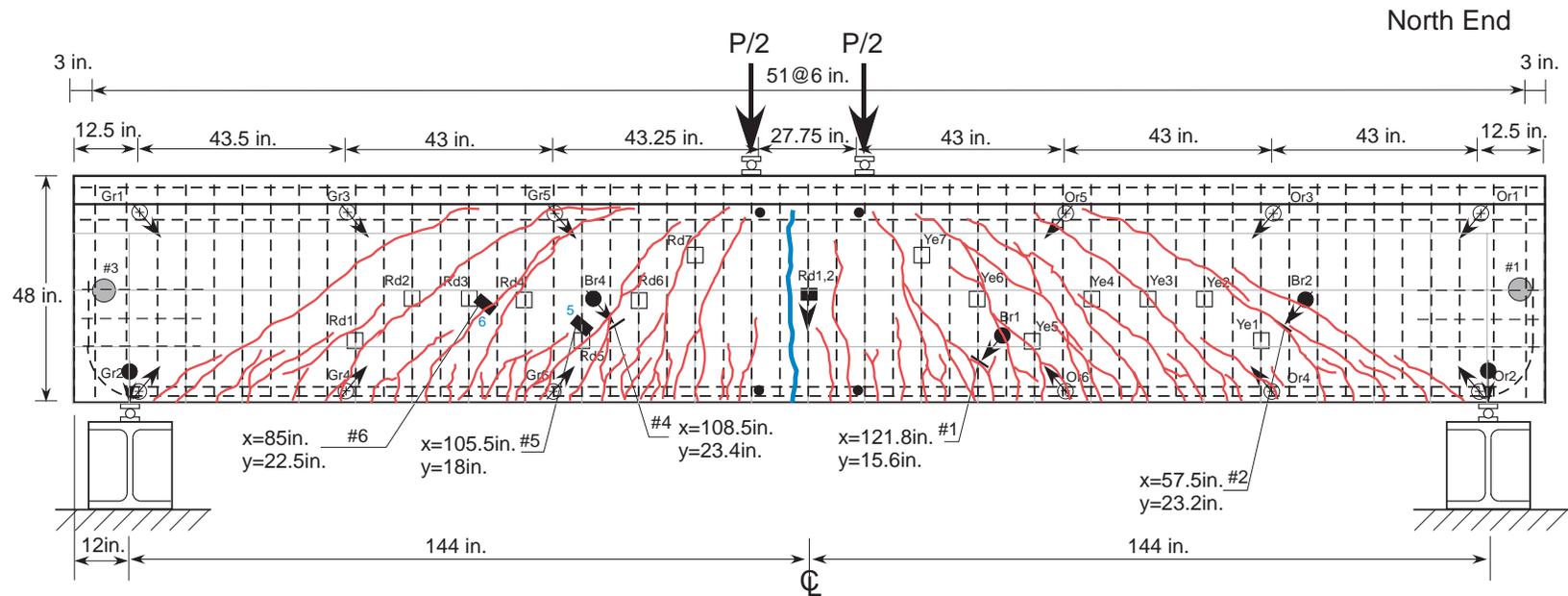


APPENDIX A3

CRACK MAPS



-  4 in. disp. sensor
-  0.5 in. disp. sensor
-  Strain gage (embedded)
-  4 in. Clip Gage
-  Added strain gage
-  5 in. string pot (on both sides of beam)
-  Tilt sensor

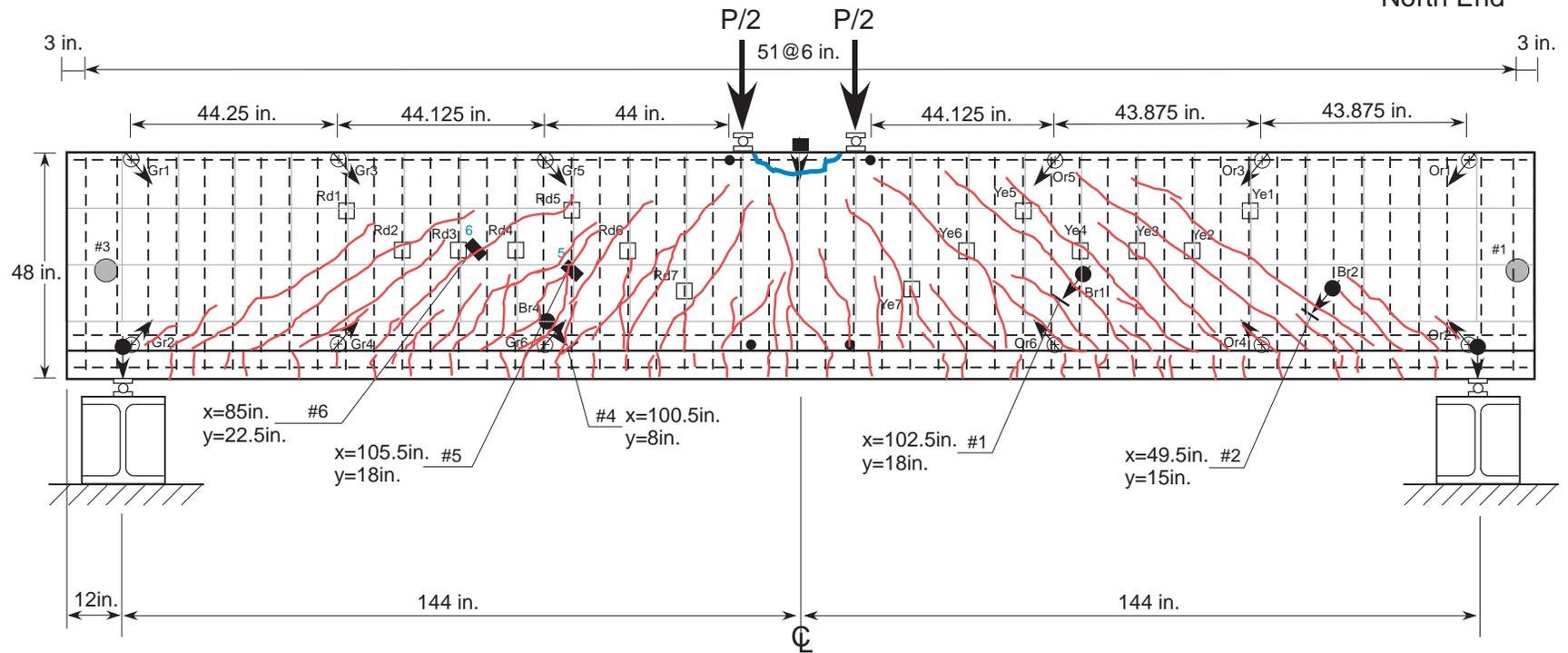
Failure mode: Flexure Tension
 Peak Load: 413 kips.
 Widest crack: 0.03 in.

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

1T6
 T Configuration
 East Face of Specimen

Figure A3.1: Instrumentation plan and crack pattern for specimen 1T6.

North End



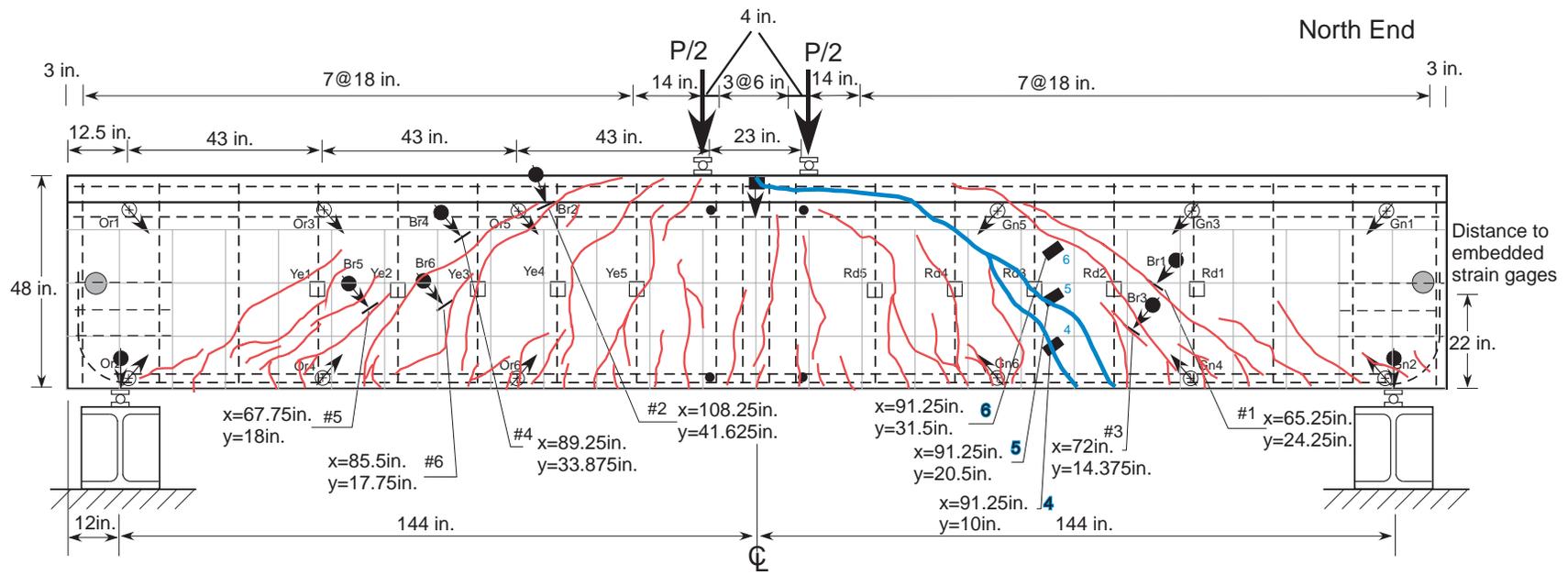
- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- 4 in. Clip Gage
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Failure mode: Flexure, Compression
 Peak Load: 472 kips
 Widest crack: 0.04 in

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

11T6
 Inverted-T Configuration
 East Face of Specimen

Figure A3.2: Instrumentation plan and crack pattern for specimen 11T6.



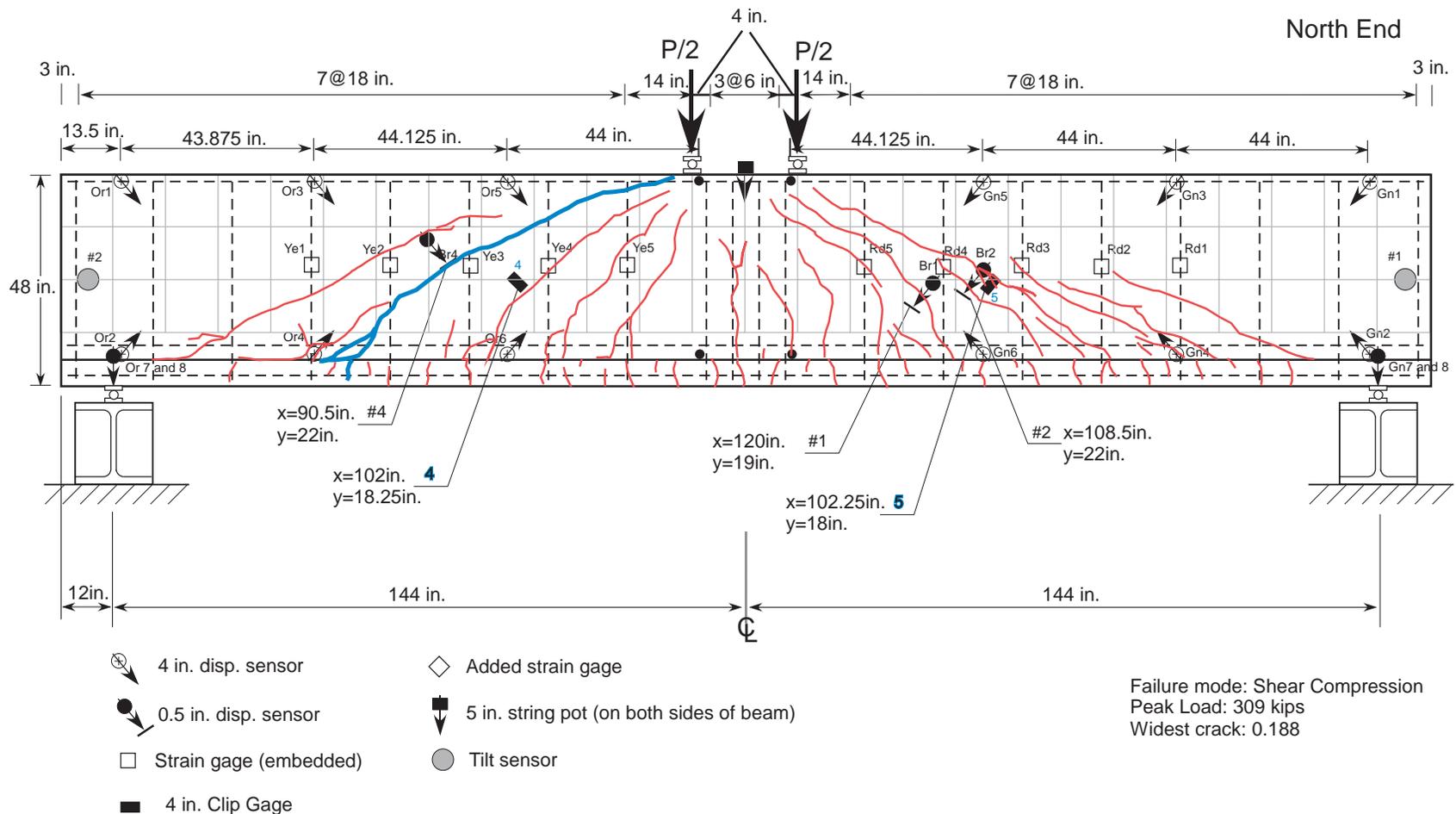
- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- 4 in. Clip Gage
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Failure mode: Shear Compression
Peak Load: 332 kips.
Widest crack: 0.165 in.

1T18
T Configuration
East Face of Specimen

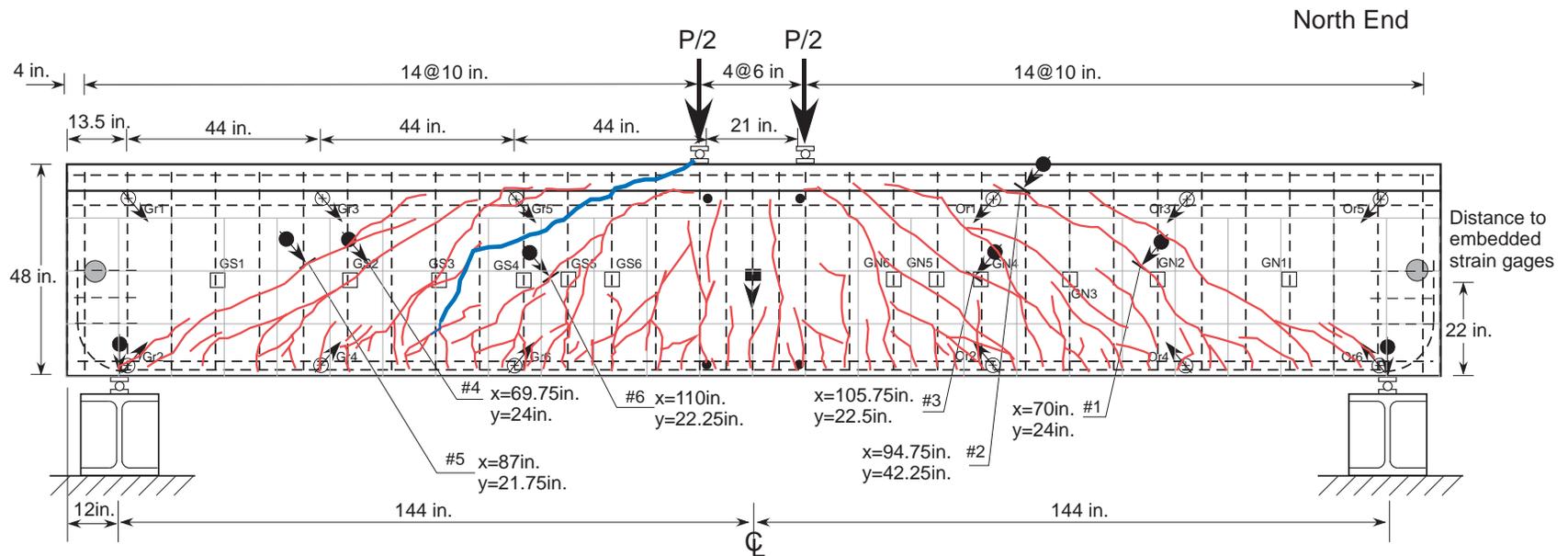
Figure A3.3: Instrumentation plan and crack pattern for specimen 1T18.



Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

11T18
Inverted-T Configuration
East Face of Specimen

Figure A3.4: Instrumentation plan and crack pattern for specimen 11T18.



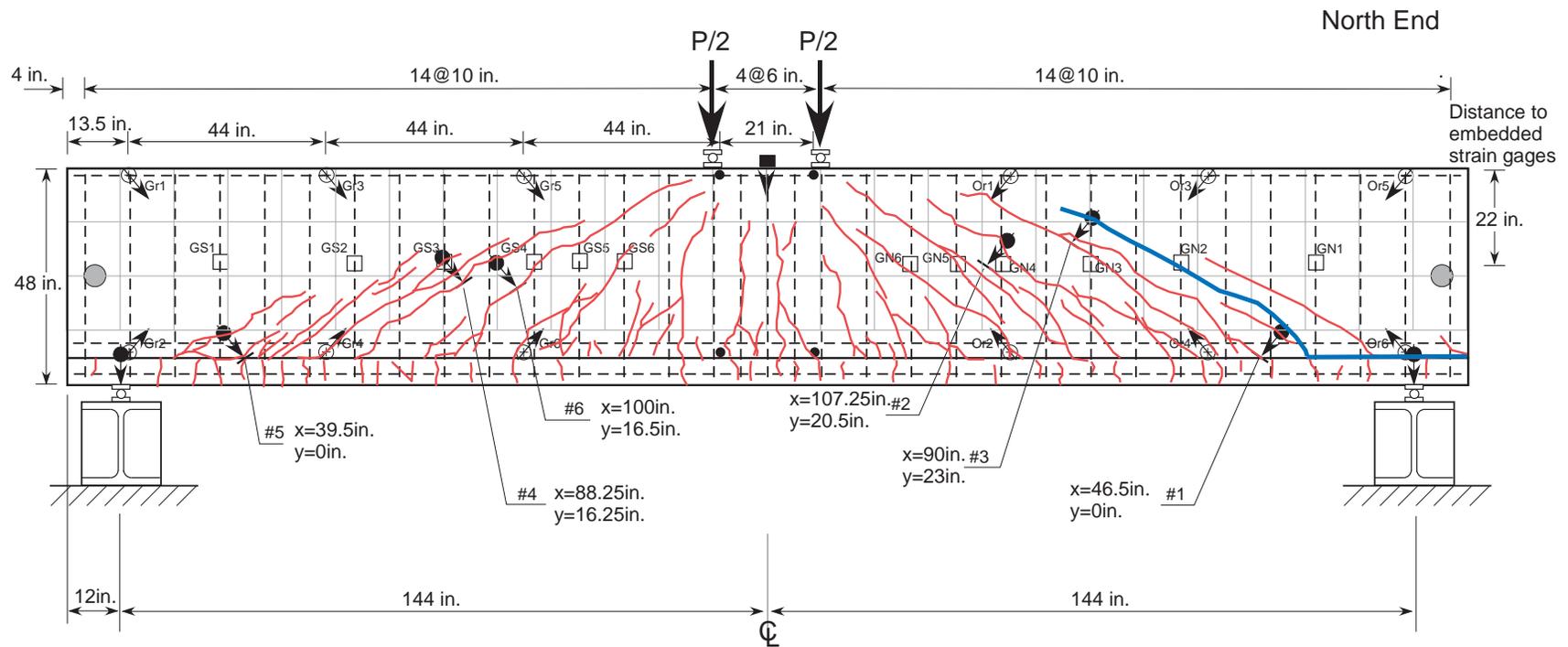
- ⊗ 4 in. disp. sensor
- ◊ Added strain gage
- 0.5 in. disp. sensor
- 5 in. string pot (on both sides of beam)
- Strain gage (embedded)
- Tilt sensor

Failure mode: Shear Compression
 Peak Load: 404 kips.
 Widest crack: 0.08 in.

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

2T10
 T Configuration
 East Face of Specimen

Figure A3.5: Instrumentation plan and crack pattern for specimen 2T10.



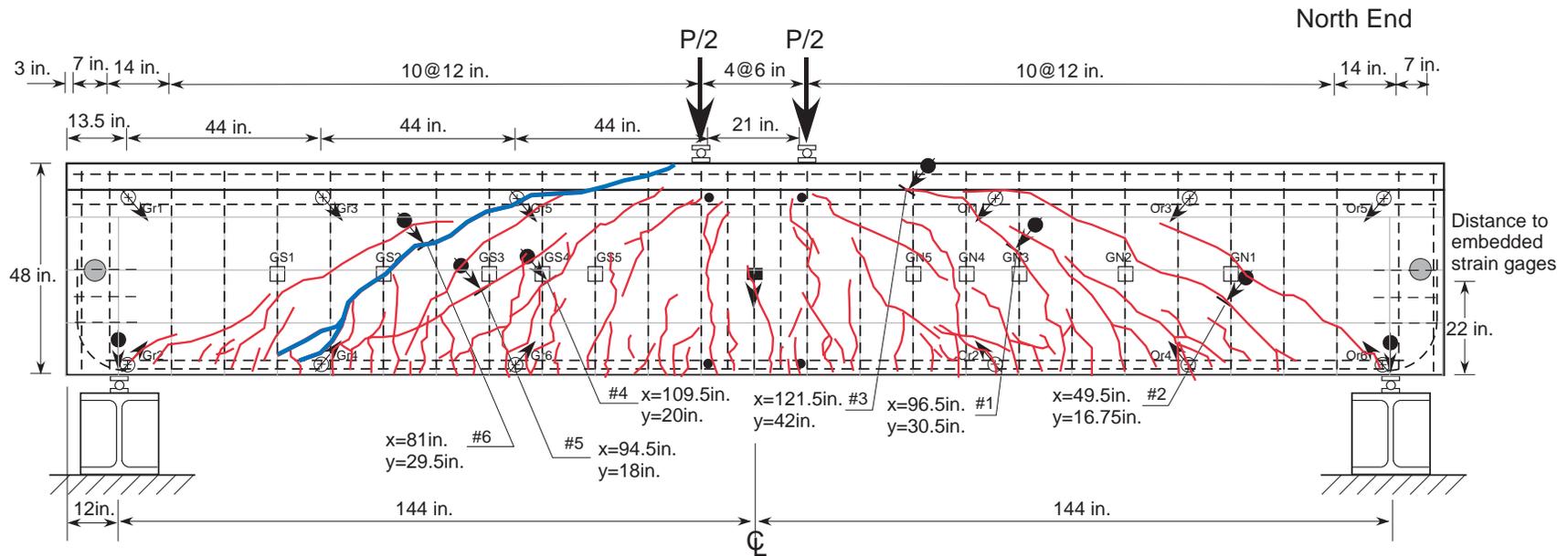
- 4 in. disp. sensor
- Added strain gage
- 0.5 in. disp. sensor
- 5 in. string pot (on both sides of beam)
- Strain gage (embedded)
- Tilt sensor

Failure mode: Shear Tension/Anchorage
 Peak Load: 401 kips, Failed at 387 kips
 Widest crack: 0.125 in.

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

2IT10
 Inverted-T Configuration
 East Face of Specimen

Figure A3.6: Instrumentation plan and crack pattern for specimen 2IT10.



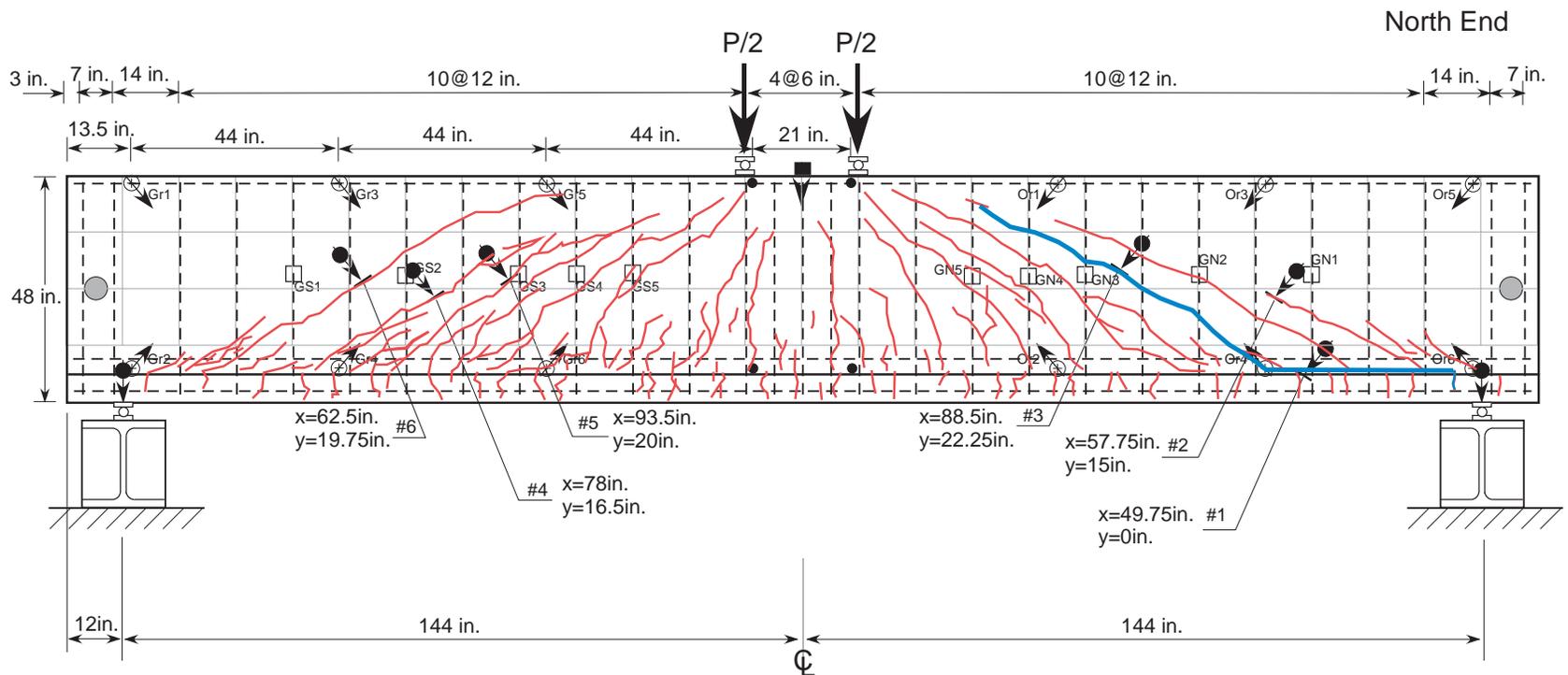
- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Failure mode: Shear Compression
 Peak Load: 378 kips.
 Widest crack: 0.109 in.

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

2T12
 T Configuration
 East Face of Specimen

Figure A3.7: Instrumentation plan and crack pattern for specimen 2T12.



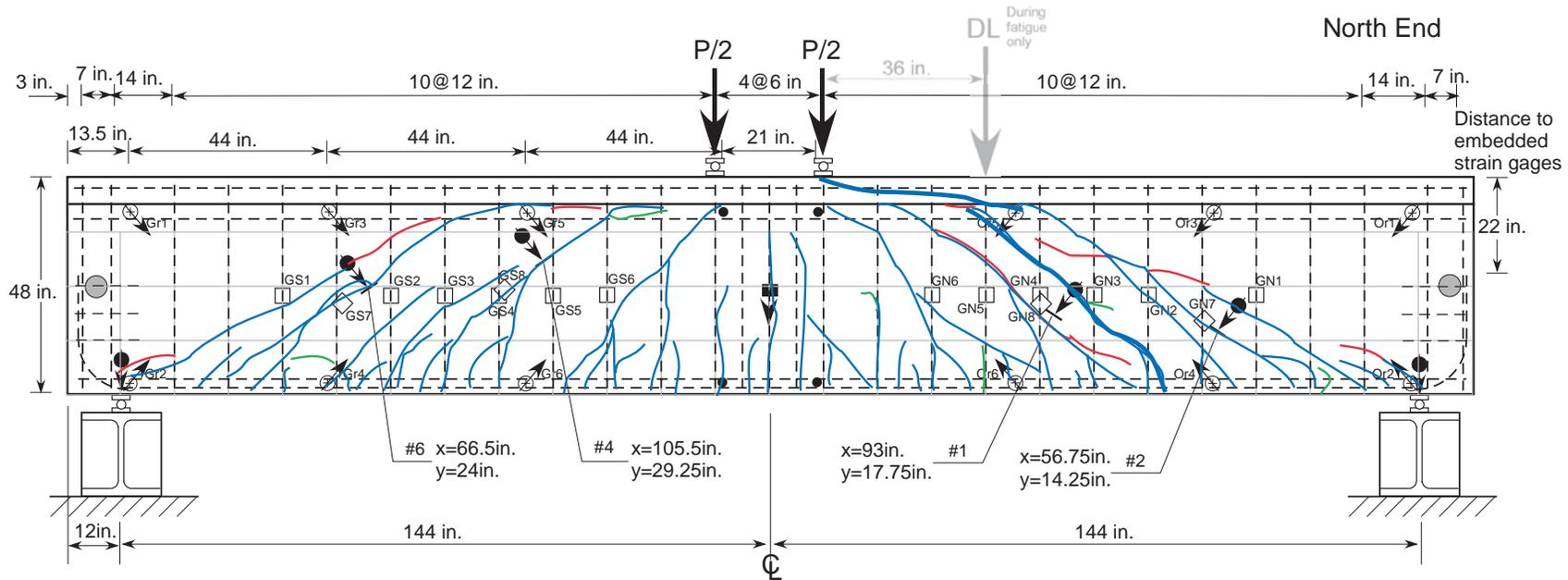
-  4 in. disp. sensor
-  0.5 in. disp. sensor
-  Strain gage (embedded)
-  Added strain gage
-  5 in. string pot (on both sides of beam)
-  Tilt sensor

Failure mode: Shear Tension/Anchorage
 Peak Load: 358 kips
 Widest Crack: 0.104 in

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

2IT12
 Inverted-T Configuration
 East Face of Specimen

Figure A3.8: Instrumentation plan and crack pattern for specimen 2IT12.



-  4 in. disp. sensor
-  0.5 in. disp. sensor
-  Strain gage (embedded)
-  Added strain gage
-  5 in. string pot (on both sides of beam)
-  Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Failure mode: Shear Compression
Peak Load: 370 kips.
Widest crack: 0.109 in.
There is no written documentation of the post-fatigue test.

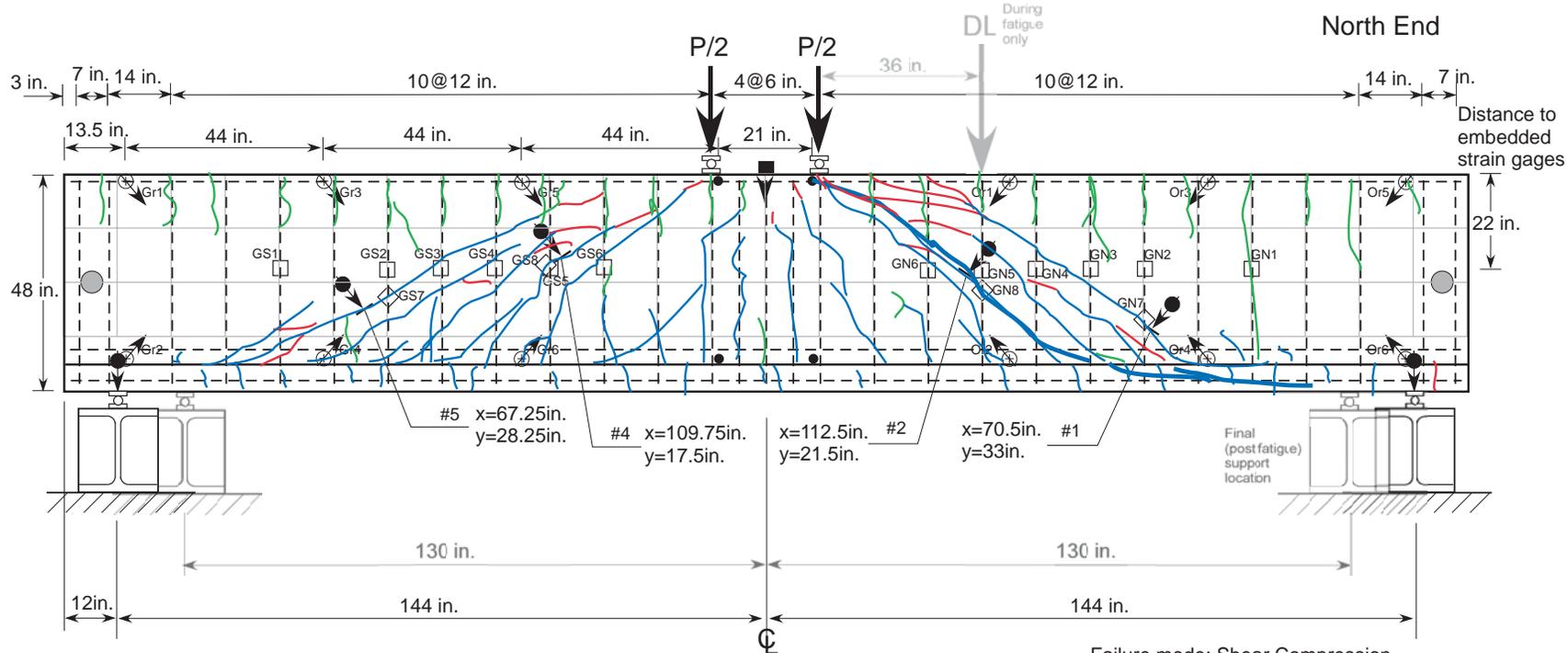
Changes made to crack gages after precrack:
--#1 moved from x=96.75", y=20.75"
--#2 added

#3 added after fatigue, no location information.

GS6 dead, GN1 and GN6 dead after fatigue.

3T12
T Configuration
East Face of Specimen

Figure A3.9: Instrumentation plan and crack pattern for specimen 3T12.



- ⊕ 4 in. disp. sensor
- ◇ Added strain gage
- 0.5 in. disp. sensor
- ⬇ 5 in. string pot (on both sides of beam)
- Strain gage (embedded)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

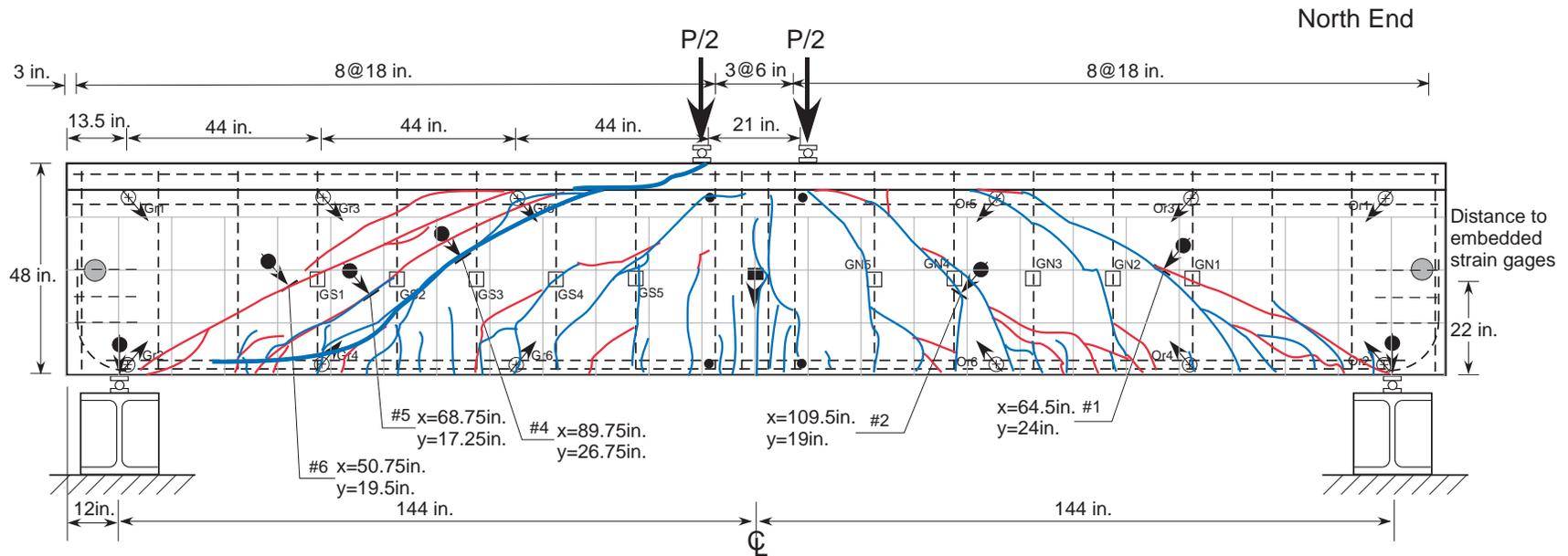
Failure mode: Shear Compression
Widest crack: 0.143 in
Peak Load: 409 kips
Continued to hold load until loading rate was increased causing an explosive failure due to fracturing of one of the stirrups.

Changes made to crack gages after precrack:
--#1 moved from x=112.5", y=21.5"
--#2 moved from x=52.75", y=0"
--#4 moved from x=54.5", y=34"
--#5 moved from x=39", y=0"

GN6 Dead
GN5 Dead after Fatigue

3IT12
Inverted-T Configuration
East Face of Specimen

Figure A3.10: Instrumentation plan and crack pattern for specimen 3IT12.



- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

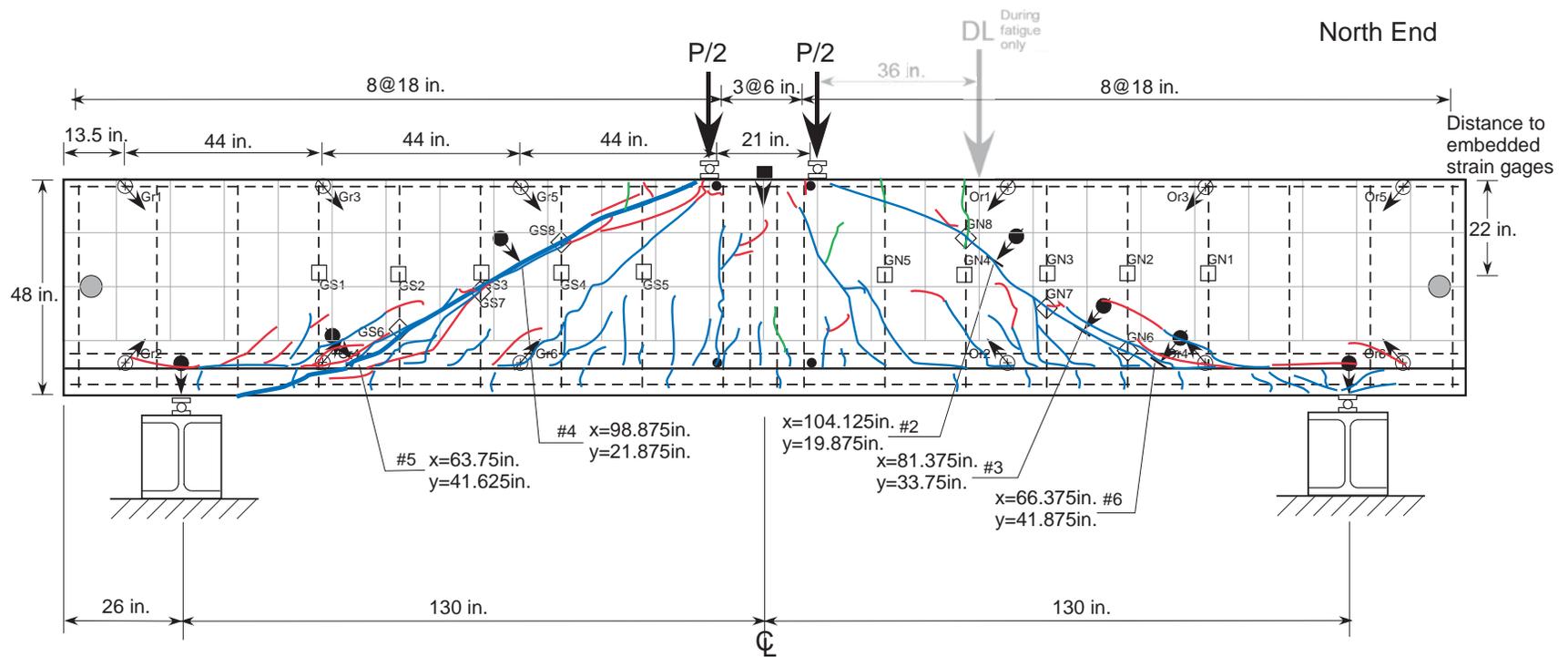
Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Failure mode: Shear Compression
Widest crack: 0.21 in
Peak Load: 299 kips.

Loaded using load control to 200 kips,
and displacement control thereafter.

3T18
T Configuration
East Face of Specimen

Figure A3.11: Instrumentation plan and crack pattern for specimen 3T18.



- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

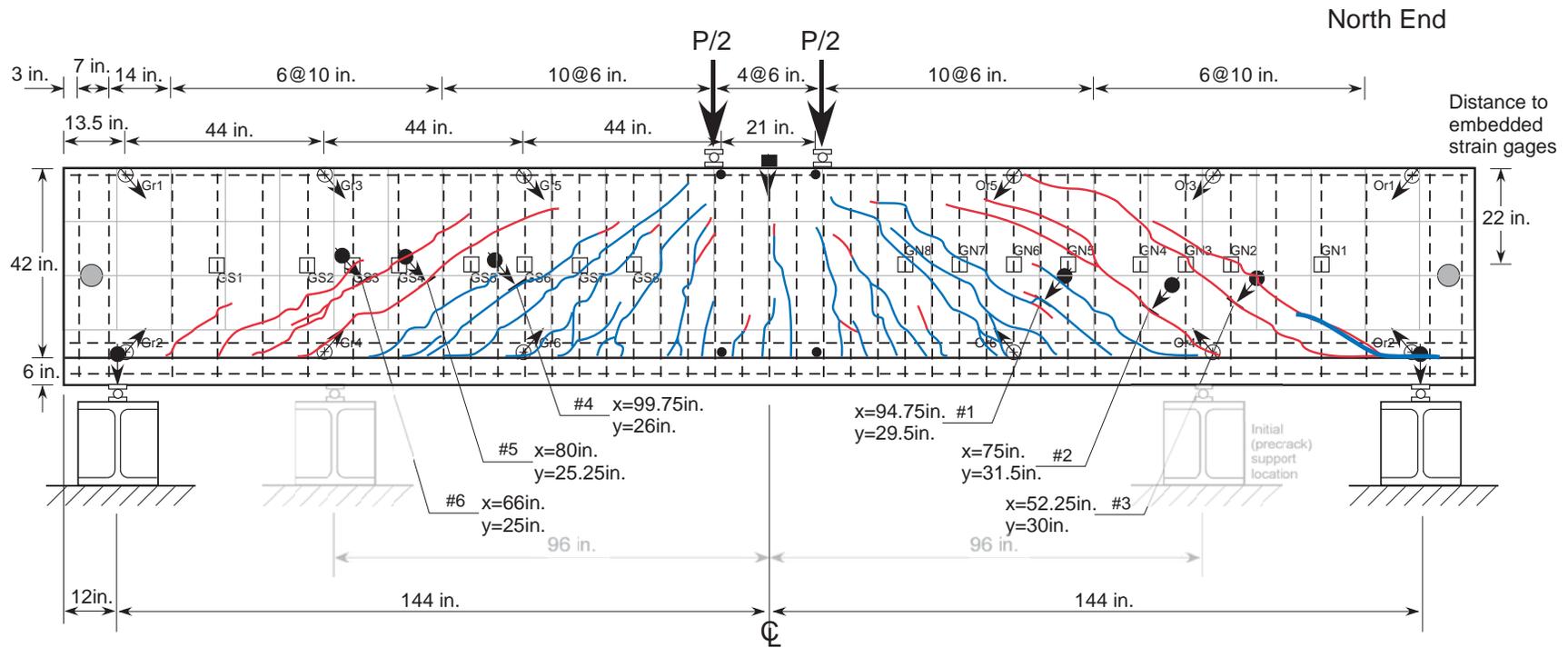
Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

No data available for GN8.

Failure mode: Shear Compression
 Widest crack: 0.171 in.
 Peak Load: 285 kips
 Fractured stirrups cross failure crack.
 Locations of fractured stirrups:
 East face across from GS6
 West face above GS7

3IT18
 Inverted-T Configuration
 East Face of Specimen

Figure A3.12: Instrumentation plan and crack pattern for specimen 3IT18.



- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Failure mode: punching through the deck at both supports.

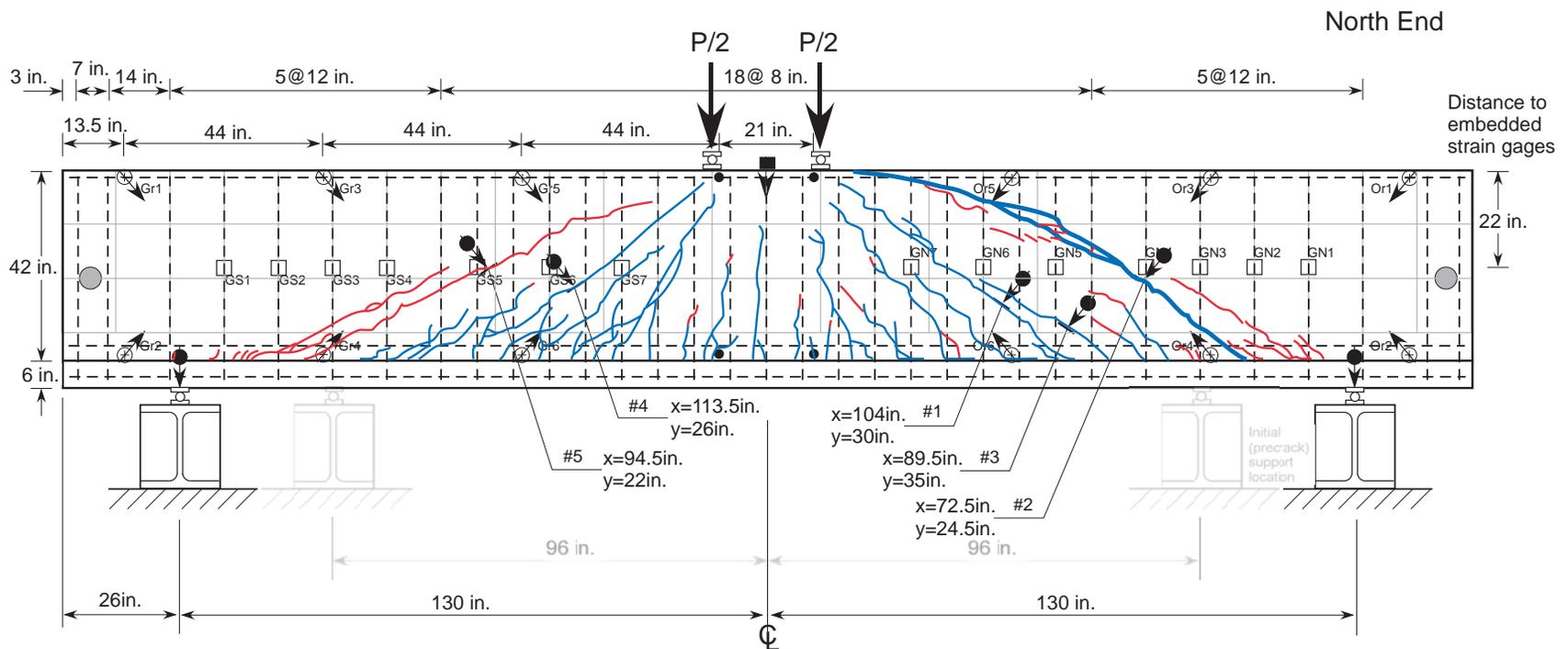
Peak load: 423 kips
Widest crack: 0.08 in.

Crack motion sensor #1 added during precracking, remaining added during loading to failure.

GN3 broken; Gr1 broke during precracking; GS4 broke during loading to failure.

4IT6-10
Inverted-T Configuration
East Face of Specimen

Figure A3.13: Instrumentation plan and crack pattern for specimen 4IT6-10.



- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Failure mode: shear-compression

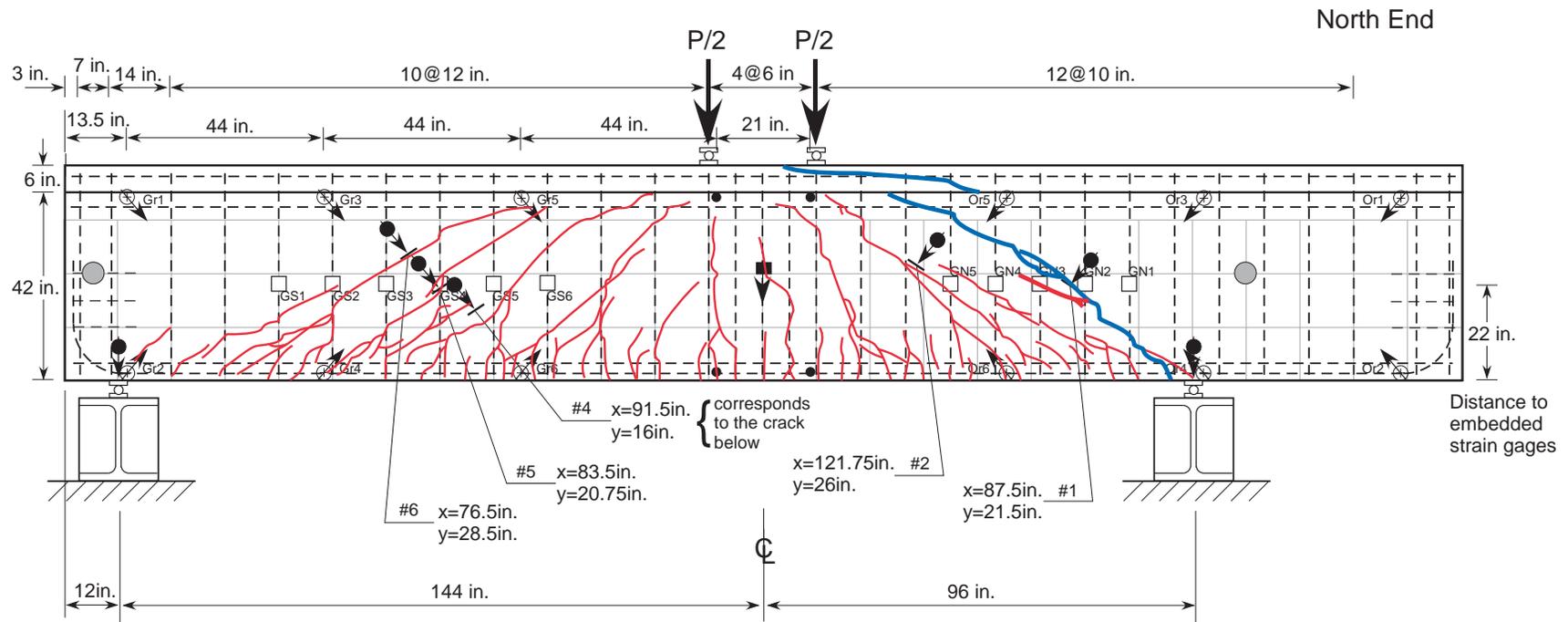
Peak load: 476 kips
Widest crack: 0.172 in.

Crack motion sensors #1 and #4 added during precracking, remaining added during loading to failure; locations estimated from photos.

GN5 broken; #3 did not appear to record valid data; GN4, GN6, GS5 broke during loading to failure.

4IT8-12
Inverted-T Configuration
East Face of Specimen

Figure A3.14: Instrumentation plan and crack pattern for specimen 4IT8-12.



- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Failure mode: shear-compression

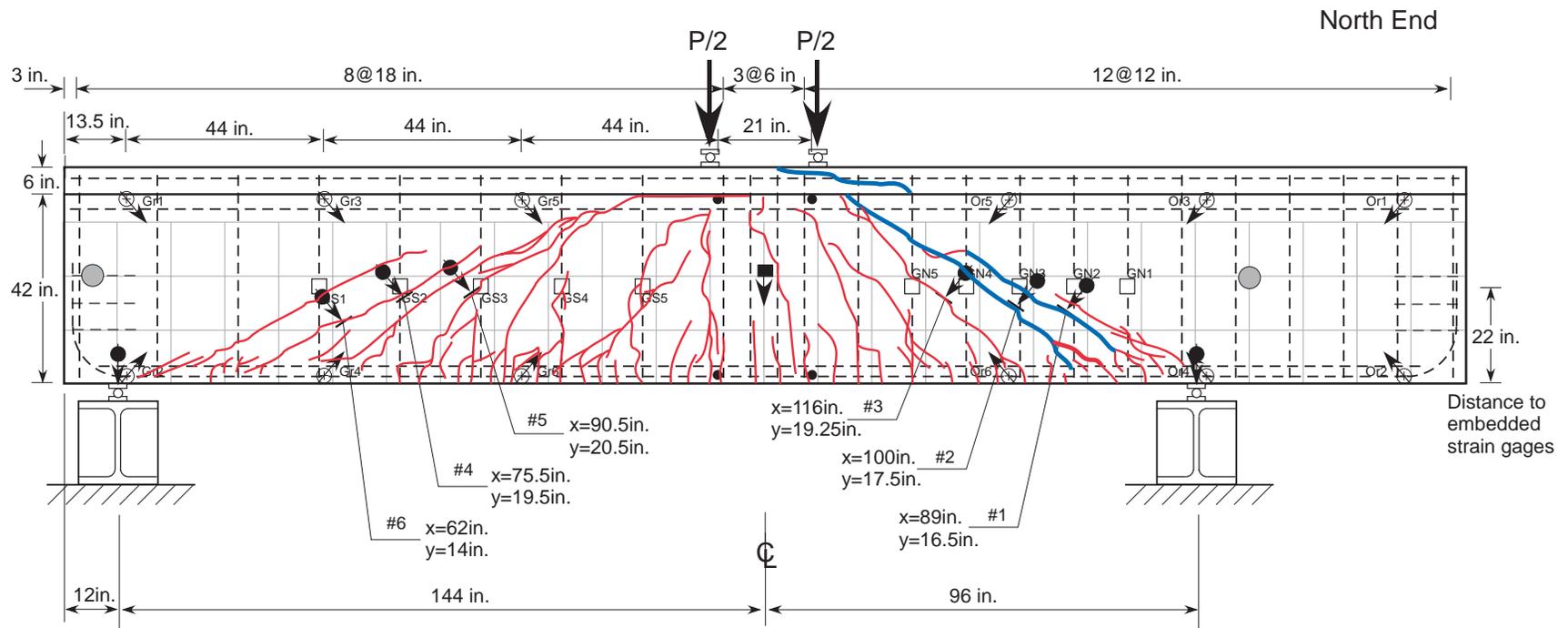
Peak load: 402 kips
Widest crack: 0.081 in.

Tilt sensor locations inferred from photos.

GS2 broke during unloading of the 350kip load step.

4T10-12
T Configuration
East Face of Specimen

Figure A3.15: Instrumentation plan and crack pattern for specimen 4T10-12.



- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Tilt sensor locations inferred from photos.

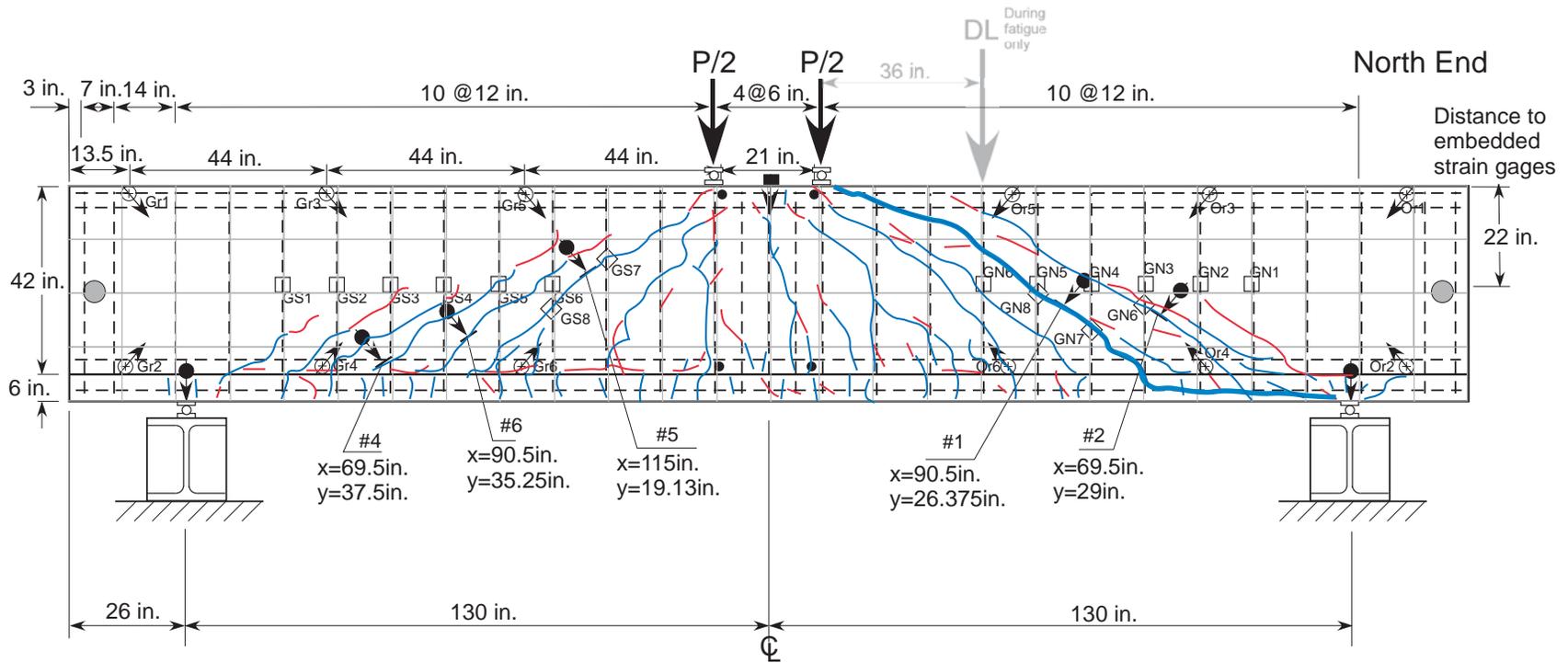
Failure mode: shear-compression

Peak load: 394 kips
Widest crack: 0.095 in.

GS3 broke on the 200kip load step; GS2 and GN3 broke on the 350kip load step; GN4 went off the upper limit.

4T12-18
T Configuration
East Face of Specimen

Figure A3.16: Instrumentation plan and crack pattern for specimen 4T12-18.



- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

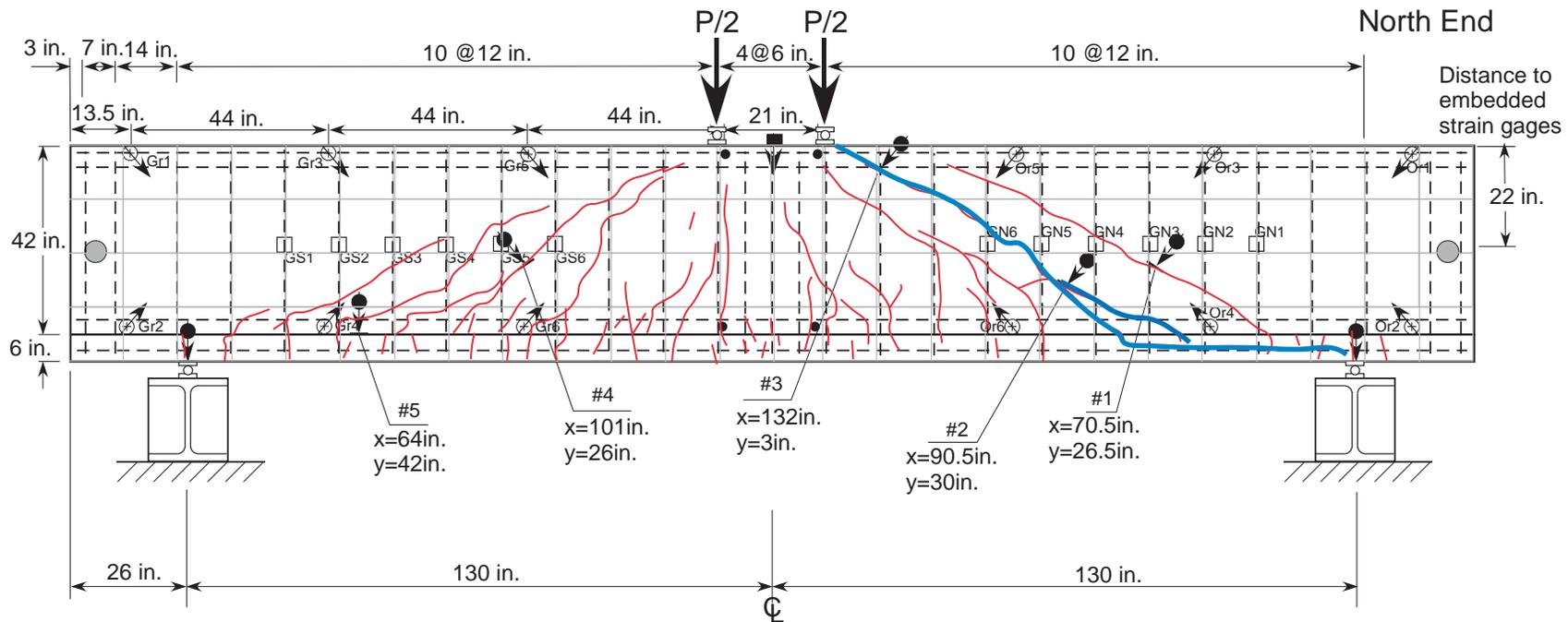
Failure mode: Shear
Peak load: 382 kips
Widest crack: 0.094 in.

#4 and #6 added after fatigue.

Embedded GN6 broken after precrack,
replaced by added GN6.

5IT12-B1
Inverted-T Configuration
East Face of Specimen

Figure A3.17: Instrumentation plan and crack pattern for specimen 5IT12-B1.



⊕ 4 in. disp. sensor

◇ Added strain gage

Failure mode: Shear

● 0.5 in. disp. sensor

⬇ 5 in. string pot (on both sides of beam)

Peak load: 379 kips

Widest crack: 0.24 in.

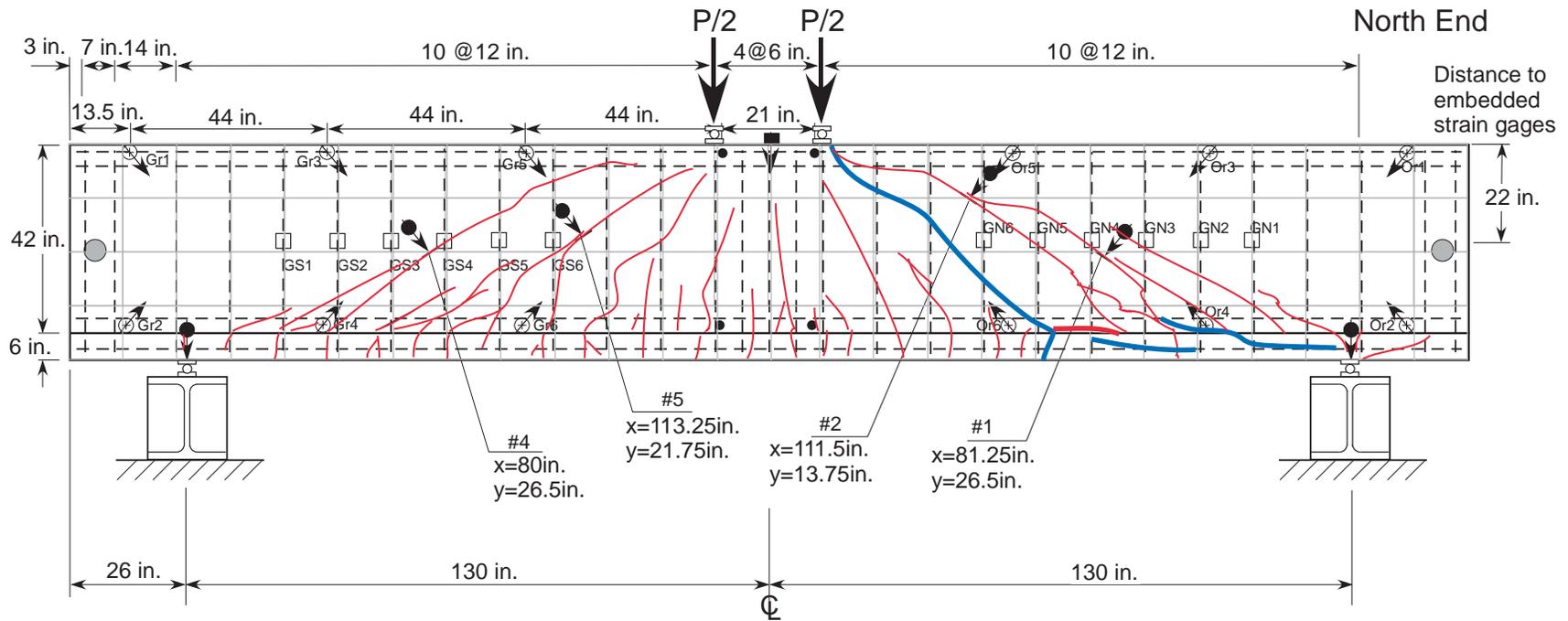
□ Strain gage (embedded)

● Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

5IT12-B3
Inverted-T Configuration
East Face of Specimen

Figure A3.19: Instrumentation plan and crack pattern for specimen 5IT12-B3.



⊗ 4 in. disp. sensor

◇ Added strain gage

Failure mode: Shear

● 0.5 in. disp. sensor

⬇ 5 in. string pot (on both sides of beam)

Peak load: 405 kips

Widest crack: 0.124 in.

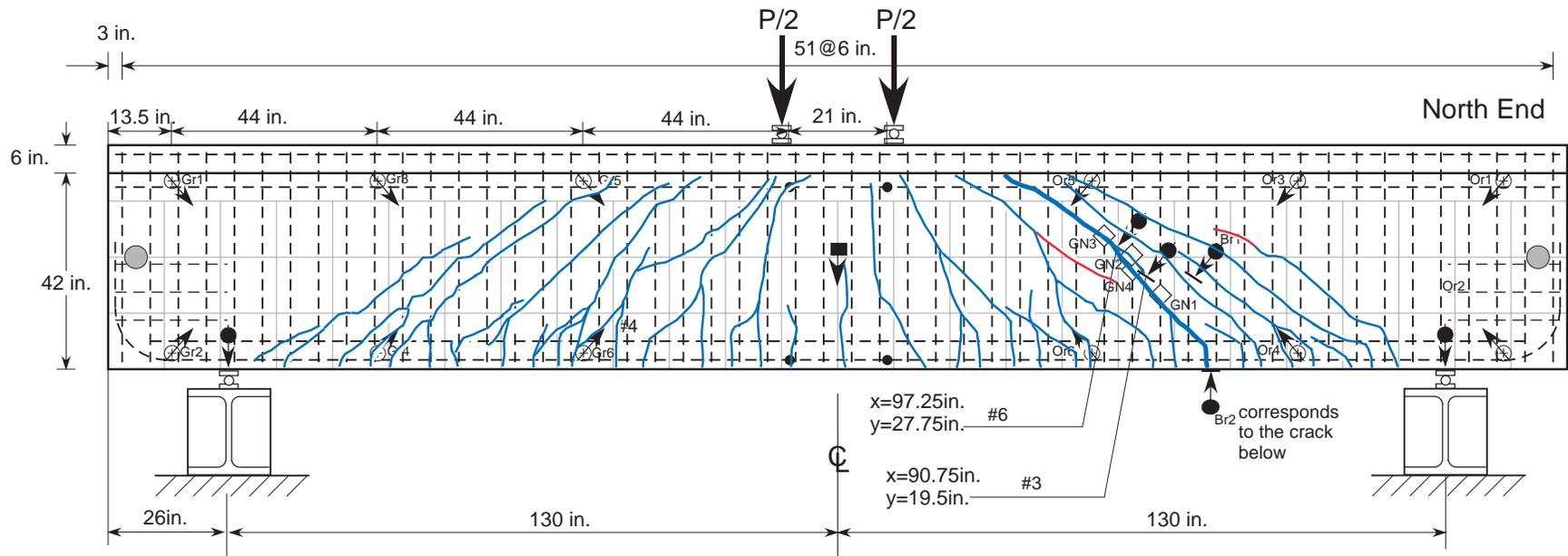
□ Strain gage (embedded)

● Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

5IT12-B4
Inverted-T Configuration
East Face of Specimen

Figure A3.20: Instrumentation plan and crack pattern for specimen 5IT12-B4.



-  4 in. disp. sensor
-  0.5 in. disp. sensor
-  Strain gage (embedded)
-  Added strain gage
-  5 in. string pot (on both sides of beam)
-  Tilt sensor

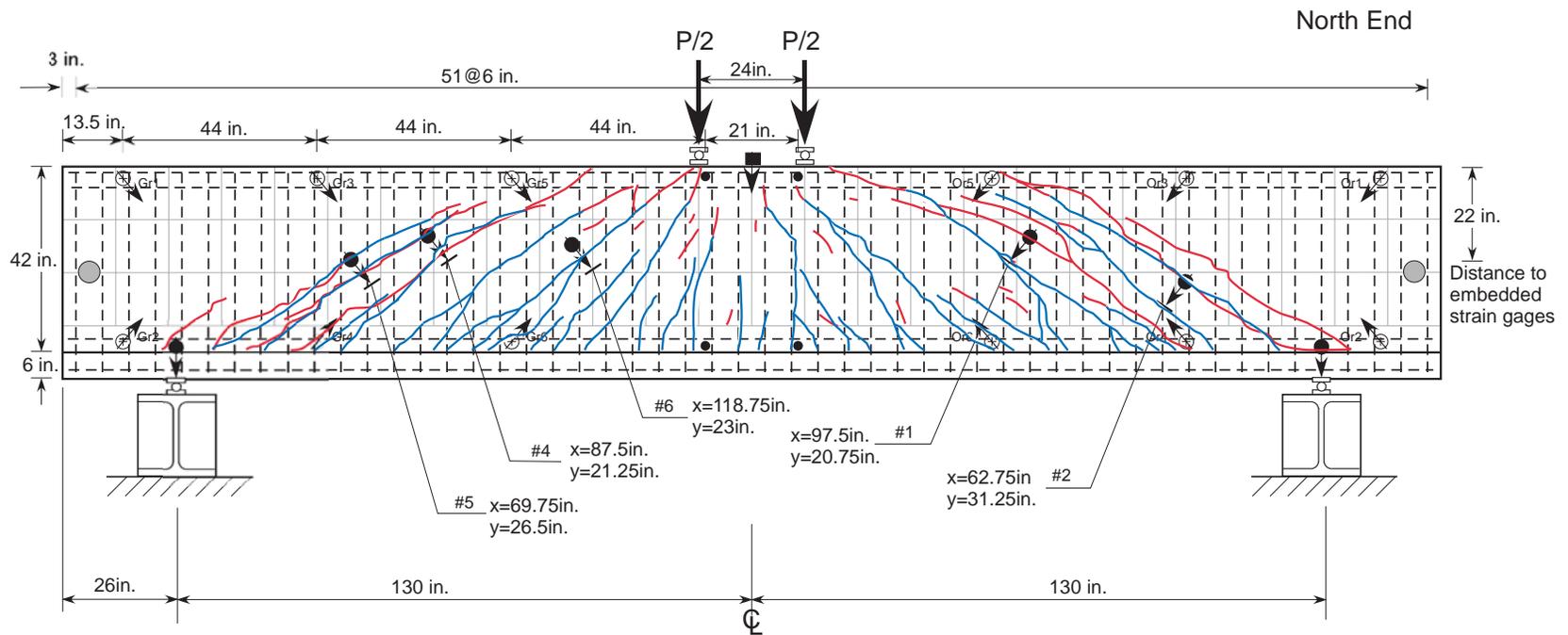
Note: All equipment is on east side of beam unless otherwise noted
 4 in disp. sensors located on west side of beam
 Tilt sensors located on west side of beam
 0.5 in. disp. sensors located from nearest corner of stem.

Failure mode: shear-compression
 Peak load: 473 kips
 Widest crack: 0.149 in.

GN4 and Br1 Located on West Face of Specimen

6T6
 Low Cycle Fatigue; Cut Bar
 T Configuration
 East Face of Specimen

Figure A3.21: Instrumentation plan and crack pattern for specimen 6T6.



4 in. disp. sensor

5 in. string pot (on both sides of beam)

Failure mode: Beam did not fail.

0.5 in. disp. sensor

Tilt sensor

Peak load: 475 kips

Widest crack: 0.096in.

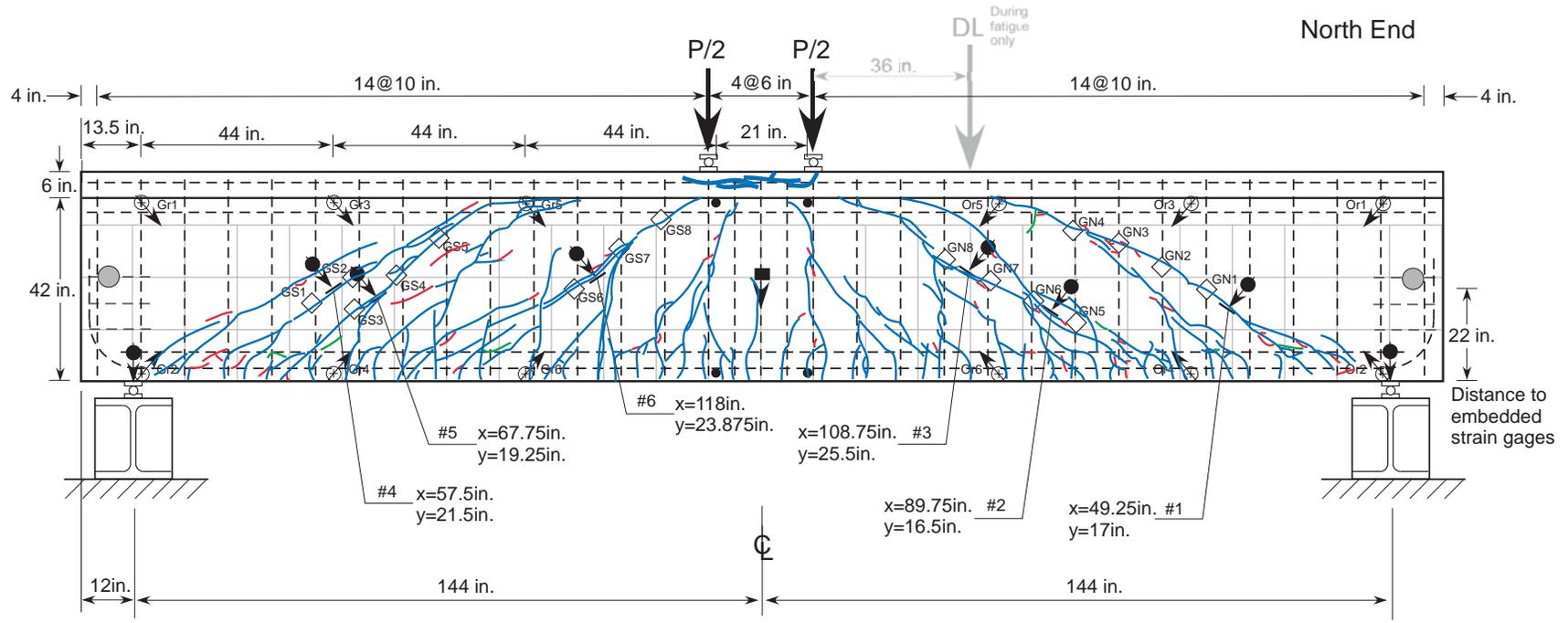
Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Crack motion sensor #1 added during precracking, remaining added during loading to failure.

6IT6
Low Cycle Fatigue
Inverted-T Configuration
East Face of Specimen

Crack pattern does not match on the East and West faces due to specimen twisting.

Figure A3.22: Instrumentation plan and crack pattern for specimen 6IT6.



- ⊕ 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- ◇ Added strain gage
- ⬇ 5 in. string pot (on both sides of beam)
- Tilt sensor

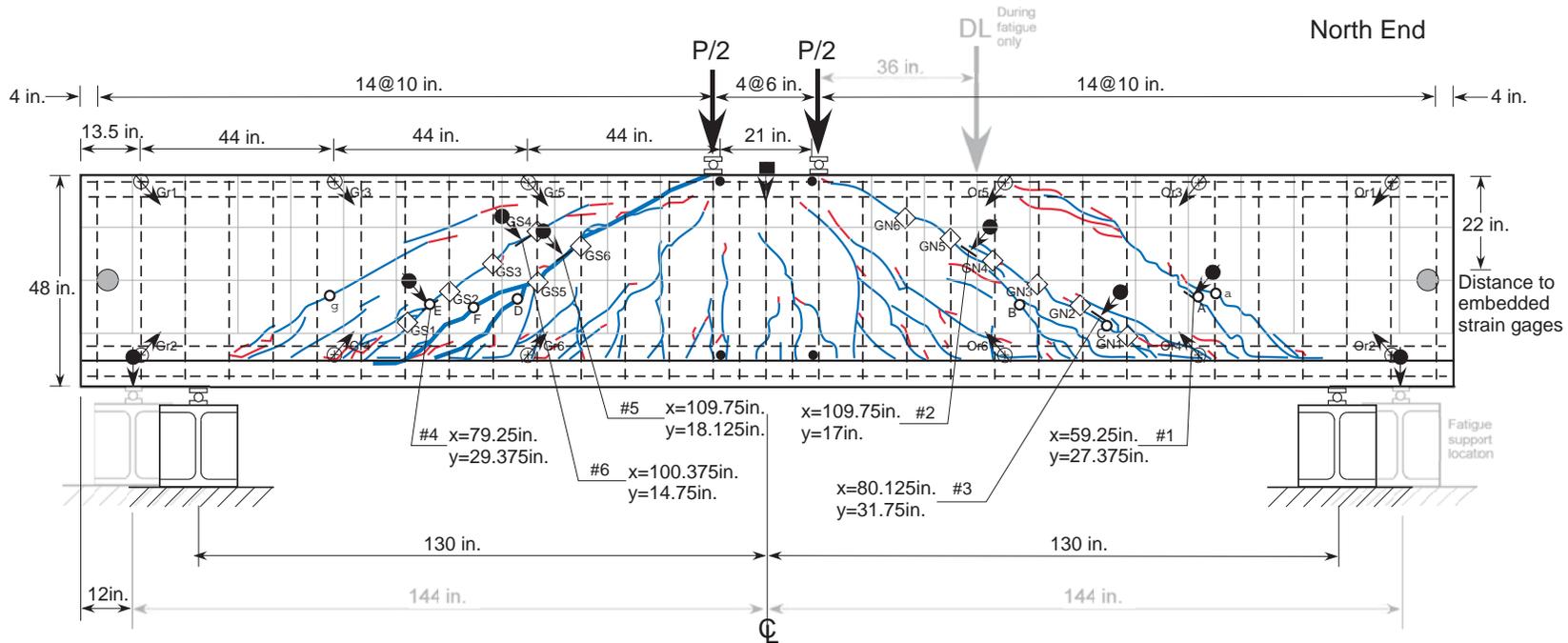
Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Failure mode: flexural-compression
Peak load: 421kips
Widest crack: 0.12in.

GN6, GN7, GS1, GS2, GS6 maximums exceeded during last loadstep; GS8 during 400k loadstep. GN8 did not appear to gather any data.

6T10
T Configuration
East Face of Specimen

Figure A3.23: Instrumentation plan and crack pattern for specimen 6T10.



- Crack comparator measurement location (will not print)
- ⊕ 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- ◇ Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

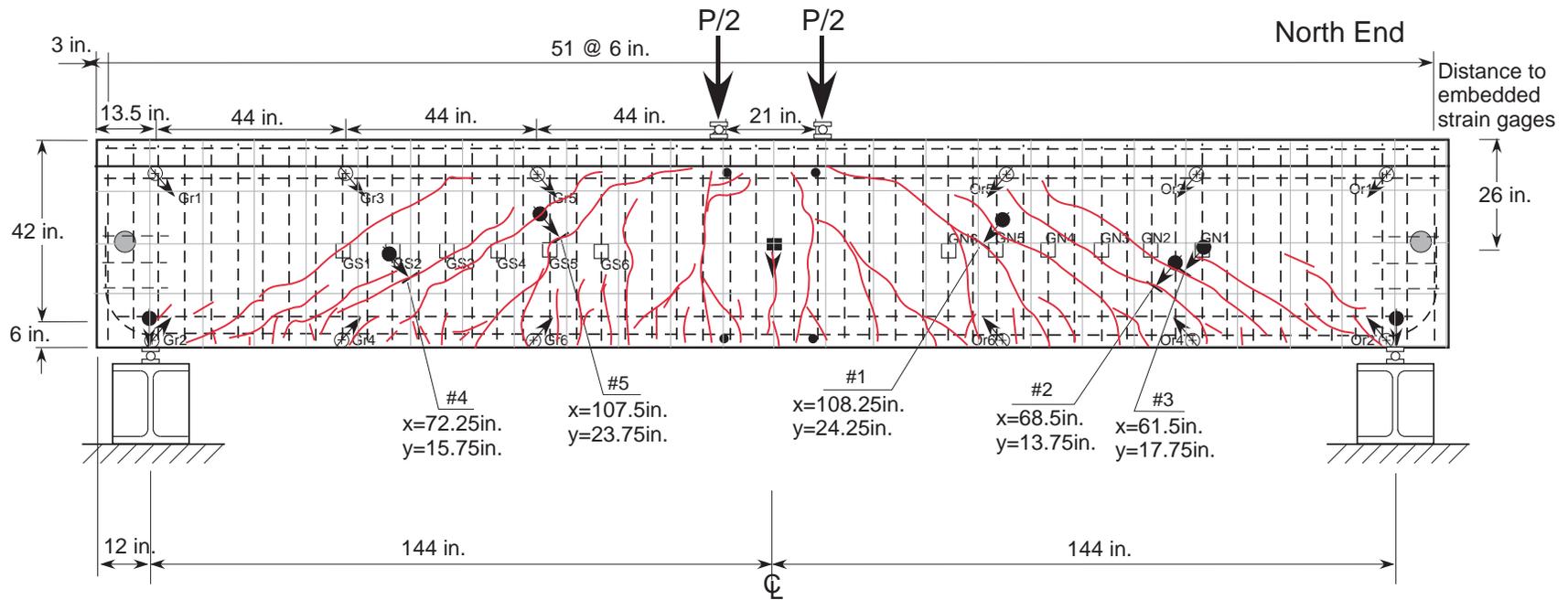
Failure mode: Shear Compression
Peak load: 468kips
Widest crack: 0.131in.

Changes made to crack gages after precrack:
--#1 removed
--#2 moved from x=98.875", y=26.75"
--#3 replaced
--#6 added

GN4 and GN6 maximums exceeded during 400k loadstep; GS1, GS2, GS3, GS5, GS6 during 450k loadstep; GN2, GN5, GS4 during last loadstep.

6IT10
Inverted-T Configuration
East Face of Specimen

Figure A3.24: Instrumentation plan and crack pattern for specimen 6IT10.



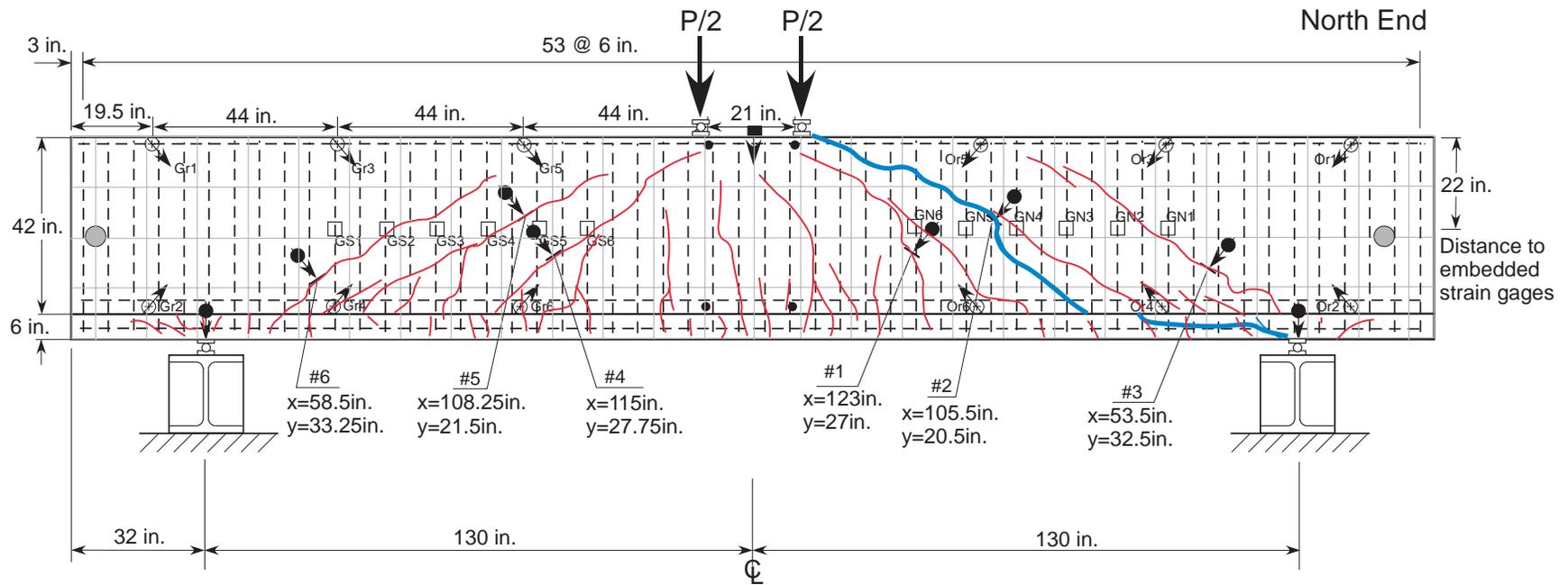
-  4 in. disp. sensor
-  0.5 in. disp. sensor
-  Strain gage (embedded)
-  Added strain gage
-  5 in. string pot (on both sides of beam)
-  Tilt sensor

Failure mode: Flexural
 Peak load: 427 kips
 Widest crack: 0.08 in.

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

7T6
 T Configuration
 East Face of Specimen

Figure A3.25: Instrumentation plan and crack pattern for specimen 7T6.



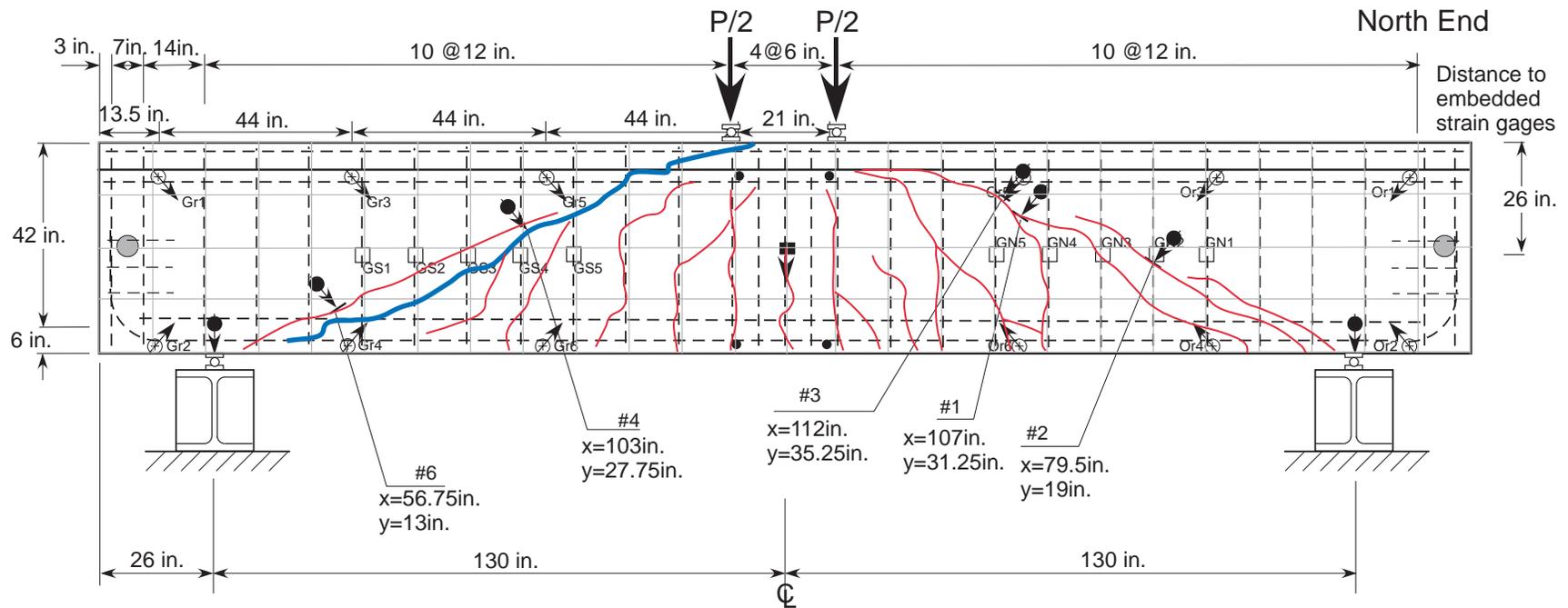
-  4 in. disp. sensor
-  0.5 in. disp. sensor
-  Strain gage (embedded)
-  Added strain gage
-  5 in. string pot (on both sides of beam)
-  Tilt sensor

Failure mode: Shear
 Peak load: 406 kips
 Widest crack: 0.20 in.

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

7IT6
 Inverted-T Configuration
 East Face of Specimen

Figure A3.26: Instrumentation plan and crack pattern for specimen 7IT6.



⊗ 4 in. disp. sensor

◇ Added strain gage

Failure mode: Shear

● 0.5 in. disp. sensor

⬇ 5 in. string pot (on both sides of beam)

Peak load: 423 kips

Widest crack: 0.216 in.

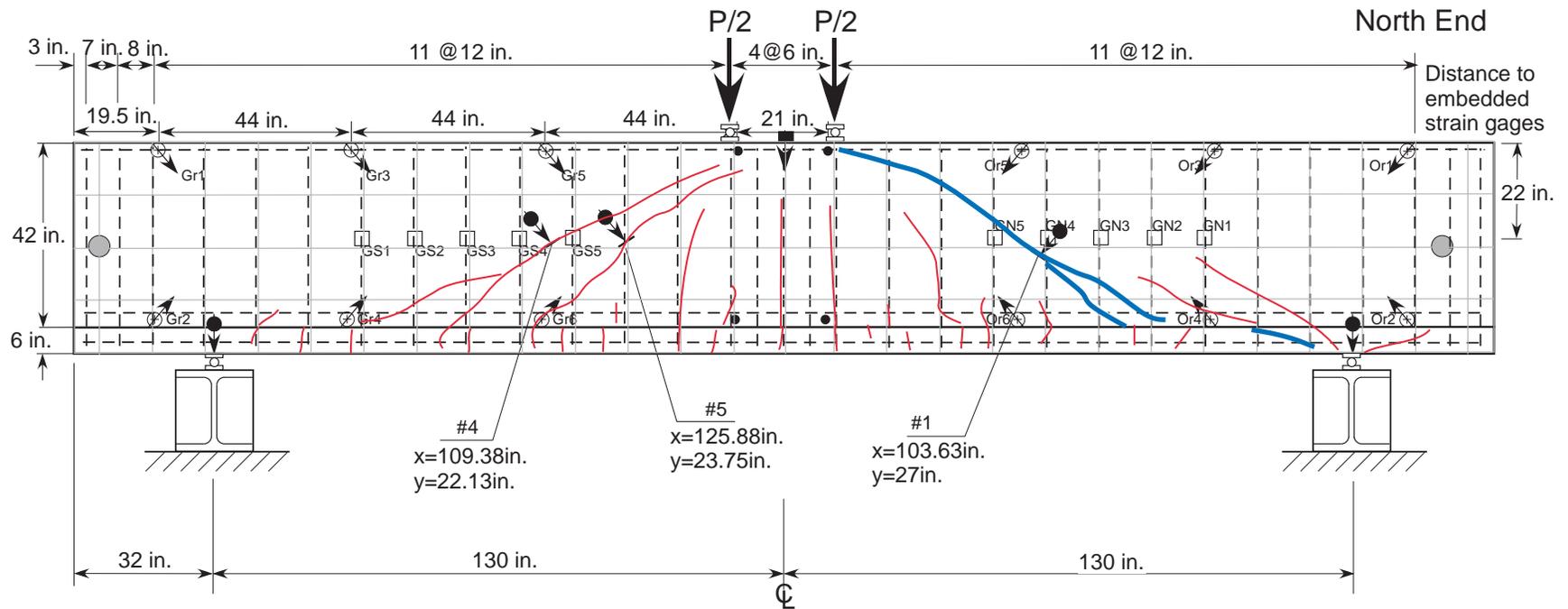
□ Strain gage (embedded)

● Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

7T12
T Configuration
East Face of Specimen

Figure A3.27: Instrumentation plan and crack pattern for specimen 7T12.



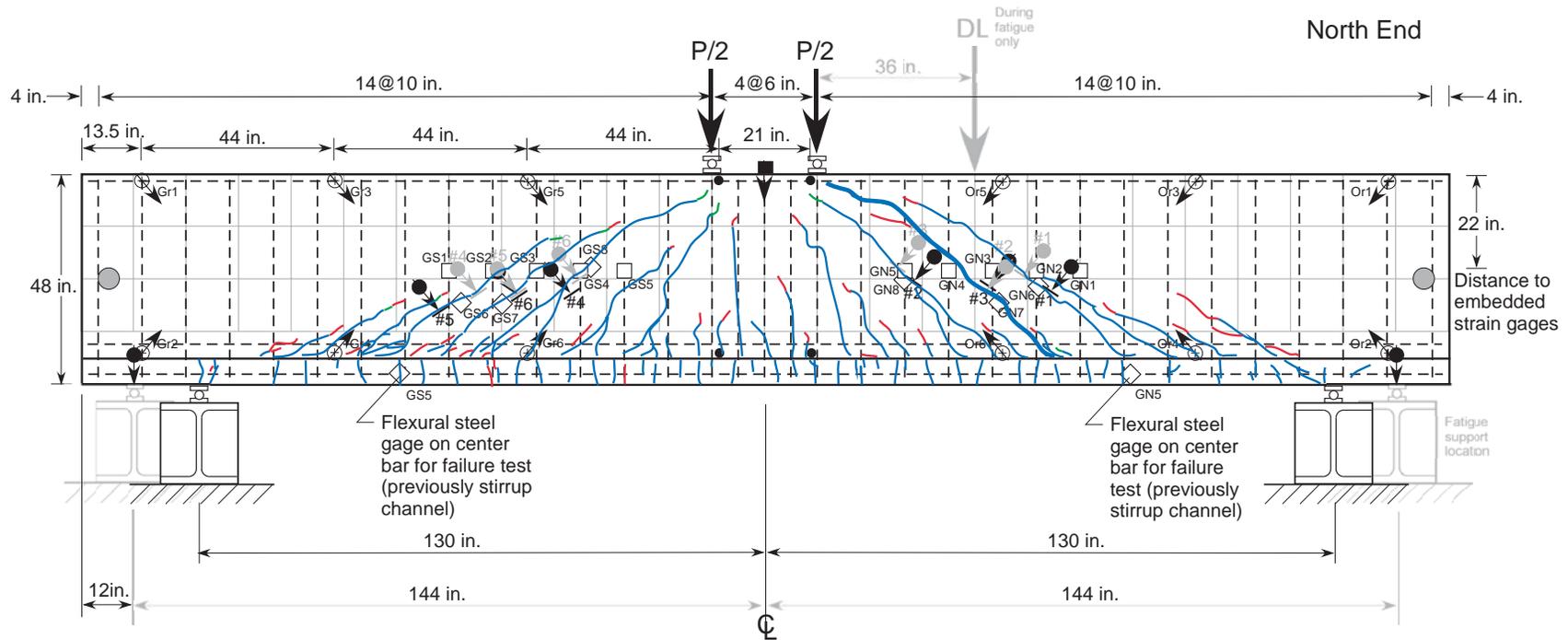
- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Failure mode: Shear
 Peak load: 400 kips
 Widest crack: 0.132 in.

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

7IT12
 Inverted-T Configuration
 East Face of Specimen

Figure A3.28: Instrumentation plan and crack pattern for specimen 7IT12.



- 4 in. disp. sensor
- 0.5 in. disp. sensor West face, precrack and post-fatigue
- 0.5 in. disp. sensor East face, fatigue
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Note: The two exterior longitudinal bars terminate 7" from centerline.

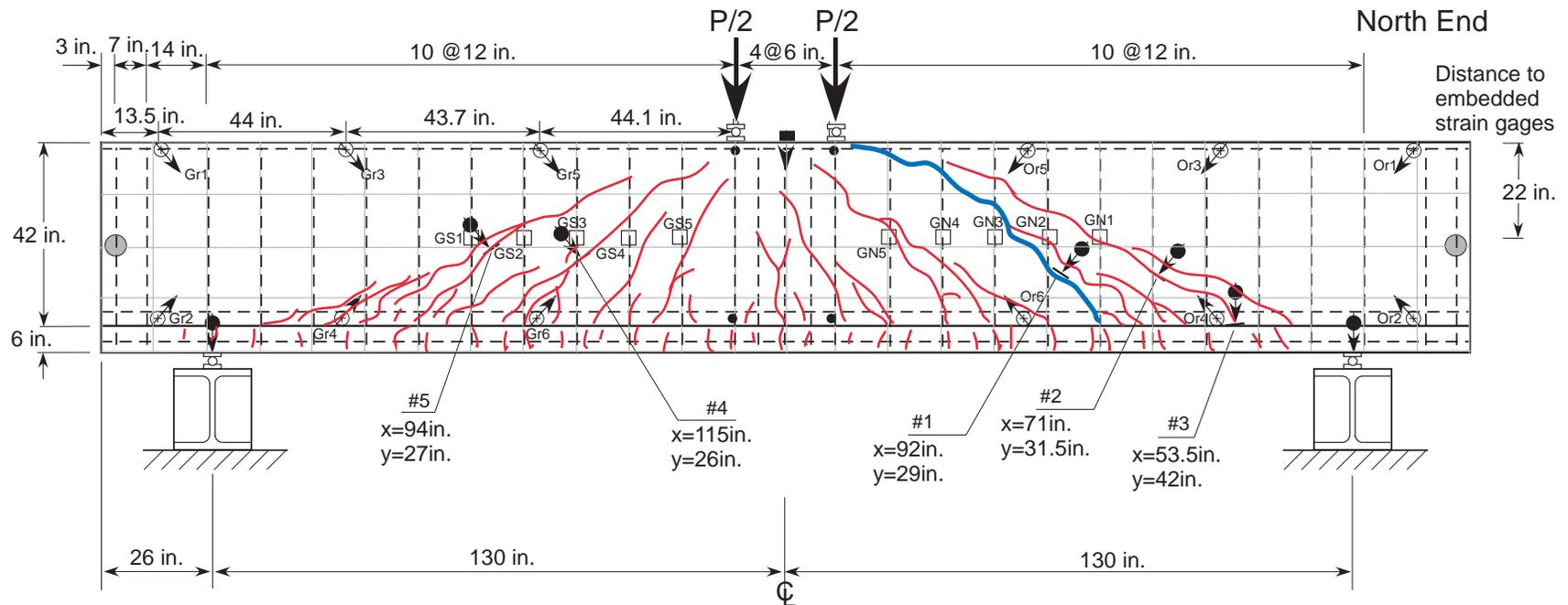
Failure mode: Shear Compression
Peak load: 437k
Widest crack: 0.09in.

External strain gages on east face, crack motion sensors used during fatigue on east face.

Precrack: GN5 broke on the 300k loadstep.
GS3 maximum exceeded on the 300k loadstep, GS2 on the 350k loadstep
Post-fatigue: GN2 broke on the 400k loadstep and GN8 did not appear to gather any data. GN6 maximum exceeded on the 350k loadstep, GN7 and GS6 on the 400k loadstep, GS7 and GS8 on the last loadstep.

8IT10 Inverted-T Configuration East Face of Specimen

Figure A3.29: Instrumentation plan and crack pattern for specimen 8IT10.



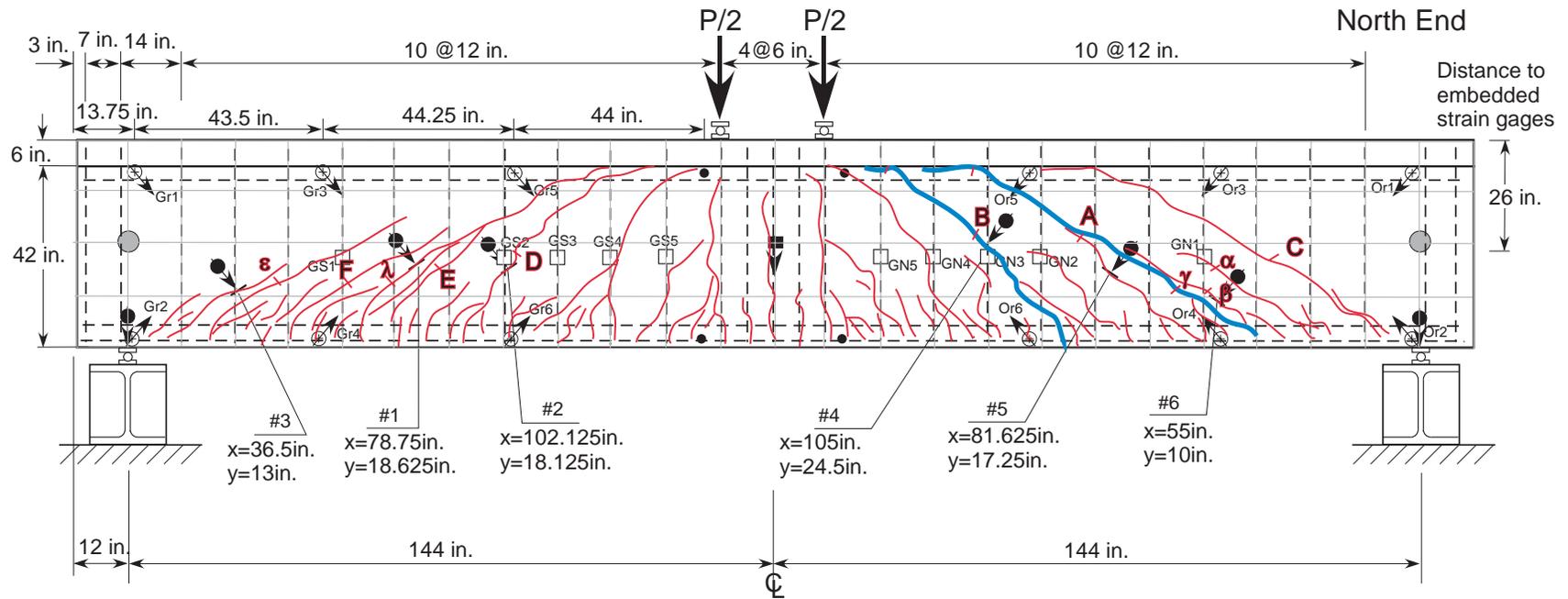
- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Failure mode: Shear
 Peak load: 365 kips
 Widest crack: 0.113 in.

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

8IT12
 Inverted-T Configuration
 East Face of Specimen

Figure A3.30: Instrumentation plan and crack pattern for specimen 8IT12.



⊕ 4 in. disp. sensor

◇ Added strain gage

Failure mode: Shear

● 0.5 in. disp. sensor

⬇ 5 in. string pot (on both sides of beam)

Peak load: 361 kips

Widest crack: 0.08 in.

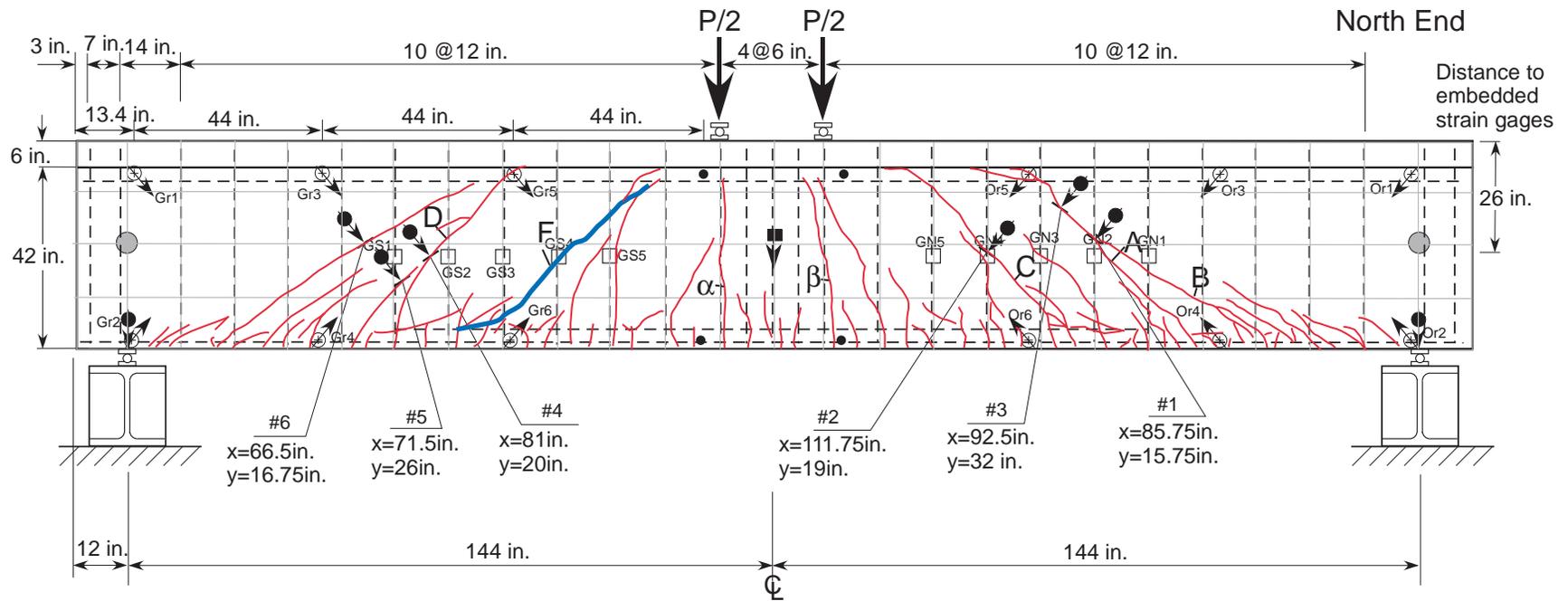
□ Strain gage (embedded)

● Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
 0.5 in. disp. sensors located from nearest corner of stem.

8T12-B3 (No hooks)
 T Configuration
 East Face of Specimen

Figure A3.31: Instrumentation plan and crack pattern for specimen 8T12-B3.



⊗ 4 in. disp. sensor

◇ Added strain gage

Failure mode: Shear

● 0.5 in. disp. sensor

⬇ 5 in. string pot (on both sides of beam)

Peak load: 312 kips

□ Strain gage (embedded)

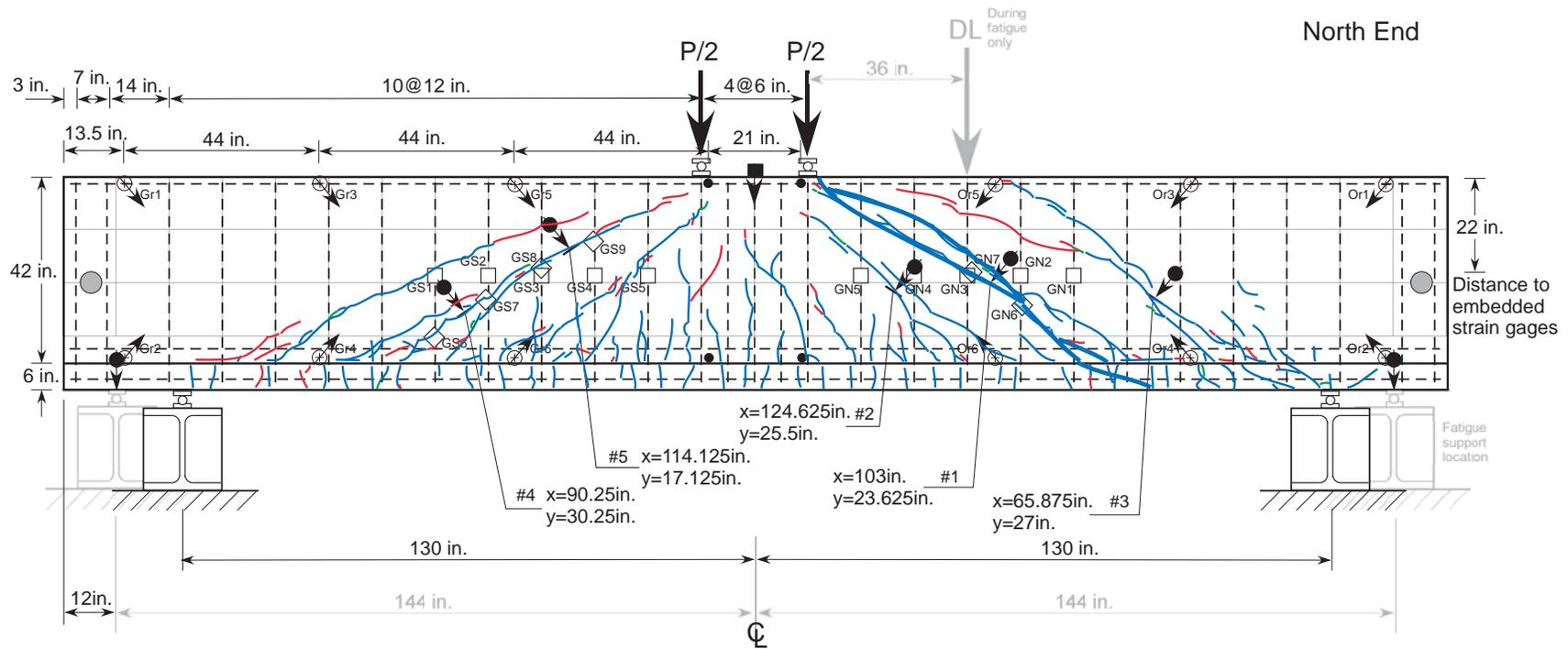
● Tilt sensor

Widest crack: 0.17 in.

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

8T12-B4
T Configuration
East Face of Specimen

Figure A3.32: Instrumentation plan and crack pattern for specimen 8T12-B4.



- 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Note: The two exterior longitudinal bars terminate 7 from centerline.

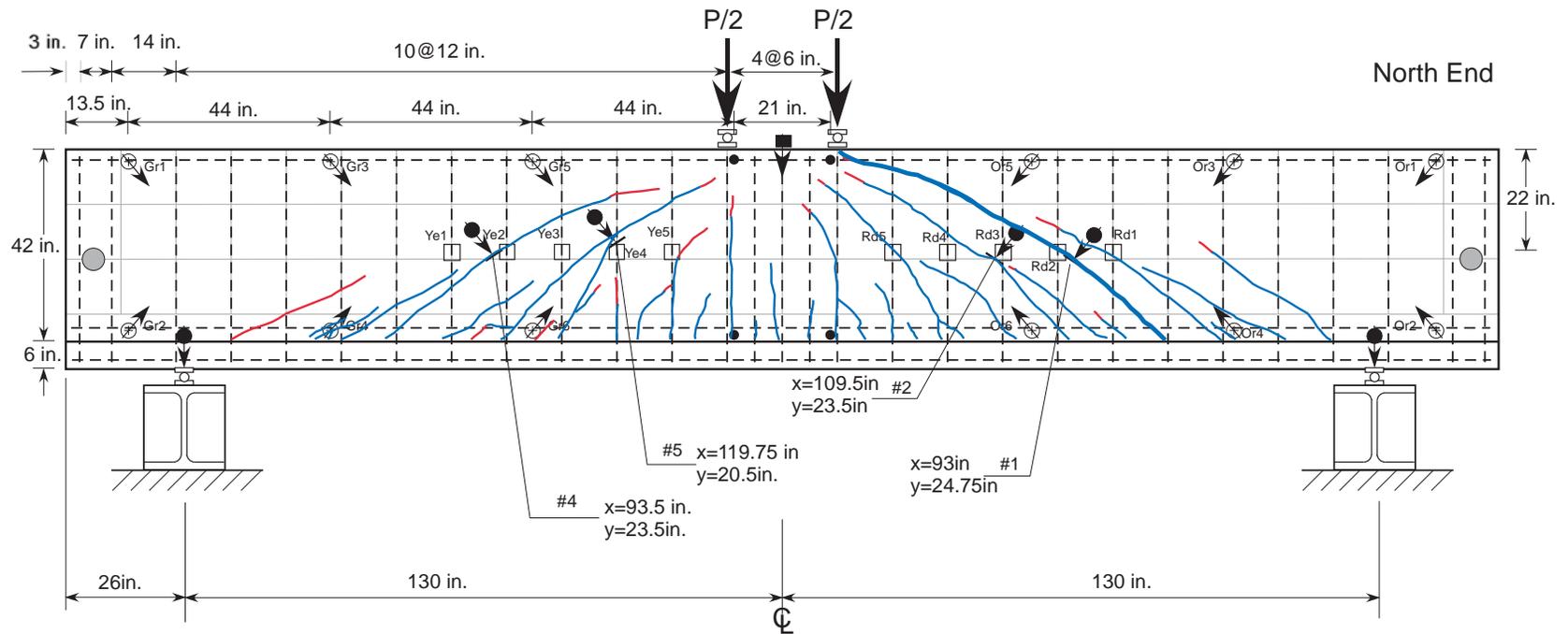
Failure mode: Shear Compression
Peak load: 426k
Widest crack: 0.147in.

#2 and #3 added during post-fatigue.

Pre-crack: GS3 broke during 350k loadstep
Post-fatigue: GN6, GS1, GS7, GS8 maximum exceeded during 350k loadstep; GN7 during 400k loadstep. GS3 and GS9 broken, GS6 broke during 300k loadstep

9IT12-B1
Inverted-T Configuration
East Face of Specimen

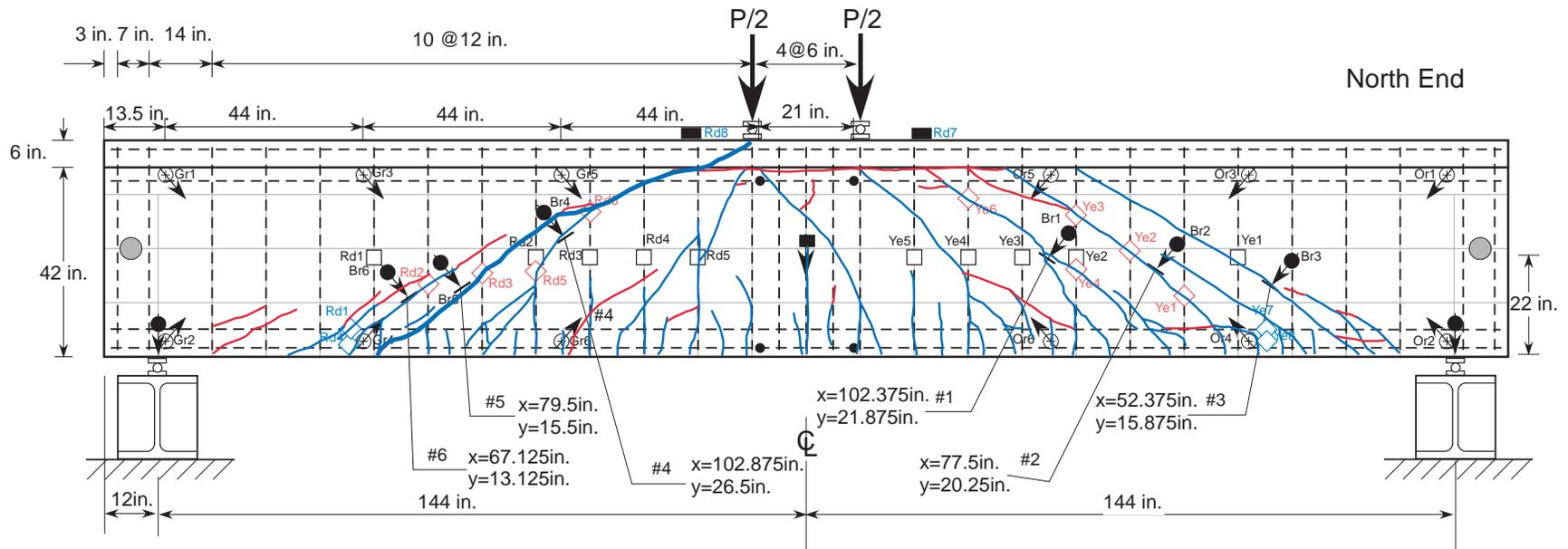
Figure A3.33: Instrumentation plan and crack pattern for specimen 9IT12-B1.



Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

9IT12-B2
Low Cycle Fatigue
Inverted-T Configuration
East Face of Specimen

Figure A3.34: Instrumentation plan and crack pattern for specimen 9IT12-B2.



- 4 in. Clip Gage
- ⊗ 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- ◇ Added strain gage
- ⬇ 5 in. string pot (on both sides of beam)
- Tilt sensor

Red Text: changed for Part 1 Blue Text: changed for Part 2

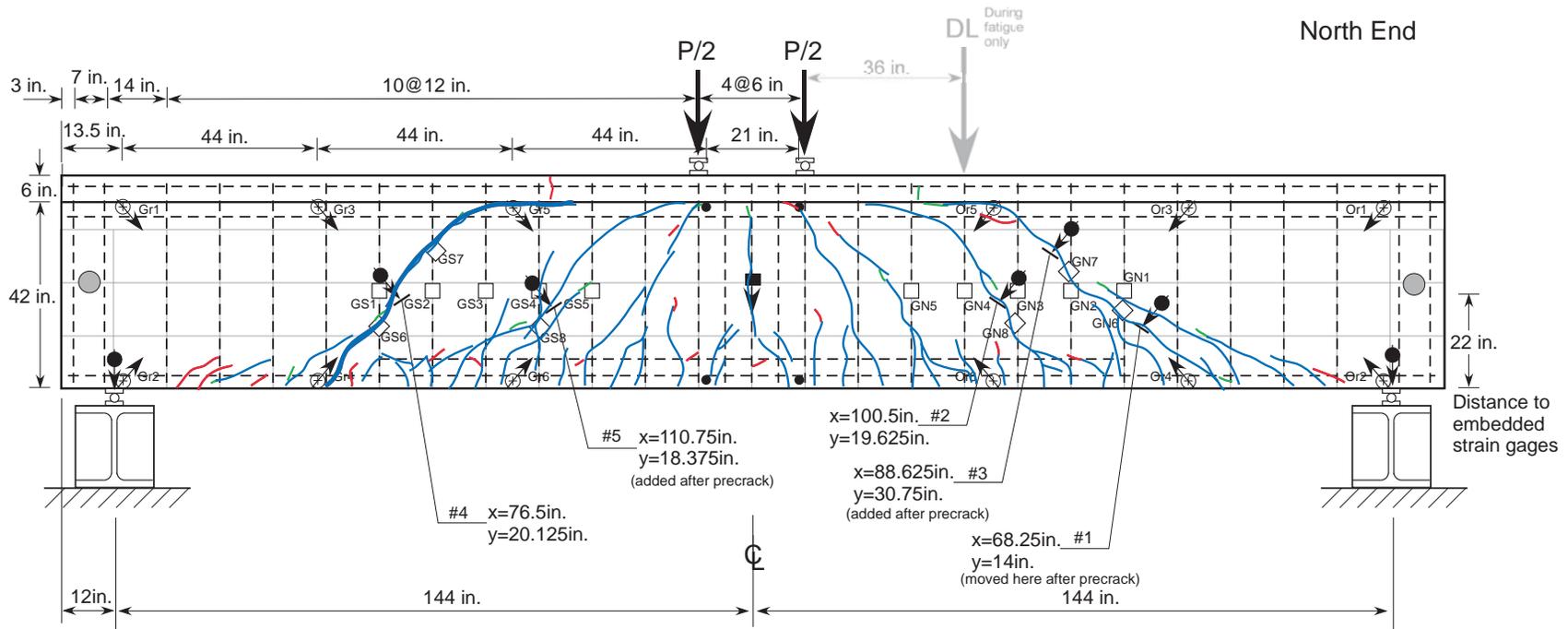
Note: All equipment is on west side of beam unless otherwise noted
External strain gages located on east side of beam

0.5 in. disp. sensors located from nearest corner of stem.

9T12-B3
Low Cycle Fatigue; Cut Bar
T Configuration
East Face of Specimen

Failure mode: shear-compression
Peak load: 334 kips
Widest crack: 0.138in.
Total Cycles to Failure: 12968

Figure A3.35: Instrumentation plan and crack pattern for specimen 9T12-B3.



- ⊕ 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- ◇ Added strain gage
- 5 in. string pot (on both sides of beam)
- Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

Note: The two upper longitudinal bars terminate 7 from centerline, the three lower longitudinal bars are straight.

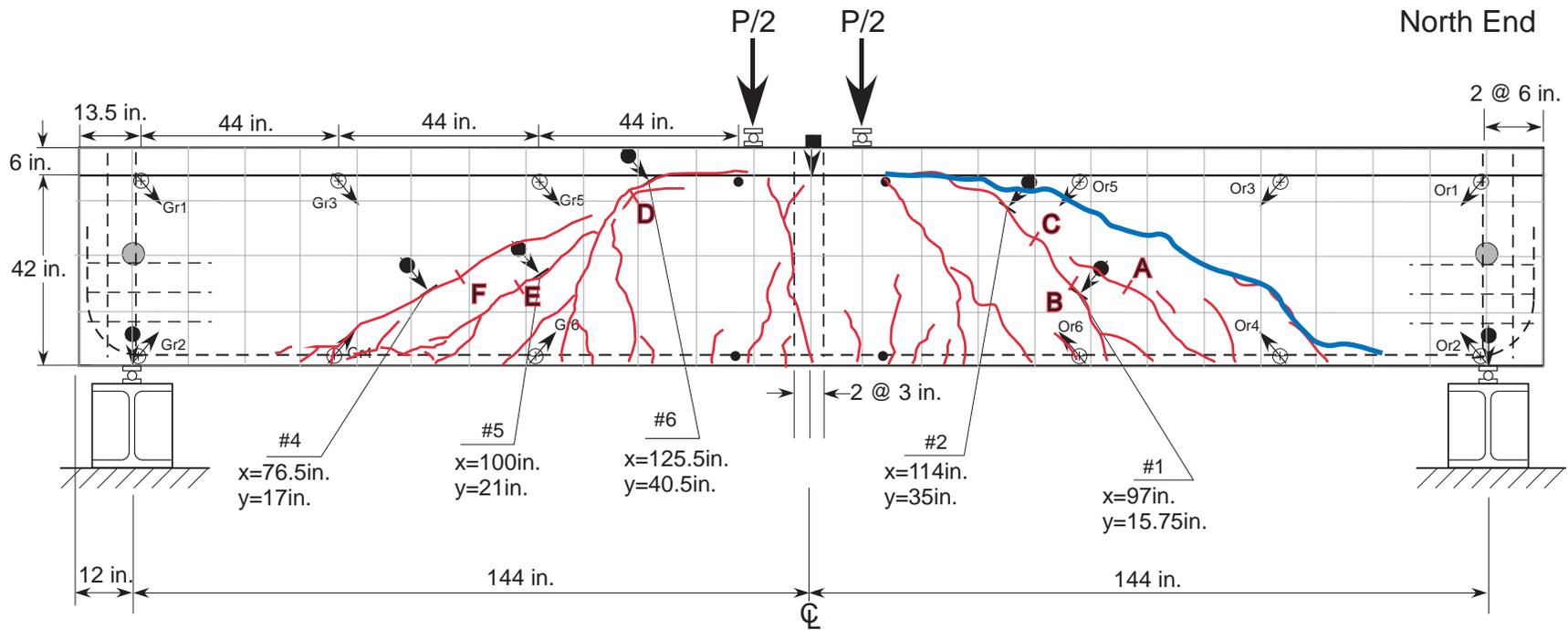
Failure mode: shear-compression
Peak load: 297 kips
Widest crack: 0.167in.

Changes made to crack gages after precrack:
--#1 moved
--#3 and #5 added

Precrack: GN2 broke on the 250k loadstep.
Post-fatigue: GN1, GN2, GN3, GS1 broken. GN7 broke during 300k loadstep, GS6 and GS7 during 250k loadstep.

9T12-B4
T Configuration
East Face of Specimen

Figure A3.36: Instrumentation plan and crack pattern for specimen 9T12-B4.



⊕ 4 in. disp. sensor

◇ Added strain gage

Failure mode: Shear

● 0.5 in. disp. sensor

⬇ 5 in. string pot (on both sides of beam)

Peak load: 101 kips

Widest crack: 0.08 in.

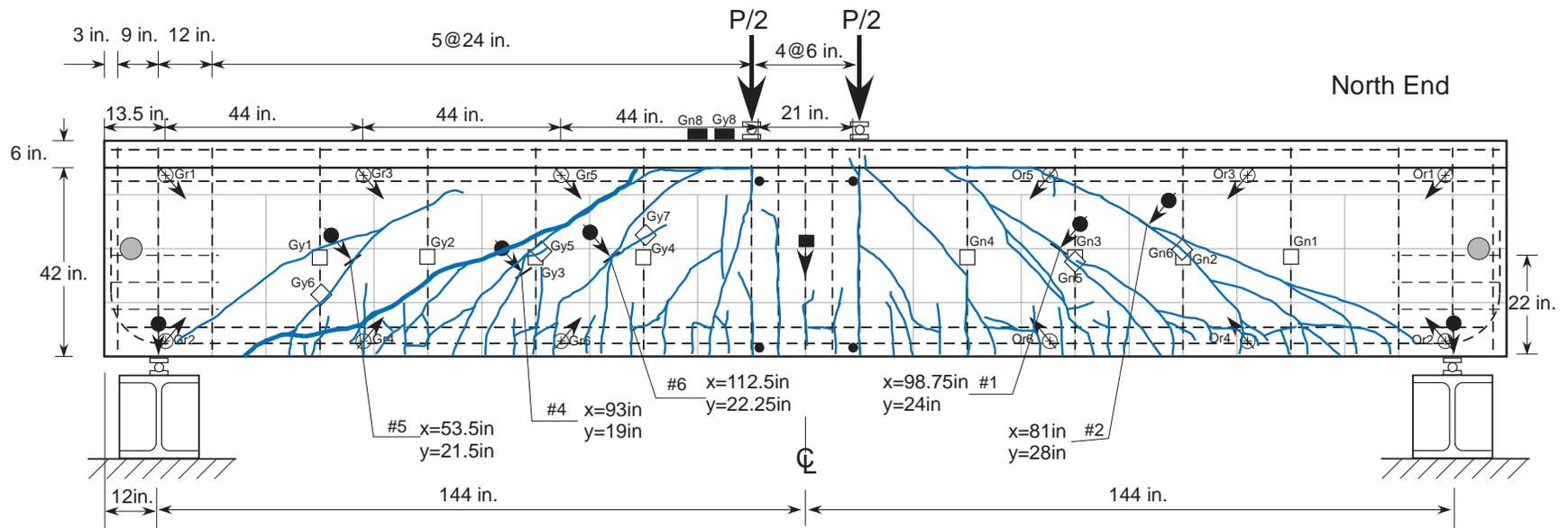
□ Strain gage (embedded)

● Tilt sensor

Note: All equipment is on west side of beam unless otherwise noted.
0.5 in. disp. sensors located from nearest corner of stem.

10T0
T Configuration
East Face of Specimen

Figure A3.37: Instrumentation plan and crack pattern for specimen 10T0.



- 4 in. Clip Gage
- ⊗ 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- ◇ Added strain gage
- ⬇ 5 in. string pot (on both sides of beam)
- Tilt sensor

Failure mode: shear-compression

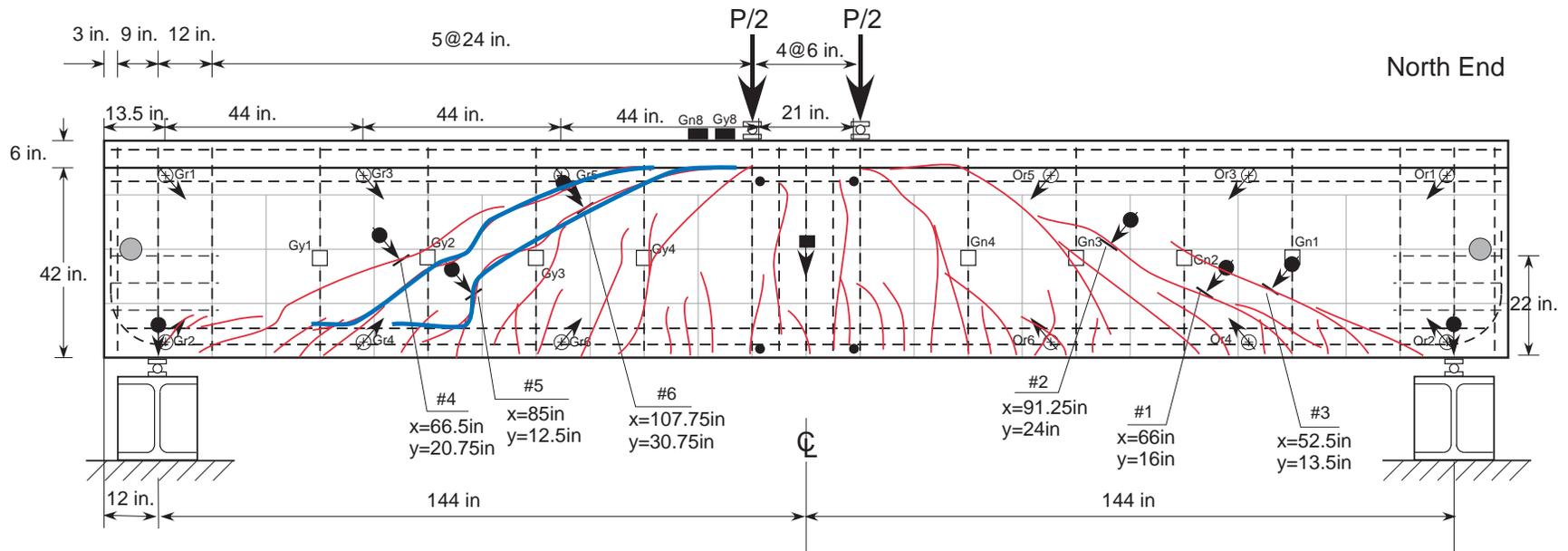
Peak load: 207 kips
 Widest crack: 0.284 in.
 Total Cycles to Failure: 14057

Note: All equipment is on west side of beam unless otherwise noted
 External strain gages located on east side of beam

0.5 in. disp. sensors located from nearest corner of stem.

10T24-B3
 Low Cycle Fatigue
 T Configuration
 East Face of Specimen

Figure A3.38: Instrumentation plan and crack pattern for specimen 10T24-B3.



- 4 in. Clip Gage
- ⊗ 4 in. disp. sensor
- 0.5 in. disp. sensor
- Strain gage (embedded)
- ◇ Added strain gage
- ⬇ 5 in. string pot (on both sides of beam)
- Tilt sensor

Failure mode: shear-compression
 Peak load: 241 kips
 Widest crack: 0.097in.

Note: All equipment is on west side of beam unless otherwise noted
 External strain gages located on east side of beam

0.5 in. disp. sensors located from nearest corner of stem.

10T24-B4
 T Configuration
 East Face of Specimen

Figure A3.39: Instrumentation plan and crack pattern for specimen 10T24-B4.