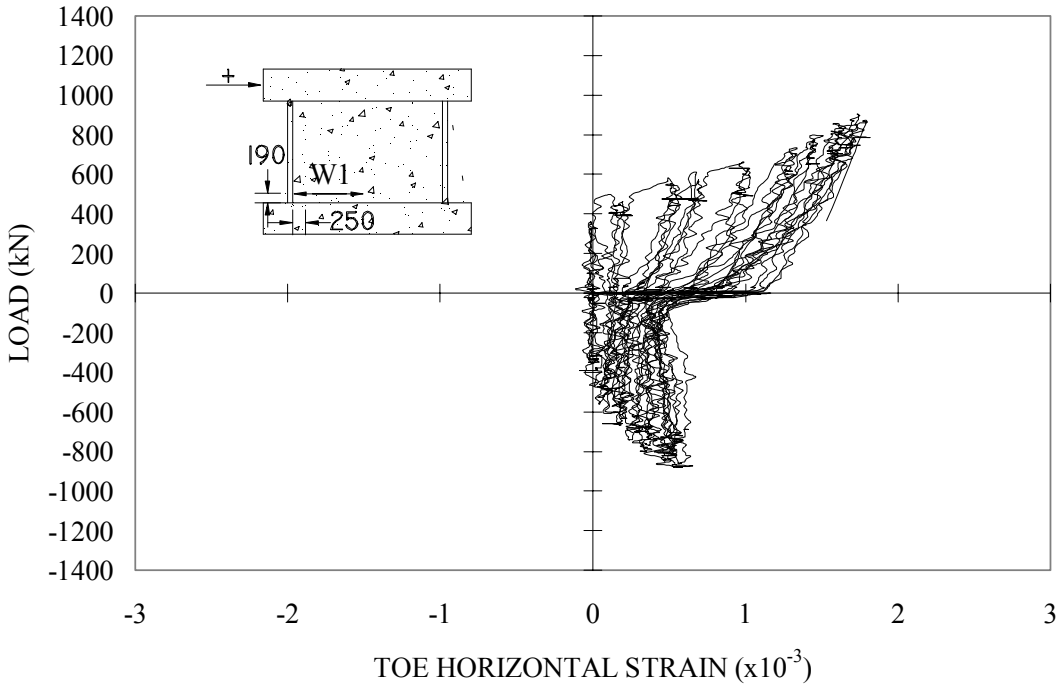

Figure D.2 DP2 W1 Response

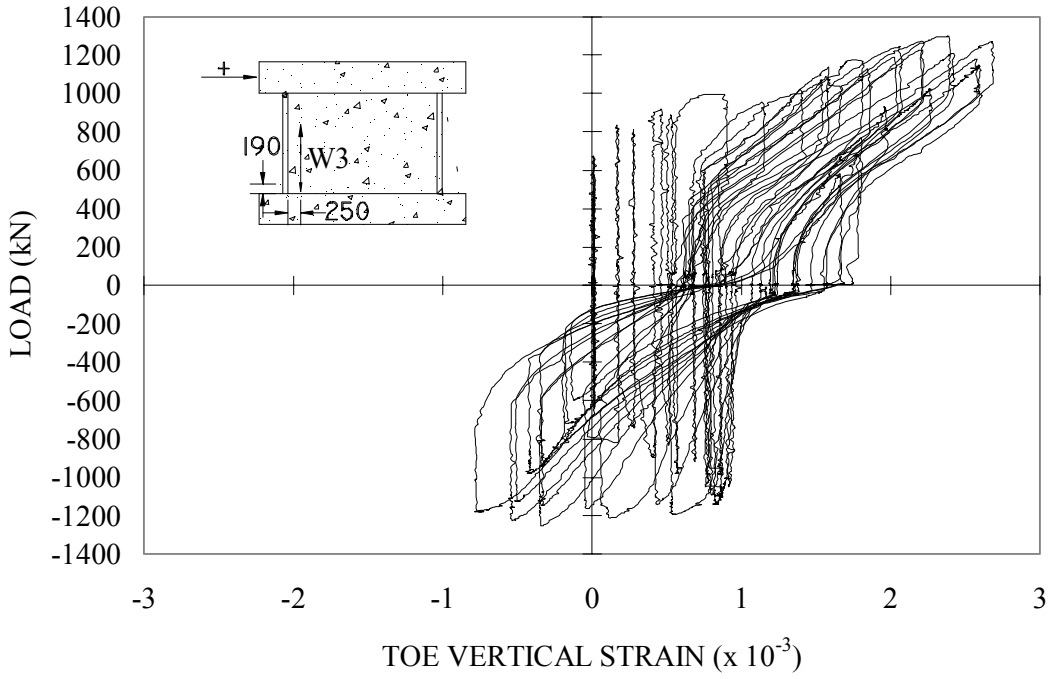

Figure D.3 DP1 W3 Response

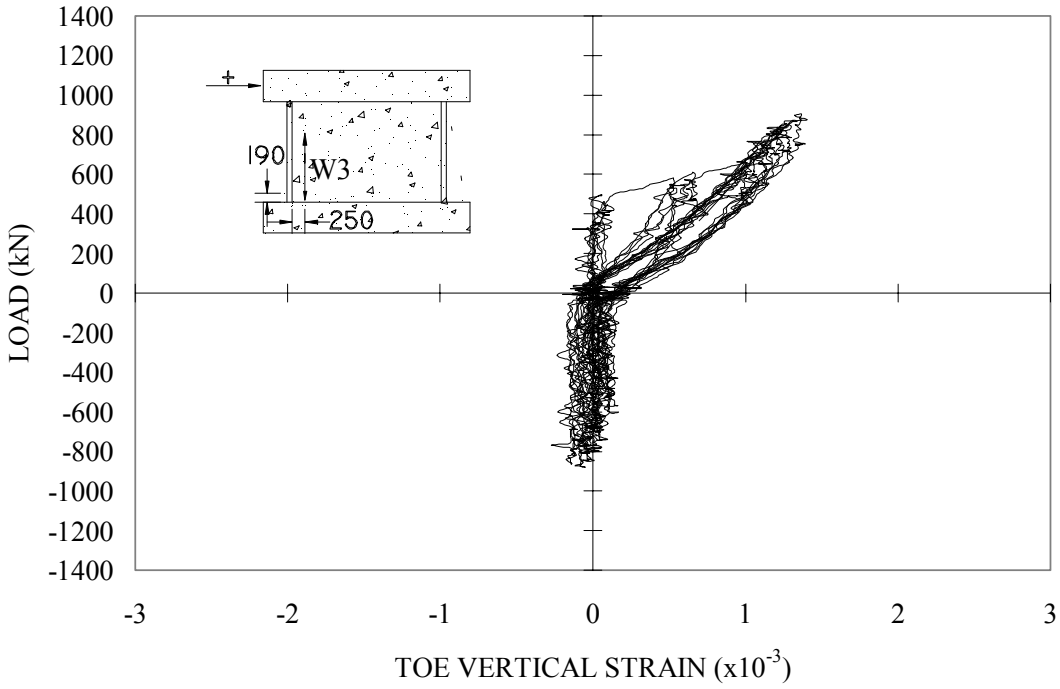

Figure D.4 DP2 W3 Response

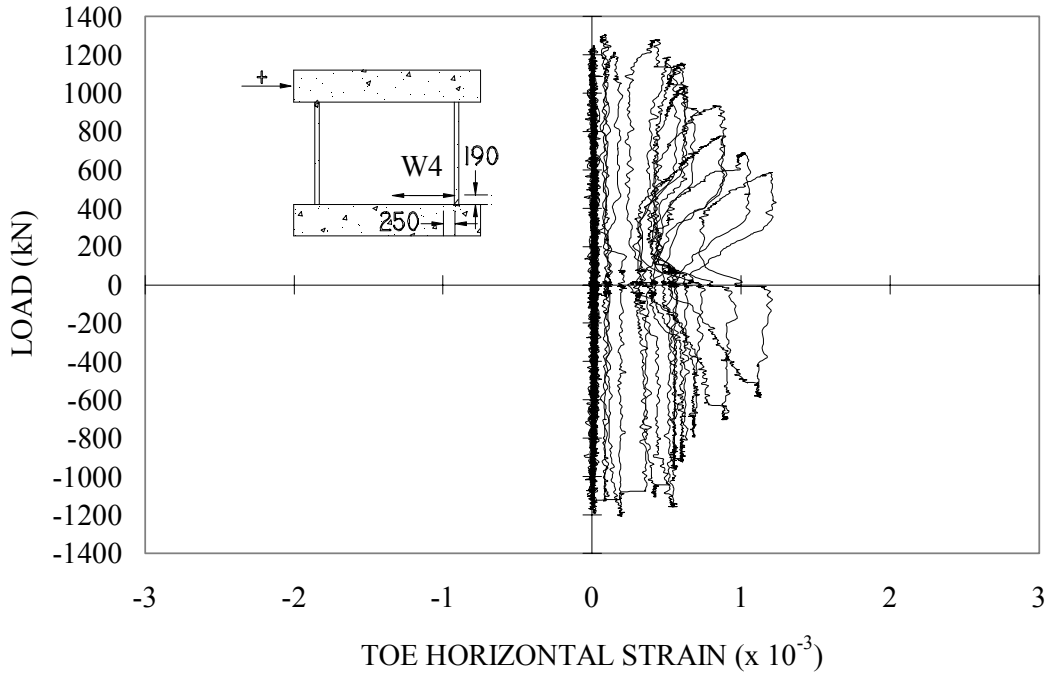

Figure D.5 DP1 W4 Response

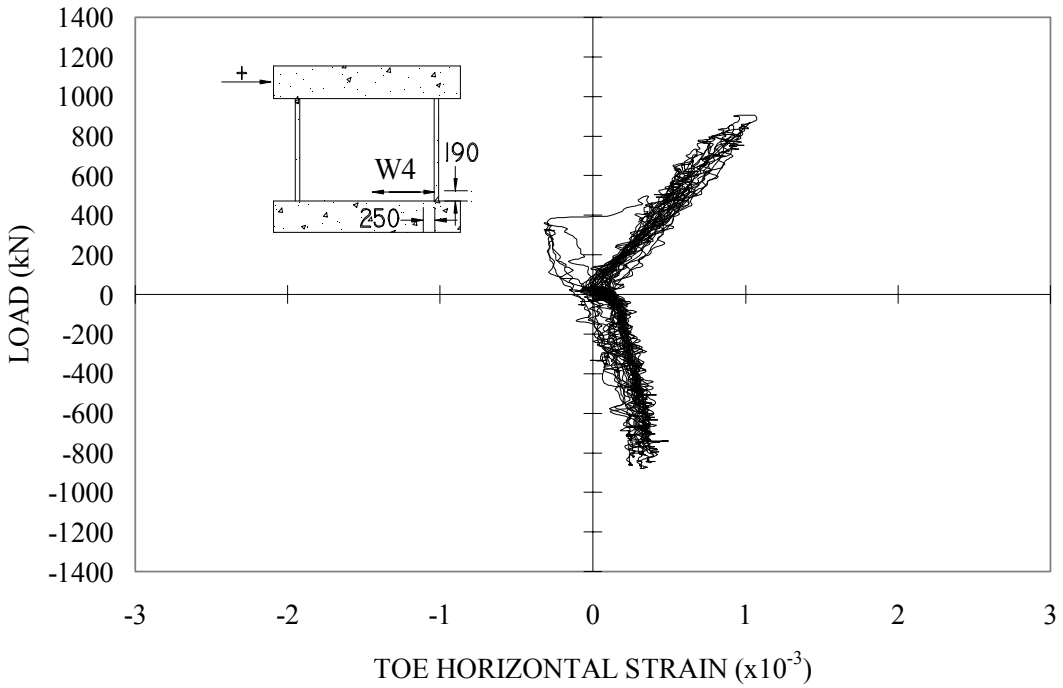

Figure D.6 DP2 W4 Response

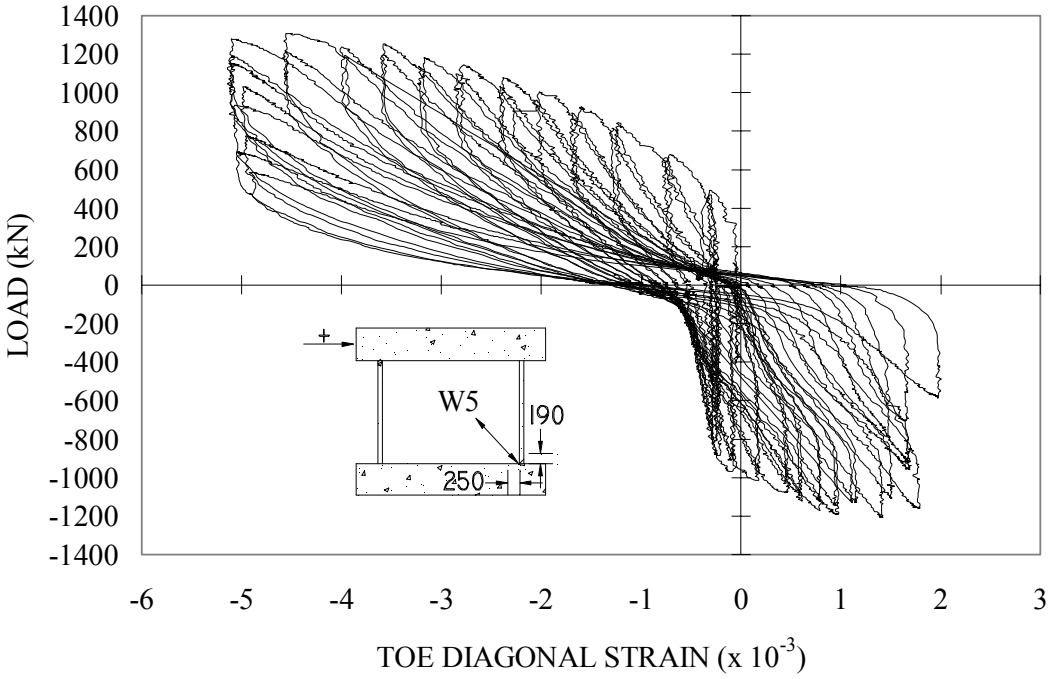

Figure D.7 DP1 W5 Response

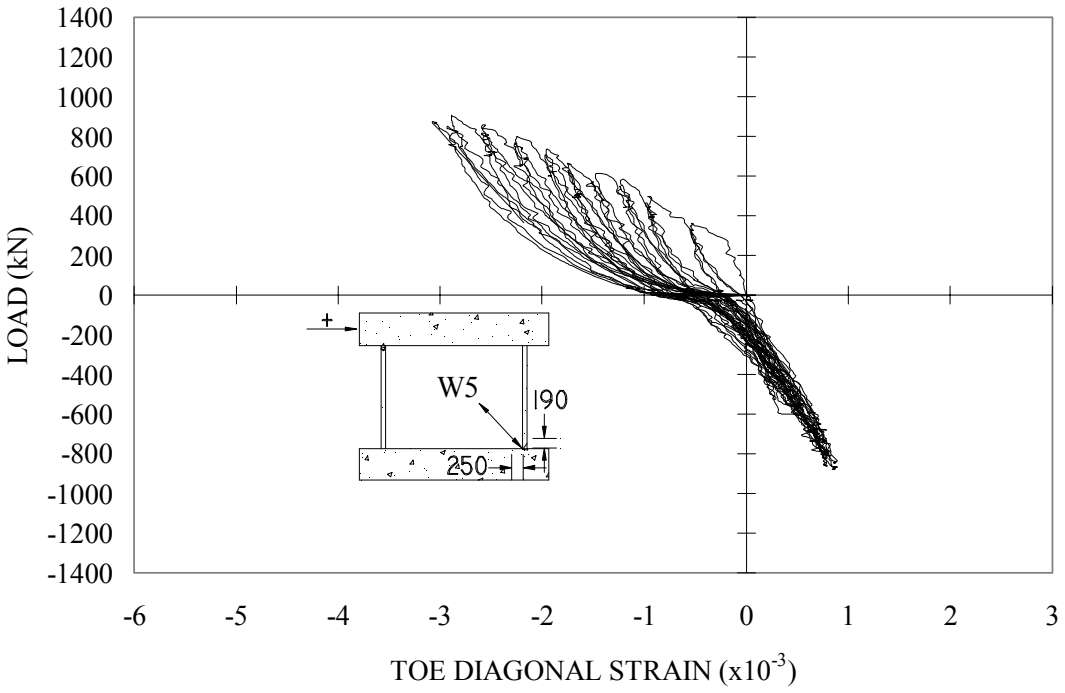

Figure D.8 DP2 W5 Response

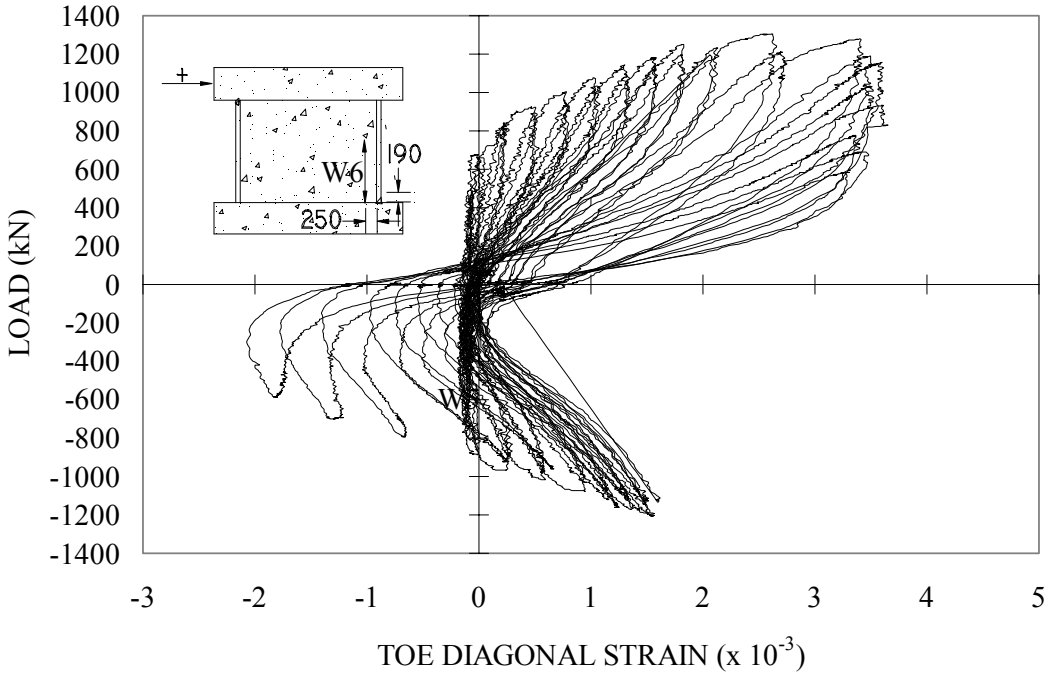

Figure D.9 DP1 W6 Response

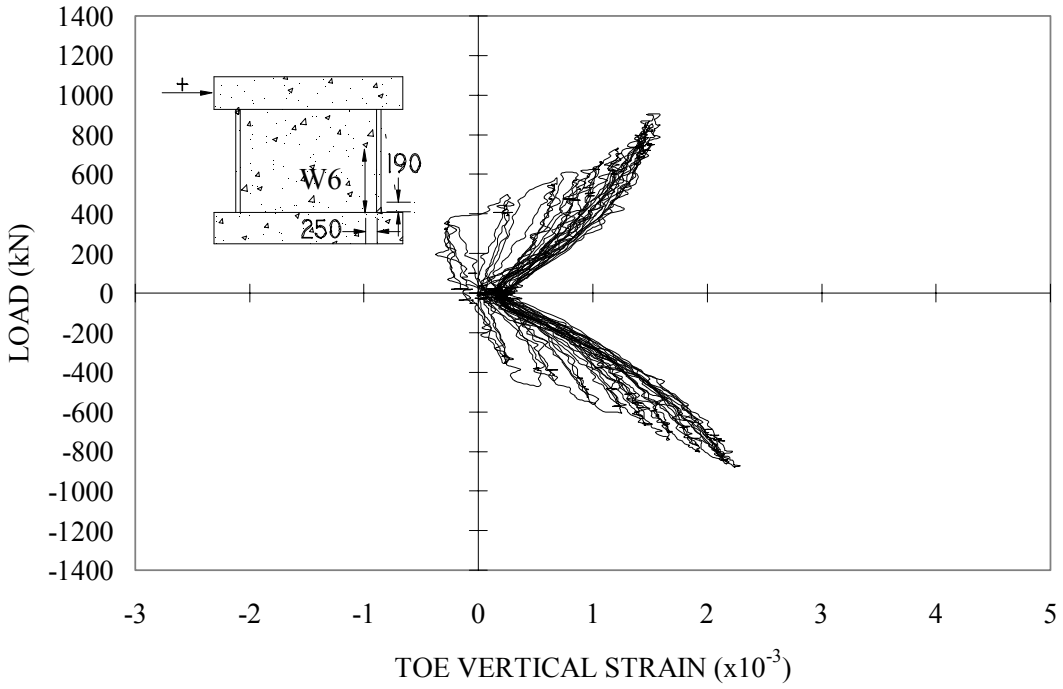

Figure D.10 DP2 W6 Response

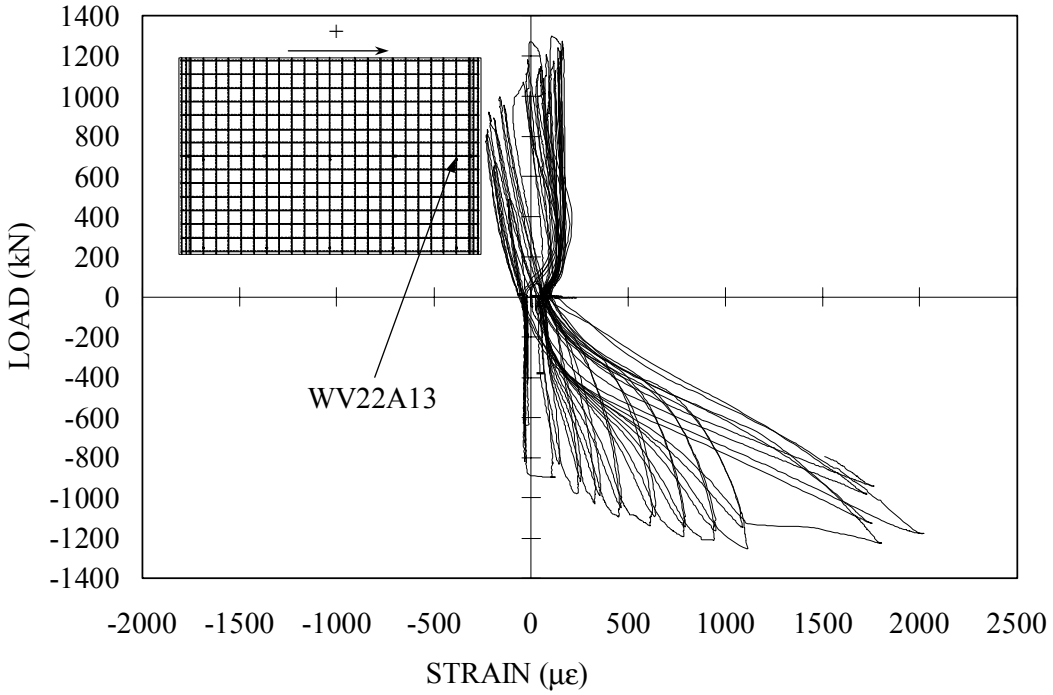

Figure E.1 DP1 Strain Gauge WV22A13

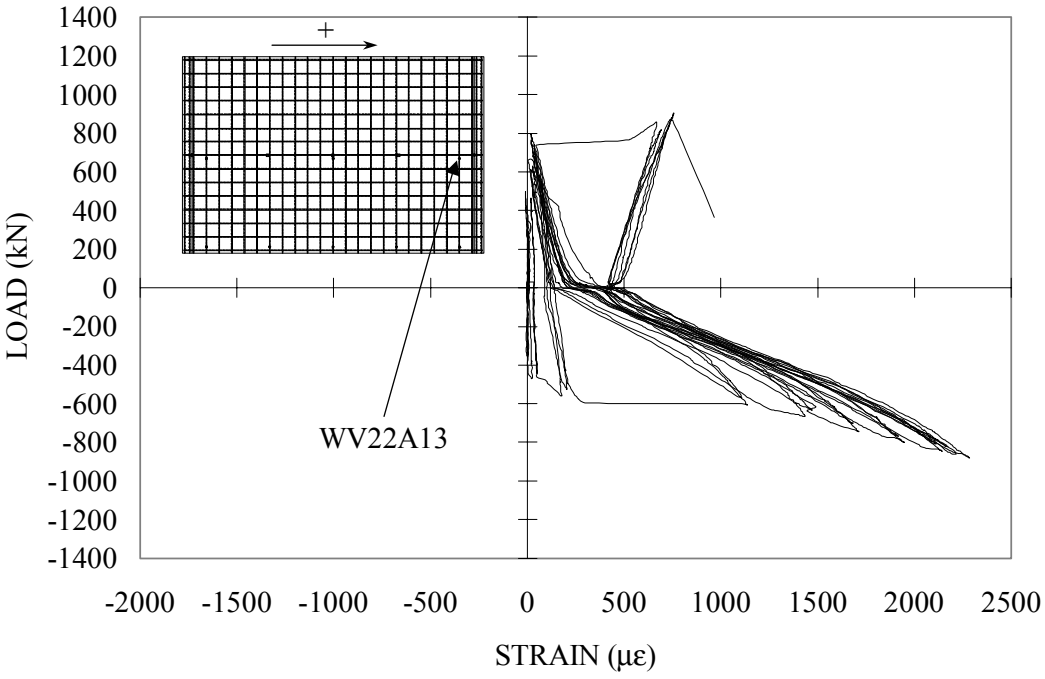

Figure E.2 DP2 Strain Gauge WV22A13

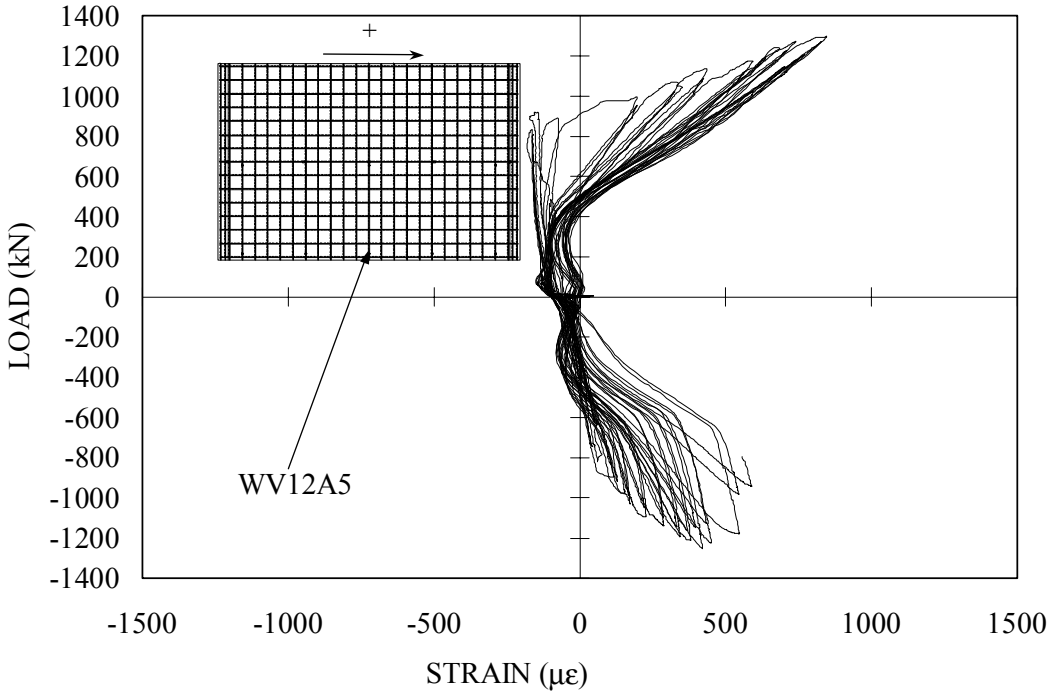

Figure E.3 DP1 Strain Gauge WV12A5

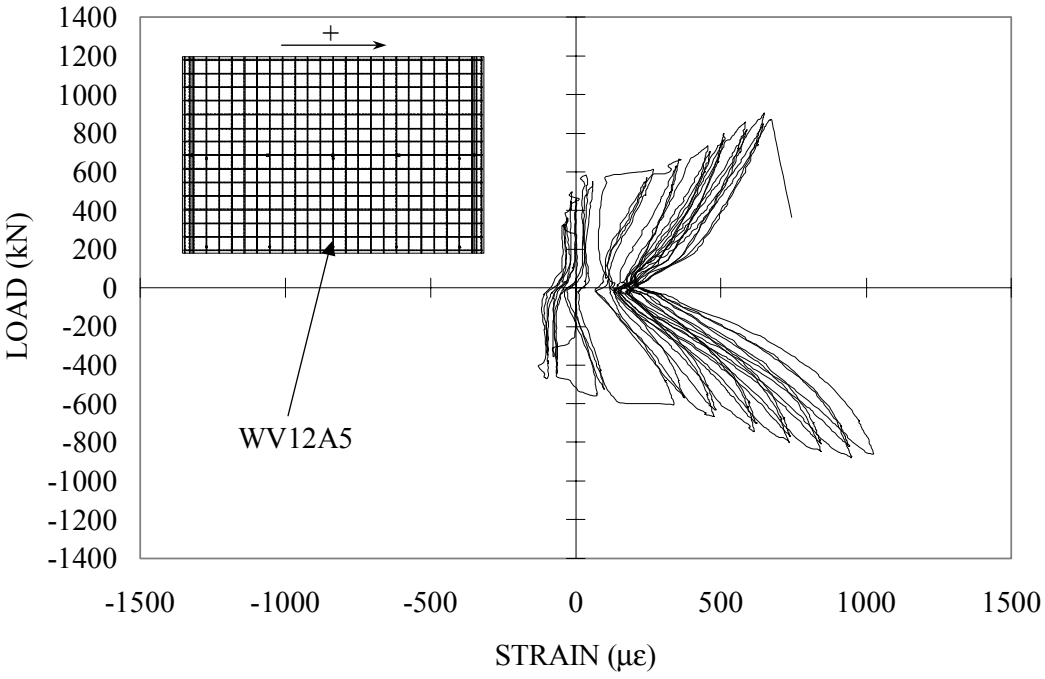

Figure E.4 DP2 Strain Gauge WV12A5

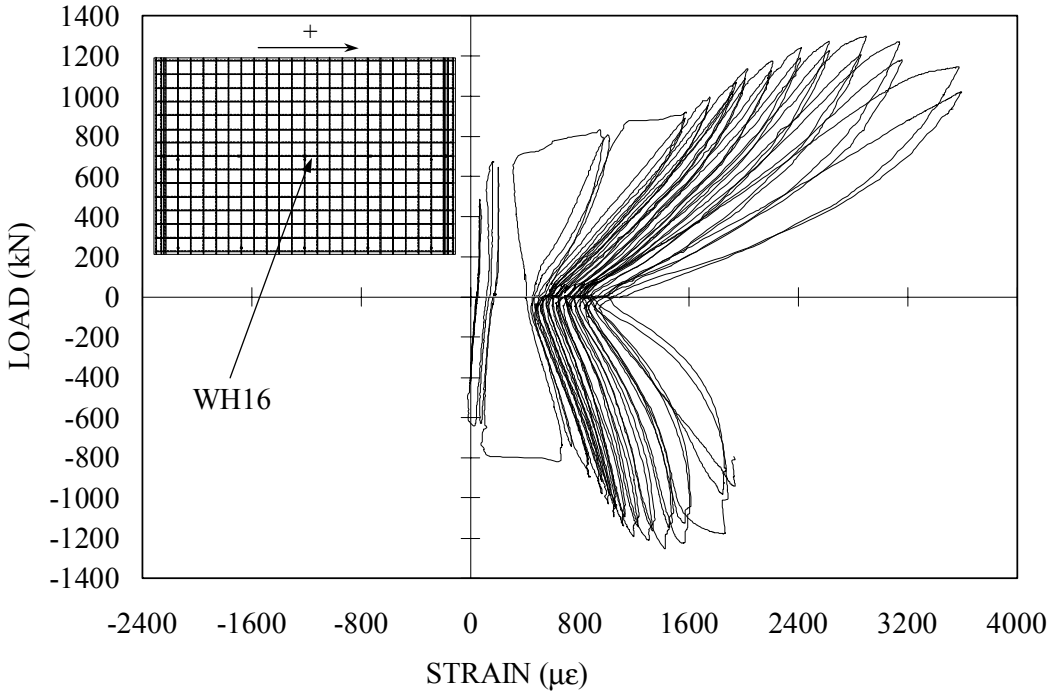

Figure E.5 DP1 Strain Gauge WH16

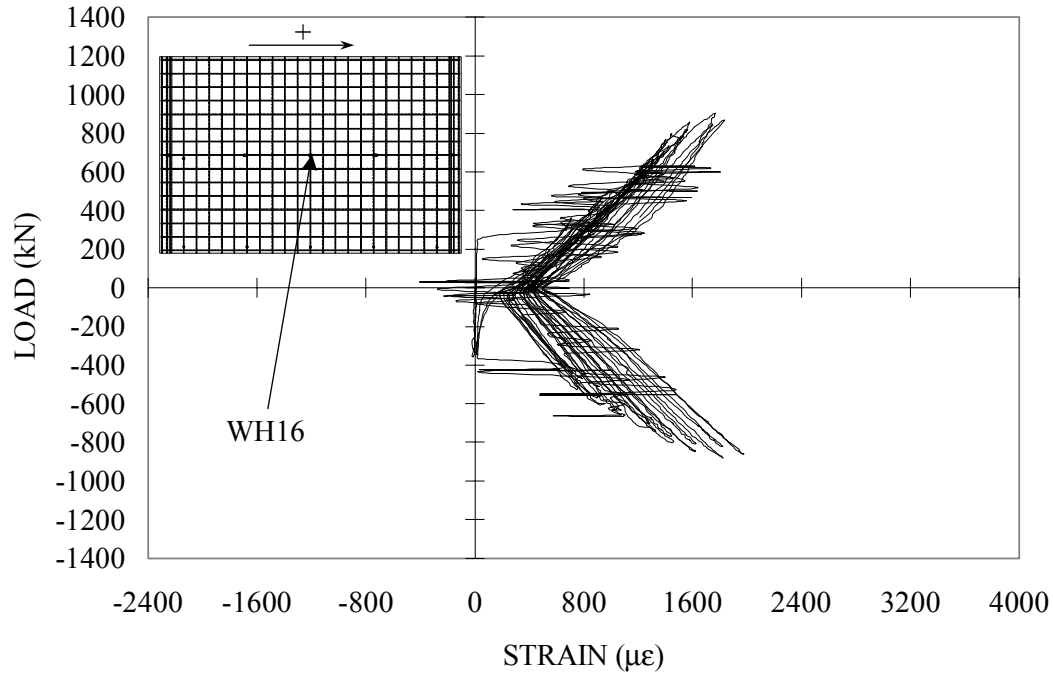

Figure E.6 DP2 Strain Gauge WH16

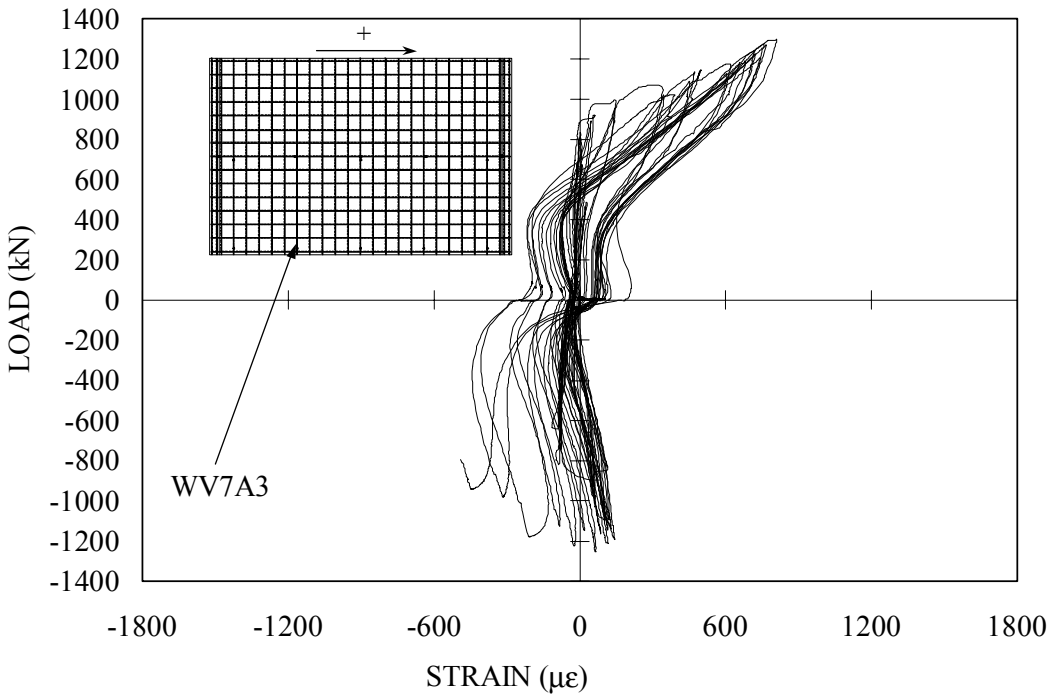

Figure E.7 DP1 Strain Gauge WV7A3

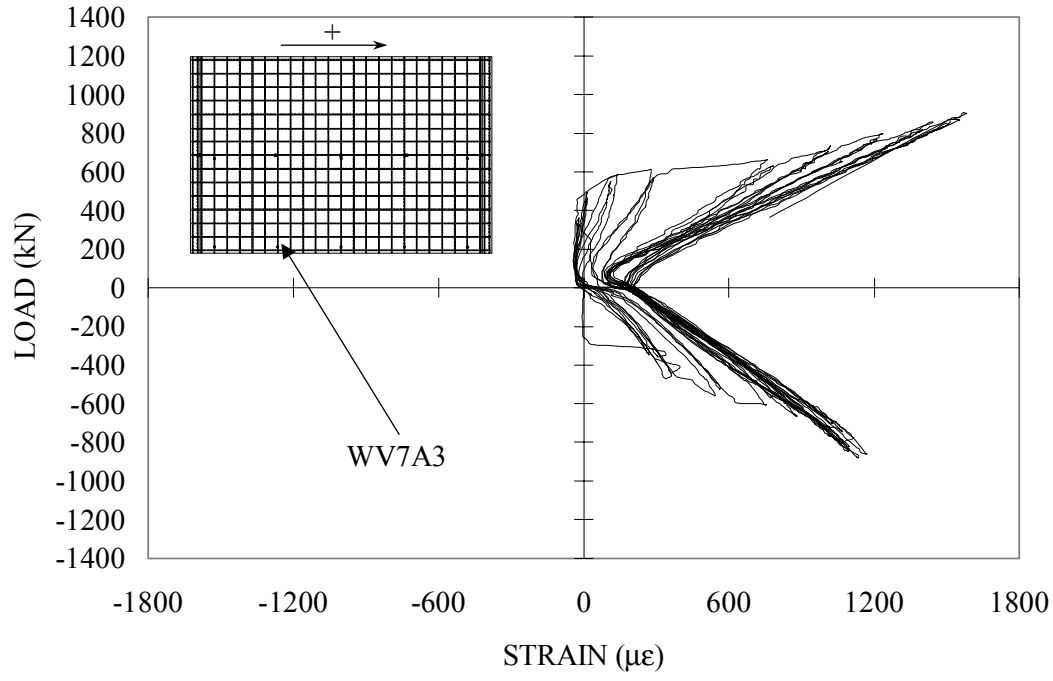

Figure E.8 DP2 Strain Gauge WV7A3

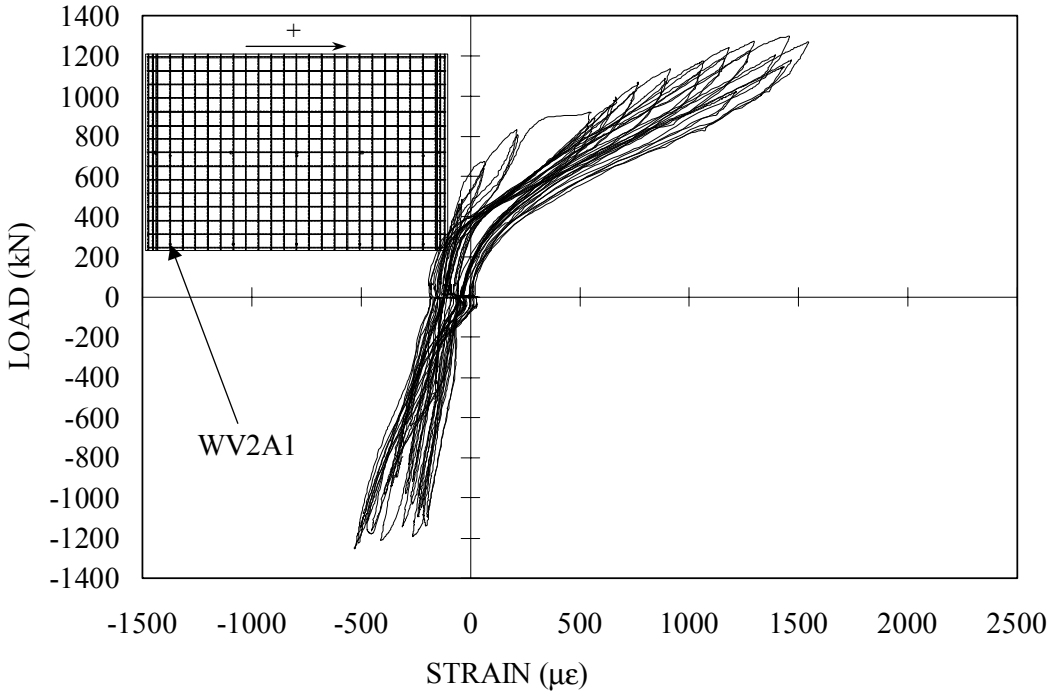

Figure E.9 DP1 Strain Gauge WV2A1

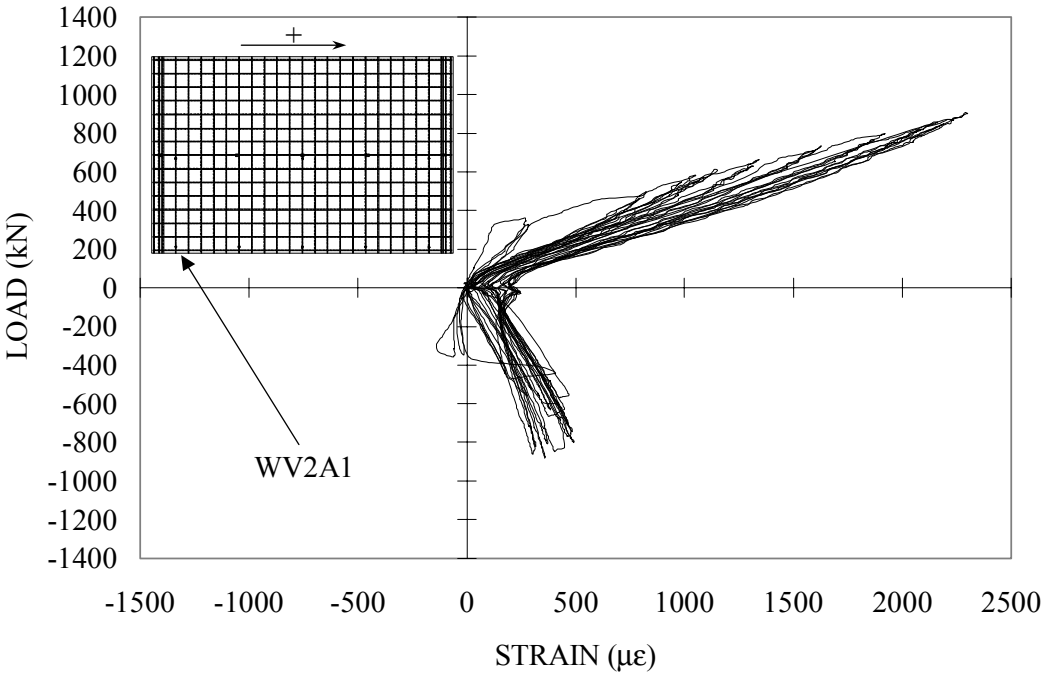

Figure E.10 DP2 Strain Gauge WV2A1

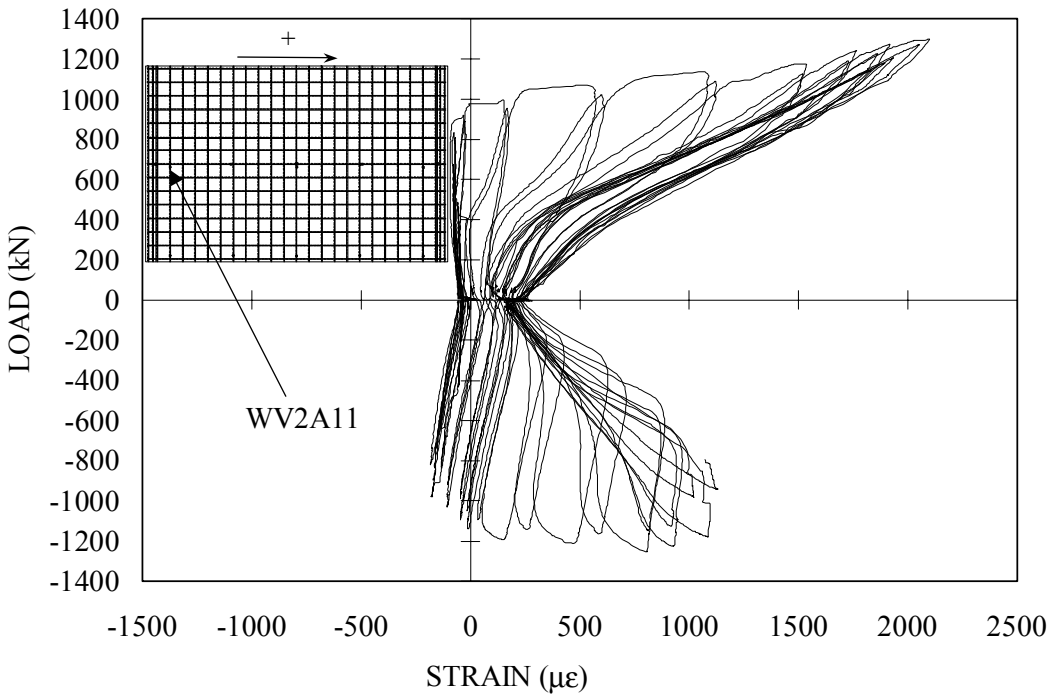

Figure E.11 DP1 Strain Gauge WV2A11

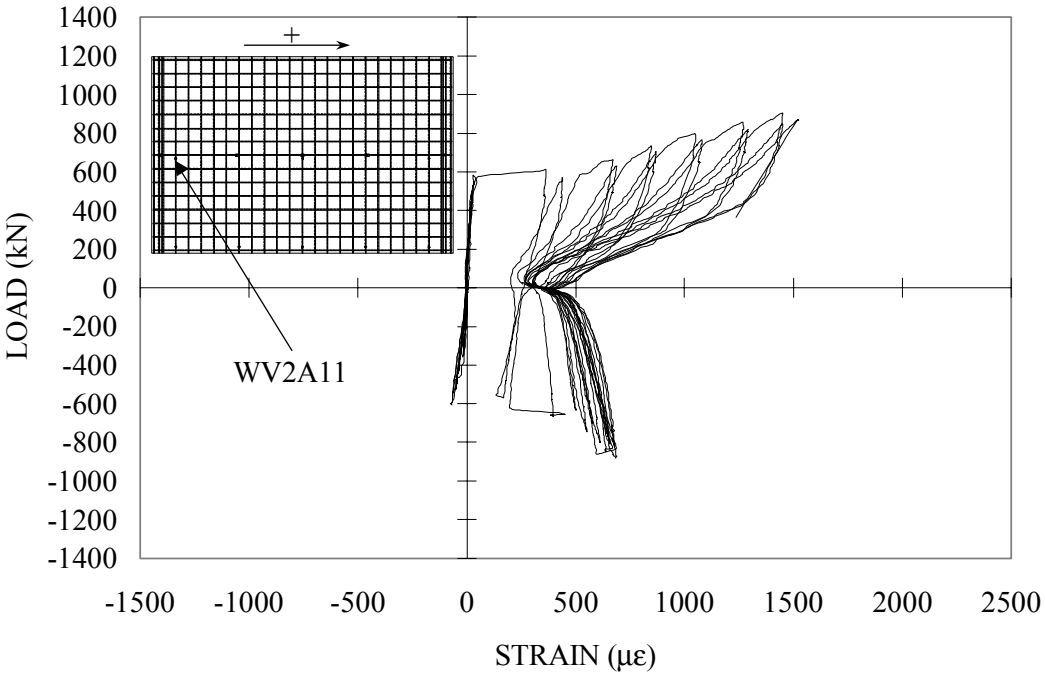

Figure E.12 DP2 Strain Gauge WV2A11

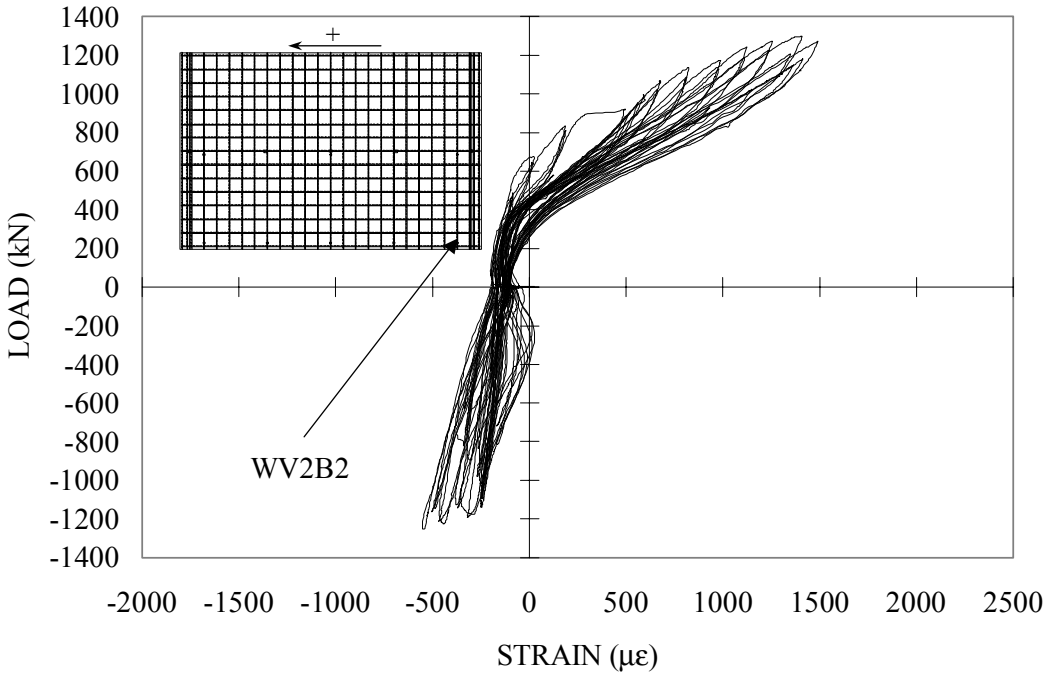

Figure E.13 DP1 Strain Gauge WV2B2

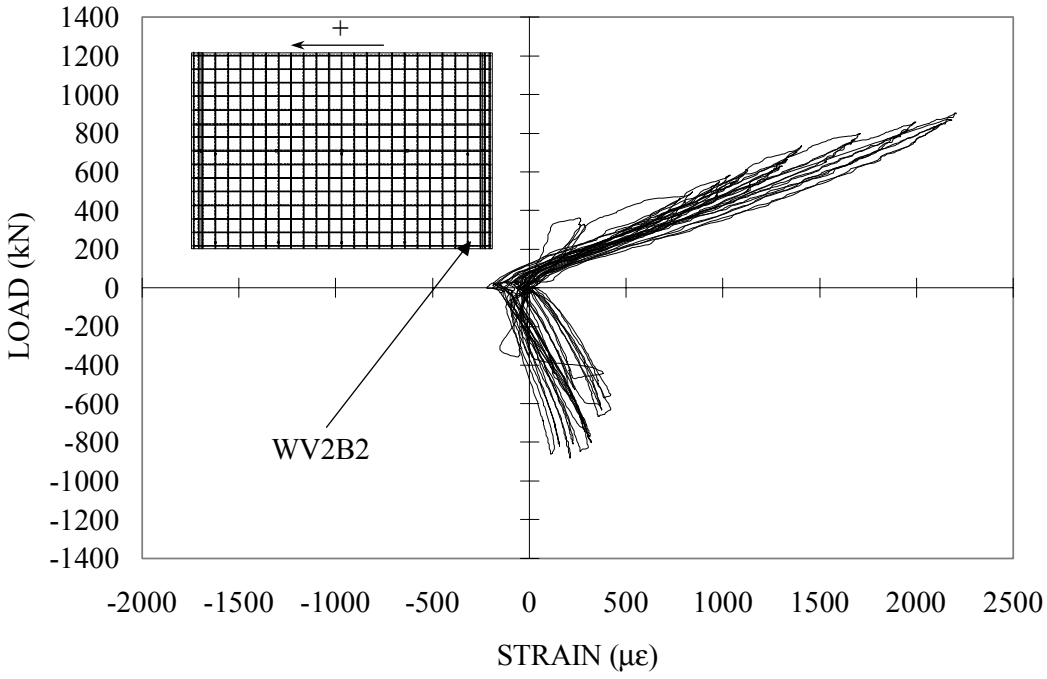

Figure E.14 DP2 Strain Gauge WV2B2

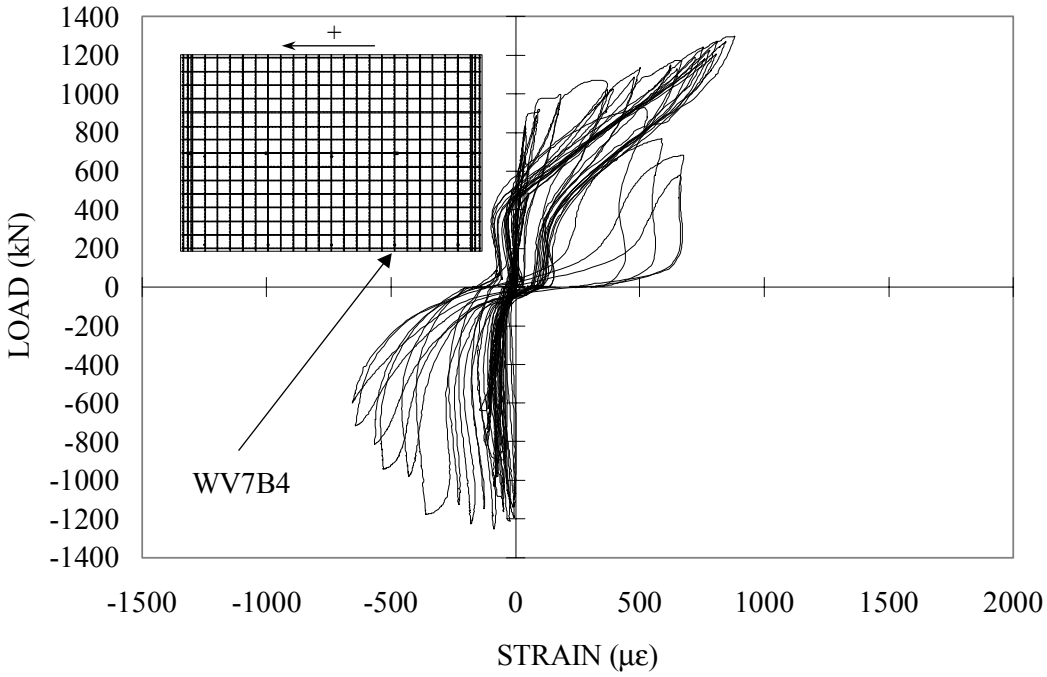

Figure E.15 DP1 Strain Gauge WV7B4

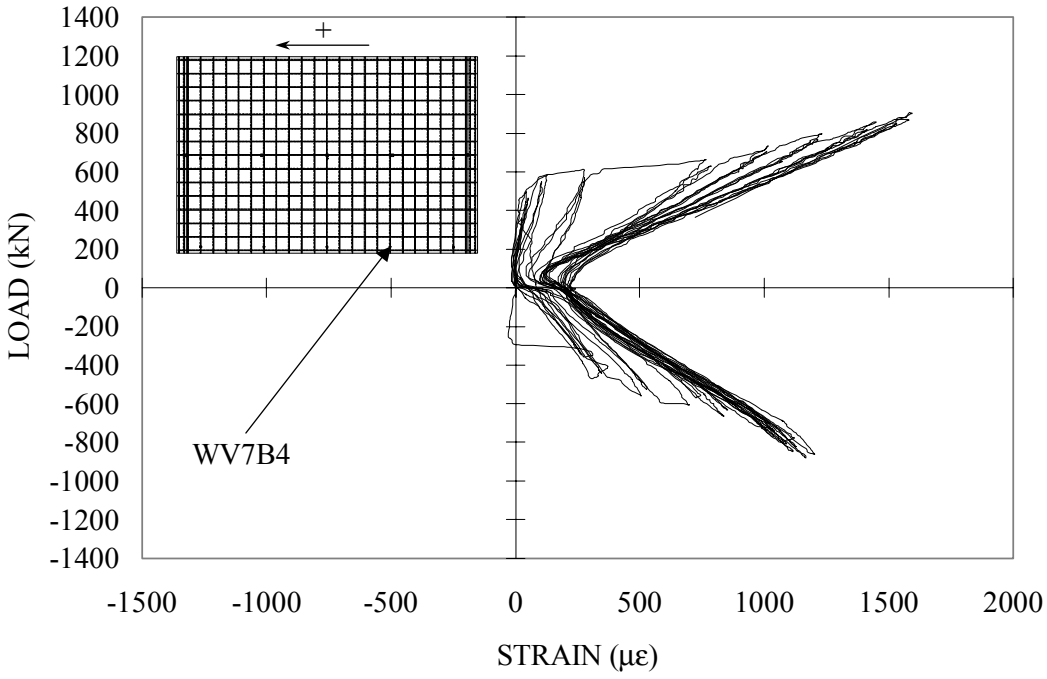

Figure E.16 DP2 Stain Gauge WV7B4

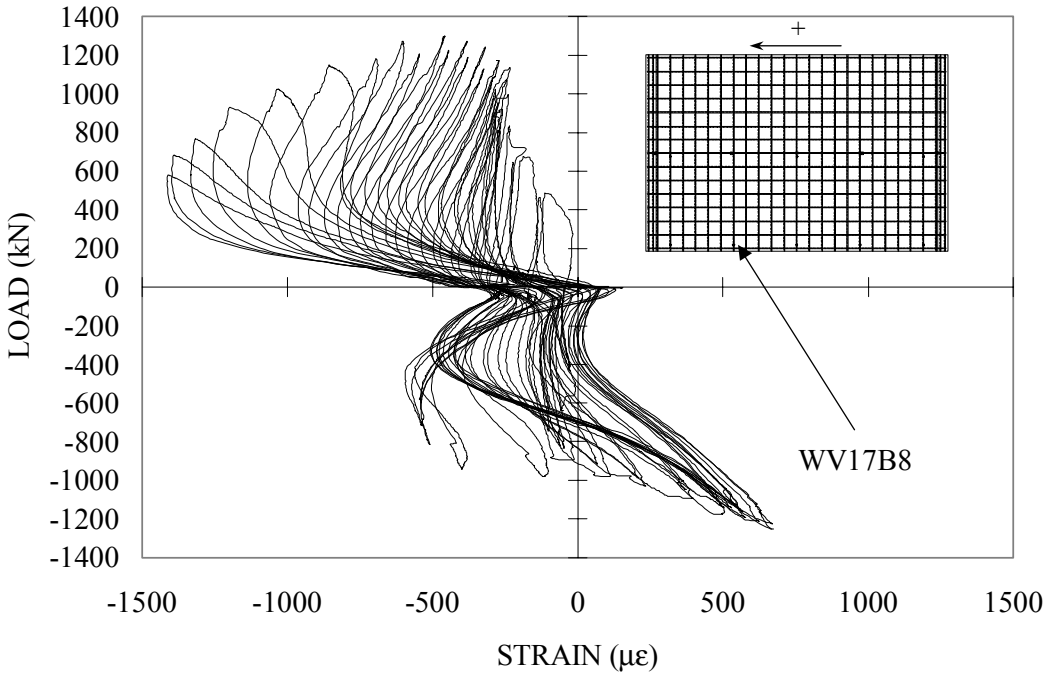

Figure E.17 DP1 Strain Gauge WV17B8

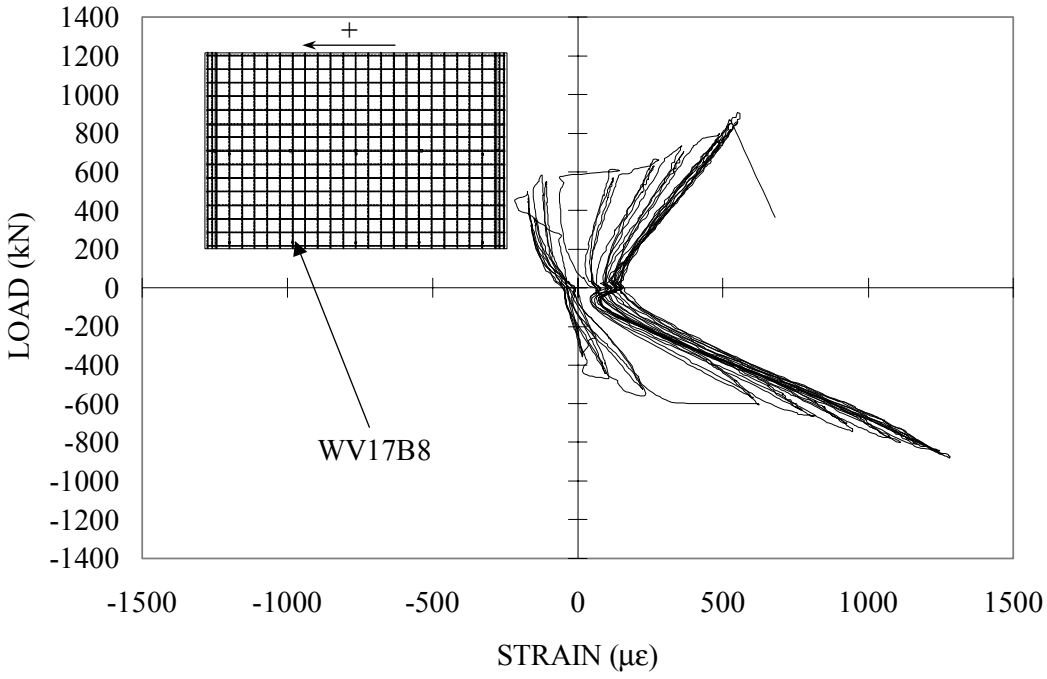

Figure E.18 DP2 Strain Gauge WV17B8

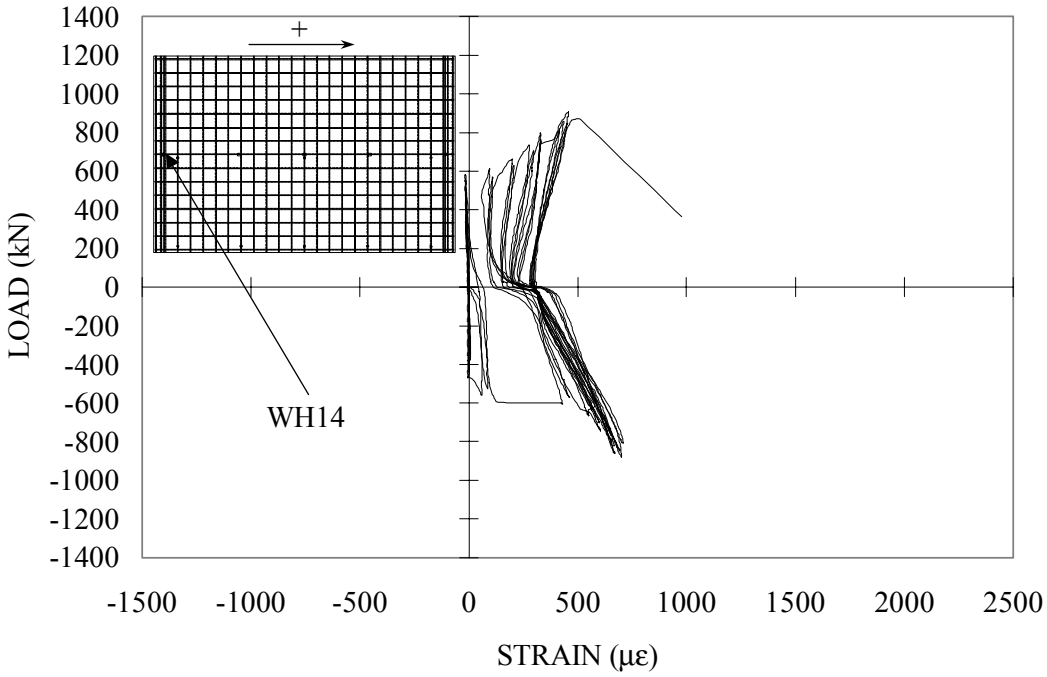

Figure E.19 DP2 Strain Gauge WH14

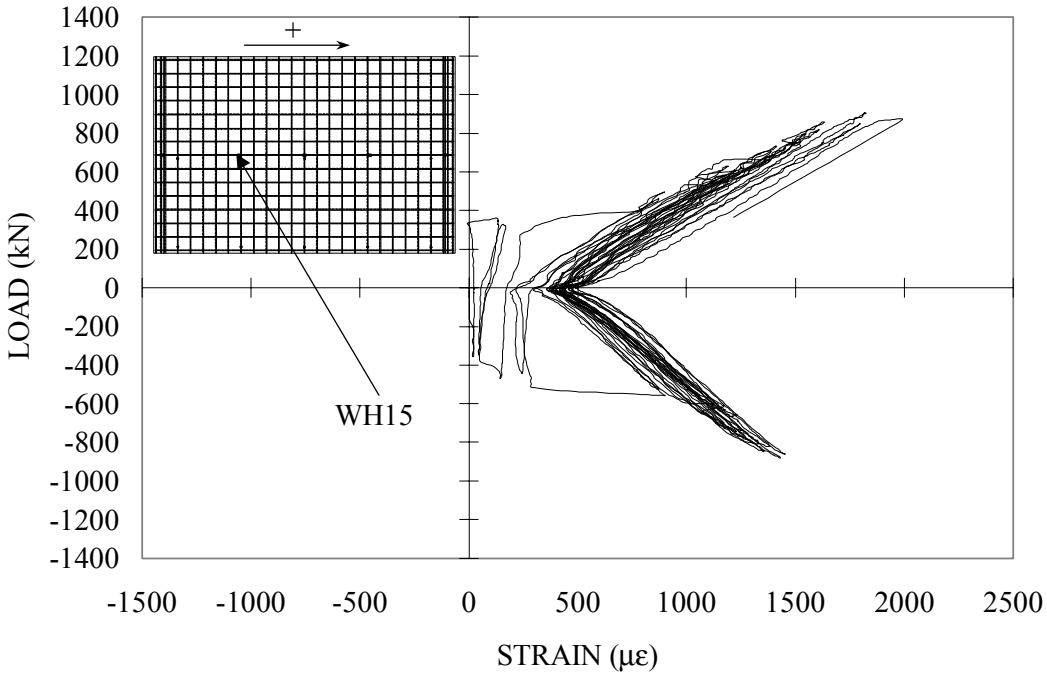

Figure E.20 DP2 Strain Gauge WH15

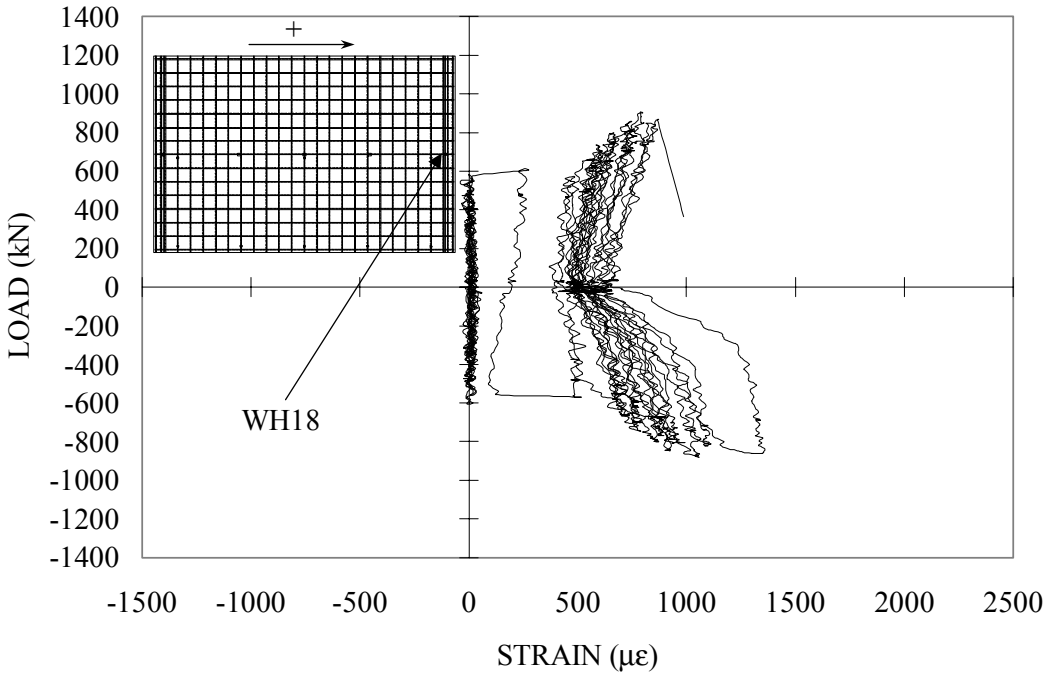

Figure E.21 DP2 Strain Gauge WH18

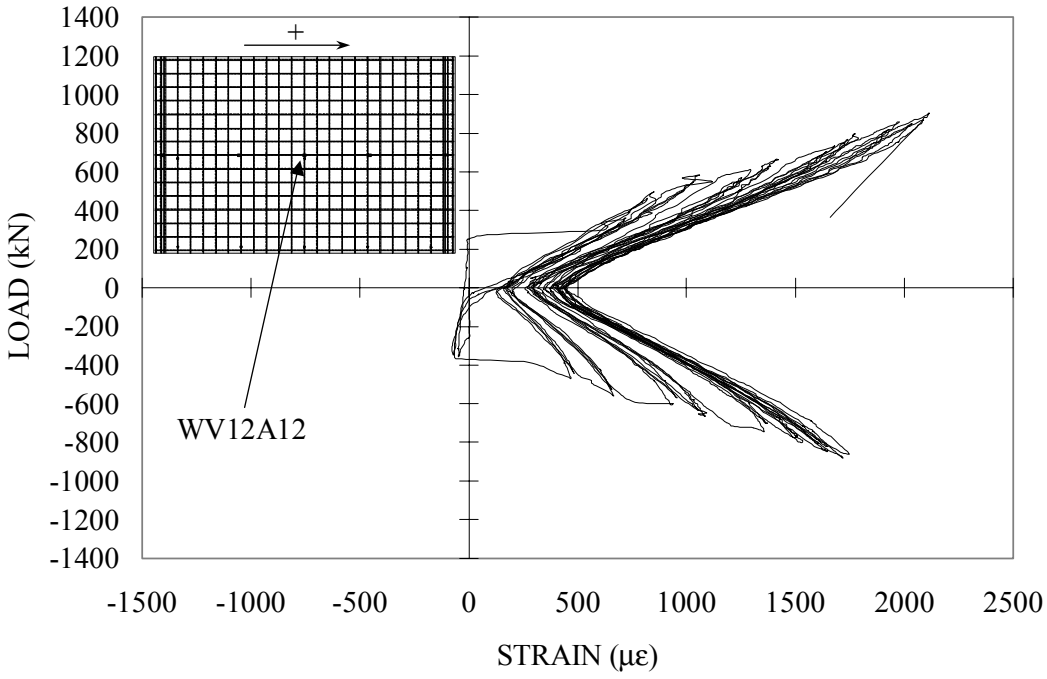

Figure E.22 DP2 Strain Gauge WV12A12

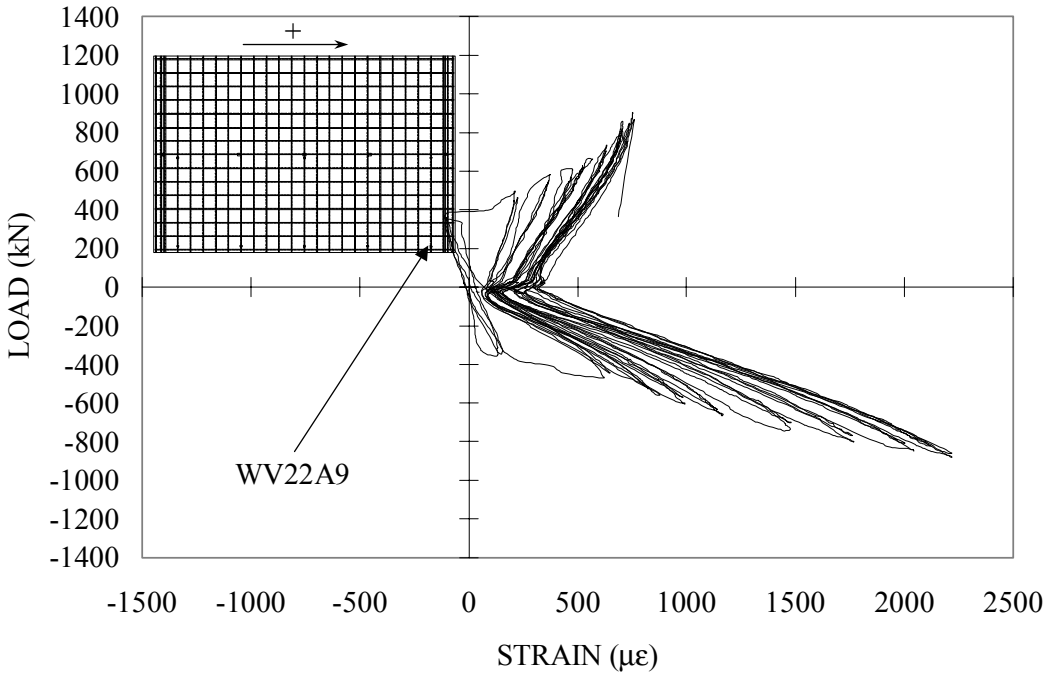

Figure E.23 DP2 Strain Gauge WV22A9

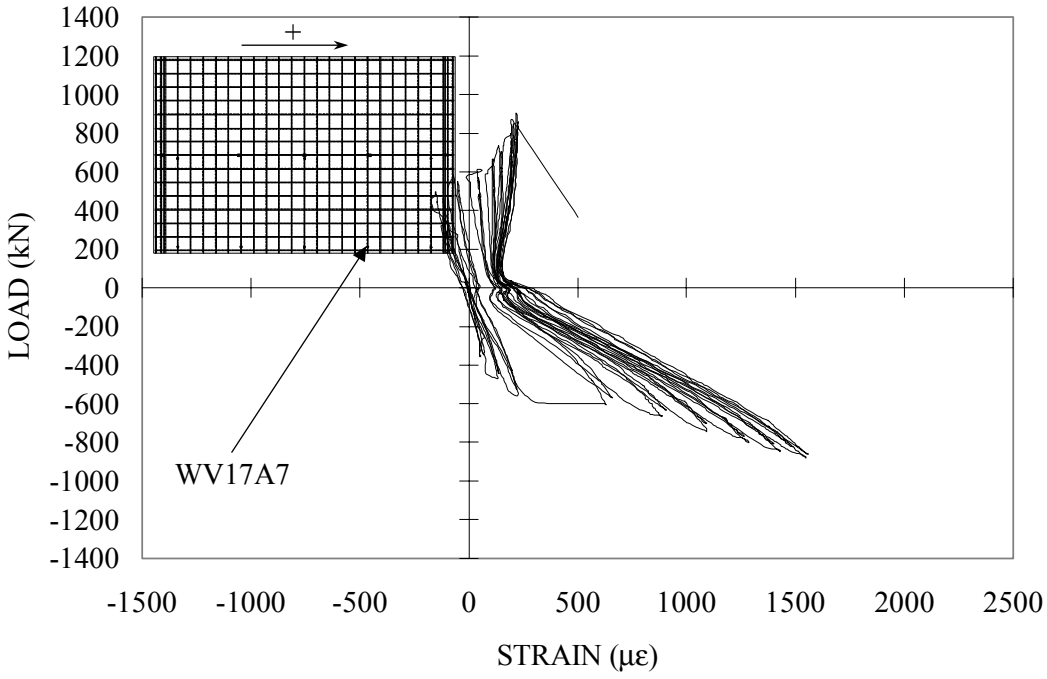

Figure E.24 DP2 Strain Gauge WV17A7

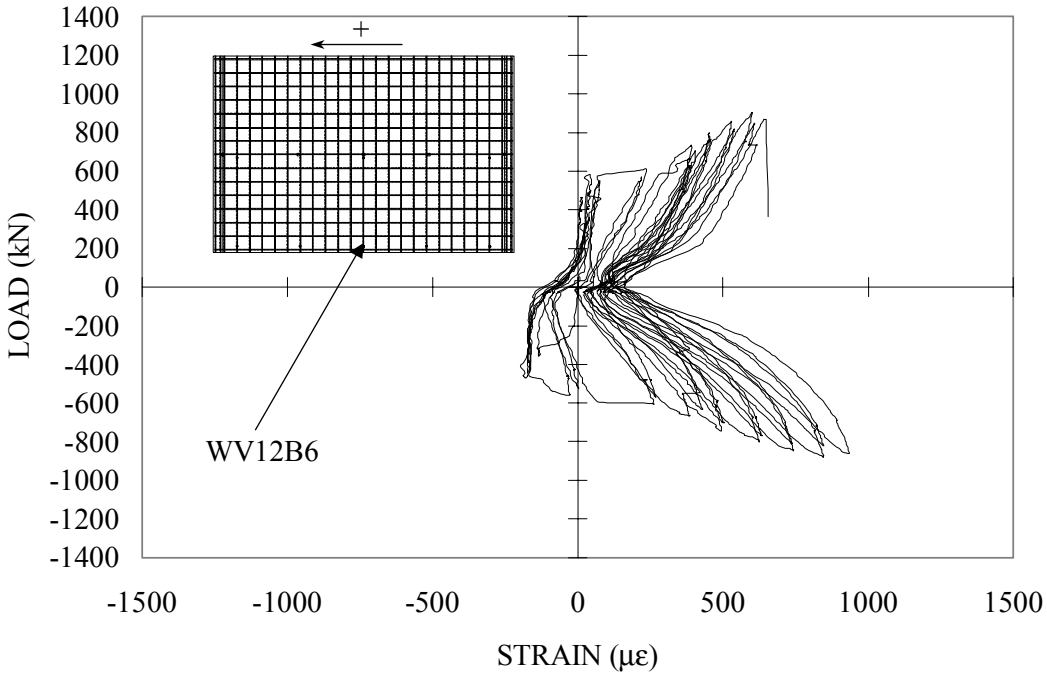

Figure E.25 DP2 Strain Gauge WV12B6

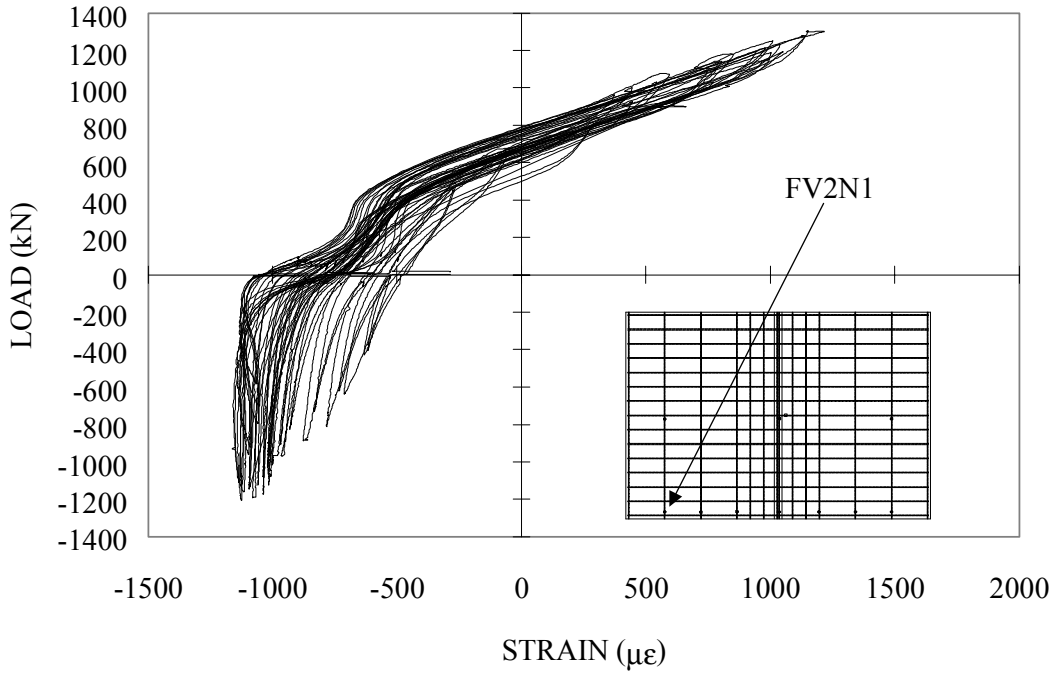

Figure F.1 DP1 Strain Gauge FV2N1

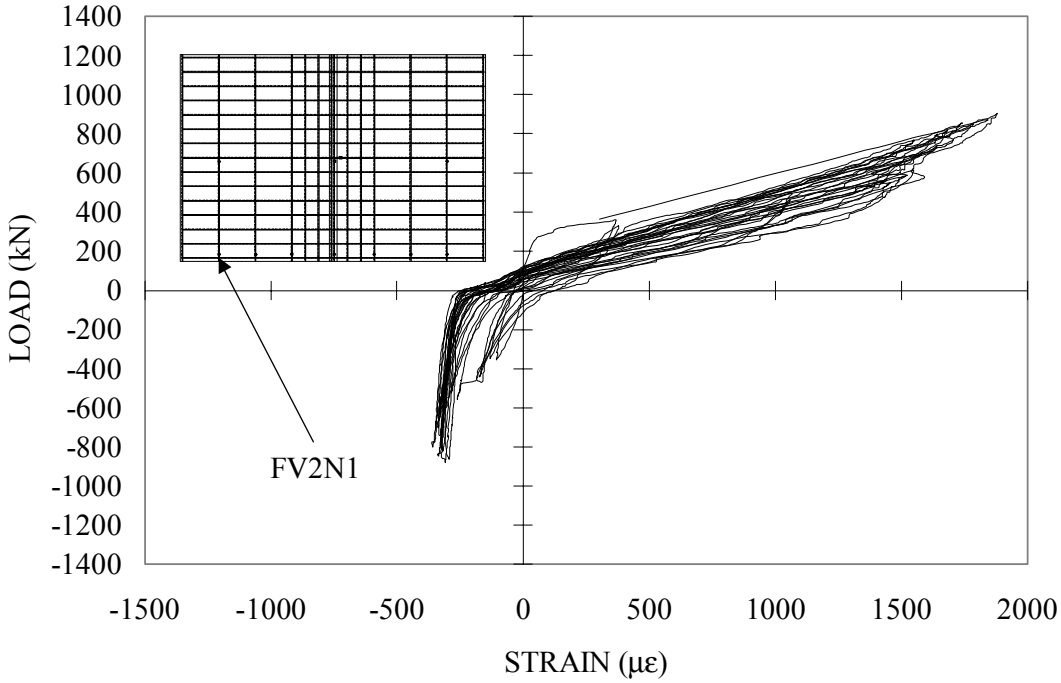

Figure F.2 DP2 Strain Gauge FV2N1

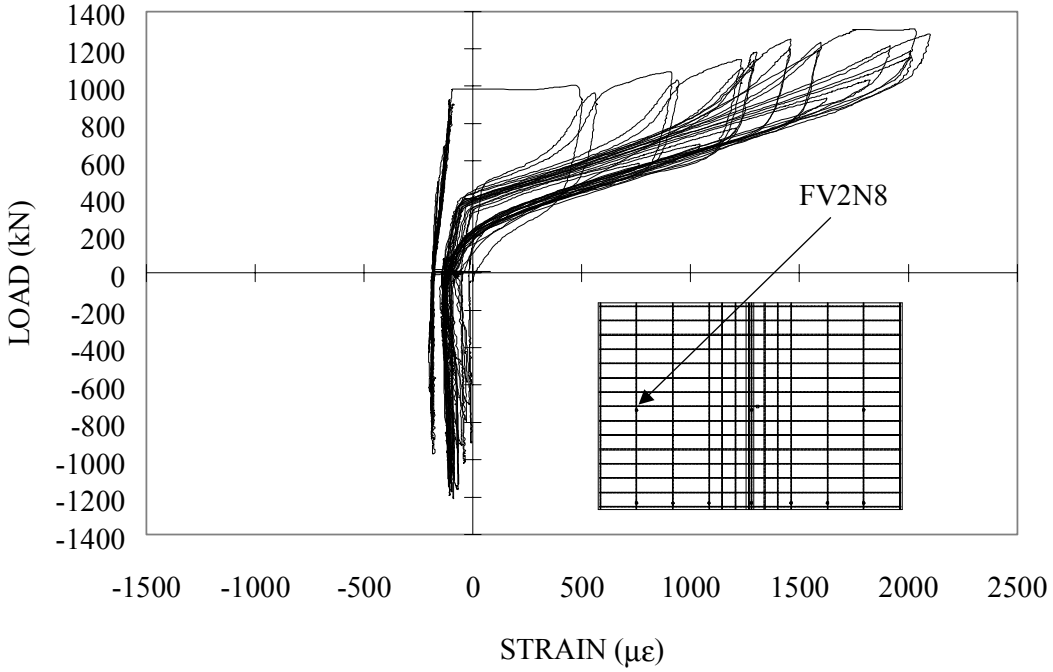

Figure F.3 DP1 Strain Gauge FV2N8

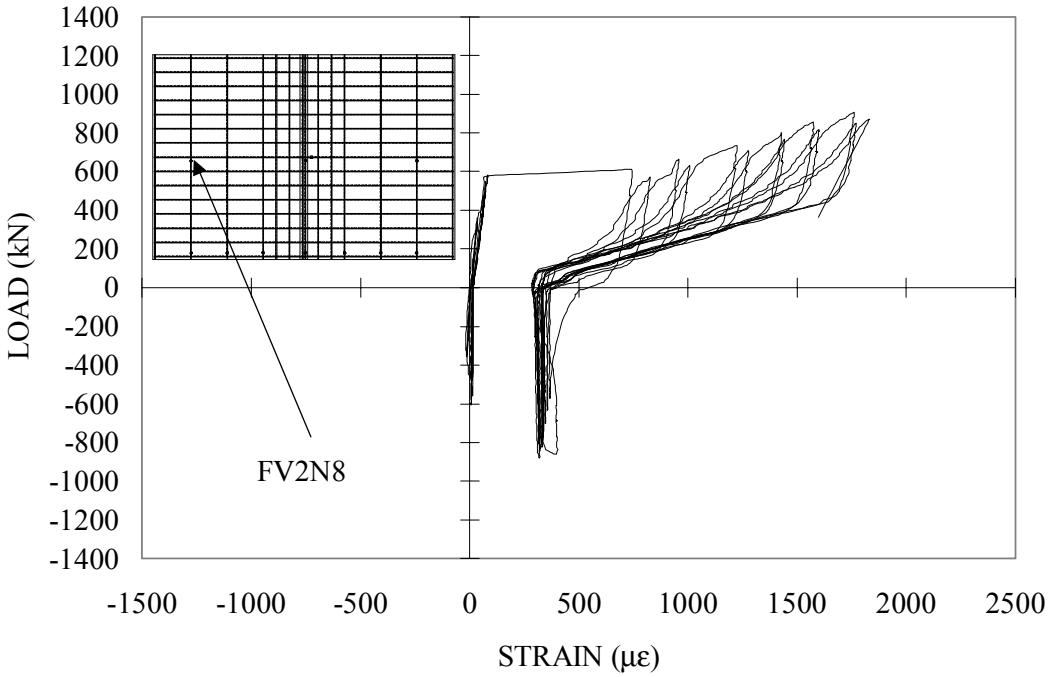

Figure F.4 DP2 Strain Gauge FV2N8

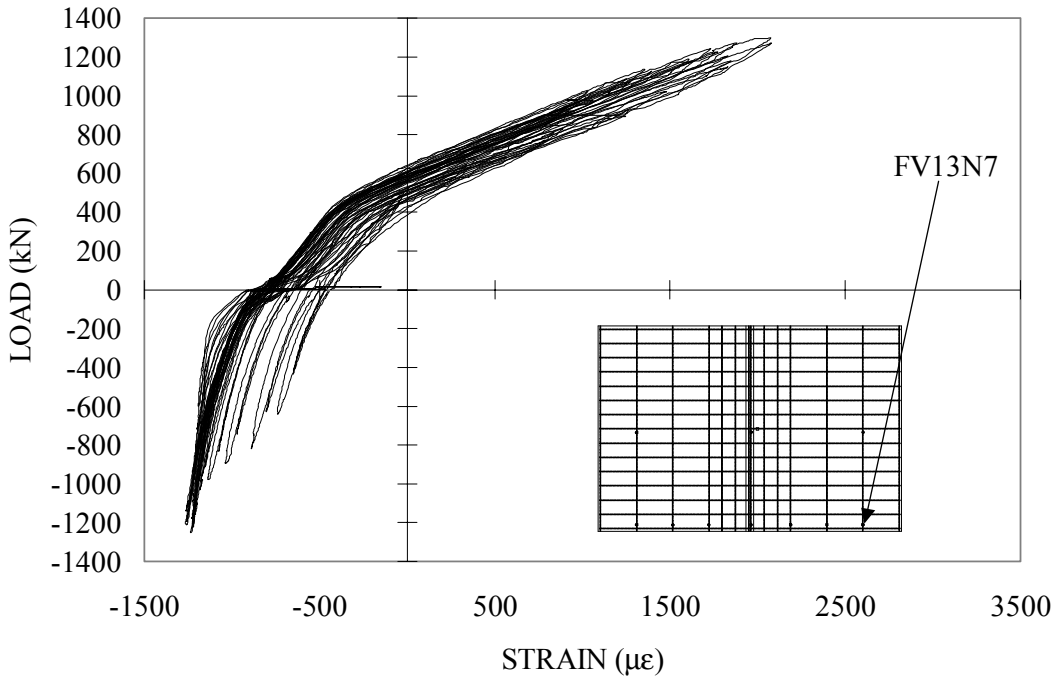

Figure F.5 DP1 Strain Gauge FV13N7

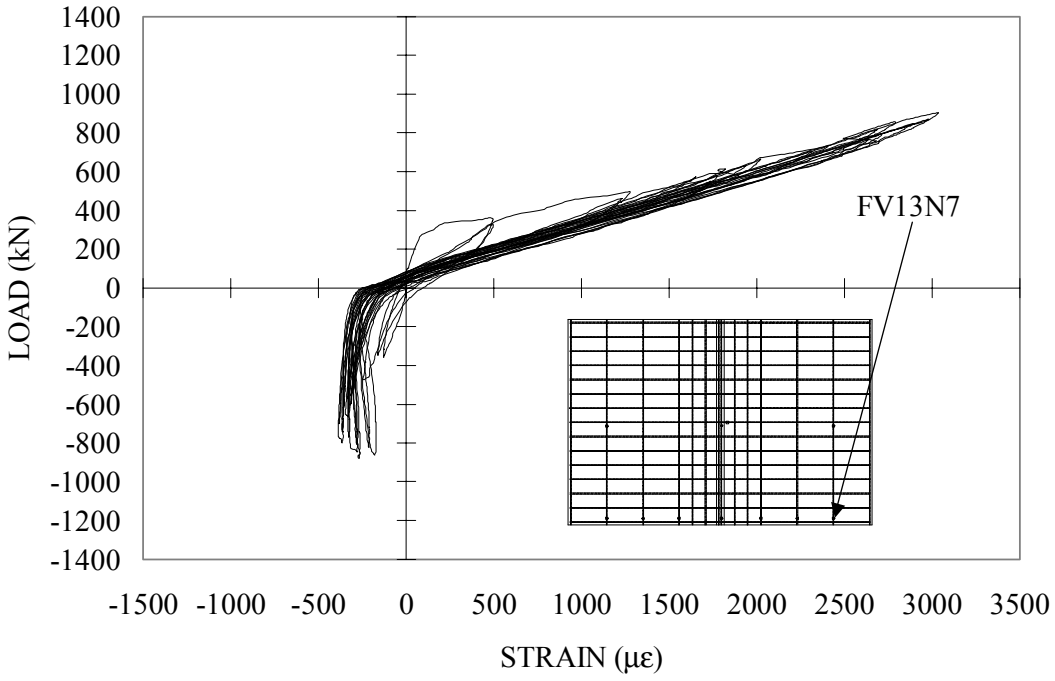

Figure F.6 DP2 Strain Gauge FV13N7

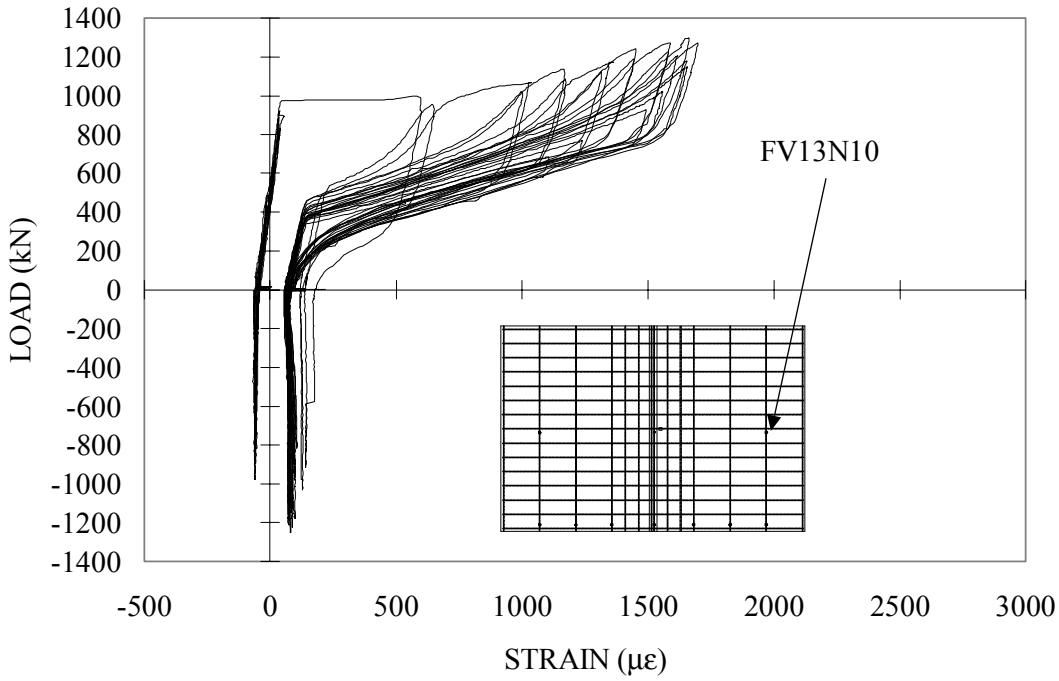

Figure F.7 DP1 Strain Gauge FV13N10

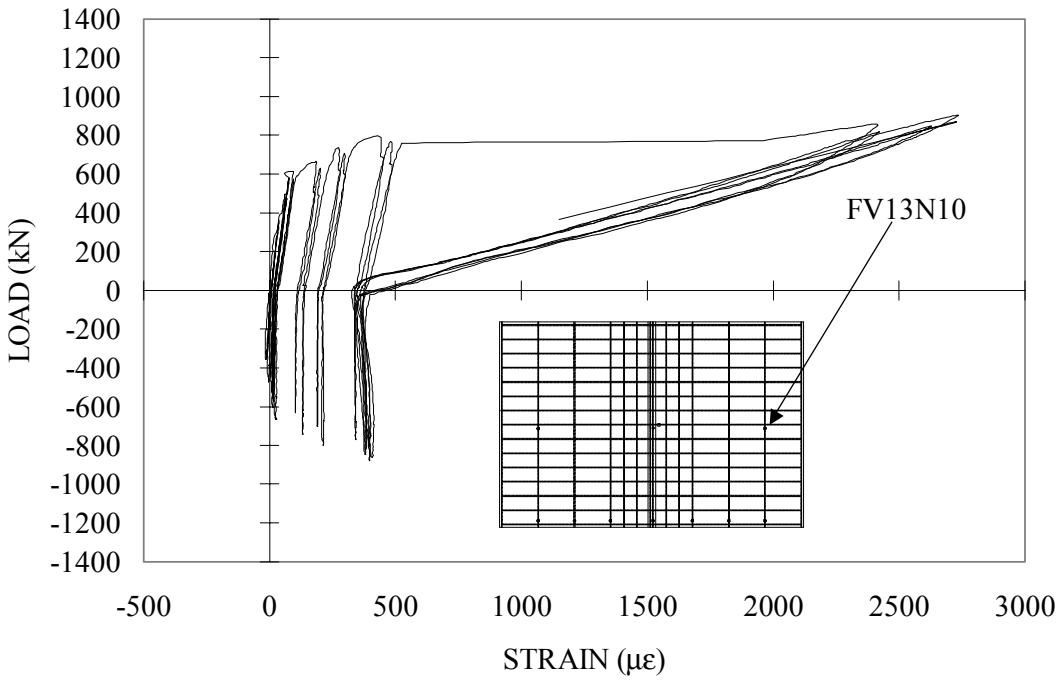

Figure F.8 DP2 Strain Gauge FV13N10

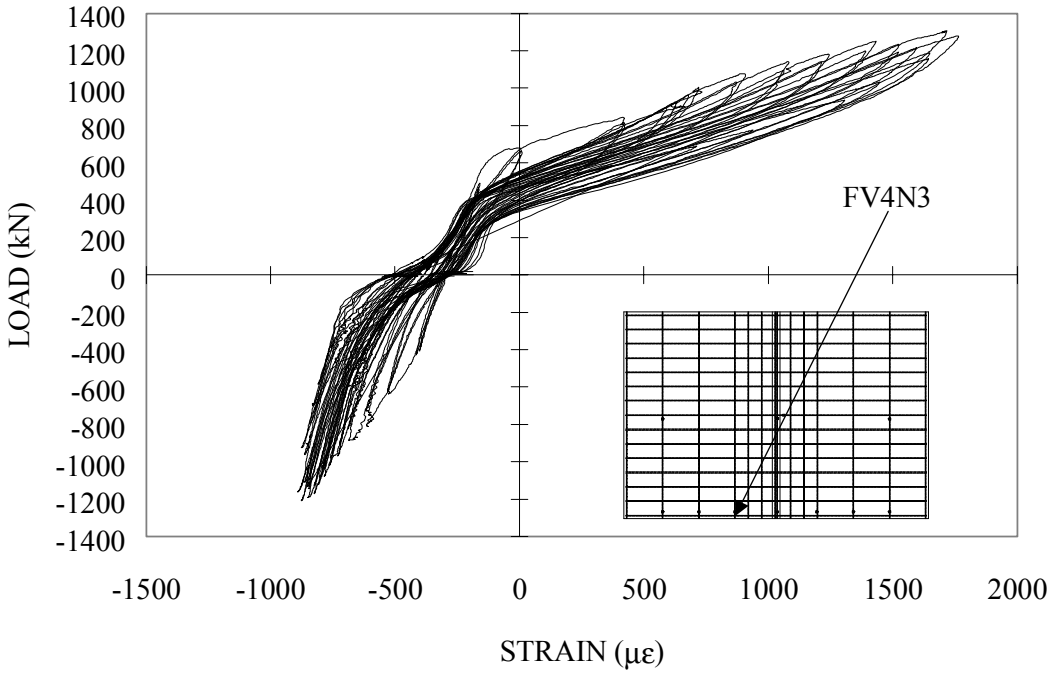

Figure F.9 DP1 Strain Gauge FV4N3

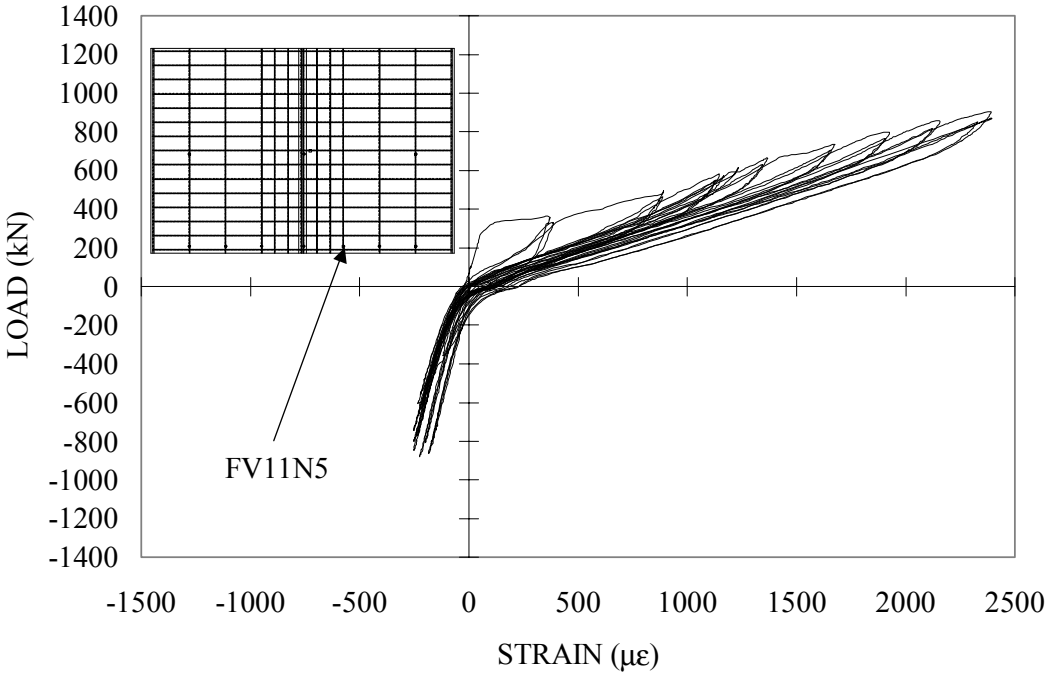

Figure F.10 DP2 Strain gauge FV11N5

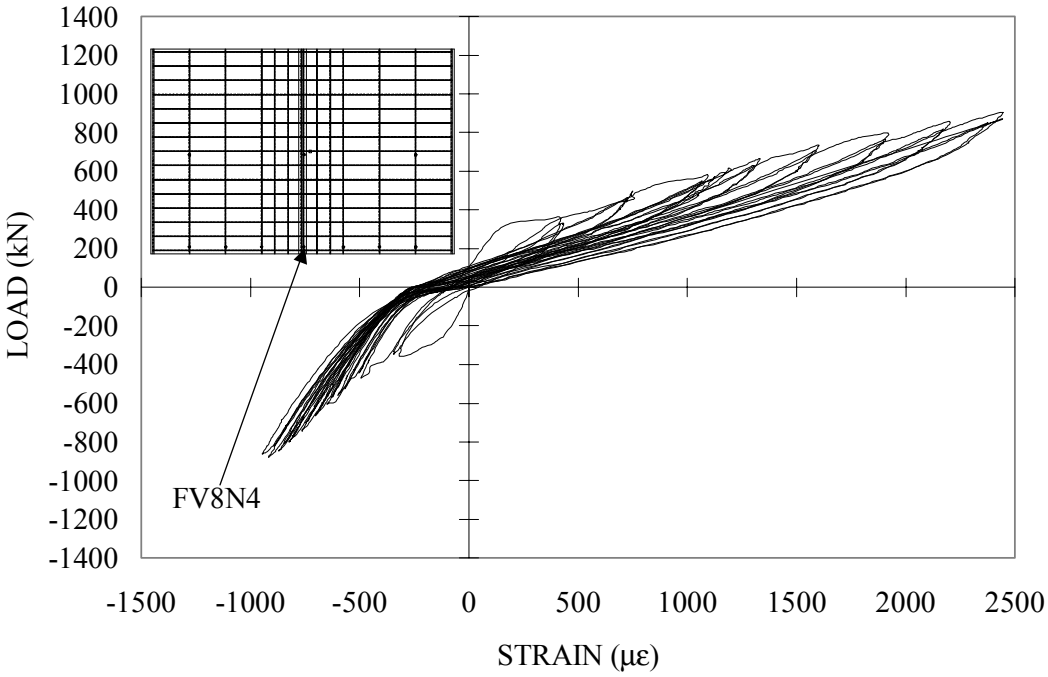

Figure F.11 DP2 Strain Gauge FV8N4

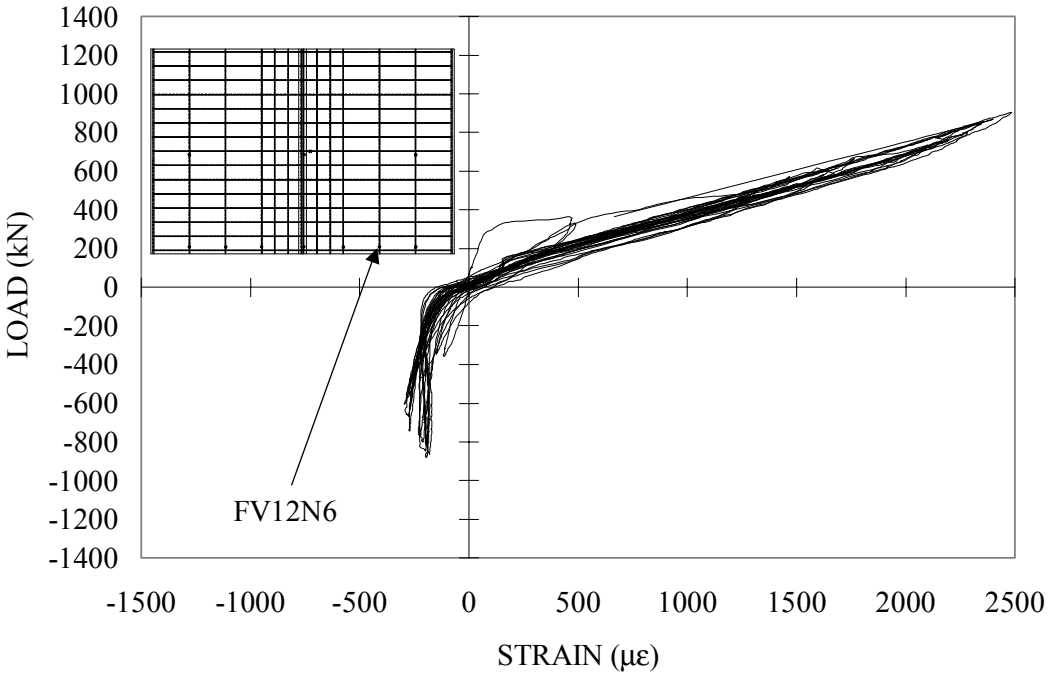

Figure F.12 DP2 Strain Gauge FV12N6

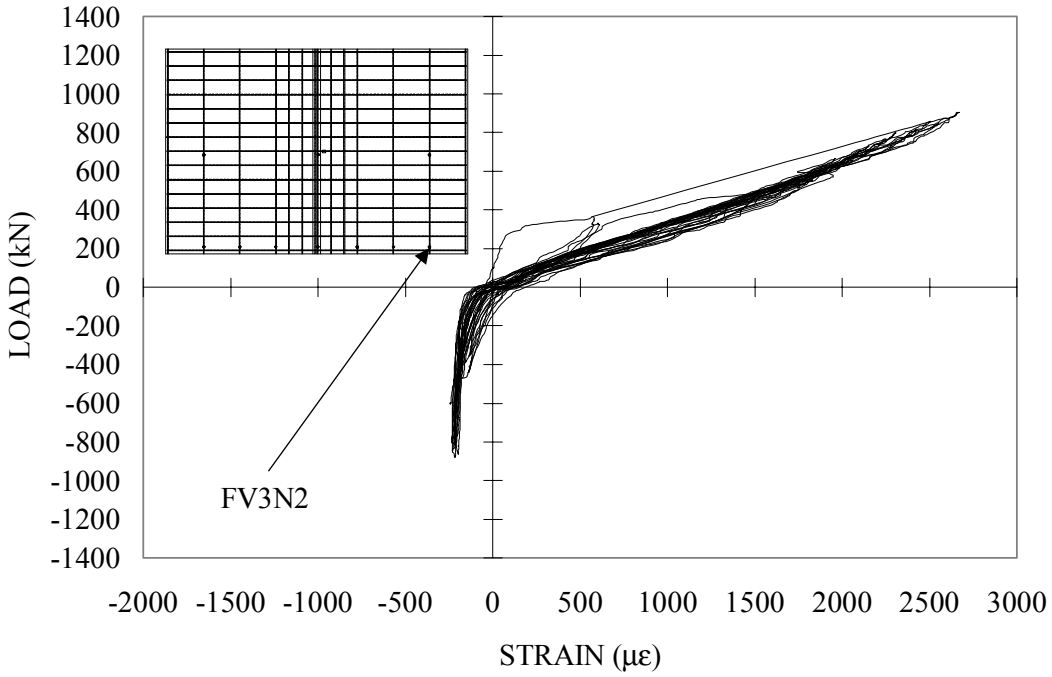

Figure F.13 DP2 Strain Gauge FV3N2

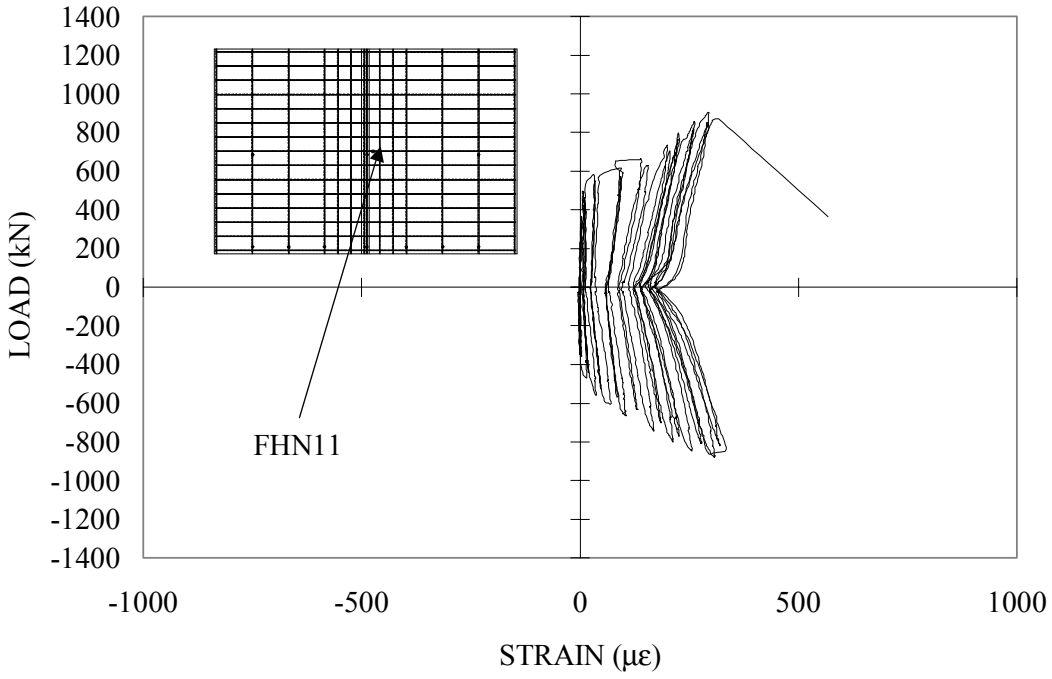

Figure F.14 DP2 Strain Gauge FHN11

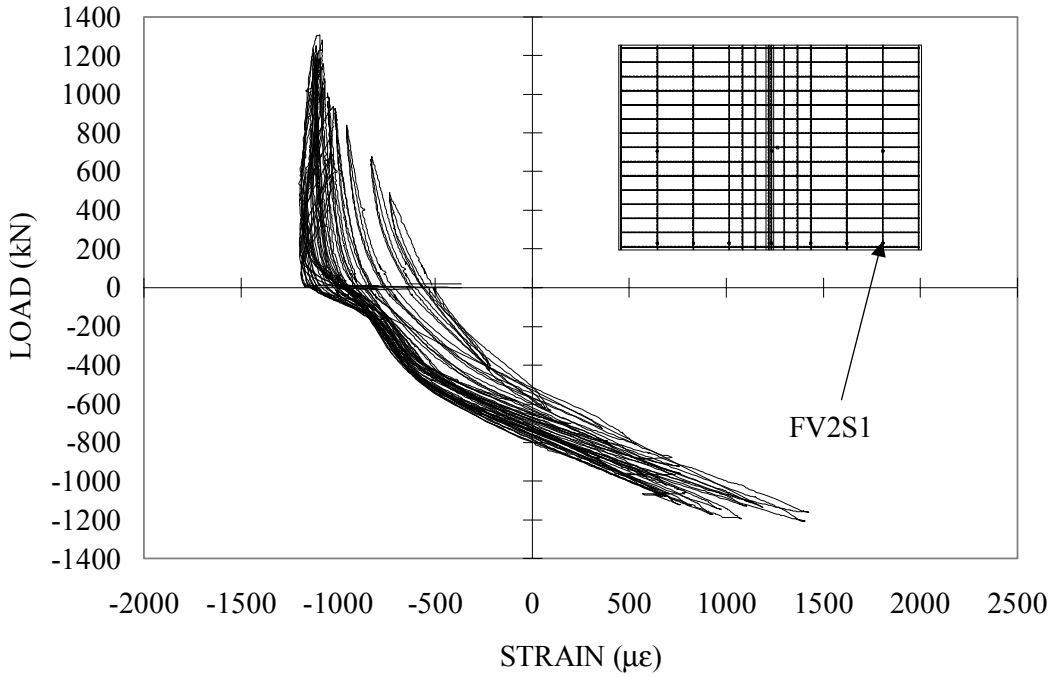

Figure G.1 DP1 Strain Gauge FV2S1

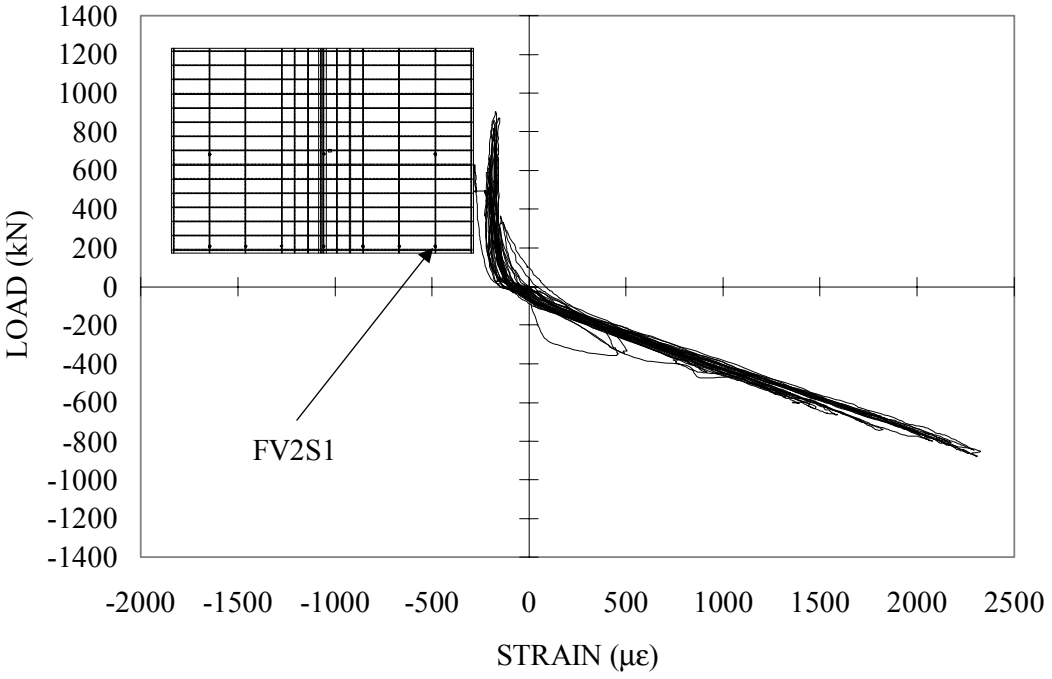

Figure G.2 DP2 Strain Gauge FV2S1

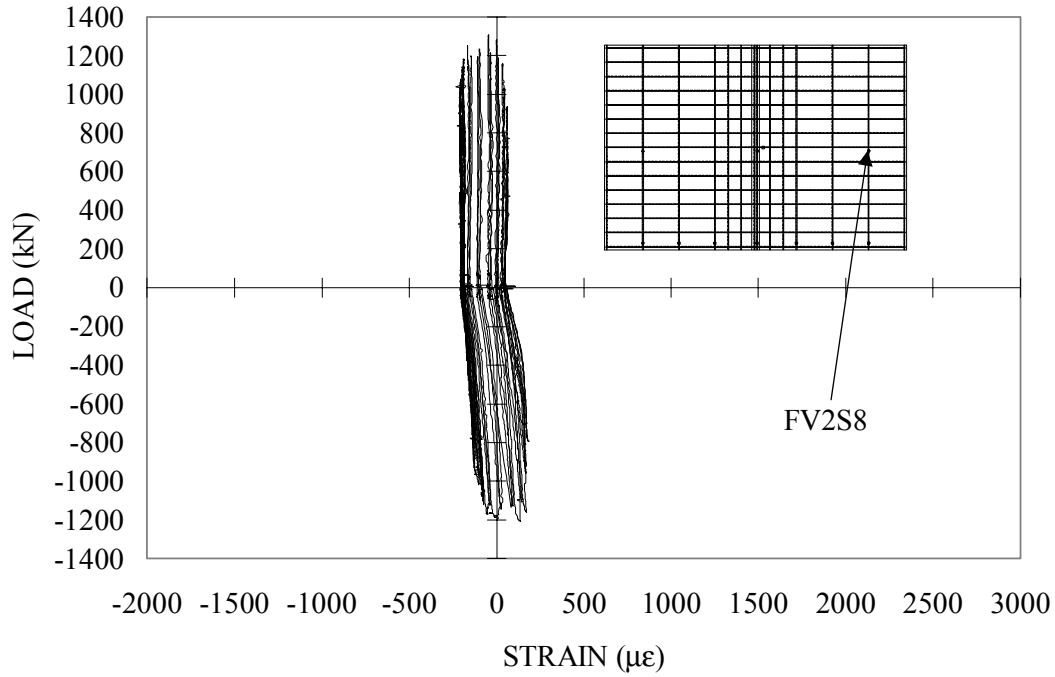

Figure G.3 DP1 Strain Gauge FV2S8

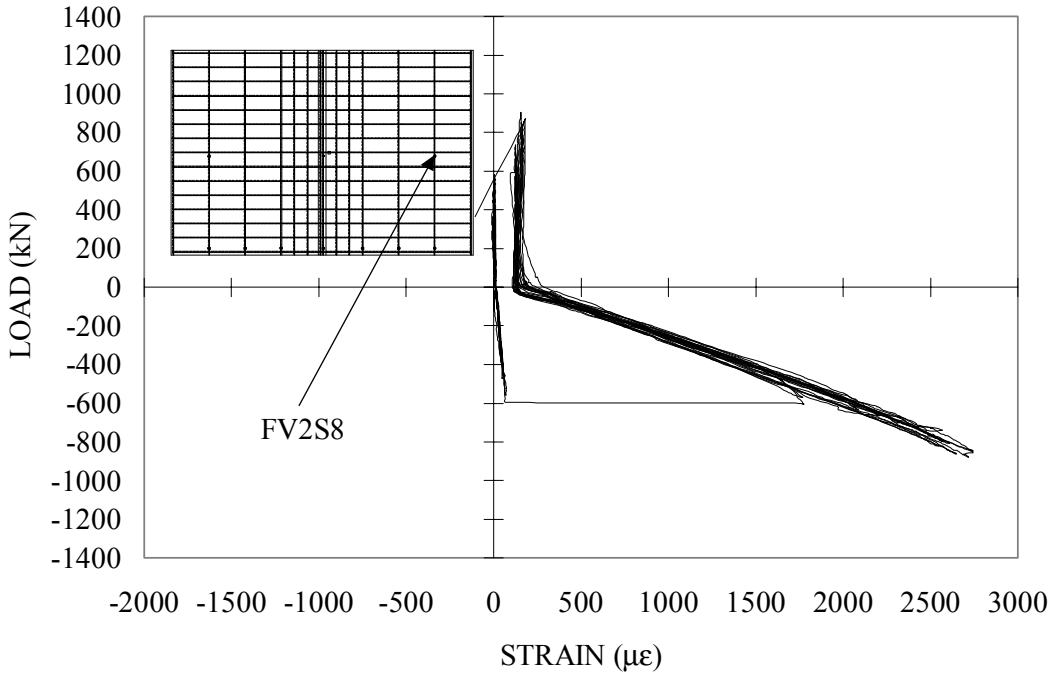

Figure G.4 DP2 Strain Gauge FV2S8

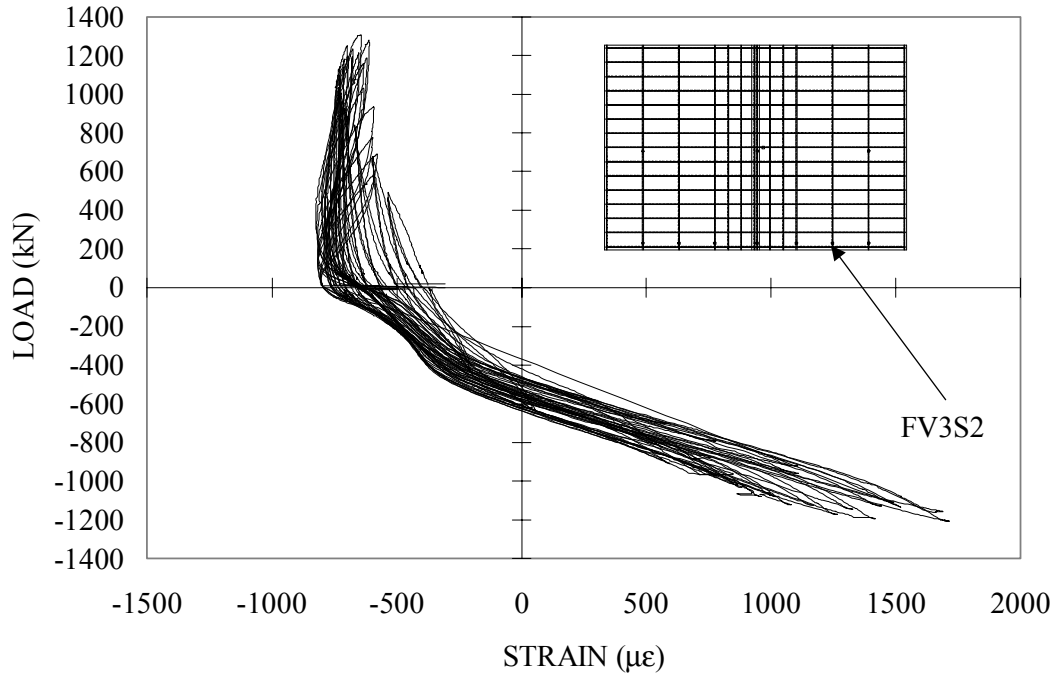

Figure G.5 DP1 Strain Gauge FV3S2

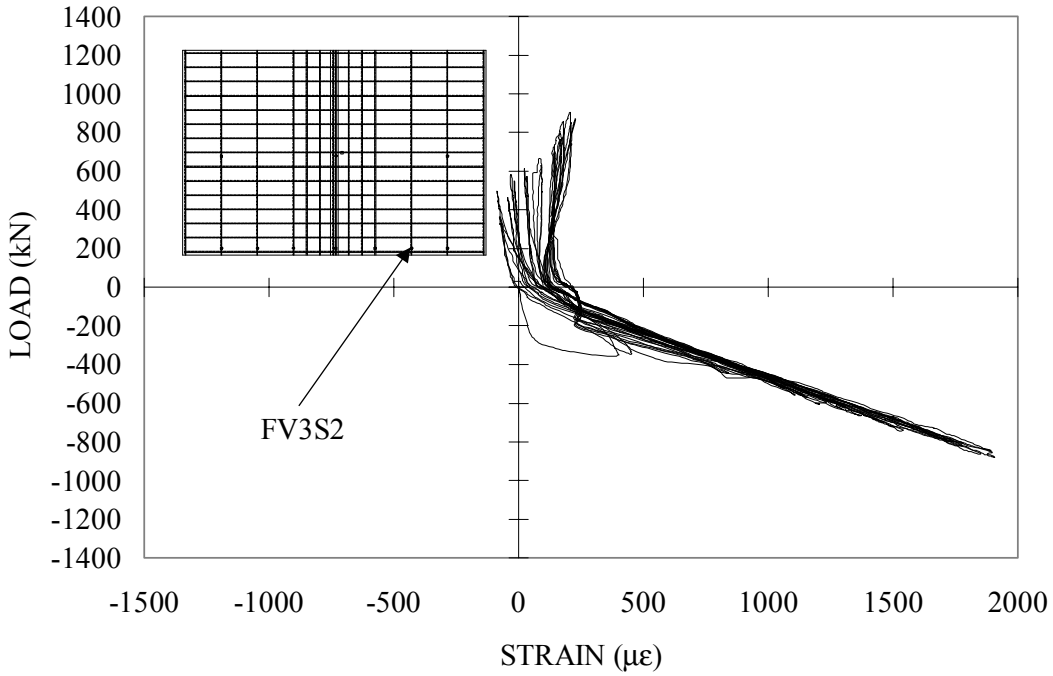

Figure G.6 DP2 Strain Gauge FV3S2

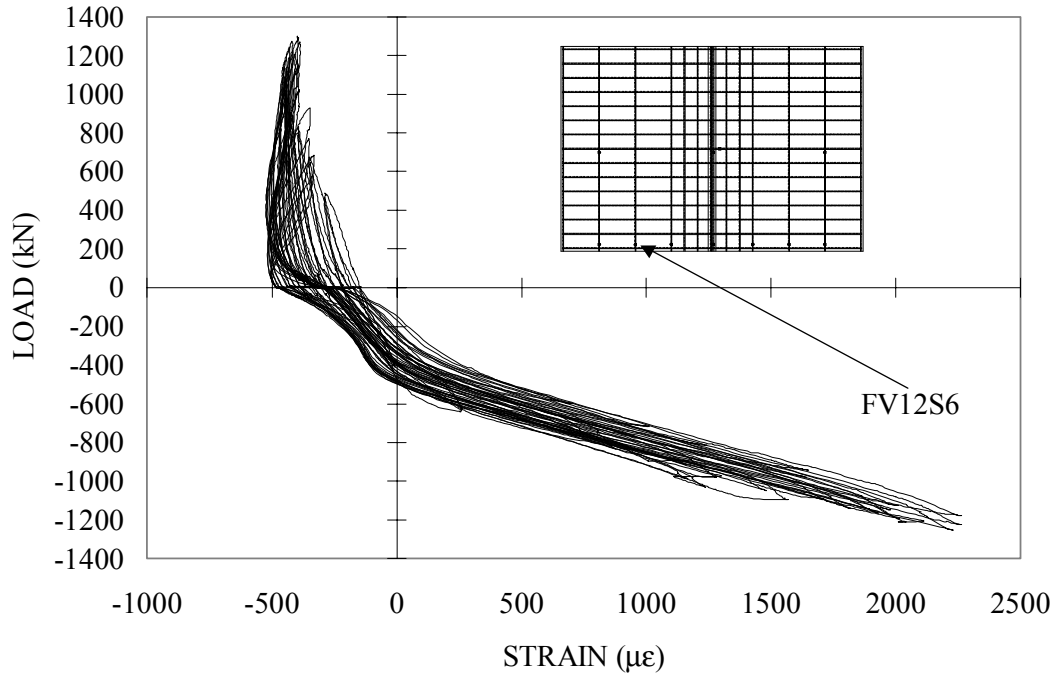

Figure G.7 DP1 Strain Gauge FV12S6

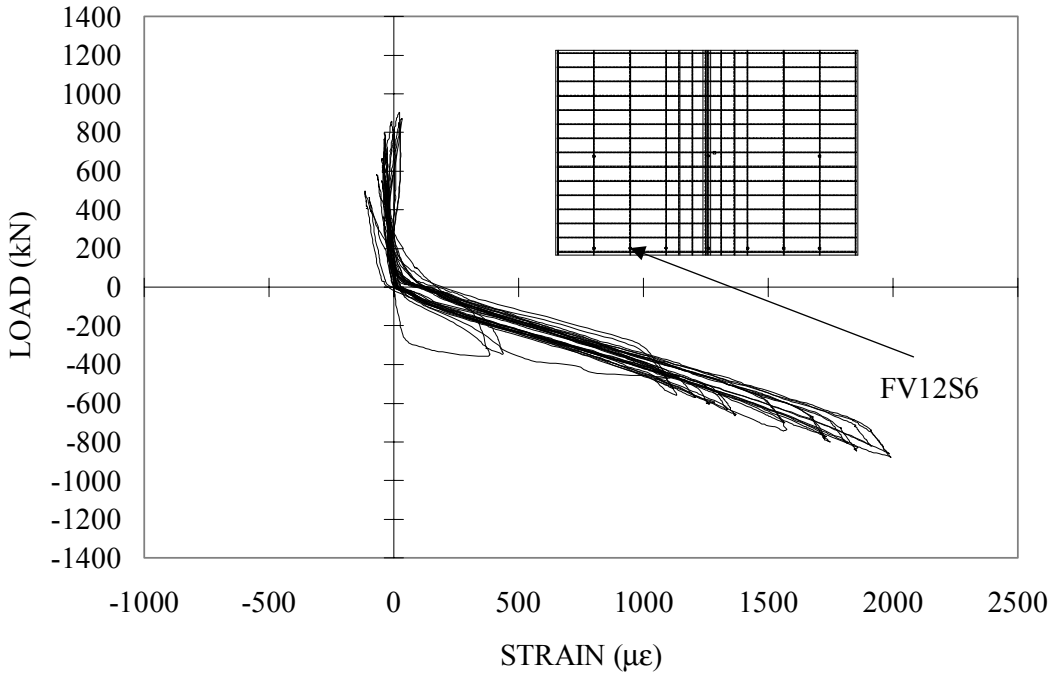

Figure G.8 DP2 Strain Gauge FV12S6

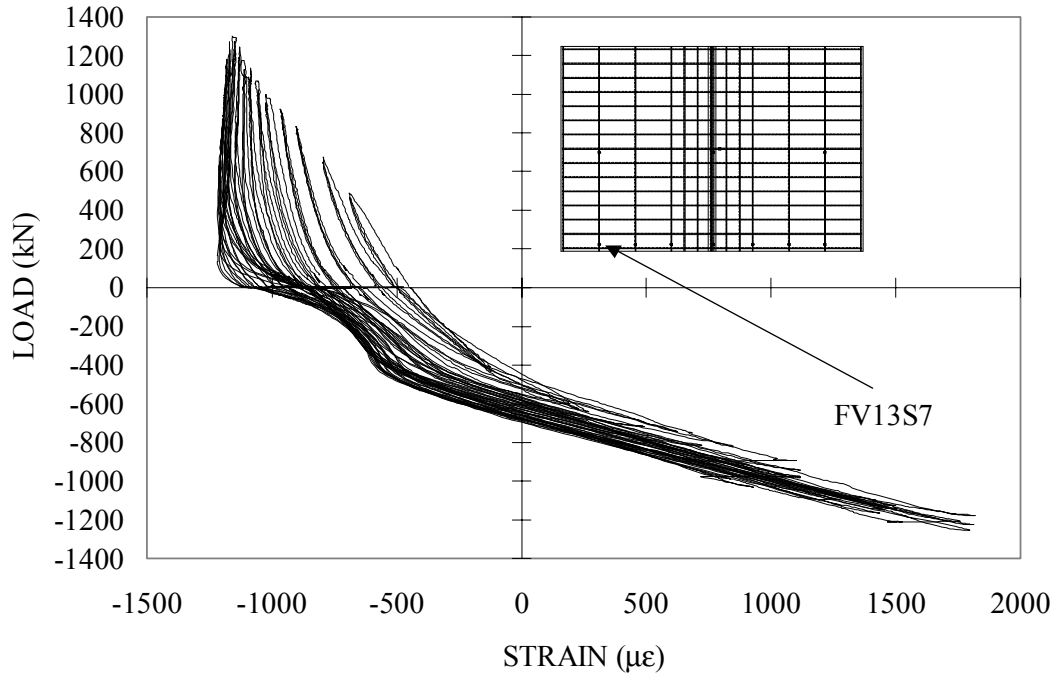

Figure G.9 DP1 Strain Gauge FV13S7

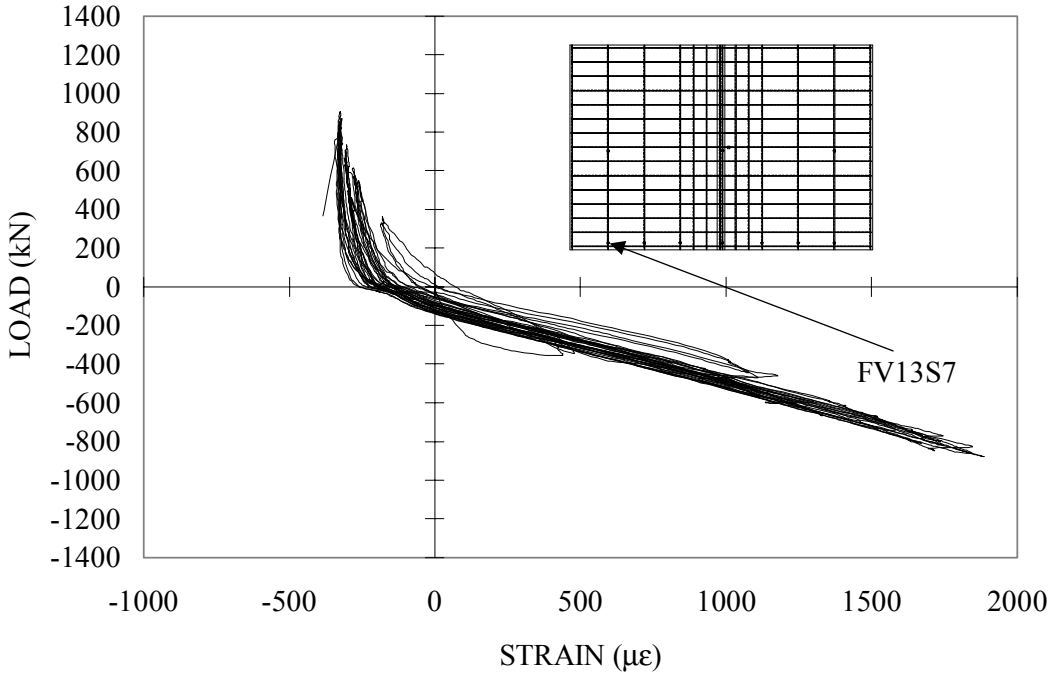

Figure G.10 DP2 Strain Gauge FV13S7

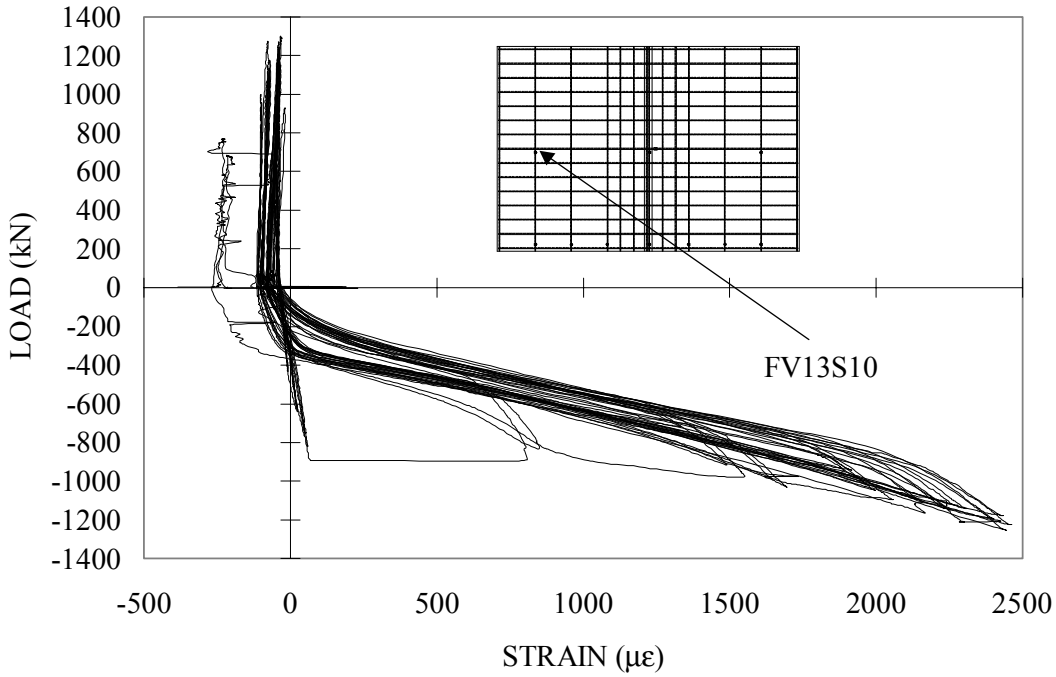

Figure G.11 DP1 Strain Gauge FV13S10

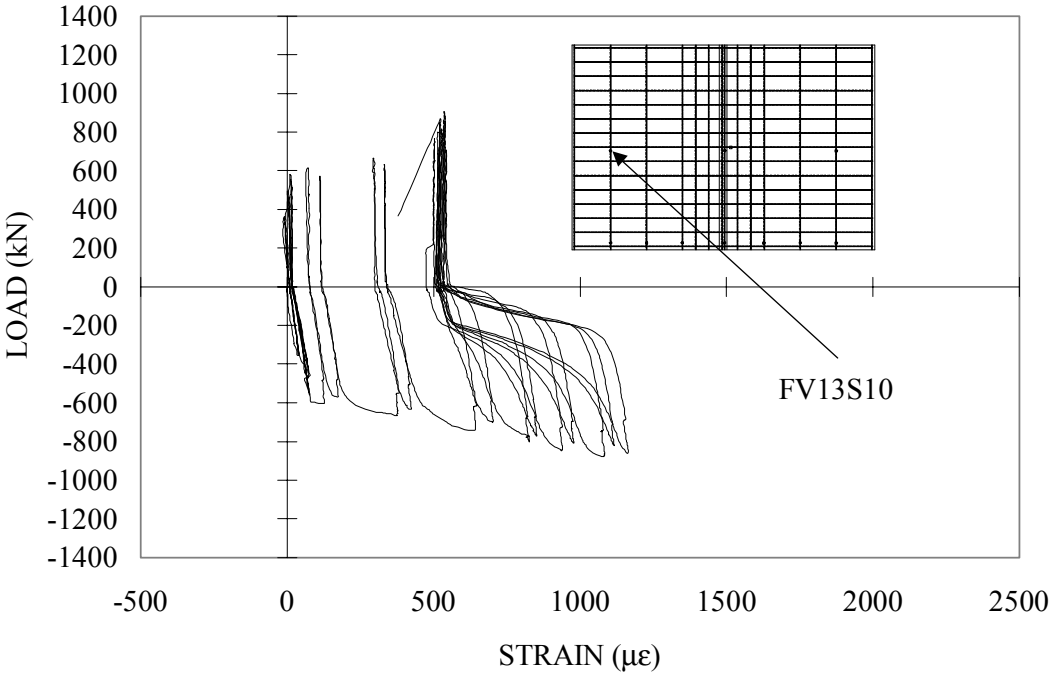

Figure G.12 DP2 Strain Gauge FV13S10

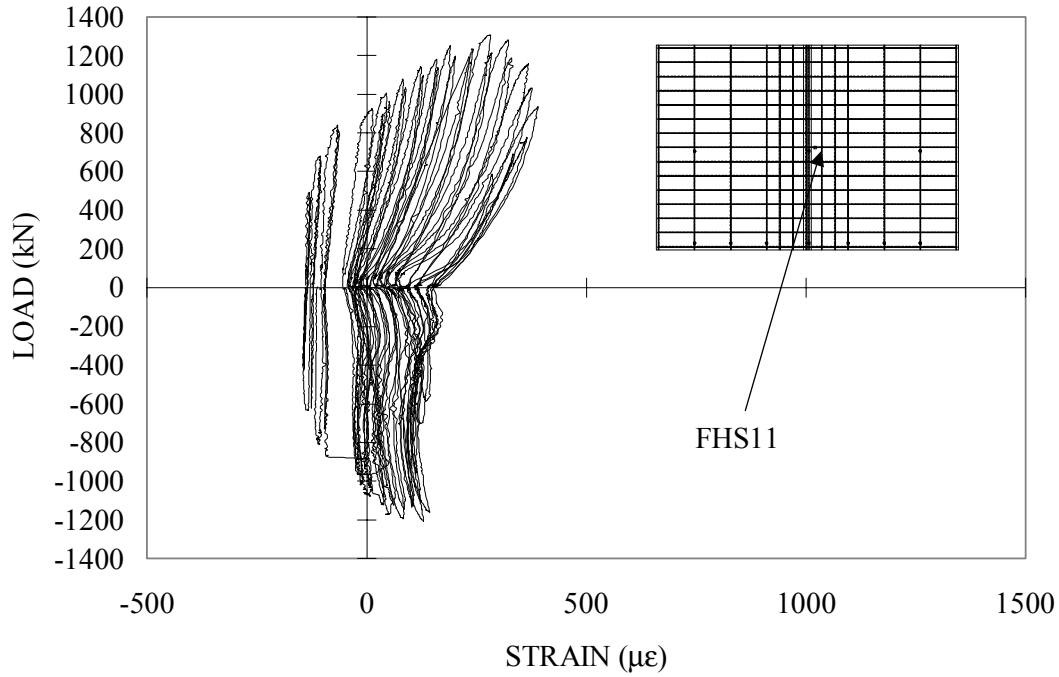

Figure G.13 DP1 Strain Gauge FHS11

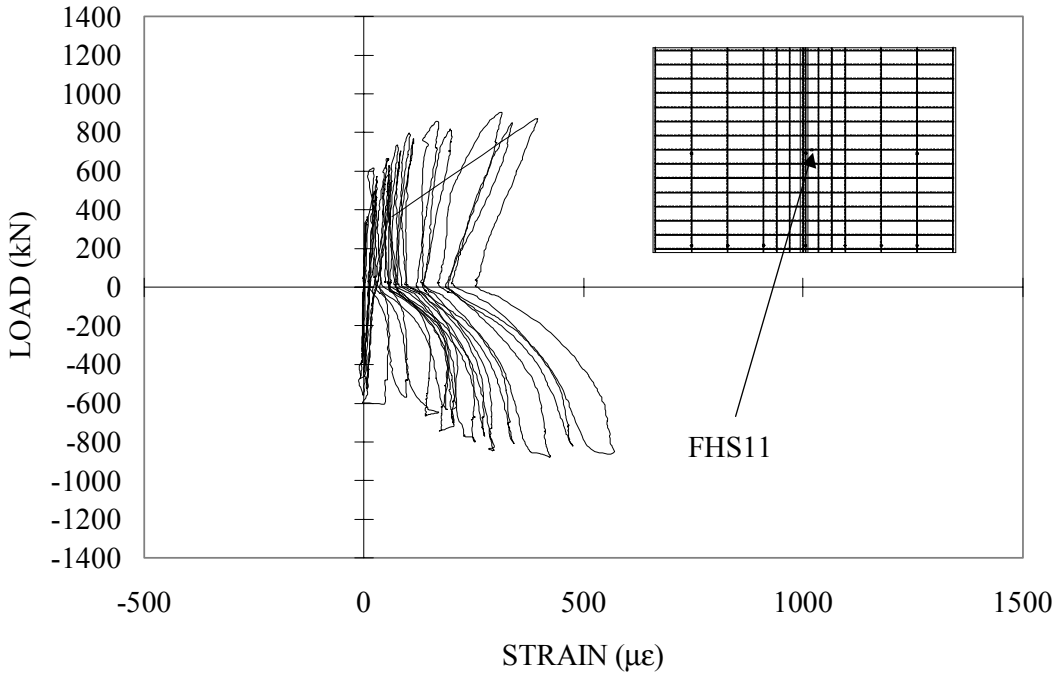

Figure G.14 DP2 Strain Gauge FHS11

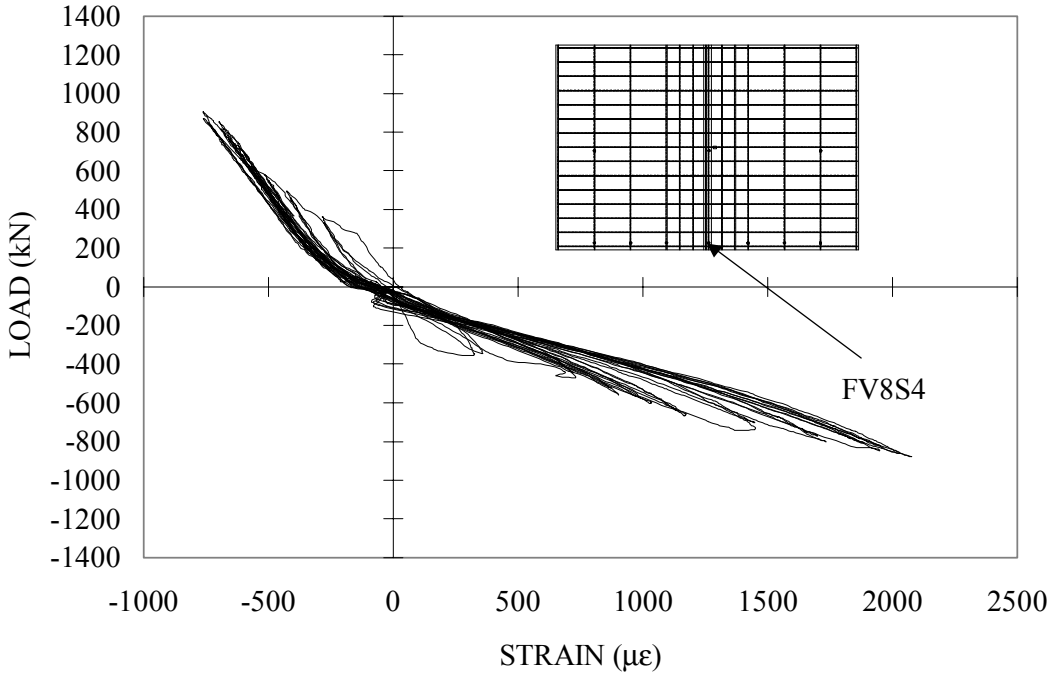

Figure G.15 DP2 Strain Gauge FV8S4

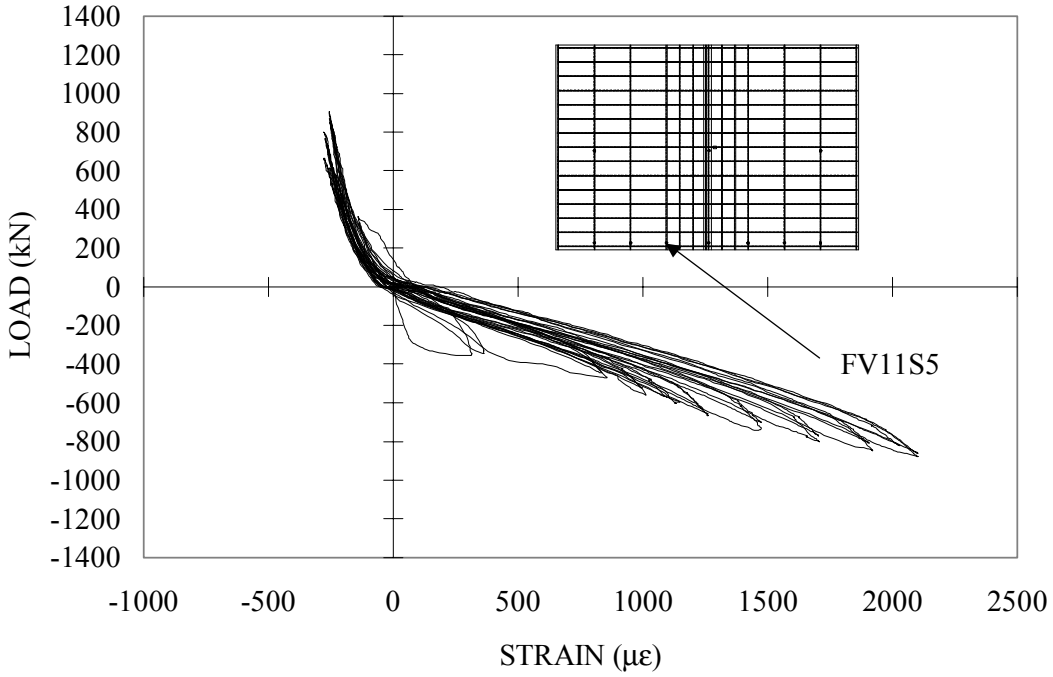

Figure G.16 DP2 Strain Gauge FV11S5

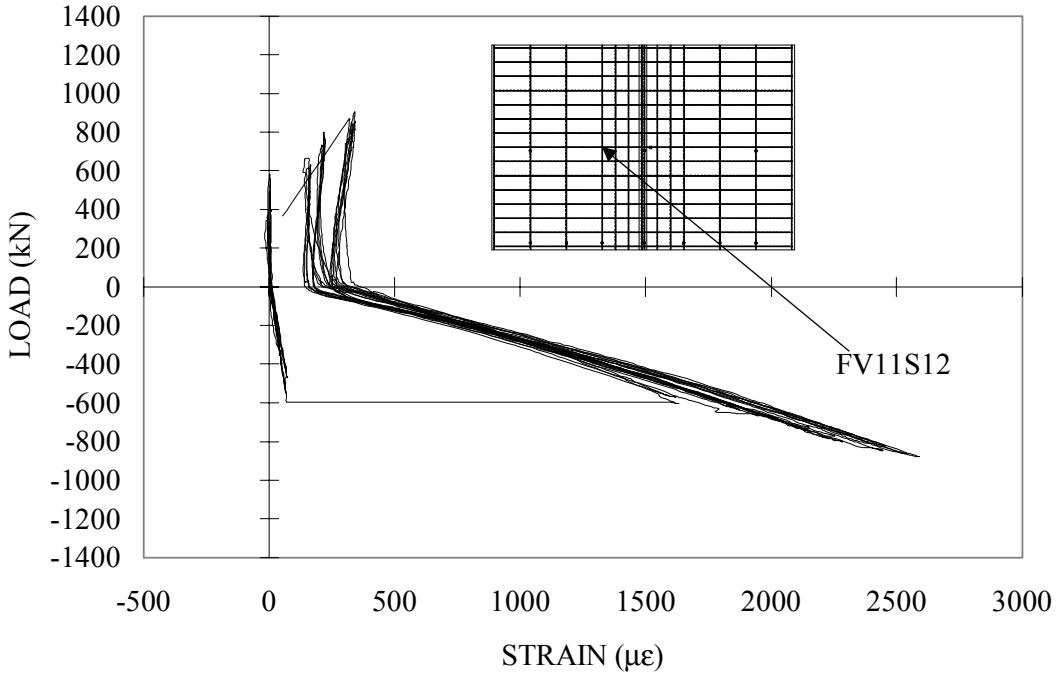

Figure G.17 DP2 Strain Gauge FV11S12

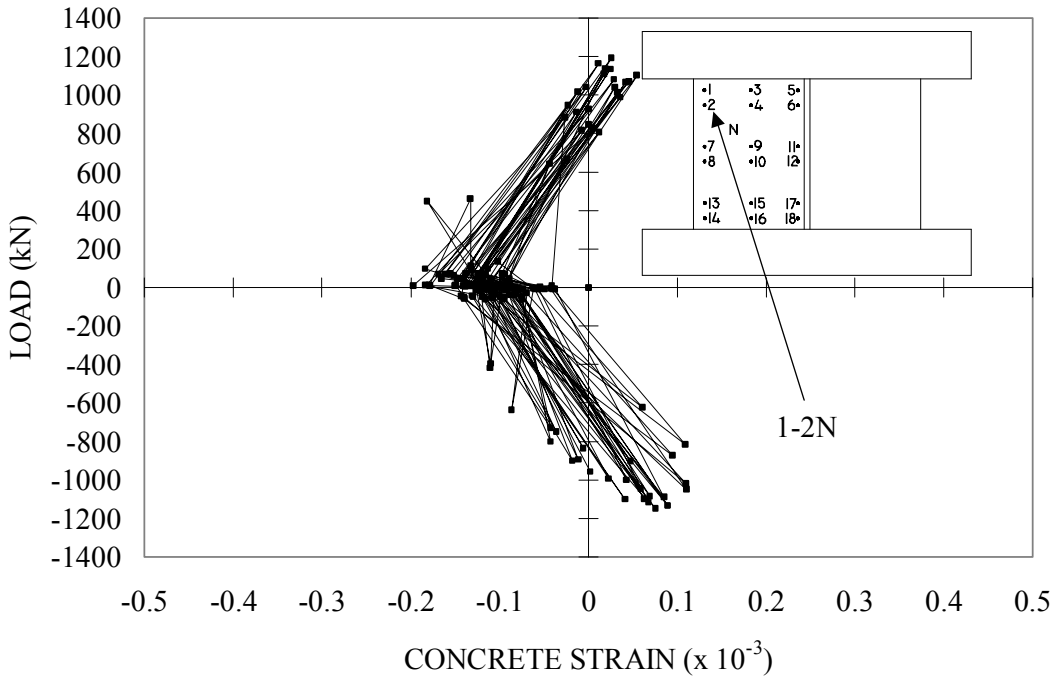

Figure H.1 DP1 Zurich Targets 1-2N

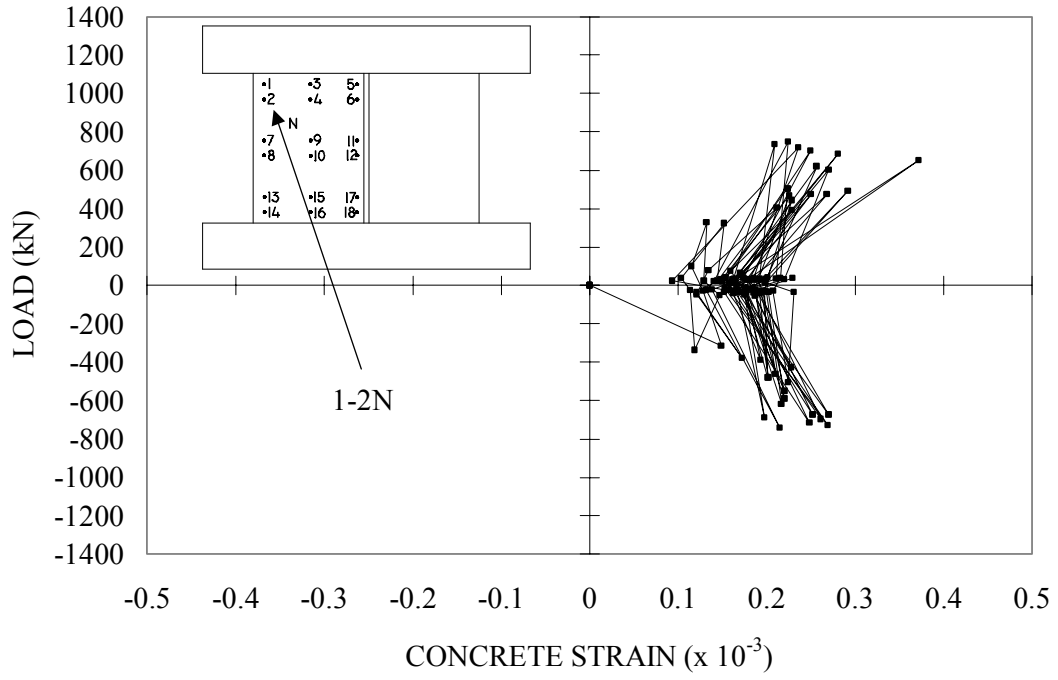

Figure H.2 DP2 Zurich Targets 1-2N

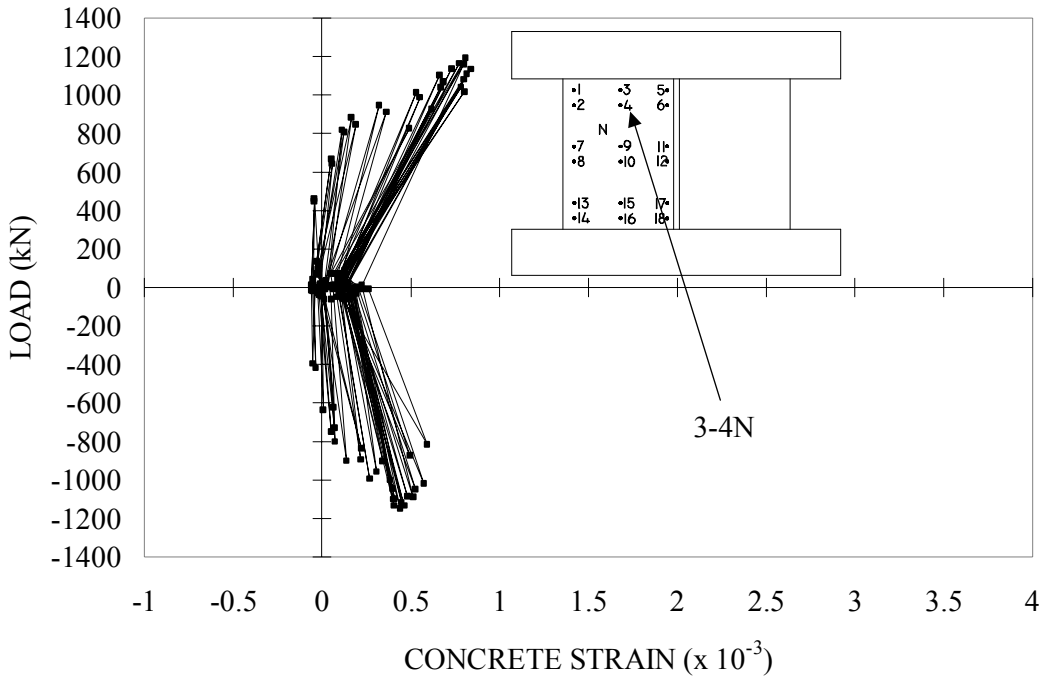

Figure H.3 DP1 Zurich Targets 3-4N

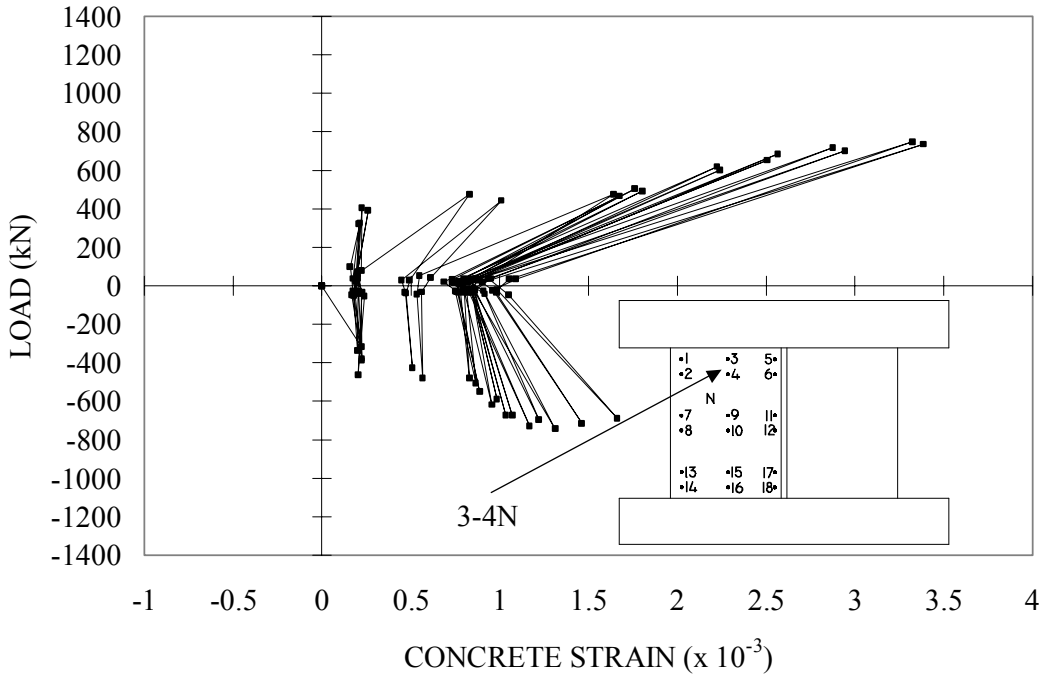

Figure H.4 DP2 Zurich Targets 3-4N

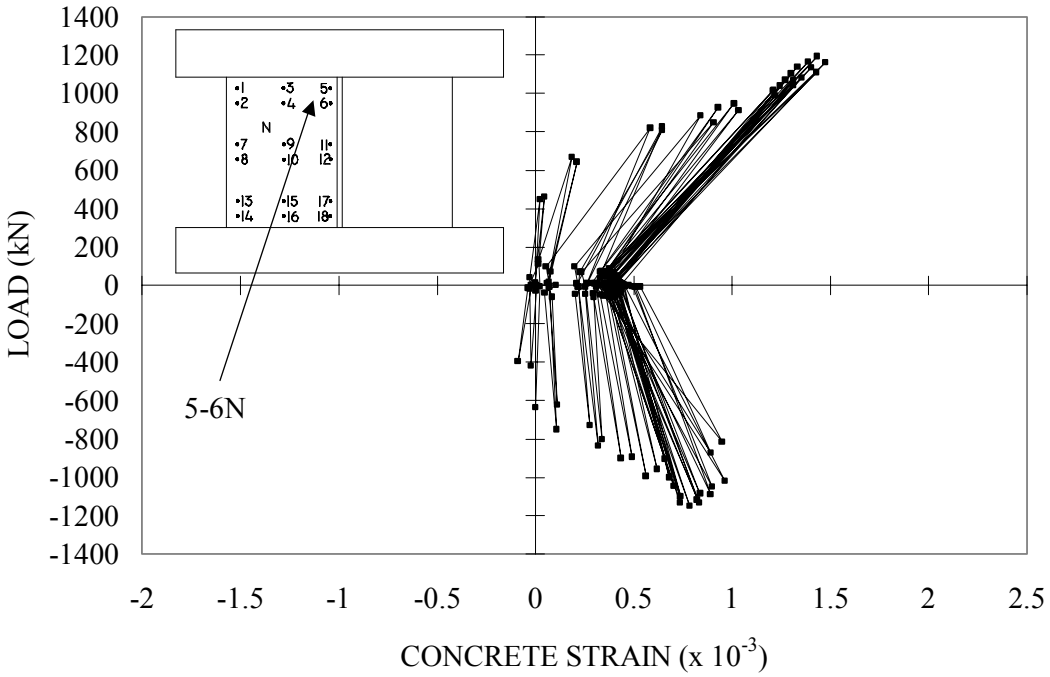

Figure H.5 DP1 Zurich Targets 5-6N

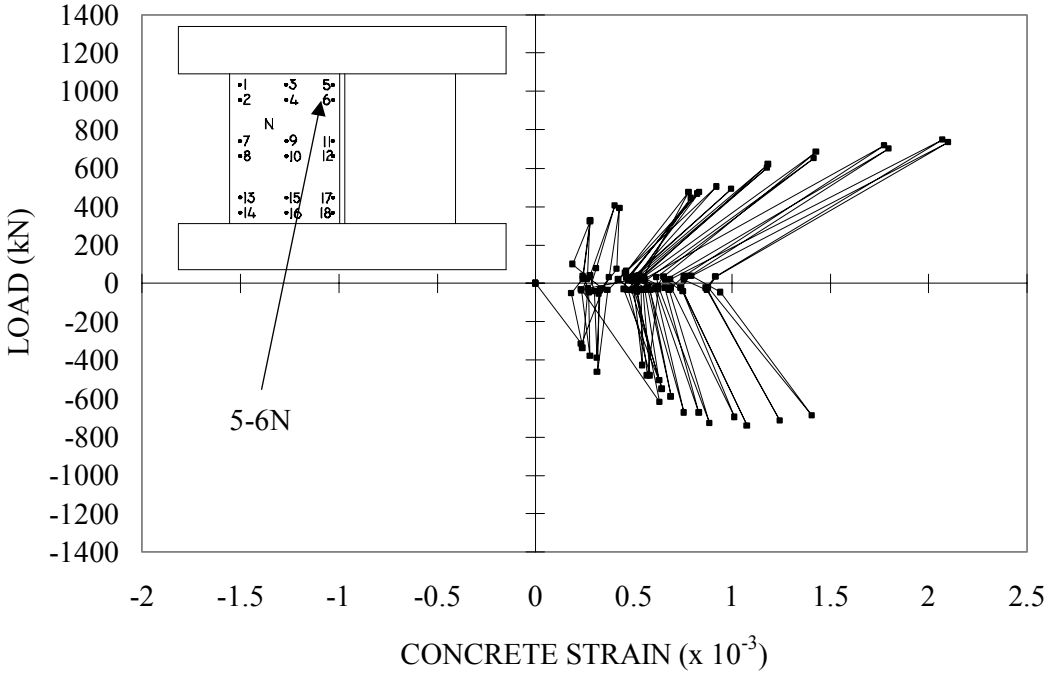

Figure H.6 DP2 Zurich Targets 5-6N

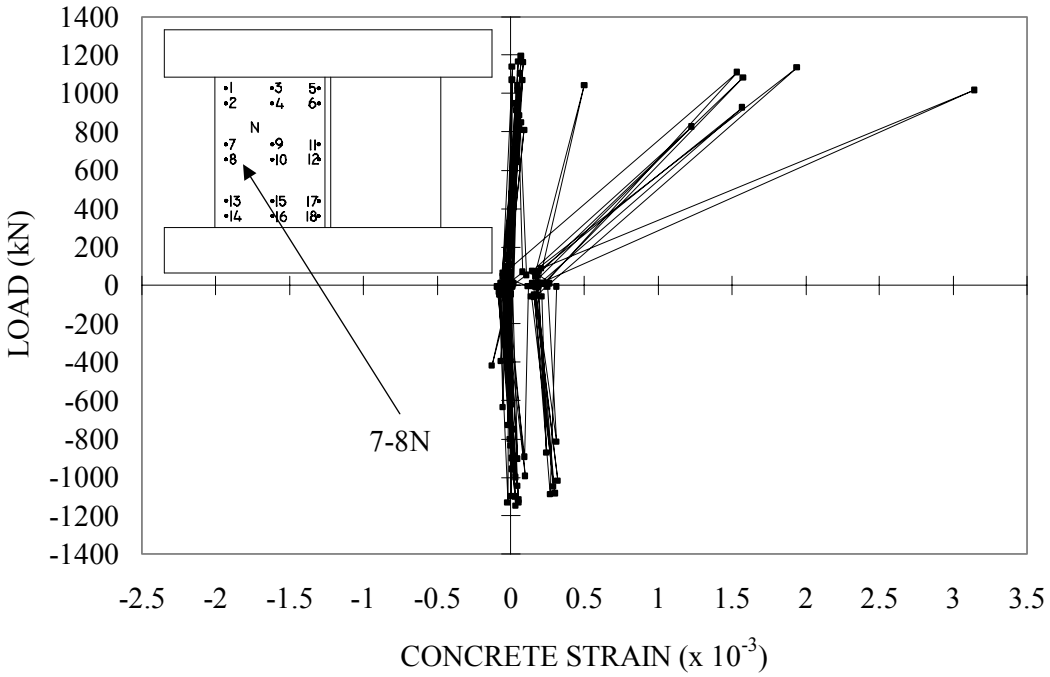

Figure H.7 DP1 Zurich Targets 7-8N

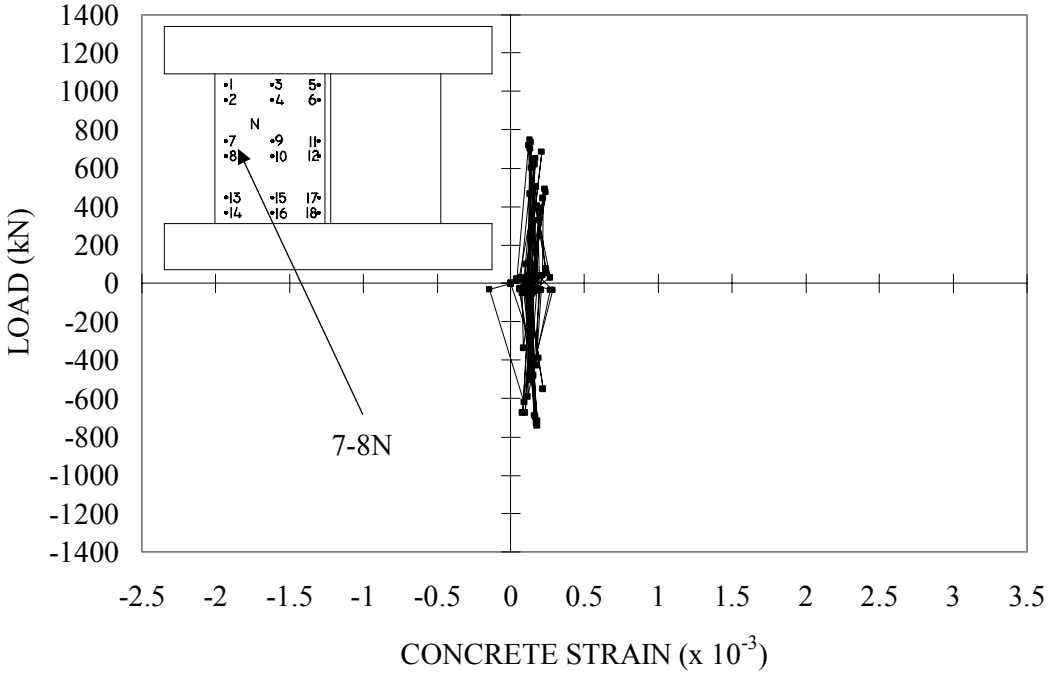

Figure H.8 DP2 Zurich Targets 7-8N

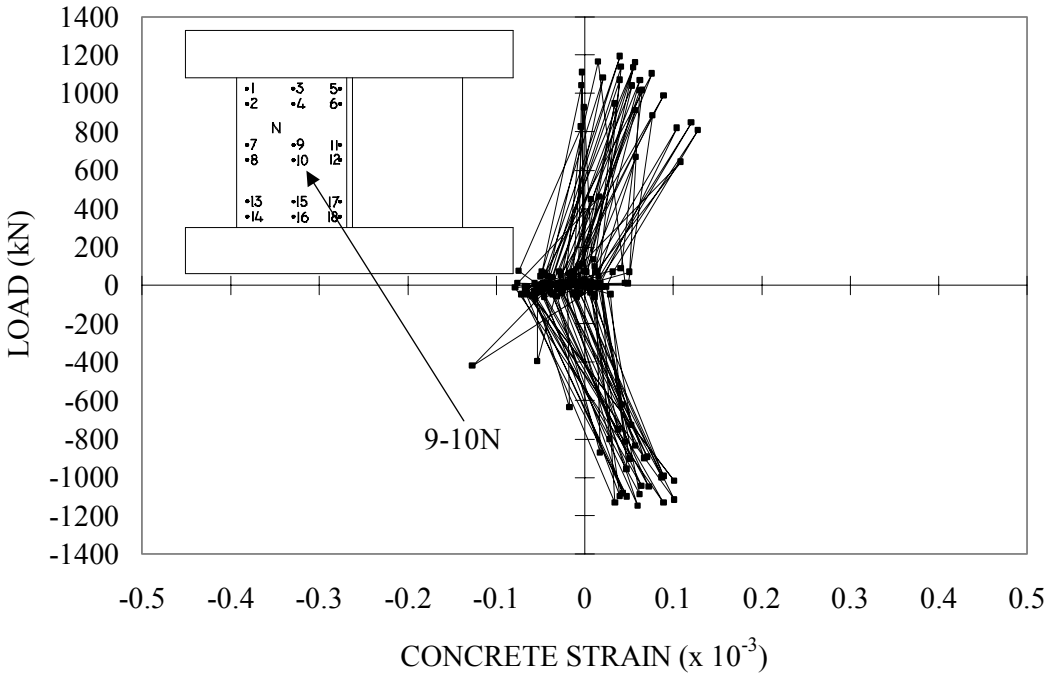

Figure H.9 DP1 Zurich Targets 9-10N

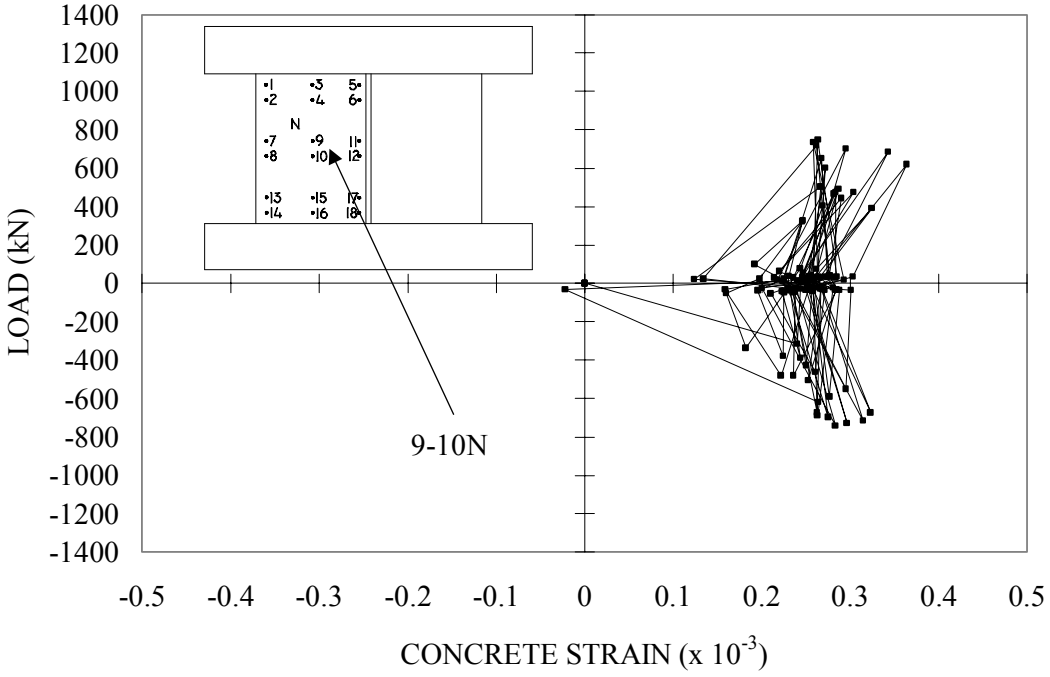

Figure H.10 DP2 Zurich Targets 9-10N

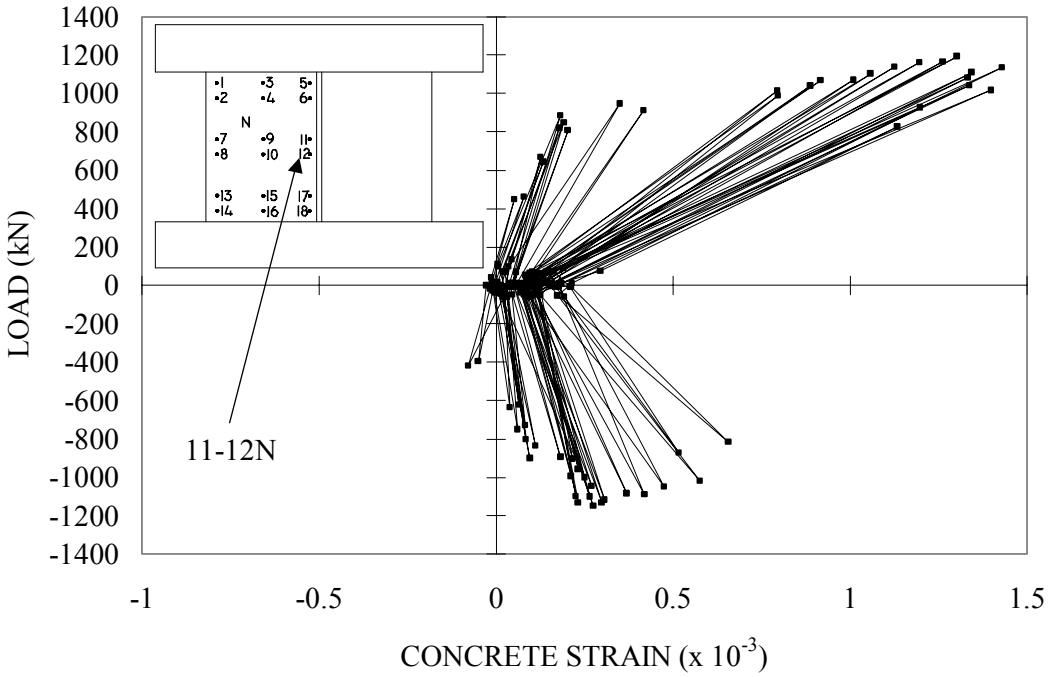

Figure H.11 DP1 Zurich Targets 11-12N

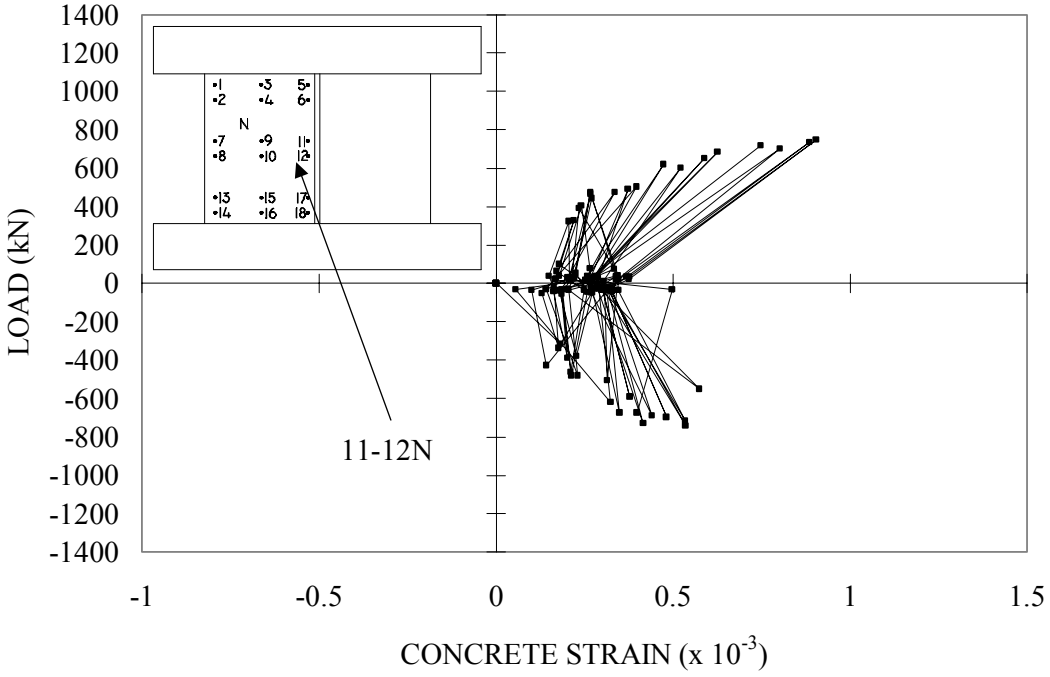

Figure H.12 DP2 Zurich Targets 11-12N

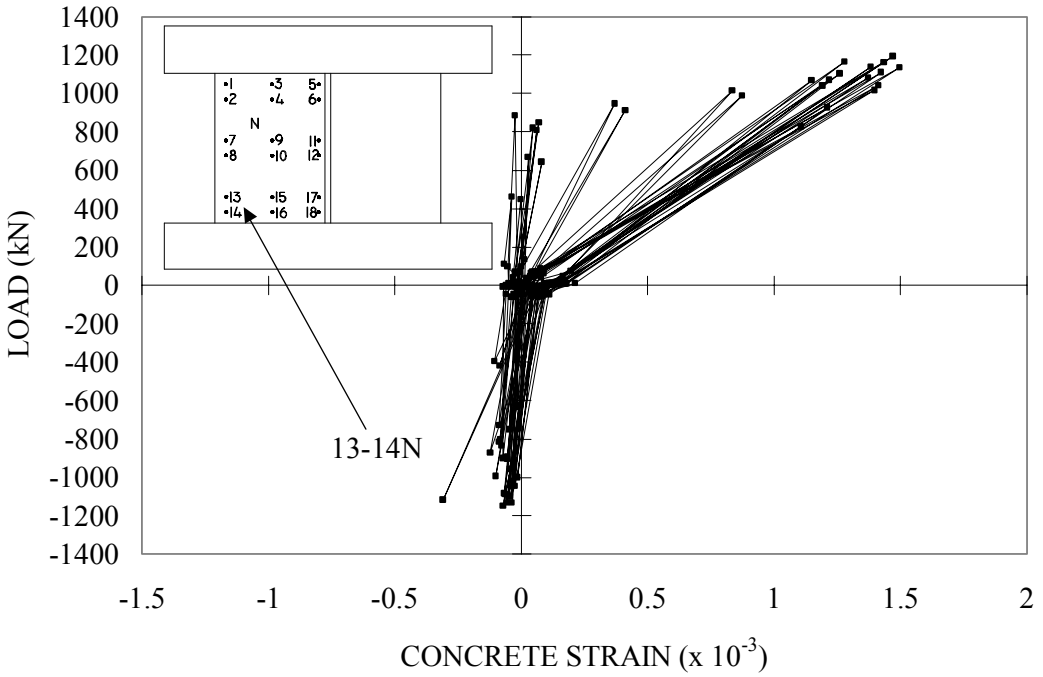

Figure H.13 DP1 Zurich Targets 13-14N

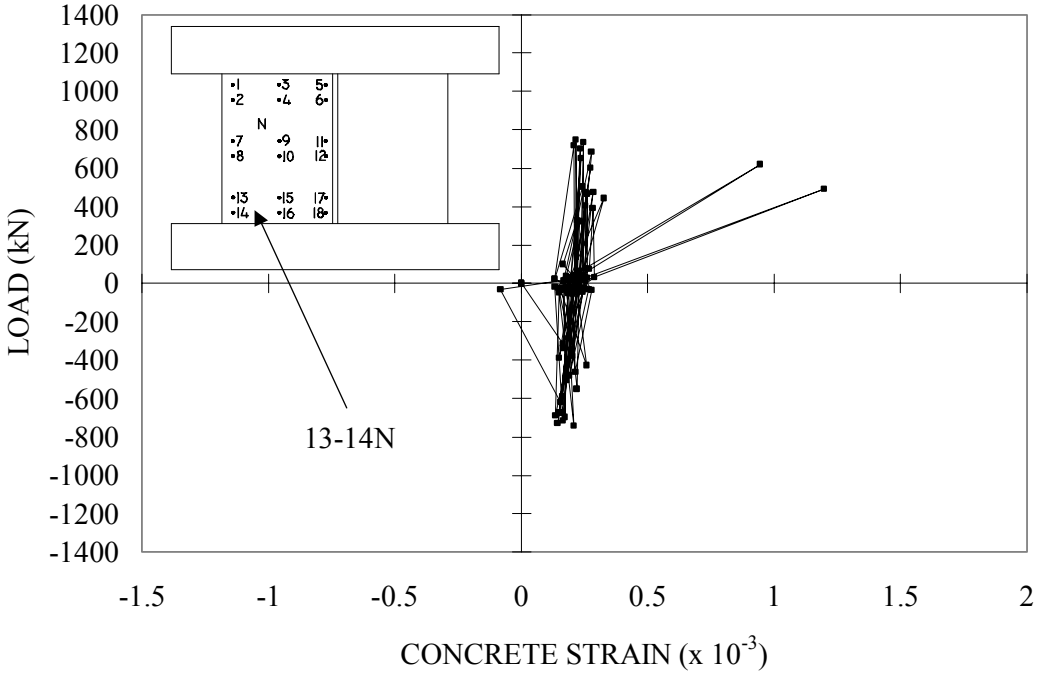

Figure H.14 DP2 Zurich Targets 13-14N

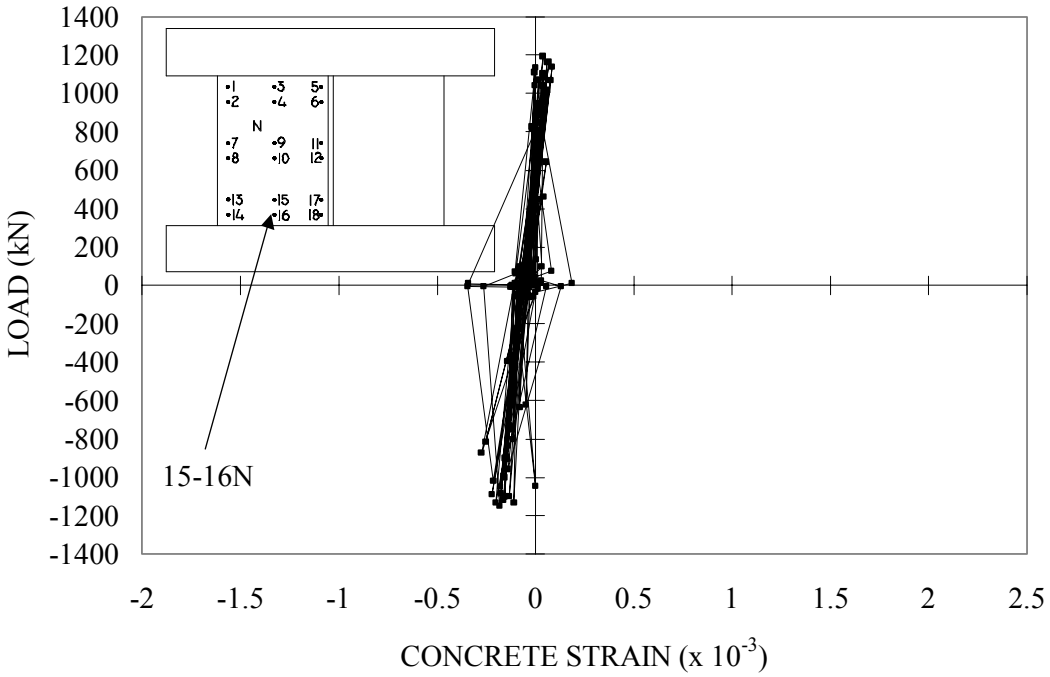

Figure H.15 DP1 Zurich Targets 15-16N

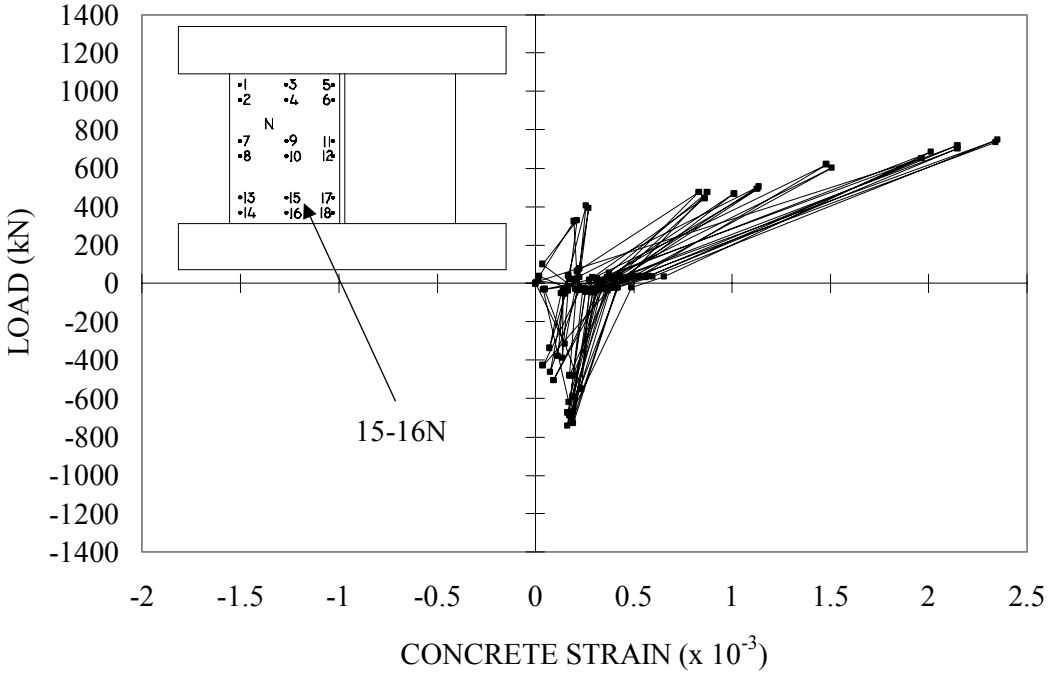

Figure H.16 DP2 Zurich Targets 15-16N

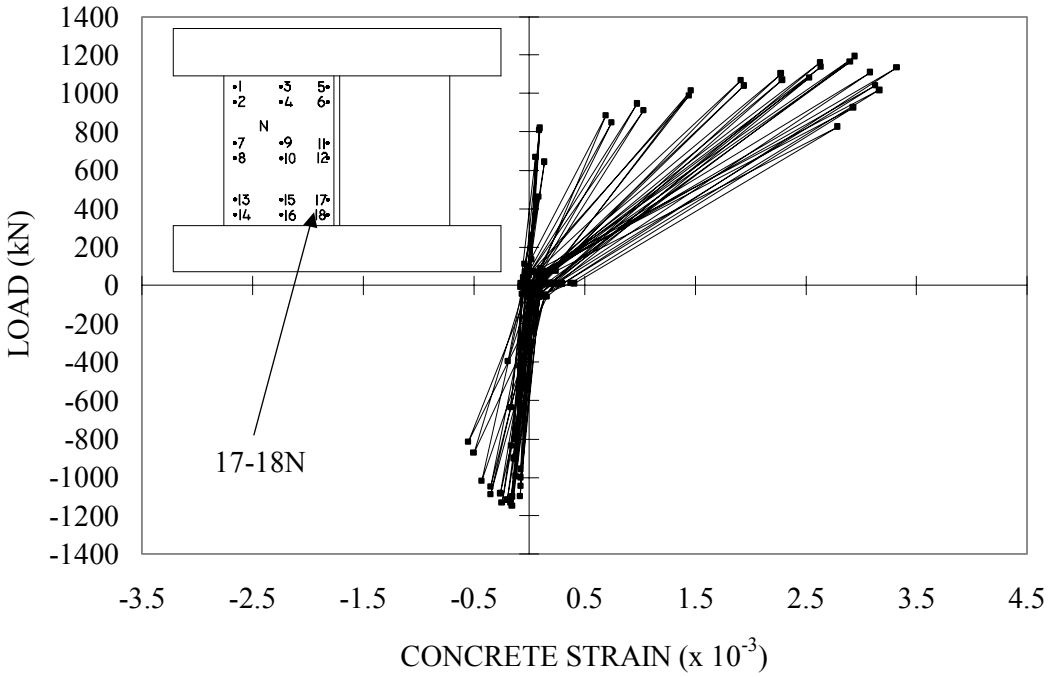

Figure H.17 DP1 Zurich Targets 17-18N

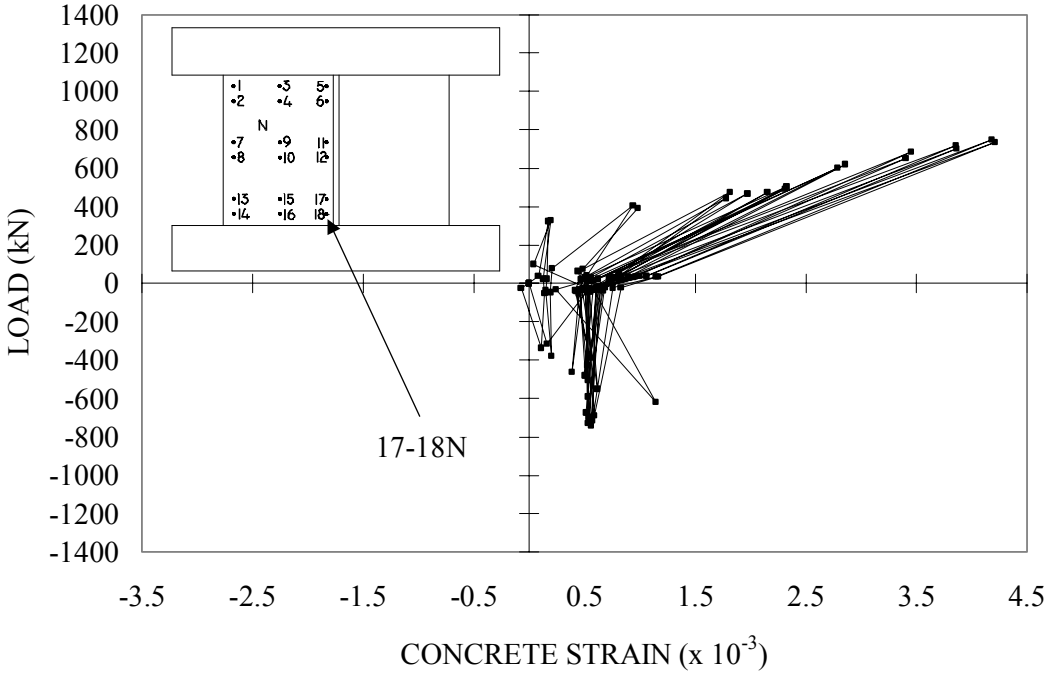

Figure H.18 DP2 Zurich Targets 17-18N

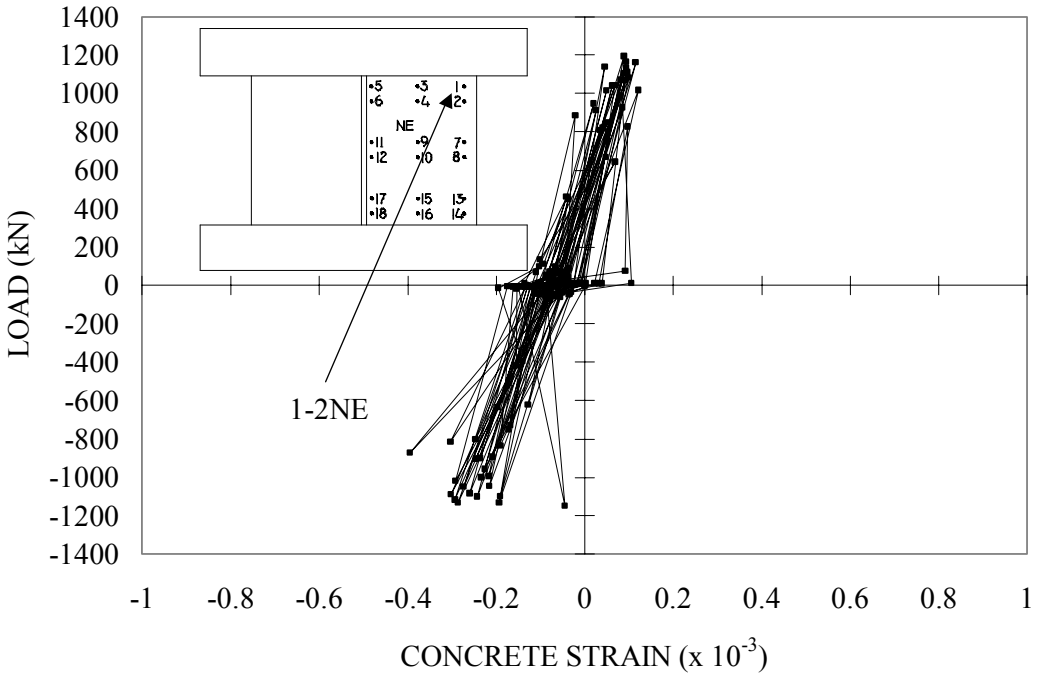

Figure H.19 DP1 Zurich Targets 1-2NE

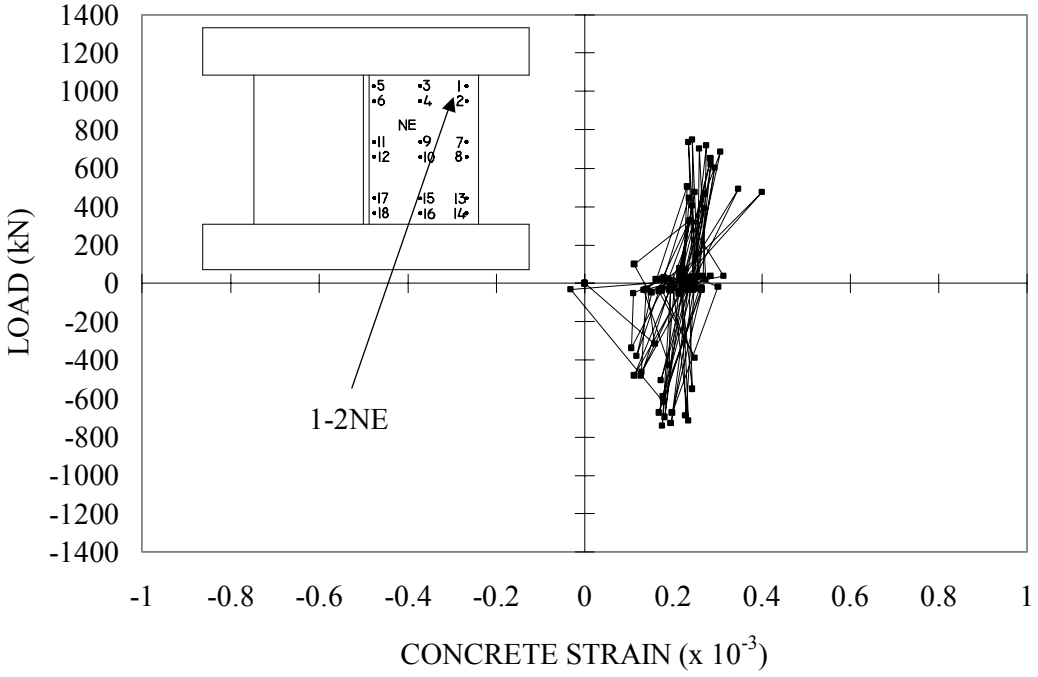

Figure H.20 DP2 Zurich Targets 1-2NE

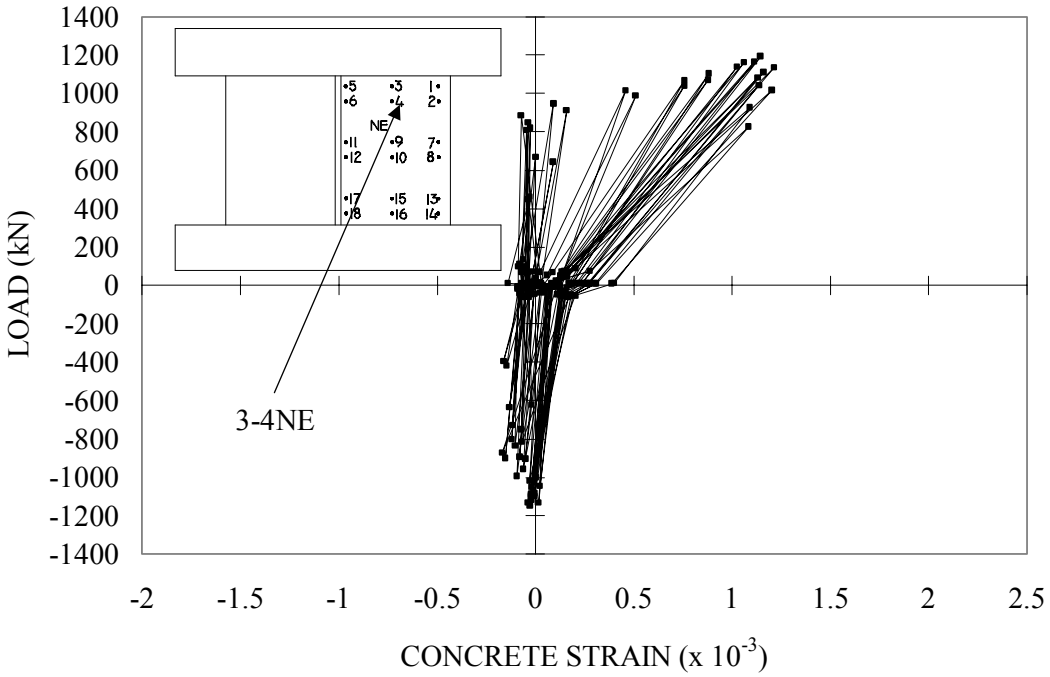

Figure H.21 DP1 Zurich Targets 3-4NE

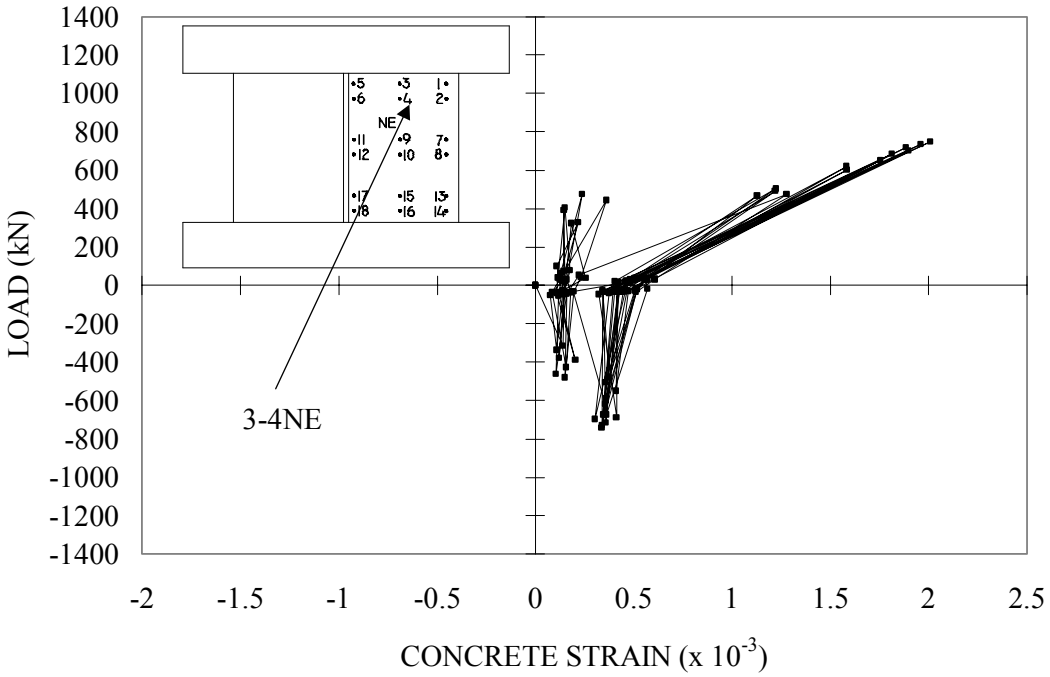

Figure H.22 DP2 Zurich Targets 3-4NE

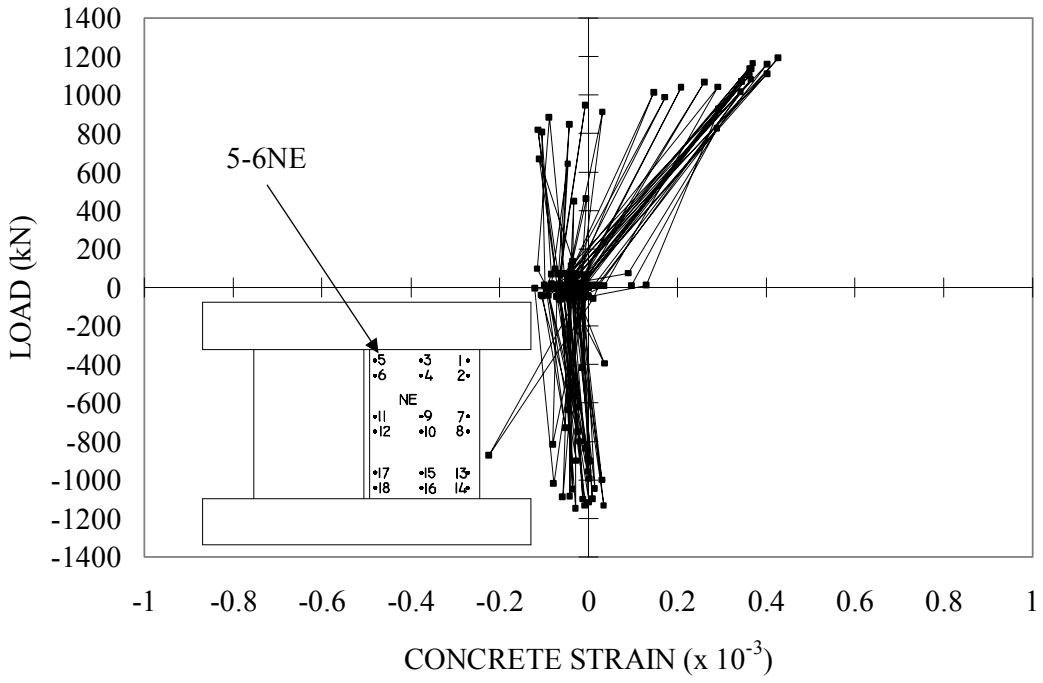

Figure H.23 DP1 Zurich Targets 5-6NE

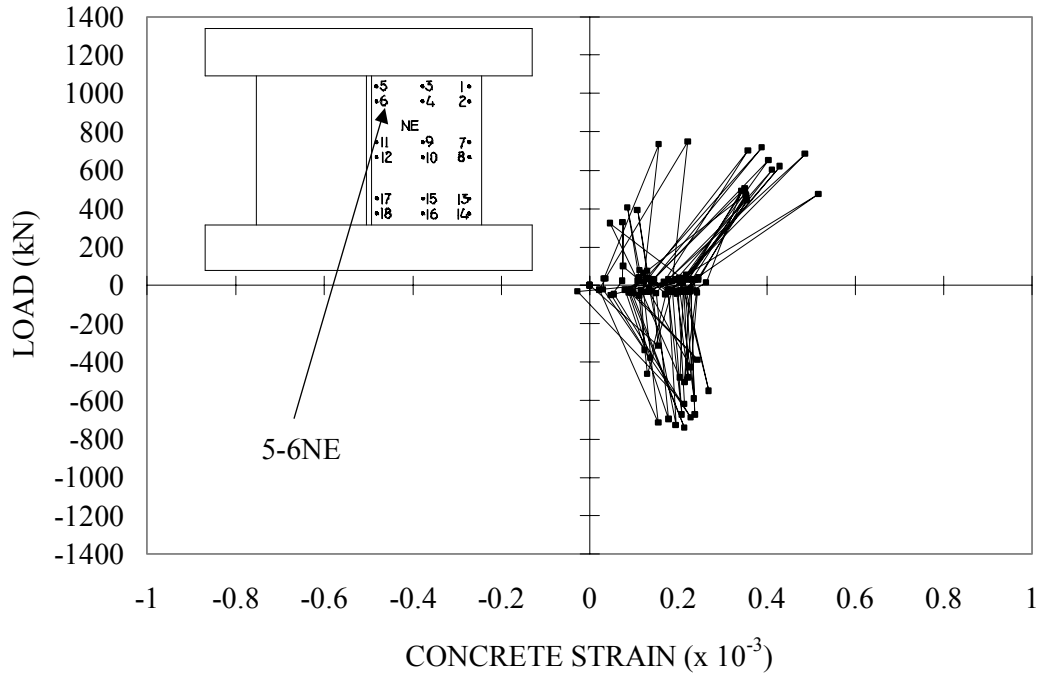

Figure H.24 DP2 Zurich Targets 5-6NE

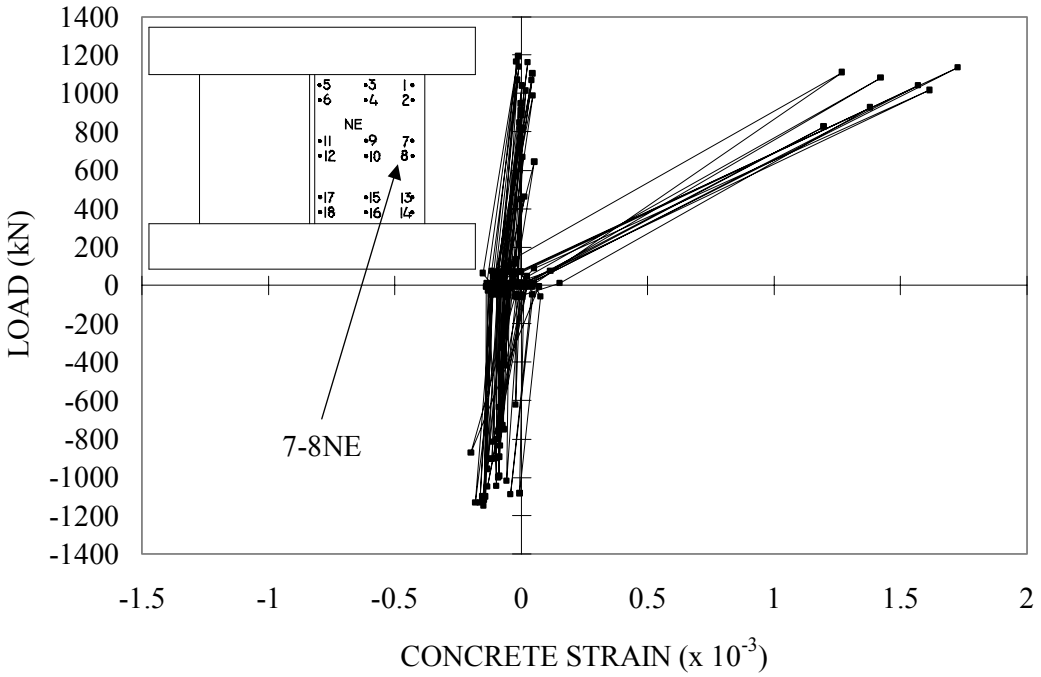

Figure H.25 DP1 Zurich Targets 7-8NE

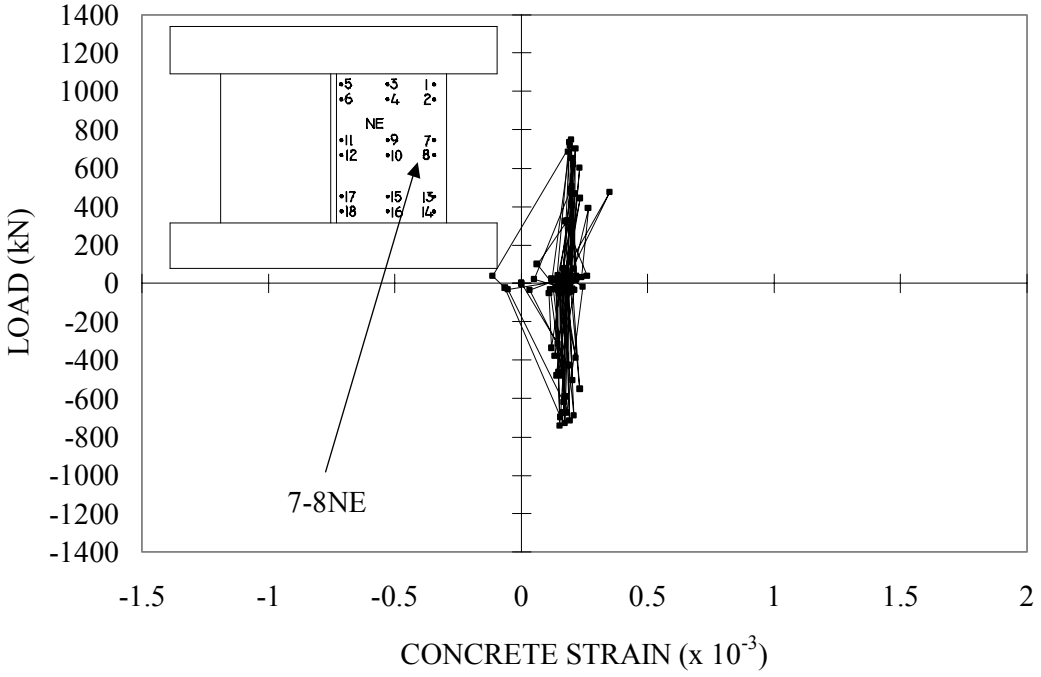

Figure H.26 DP2 Zurich Targets 7-8NE

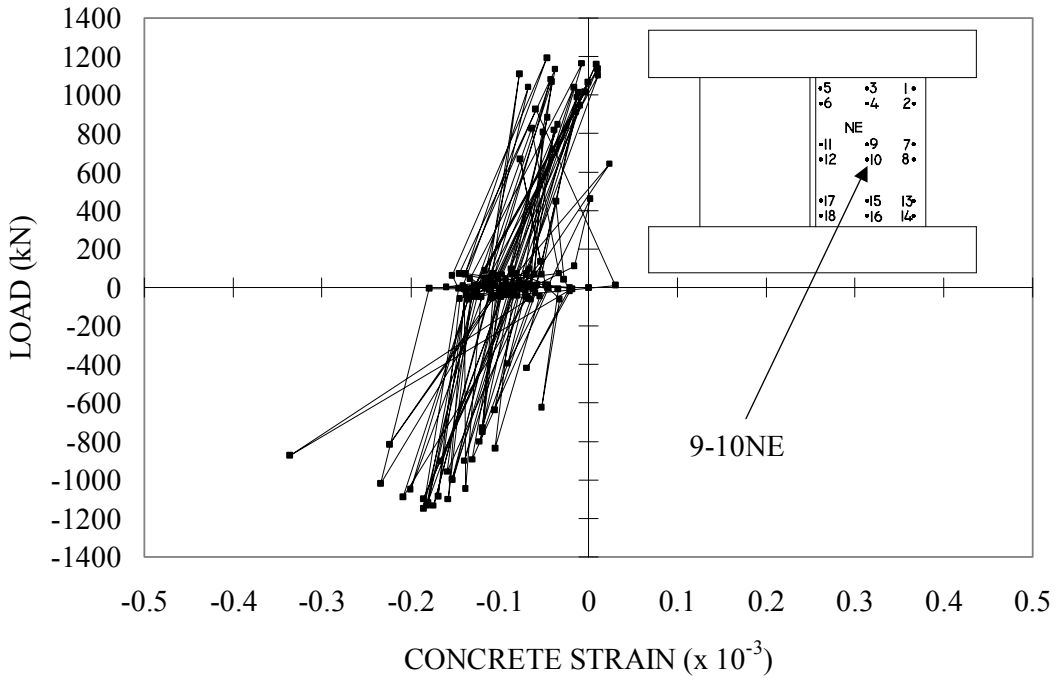

Figure H.27 DP1 Zurich Targets 9-10NE

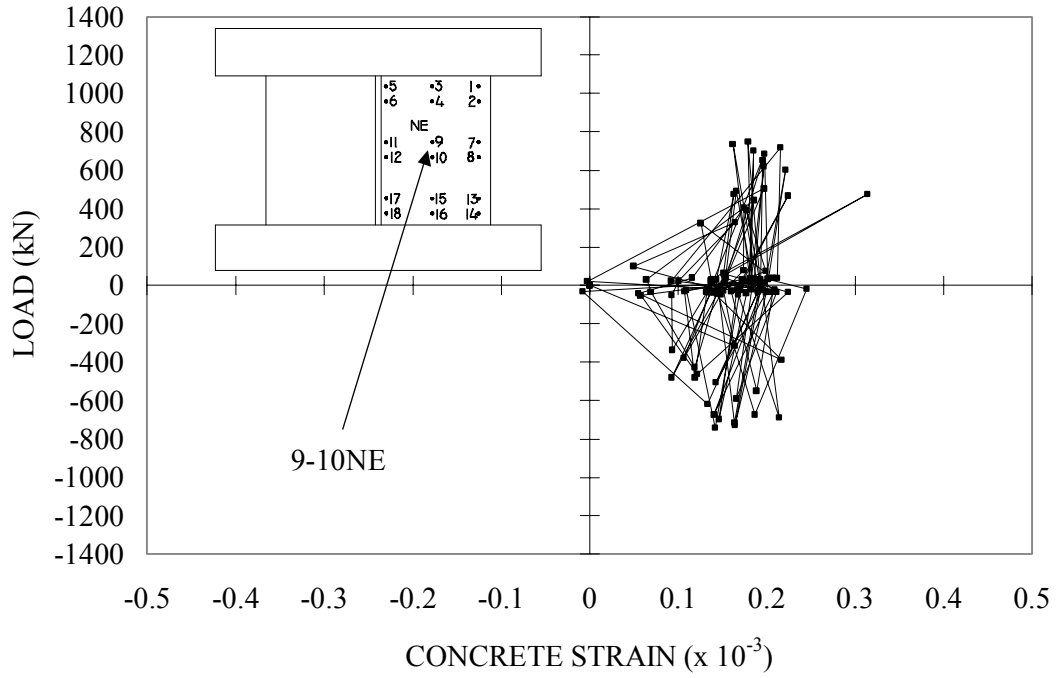

Figure H.28 DP2 Zurich Targets 9-10NE

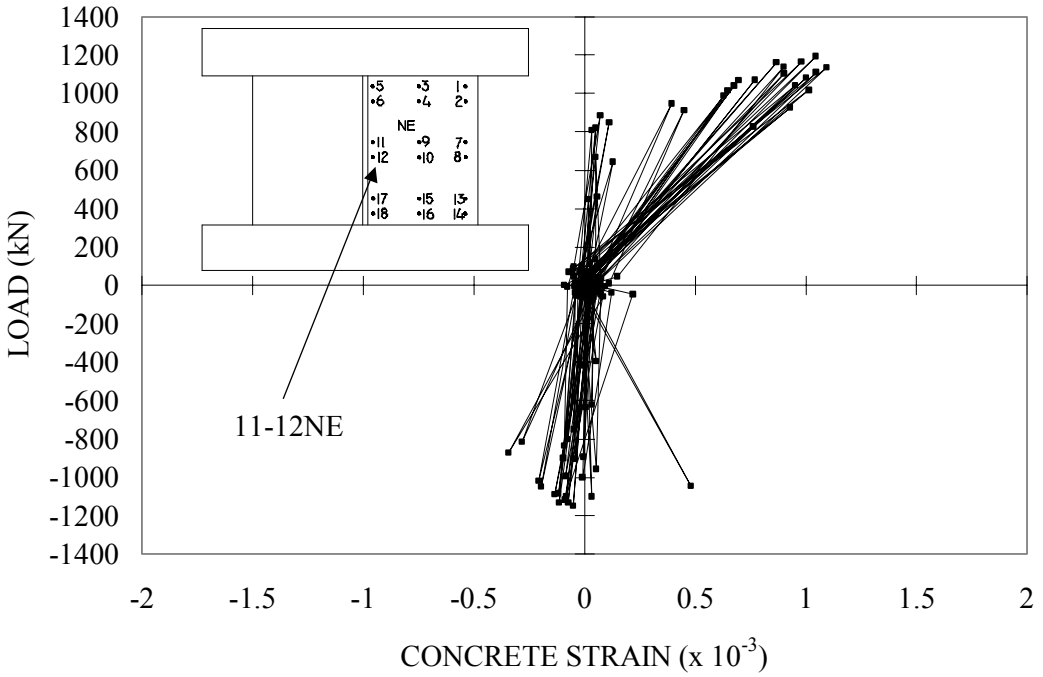

Figure H.29 DP1 Zurich Targets 11-12NE

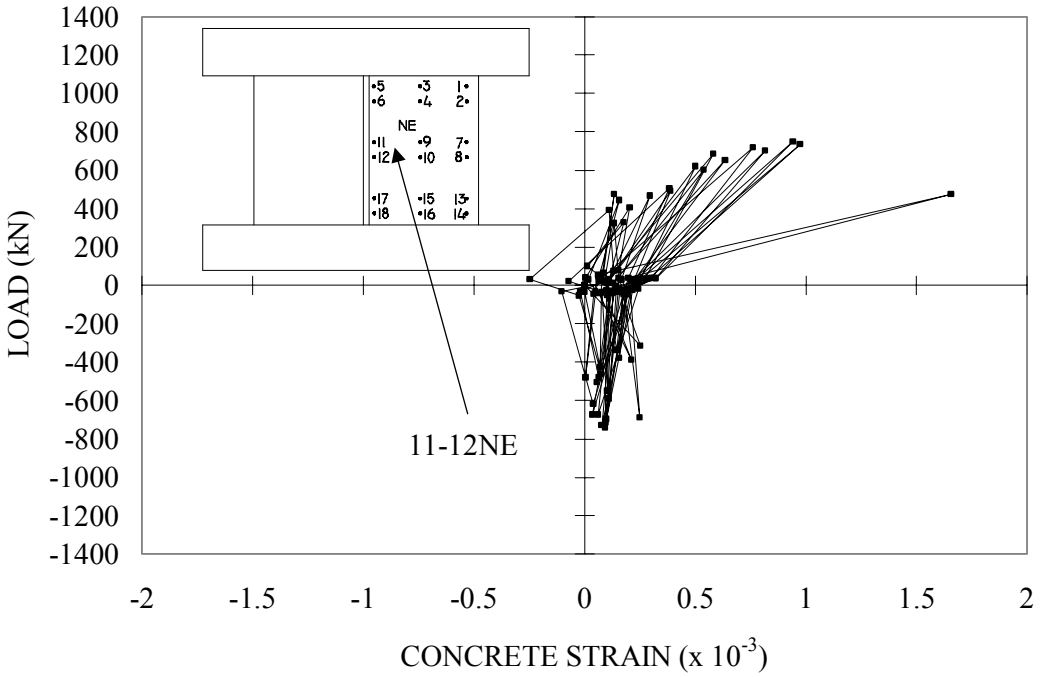

Figure H.30 DP2 Zurich Targets 11-12NE

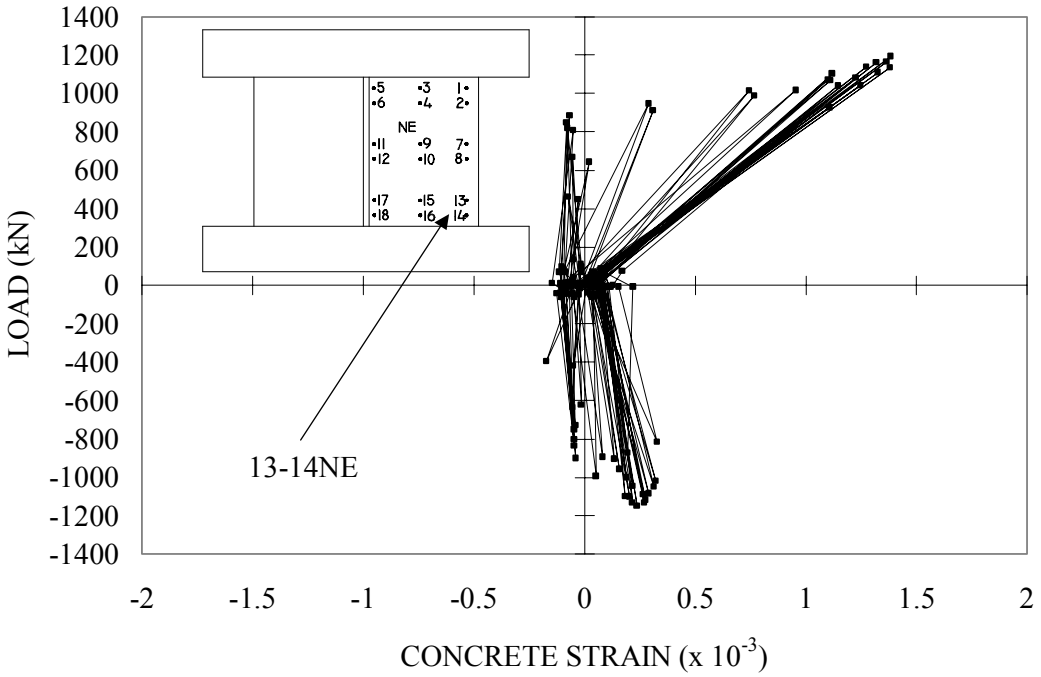

Figure H.31 DP1 Zurich Targets 13-14NE

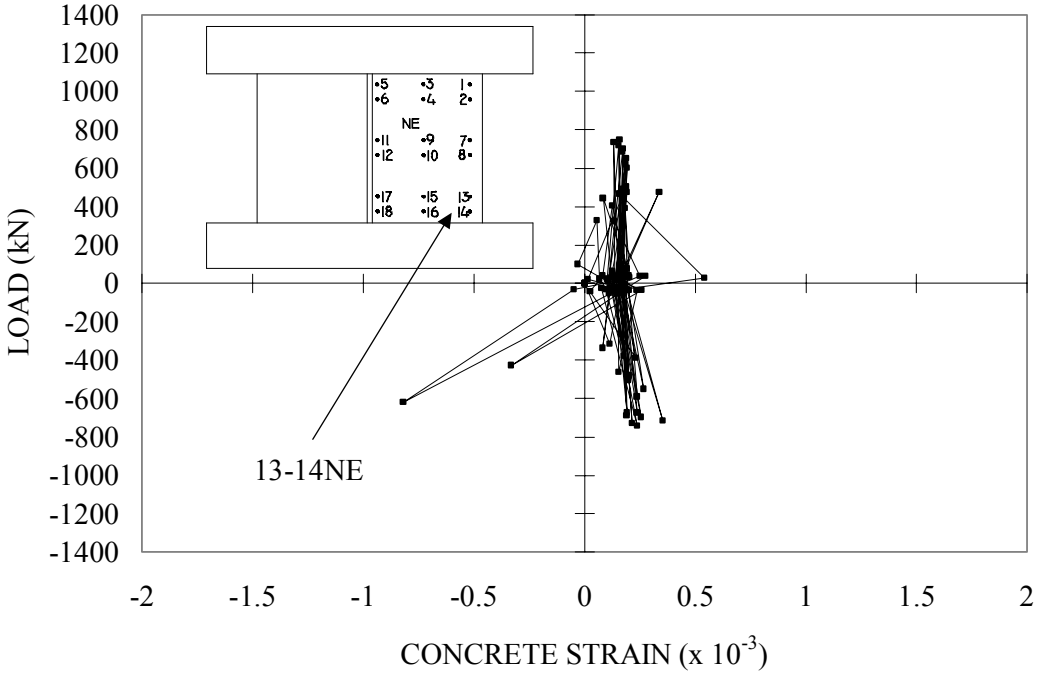

Figure H.32 DP2 Zurich Targets 13-14NE

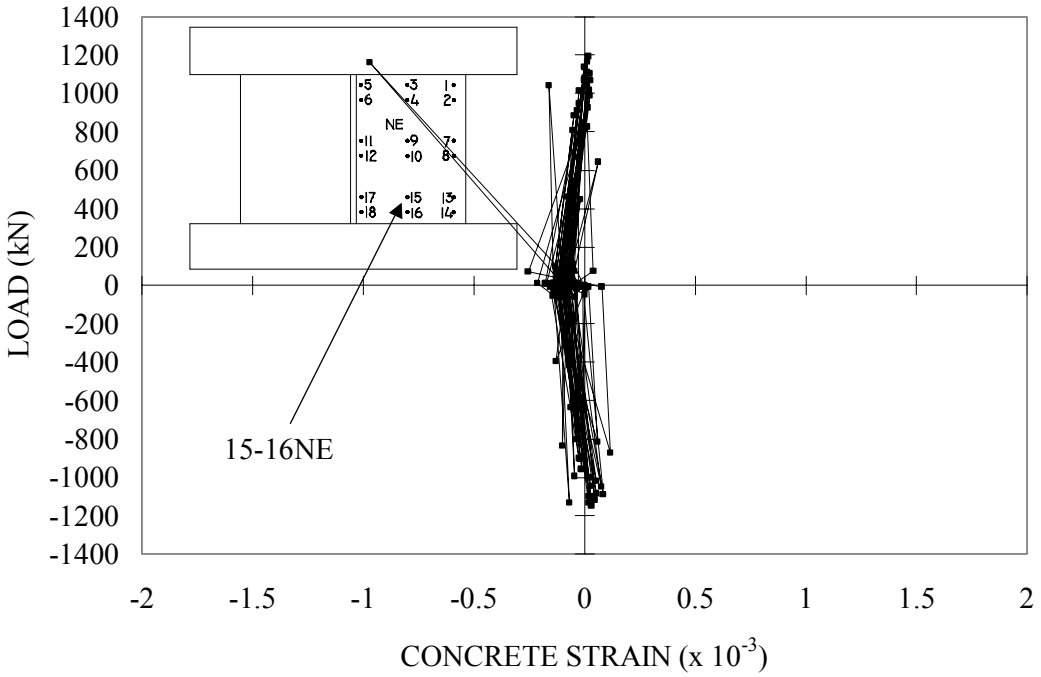

Figure H.33 DP1 Zurich Targets 15-16NE

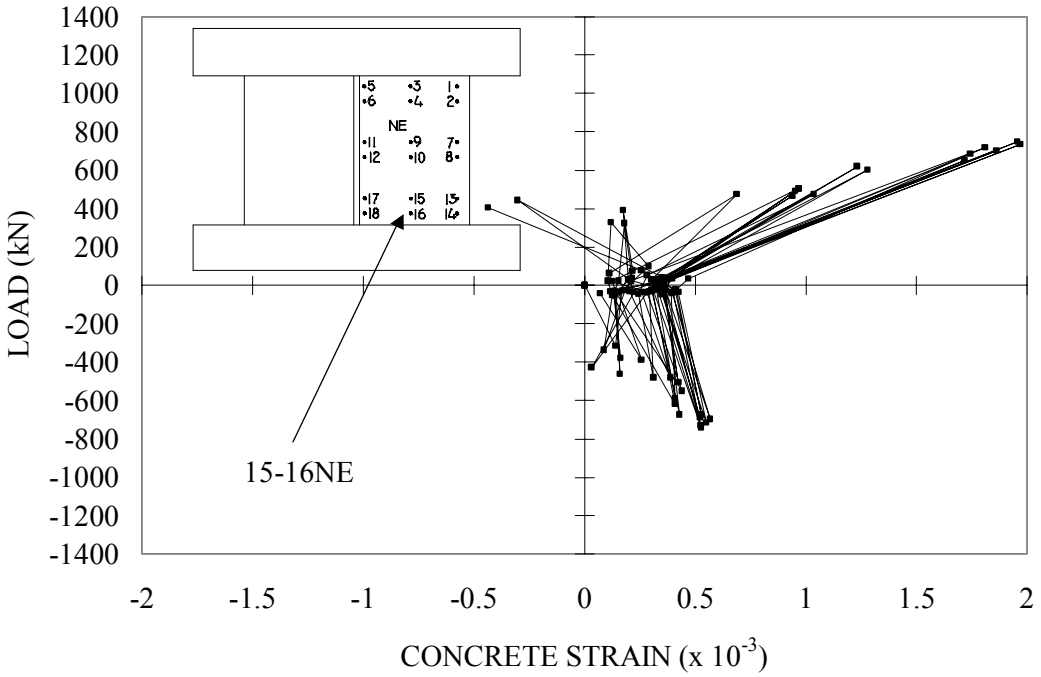

Figure H.34 DP2 Zurich Targets 15-16NE

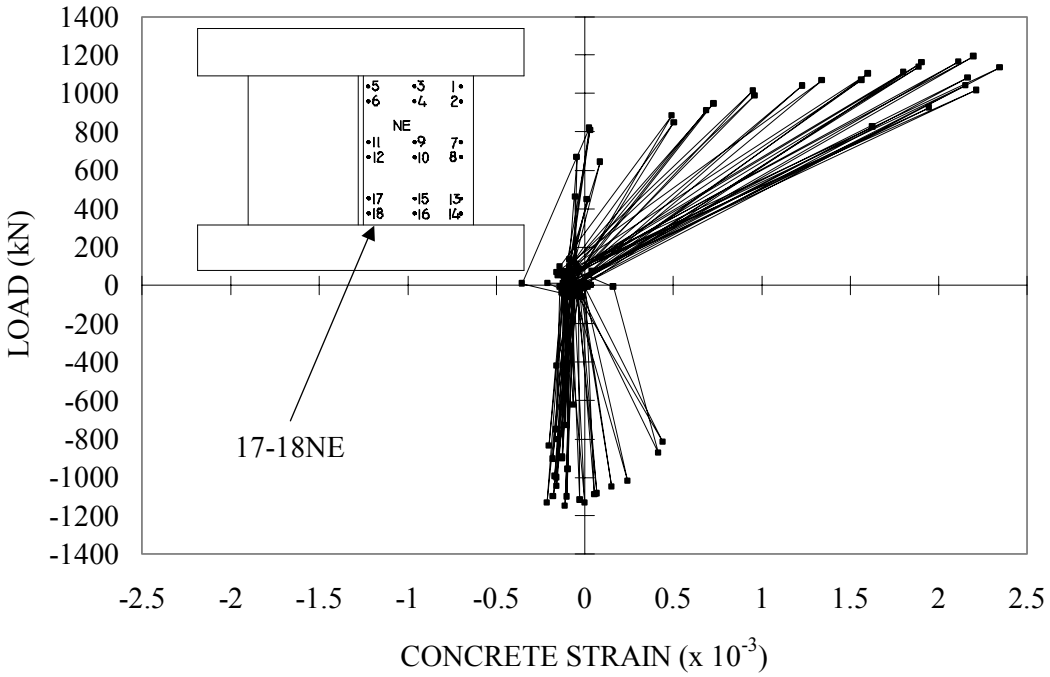

Figure H.35 DP1 Zurich Targets 17-18NE

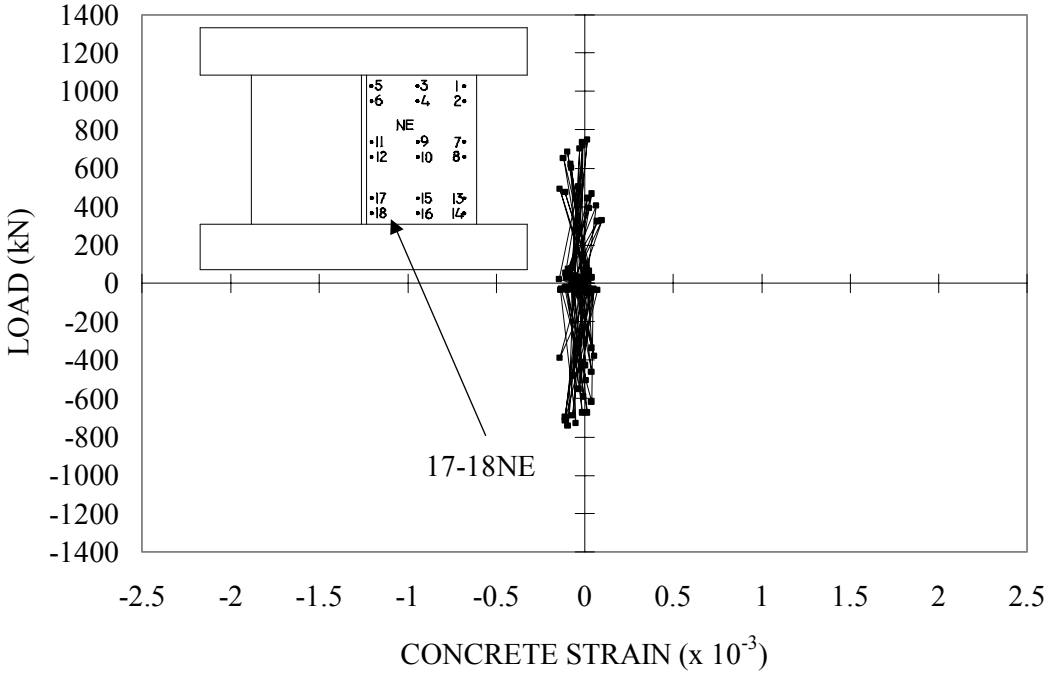

Figure H.36 DP2 Zurich Targets 17-18NE

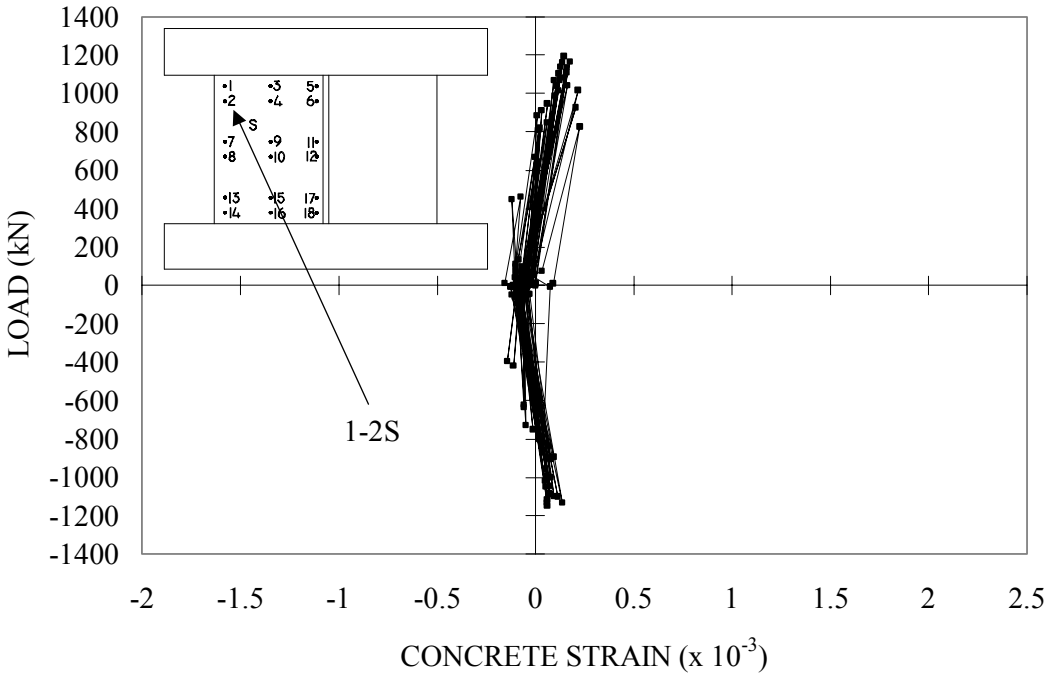

Figure H.37 DP1 Zurich Targets 1-2S

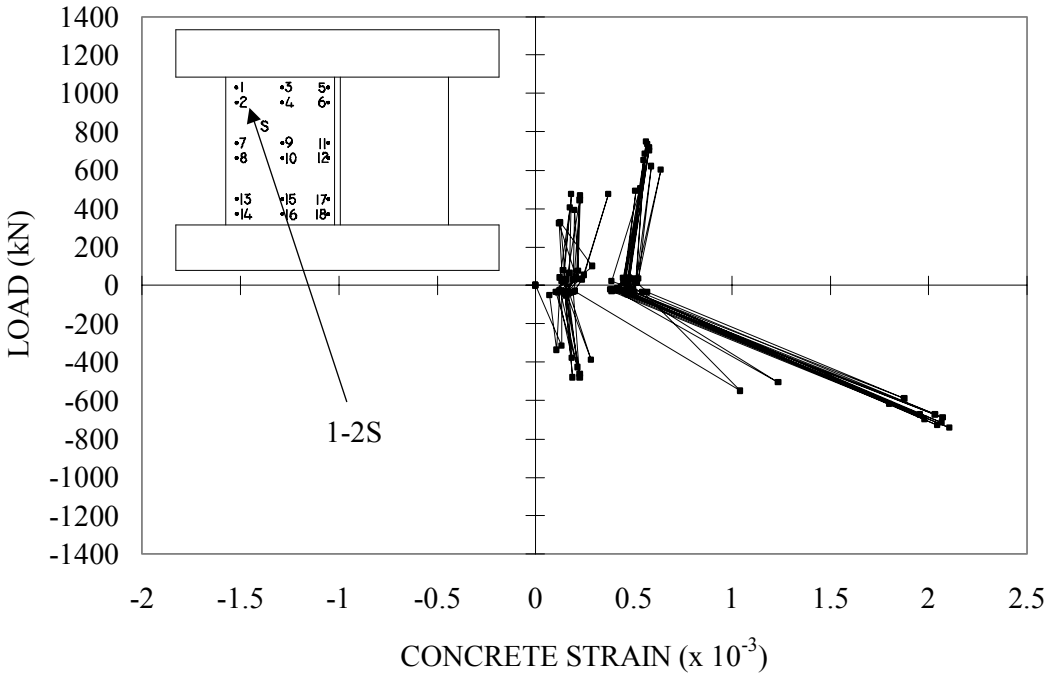

Figure H.38 DP2 Zurich Targets 1-2S

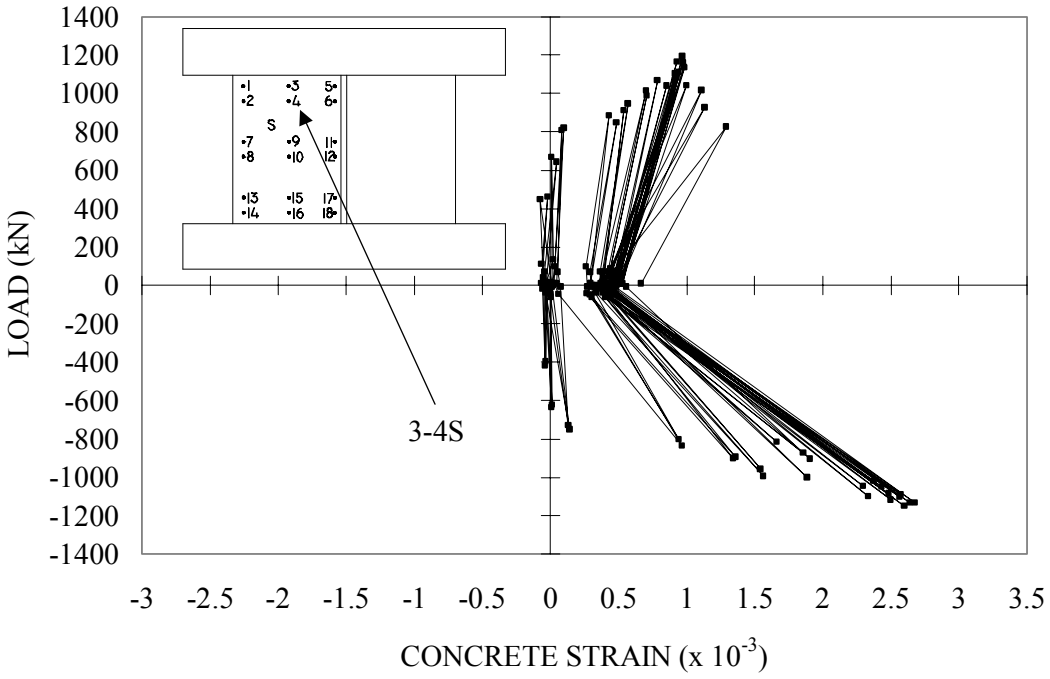

Figure H.39 DP1 Strain Gauge 3-4S

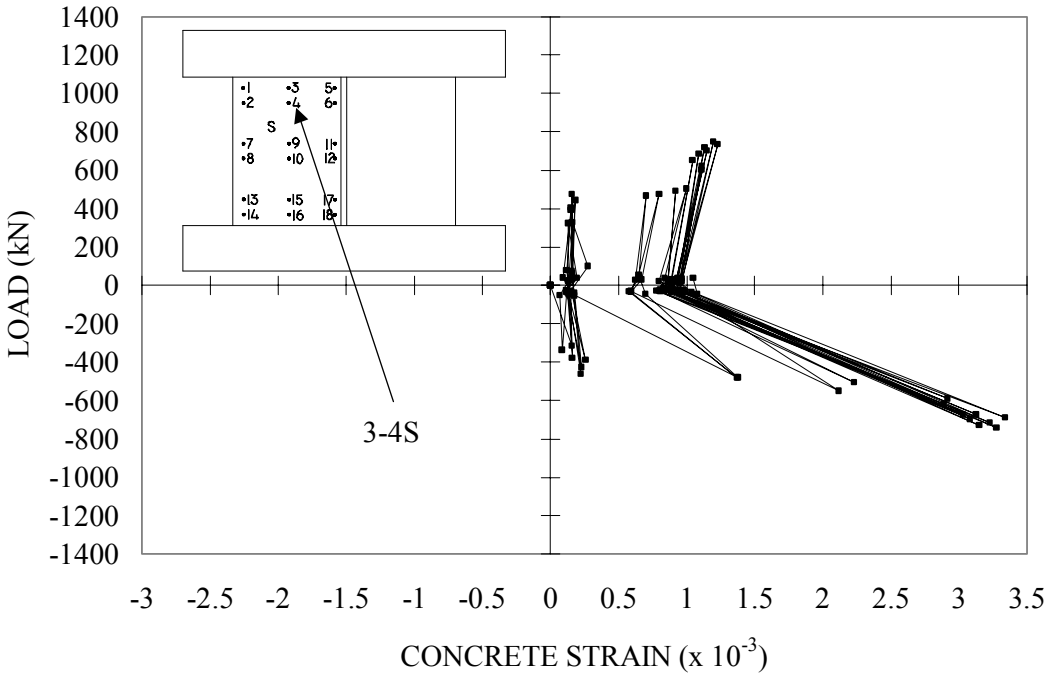

Figure H.40 DP2 Zurich Gauge 3-4S

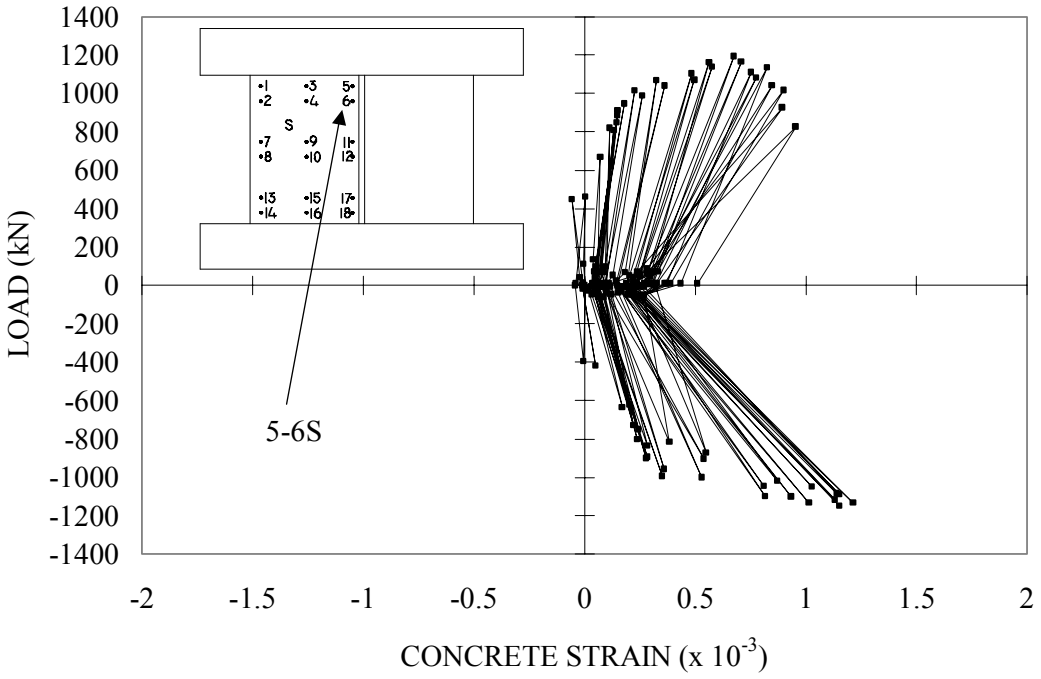

Figure H.41 DP1 Zurich Targets 5-6S

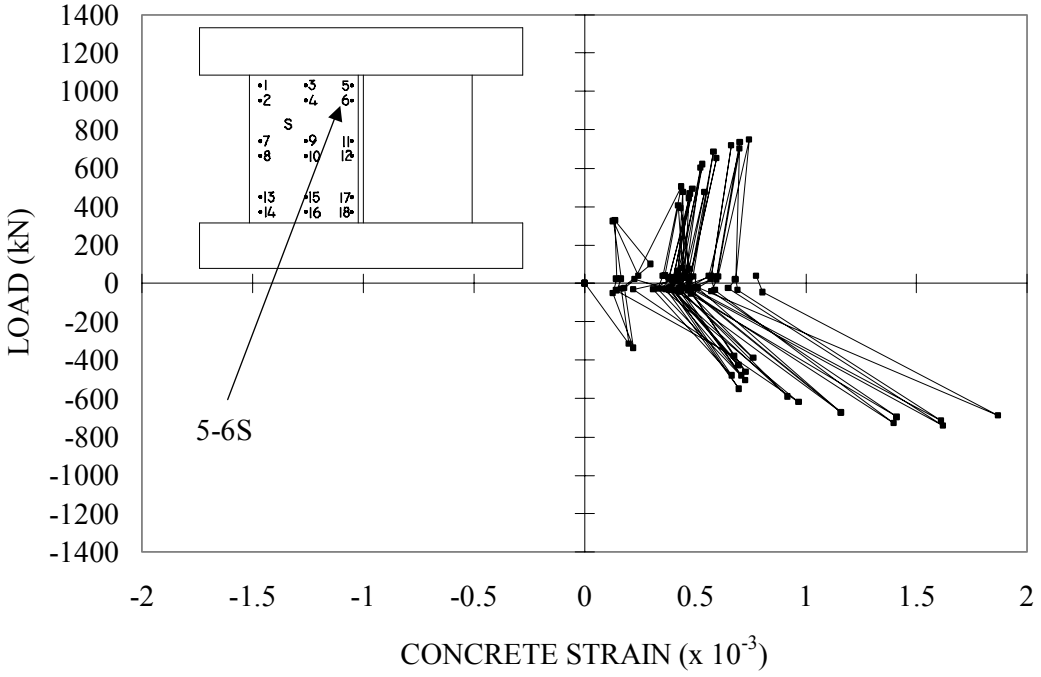

Figure H.42 DP2 Zurich Targets 5-6S

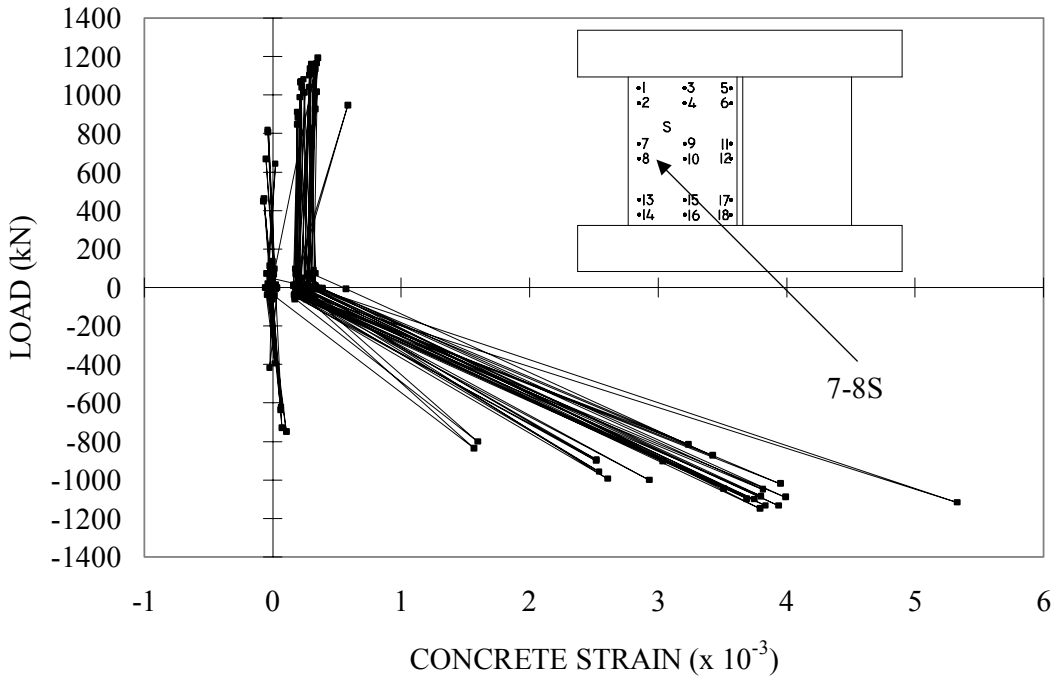

Figure H.43 DP1 Zurich Targets 7-8S

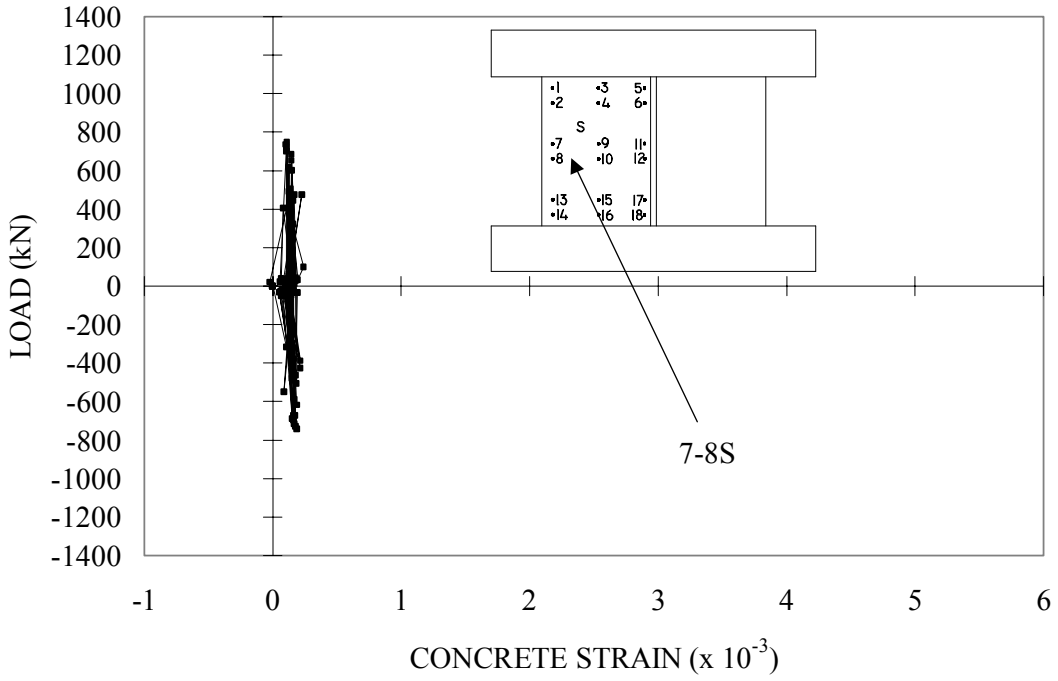

Figure H.44 DP2 Zurich Targets 7-8S

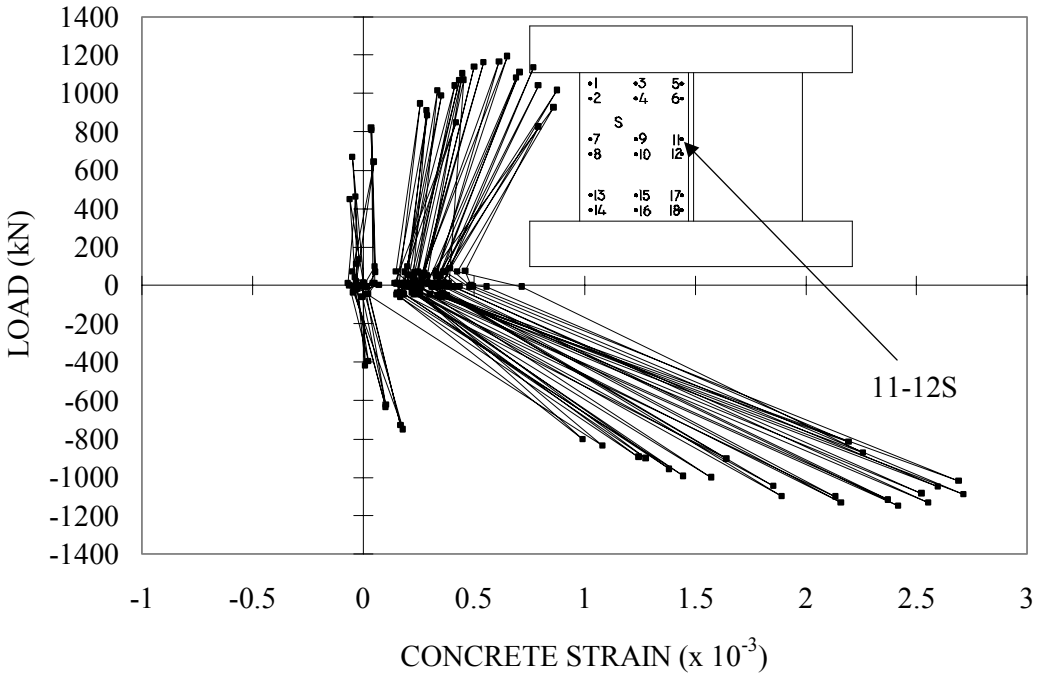

Figure H.45 DP1 Zurich Targets 11-12S

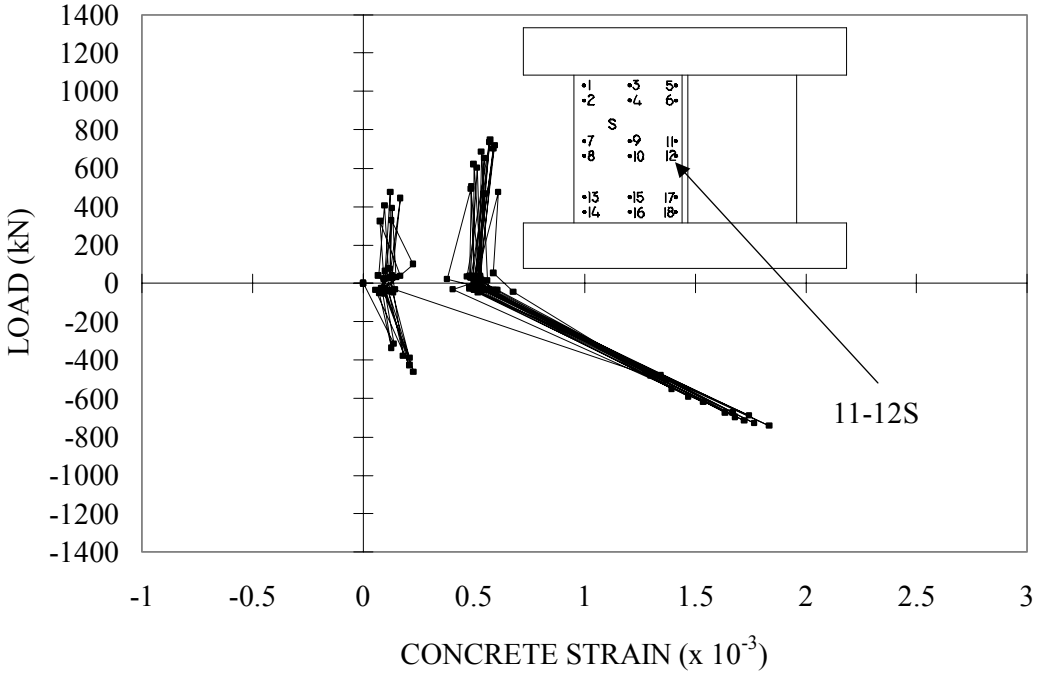

Figure H.46 DP2 Zurich Targets 11-12S

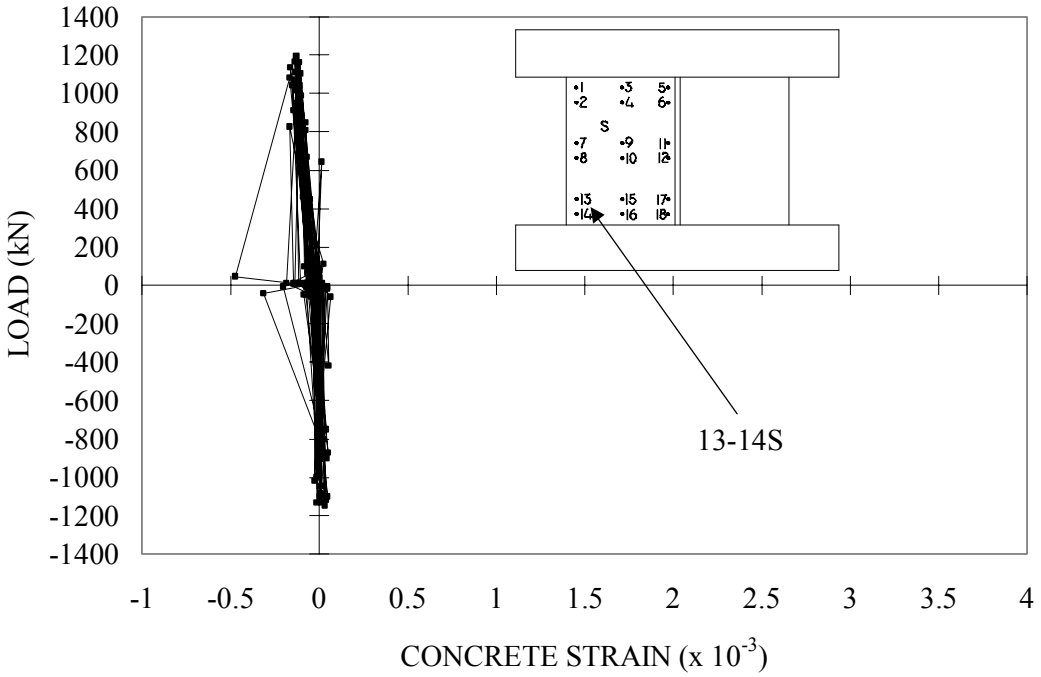

Figure H.47 DP1 Zurich Targets 13-14S

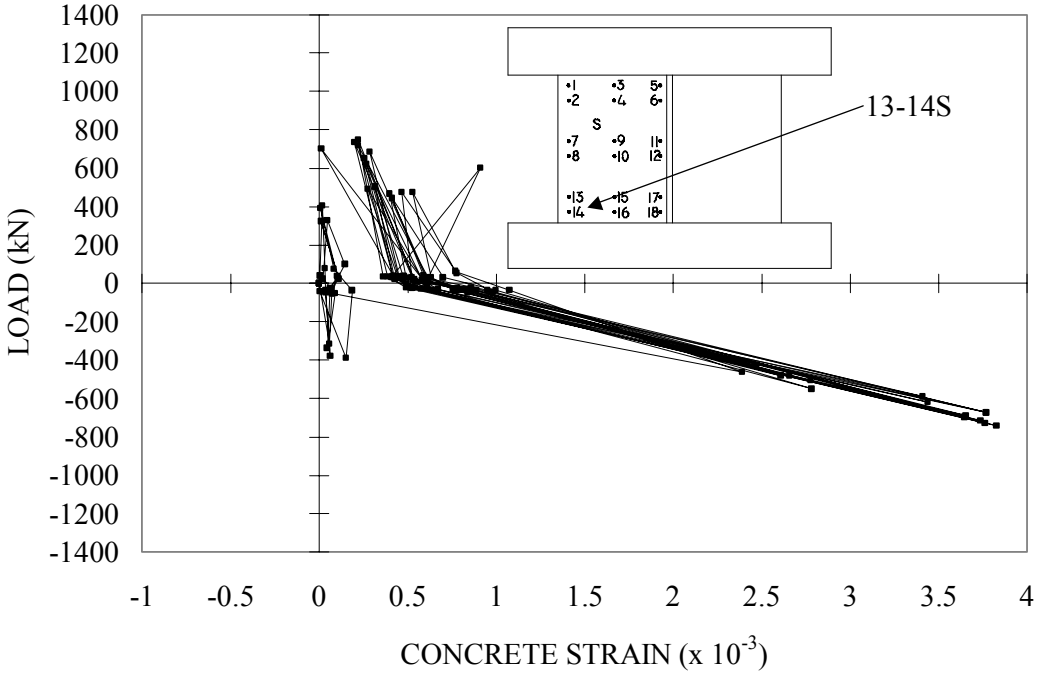

Figure H.48 DP2 Zurich Targets 13-14S

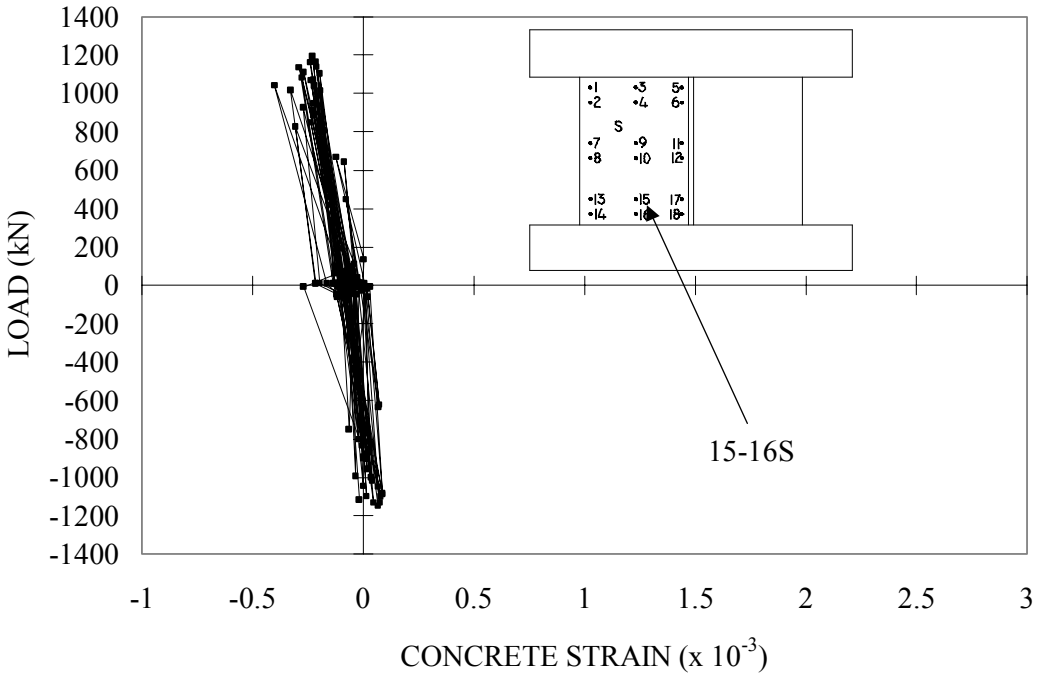

Figure H.49 DP1 Zurich Targets 15-16S

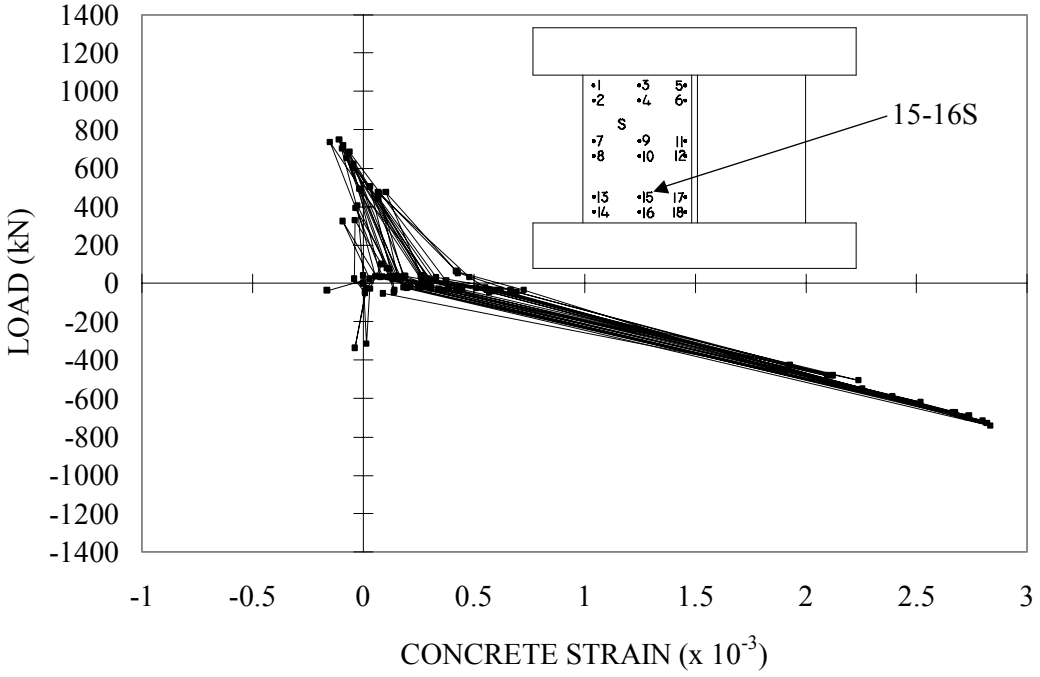

Figure H.50 DP2 Zurich Targets 15-16S

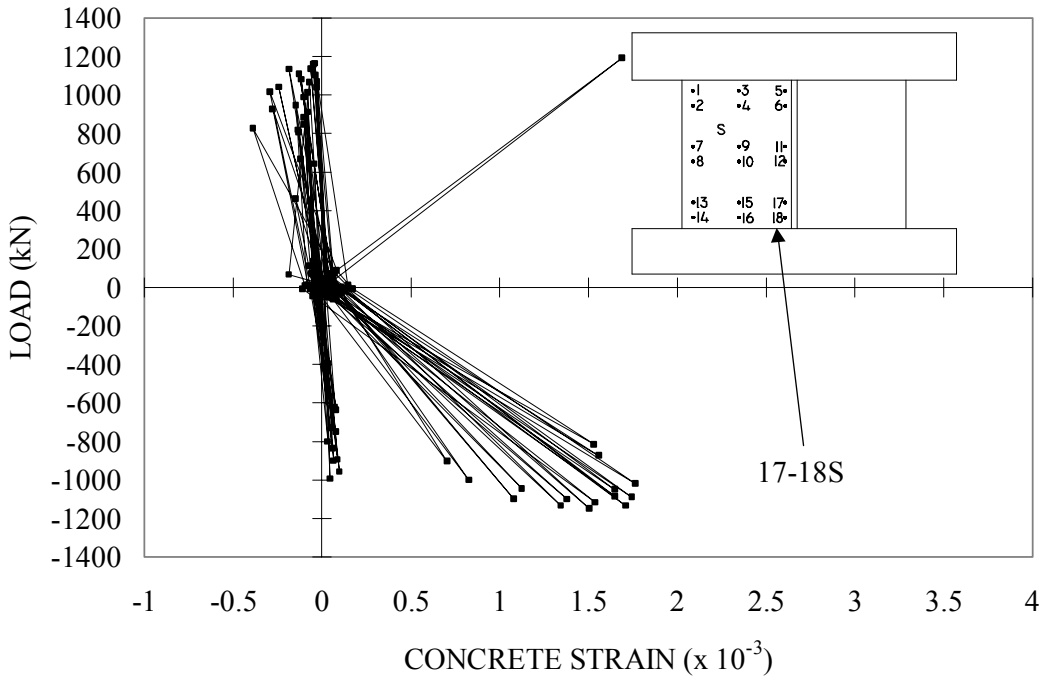

Figure H.51 DP1 Zurich Targets 17-18S

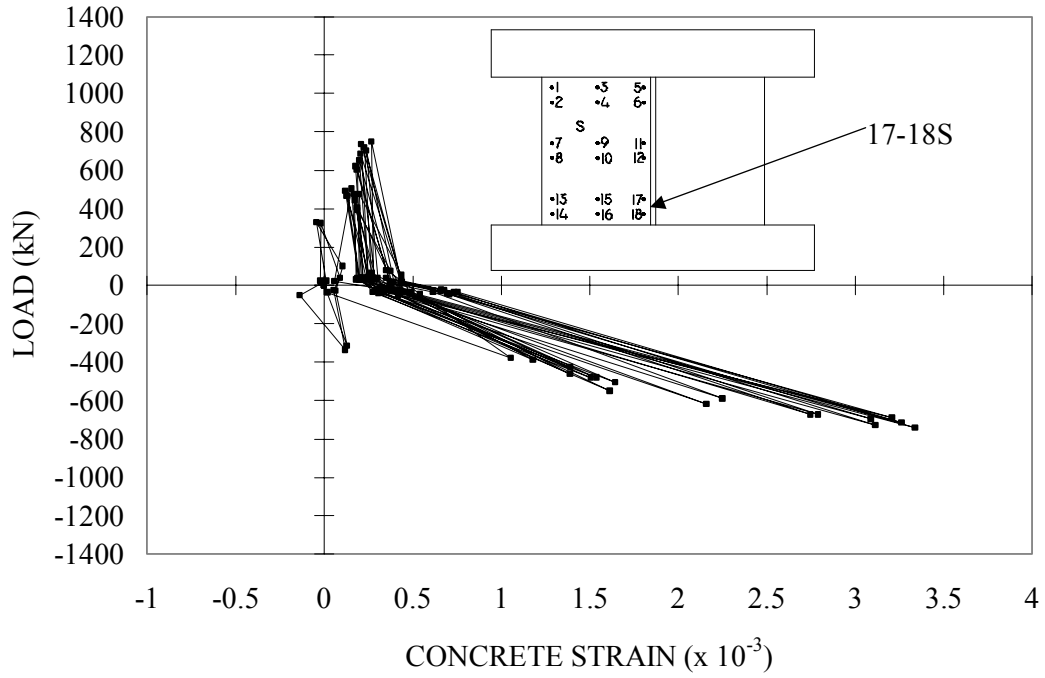

Figure H.52 DP2 Zurich Targets 17-18S

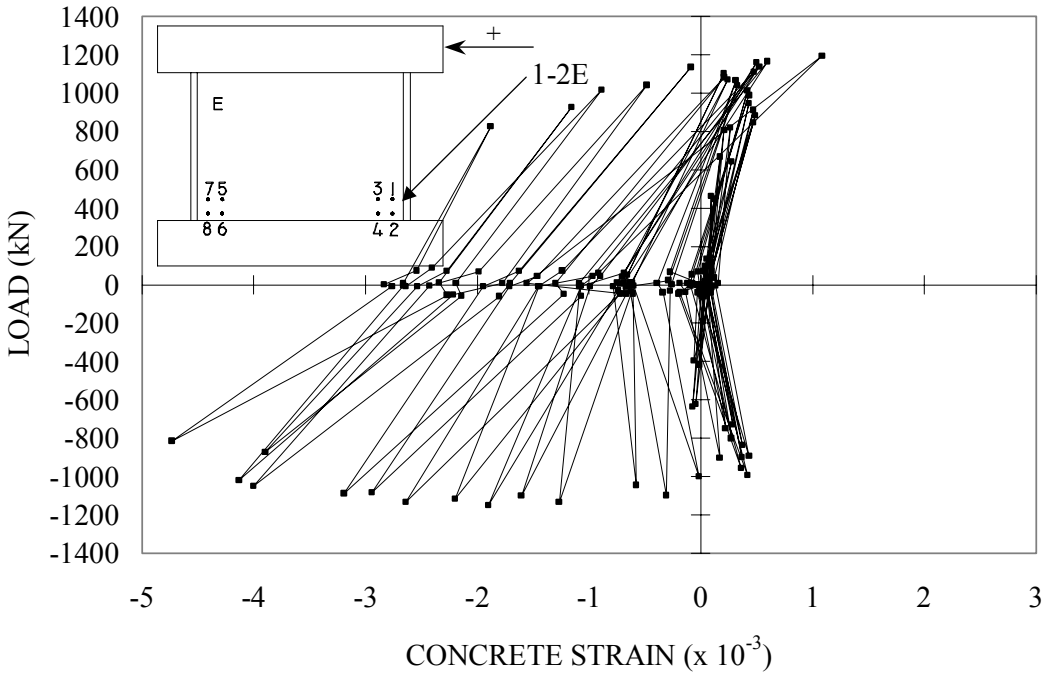

Figure H.53 DP1 Zurich Targets 1-2E

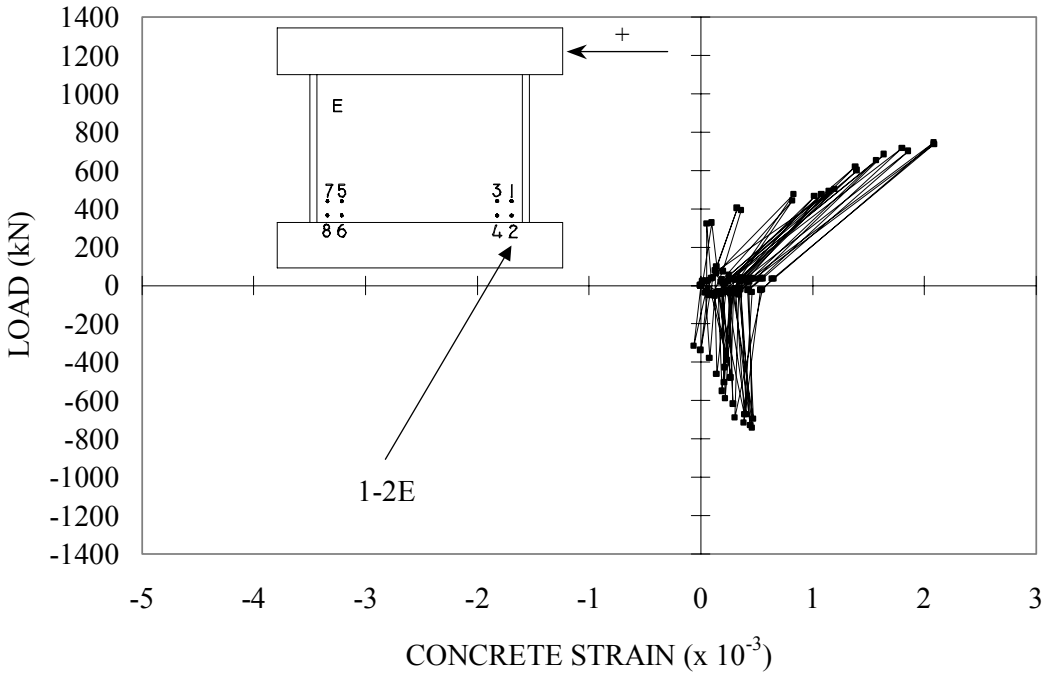

Figure H.54 DP2 Zurich Targets 1-2E

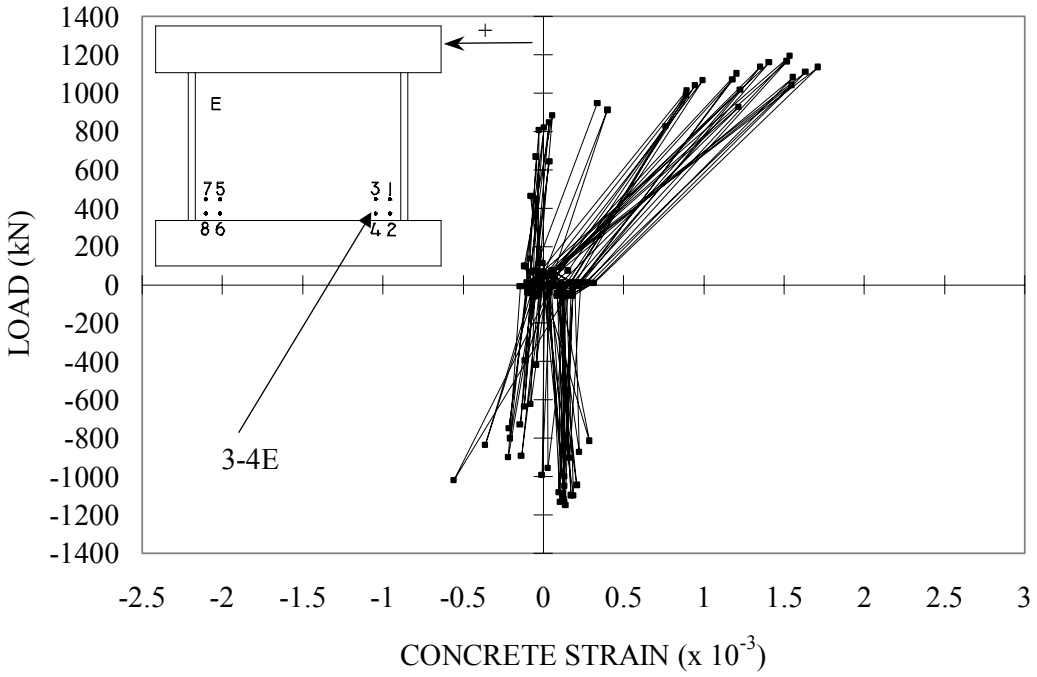

Figure H.55 DP1 Zurich Targets 3-4E

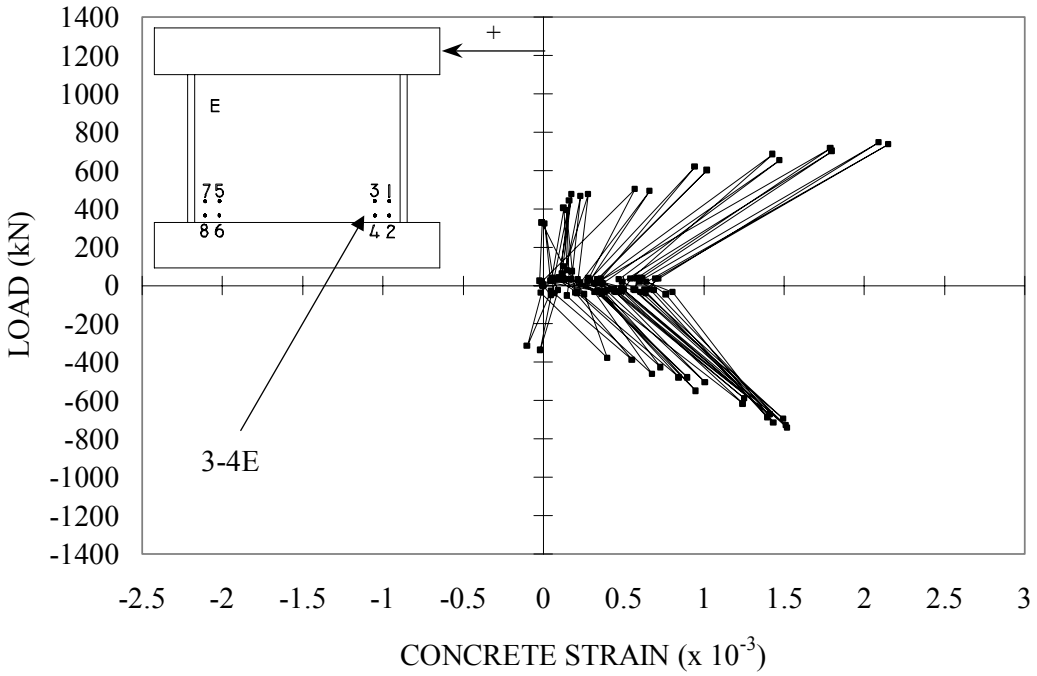

Figure H.56 DP2 Zurich Targets 3-4E

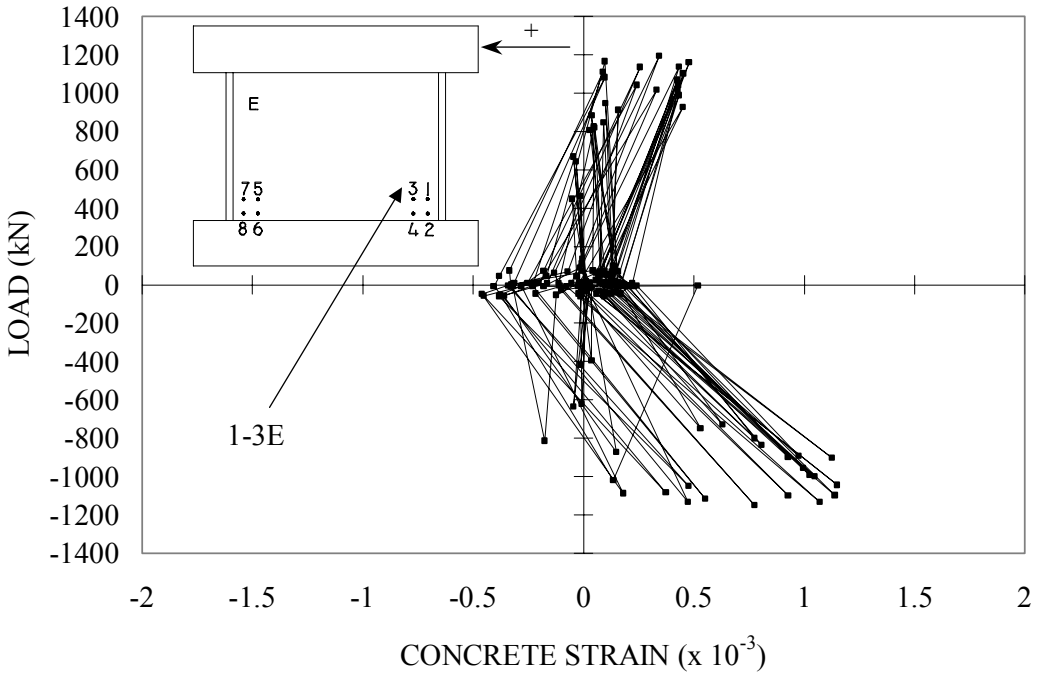

Figure H.57 DP1 Zurich Targets 1-3E

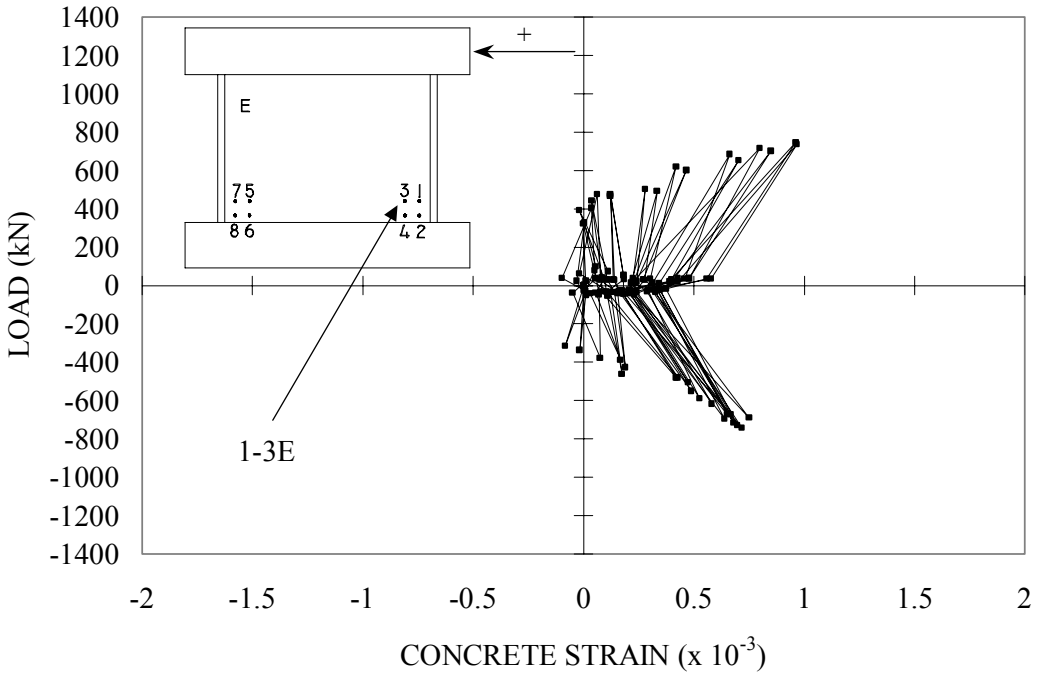

Figure H.58 DP2 Zurich Targets 1-3E

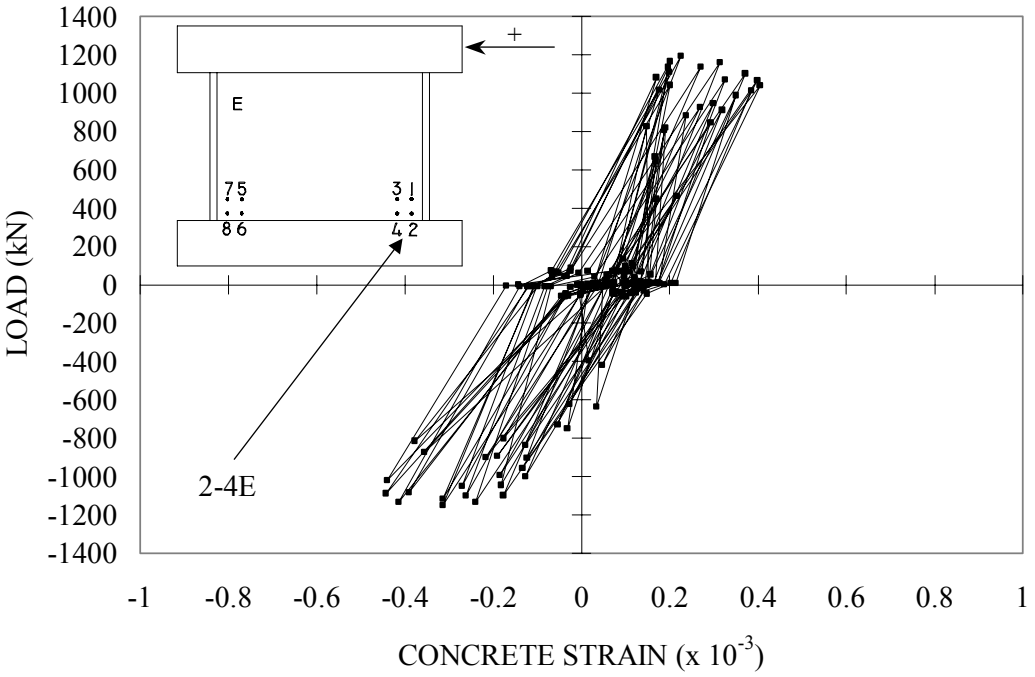

Figure H.59 DP1 Zurich Targets 2-4E

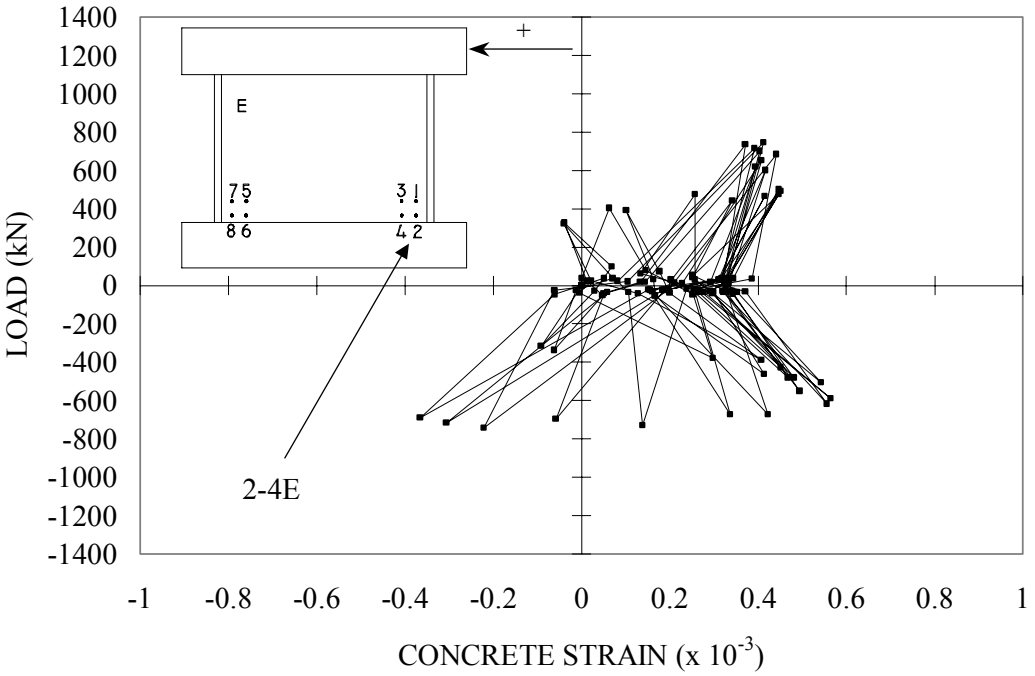

Figure H.60 DP2 Zurich Targets 2-4E

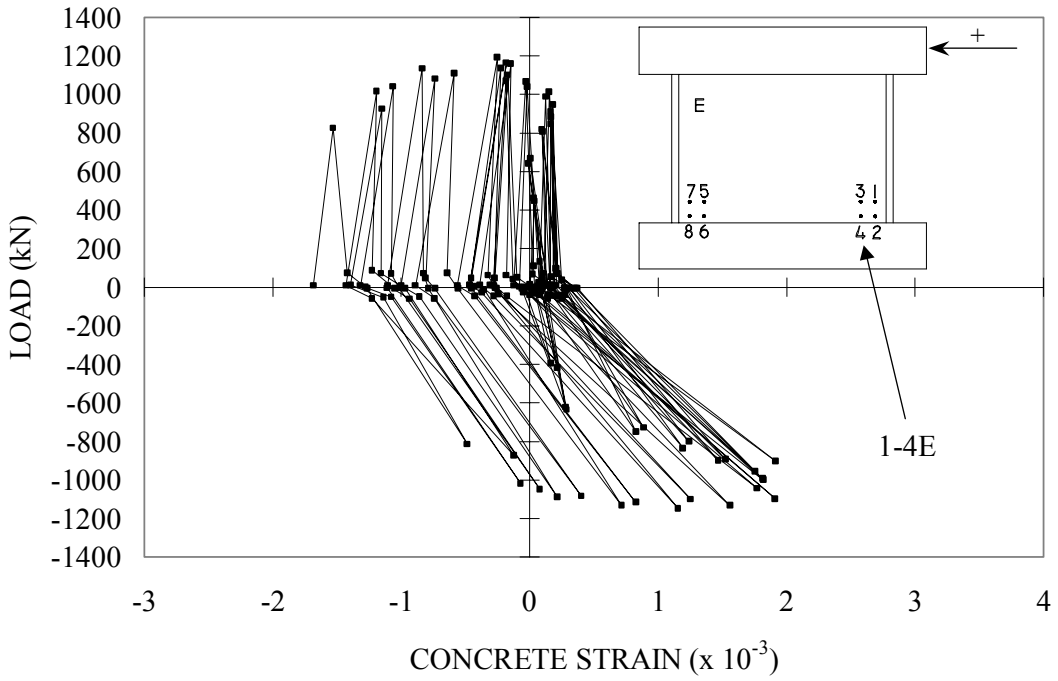

Figure H.61 DP1 Zurich Targets 1-4E

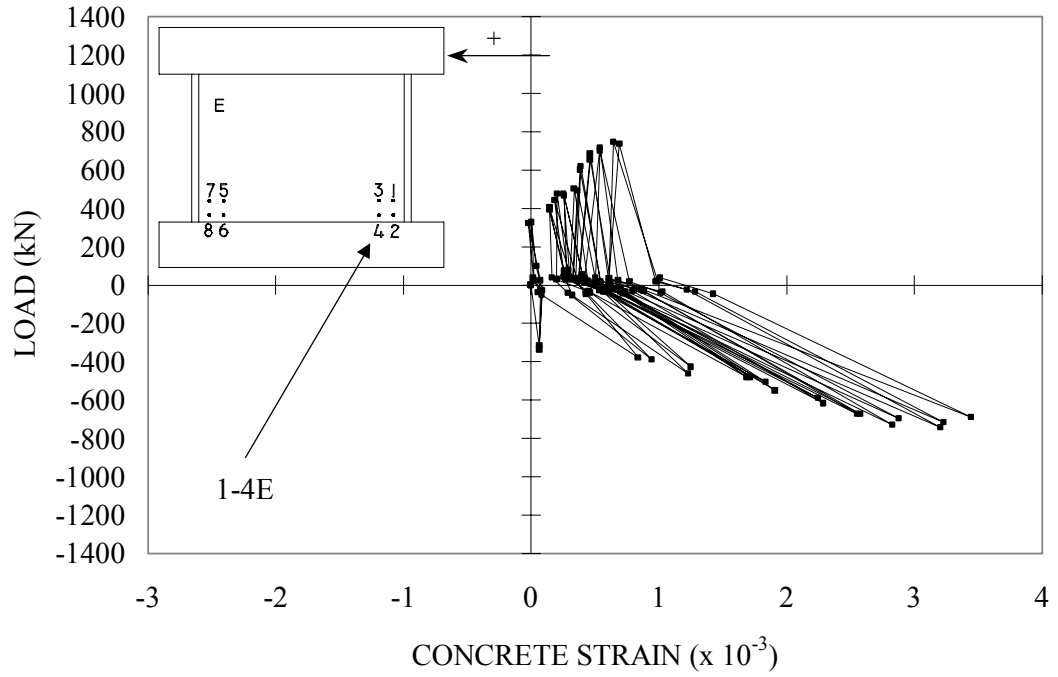

Figure H.62 DP2 Zurich Targets 1-4E

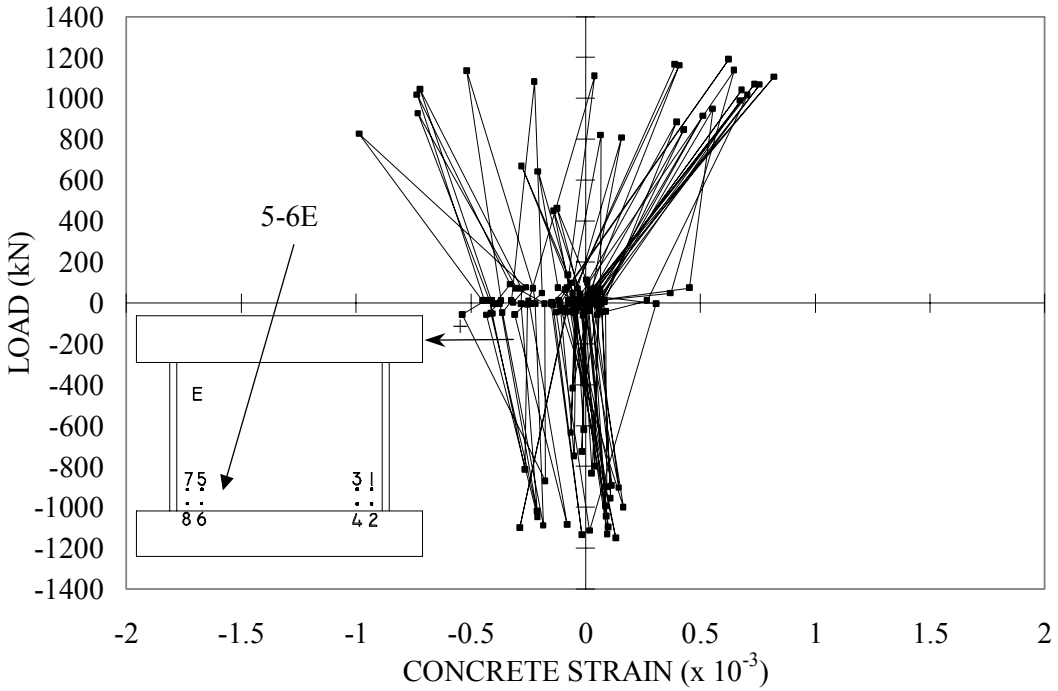

Figure H.63 DP1 Zurich Targets 5-6E

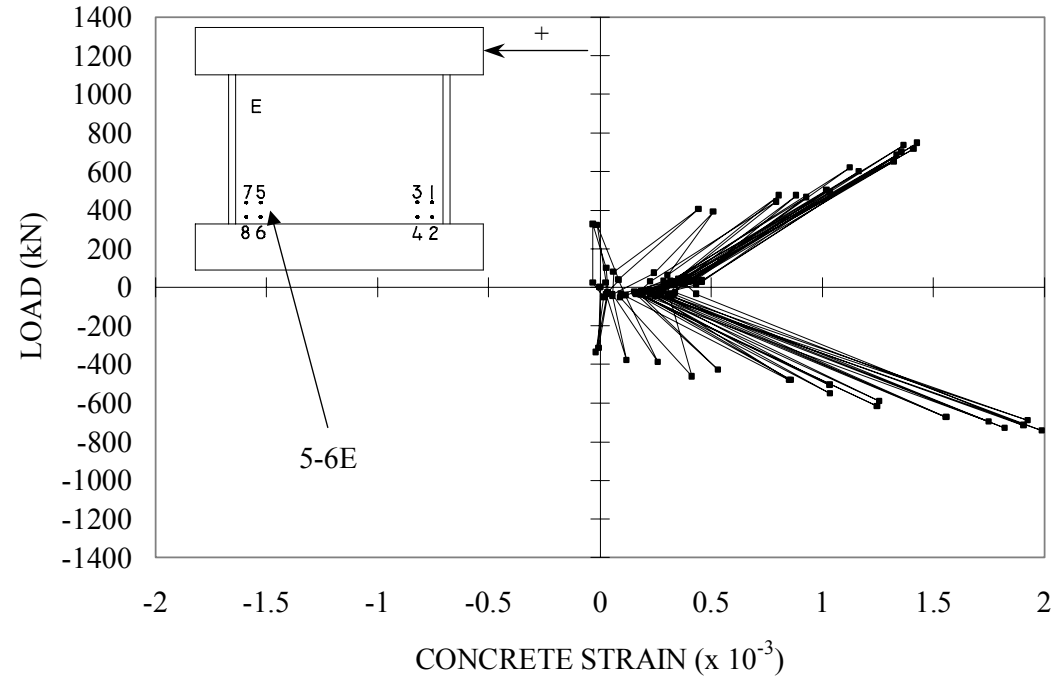

Figure H.64 DP2 Zurich Targets 5-6E

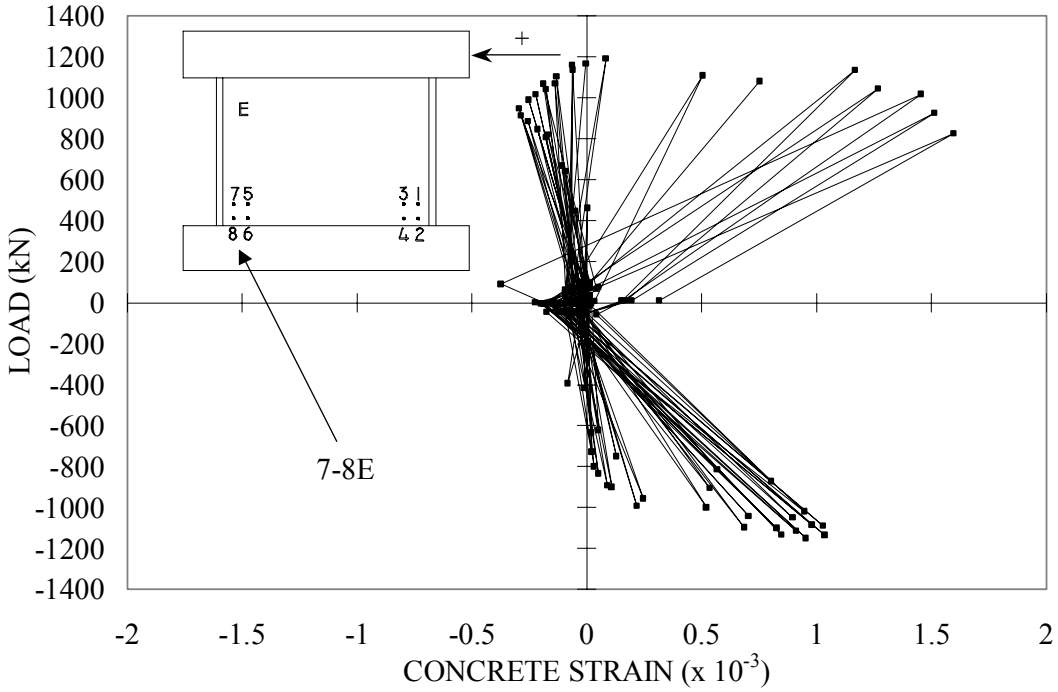

Figure H.65 DP1 Zurich Targets 7-8E

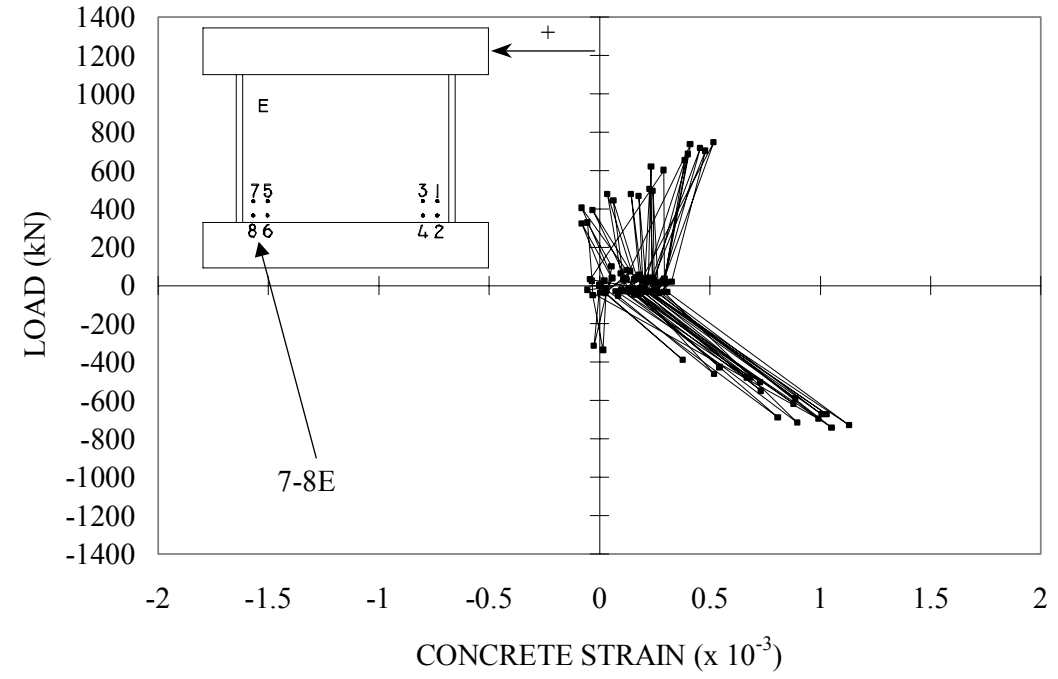

Figure H.66 DP2 Zurich Targets 7-8E

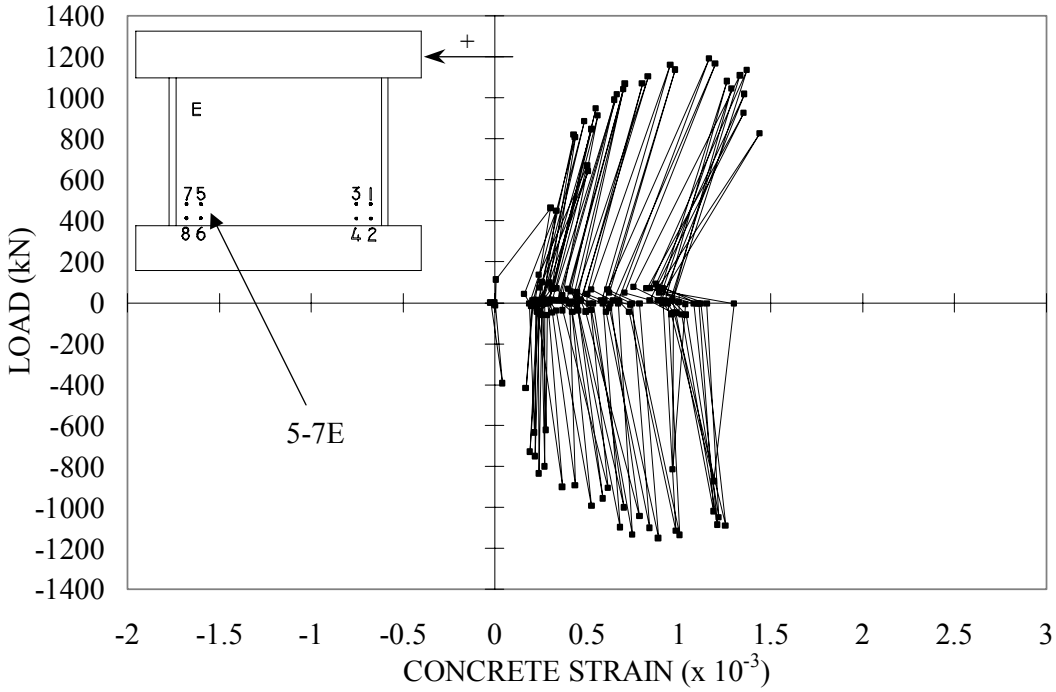

Figure H.67 DP1 Zurich Targets 5-7E

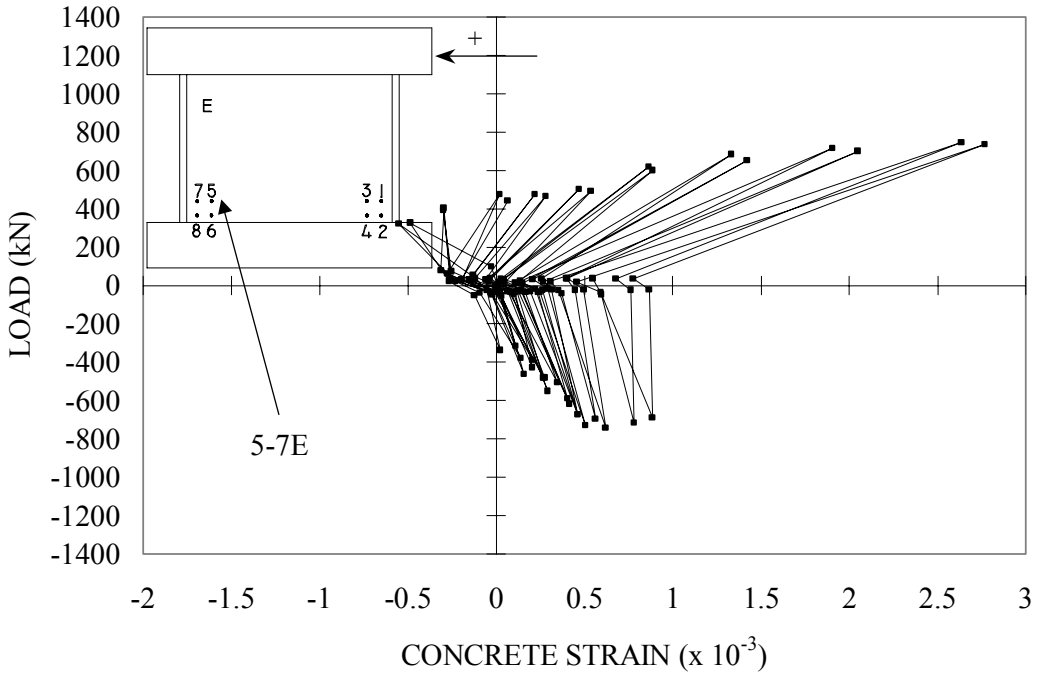

Figure H.68 DP2 Zurich Targets 5-7E

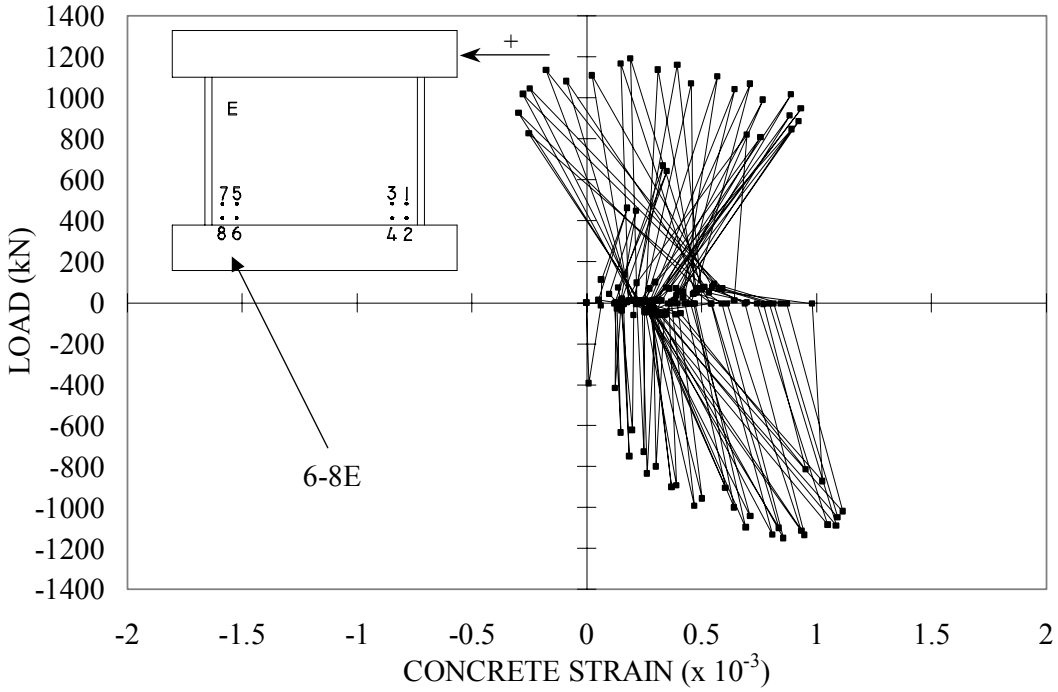

Figure H.69 DP1 Zurich Targets 6-8E

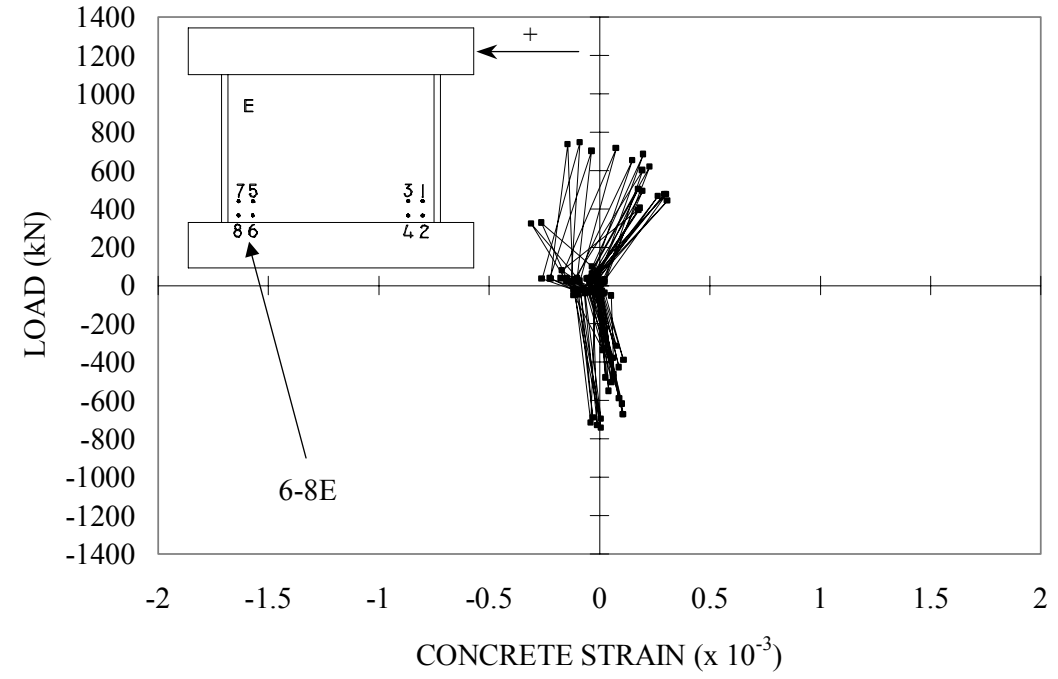

Figure H.70 DP2 Zurich Targets 6-8E

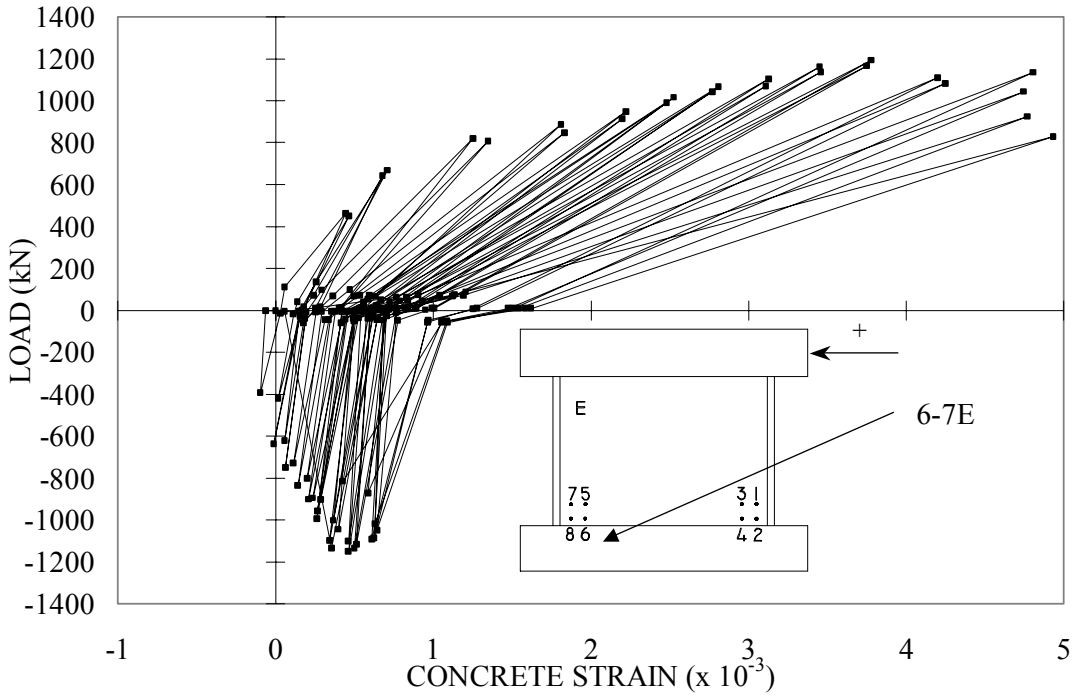

Figure H.71 DP1 Zurich Targets 6-7E

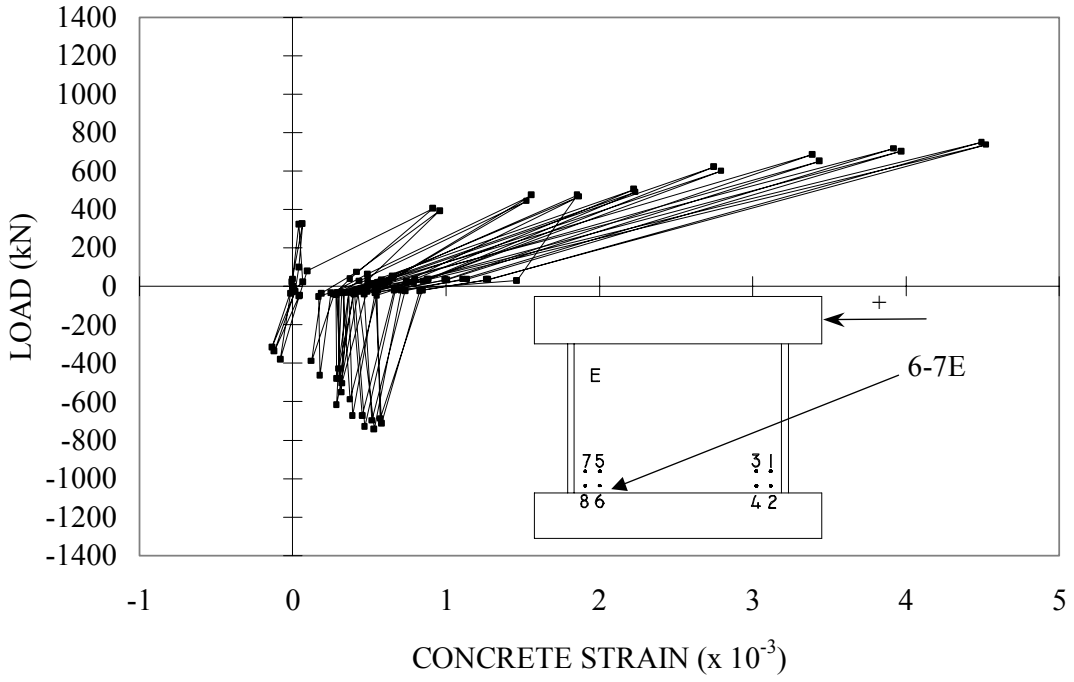

Figure H.72 DP2 Zurich Targets 6-7E

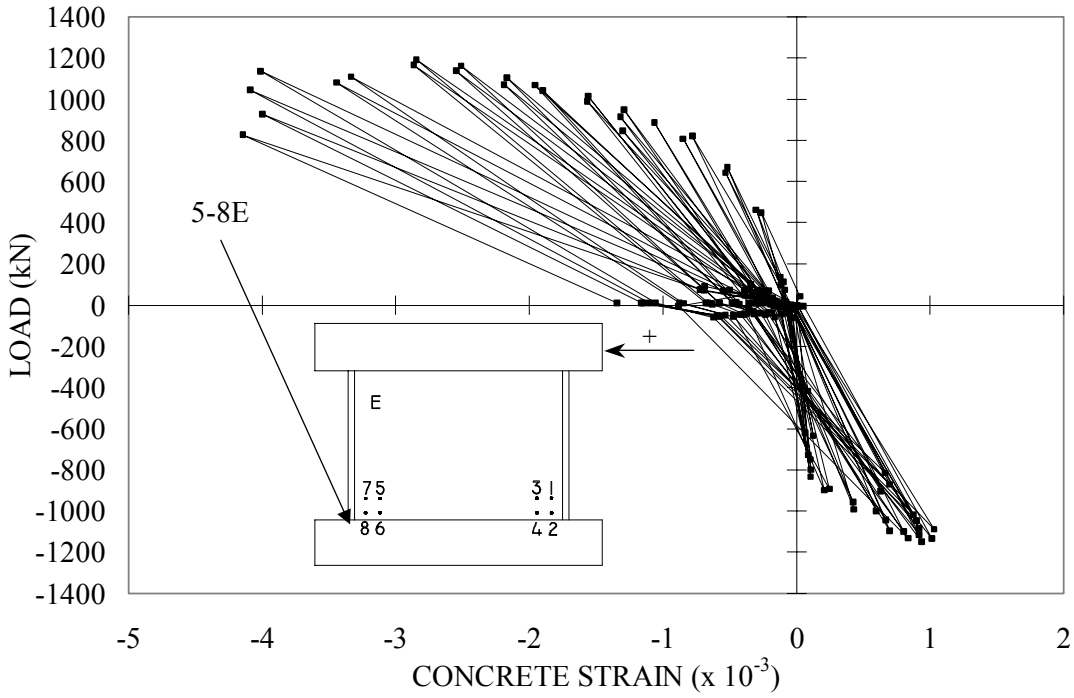

Figure H.73 DP1 Zurich Targets 5-8E

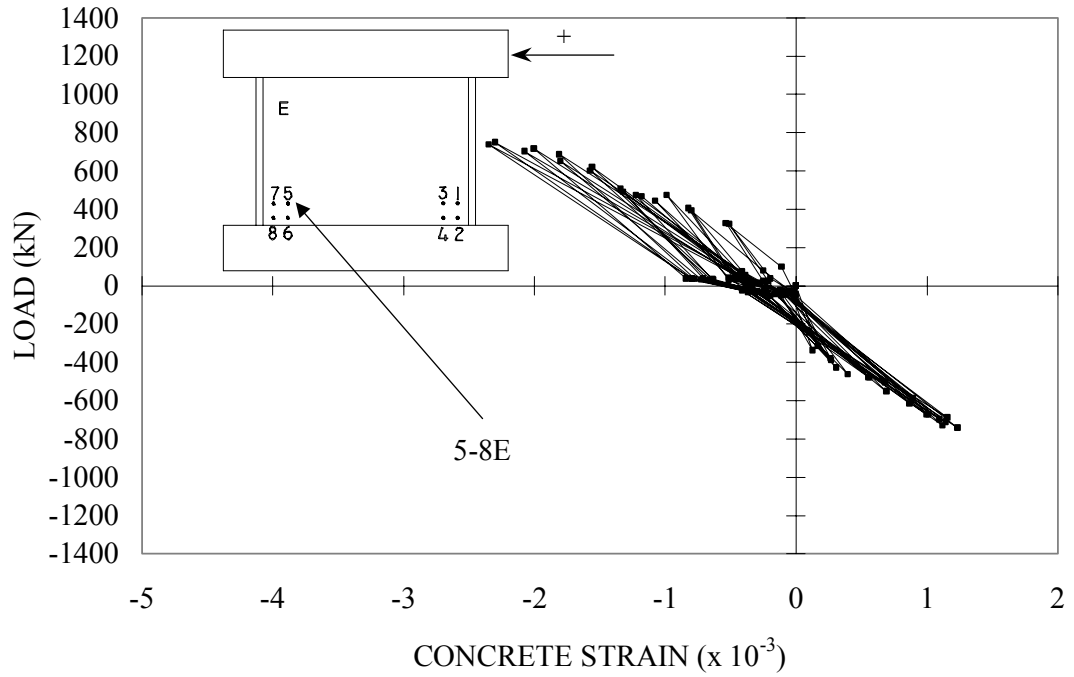

Figure H.74 DP2 Zurich Targets 5-8E

I.1 Input files for test panel PDV3

Job File:

```
Job Title        (30 char. max.)       : Panel PDV3
Job File Name    ( 8 char. max.)       : PDV3
Date             (30 char. max.)       : July 16, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : PDV3

LOADING DATA
------------
No. of Load Stages                     : 100
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : PDV3

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    COMP                  0.000     2.000     0.500    2   1   0.500
  2    SHEAR                 0.000     2.000     0.500    2   1   0.500
  3    NULL                  0.000     0.000     0.000    1   1   0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000001
Averaging Factor   ( 0.0 to 1.0 )          : 1.000000
Maximum No. of Iterations                  : 100
Convergence Criteria                       : 3
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 1
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 1
Concrete Tension Softening            (0-3) : 0
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Panel PDV3
Structure File Name   ( 8 char. max.)      : PDV3
No. of RC Material Types                   : 1
```

```
No. of Steel Material Types                : 0
No. of Rectangular Elements                : 1
No. of Triangular Elements                 : 0
No. of Truss Elements                      : 0
No. of Joints                              : 4
No. of Restraints                          : 3

                          MATERIAL SPECIFICATIONS
                          ***********************

                          (A) REINFORCED CONCRETE
                          -----------------------

CONCRETE
--------
MAT   f'c      f't     Ec     e0      Mu     Cc     T     Agg    Sx    Sy   U   Ns
TYP   MPa      MPa    MPa     me             /C     mm     mm    mm     mm
1     34.1    1.93   40355   1.690   0.15 10E-6   70    20    100   100   1.0   2

REINFORCEMENT COMPONENTS
------------------------
MAT SRF  DIR    As     Fy   Fu      Es     Esh     esh    Cs    Dep
TYP TYP  deg    %      MPa  MPa     MPa    MPa     me     /C    me
 1   1    0   1.820    282  419   184700 1250     30   10E-6    0
 1   1   90   0.910    282  419   184700 1250     30   10E-6    0

                            ELEMENT INCIDENCES
                            ******************

                          (A) RECTANGULAR ELEMENTS
                          ------------------------
ELMT INC1 INC2 INC3 INC4 [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT)d(INC)] /
1 1 2 3 4  /

                          MATERIAL TYPE ASSIGNMENT
                          ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
1   1  1 /

                              COORDINATES
                              ***********
NODE X Y  [#NODES d(NODES)  d(X) d(Y)] [#NODES d(NODES)  d(X) d(Y) ] /
1 0 0  /
2 890 0  /
3 890 890 /
4 0 890 /

                          SUPPORT RESTRAINTS
                          ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1  /
2 0 1  /
```

Load Files:

```
Structure Title       (30 char. max.)    : Panel PDV
```

```
Load Case Title       (30 char. max.)    : Compression (1 MPa)
Load Case File Name   ( 8 char. max.)    : COMP
No. of Loaded Joints                     : 3
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                              JOINT LOADS
                              ***********
NODE Fx Fy [ #NODE d(NODE) d(Fx) d(Fy) ] /
2 -12.46 0 /
3 -12.46 -12.46 /
4 12.46 -12.46 /


Structure Title       (30 char. max.)    : Panel PDV
Load Case Title       (30 char. max.)    : Shear (1 MPa)
Load Case File Name   ( 8 char. max.)    : SHEAR
No. of Loaded Joints                     : 3
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                              JOINT LOADS
                              ***********
NODE Fx Fy [ #NODE d(NODE) d(Fx) d(Fy) ] /
2 -31.15 31.15 /
3 31.15 31.15 /
4 31.15 -31.15 /
```

I.2 Input files for test panel PDV2

Job File:

```
Job Title        (30 char. max.)       : Panel PDV2
Job File Name    ( 8 char. max.)       : PDV2
Date             (30 char. max.)       : July 16, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : PDV2

LOADING DATA
------------
No. of Load Stages                     : 100
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : PDV2

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final   LS-Inc  Type Reps  C-Inc
  1    COMP                  0.000     2.000     0.500    2   2   0.500
  2    SHEAR                 0.000     2.000     0.500    3   1   0.500
  3    NULL                  0.000     0.000     0.000    1   1   0.000
```

```
ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)           : NULL
Convergence Limit  (factor > 1.0)           : 1.000001
Averaging Factor   ( 0.0 to 1.0 )           : 1.000000
Maximum No. of Iterations                   : 100
Convergence Criteria                        : 3
Results Files                               : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 1
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 1
Concrete Tension Softening            (0-3) : 0
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)       : Panel PDV3
Structure File Name   ( 8 char. max.)       : PDV3
No. of RC Material Types                    : 1
No. of Steel Material Types                 : 0
No. of Rectangular Elements                 : 1
No. of Triangular Elements                  : 0
No. of Truss Elements                       : 0
No. of Joints                               : 4
No. of Restraints                           : 3

                        MATERIAL SPECIFICATIONS
                        ***********************

                        (A) REINFORCED CONCRETE
                        -----------------------

CONCRETE
--------
MAT   f'c     f't    Ec     e0     Mu    Cc     T    Agg   Sx    Sy U Ns
TYP   MPa     MPa   MPa     me           /C     mm    mm   mm    mm
1    23.7   1.93  29080   1.630  0.15 10E-6  70   20   100  100  1.0  2

REINFORCEMENT COMPONENTS
------------------------
MAT SRF  DIR   As    Fy   Fu     Es    Esh    esh   Cs   Dep
TYP TYP  deg   %     MPa  MPa    MPa   MPa    me    /C   me
 1   1    0  1.820   282  419  184700 1250    30  10E-6   0
 1   1   90  0.910   282  419  184700 1250    30  10E-6   0
```

```
                          (A) RECTANGULAR ELEMENTS
                          ------------------------
ELMT INC1 INC2 INC3 INC4 [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)]/
1 1 2 3 4  /

                          MATERIAL TYPE ASSIGNMENT
                          ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
1   1  1 /

                             COORDINATES
                             ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [#NODES d(NODES)  d(X) d(Y)] /
1 0 0  /
2 890 0  /
3 890 890 /
4 0 890 /

                          SUPPORT RESTRAINTS
                          ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1  /
2 0 1  /
```

Load Files:

See PDV3 load files.

I.3 Input files for test panel SE8

Job File:

```
Job Title        (30 char. max.)       : Panel SE8
Job File Name    ( 8 char. max.)       : SE8
Date             (30 char. max.)       : July 16, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : SE8

LOADING DATA
------------
No. of Load Stages                     : 32
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : SE8

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    SE8                   0.000     1.000     0.125    3   1   0.000
  2    NULL                  0.000     5.000     0.500    1   1   1.000
  3    NULL                  0.000     0.000     0.000    1   1   0.000

ANALYSIS PARAMETERS
-------------------
```

```
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000001
Averaging Factor   ( 0.0 to 1.0 )          : 1.000000
Maximum No. of Iterations                  : 100
Convergence Criteria                       : 3
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 1
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 1
Concrete Tension Softening            (0-3) : 2
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure Files:

```
Structure Title       (30 char. max.)      : Panel SE10
Structure File Name   ( 8 char. max.)      : SE10
No. of RC Material Types                   : 1
No. of Steel Material Types                : 0
No. of Rectangular Elements                : 1
No. of Triangular Elements                 : 0
No. of Truss Elements                      : 0
No. of Joints                              : 4
No. of Restraints                          : 3

                        MATERIAL SPECIFICATIONS
                        ***********************

                        (A) REINFORCED CONCRETE
                        -----------------------

CONCRETE
--------
MAT   f'c     f't    Ec     e0      Mu    Cc     T    Agg   Sx    Sy  U Ns
TYP   MPa     MPa   MPa     me           /C     mm    mm   mm    mm
1    37.0   3.2   28462   2.600  0.15 10E-6  285   20   72   72  1.0  2

REINFORCEMENT COMPONENTS
------------------------
MAT SRF  DIR   As     Fy   Fu     Es     Esh    esh   Cs    Dep
TYP TYP  deg   %     MPa  MPa    MPa    MPa    me    /C    me
 1   1   0   2.924   492  615  189230  1250   30  10E-6   0
 1   1   90  0.975   479  600  191600  1250   30  10E-6   0
```

```
                        (A) RECTANGULAR ELEMENTS
                        ------------------------
ELMT INC1 INC2 INC3 INC4 [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)] /
1 1 2 3 4  /

                        MATERIAL TYPE ASSIGNMENT
                        ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
  1   1  1 /

                            COORDINATES
                            ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [#NODES d(NODES)  d(X) d(Y)] /
1 0 0  /
2 1524 0  /
3 1524 1524 /
4 0 1524 /

                        SUPPORT RESTRAINTS
                        ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1  /
2 0 1  /
```

Load File:

```
Structure Title       (30 char. max.)    : Panel SE8
Load Case Title       (30 char. max.)    : Shear
Load Case File Name   ( 8 char. max.)    : SHEAR
No. of Loaded Joints                     : 3
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                            JOINT LOADS
                            ***********
NODE Fx Fy [ #NODE d(NODE) d(Fx) d(Fy) ] /
2  -1251  1251 /
3  1251  1251 /
4  1251  -1251/
```

I.4 Input files for test panel SE9

Job File:

```
Job Title        (30 char. max.)       : Panel SE9
Job File Name    ( 8 char. max.)       : SE9
Date             (30 char. max.)       : July 16, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : SE9
```

```
LOADING DATA
------------
No. of Load Stages                    : 32
Starting Load Stage No.               : 1
Load Series ID   ( 5 char. max.)      : SE9

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    SE9                   0.000     1.000     0.125    3    1  0.000
  2    NULL                  0.000     5.000     0.500    1    1  1.000
  3    NULL                  0.000     0.000     0.000    1    1  0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000001
Averaging Factor   ( 0.0 to 1.0 )          : 1.000000
Maximum No. of Iterations                  : 100
Convergence Criteria                       : 3
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 1
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 1
Concrete Tension Softening            (0-3) : 2
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Panel SE9
Structure File Name   ( 8 char. max.)      : SE9
No. of RC Material Types                   : 1
No. of Steel Material Types                : 0
No. of Rectangular Elements                : 1
No. of Triangular Elements                 : 0
No. of Truss Elements                      : 0
No. of Joints                              : 4
No. of Restraints                          : 3

                        MATERIAL SPECIFICATIONS
                        ***********************

                        (A) REINFORCED CONCRETE
                        -----------------------
```

```
CONCRETE
--------
MAT   f'c     f't    Ec     e0     Mu    Cc    T    Agg   Sx    Sy  U Ns
TYP   MPa     MPa   MPa     me           /C    mm    mm   mm    mm
1    44.2   4.1   33358   2.650  0.15 10E-6  285   20   72   72  1.0  2

REINFORCEMENT COMPONENTS
------------------------
MAT SRF  DIR   As    Fy   Fu     Es    Esh    esh   Cs   Dep
TYP TYP  deg   %     MPa  MPa    MPa   MPa    me    /C   me
 1   1   0   2.924   422  530  187555  1250   30  10E-6   0
 1   1   90  2.924   422  530  187555  1250   30  10E-6   0

                          (A) RECTANGULAR ELEMENTS
                          ------------------------
ELMT INC1 INC2 INC3 INC4  [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)]/
1 1 2 3 4  /

                          MATERIAL TYPE ASSIGNMENT
                          ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
  1   1  1 /

                             COORDINATES
                             ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [#NODES d(NODES)  d(X) d(Y)] /
1 0 0  /
2 1524 0  /
3 1524 1524 /
4 0 1524 /

                          SUPPORT RESTRAINTS
                          ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1  /
2 0 1  /
```

Load File:

```
Structure Title       (30 char. max.)    : Panel SE9
Load Case Title       (30 char. max.)    : Shear
Load Case File Name   ( 8 char. max.)    : SHEAR
No. of Loaded Joints                     : 3
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                             JOINT LOADS
                             ***********
NODE Fx Fy [ #NODE d(NODE) d(Fx) d(Fy) ] /
2 -2074 2074 /
3  2074 2074 /
4  2074 -2074 /
```

I.5 Input files for test panel SE10

Job File:

```
Job Title        (30 char. max.)       : Panel SE10
Job File Name    ( 8 char. max.)       : SE10
Date             (30 char. max.)       : July 16, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : SE10

LOADING DATA
------------
No. of Load Stages                     : 32
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : SE10

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    SE10S                 0.000     1.000     0.125    3    3  0.000
  2    SE10C                 0.000     1.000     0.125    2    6  0.000
  3    NULL                  0.000     0.000     0.000    1    1  0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000001
Averaging Factor   ( 0.0 to 1.0 )          : 1.000000
Maximum No. of Iterations                  : 100
Convergence Criteria                       : 3
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 1
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 1
Concrete Tension Softening            (0-3) : 2
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Panel SE10
Structure File Name   ( 8 char. max.)      : SE10
```

```
No. of RC Material Types                    : 1
No. of Steel Material Types                 : 0
No. of Rectangular Elements                 : 1
No. of Triangular Elements                  : 0
No. of Truss Elements                       : 0
No. of Joints                               : 4
No. of Restraints                           : 3

                        MATERIAL SPECIFICATIONS
                        ***********************

                        (A) REINFORCED CONCRETE
                        -----------------------

CONCRETE
--------
MAT   f'c     f't    Ec     e0      Mu    Cc    T    Agg   Sx    Sy  U Ns
TYP   MPa     MPa   MPa     me           /C    mm    mm   mm    mm
1    34.0   3.0   30909   2.200  0.15 10E-6  285   20   72   72  1.0  2

REINFORCEMENT COMPONENTS
------------------------
MAT SRF  DIR   As    Fy   Fu     Es    Esh    esh   Cs   Dep
TYP TYP  deg   %     MPa  MPa    MPa   MPa    me    /C   me
1   1    0    2.924   422  530  187555  1250   30  10E-6   0
1   1   90    0.980   479  530  191600  1250   30  10E-6   0

                        (A) RECTANGULAR ELEMENTS
                        ------------------------
ELMT INC1 INC2 INC3 INC4  [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)]/
1 1 2 3 4  /

                        MATERIAL TYPE ASSIGNMENT
                        ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
1   1  1 /

                            COORDINATES
                            ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [#NODES d(NODES)  d(X) d(Y)] /
1 0 0  /
2 1524 0  /
3 1524 1524 /
4 0 1524 /

                        SUPPORT RESTRAINTS
                        ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1  /
2 0 1  /
```

Load Files:

```
Structure Title       (30 char. max.)    : Panel SE10
Load Case Title       (30 char. max.)    : Shear
Load Case File Name   ( 8 char. max.)    : SHEAR
No. of Loaded Joints                     : 3
```

```
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                              JOINT LOADS
                              ***********
NODE Fx Fy [ #NODE d(NODE) d(Fx) d(Fy) ] /
2  -1792.0   1792.0/
3   1792.0   1792.0/
4   1792.0  -1792.0/

Structure Title       (30 char. max.)    : Panel SE10
Load Case Title       (30 char. max.)    : Compression
Load Case File Name   ( 8 char. max.)    : COMP
No. of Loaded Joints                     : 3
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                              JOINT LOADS
                              ***********
NODE Fx Fy [ #NODE d(NODE) d(Fx) d(Fy) ] /
2  -597.0   597.0/
3  -597.0  -597.0/
4   597.0  -597.0/
```

I.6 Input files for test specimen B1

Job File:

```
Job Title        (30 char. max.)       : Shear Wall B1
Job File Name    ( 8 char. max.)       : B1
Date             (30 char. max.)       : July 16, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : B1

LOADING DATA
------------
No. of Load Stages                     : 300
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : B1

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    B1                    0.000     1.000     0.200    3    2  1.000
  2    NULL                  0.000     1.000     0.250    3    2  1.000
  3    NULL                  1.000     1.000     1.000    1    1  0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)           : NULL
```

```
Convergence Limit  (factor > 1.0)           : 1.000010
Averaging Factor   ( 0.0 to 1.0 )           : 0.25
Maximum No. of Iterations                   : 50
Convergence Criteria                        : 2
Results Files                               : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 2
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 2
Concrete Tension Softening            (0-3) : 0
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)       : Shear Wall B1
Structure File Name   ( 8 char. max.)       : B1
No. of RC Material Types                    : 3
No. of Steel Material Types                 : 0
No. of Rectangular Elements                 : 252
No. of Triangular Elements                  : 0
No. of Truss Elements                       : 0
No. of Joints                               : 286
No. of Restraints                           : 26

                        MATERIAL SPECIFICATIONS
                        ***********************

                        (A) REINFORCED CONCRETE
                        -----------------------

CONCRETE
--------
MAT   f'c     f't    Ec     e0     Mu    Cc    T    Agg   Sx    Sy  U Ns
TYP   MPa     MPa   MPa     me           /C    mm    mm   mm    mm
1  53.0  2.42  32300 3.284  0.15  0   102   20  100  100  1.0  2
2  53.0  2.42  32300 3.284  0.15  0   305   20  100  100  1.0  2
3  99.9  9.99  60000 3.284  0.15  0  1220   20  100  100  1.0  2

REINFORCEMENT COMPONENTS
------------------------
MAT SRF  DIR   As    Fy   Fu     Es     Esh    esh   Cs   Dep
TYP TYP  deg   %     MPa  MPa    MPa    MPa    me    /C   me
1   1   0   0.31   521   730   200000   2000  5.0  0  0
1   1  90   0.29   521   730   200000   2000  5.0  0  0
2   1   0   0.31   521   730   200000   2000  5.0  0  0
```

```
2   1  90   1.11   450   710   200000   2000  5.0  0  0
3   1   0   5.00   600   900   200000   2000  5.0  0  0
3   1  90   5.00   600   900   200000   2000  5.0  0  0

                          ELEMENT INCIDENCES
                          ******************

                        (A) RECTANGULAR ELEMENTS
                        ------------------------
ELMT INC1 INC2 INC3 INC4 [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)] /
 1   1   2  15  14  12  1  1   21  12  13/

                        MATERIAL TYPE ASSIGNMENT
                        ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
  3  1   1    8  1  20  12 /
  1  2   1    2  1  20  12 /
 11  2   1    2  1  20  12 /
241  3   1    12 1 /

                           COORDINATES
                           ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ][ #NODES d(NODES)  d(X) d(Y)] /
   1    0.     0.   2  1  152.5  0.  21  13  0.  223.5 /
   3  305.     0.   9  1  162.5  0.  21  13  0.  223.5 /
  12 1757.5    0.   2  1  152.5  0.  21  13  0.  223.5 /
 274    0.  4670.   2  1  152.5  0.  /
 276  305.  4670.   9  1  162.5  0.  /
 285 1757.5 4670.   2  1  152.5  0.  /

                        SUPPORT RESTRAINTS
                        ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1 13 1  /
```

Load File:

```
Structure Title       (30 char. max.)    : Shear Wall B1
Load Case Title       (30 char. max.)    : Lateral Disp. (1.0 in)
Load Case File Name   ( 8 char. max.)    : B1
No. of Loaded Joints                     : 0
No. of Prescribed Support Displacements  : 1
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                        SUPPORT DISPLACEMENTS
                        *********************
JNT  DOF  DISPL  [ #JNT  d(JNT) ] /
280  1  25.4 /
```

I.7 Input files for test specimen B2

Job File:

```
Job Title        (30 char. max.)       : Shear Wall B2
Job File Name    ( 8 char. max.)       : B2
Date             (30 char. max.)       : July 16, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : B2

LOADING DATA
------------
No. of Load Stages                     : 300
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : B2

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    B2                    0.000     2.000     0.200    3    2  1.000
  2    NULL                  0.000     1.000     0.250    3    2  1.000
  3    NULL                  1.000     1.000     1.000    1    1  0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000010
Averaging Factor   ( 0.0 to 1.0 )          : 0.25
Maximum No. of Iterations                  : 50
Convergence Criteria                       : 2
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 2
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 2
Concrete Tension Softening            (0-3) : 0
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Shear Wall B2
Structure File Name   ( 8 char. max.)      : B2
```

```
No. of RC Material Types                    : 3
No. of Steel Material Types                 : 0
No. of Rectangular Elements                 : 252
No. of Triangular Elements                  : 0
No. of Truss Elements                       : 0
No. of Joints                               : 286
No. of Restraints                           : 26

                          MATERIAL SPECIFICATIONS
                          ***********************

                          (A) REINFORCED CONCRETE
                          -----------------------

CONCRETE
--------
MAT   f'c      f't     Ec     e0      Mu    Cc    T    Agg   Sx    Sy  U Ns
TYP   MPa      MPa    MPa     me           /C    mm    mm    mm    mm
1  53.6  2.42  32700 3.278  0.15  0   102   20  100  100  1.0  2
2  53.6  2.42  32700 3.278  0.15  0   305   20  100  100  1.0  2
3  99.9  9.99  60000 3.330  0.15  0  1220   20  100  100  1.0  2

REINFORCEMENT COMPONENTS
-----------------------
MAT SRF  DIR    As     Fy   Fu      Es     Esh    esh   Cs   Dep
TYP TYP  deg    %      MPa  MPa     MPa    MPa    me    /C   me
1   1    0   0.63    532   750   200000   2000  5.0  0  0
1   1   90   0.29    532   750   200000   2000  5.0  0  0
2   1    0   0.63    532   750   200000   2000  5.0  0  0
2   1   90   3.67    410   650   200000   2000  5.0  0  0
3   1    0   5.00    600   900   200000   2000  5.0  0  0
3   1   90   5.00    600   900   200000   2000  5.0  0  0

                            ELEMENT INCIDENCES
                            ******************

                          (A) RECTANGULAR ELEMENTS
                          ------------------------
ELMT INC1 INC2 INC3 INC4  [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)]/
 1   1   2  15  14  12  1  1   21  12  13/

                          MATERIAL TYPE ASSIGNMENT
                          ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
  3  1   1    8  1  20  12 /
  1  2   1    2  1  20  12 /
 11  2   1    2  1  20  12 /
241  3   1    12 1 /

                             COORDINATES
                             ***********
NODE X Y  [#NODES d(NODES)  d(X) d(Y)] [ #NODES d(NODES)  d(X) d(Y) ] /
   1    0.     0.   2  1  152.5  0.  21  13  0.  223.5 /
   3  305.     0.   9  1  162.5  0.  21  13  0.  223.5 /
  12 1757.5    0.   2  1  152.5  0.  21  13  0.  223.5 /
 274    0.  4670.   2  1  152.5  0.  /
 276  305.  4670.   9  1  162.5  0.  /
 285 1757.5 4670.   2  1  152.5  0.  /
```

```
                        SUPPORT RESTRAINTS
                        ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1 13 1  /
```

Load File:

See B1 load files.

I.8 Input files for test specimen B7

```
Job Title        (30 char. max.)       : Shear Wall B7
Job File Name    ( 8 char. max.)       : B7
Date             (30 char. max.)       : July 16, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : B7

LOADING DATA
------------
No. of Load Stages                     : 300
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : B7

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    B7                   0.000     1.000     0.200    3    2   1.000
  2    B7v                  1.000     1.000     1.000    1    1   1.000
  3    NULL                 1.000     1.000     1.000    1    1   0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000010
Averaging Factor   ( 0.0 to 1.0 )          : 0.25
Maximum No. of Iterations                  : 50
Convergence Criteria                       : 2
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 2
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 2
Concrete Tension Softening            (0-3) : 0
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
```

```
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Shear Wall B7
Structure File Name   ( 8 char. max.)      : B7
No. of RC Material Types                   : 3
No. of Steel Material Types                : 0
No. of Rectangular Elements                : 252
No. of Triangular Elements                 : 0
No. of Truss Elements                      : 0
No. of Joints                              : 286
No. of Restraints                          : 26

                        MATERIAL SPECIFICATIONS
                        ***********************

                        (A) REINFORCED CONCRETE
                        -----------------------
CONCRETE
--------
MAT   f'c     f't    Ec     e0     Mu    Cc    T    Agg   Sx    Sy U  Ns
TYP   MPa     MPa    MPa    me           /C    mm    mm    mm    mm
1  49.3  2.32  30100 3.278  0.15  0   102   20  100  100  1.0  2
2  49.3  2.32  30100 3.278  0.15  0   305   20  100  100  1.0  3
3  99.9  9.99  60000 3.330  0.15  0  1220   20  100  100  1.0  2

REINFORCEMENT COMPONENTS
-----------------------
MAT SRF  DIR   As    Fy   Fu     Es     Esh    esh   Cs   Dep
TYP TYP  deg   %     MPa  MPa    MPa    MPa    me    /C   me
1   1    0   0.63   489   690   200000   2000  5.0  0  0
1   1   90   0.29   489   690   200000   2000  5.0  0  0
2   1    0   0.63   489   690   200000   2000  5.0  0  0
2   1   90   3.67   457   725   200000   2000  5.0  0  0
2   1  400   1.35   489   690   200000   2000  5.0  0  0
3   1    0   5.00   600   900   200000   2000  5.0  0  0
3   1   90   5.00   600   900   200000   2000  5.0  0  0

                          ELEMENT INCIDENCES
                          ******************

                        (A) RECTANGULAR ELEMENTS
                        ------------------------
ELMT INC1 INC2 INC3 INC4 [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)] /
 1   1   2  15  14  12  1  1   21  12  13/

                        MATERIAL TYPE ASSIGNMENT
                        ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
  3  1   1    8  1  20  12 /
  1  2   1    2  1  20  12 /
 11  2   1    2  1  20  12 /
241  3   1    12 1 /
```

```
                              COORDINATES
                              ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [#NODES d(NODES)  d(X) d(Y)] /
   1    0.     0.   2  1  152.5  0.  21  13  0.  223.5 /
   3  305.     0.   9  1  162.5  0.  21  13  0.  223.5 /
  12 1757.5    0.   2  1  152.5  0.  21  13  0.  223.5 /
 274    0.  4670.   2  1  152.5  0.  /
 276  305.  4670.   9  1  162.5  0.  /
 285 1757.5 4670.   2  1  152.5  0.  /

                           SUPPORT RESTRAINTS
                           ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1 13 1  /
```

Load Files:

```
Structure Title       (30 char. max.)    : Shear Wall B7
Load Case Title       (30 char. max.)    : Lateral Disp. (1.0 in)
Load Case File Name   ( 8 char. max.)    : B7
No. of Loaded Joints                     : 0
No. of Prescribed Support Displacements  : 1
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                           SUPPORT DISPLACEMENTS
                           *********************
JNT  DOF  DISPL  [ #JNT  d(JNT) ] /
280  1  25.4 /

Structure Title       (30 char. max.)    : Shear Wall B7
Load Case Title       (30 char. max.)    : Vertical Load
Load Case File Name   ( 8 char. max.)    : B7v
No. of Loaded Joints                     : 13
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                              JOINT LOADS
                              ***********
NODE Fx Fy [ #NODE d(NODE) d(Fx) d(Fy) ] /
274  0.0  -92.3  13  1  0.0  0.0 /
```

I.9 Input files for test specimen B8

```
Job Title        (30 char. max.)       : Shear Wall B8
Job File Name    ( 8 char. max.)       : B8
Date             (30 char. max.)       : July 16, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : B8
```

```
LOADING DATA
------------
No. of Load Stages                    : 300
Starting Load Stage No.               : 1
Load Series ID   ( 5 char. max.)      : B8

Load   File Name                                Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    B7                   0.000     1.000     0.200    3    2   1.000
  2    B7v                  1.000     1.000     1.000    1    1   1.000
  3    NULL                 1.000     1.000     1.000    1    1   0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000010
Averaging Factor   ( 0.0 to 1.0 )          : 0.25
Maximum No. of Iterations                  : 50
Convergence Criteria                       : 2
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 2
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 2
Concrete Tension Softening            (0-3) : 0
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Shear Wall B8
Structure File Name   ( 8 char. max.)      : B8
No. of RC Material Types                   : 3
No. of Steel Material Types                : 0
No. of Rectangular Elements                : 252
No. of Triangular Elements                 : 0
No. of Truss Elements                      : 0
No. of Joints                              : 286
No. of Restraints                          : 26

                        MATERIAL SPECIFICATIONS
                        ***********************

                        (A) REINFORCED CONCRETE
```

```
                        ----------------------
CONCRETE
--------
MAT   f'c     f't    Ec     e0     Mu    Cc    T    Agg   Sx    Sy  U Ns
TYP   MPa     MPa    MPa    me           /C    mm    mm    mm    mm
1  42.1  2.14  25600 3.289  0.15  0   102   20  100  100  1.0  2
2  42.1  2.14  25600 3.289  0.15  0   305   20  100  100  1.0  3
3  99.9  9.99  60000 3.330  0.15  0  1220   20  100  100  1.0  2

REINFORCEMENT COMPONENTS
------------------------
MAT SRF  DIR   As    Fy   Fu     Es     Esh    esh   Cs   Dep
TYP TYP  deg   %     MPa  MPa    MPa    MPa    me    /C   me
1   1   0   1.38   489   750   200000   2000  5.0  0  0
1   1  90   0.29   455   750   200000   2000  5.0  0  0
2   1   0   1.38   489   750   200000   2000  5.0  0  0
2   1  90   3.67   448   650   200000   2000  5.0  0  0
2   1  400  1.35   455   750   200000   2000  5.0  0  0
3   1   0   5.00   600   900   200000   2000  5.0  0  0
3   1  90   5.00   600   900   200000   2000  5.0  0  0

                          ELEMENT INCIDENCES
                          ******************

                        (A) RECTANGULAR ELEMENTS
                        ------------------------
ELMT INC1 INC2 INC3 INC4  [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)]/
 1   1   2  15  14  12  1  1   21  12  13/

                        MATERIAL TYPE ASSIGNMENT
                        ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
  3  1   1    8  1  20  12 /
  1  2   1    2  1  20  12 /
 11  2   1    2  1  20  12 /
241  3   1    12 1 /

                           COORDINATES
                           ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [ #NODES d(NODES)  d(X) d(Y)]/
   1    0.     0.   2  1  152.5  0.  21  13  0.  223.5 /
   3  305.     0.   9  1  162.5  0.  21  13  0.  223.5 /
  12 1757.5    0.   2  1  152.5  0.  21  13  0.  223.5 /
 274    0.  4670.   2  1  152.5  0.  /
 276  305.  4670.   9  1  162.5  0.  /
 285 1757.5 4670.   2  1  152.5  0.  /

                        SUPPORT RESTRAINTS
                        ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1 13 1  /
```

Load Files:

See B7 load files.

I.10 Input files for test specimen SW4

```
Job Title        (30 char. max.)       : Shear Wall SW4
Job File Name    ( 8 char. max.)       : SW4
Date             (30 char. max.)       : August 2, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : SW4

LOADING DATA
------------
No. of Load Stages                     : 300
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : SW4

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    SW4                   0.000     2.000     1.000    3    2  2.000
  2    NULL                  0.000     1.000     0.250    3    2  1.000
  3    NULL                  1.000     1.000     1.000    1    1  0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000010
Averaging Factor   ( 0.0 to 1.0 )          : 0.25
Maximum No. of Iterations                  : 50
Convergence Criteria                       : 2
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 1
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 2
Concrete Tension Softening            (0-3) : 0
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 1
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Shear Wall SW4
Structure File Name   ( 8 char. max.)      : SW4
No. of RC Material Types                   : 3
No. of Steel Material Types                : 0
```

```
No. of Rectangular Elements                : 117
No. of Triangular Elements                 : 0
No. of Truss Elements                      : 0
No. of Joints                              : 140
No. of Restraints                          : 20

                          MATERIAL SPECIFICATIONS
                          ***********************

                          (A) REINFORCED CONCRETE
                          -----------------------

CONCRETE
--------
MAT   f'c      f't    Ec     e0      Mu    Cc    T    Agg   Sx    Sy  U Ns
TYP   MPa      MPa    MPa    me            /C    mm    mm    mm    mm
1  37.0  2.00  35240 2.10   0.15  0   60.   10  100  100  1.0  2
2  37.0  2.00  35240 2.10   0.15  0   60.   10  100  100  1.0  3
3  99.9  9.99  60000 3.284  0.15  0  250.   10  100  100  1.0  2

REINFORCEMENT COMPONENTS
-----------------------
MAT SRF  DIR   As     Fy   Fu     Es     Esh    esh   Cs   Dep
TYP TYP  deg   %      MPa  MPa    MPa    MPa    me    /C   me
1   1    0   0.39    545   590   200000   1000  2.8  0  0
1   1   90   0.50    545   590   200000   1000  2.8  0  0
2   1    0   1.178   545   590   200000   1000  2.8  0  0
2   1   90   6.86    470   600   200000   1000  2.4  0  0
2   1  400   0.43    545   590   200000   1000  2.8  0  0
3   1    0   5.00    600   900   200000   2000  5.0  0  0
3   1   90   5.00    600   900   200000   2000  5.0  0  0

                            ELEMENT INCIDENCES
                            ******************

                          (A) RECTANGULAR ELEMENTS
                          ------------------------
ELMT INC1 INC2 INC3 INC4  [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)]/
 1   1   2  12  11  9  1  1   13  9  10/

                          MATERIAL TYPE ASSIGNMENT
                          ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
  1  2   1    2  1  12  9 /
  8  2   1    2  1  12  9 /
  3  1   1    5  1  12  9 /
109  3   1    9 1 /

                             COORDINATES
                             ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [ #NODES d(NODES)  d(X) d(Y)]/
   1    0.     0.   2  1  55.    0.  13  10  0.  100. /
   3  110.     0.   6  1  76.    0.  13  10  0.  100. /
   9  545.     0.   2  1  55.    0.  13  10  0.  100. /
 131    0. 1325.    2  1  55.    0.   /
 133  110  1325.    6  1  76.    0.   /
 139  545  1325.    2  1  55.    0.  /
```

```
                          SUPPORT RESTRAINTS
                          ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1 10 1  /
```

Load File:

```
Structure Title       (30 char. max.)    : Shear Wall SW4
Load Case Title       (30 char. max.)    : Lateral Disp. (1.0 mm)
Load Case File Name   ( 8 char. max.)    : SW4
No. of Loaded Joints                     : 0
No. of Prescribed Support Displacements  : 1
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                          SUPPORT DISPLACEMENTS
                          *********************
JNT  DOF  DISPL  [ #JNT  d(JNT) ] /
131  1  1.0 /
```

I.11 Input files for test specimen SW5

```
Job Title        (30 char. max.)       : Shear Wall SW5
Job File Name    ( 8 char. max.)       : SW5
Date             (30 char. max.)       : August 2, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : SW5

LOADING DATA
------------
No. of Load Stages                     : 300
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : SW5

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    SW5                   0.000     2.000     1.000    3    2  2.000
  2    NULL                  0.000     1.000     0.250    3    2  1.000
  3    NULL                  1.000     1.000     1.000    1    1  0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000010
Averaging Factor   ( 0.0 to 1.0 )          : 0.25
Maximum No. of Iterations                  : 50
Convergence Criteria                       : 2
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
```

```
Concrete Compression Base Curve       (0-3) : 1
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 2
Concrete Tension Softening            (0-3) : 0
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 1
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Shear Wall SW4
Structure File Name   ( 8 char. max.)      : SW4
No. of RC Material Types                   : 4
No. of Steel Material Types                : 0
No. of Rectangular Elements                : 117
No. of Triangular Elements                 : 0
No. of Truss Elements                      : 0
No. of Joints                              : 140
No. of Restraints                          : 20

                        MATERIAL SPECIFICATIONS
                        ***********************

                        (A) REINFORCED CONCRETE
                        -----------------------

CONCRETE
--------
MAT   f'c     f't    Ec    e0     Mu    Cc    T    Agg   Sx    Sy  U Ns
TYP   MPa     MPa   MPa    me           /C    mm    mm    mm    mm
1  31.8  1.86  27820 2.29   0.15  0   60.   10  100  100  1.0  2
2  31.8  1.86  27820 2.29   0.15  0   60.   10  100  100  1.0  3
3  31.8  1.86  27820 2.29   0.15  0   60.   10  100  100  1.0  2
4  99.9  9.99  60000 3.30   0.15  0  250.   10  100  100  1.0  2

REINFORCEMENT COMPONENTS
------------------------
MAT SRF  DIR   As    Fy   Fu     Es    Esh    esh   Cs   Dep
TYP TYP  deg   %     MPa  MPa    MPa   MPa    me    /C   me
1   1    0   0.314  400   460   200000   1000  2.0  0  0
1   1   90   0.589  545   590   200000   1000  2.8  0  0
2   1    0   0.663  400   460   200000   1000  2.0  0  0
2   1   90   12.5   535   590   205000   1000  2.7  0  0
2   1  400   0.349  400   460   200000   1000  2.0  0  0
3   1    0   0.314  400   460   200000   1000  2.0  0  0
3   1   90   12.5   535   590   205000   1000  2.7  0  0
4   1    0   5.00   600   900   200000   2000  5.0  0  0
4   1   90   5.00   600   900   200000   2000  5.0  0  0
```

```
                          ELEMENT INCIDENCES
                          ******************


                        (A) RECTANGULAR ELEMENTS
                        ------------------------
ELMT INC1 INC2 INC3 INC4  [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)]/
 1   1   2  12  11  9  1  1   13  9  10/

                        MATERIAL TYPE ASSIGNMENT
                        ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
  1  2   1    2  1  6   9 /
  8  2   1    2  1  6   9 /
  3  1   1    5  1  12  9 /
 55  3   1    2  1  6   9 /
 62  3   1    2  1  6   9 /
 109  4   1    9 1 /

                           COORDINATES
                           ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [ #NODES d(NODES)  d(X) d(Y)]/
   1    0.     0.   2  1  30.    0.  13  10  0.  100. /
   3   60.     0.   6  1  96.    0.  13  10  0.  100. /
   9  570.     0.   2  1  30.    0.  13  10  0.  100. /
 131    0. 1325.    2  1  30.    0.   /
 133   60. 1325.    6  1  96.    0.   /
 139  570. 1325.    2  1  30.    0.  /

                        SUPPORT RESTRAINTS
                        ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1 10 1  /
```

Load File:

See SW4 load files.

I.12 Input files for test specimen SW6

```
Job Title        (30 char. max.)       : Shear Wall SW6
Job File Name    ( 8 char. max.)       : SW6
Date             (30 char. max.)       : August 2, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : SW6

LOADING DATA
------------
No. of Load Stages                     : 300
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : SW6
```

```
Load   File Name                                Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    SW6                    0.000    2.000     1.000    3    2  2.000
  2    NULL                   0.000    1.000     0.250    3    2  1.000
  3    NULL                   1.000    1.000     1.000    1    1  0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000010
Averaging Factor   ( 0.0 to 1.0 )          : 0.25
Maximum No. of Iterations                  : 50
Convergence Criteria                       : 2
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 1
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 2
Concrete Tension Softening            (0-3) : 0
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 1
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Shear Wall SW4
Structure File Name   ( 8 char. max.)      : SW4
No. of RC Material Types                   : 4
No. of Steel Material Types                : 0
No. of Rectangular Elements                : 117
No. of Triangular Elements                 : 0
No. of Truss Elements                      : 0
No. of Joints                              : 140
No. of Restraints                          : 20

                        MATERIAL SPECIFICATIONS
                        ***********************
                        (A) REINFORCED CONCRETE
                        -----------------------

CONCRETE
--------
MAT   f'c     f't    Ec     e0     Mu    Cc    T    Agg   Sx    Sy  U Ns
TYP   MPa     MPa    MPa    me           /C    mm    mm    mm    mm
1  38.6  2.05  36075 2.14   0.15  0   60.   10  100  100  1.0  2
2  38.6  2.05  36075 2.14   0.15  0   60.   10  100  100  1.0  3
3  38.6  2.05  36075 2.14   0.15  0   60.   10  100  100  1.0  2
```

```
4  99.9  9.99  60000 3.30   0.15  0  250.   10  100  100  1.0  2

REINFORCEMENT COMPONENTS
------------------------
MAT SRF  DIR   As    Fy   Fu     Es    Esh    esh   Cs   Dep
TYP TYP  deg   %     MPa  MPa    MPa   MPa    me    /C   me
1   1   0   0.314  400   460   200000   1000  2.0  0  0
1   1  90   0.50   545   590   200000   1000  2.8  0  0
2   1   0   0.663  400   460   200000   1000  2.0  0  0
2   1  90   6.86   470   600   200000   1000  2.4  0  0
2   1 400   0.19   400   460   200000   1000  2.0  0  0
3   1   0   0.314  400   460   200000   1000  2.0  0  0
3   1  90   6.86   470   600   200000   1000  2.4  0  0
4   1   0   5.00   600   900   200000   2000  5.0  0  0
4   1  90   5.00   600   900   200000   2000  5.0  0  0

                          ELEMENT INCIDENCES
                          ******************

                         (A) RECTANGULAR ELEMENTS
                         ------------------------
ELMT INC1 INC2 INC3 INC4 [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)] /
 1   1   2  12  11  9  1  1   13  9  10/

                         MATERIAL TYPE ASSIGNMENT
                         ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
  1  2   1    2  1  6   9 /
  8  2   1    2  1  6   9 /
  3  1   1    5  1  12  9 /
 55  3   1    2  1  6   9 /
 62  3   1    2  1  6   9 /
 109  4   1    9 1 /

                            COORDINATES
                            ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [ #NODES d(NODES)  d(X) d(Y)]/
   1    0.     0.   2  1  55.    0.  13  10  0.  100. /
   3   110.    0.   6  1  76.    0.  13  10  0.  100. /
   9   545.    0.   2  1  55.    0.  13  10  0.  100. /
 131    0.  1325.   2  1  55.    0.   /
 133   110. 1325.   6  1  76.    0.   /
 139   545. 1325.   2  1  55.    0.  /

                         SUPPORT RESTRAINTS
                         ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1 10 1  /
```

Load File:

See SW4 load files.

I.13 Input files for test specimen DP1

```
Job Title        (30 char. max.)       : Shear Wall DP1
Job File Name    ( 8 char. max.)       : DP
Date             (30 char. max.)       : July 20, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : DP1

LOADING DATA
------------
No. of Load Stages                     : 1
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : DP1

Load   File Name                                Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    DP1VL                 0.000     1.000     0.000    1    1  0.000
  2    DP1DL                 0.000     1.000     0.250    3    2  1.000
  3    DP1SH                 1.000     1.000     1.000    1    1  0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000010
Averaging Factor   ( 0.0 to 1.0 )          : 0.50
Maximum No. of Iterations                  : 70
Convergence Criteria                       : 2
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 1
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 2
Concrete Tension Softening            (0-3) : 3
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
Element Strain Histories              (0-1) : 1
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Shear Wall DP1
Structure File Name   ( 8 char. max.)      : DP1
No. of RC Material Types                   : 4
No. of Steel Material Types                : 0
No. of Rectangular Elements                : 540
```

```
No. of Triangular Elements                  : 0
No. of Truss Elements                       : 0
No. of Joints                               : 591
No. of Restraints                           : 54


                          MATERIAL SPECIFICATIONS
                          ***********************

                          (A) REINFORCED CONCRETE
                          -----------------------

CONCRETE
--------
MAT   f'c      f't    Ec     e0      Mu    Cc    T    Agg   Sx    Sy  U Ns
TYP   MPa      MPa    MPa    me            /C    mm    mm    mm    mm
1  21.7  1.54  25900  2.04  0.15  0    75   10  70  70  1.0  2
2  21.7  1.54  25900  2.04  0.15  0  3045   10  70  70  1.0  2
3  34.7  1.94  57500  1.66  0.15  0  4415   10  70  70  1.0  2
4  43.9  2.19  43700  1.93  0.15  0  4415   10  70  70  1.0  2

REINFORCEMENT COMPONENTS
------------------------
MAT SRF  DIR   As     Fy   Fu     Es     Esh    esh    Cs   Dep
TYP TYP  deg   %      MPa  MPa    MPa    MPa    me     /C   me
1     1    0  0.737  605  652  190250  1000  3.180  0  0
1     1   90  0.794  605  652  190250  1000  3.180  0  0
2     1    0  0.018  605  652  190250  1000  3.180  0  0
2     1   90  0.375  605  652  190250  1000  3.180  0  0
3     1    0  0.625  550  696  220000  4200  16.6   0  0
3     1   90  0.365  550  696  220000  4200  16.6   0  0
4     1    0  0.625  550  696  220000  4200  16.6   0  0
4     1   90  0.365  550  696  220000  4200  16.6   0  0

                            ELEMENT INCIDENCES
                            ******************

                          (A) RECTANGULAR ELEMENTS
                          ------------------------
ELMT INC1 INC2 INC3 INC4  [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)]/
 1   1   2  29  28   26  1  1   3  26  27 /
 79  83  84 110 109  24  1  1             /
103 109 110 135 134  24  1  1  14   24  25 /
439 459 460 486 485  24  1  1             /
463 484 485 512 511  26  1  1  3  26  27 /

                          MATERIAL TYPE ASSIGNMENT
                          ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
81  1  1  20  1  16  24 /
 79  2  1   2  1  16  24 /
101  2  1   2  1  16  24 /
  1  3  1  78  1         /
463  4  1  78  1         /

                             COORDINATES
                             ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [ #NODES d(NODES)  d(X) d(Y)]/
```

```
   1  -500.     0.     4   27  0.  206.667                        /
   2     0.     0.     4   27  0.  206.667   2   1   47.5    0. /
   4    95.     0.     4   27  0.  206.667   21  1   144.25  0. /
  25  3027.5    0.     4   27  0.  206.667   2   1   47.5    0. /
  27  3500.     0.     4   27  0.  206.667                        /
 109     0.   746.25  15  25  0.  126.250   2   1   47.5    0. /
 111    95.   746.25  15  25  0.  126.25    21  1   144.25  0. /
 132  3027.5  746.25  15  25  0.  126.25    2   1   47.5    0. /
 484  -500.   2640    4   27  0.  213.333                        /
 485    0.    2640    4   27  0.  213.333   2   1   47.5    0. /
 487  95      2640    4   27  0.  213.333   21  1   144.25  0. /
 508  3027.5  2640    4   27  0.  213.333   2   1   47.5    0. /
 510  3500    2640    4   27  0.  213.333                        /

                        SUPPORT RESTRAINTS
                        ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1 27 1  /
```

Load Files:

```
Structure Title       (30 char. max.)    : Shear Wall DP1
Load Case Title       (30 char. max.)    : Lateral Disp. (1.0 mm)
Load Case File Name   ( 8 char. max.)    : DP1RDL
No. of Loaded Joints                     : 0
No. of Prescribed Support Displacements  : 1
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                        SUPPORT DISPLACEMENTS
                        *********************
JNT  DOF  DISPL  [ #JNT  d(JNT) ] /
538  1 1.0 /

Structure Title       (30 char. max.)    : Shear Wall DP1
Load Case Title       (30 char. max.)    : Vertical Load
Load Case File Name   ( 8 char. max.)    : DP1RVL
No. of Loaded Joints                     : 50
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                           JOINT LOADS
                           ***********
NODE Fx Fy [ #NODE d(NODE) d(Fx) d(Fy) ] /
512  0.0  -24.0  25  1  0.0  0.0 /
539  0.0  -24.0  25  1  0.0  0.0 /

Structure Title       (30 char. max.)    : Shear Wall DP1
Load Case Title       (30 char. max.)    : Shrinkage
Load Case File Name   ( 8 char. max.)    : DP1SH
No. of Loaded Joints                     : 0
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
```

```
No. of Elements with Concrete Prestrain  : 384
No. of Elements with Ingress Pressure    : 0

                          CONCRETE PRESTRAINS
                          *******************
ELMT STRAIN  [ #ELMT d(ELMT) d(STRAIN) ] [ #ELMT d(ELMT) d(STRAIN) ]  /
79  -0.4  384  1  0 /
```

I.14 Input files for test specimen DP2

```
Job Title        (30 char. max.)       : Shear Wall DP2
Job File Name    ( 8 char. max.)       : DP2
Date             (30 char. max.)       : July 25, 2001

STRUCTURE DATA
--------------
File Name        ( 8 char. max.)       : DP2

LOADING DATA
------------
No. of Load Stages                     : 1
Starting Load Stage No.                : 1
Load Series ID   ( 5 char. max.)       : DP2

Load   File Name                              Factors
Case   (8 char. max.)       Initial    Final    LS-Inc  Type Reps C-Inc
  1    DP2VL                 0.000     1.000     0.000    1    1  0.000
  2    DP2DL                 0.000     1.000     0.250    3    2  1.000
  3    DP2SH                 1.000     1.000     1.000    1    1  0.000

ANALYSIS PARAMETERS
-------------------
Seed File Name     (8 char. max.)          : NULL
Convergence Limit  (factor > 1.0)          : 1.000010
Averaging Factor   ( 0.0 to 1.0 )          : 0.50
Maximum No. of Iterations                  : 70
Convergence Criteria                       : 2
Results Files                              : 1

MATERIAL BEHAVIOUR MODELS
-------------------------
Concrete Compression Base Curve       (0-3) : 1
Concrete Compression Post-Peak        (0-3) : 2
Concrete Compression Softening        (0-8) : 3
Concrete Tension Stiffening           (0-3) : 2
Concrete Tension Softening            (0-3) : 3
Concrete Tension Splitting            (0-1) : 0
Concrete Confined Strength            (0-2) : 1
Concrete Lateral Expansion            (0-1) : 1
Concrete Cracking Criterion           (0-4) : 3
Concrete Crack Slip Check             (0-2) : 1
Concrete Crack Width Check            (0-2) : 0
Concrete Hysteretic Response          (0-2) : 1
Reinforcement Hysteretic Response     (0-3) : 3
Element Strain Histories              (0-1) : 1
```

```
Element Slip Distortions              (0-4) : 0
```

Structure File:

```
Structure Title       (30 char. max.)      : Shear Wall DP2
Structure File Name   ( 8 char. max.)      : DP2
No. of RC Material Types                   : 4
No. of Steel Material Types                : 0
No. of Rectangular Elements                : 540
No. of Triangular Elements                 : 0
No. of Truss Elements                      : 0
No. of Joints                              : 591
No. of Restraints                          : 54

                          MATERIAL SPECIFICATIONS
                          ***********************

                          (A) REINFORCED CONCRETE
                          -----------------------

CONCRETE
--------
MAT   f'c     f't    Ec    e0     Mu    Cc    T    Agg   Sx    Sy U  Ns
TYP   MPa     MPa   MPa    me           /C    mm    mm    mm    mm
1  18.8  1.43  18580  2.12  0.15  0    75   10  70  70  1.0  2
2  18.8  1.43  18580  2.12  0.15  0  3045   10  70  70  1.0  2
3  34.7  1.94  57500  1.66  0.15  0  4415   10  70  70  1.0  2
4  38.0  2.03  37570  1.96  0.15  0  4415   10  70  70  1.0  2

REINFORCEMENT COMPONENTS
-----------------------
MAT SRF  DIR   As    Fy   Fu     Es     Esh    esh    Cs   Dep
TYP TYP  deg   %     MPa  MPa    MPa    MPa    me     /C   me
1     1    0  0.737  605  652  190250  1000  3.180  0  0
1     1   90  0.794  605  652  190250  1000  3.180  0  0
2     1    0  0.018  605  652  190250  1000  3.180  0  0
2     1   90  0.375  605  652  190250  1000  3.180  0  0
3     1    0  0.625  550  696  220000  4200  16.6  0  0
3     1   90  0.365  550  696  220000  4200  16.6  0  0
4     1    0  0.625  550  696  220000  4200  16.6  0  0
4     1   90  0.365  550  696  220000  4200  16.6  0  0

                            ELEMENT INCIDENCES
                            ******************

                          (A) RECTANGULAR ELEMENTS
                          ------------------------
ELMT INC1 INC2 INC3 INC4  [#ELMT d(ELMT) d(INC)][#ELMT d(ELMT) d(INC)]/
 1   1   2  29  28   26  1  1   3  26  27 /
 79  83  84 110 109  24  1  1             /
103 109 110 135 134  24  1  1  14   24  25 /
439 459 460 486 485  24  1  1             /
463 484 485 512 511  26  1  1   3  26  27 /

                          MATERIAL TYPE ASSIGNMENT
                          ************************
ELMT MAT ACT [ #ELMT d(ELMT)] [ #ELMT d(ELMT) ] /
```

```
81   1  1  20  1  16  24  /
 79  2  1   2  1  16  24 /
101  2  1   2  1  16  24 /
  1  3  1  78  1         /
463  4  1  78  1         /


                              COORDINATES
                              ***********
NODE X Y  [ #NODES d(NODES)  d(X) d(Y) ] [ #NODES d(NODES)  d(X) d(Y)]/
   1  -500.     0.    4   27  0.  206.667                        /
   2     0.     0.    4   27  0.  206.667   2   1   47.5    0. /
   4    95.     0.    4   27  0.  206.667   21  1   144.25  0. /
  25  3027.5    0.    4   27  0.  206.667   2   1   47.5    0. /
  27  3500.     0.    4   27  0.  206.667                        /
 109     0.   746.25  15  25  0.  126.250   2   1   47.5    0. /
 111    95.   746.25  15  25  0.  126.25    21  1   144.25  0. /
 132  3027.5  746.25  15  25  0.  126.25    2   1   47.5    0. /
 484  -500.   2640    4   27  0.  213.333                        /
 485    0.    2640    4   27  0.  213.333   2   1   47.5    0. /
 487  95      2640    4   27  0.  213.333   21  1   144.25  0. /
 508  3027.5  2640    4   27  0.  213.333   2   1   47.5    0. /
 510  3500    2640    4   27  0.  213.333                        /

                           SUPPORT RESTRAINTS
                           ******************
NODE  X-RST  Y-RST [ #NODE d(NODE) ]  /
1 1 1 27 1  /
```

Load Files:

```
Structure Title       (30 char. max.)    : Shear Wall DP2
Load Case Title       (30 char. max.)    : Lateral Disp. (1.0 mm)
Load Case File Name   ( 8 char. max.)    : DP2DL
No. of Loaded Joints                     : 0
No. of Prescribed Support Displacements  : 1
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                           SUPPORT DISPLACEMENTS
                           *********************
JNT  DOF  DISPL  [ #JNT  d(JNT) ] /
538  1  1.0 /

Structure Title       (30 char. max.)    : Shear Wall DP2
Load Case Title       (30 char. max.)    : Vertical Load
Load Case File Name   ( 8 char. max.)    : DP2VL
No. of Loaded Joints                     : 50
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 0
No. of Elements with Ingress Pressure    : 0

                              JOINT LOADS
                              ***********
```

```
NODE Fx Fy [ #NODE d(NODE) d(Fx) d(Fy) ] /
512  0.0   -5.2   25  1  0.0  0.0 /
539  0.0   -5.2   25  1  0.0  0.0 /

Structure Title       (30 char. max.)    : Shear Wall DP2
Load Case Title       (30 char. max.)    : Shrinkage
Load Case File Name   ( 8 char. max.)    : DP2SH
No. of Loaded Joints                     : 0
No. of Prescribed Support Displacements  : 0
No. of Elements with Temperature Loads   : 0
No. of Elements with Concrete Prestrain  : 384
No. of Elements with Ingress Pressure    : 0

                         CONCRETE PRESTRAINS
                         *******************
ELMT STRAIN  [ #ELMT d(ELMT) d(STRAIN) ] [ #ELMT d(ELMT) d(STRAIN) ]  /
79  -0.4  384  1  0 /
```