CES SUSTAINABLE TRANSPORT SERVICES

DOCUMENTUM:

FILE PATH: Transport and Infrastructure/ Transport Planning/TPU General Admin & Offices Procedures/Documentum/Ruth Stephenson/York Central

FILE NAME: Transport Report for Stage 2 Appendix B 2003

YORK CENTRAL

TRANSPORT REPORT FOR STAGE 2 MASTERPLAN

APPENDIX B
SATURN MODELLING
STAGE 1

Prepared for

YORK CENTRAL STEERING GROUP

ALAN BAXTER AND ASSOCIATES

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1218/70/AR/fl

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Revised 10 July 2002

YORK CENTRAL

Outline Scope of Saturn Modelling

Initially using the a.m. peak but then run on the p.m. peak and off-peak models.

Test existing network model – understand existing flows and existing pinch points.

Stage 1

Model the following scenarios on the Saturn Model using existing traffic flows. Refer to sketches (figs. 1 to 9).

1a) Model with road link A examine how existing traffic redistributes itself (fig. 1).

1b) Model with road link A and severing existing route through housing estate at Y - examine how existing traffic re-distributes itself (fig. 2). Link Y effectively becomes a no through road.

1c) Model with road link B – examine how existing traffic re-distributes itself (fig. 3).

1d) Model with road links B and C – examine combined effects on existing traffic (fig. 4).

1e) Model with A, B, C, D and E, sever Leaman Road at F and make route through housing at Y a no through road – examine combined effects on existing traffic (fig. 5).

1f) Model with A, B, C, D, E, sever Leaman Road at F, create no through road at Y and add in link G (fig. 6).

1g) Model with road link G – examine how existing traffic re-distributes itself (fig. 7).

1h) Model with road links B, C, D, F and G – examine combined effects on existing network (fig. 8).

1i) Model with road links B, C, D, E and G and create no through road at Y (fig. 9).

ABA to supply sketch of indicative junction layout where new links interface with existing road network examples of junctions 1 and 3 included.

Stage 2

2) Model the effects of adding extra traffic onto the new network in each of the scenarios a) to i). Quantum of traffic to add in, to be agreed between ABA and CYC. Extra traffic to reflect amount of development likely to have been built at each stage.

Scenarios to reflect the likely growth of the development as roads are added. Scenarios will also need to reflect the range of possible modal splits. Modelling should allow for carrying out tests to establish the sensitivity of the model.

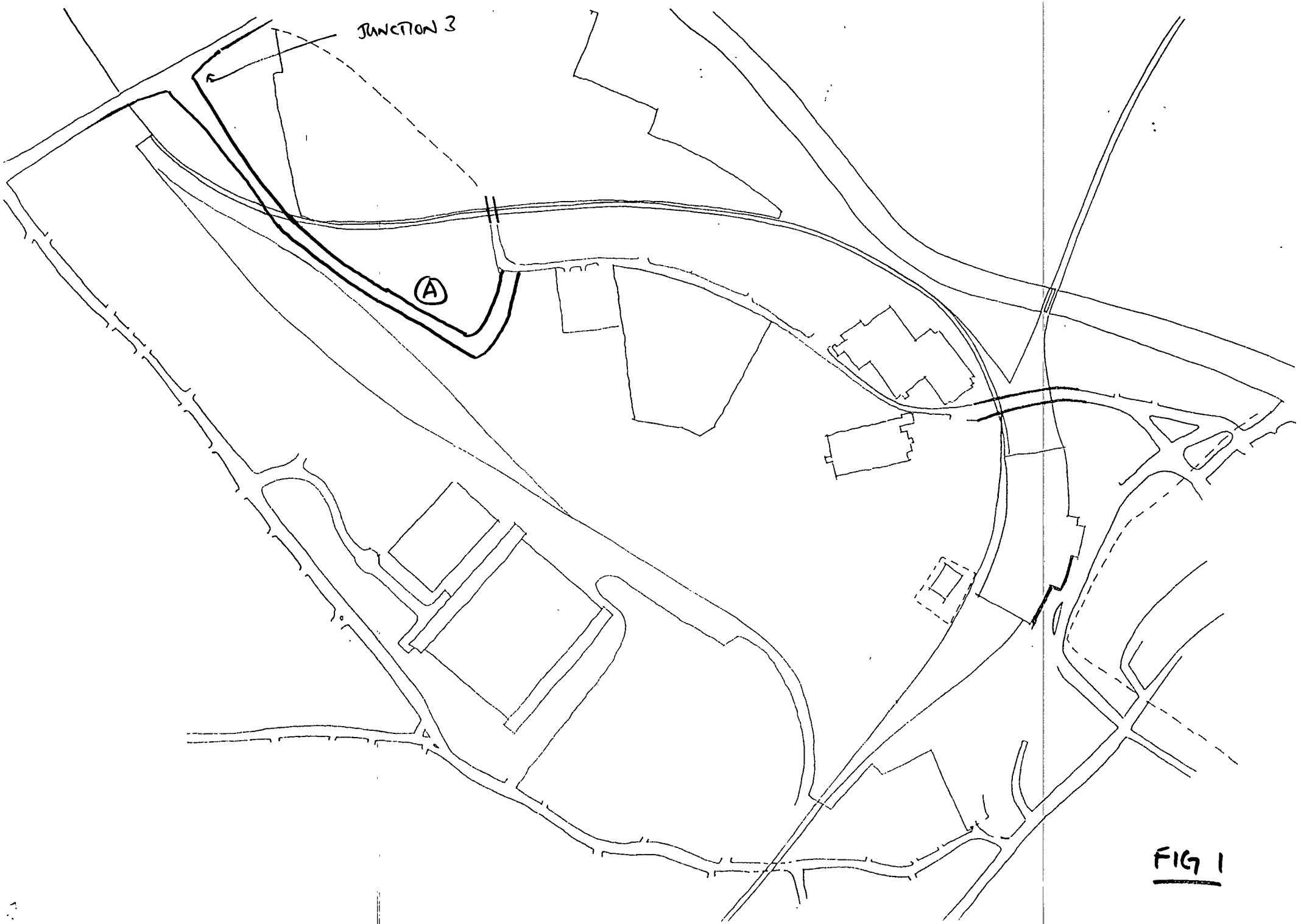


FIG 1

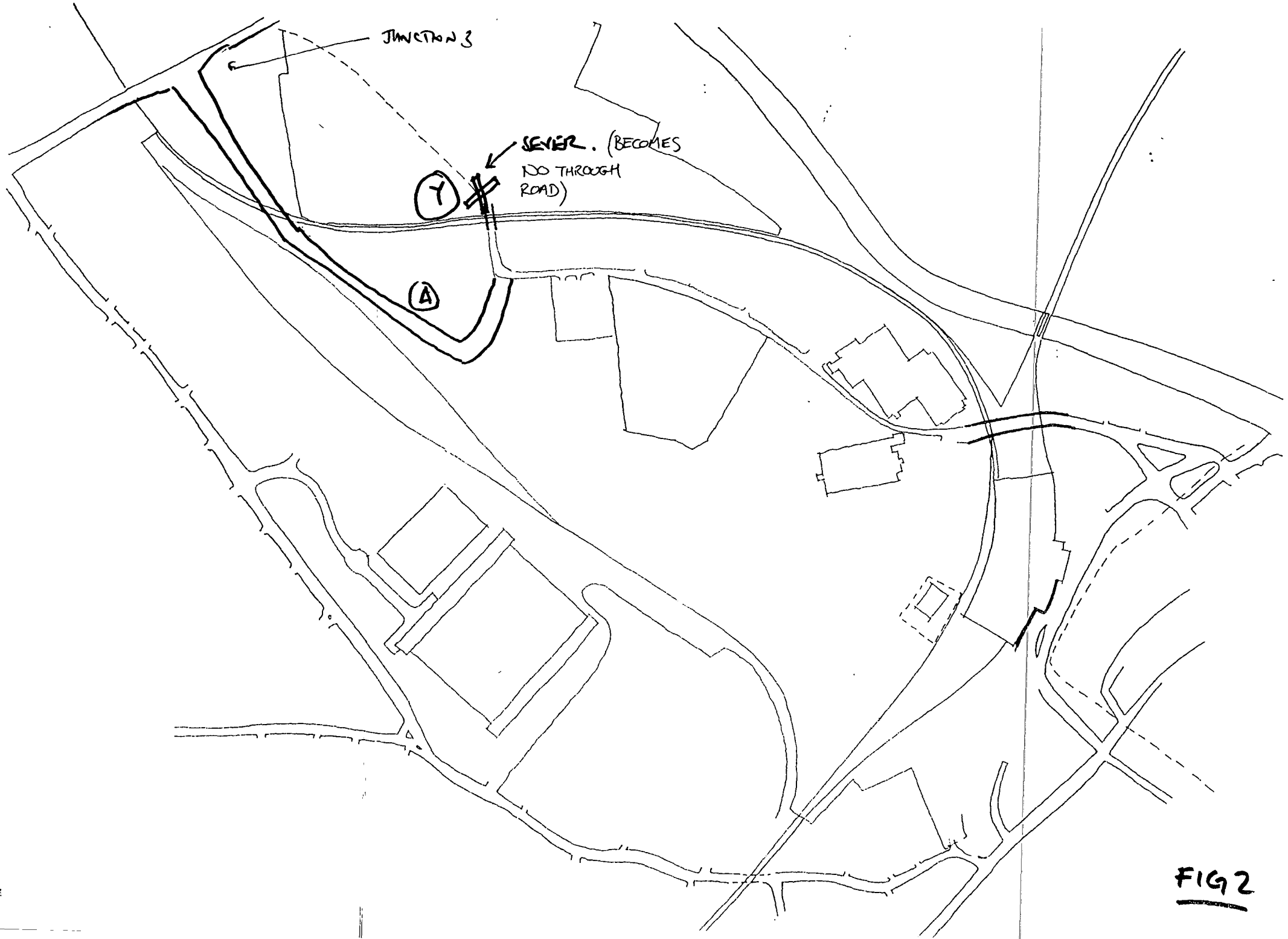


FIG 2

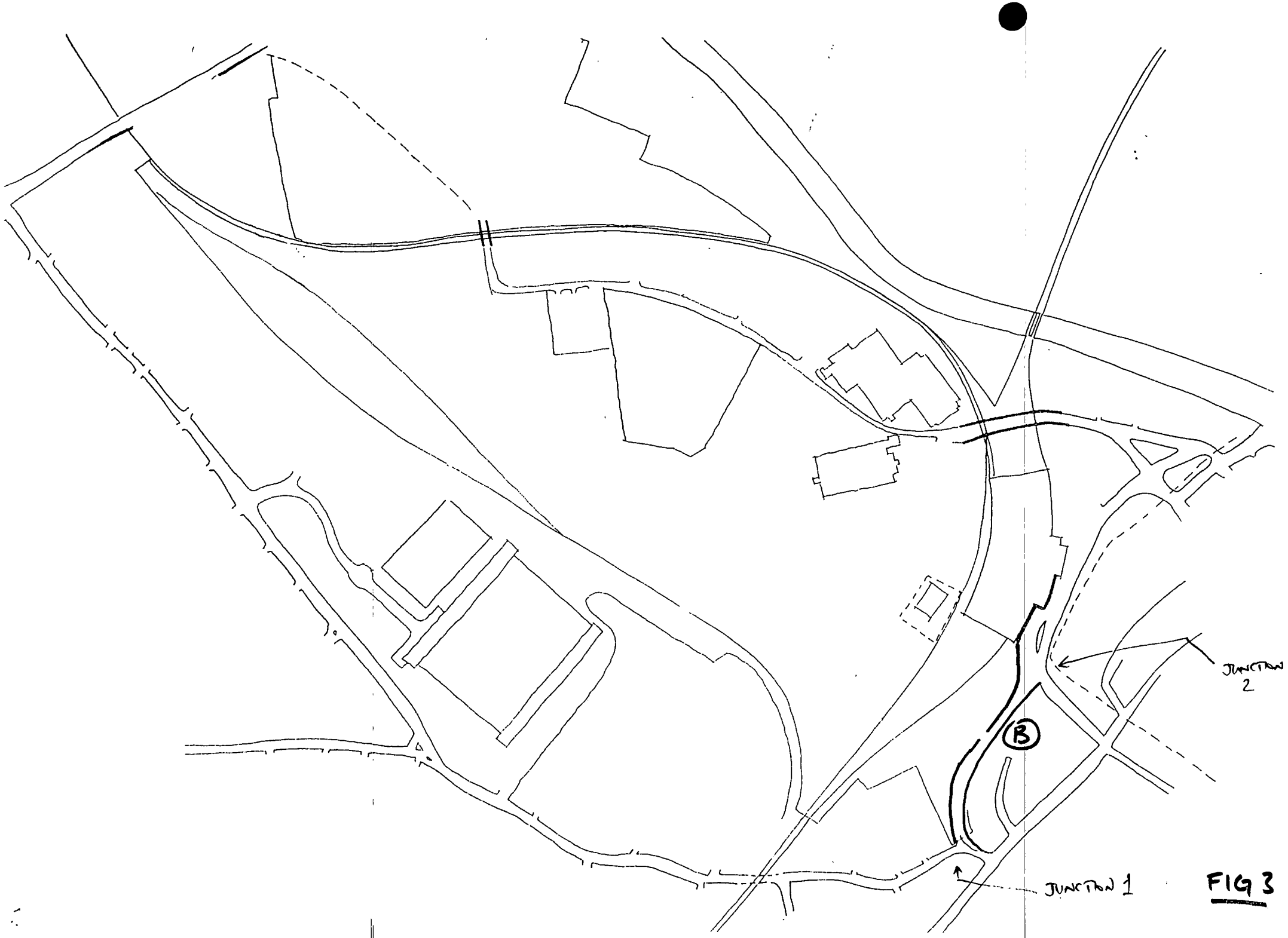


FIG 3

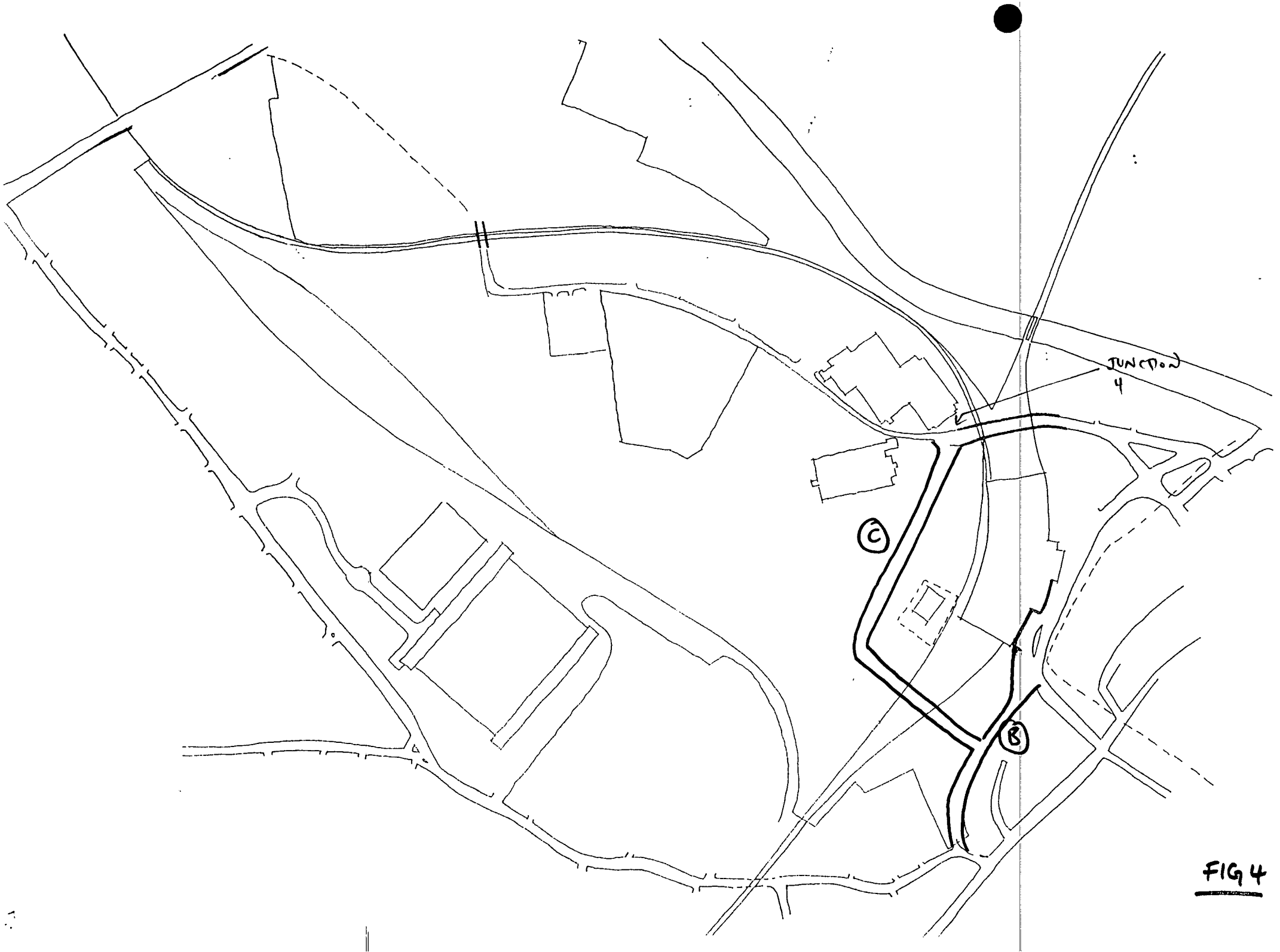


FIG 4

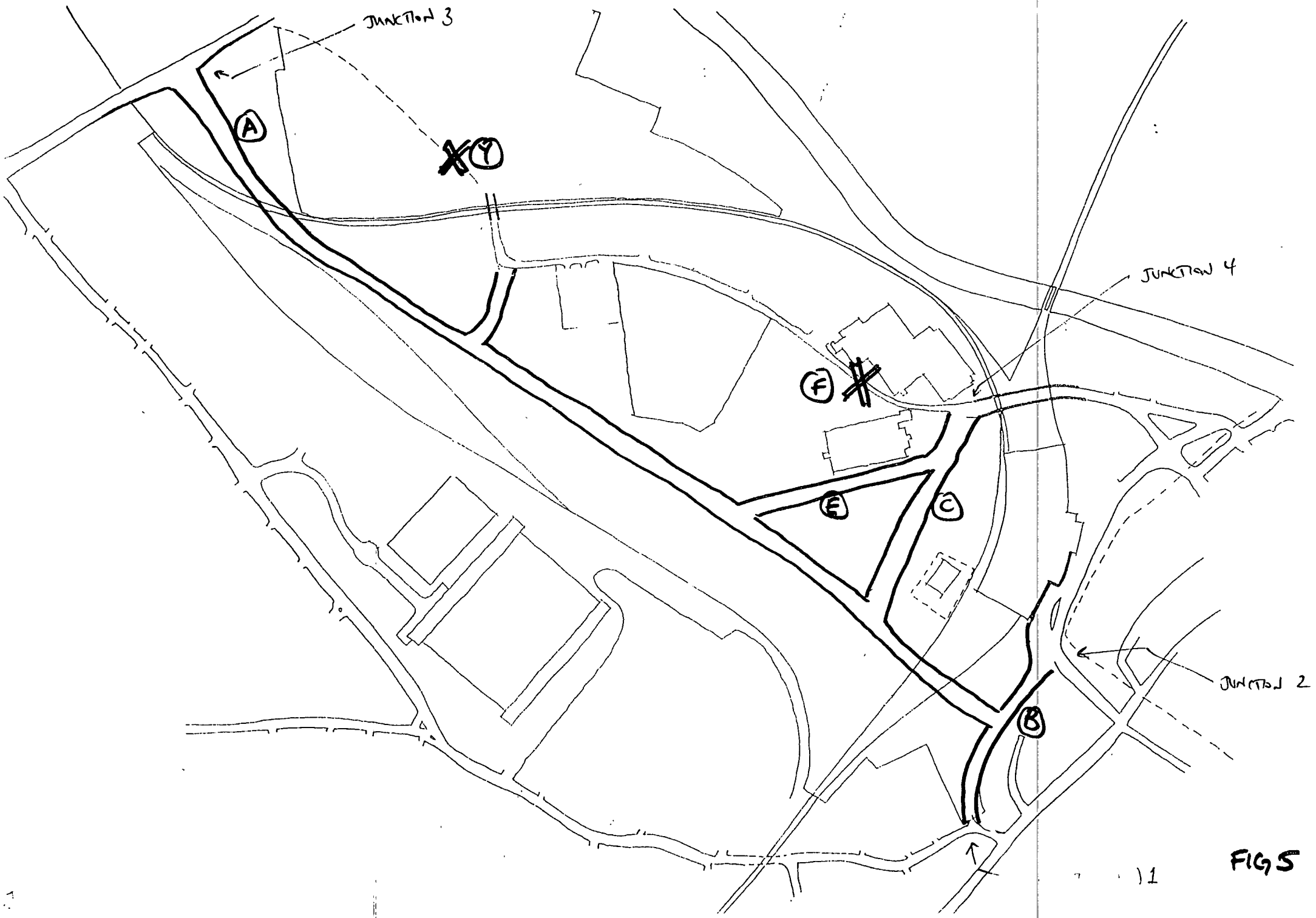


FIG 5

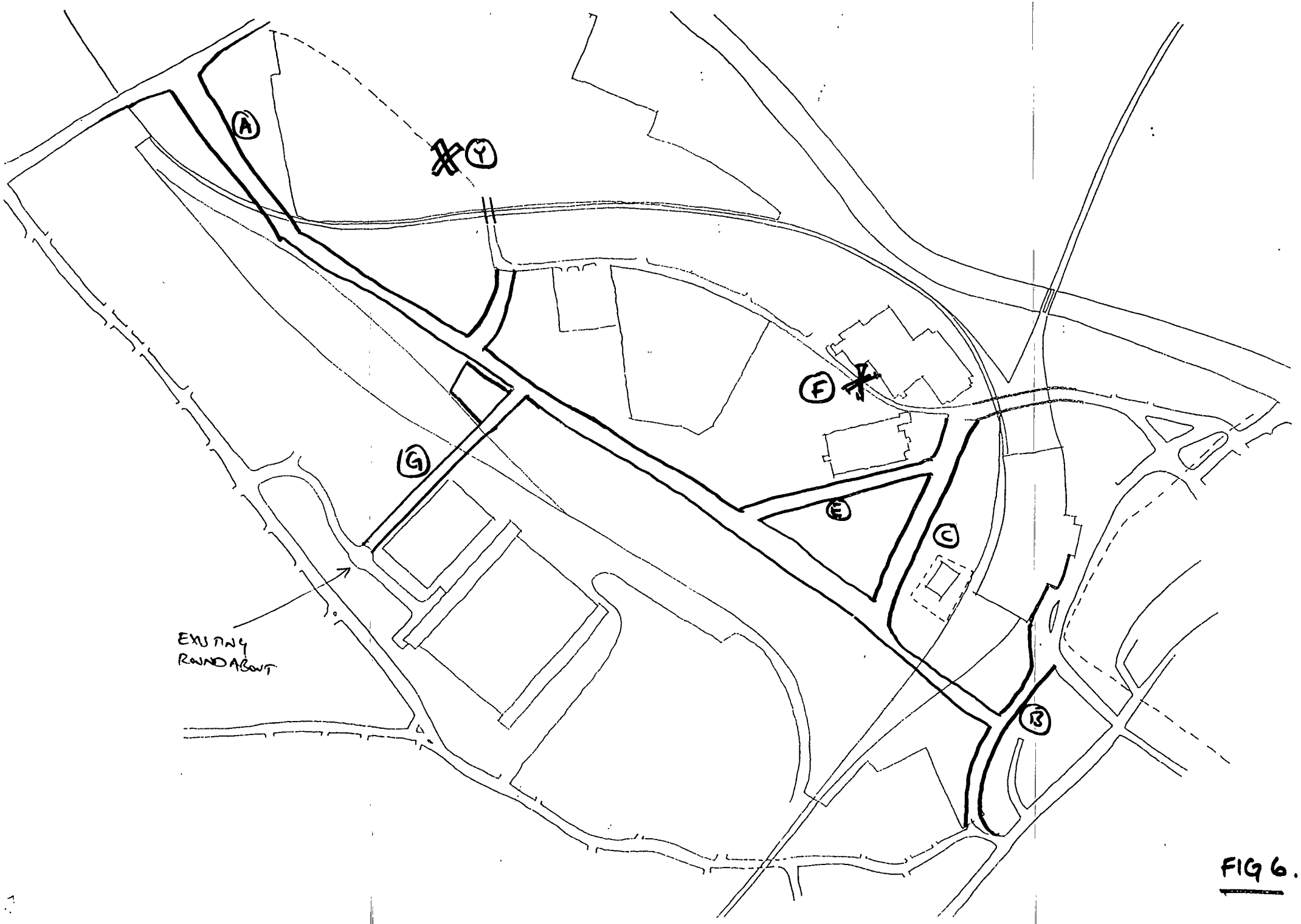


FIG 6.

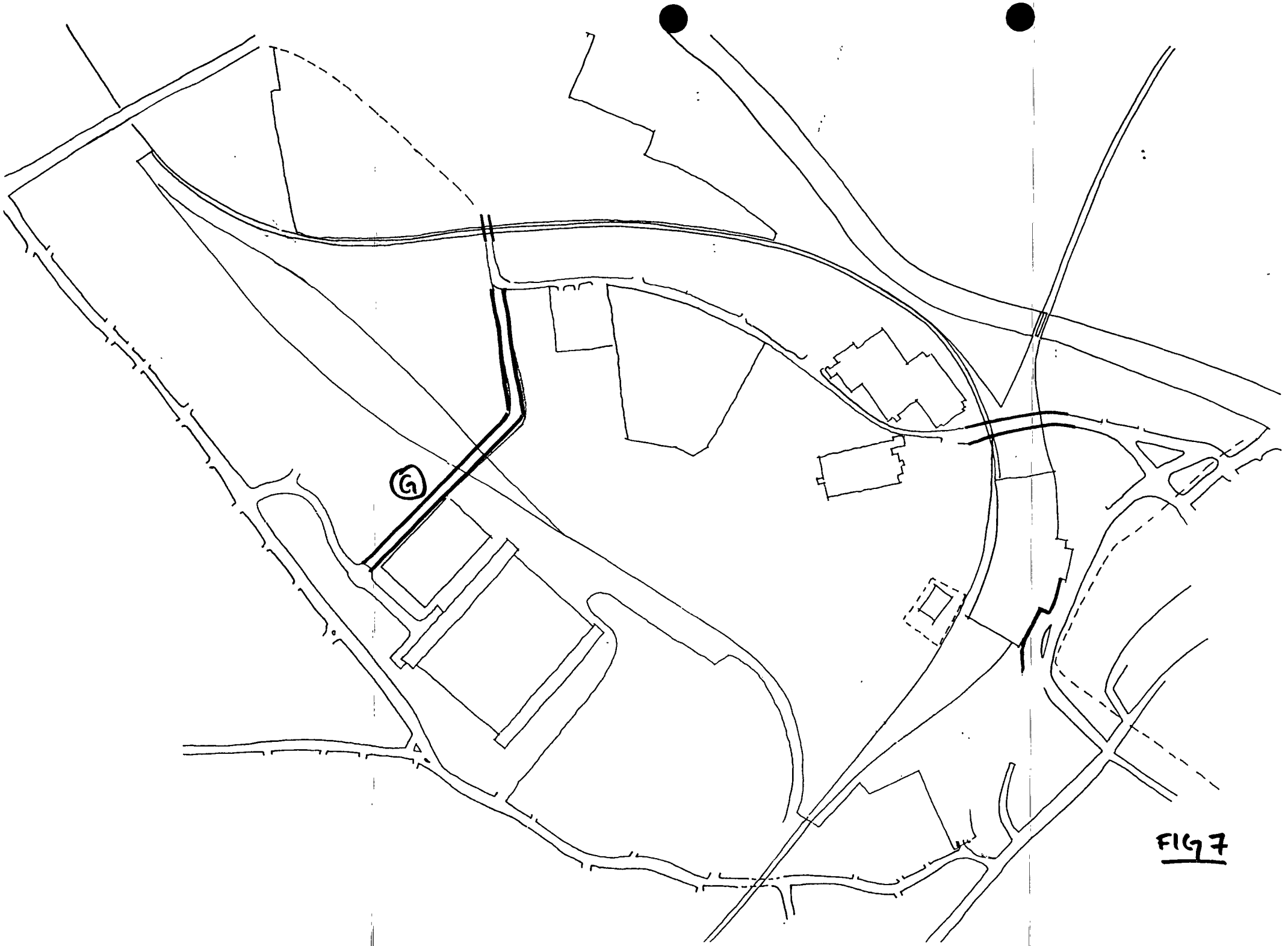


FIG 7

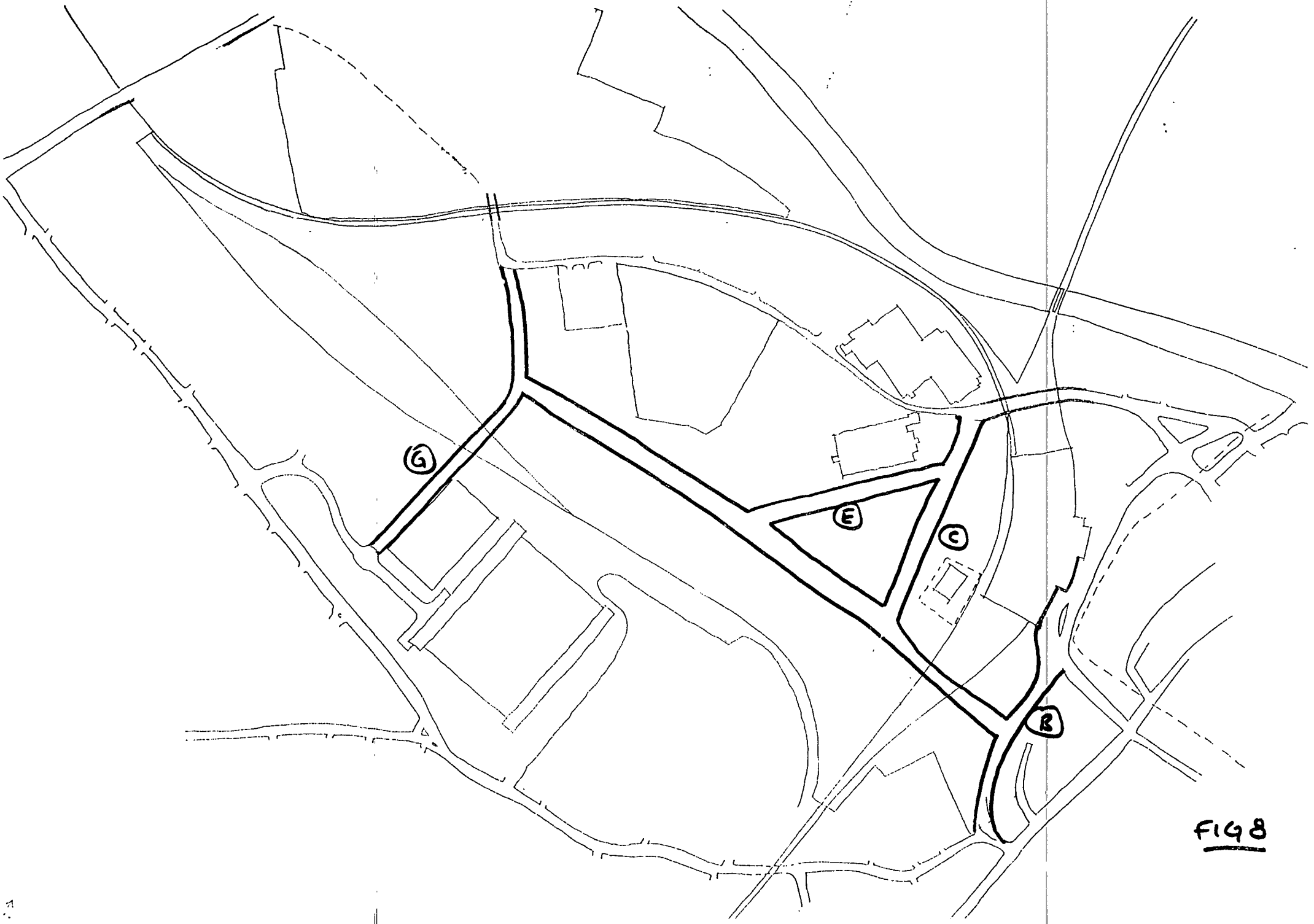


FIG 8

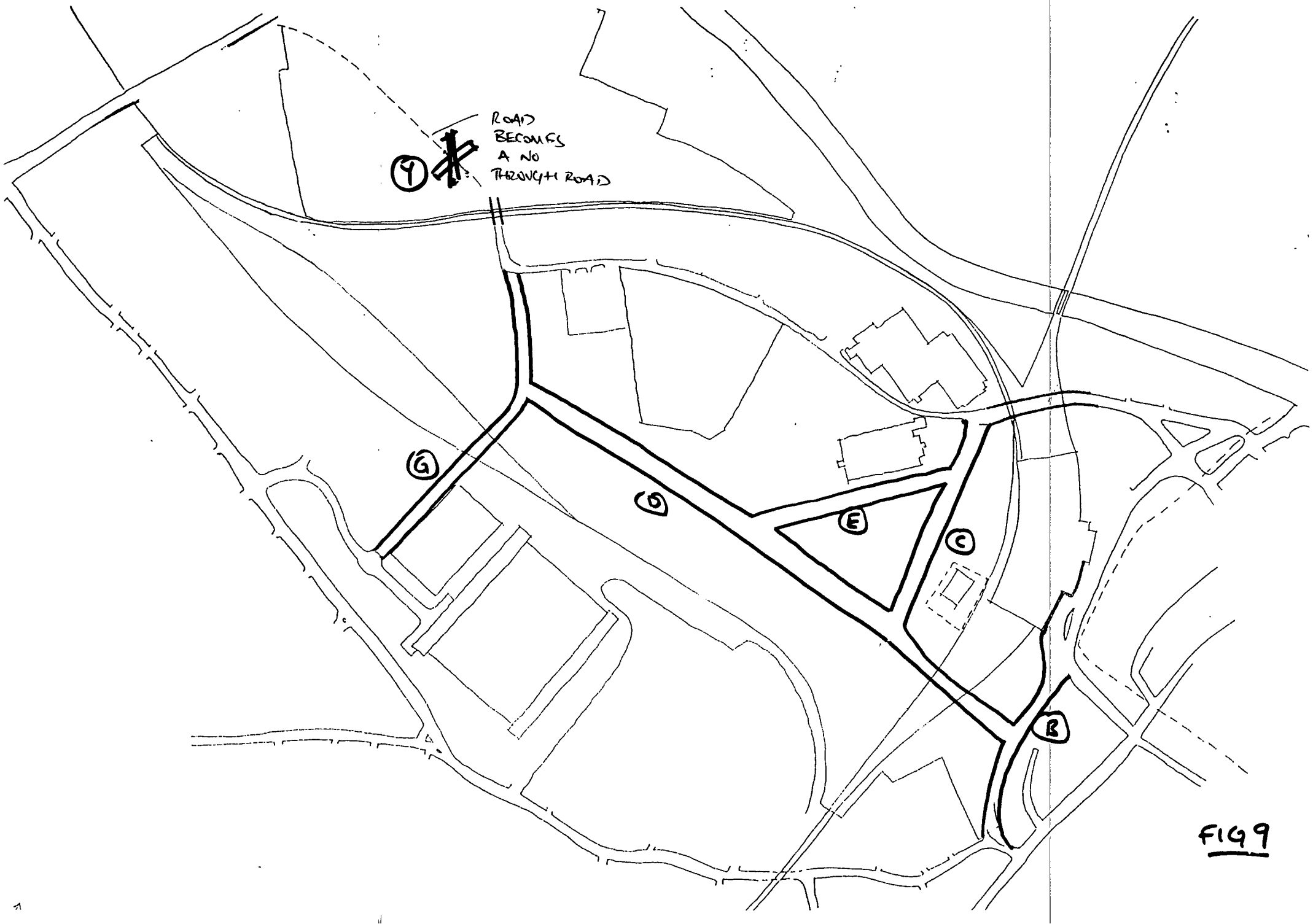
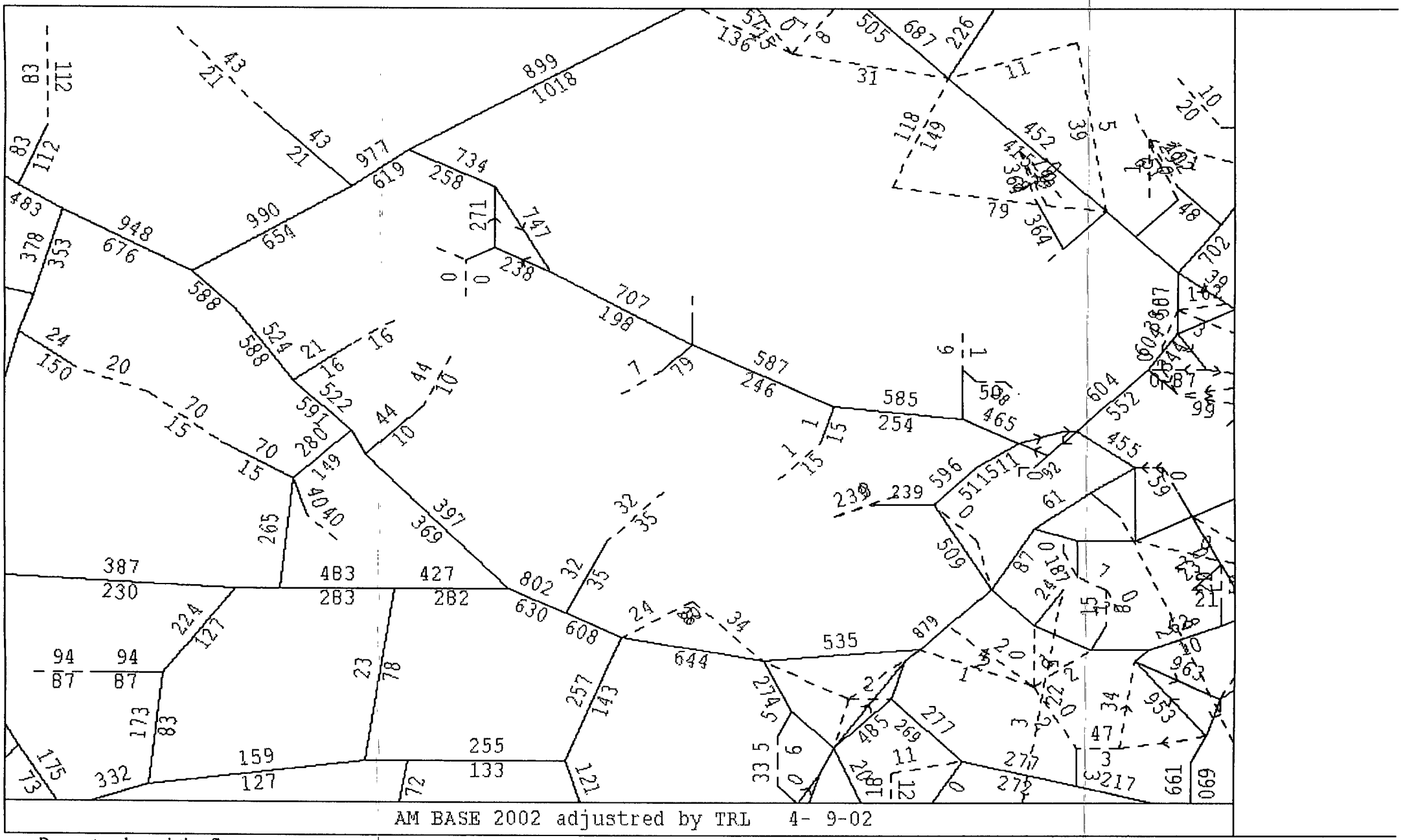
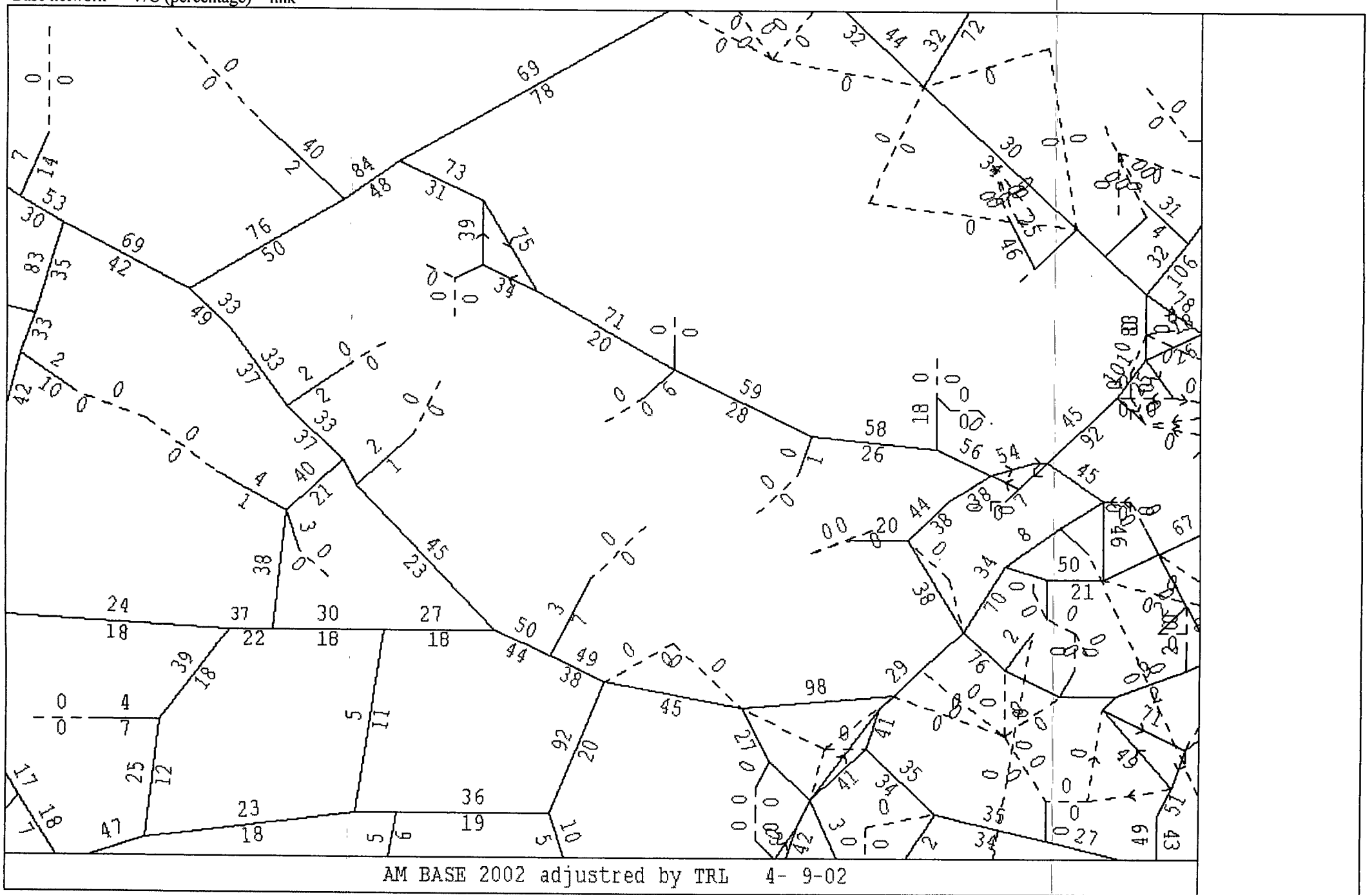


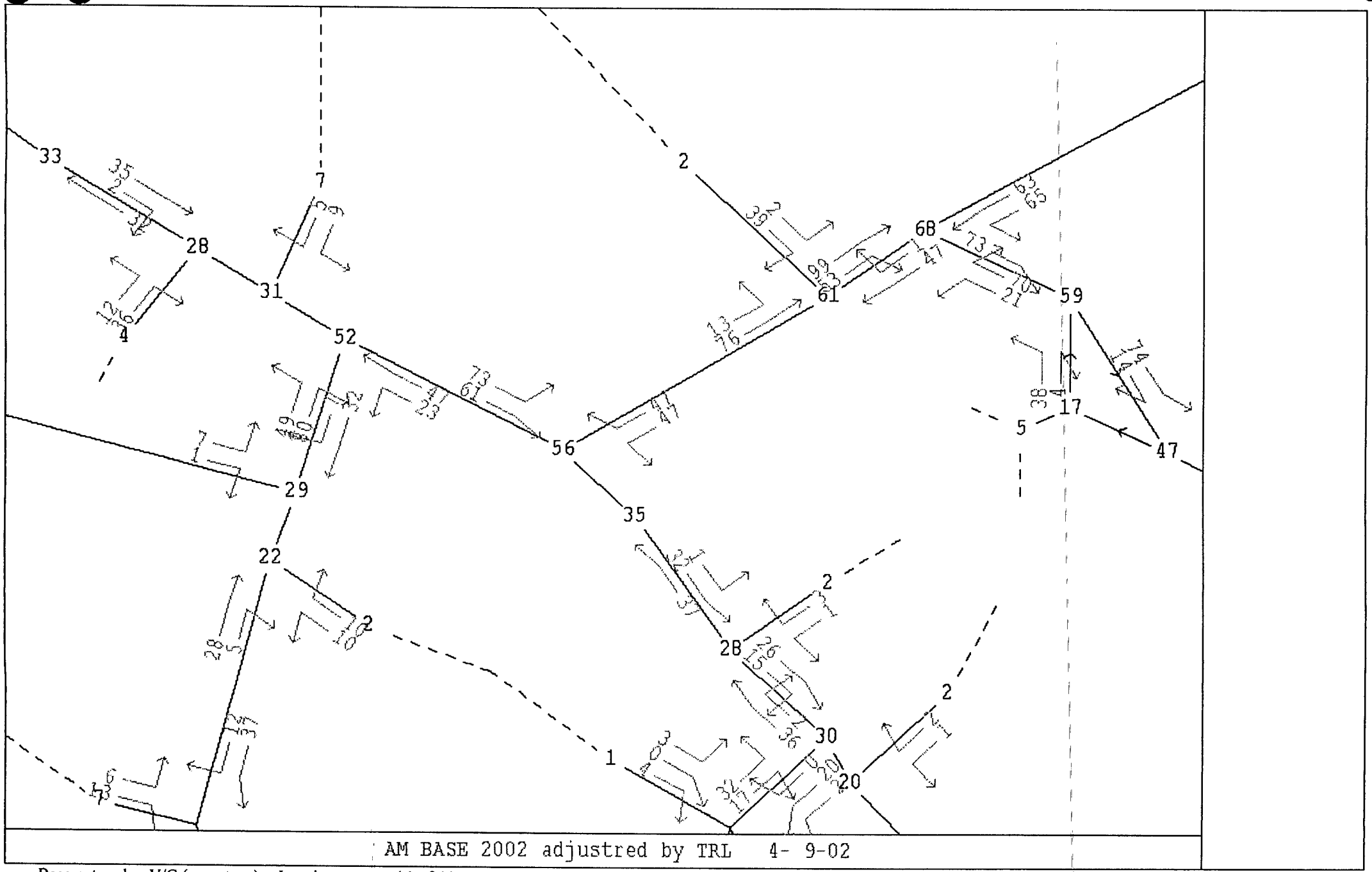
FIG 9



Base network – existing flow

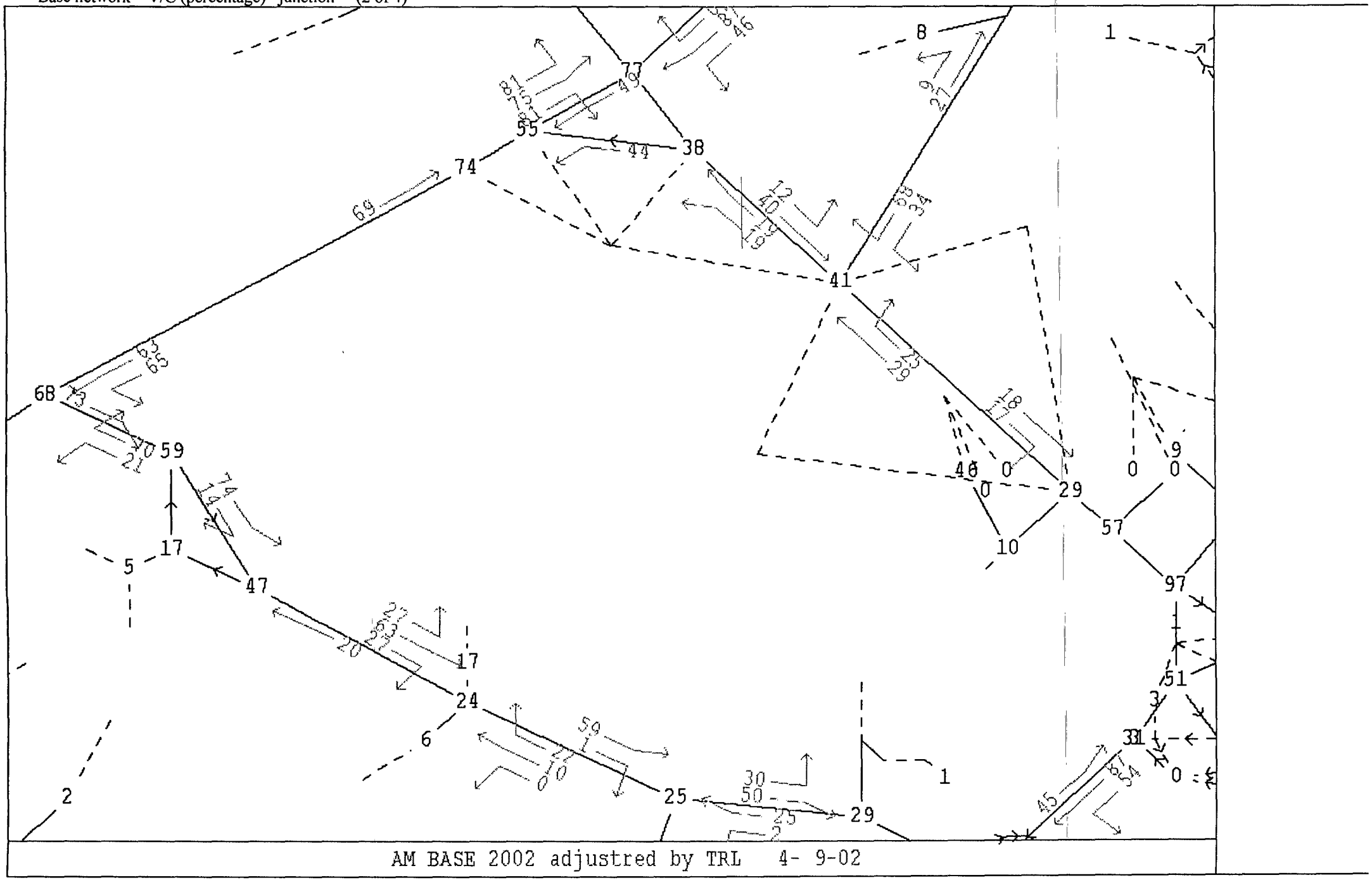
Base network -- V/C (percentage) – link

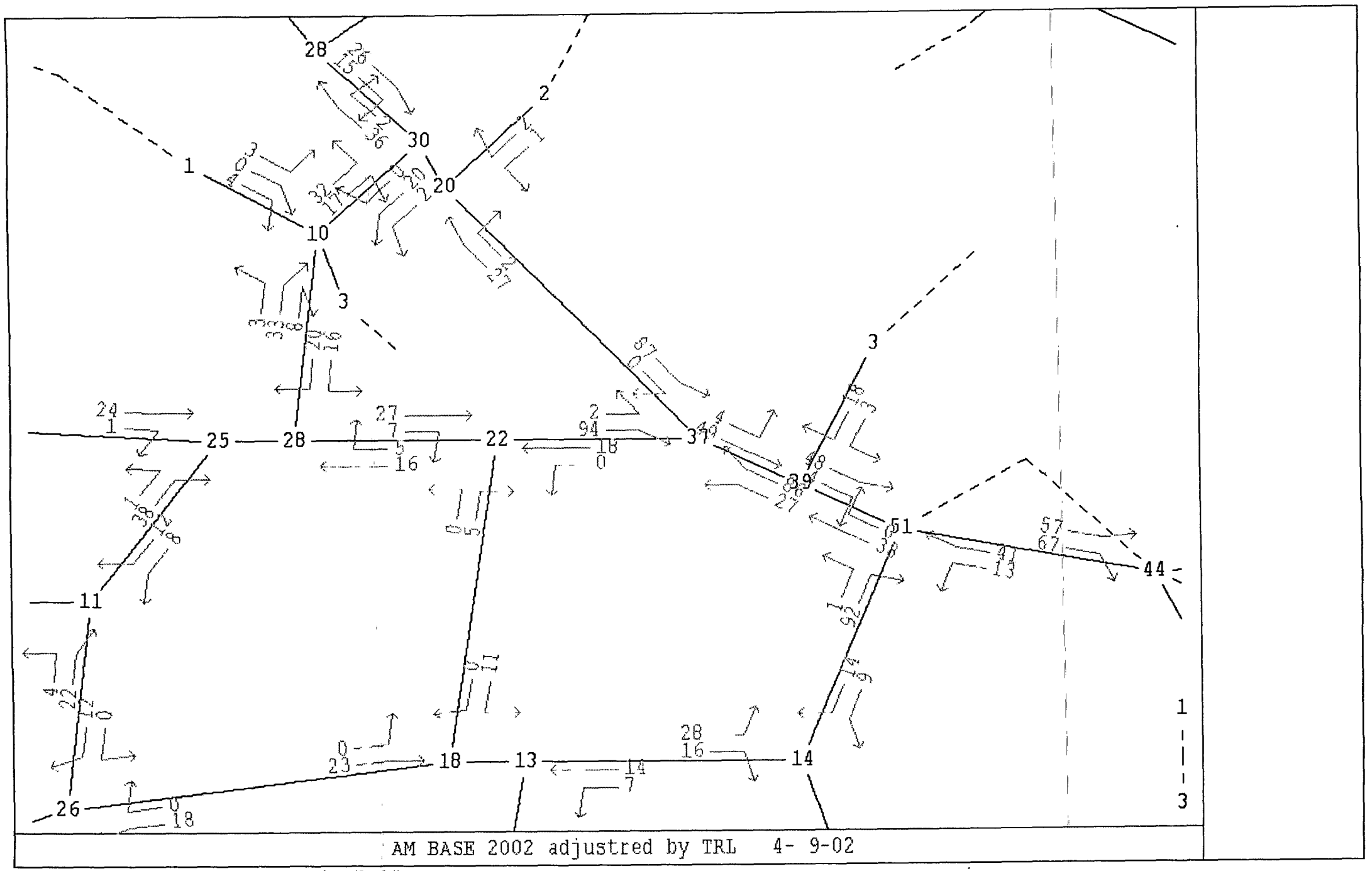




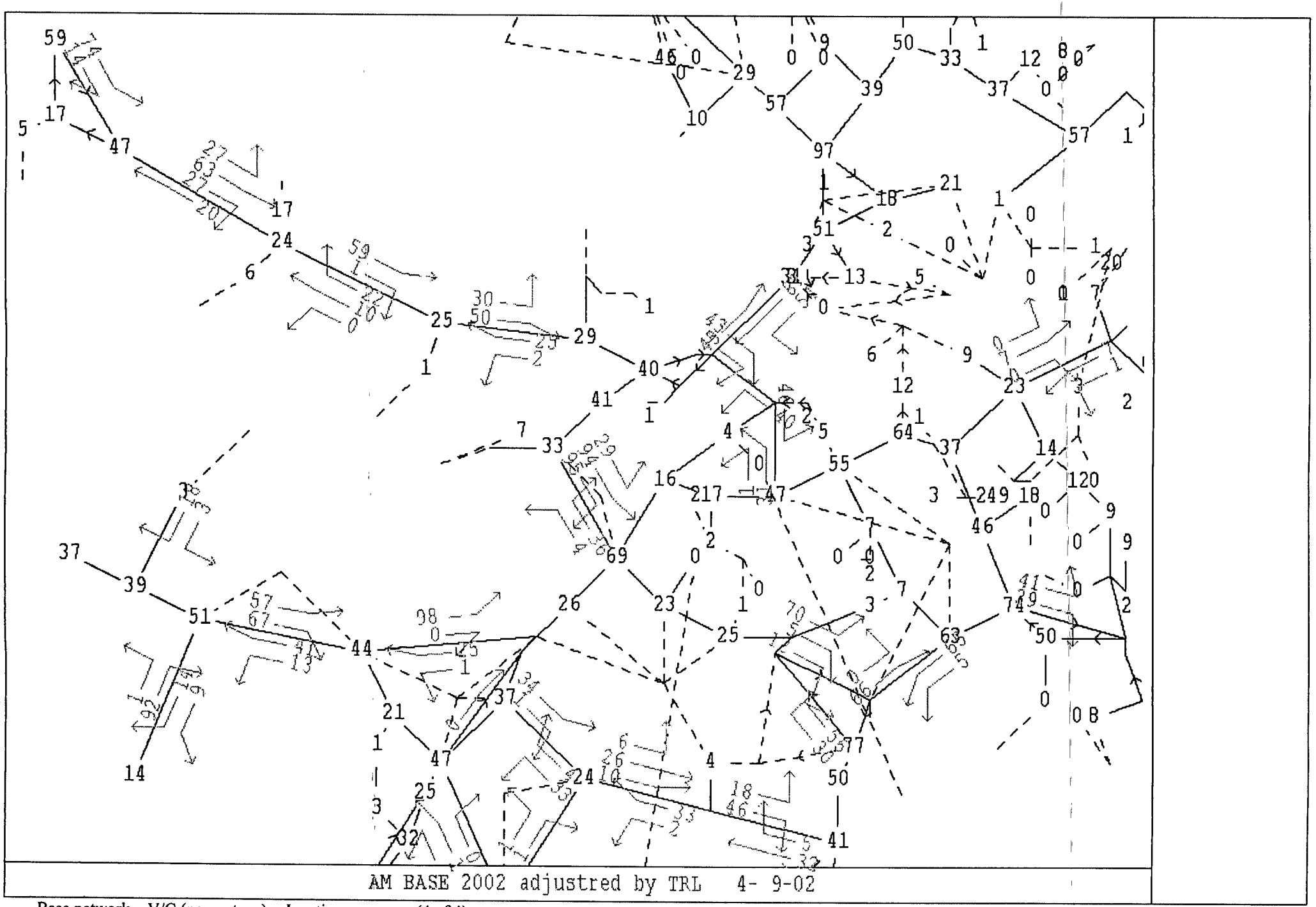
Base network – V/C (ercentage) – Junction (1 of 4)

Base network – V/C (percentage) –junction (2 of 4)

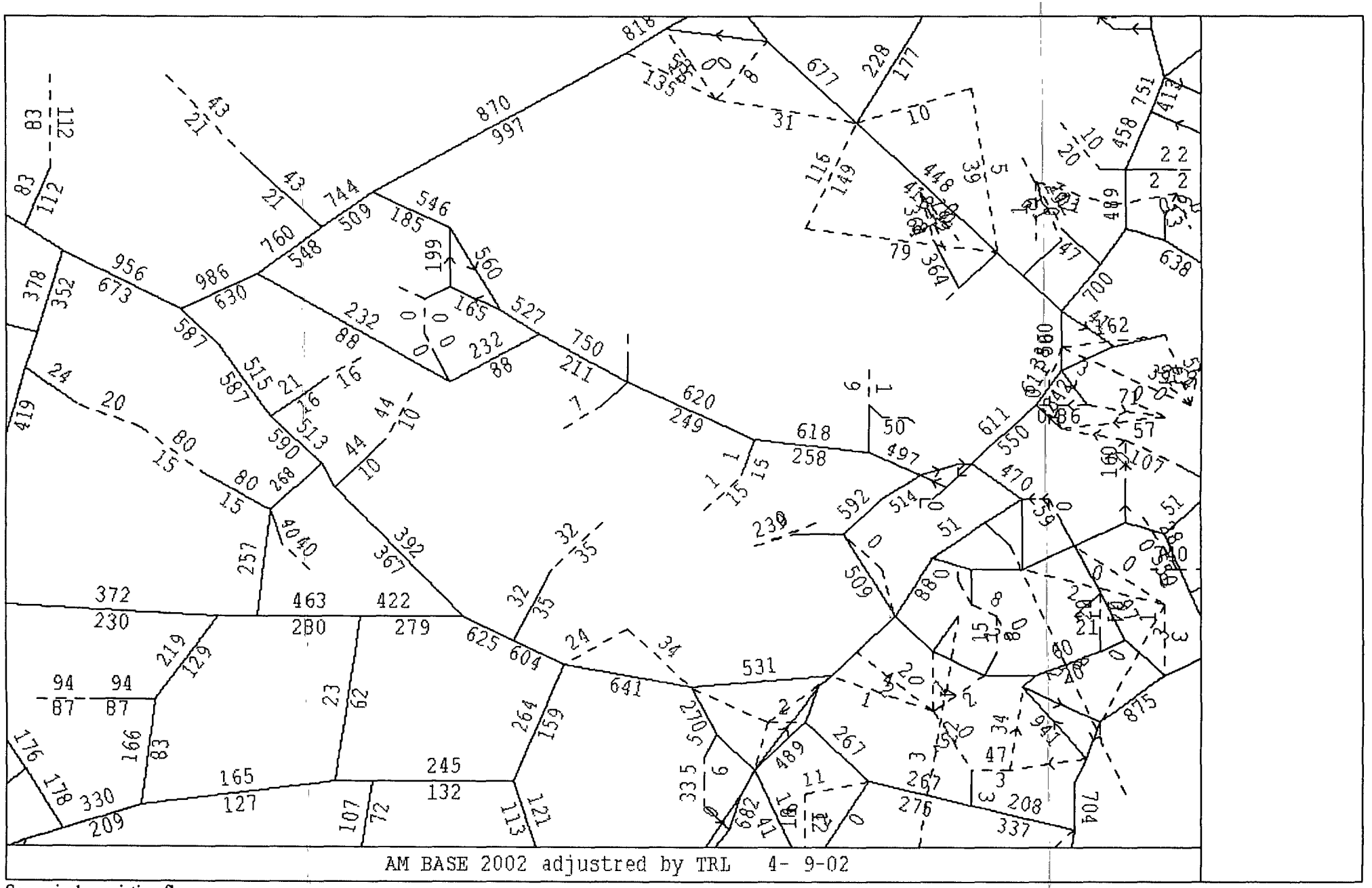




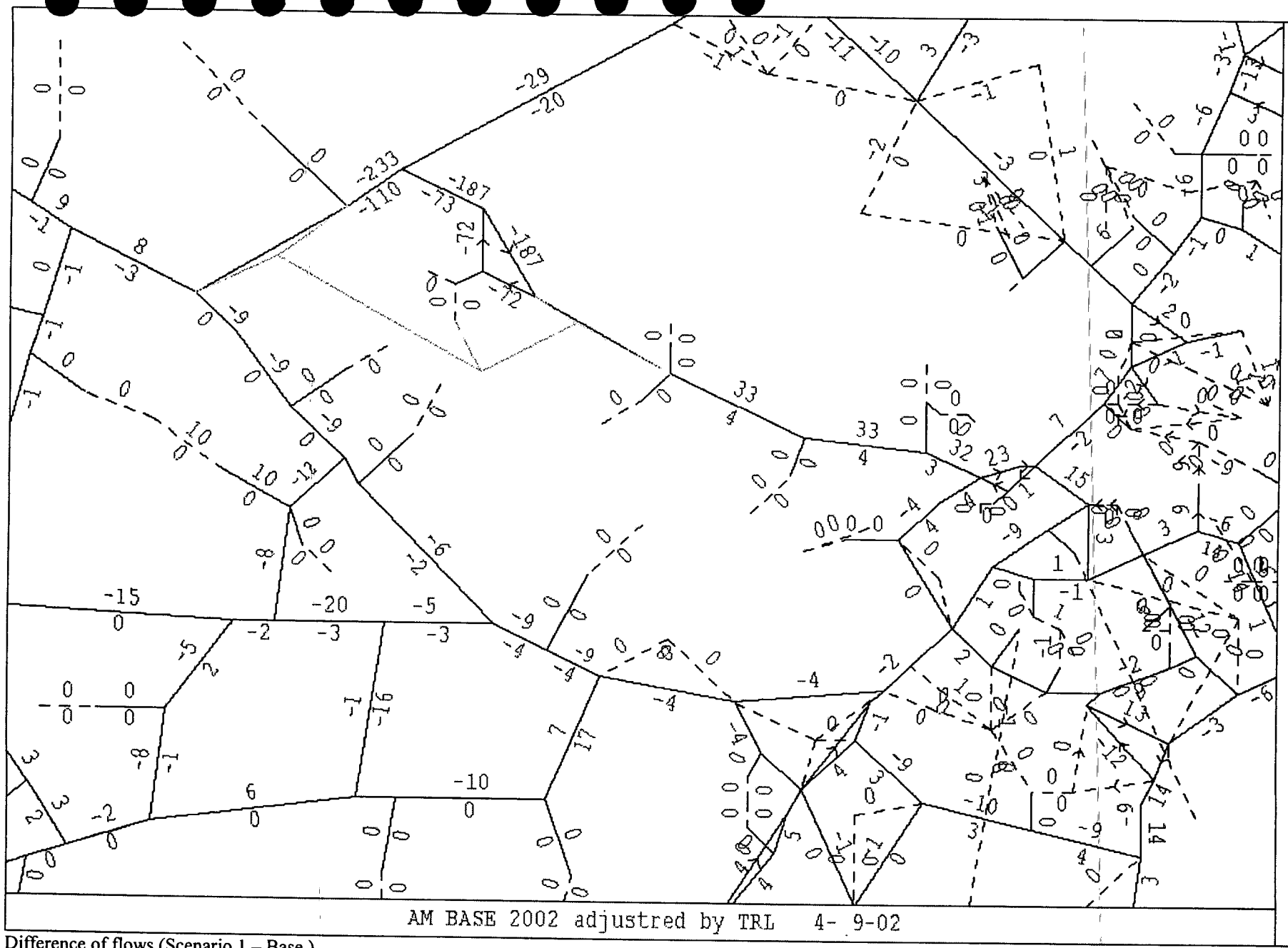
Base network – V/C (percentage) –Junction (3 of 4)



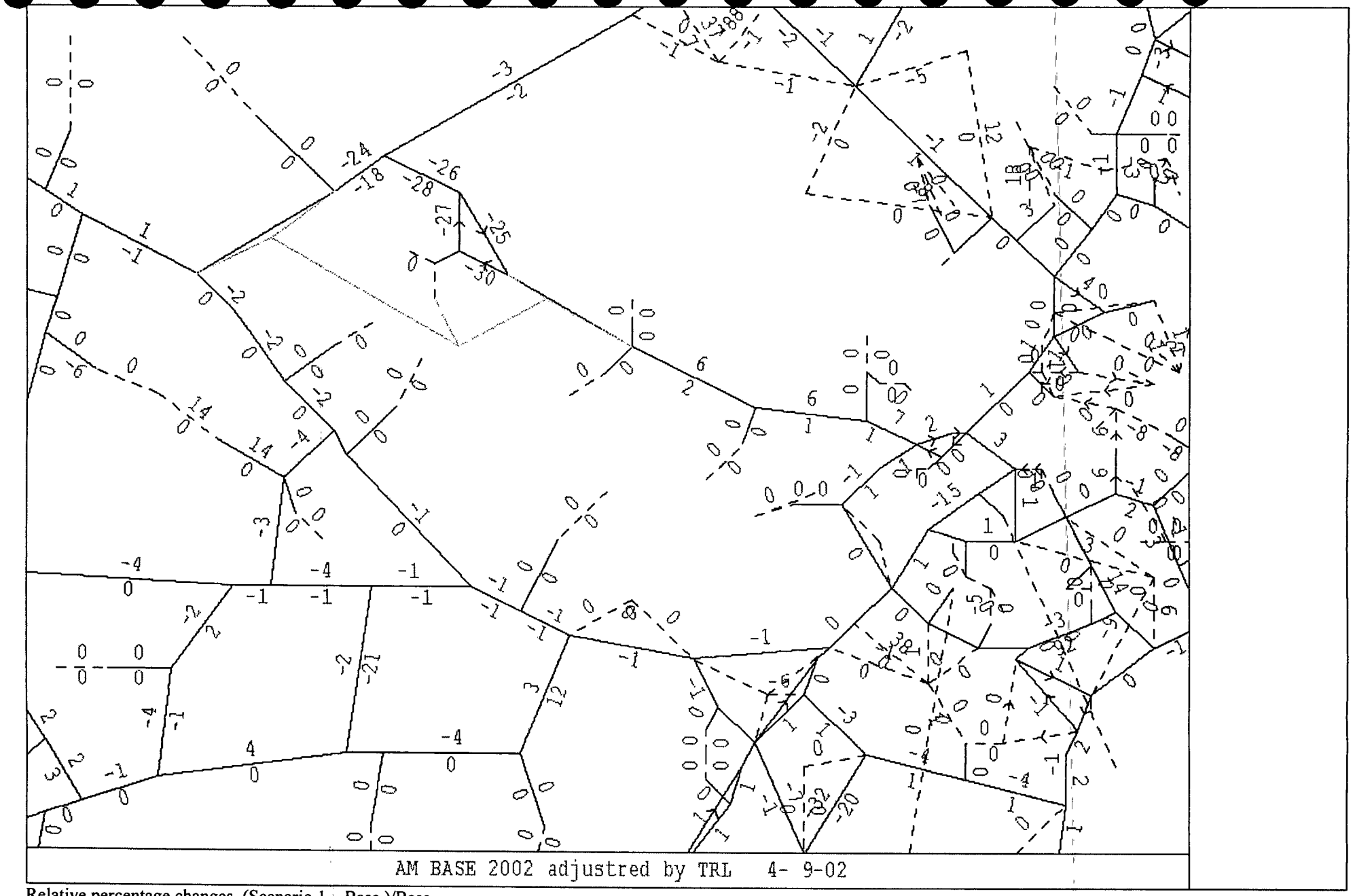
Base network – V/C (percentage) – Junction (4 of 4)



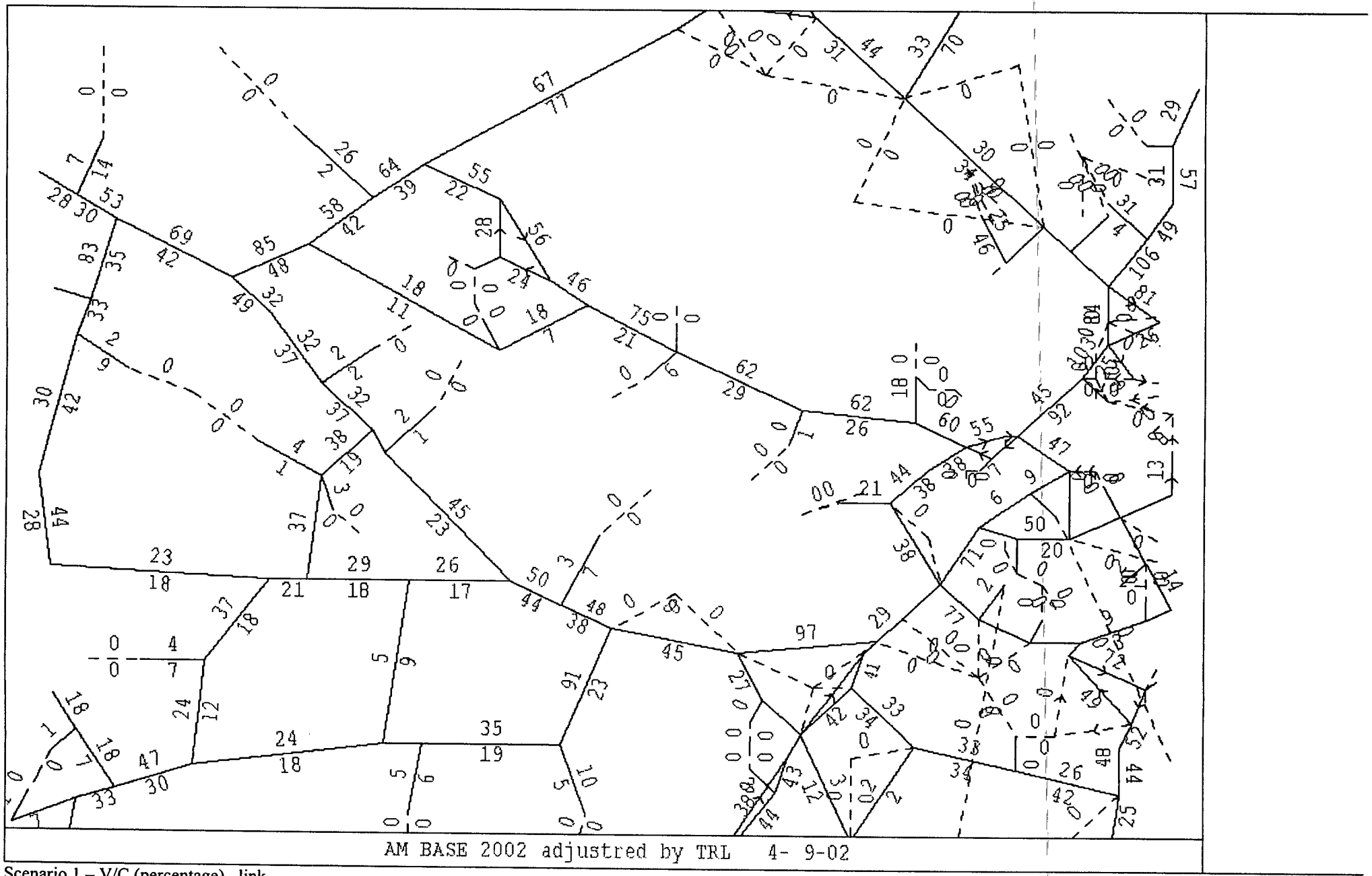
Scenario 1 – existing flow



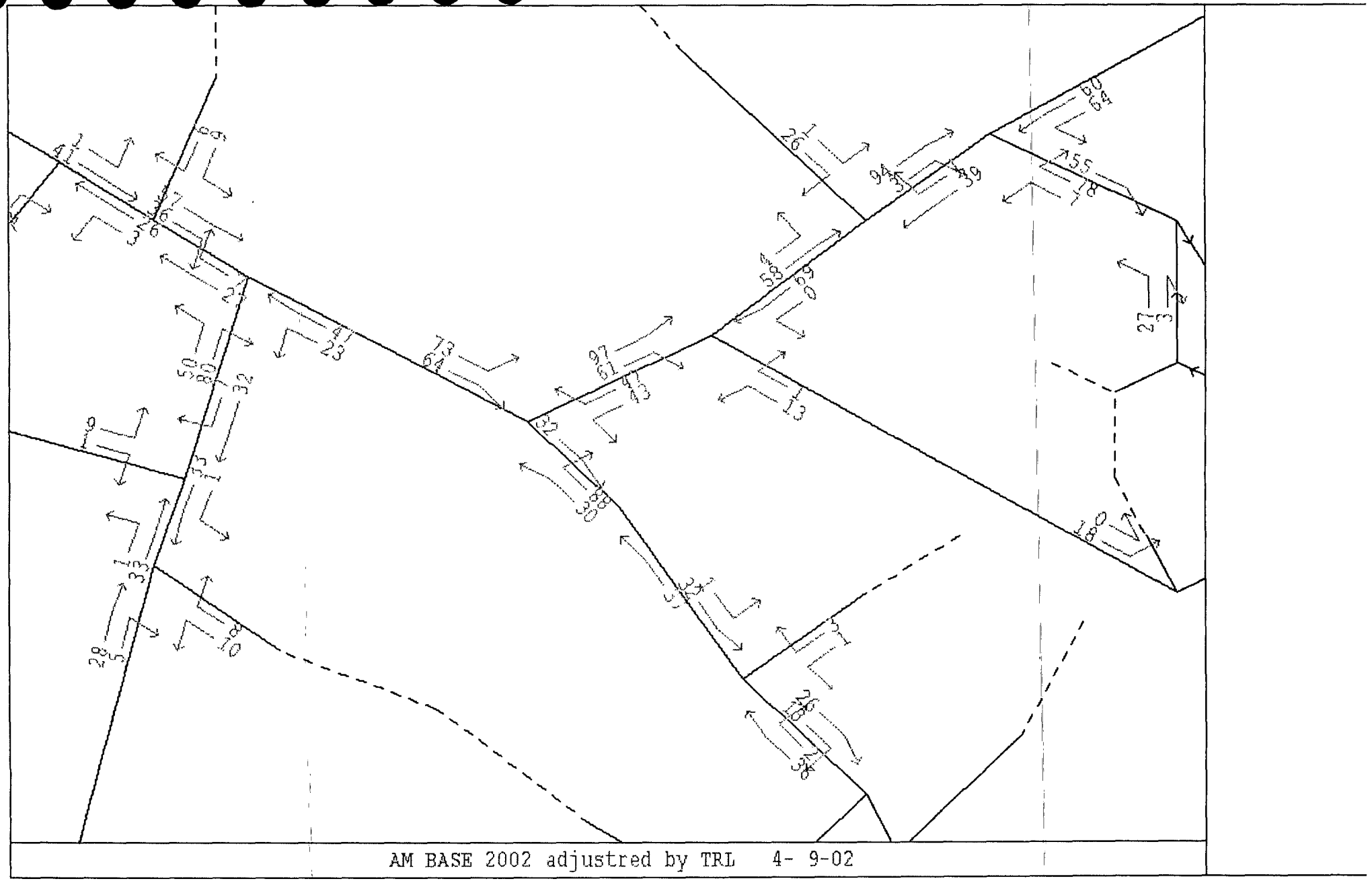
Difference of flows (Scenario 1 – Base)



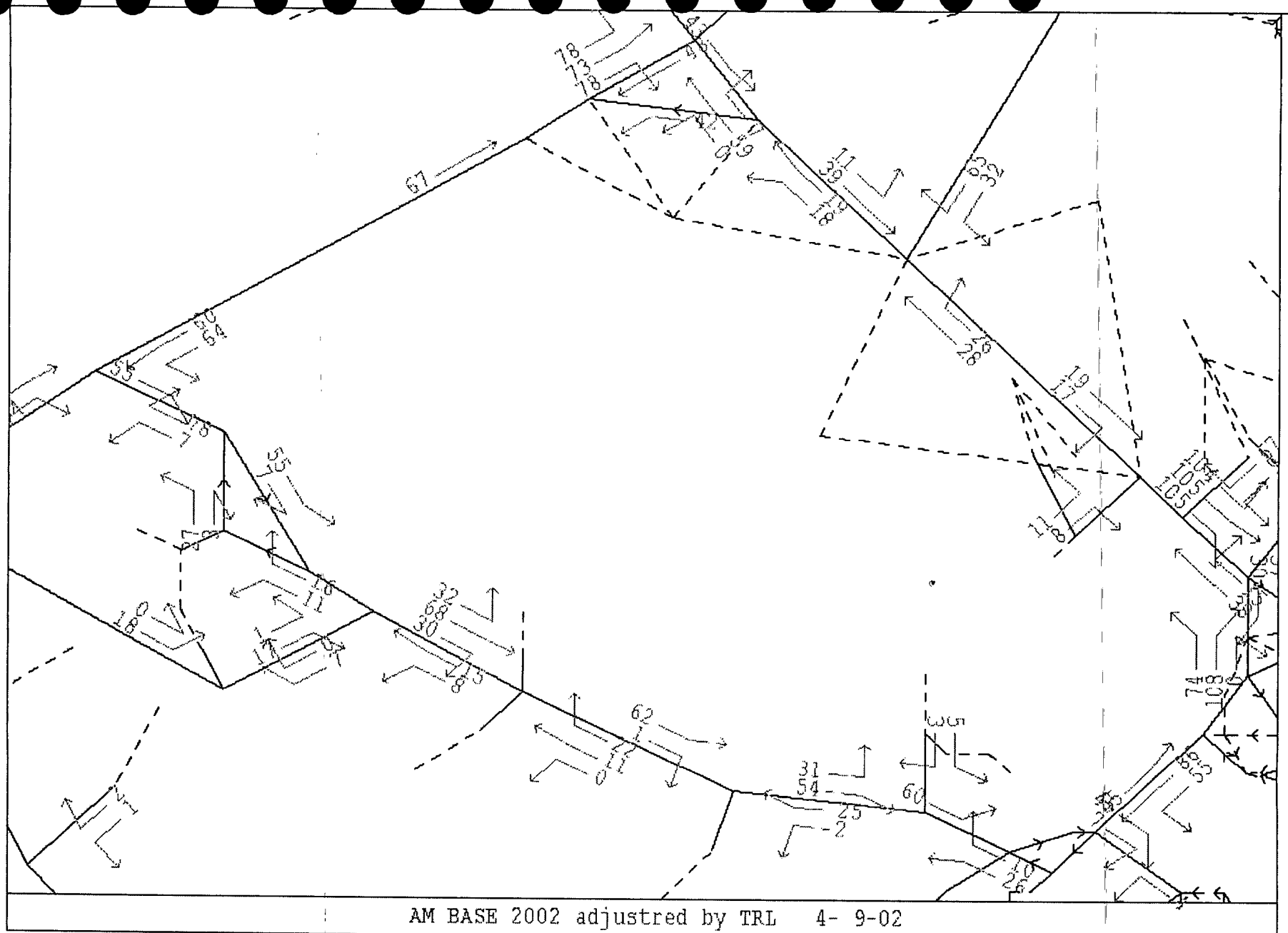
Relative percentage changes (Scenario 1 – Base)/Base



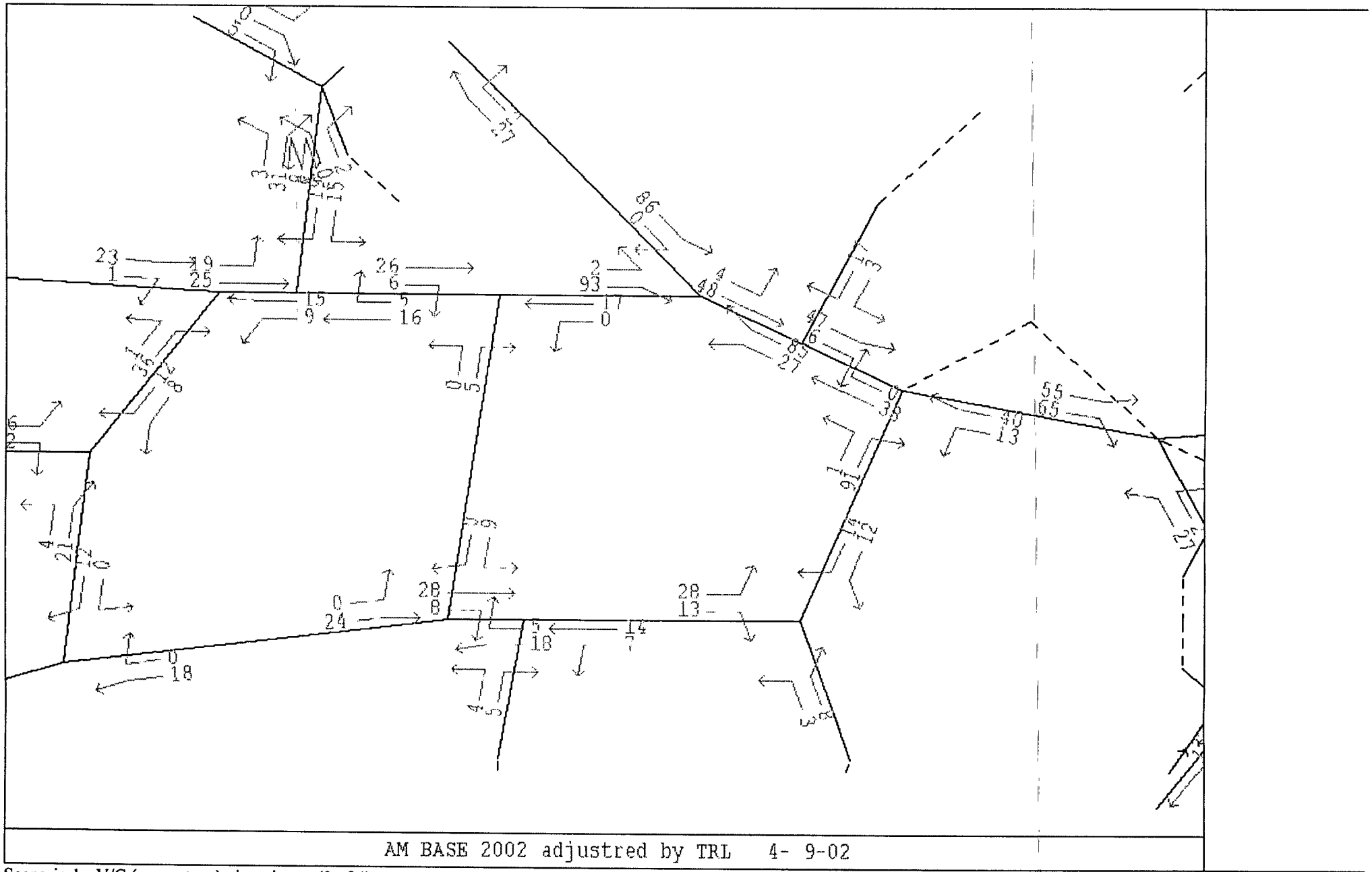
Scenario 1 – V/C (percentage) –link



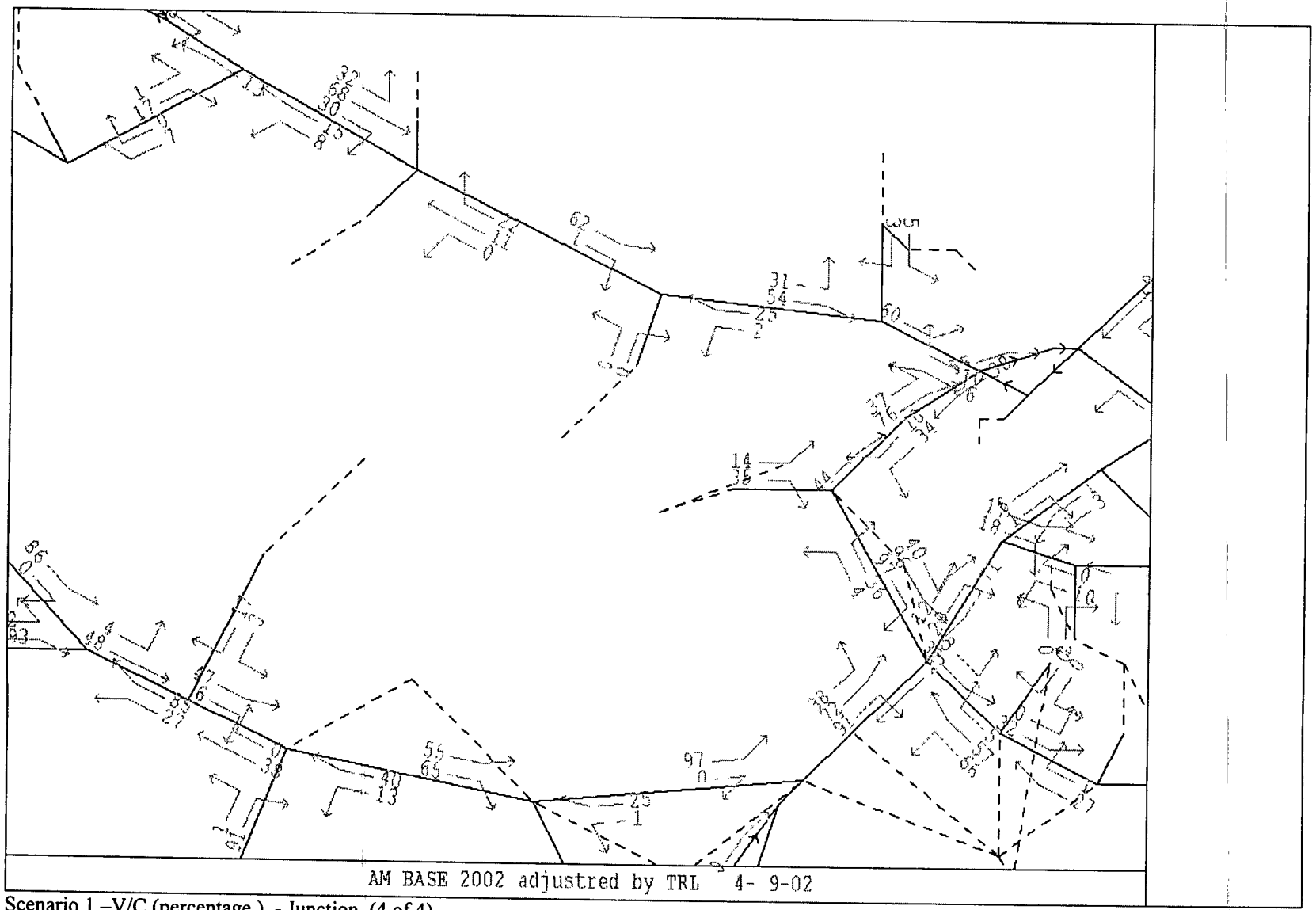
Scenario 1 ---V/C (percentage) – Junction (1 of 4)



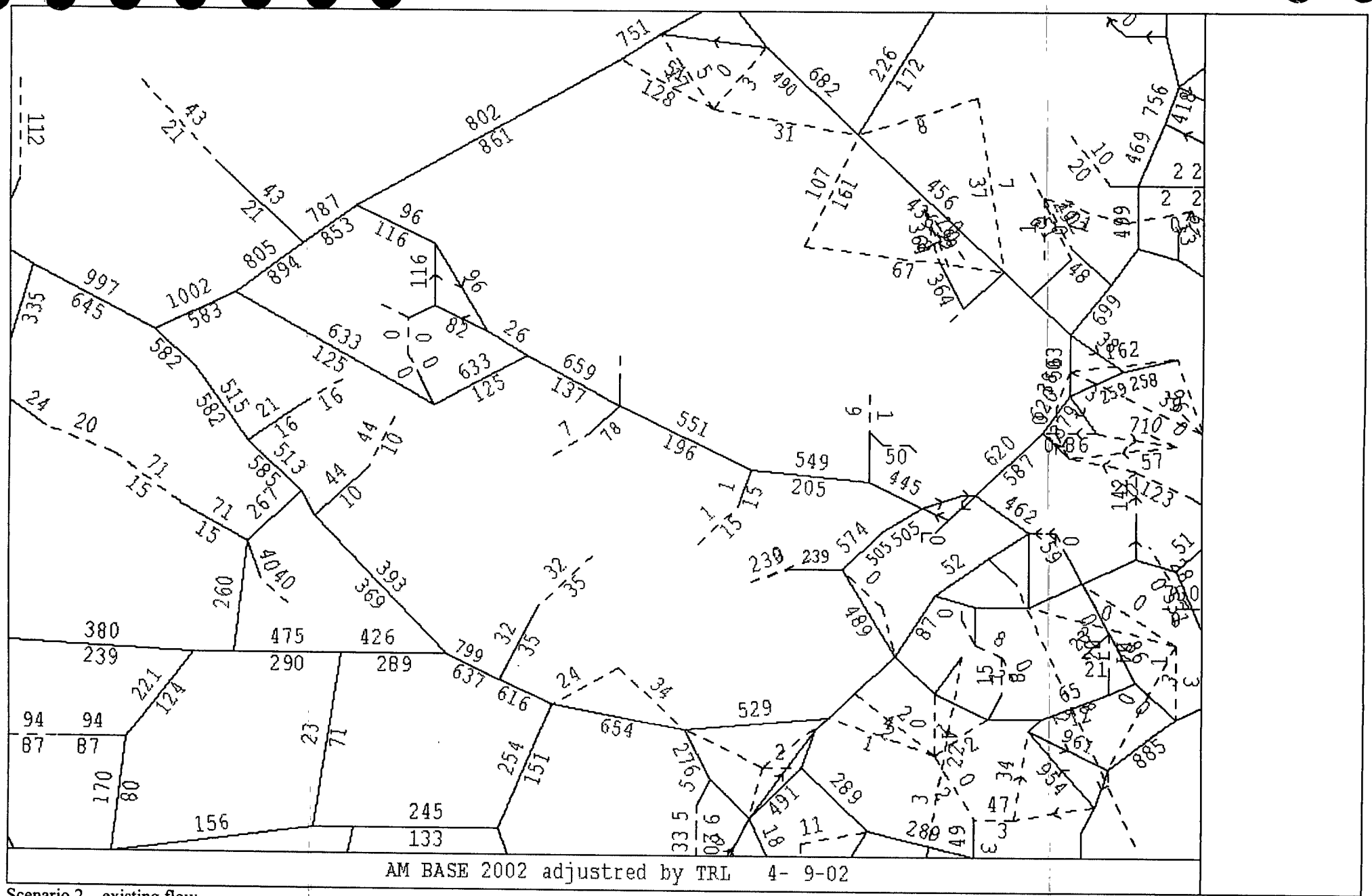
Scenario 1 – V/C (percentage) –Junction (2 of 4)



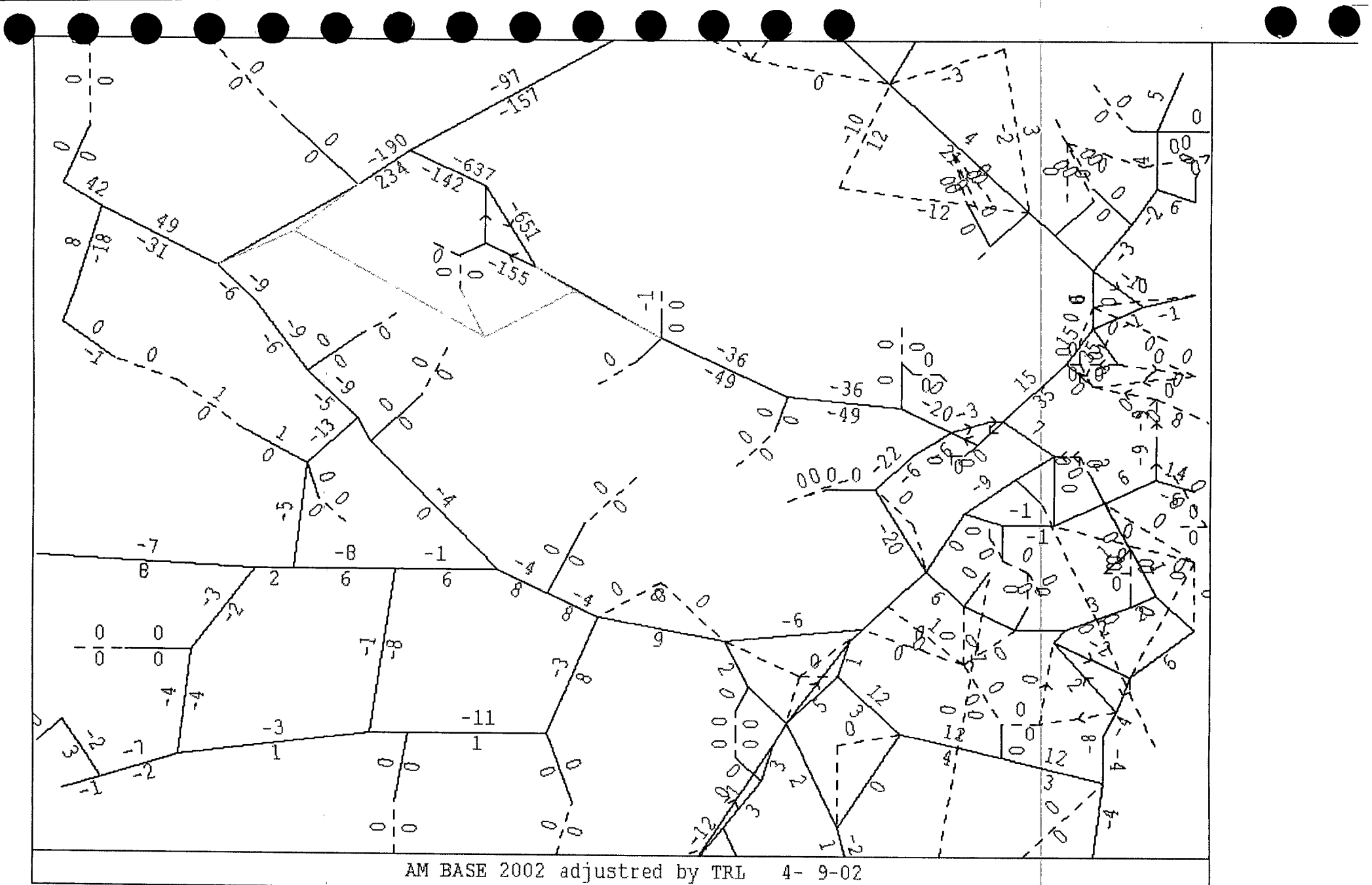
Scenario 1 -V/C (percentage) –junction (3 of 4)



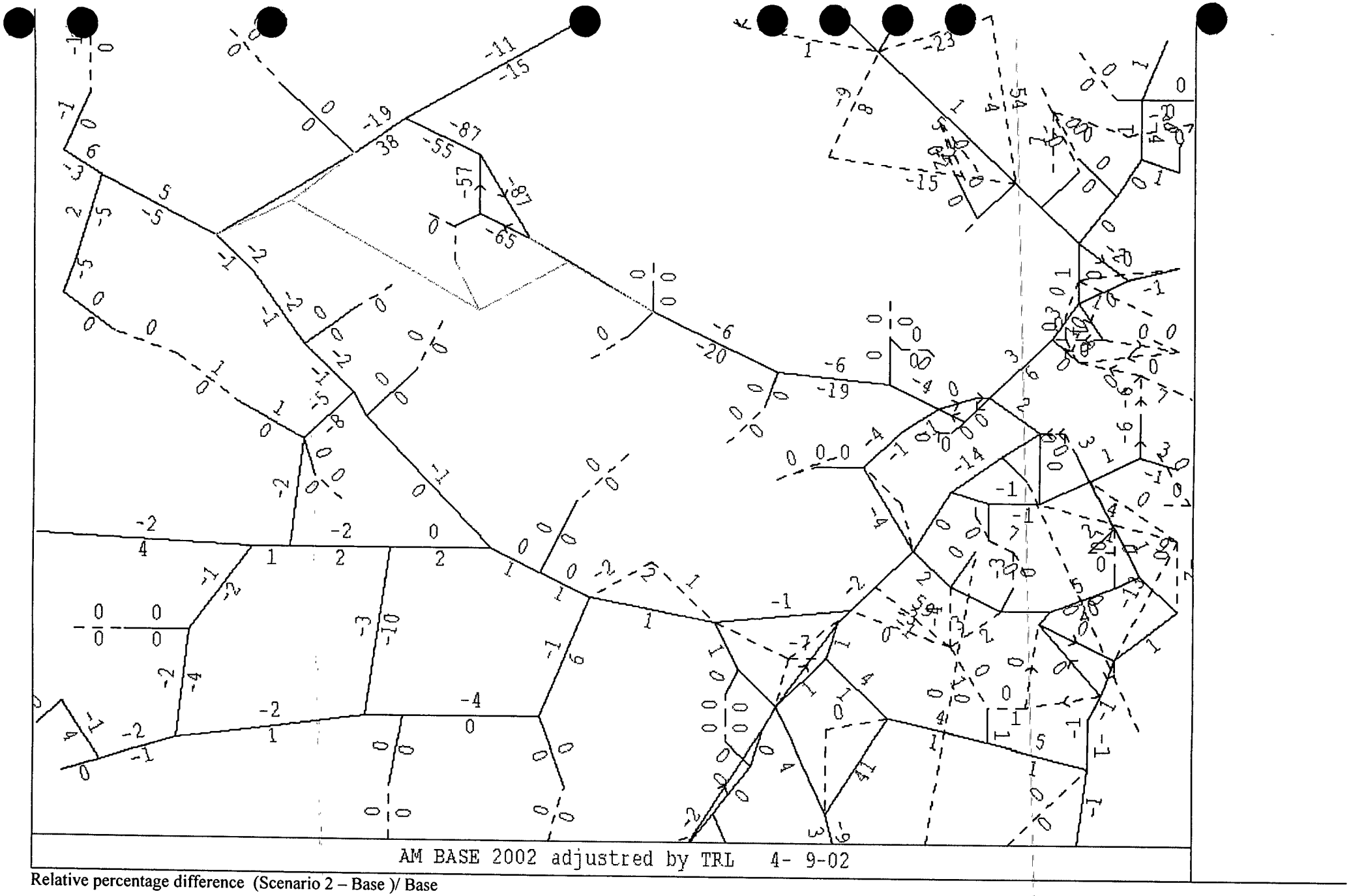
Scenario 1 –V/C (percentage) - Junction (4 of 4)



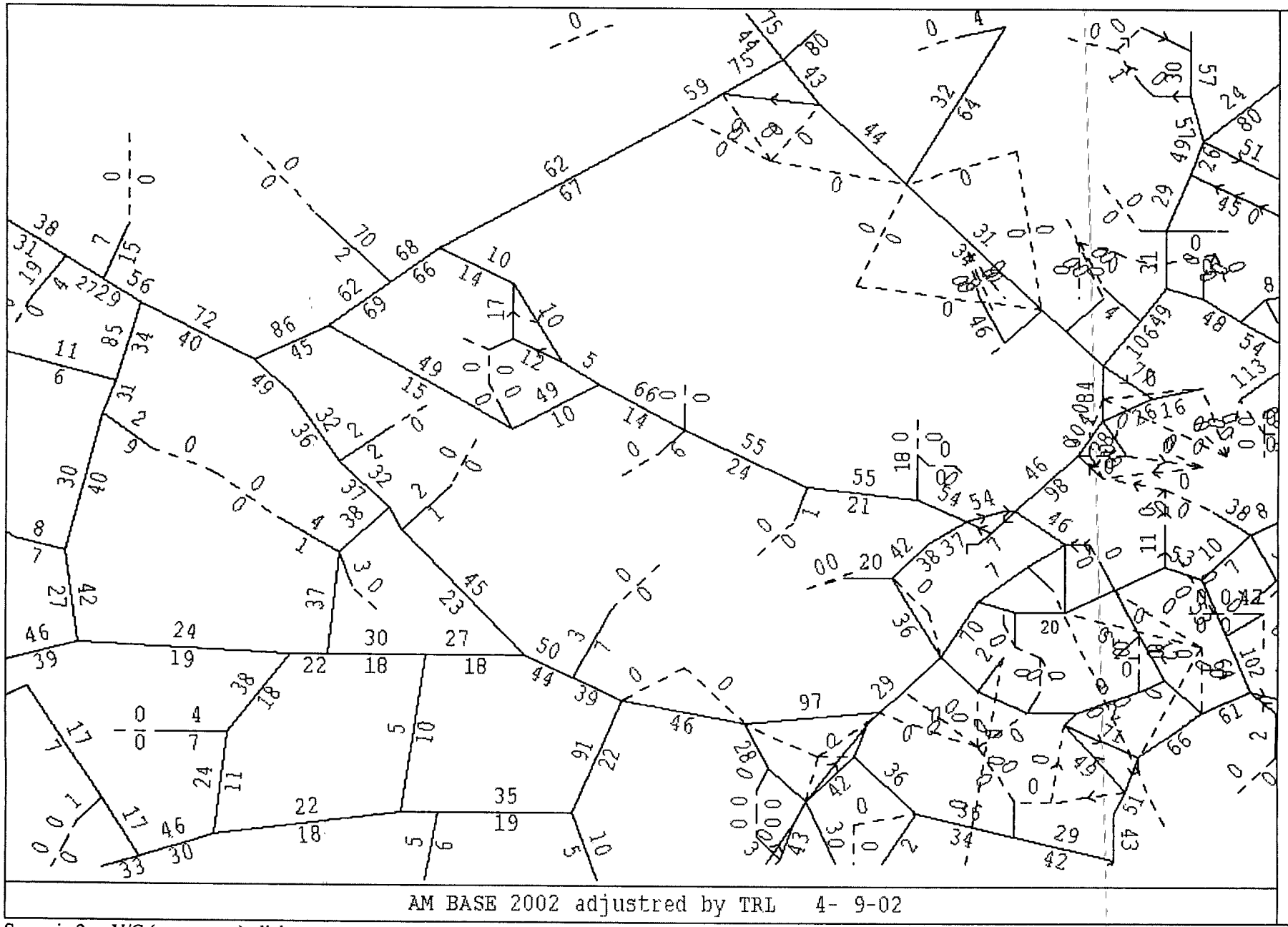
Scenario 2 – existing flow



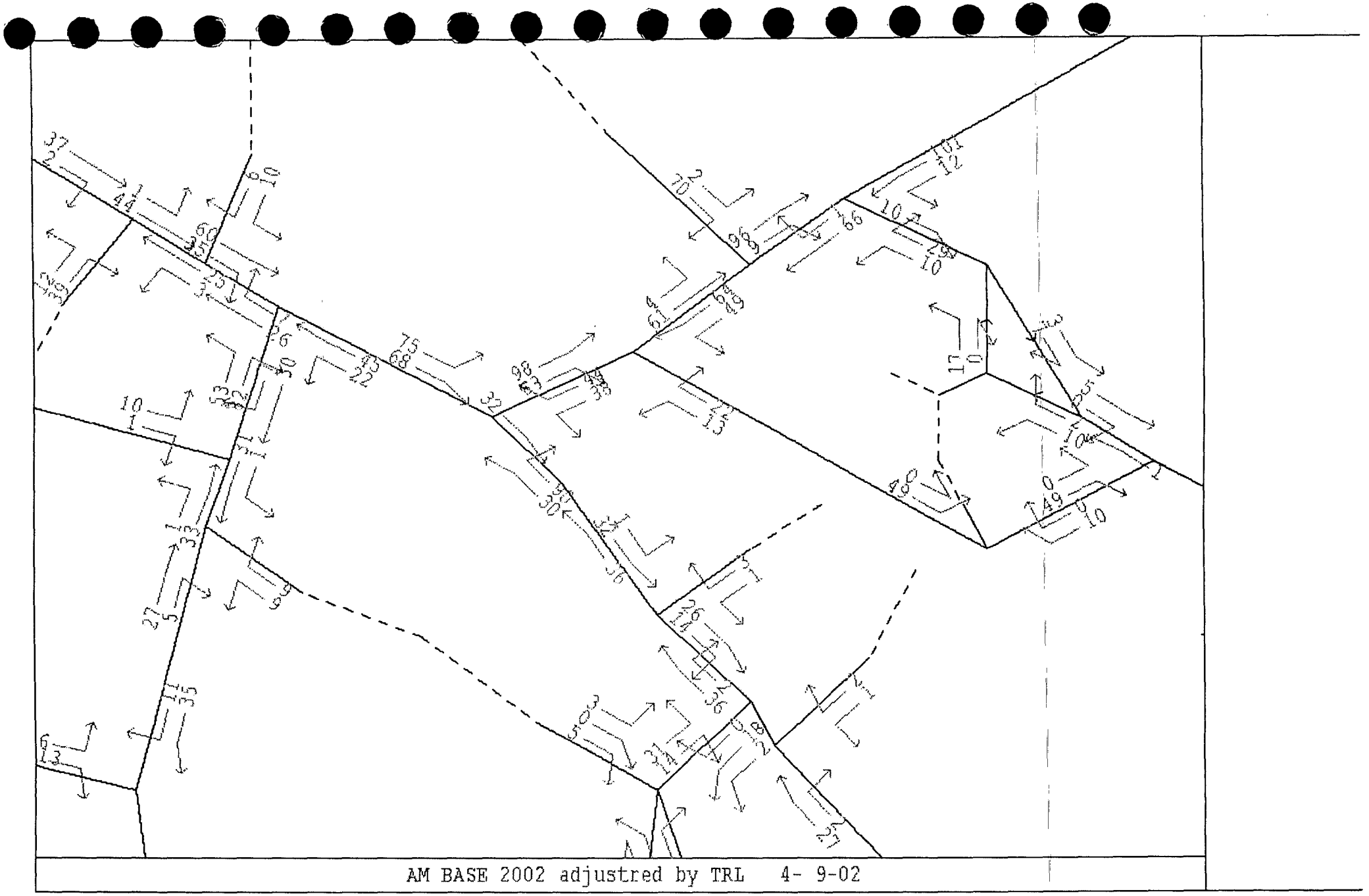
Difference of flow (Scenario 2 – Base)



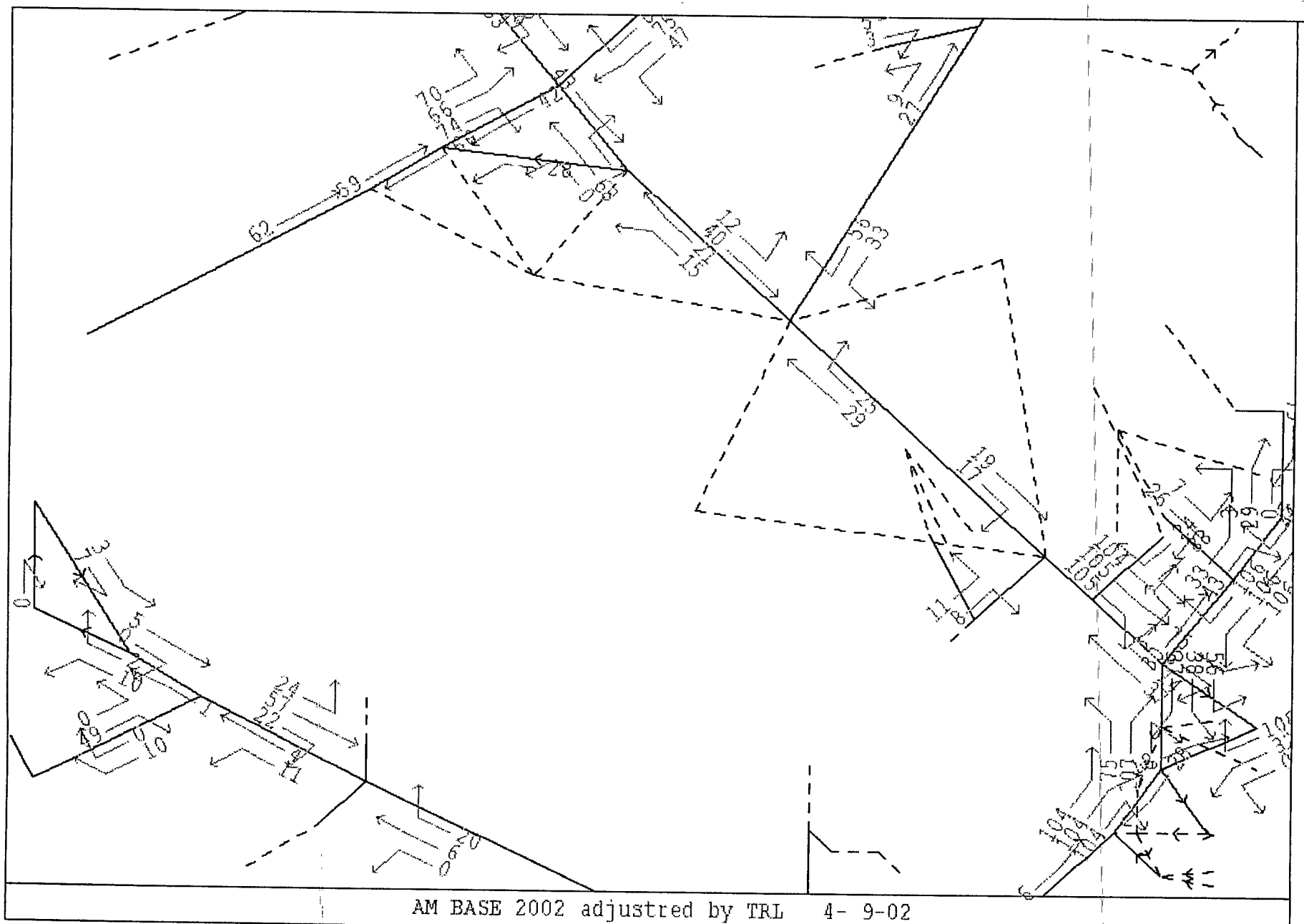
Relative percentage difference (Scenario 2 – Base)/ Base



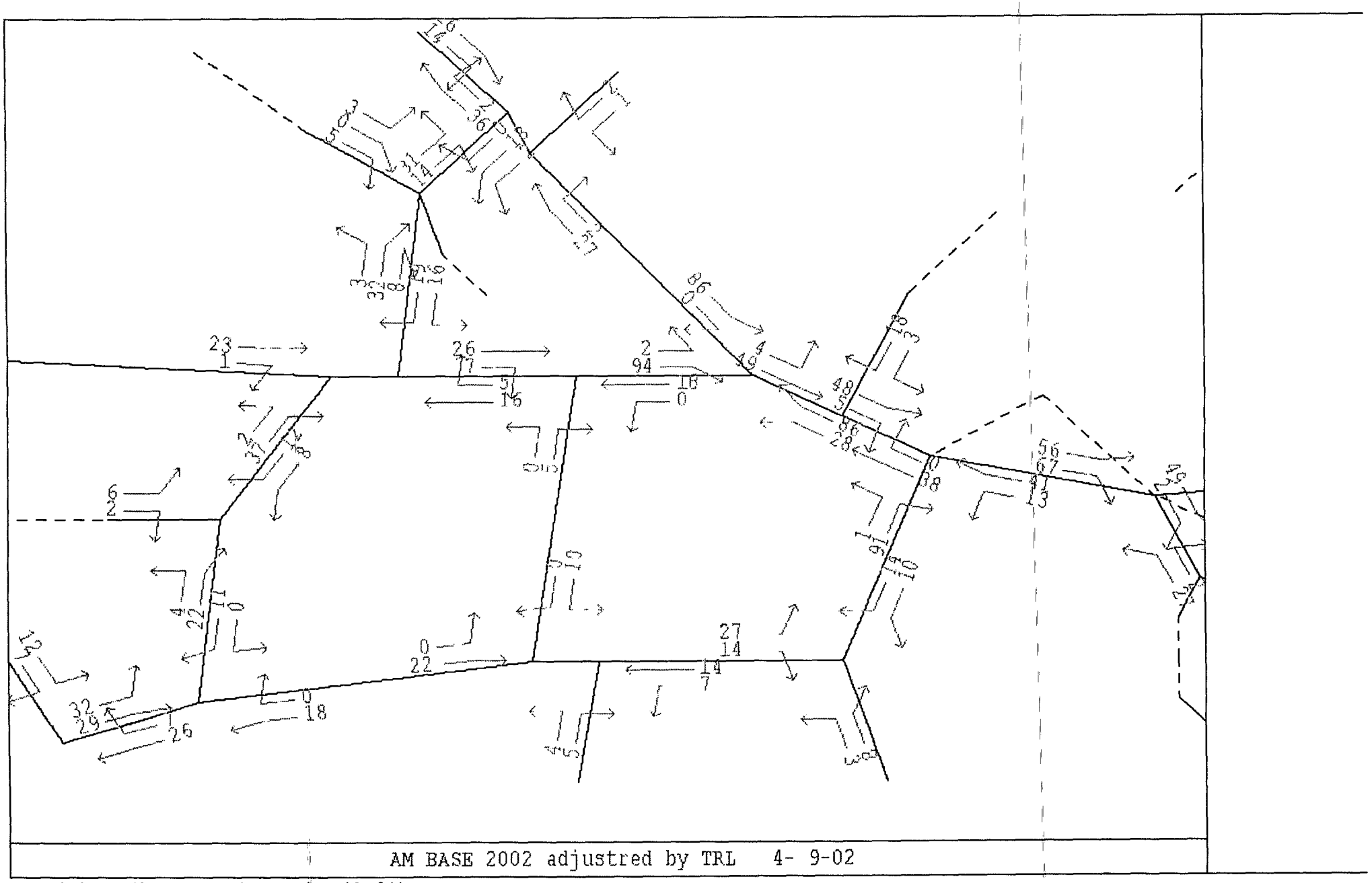
Scenario 2 - V/C (percentage) –link



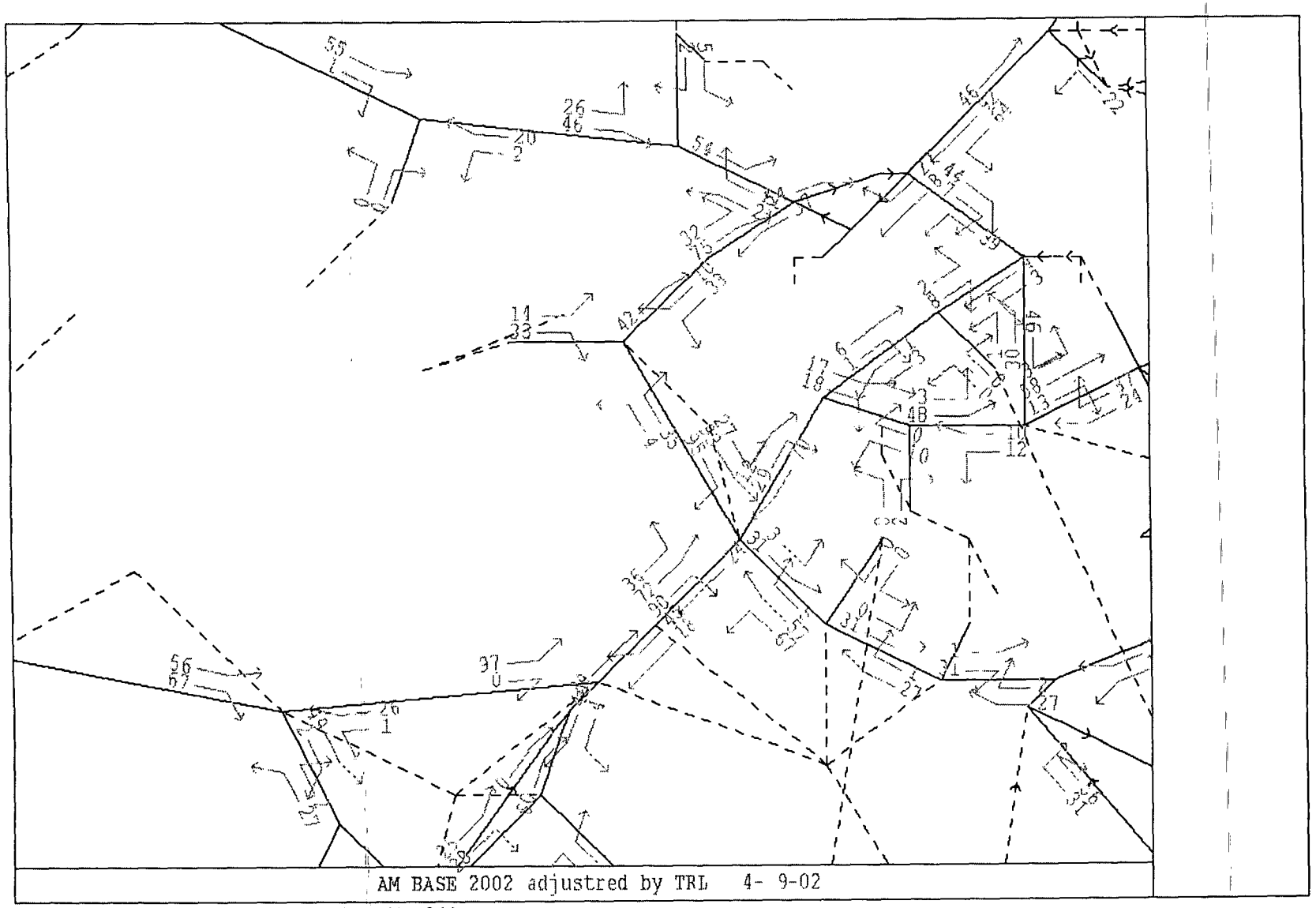
Scenario 2 – V/C (percentage) – Junction (1 of 4)



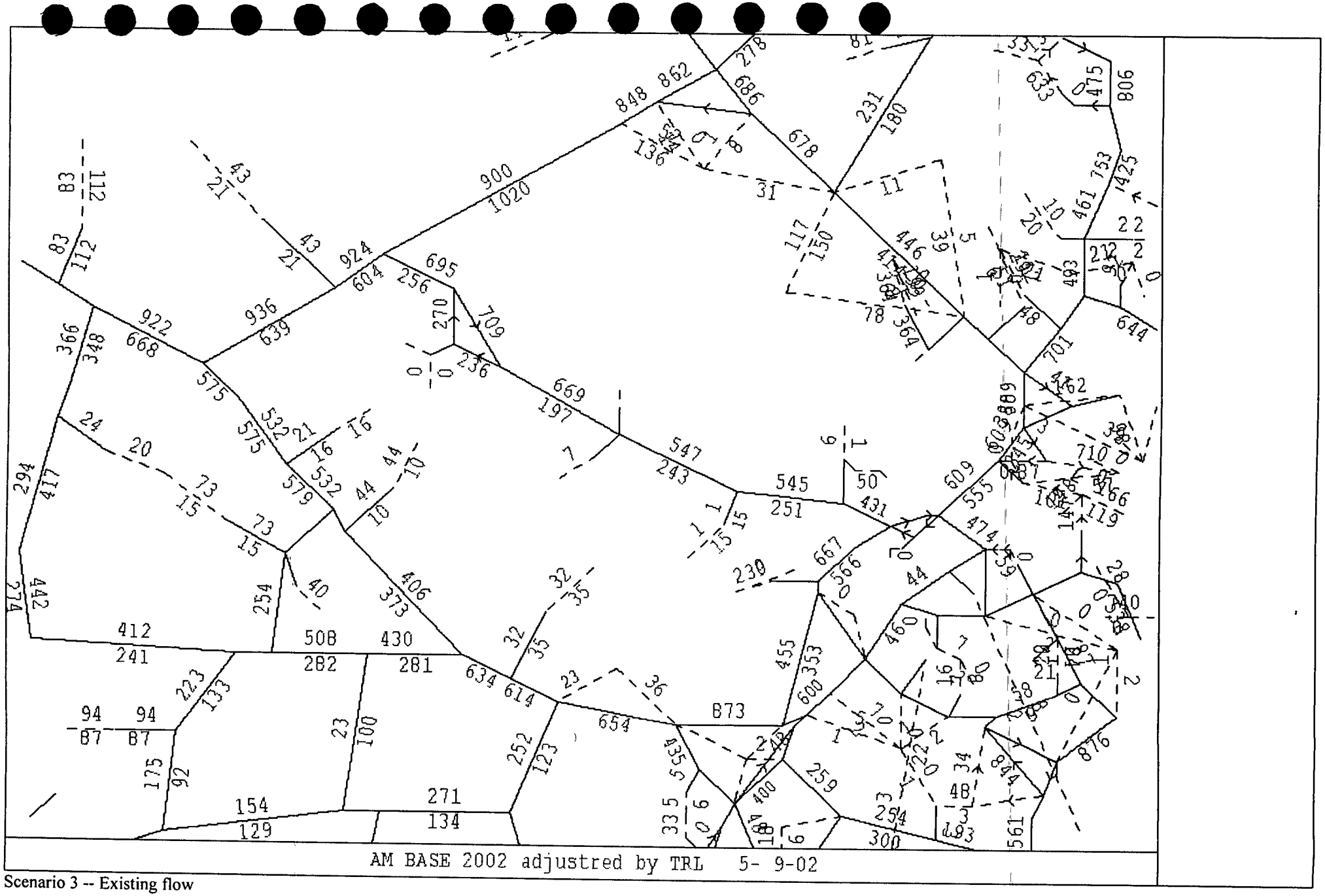
Scenario 2 -- V/C (percentage) – Junction (2 of 4)



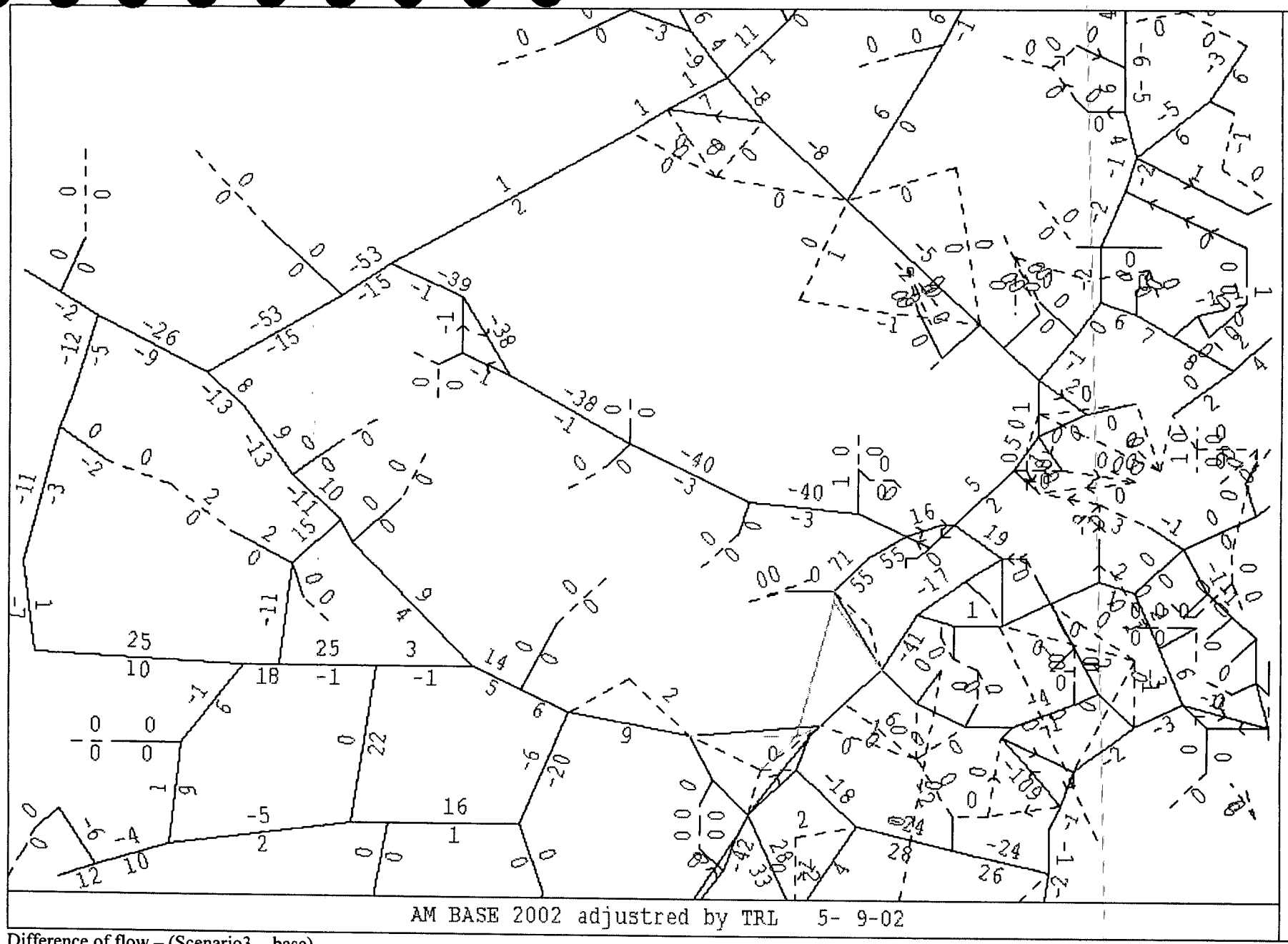
Scenario 2 -- V/C (percentage) --Junction (3 of 4)



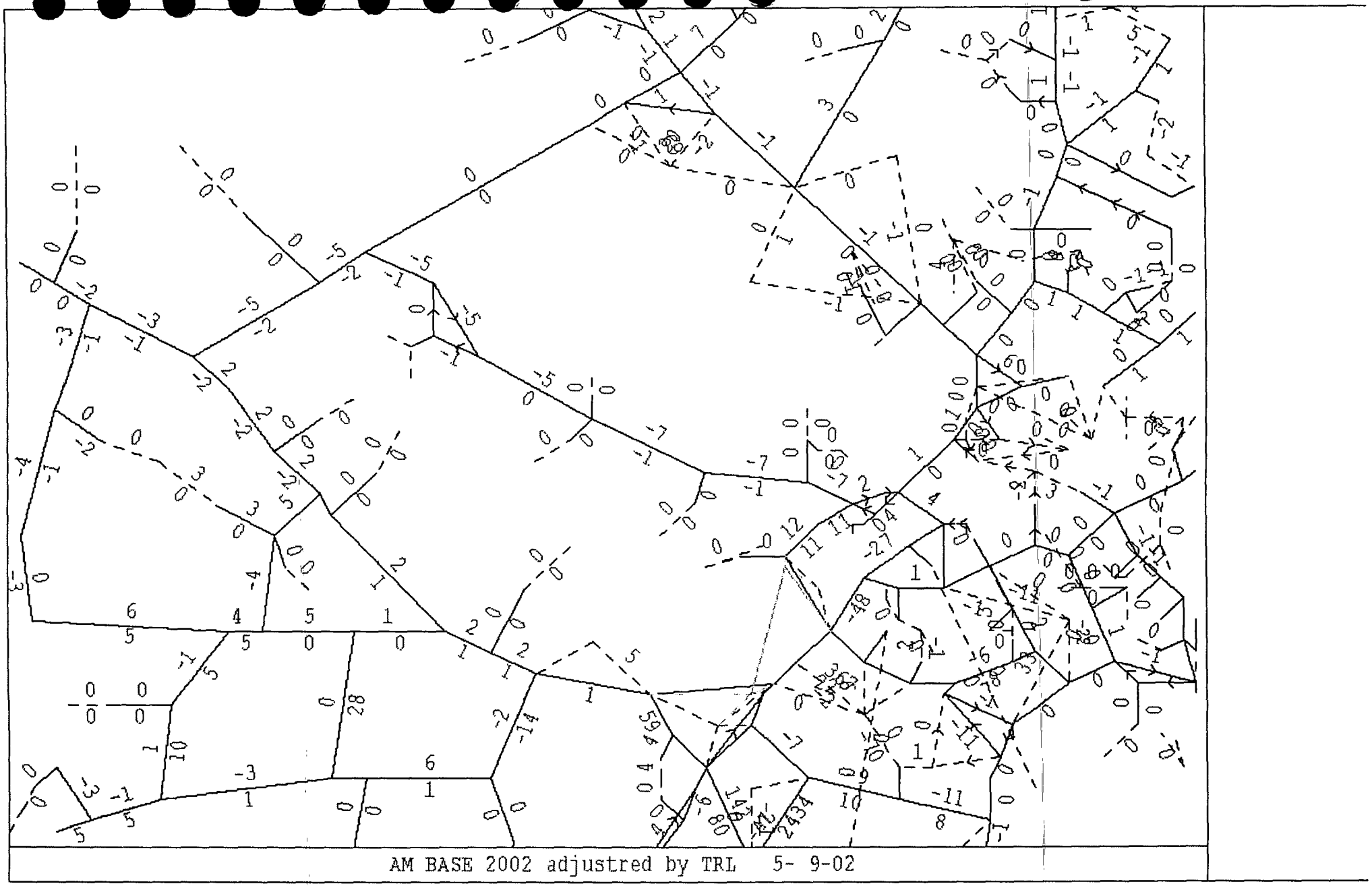
Scenario 2 - V/C (percentage) – Junction (4 of 4)



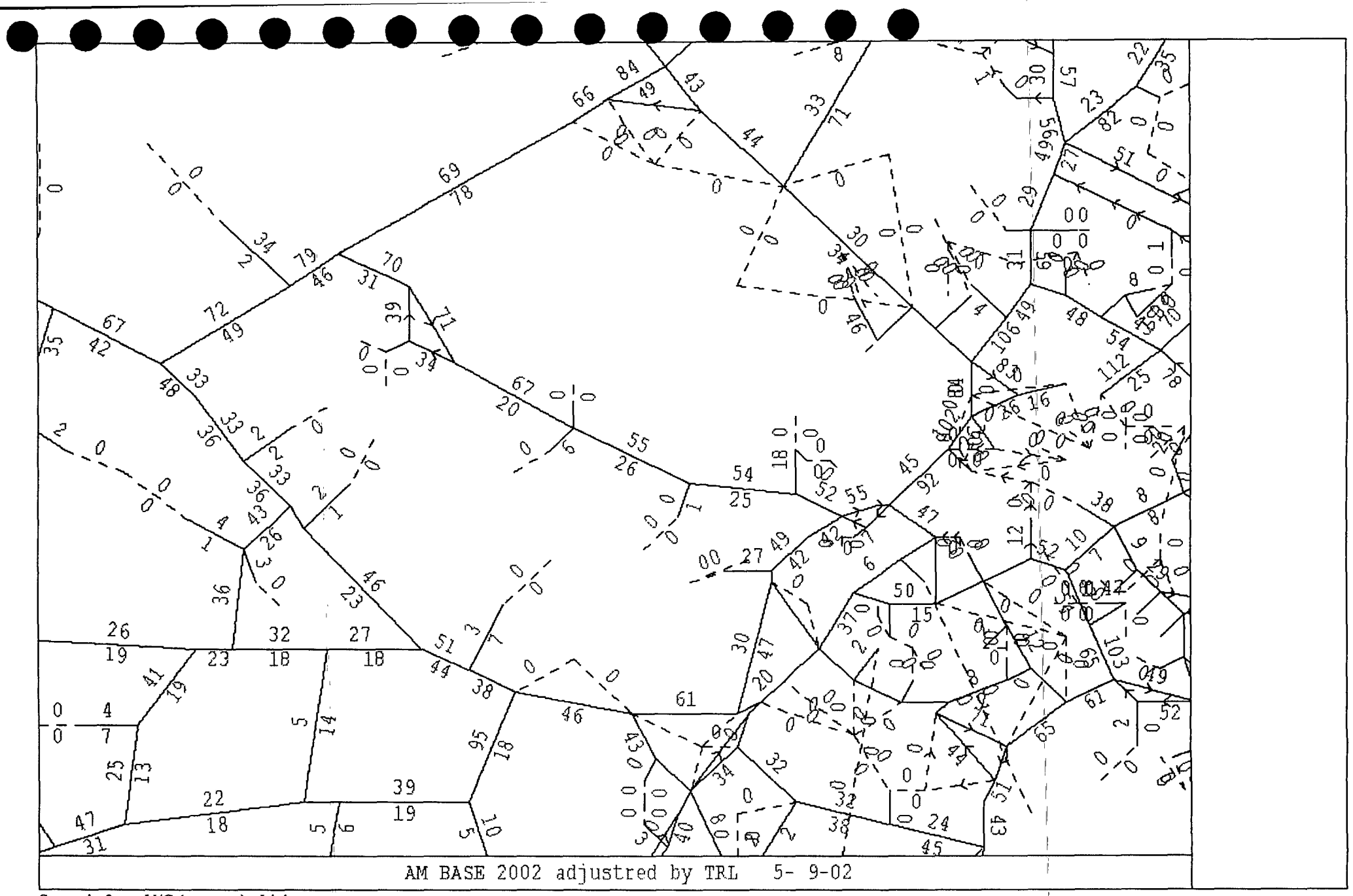
Scenario 3 -- Existing flow



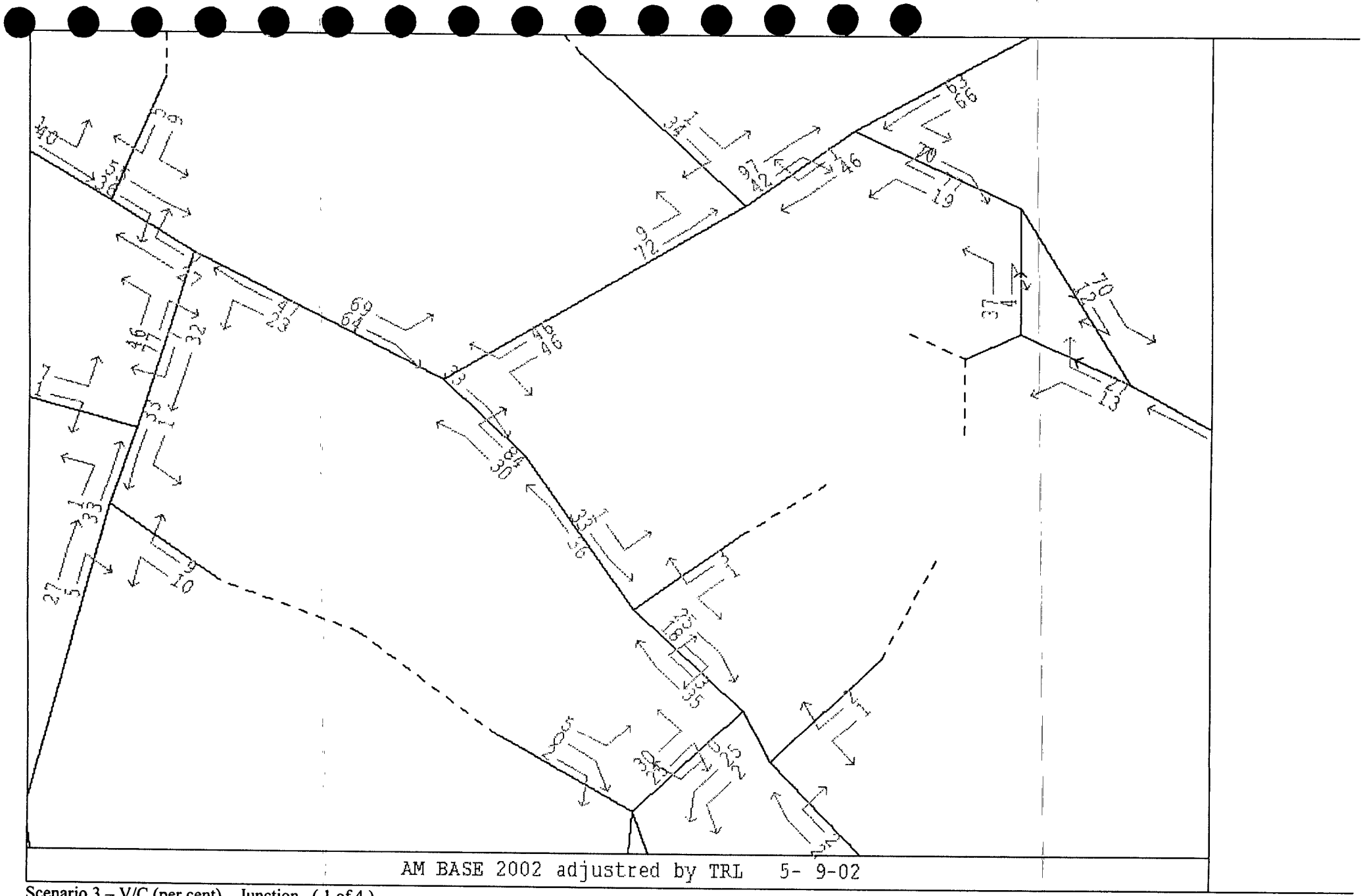
Difference of flow – (Scenario3 - base)



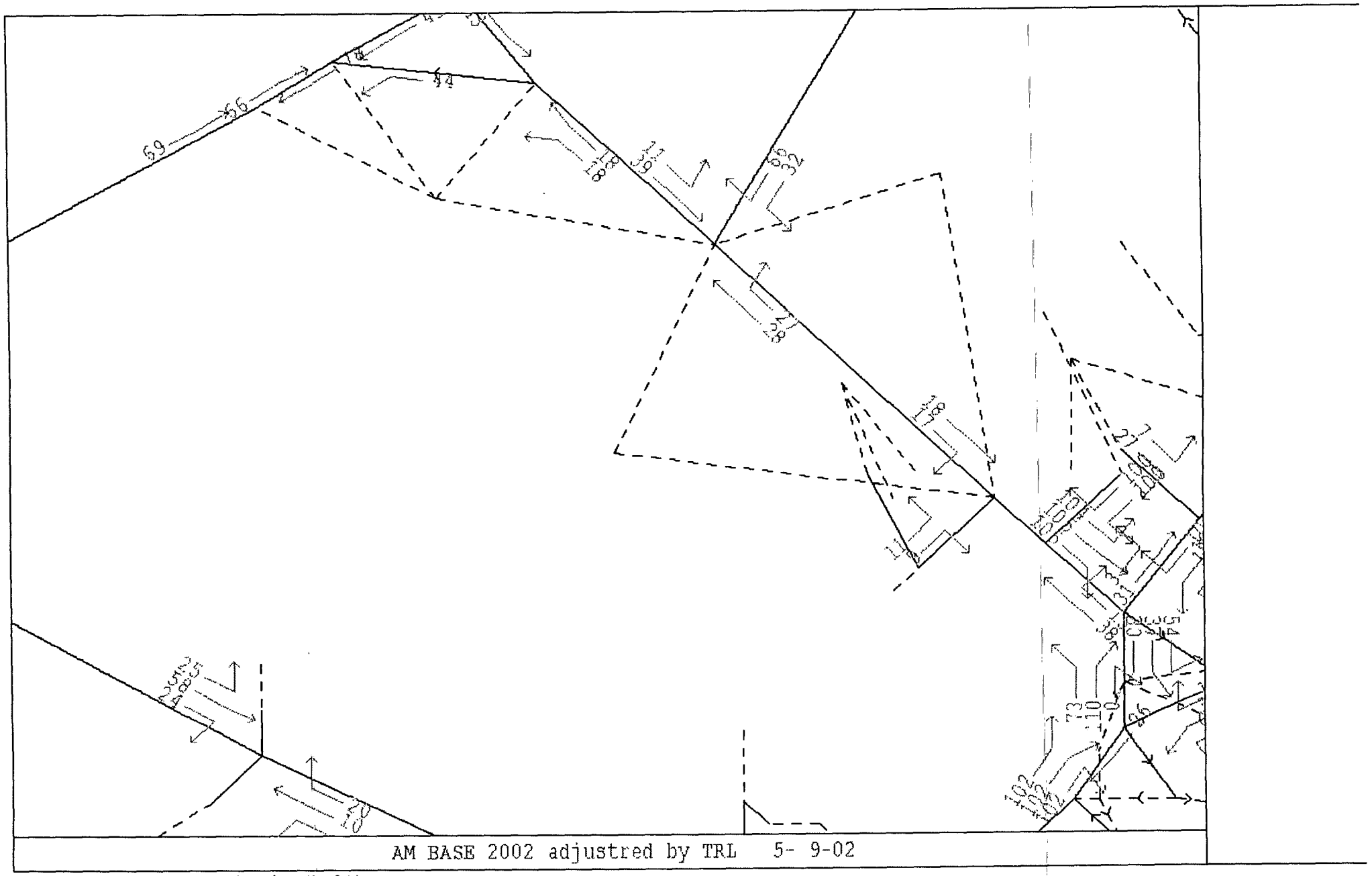
Relative difference of flow -- (Scenario 3 – base) / Base



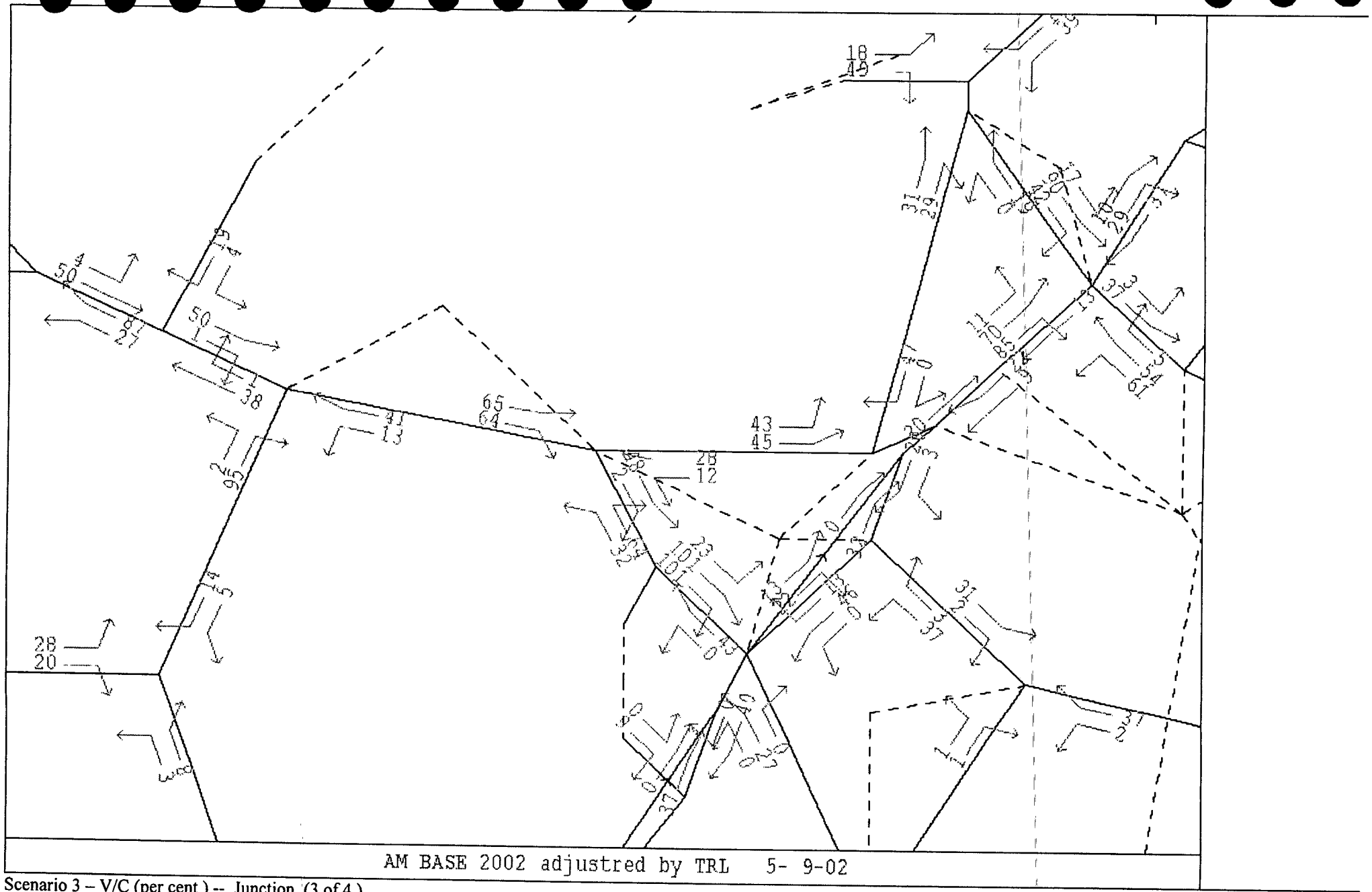
Scenario 3 --- V/C (per cent) –Link



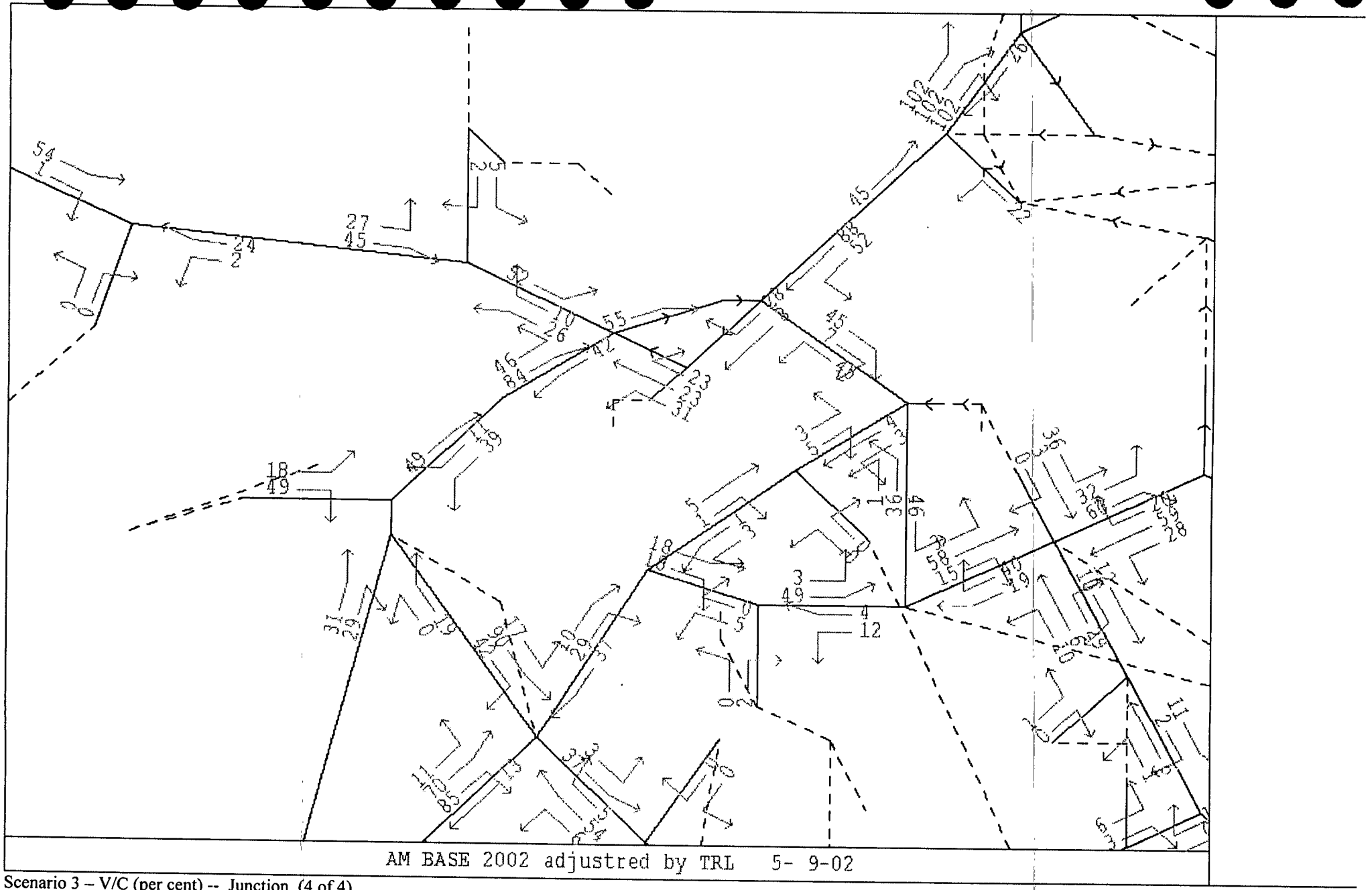
Scenario 3 – V/C (per cent) – Junction (1 of 4)



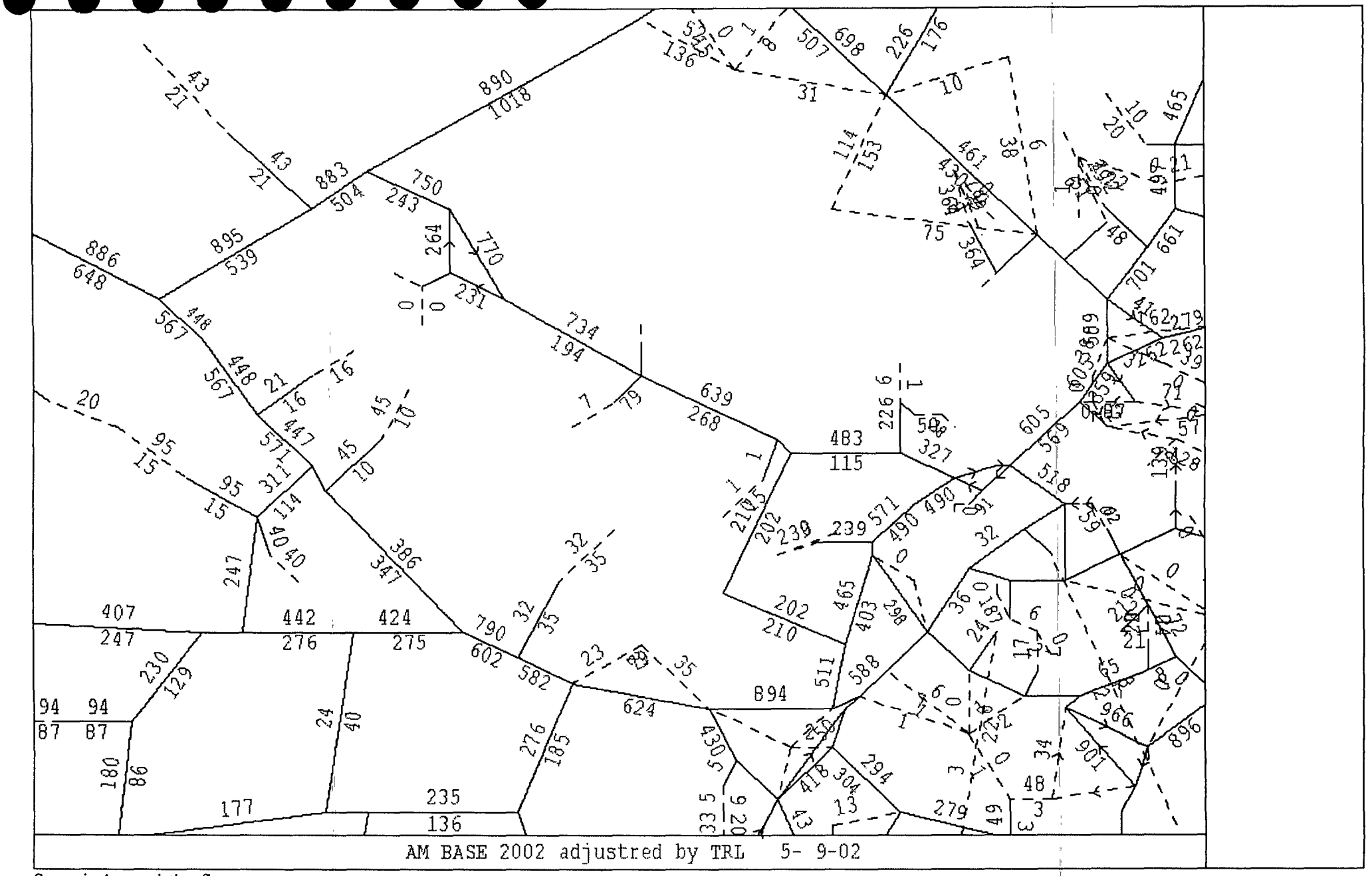
Scenario 3 – V/C (per cent) – junction (2 of 4)



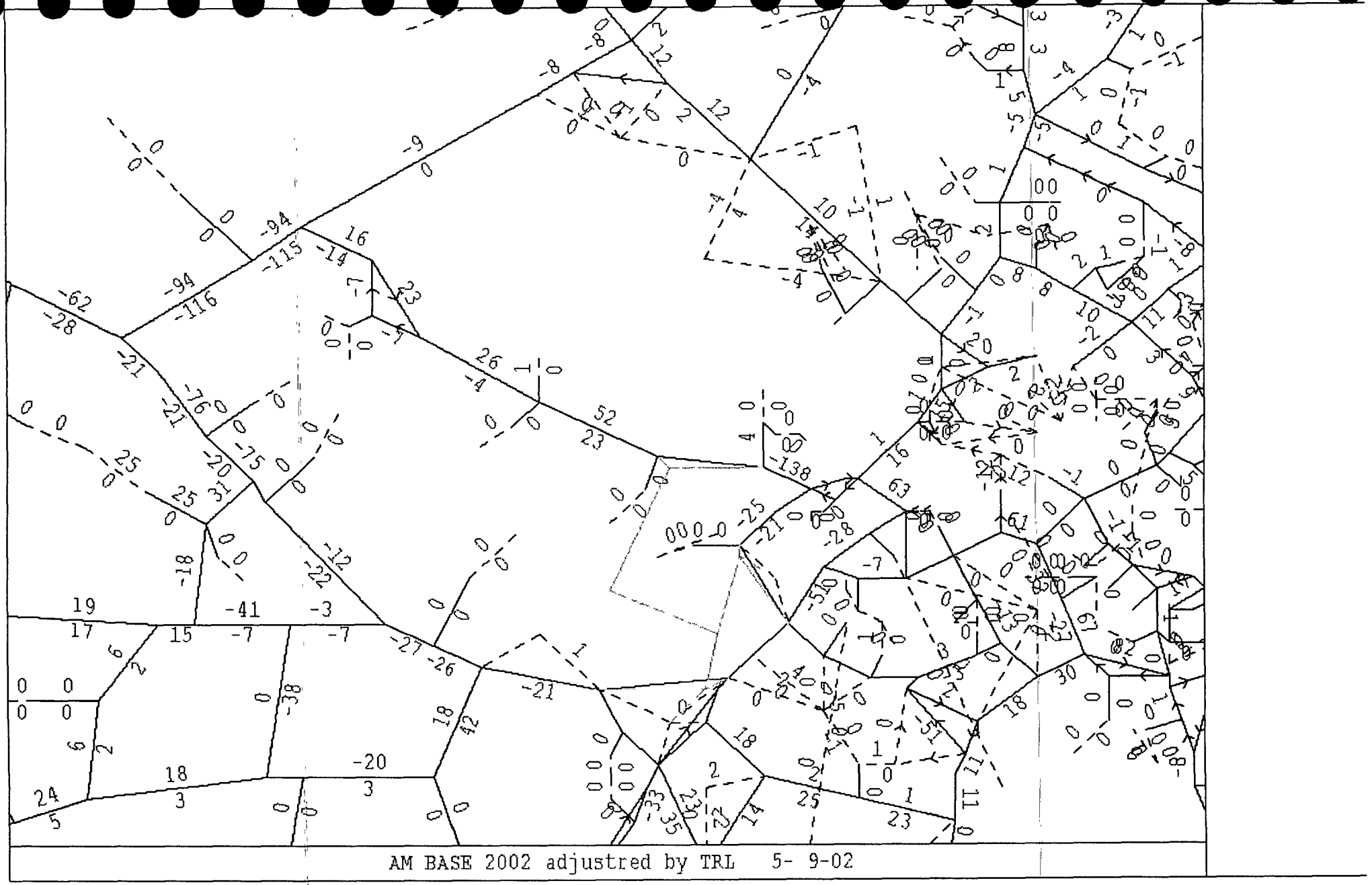
Scenario 3 – V/C (per cent) -- Junction (3 of 4)



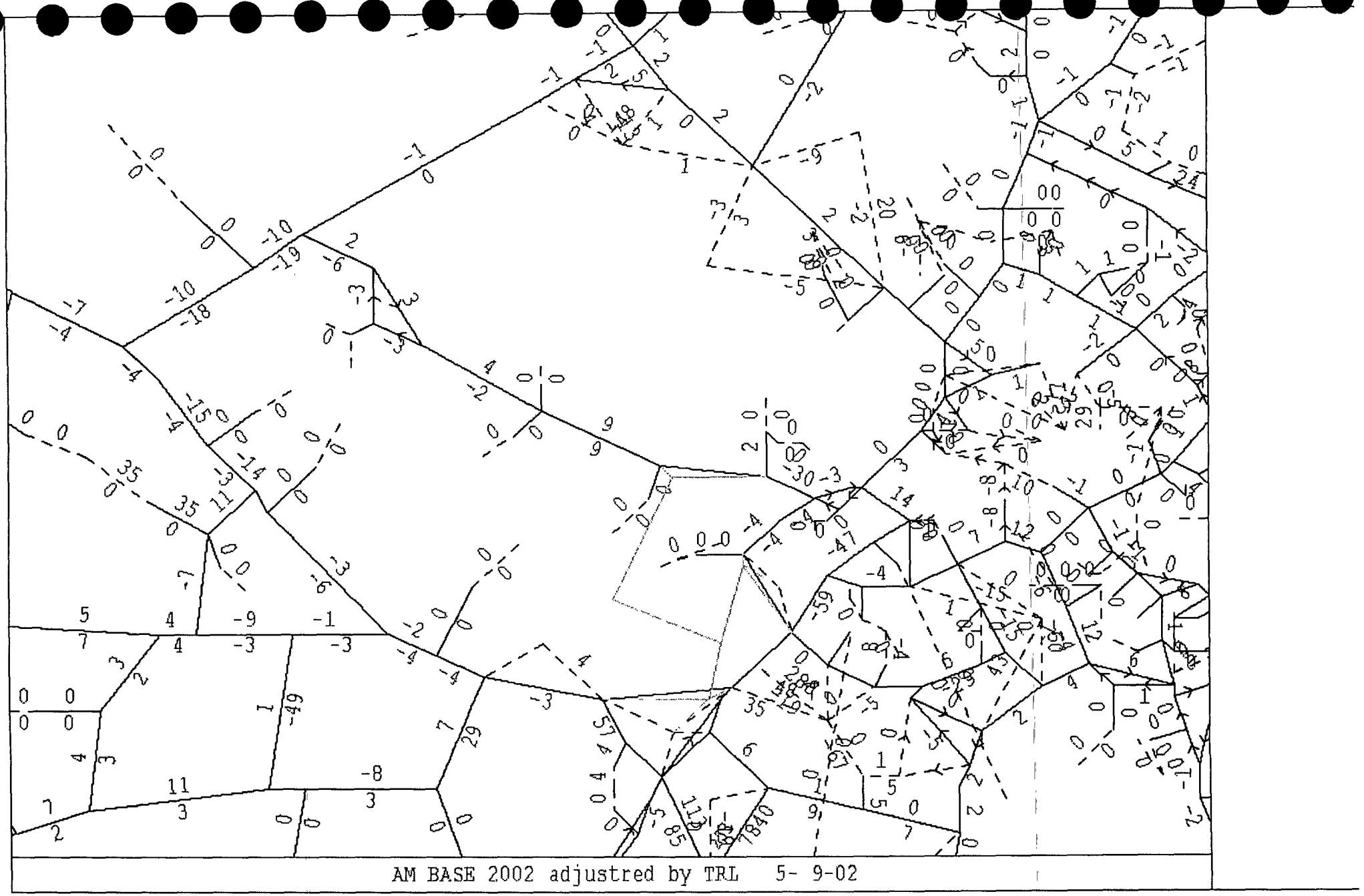
Scenario 3 – V/C (per cent) -- Junction (4 of 4)



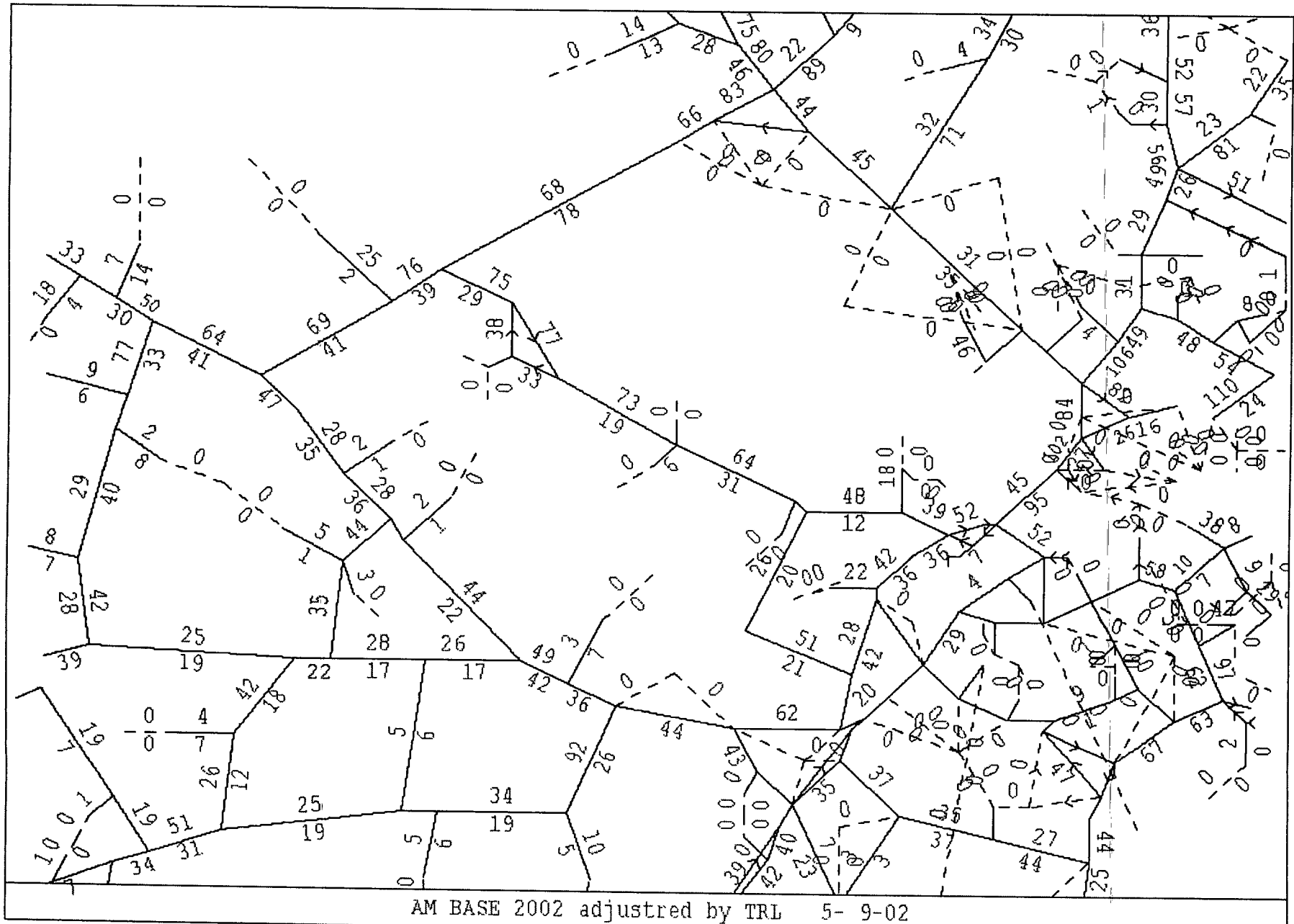
Scenario 4 -- existing flow



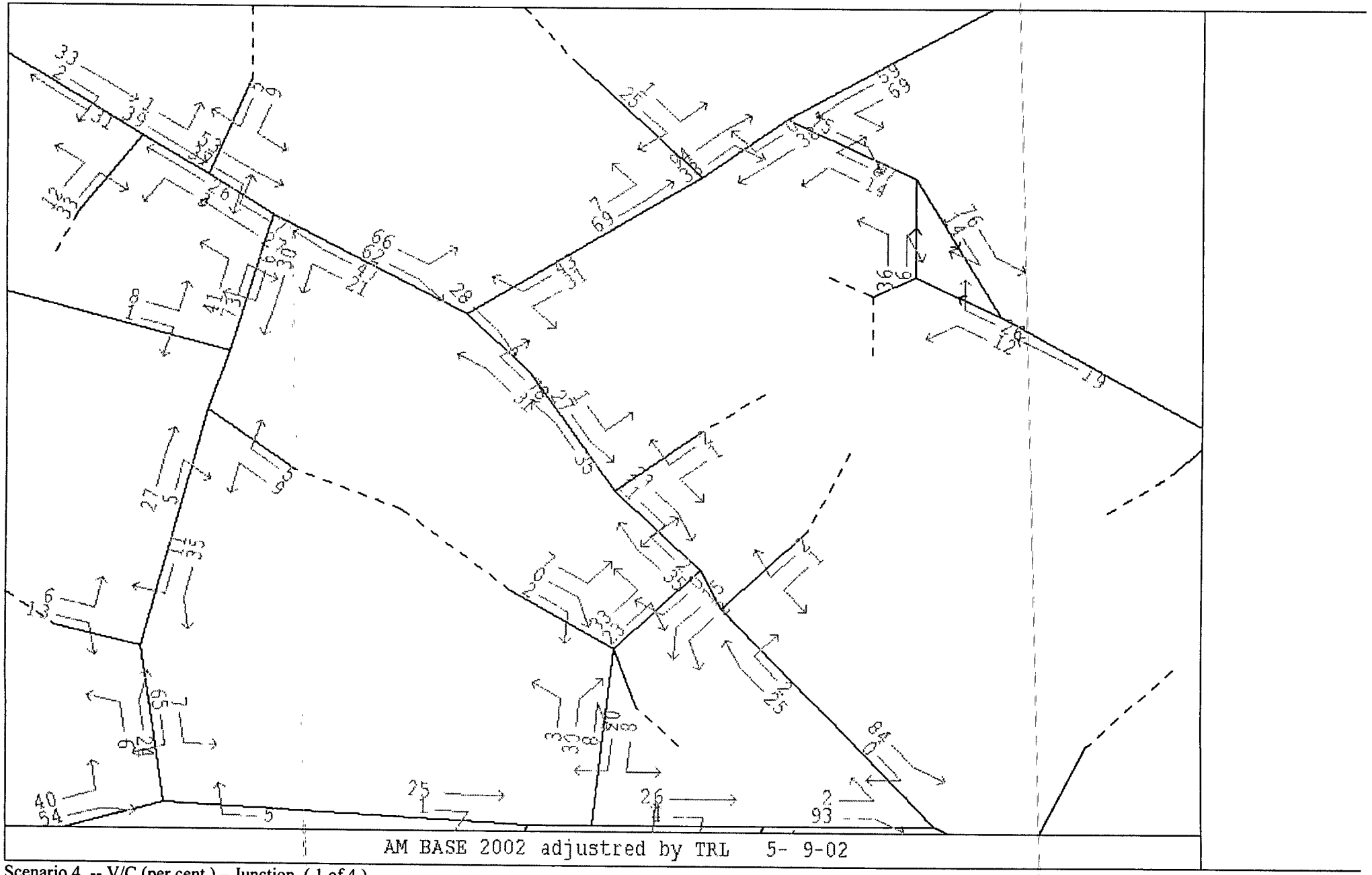
Difference of flow -- (Scenario 4 – base)



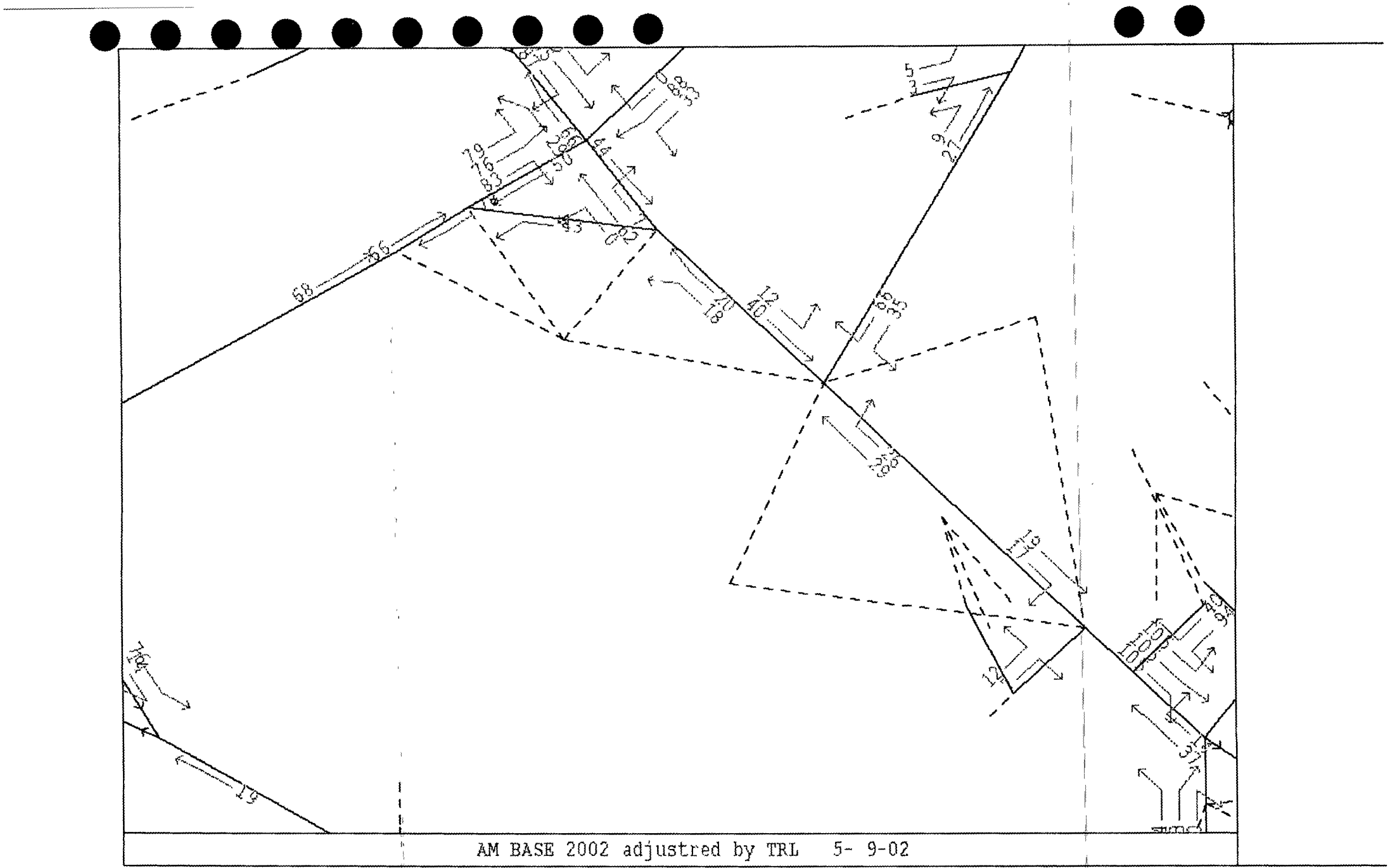
Relative difference of flow -- (scenario 4 – base)/ Base



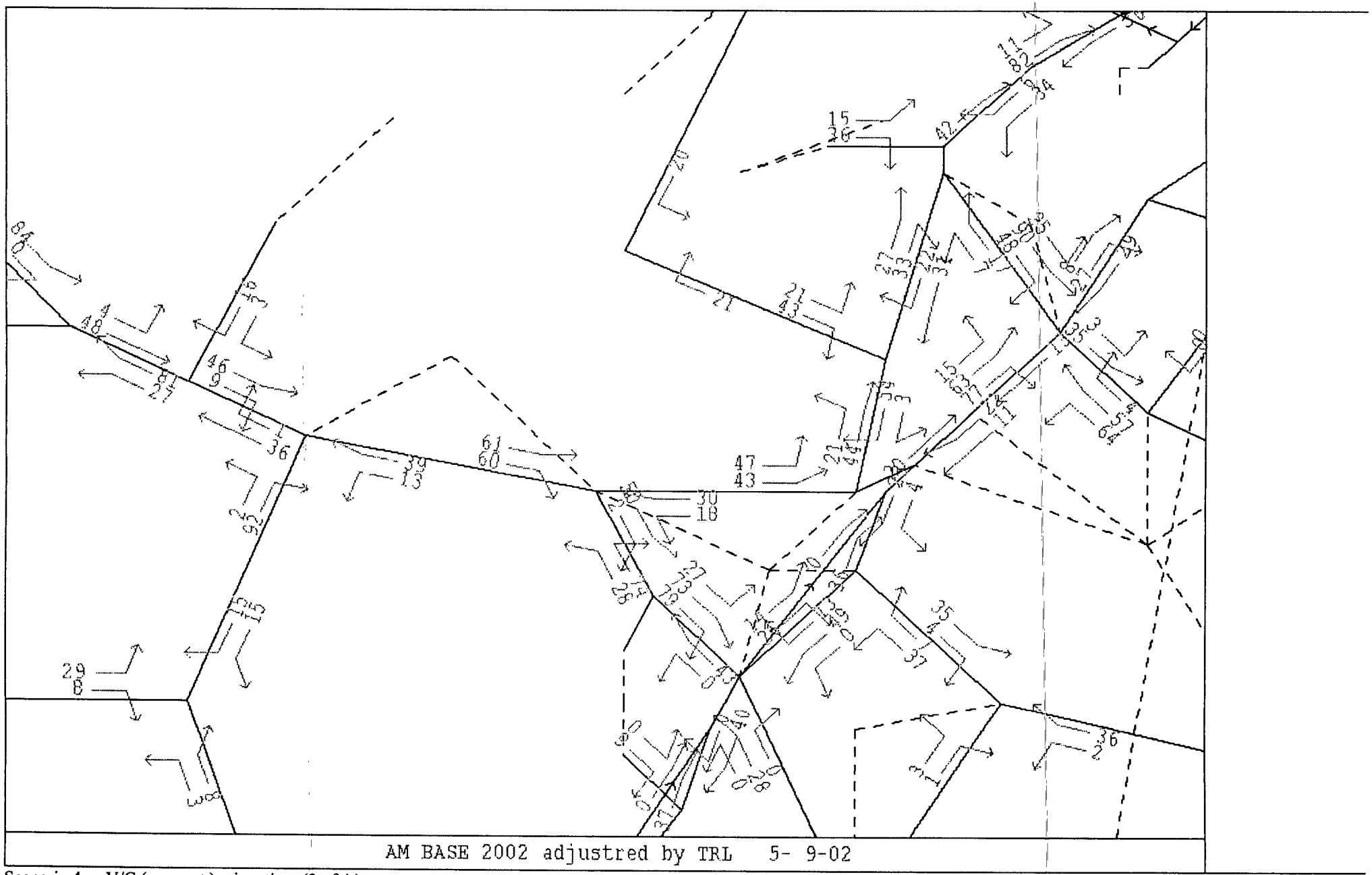
Scenario 4 – V/C (per cent) – link



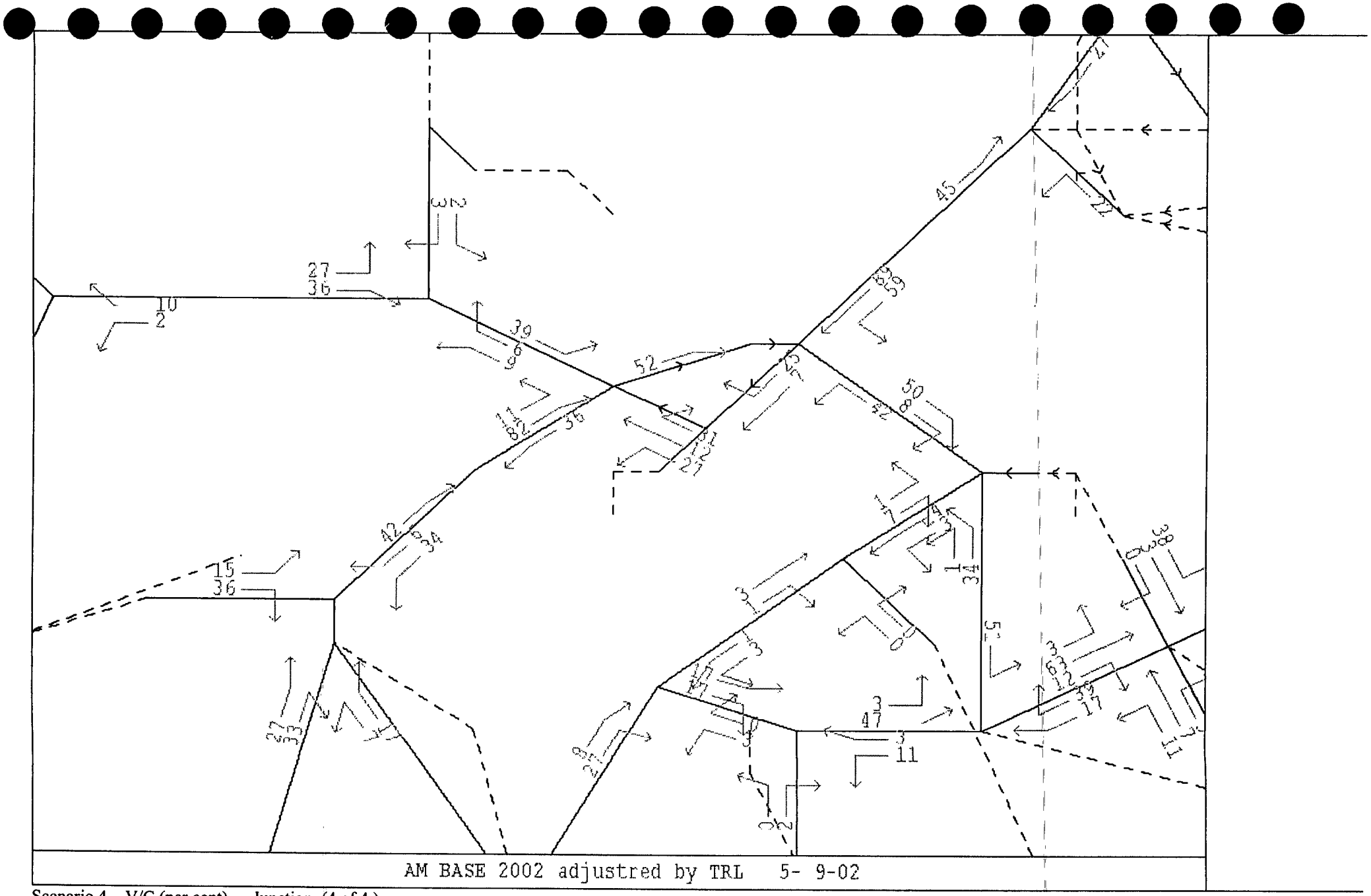
Scenario 4 -- V/C (per cent) – Junction (1 of 4)



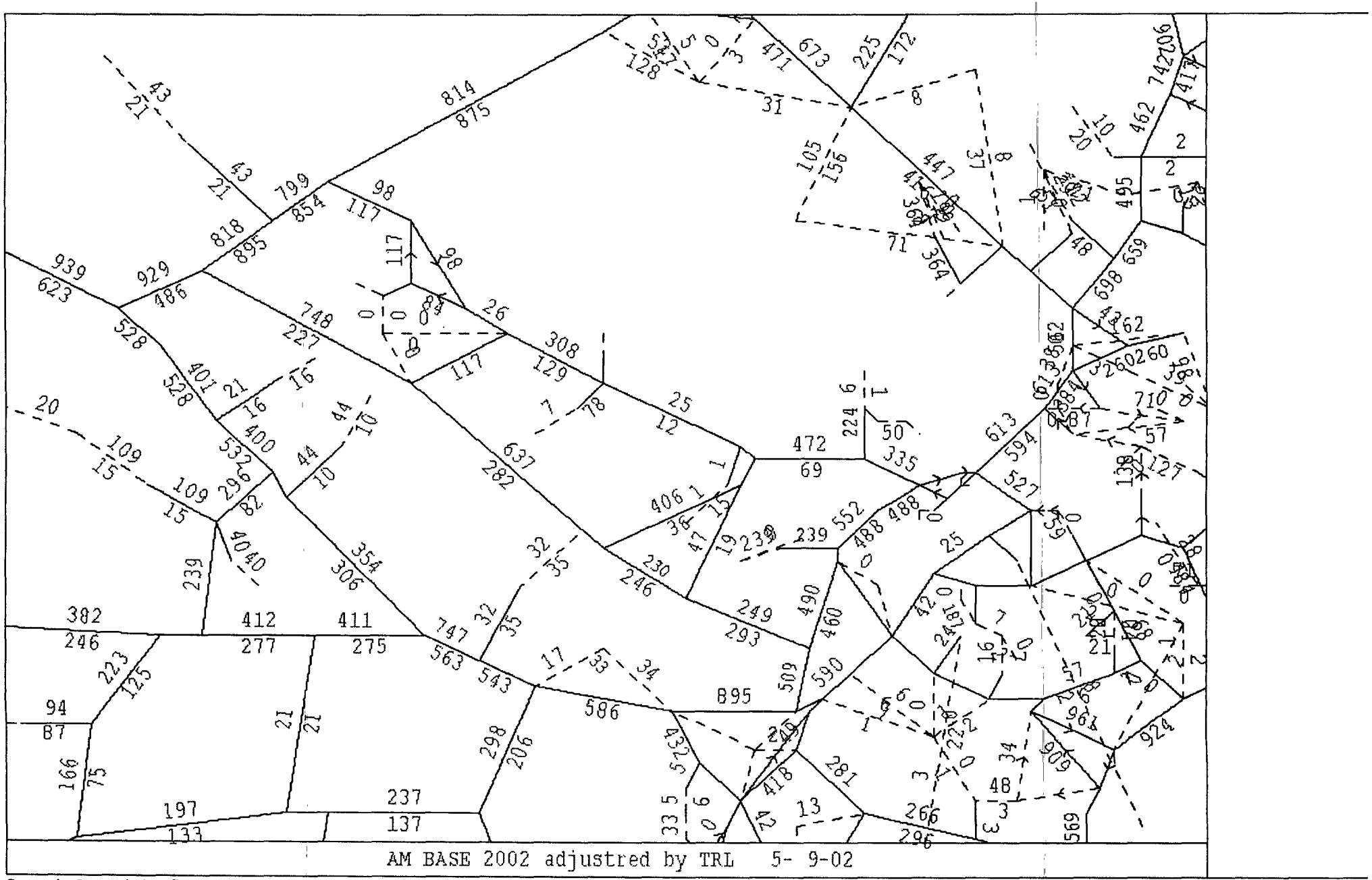
Scenario 4 -- V/C (per cent) -- junction (2 of 4)



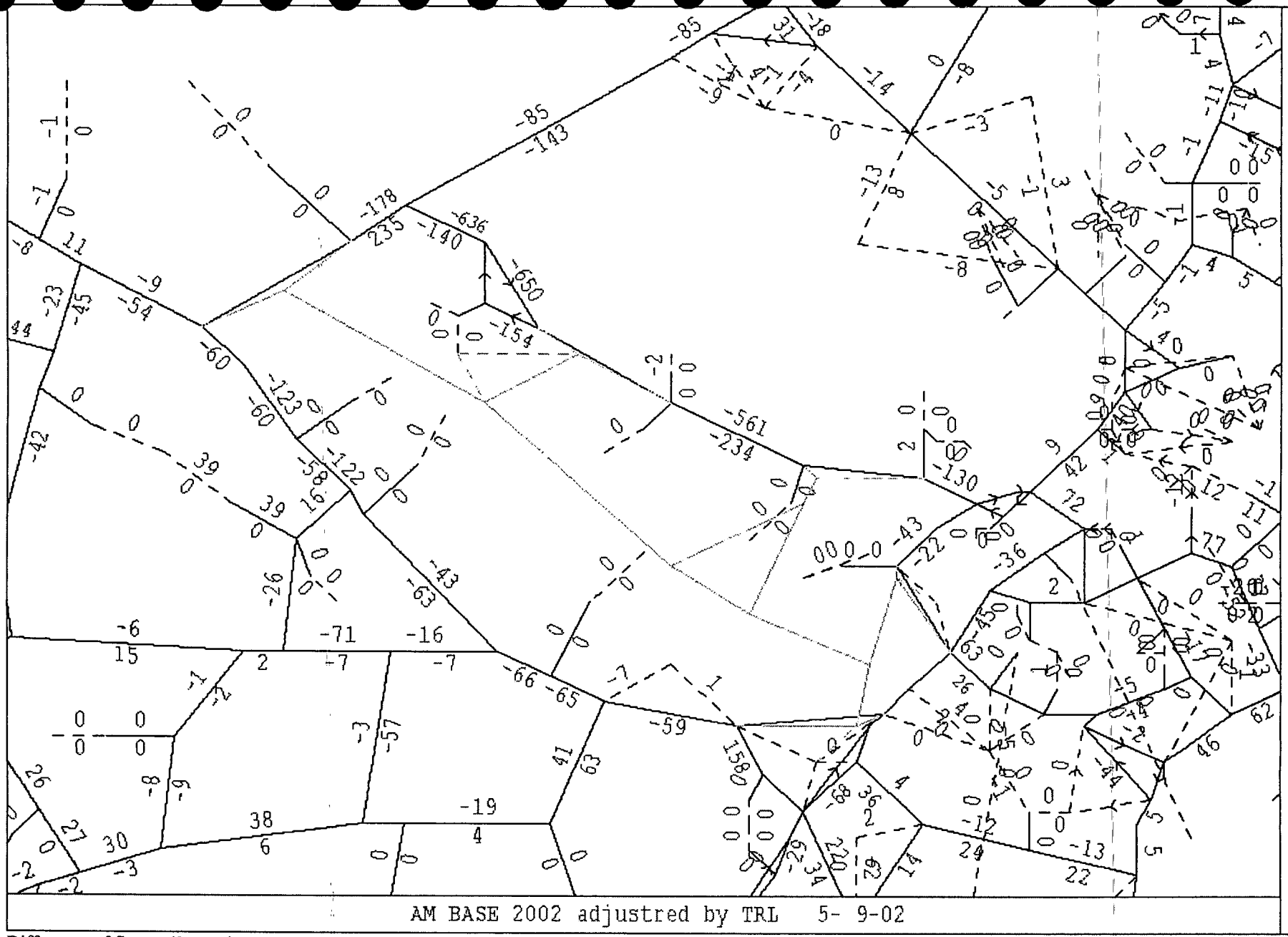
Scenario 4 - V/C (per cent) – junction (3 of 4)



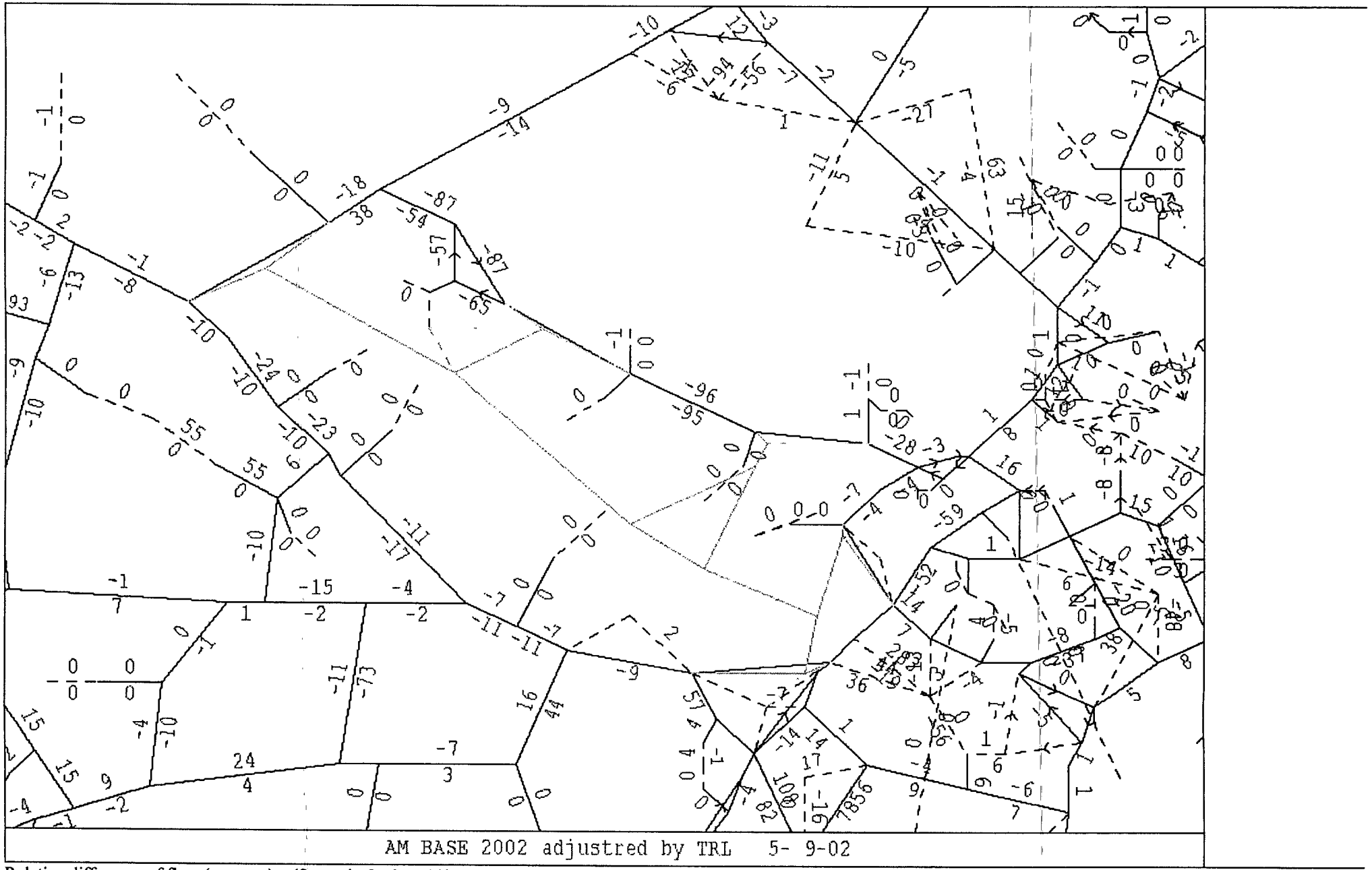
Scenario 4 – V/C (per cent) -- Junction (4 of 4)



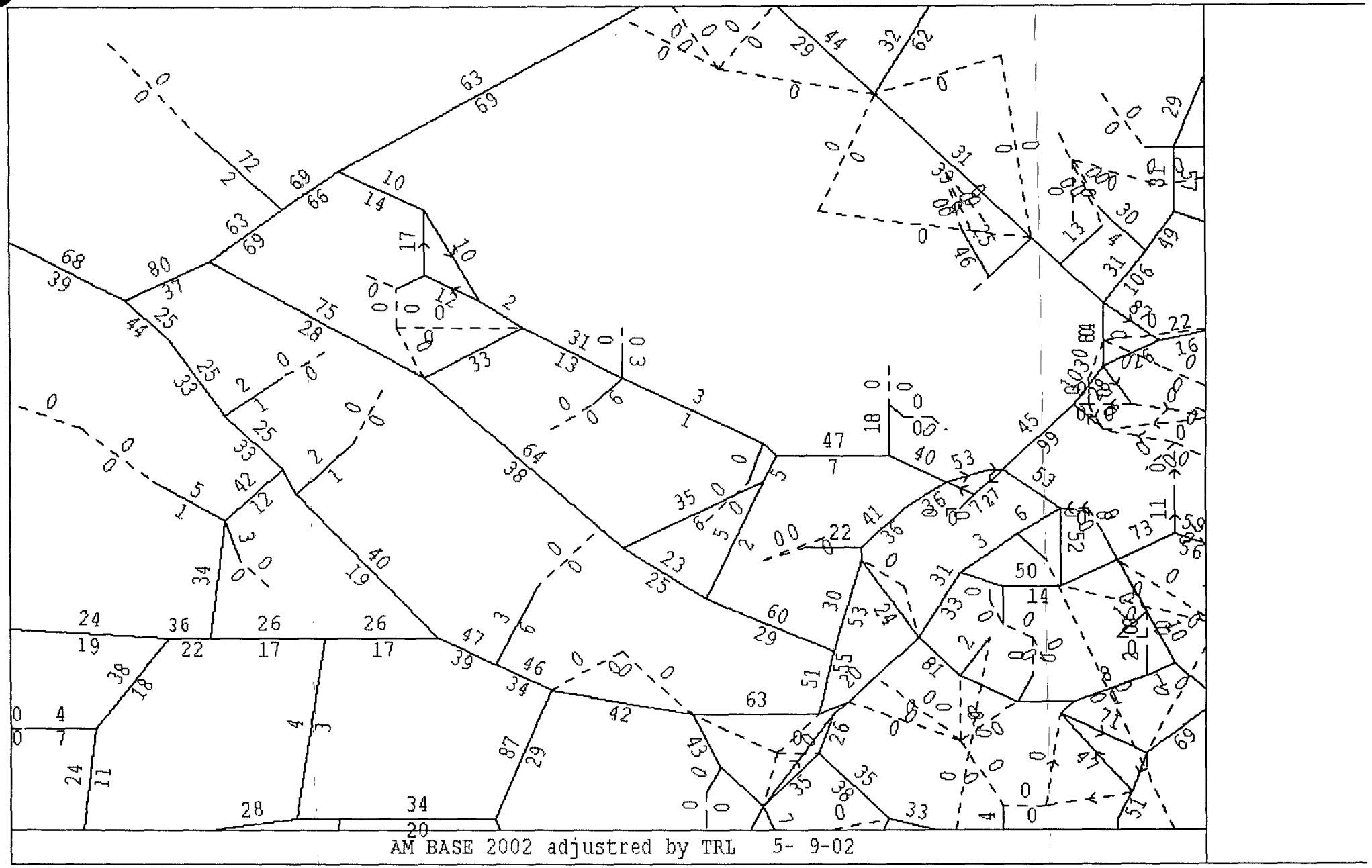
Scenario 5 - existing flow



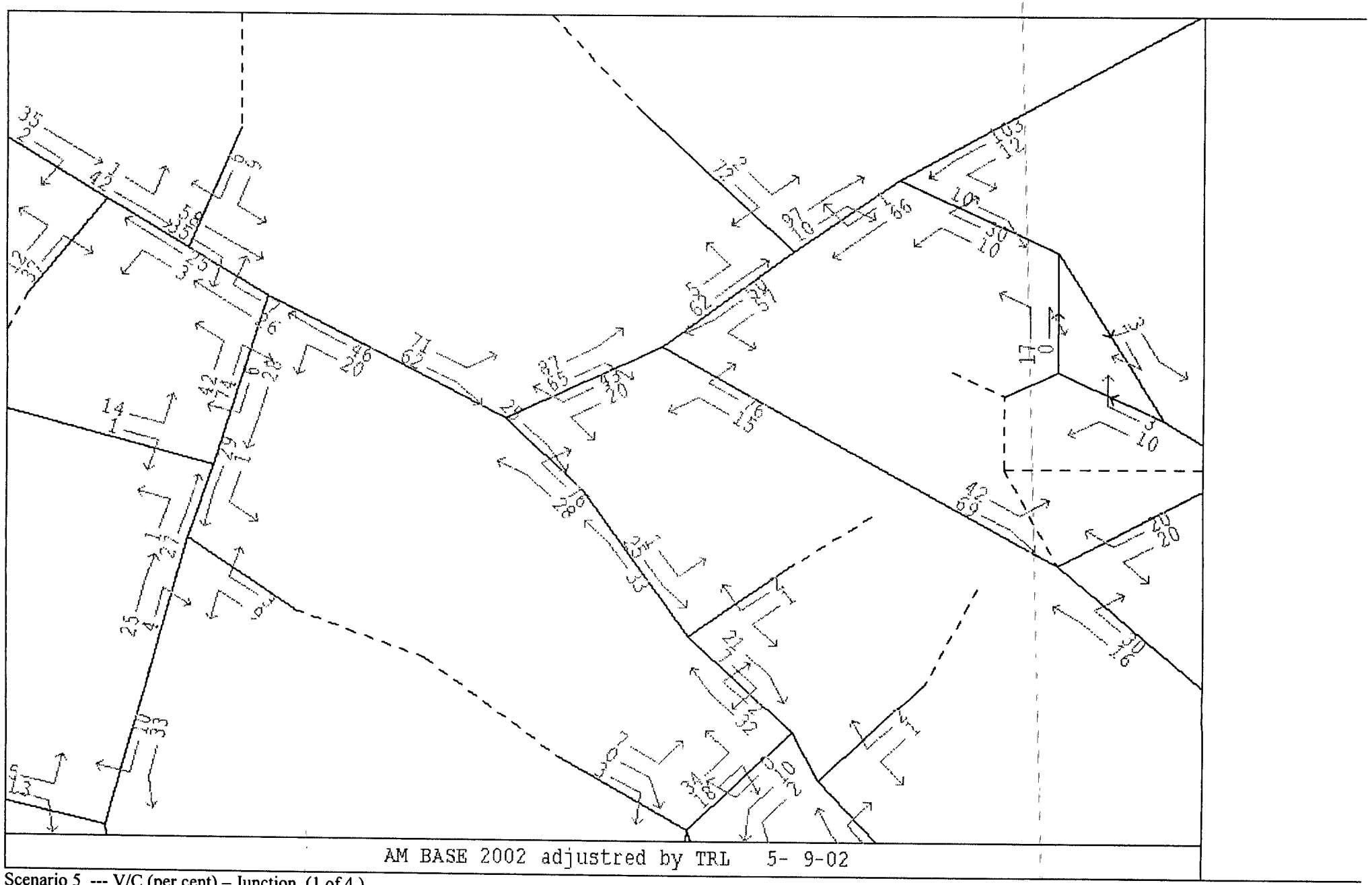
Difference of flow – (Scenario 5 – Base)



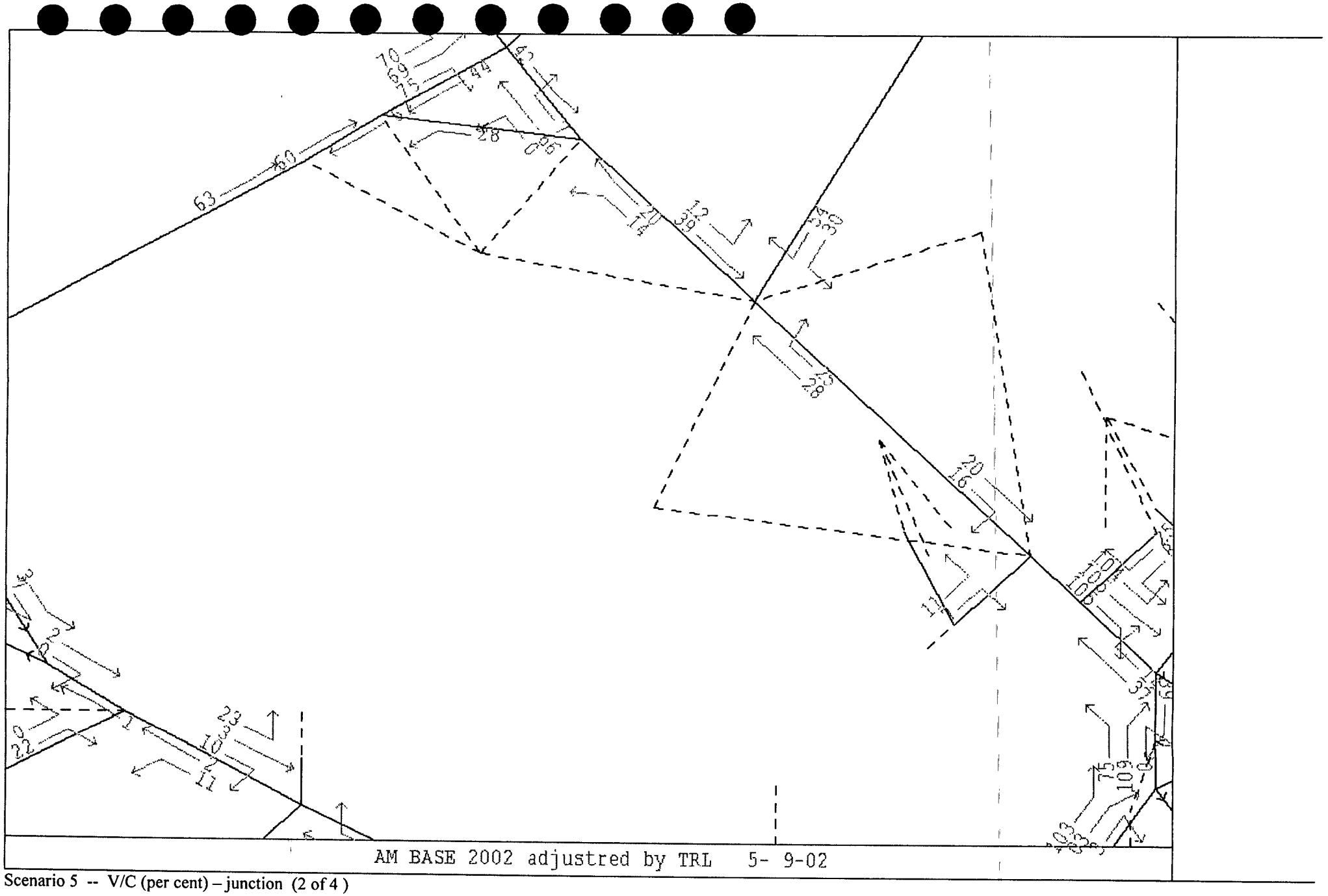
Relative difference of flow (per cent) – (Scenario 5 – base)/ base



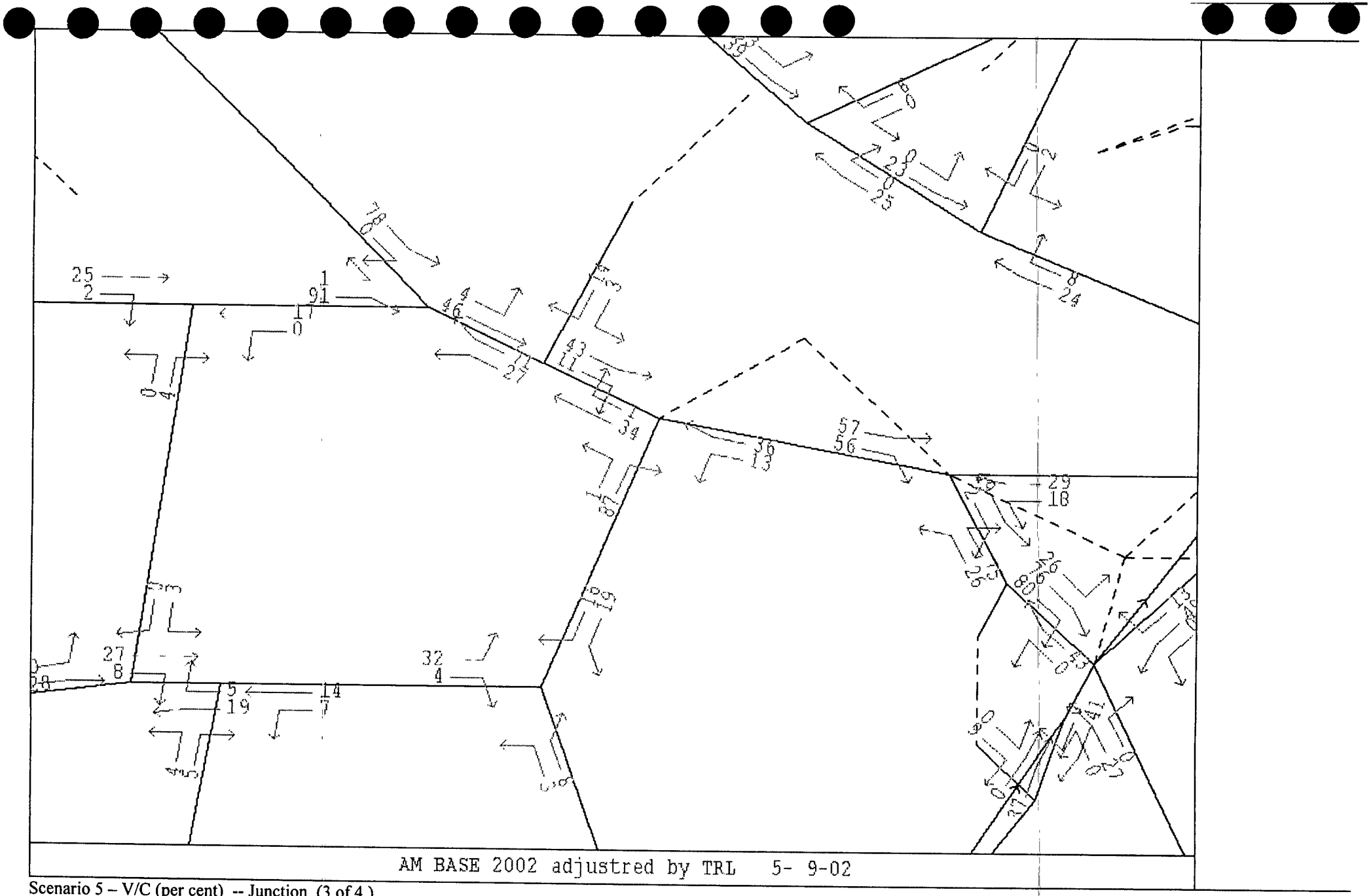
Scenario 5 – V/C (per cent) –link



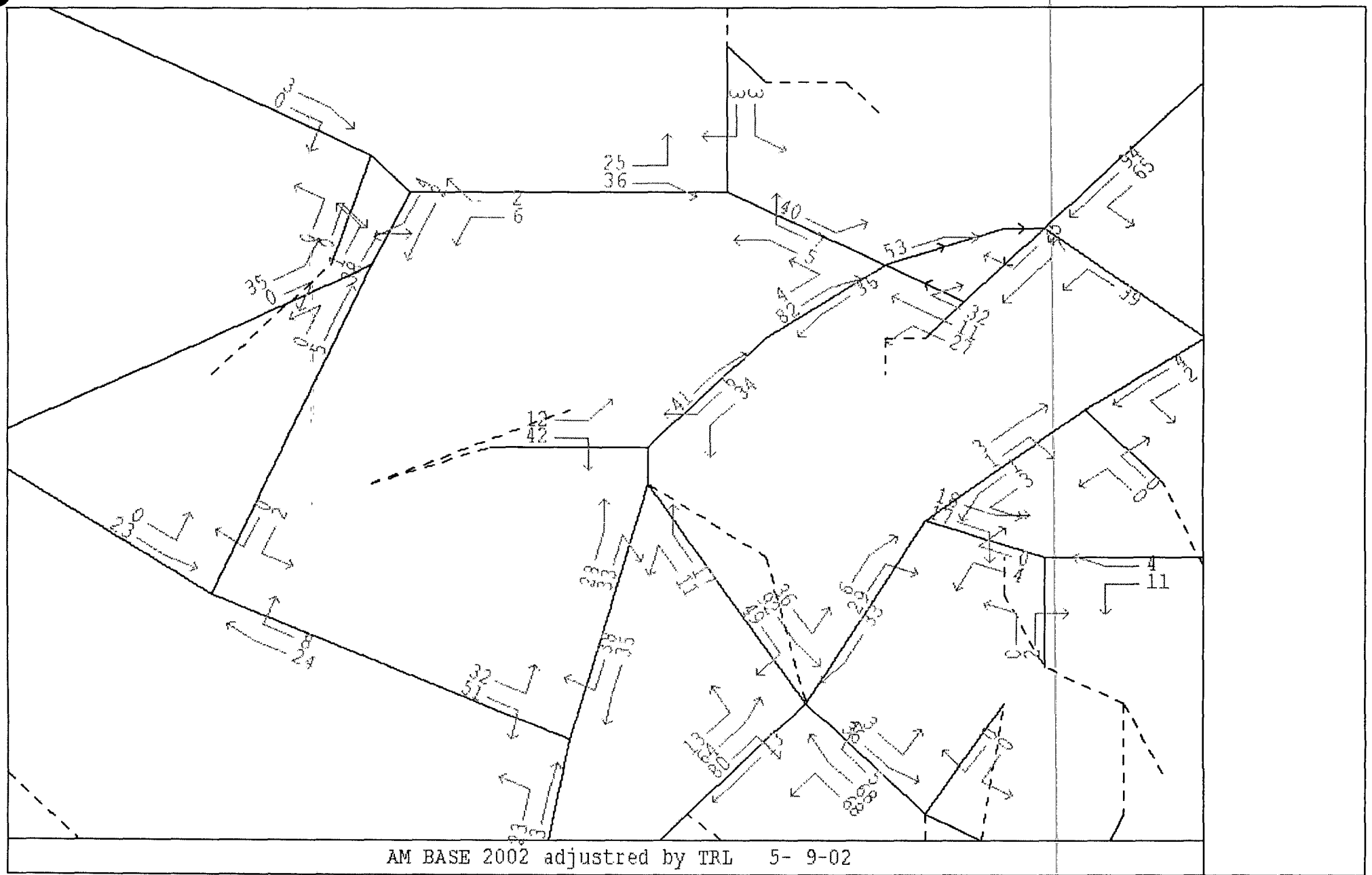
Scenario 5 --- V/C (per cent) – Junction (1 of 4)



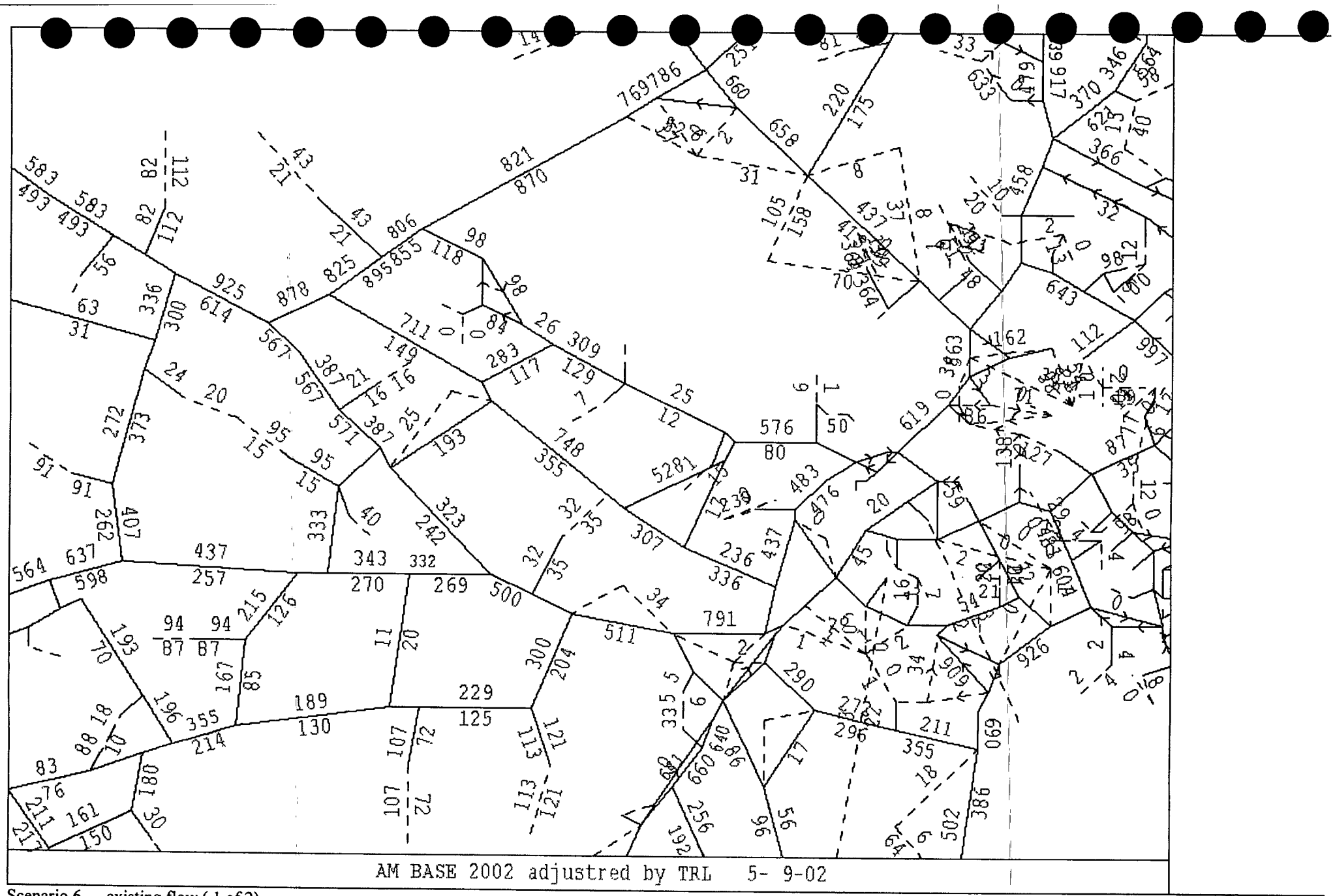
Scenario 5 -- V/C (per cent) – junction (2 of 4)



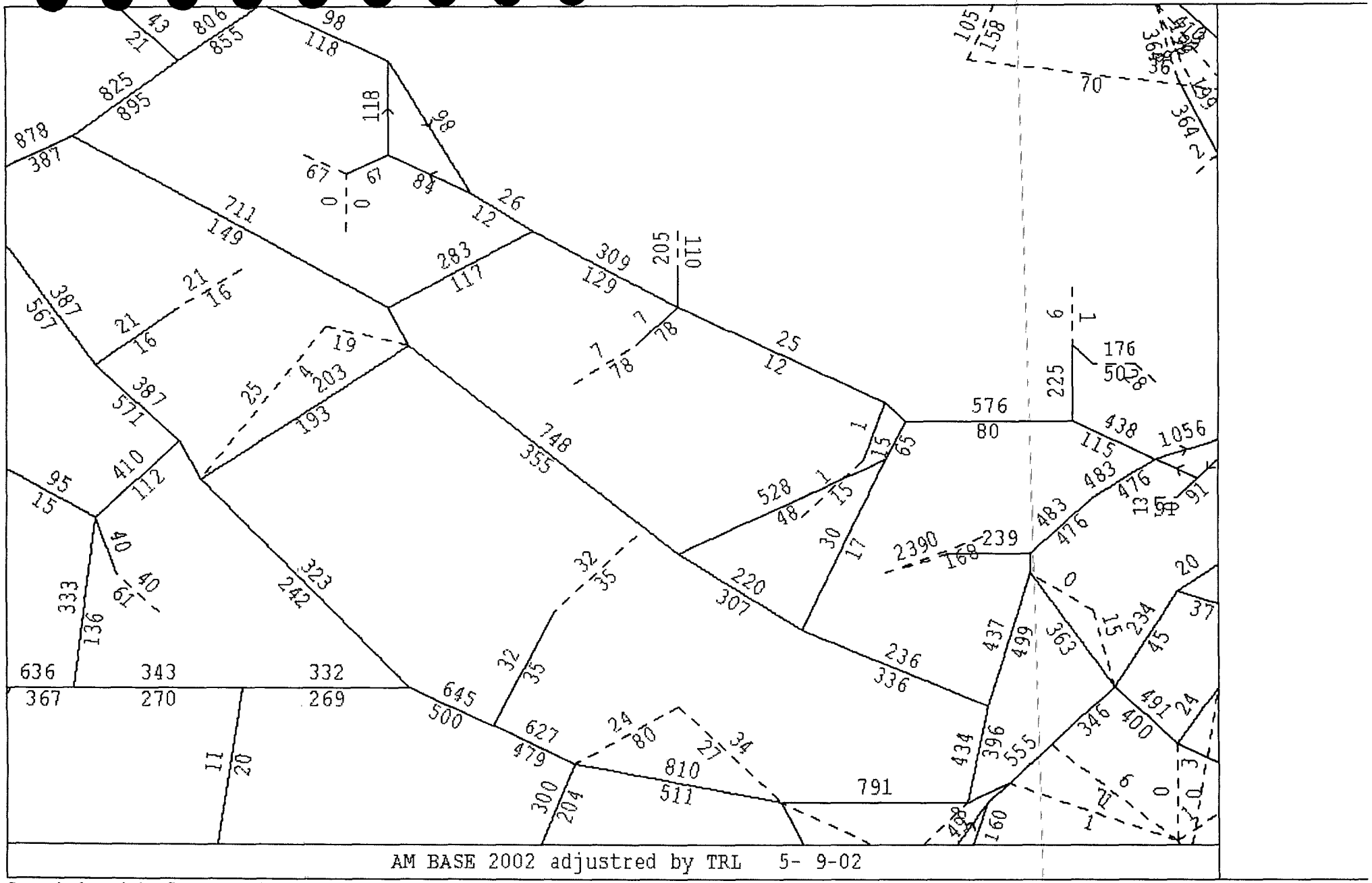
Scenario 5 – V/C (per cent) -- Junction (3 of 4)



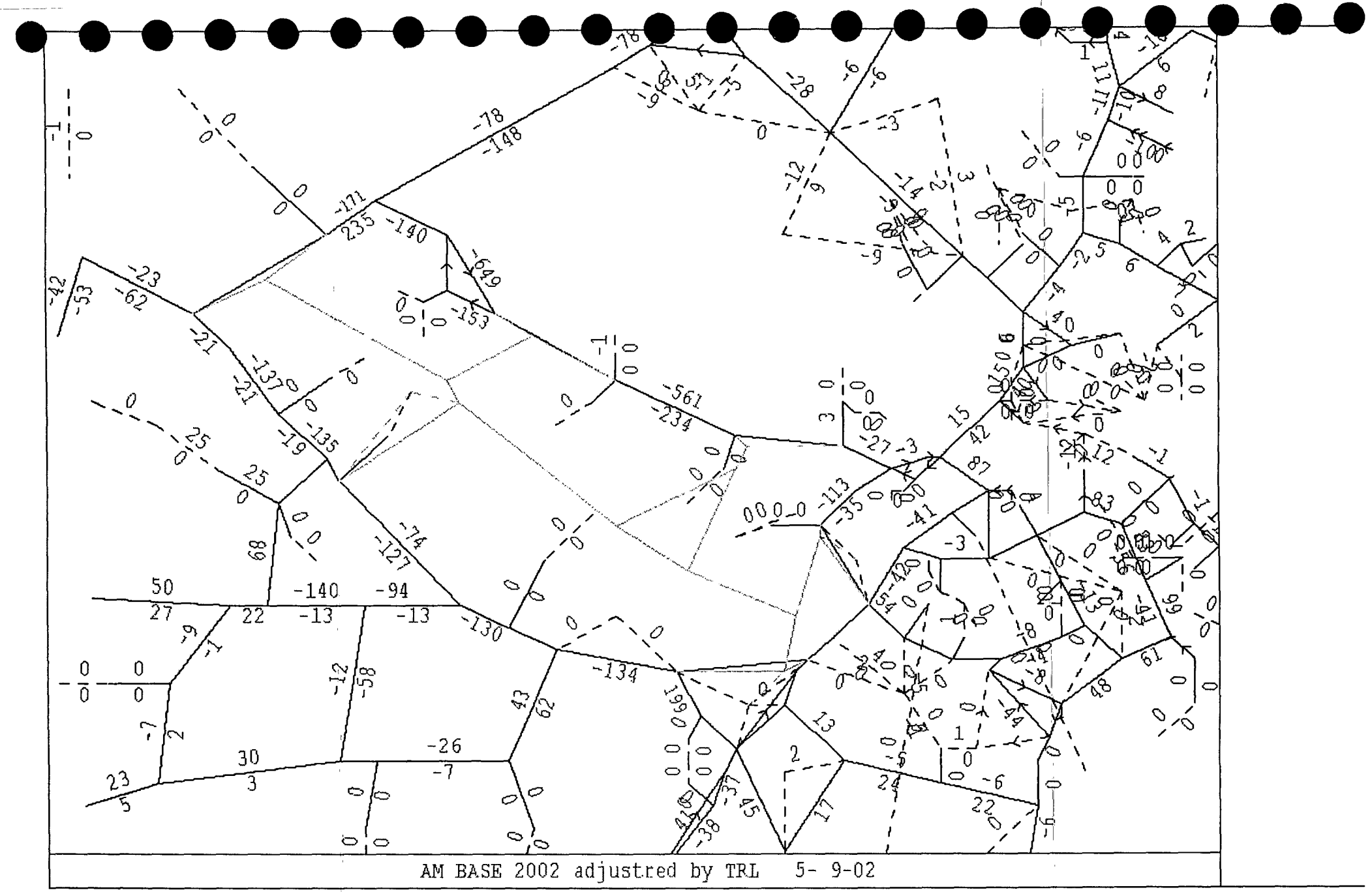
Scenario 5 - V/C (per cent) - Junction (4 of 4)



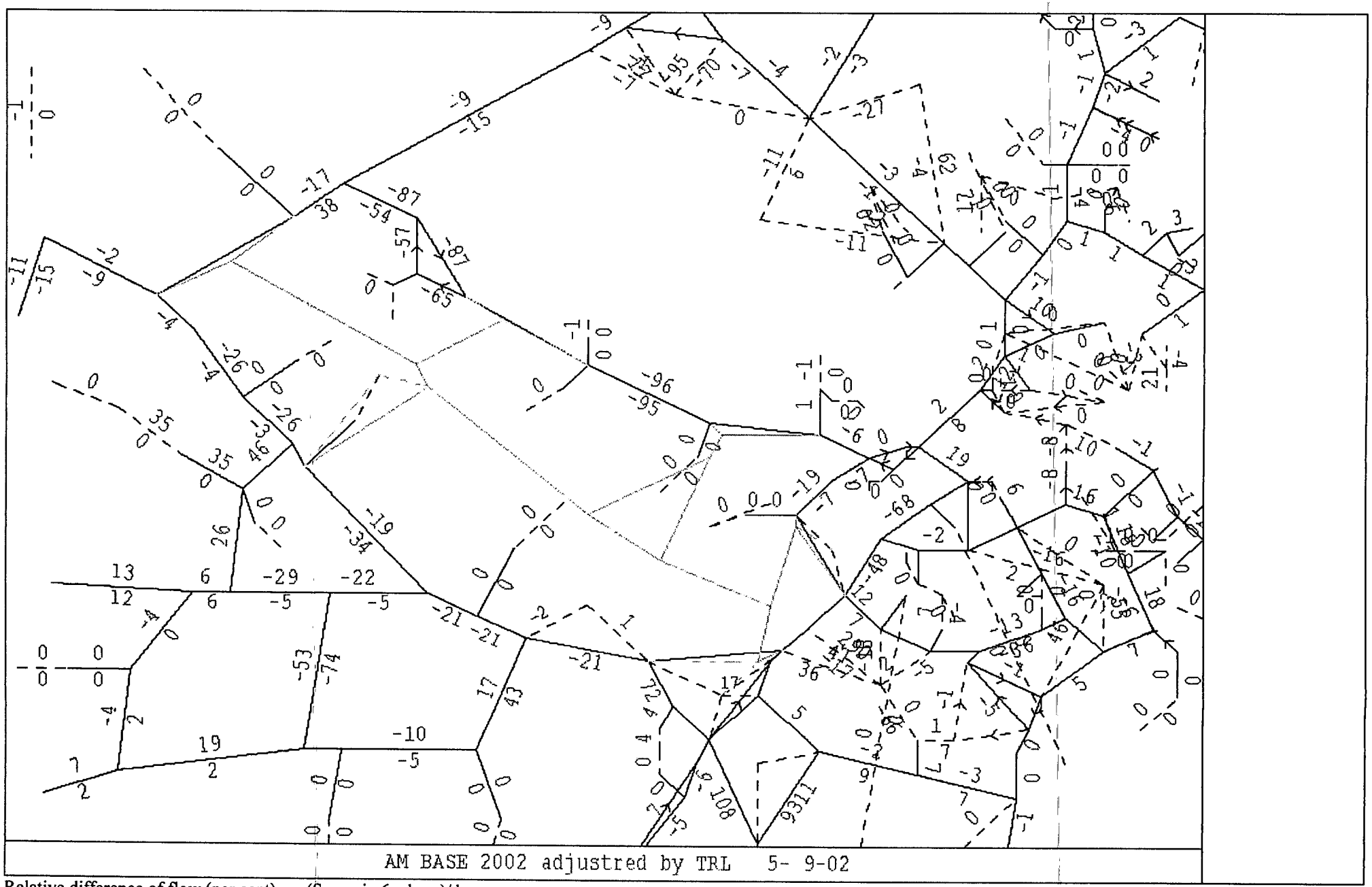
Scenario 6 -- existing flow (1 of 2)



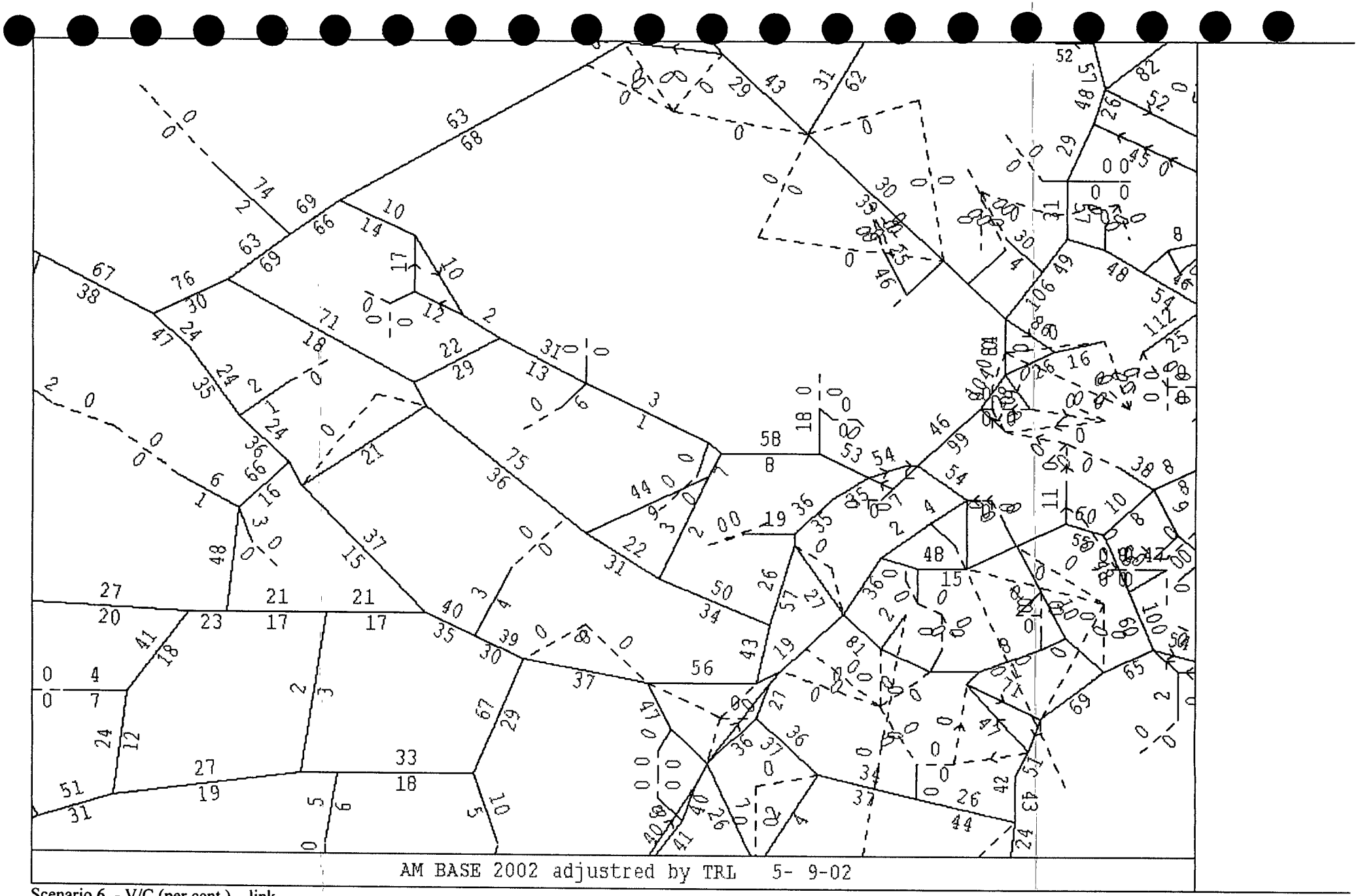
Scenario 6 - existing flow (2 of 2)



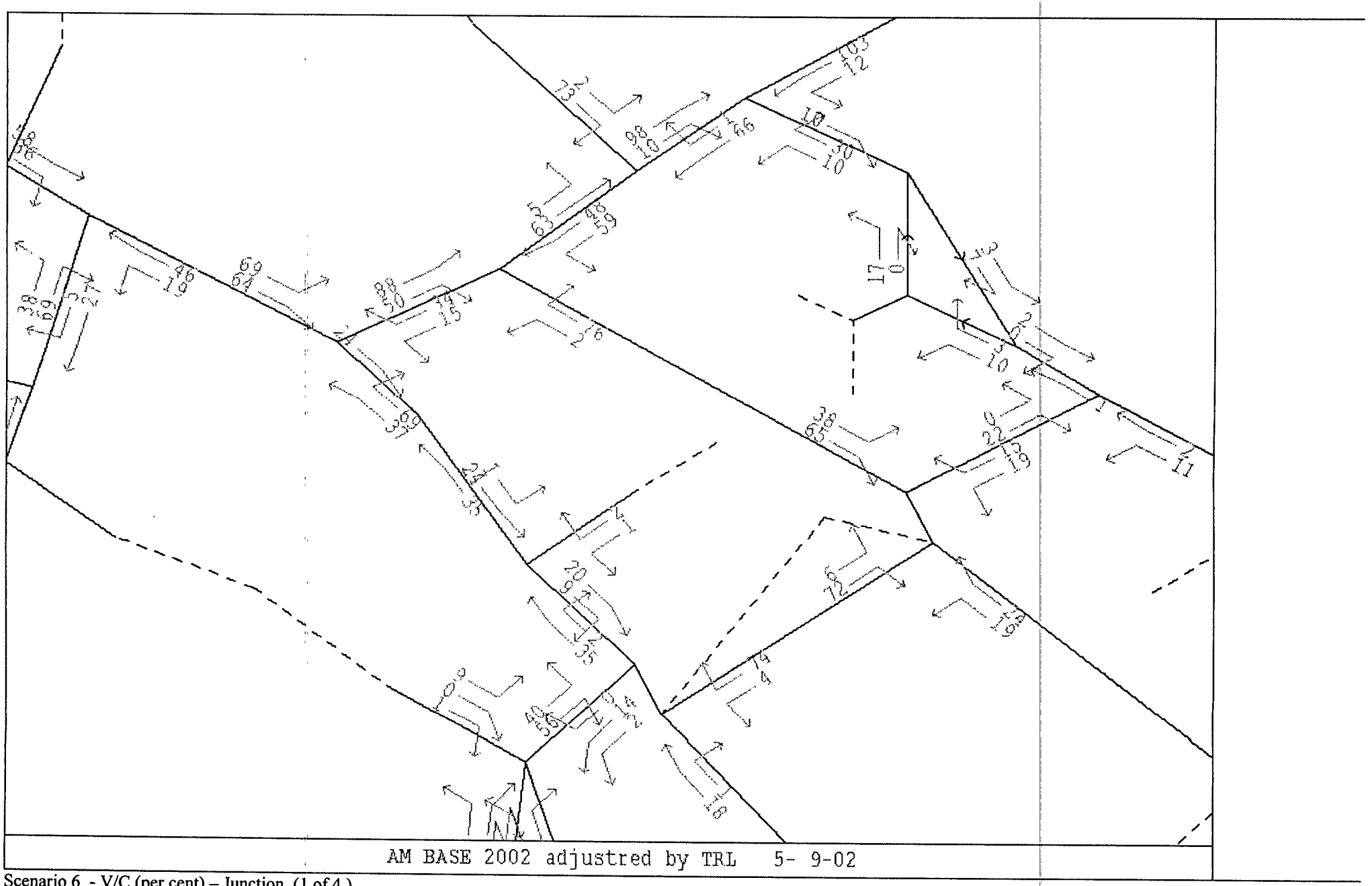
Difference of flow -- (scenario 6 – base)



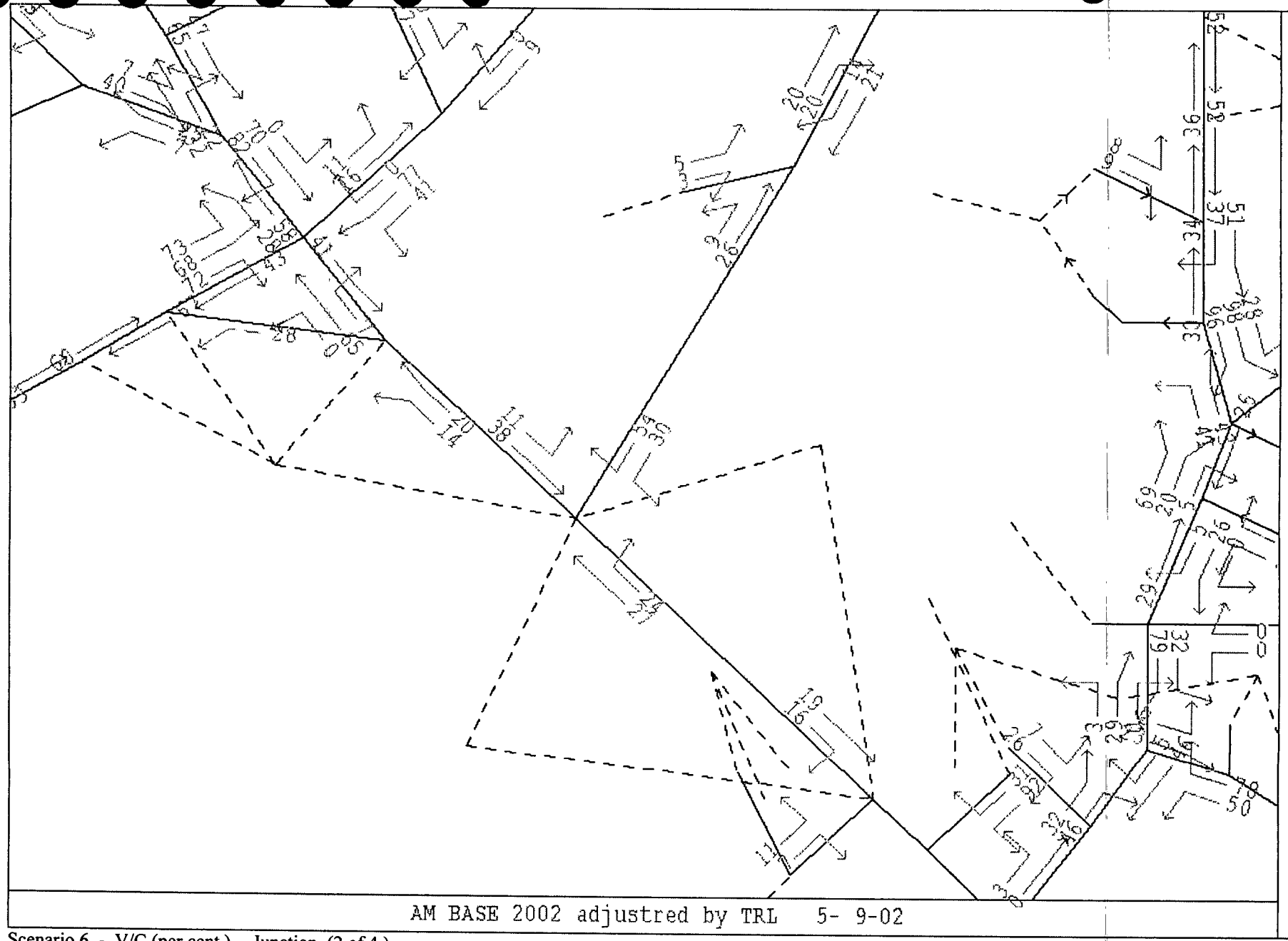
Relative difference of flow (per cent) -- (Scenario 6 – base)/ base



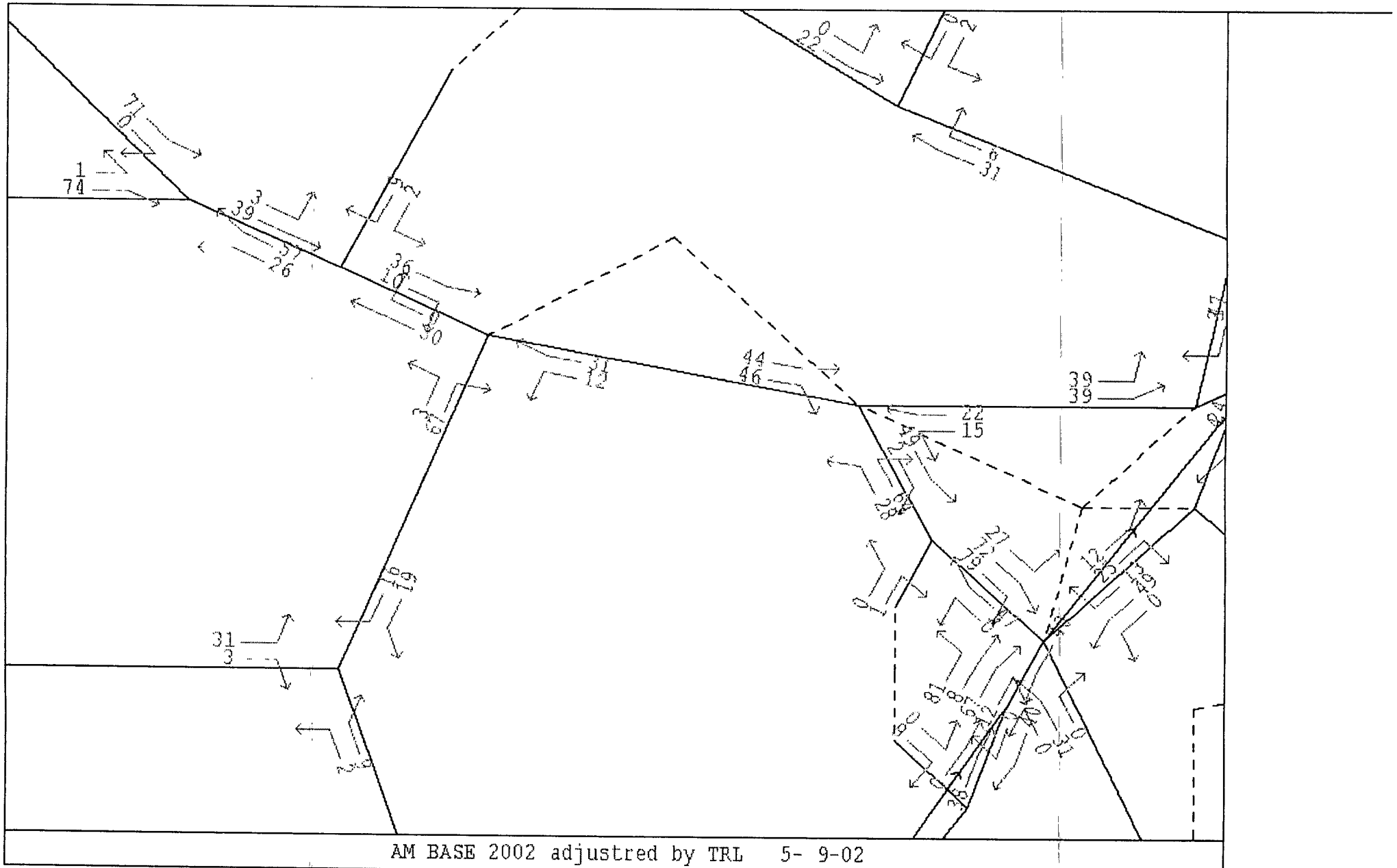
Scenario 6 - V/C (per cent) – link



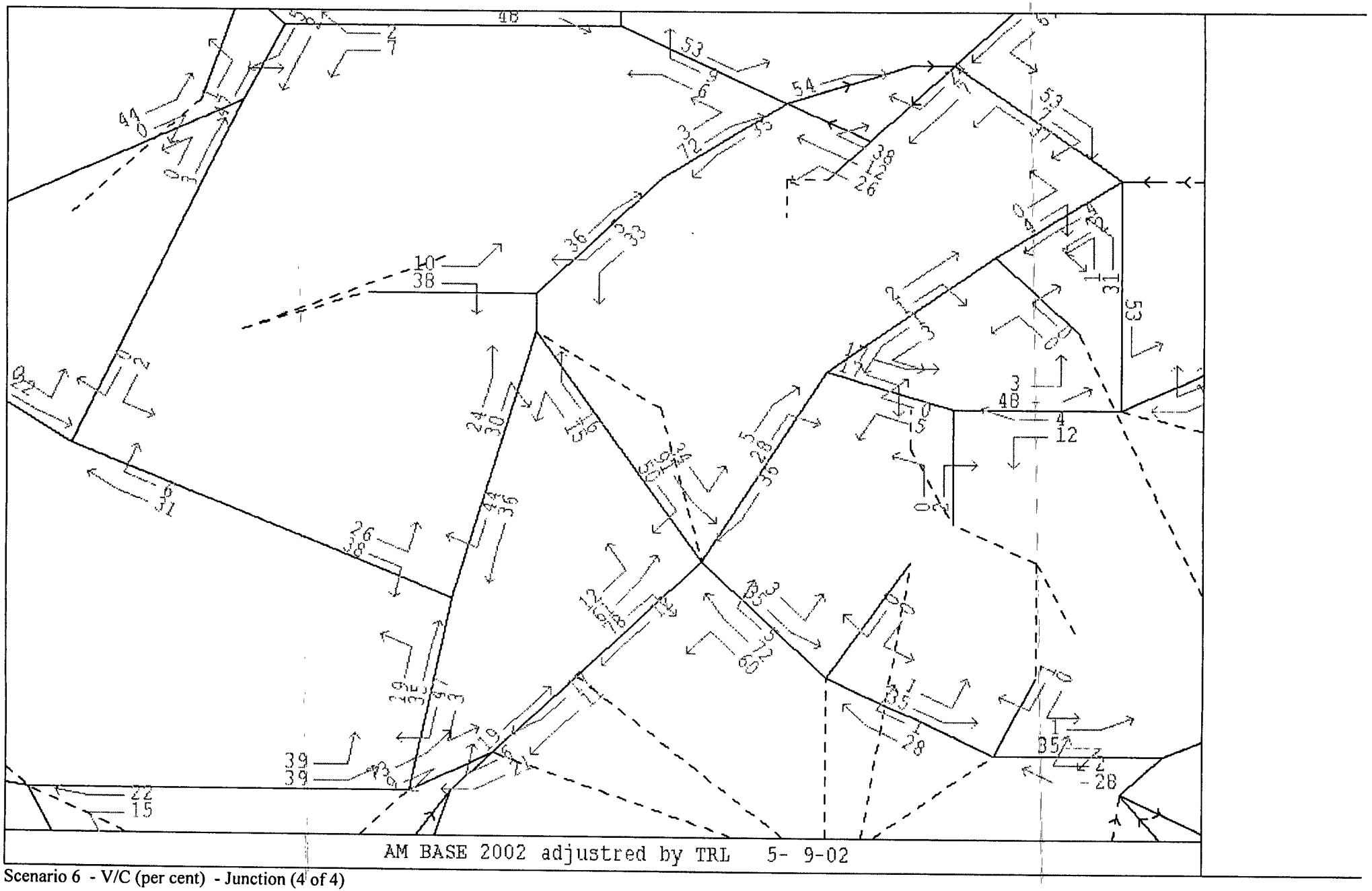
Scenario 6 - V/C (per cent) – Junction (1 of 4)



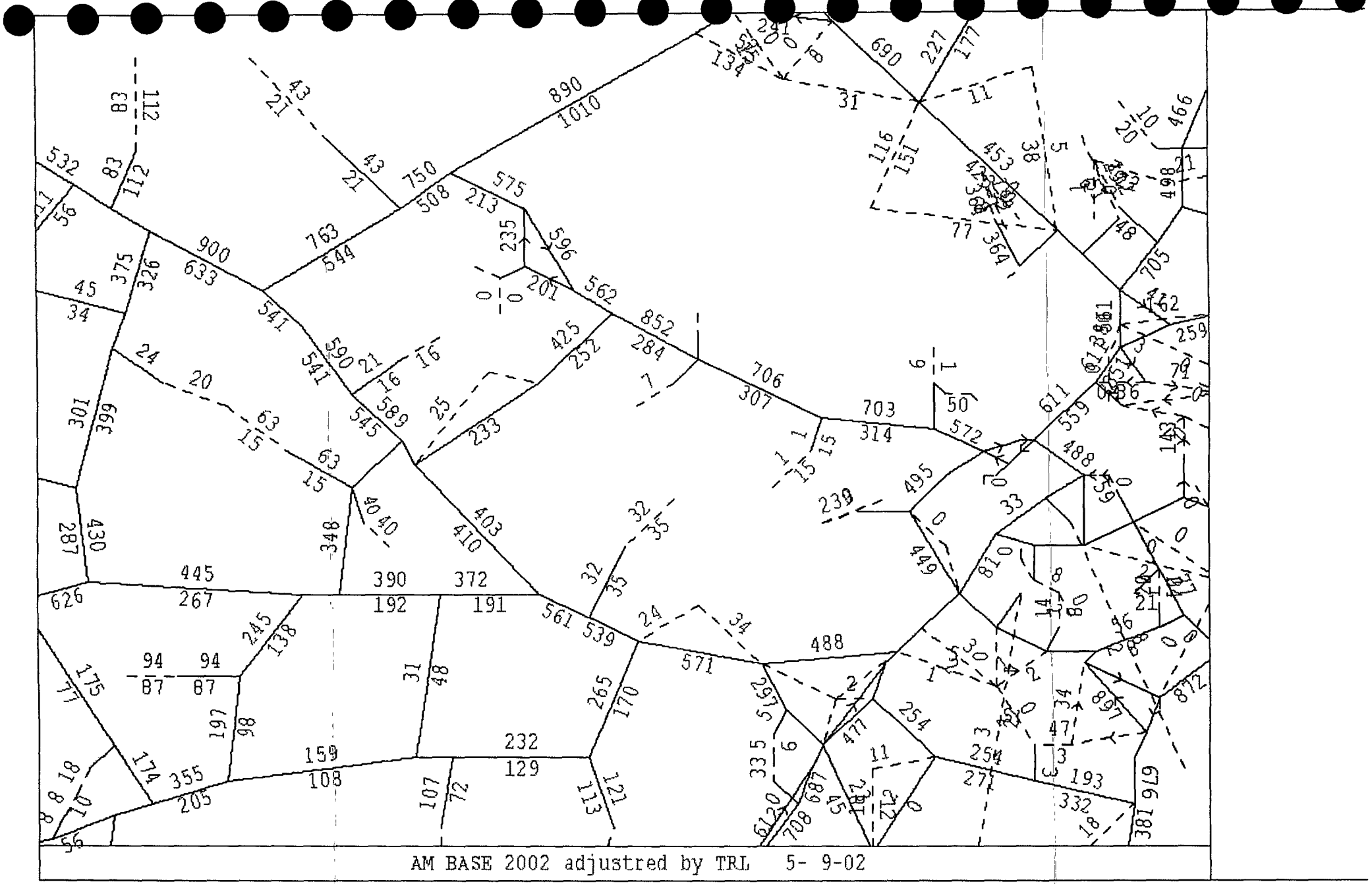
Scenario 6 - V/C (per cent) --Junction (2 of 4)



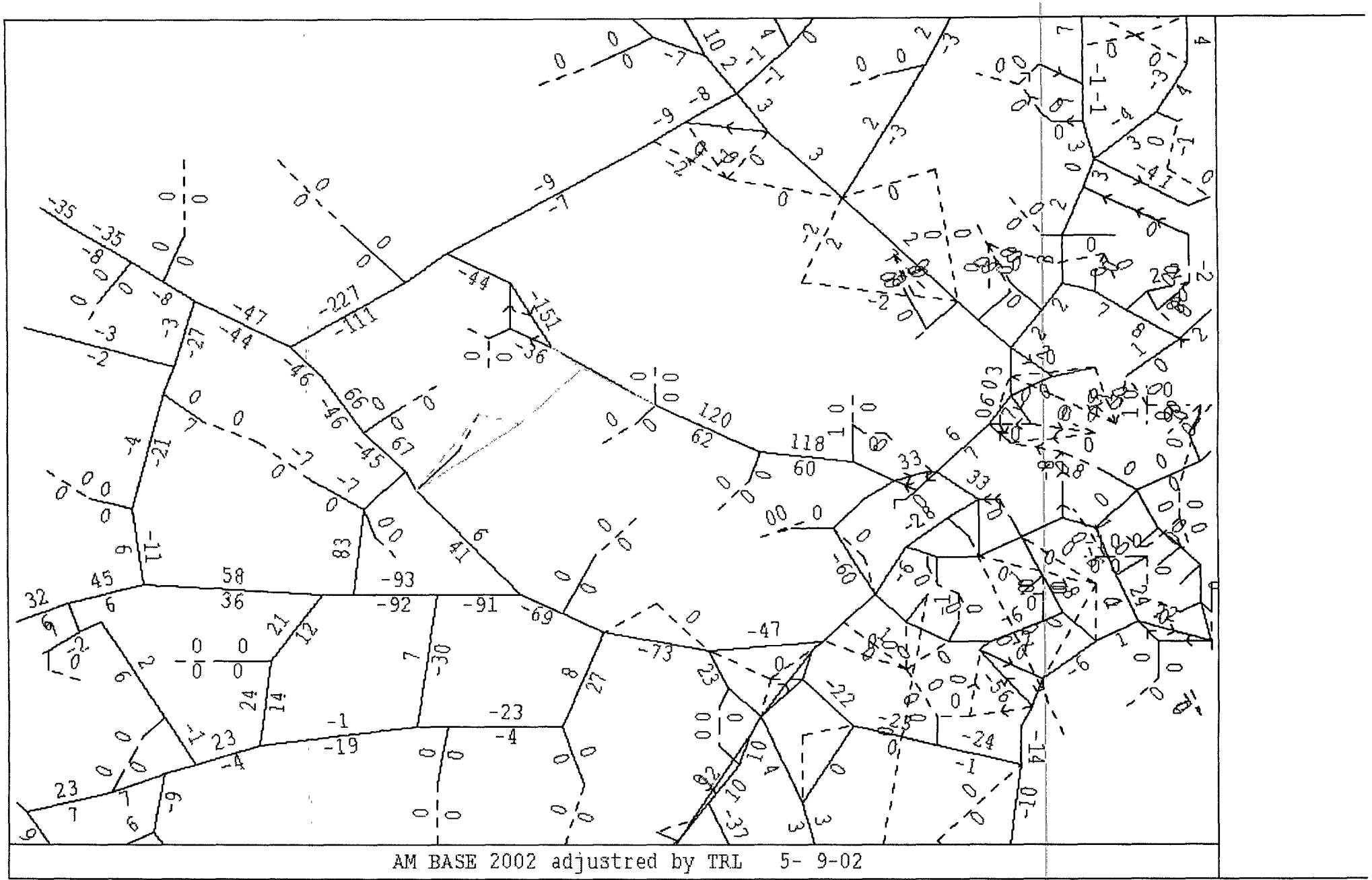
Scenario 6 - V/C (per cent) - Junction (3 of 4)



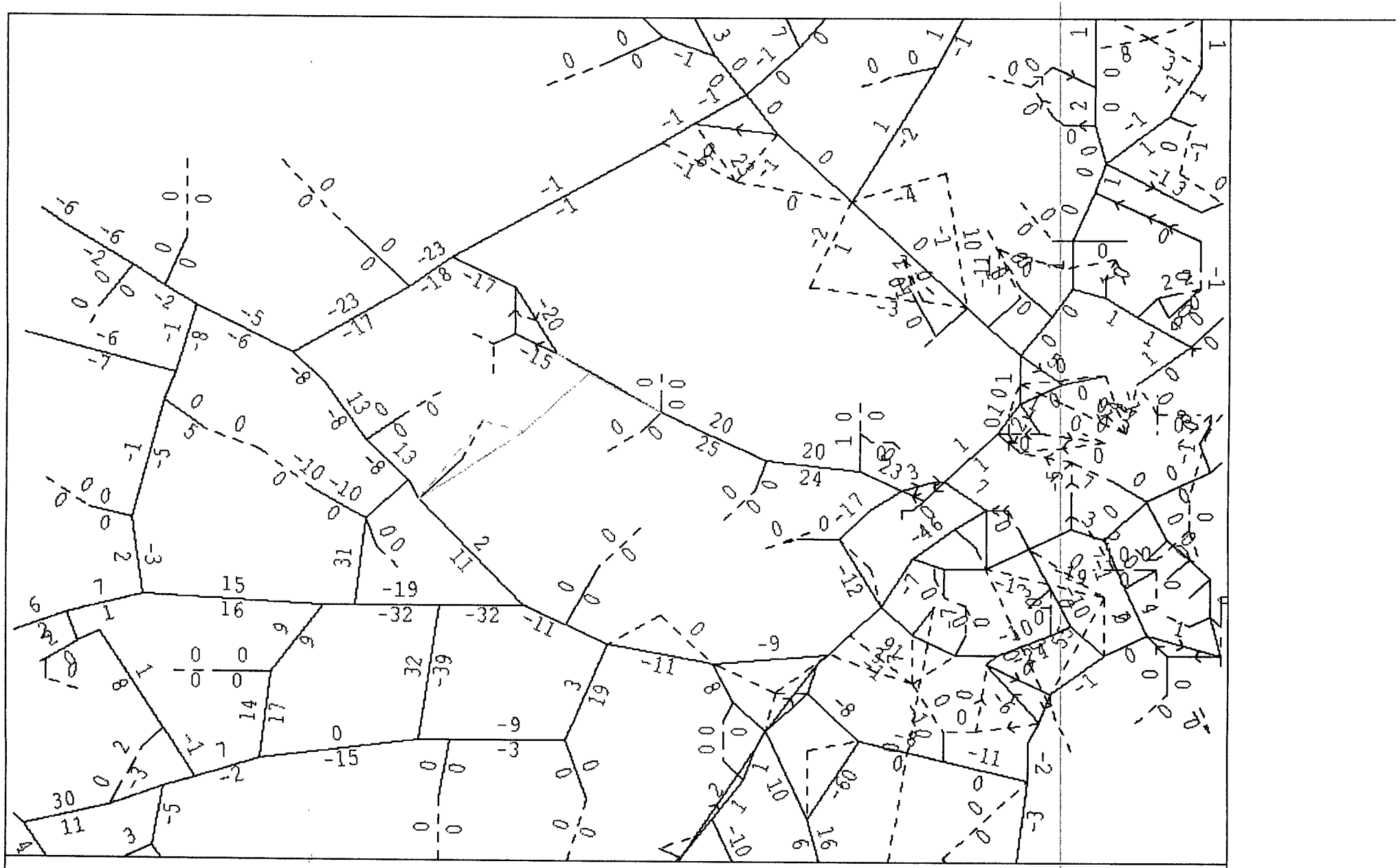
Scenario 6 - V/C (per cent) - Junction (4 of 4)



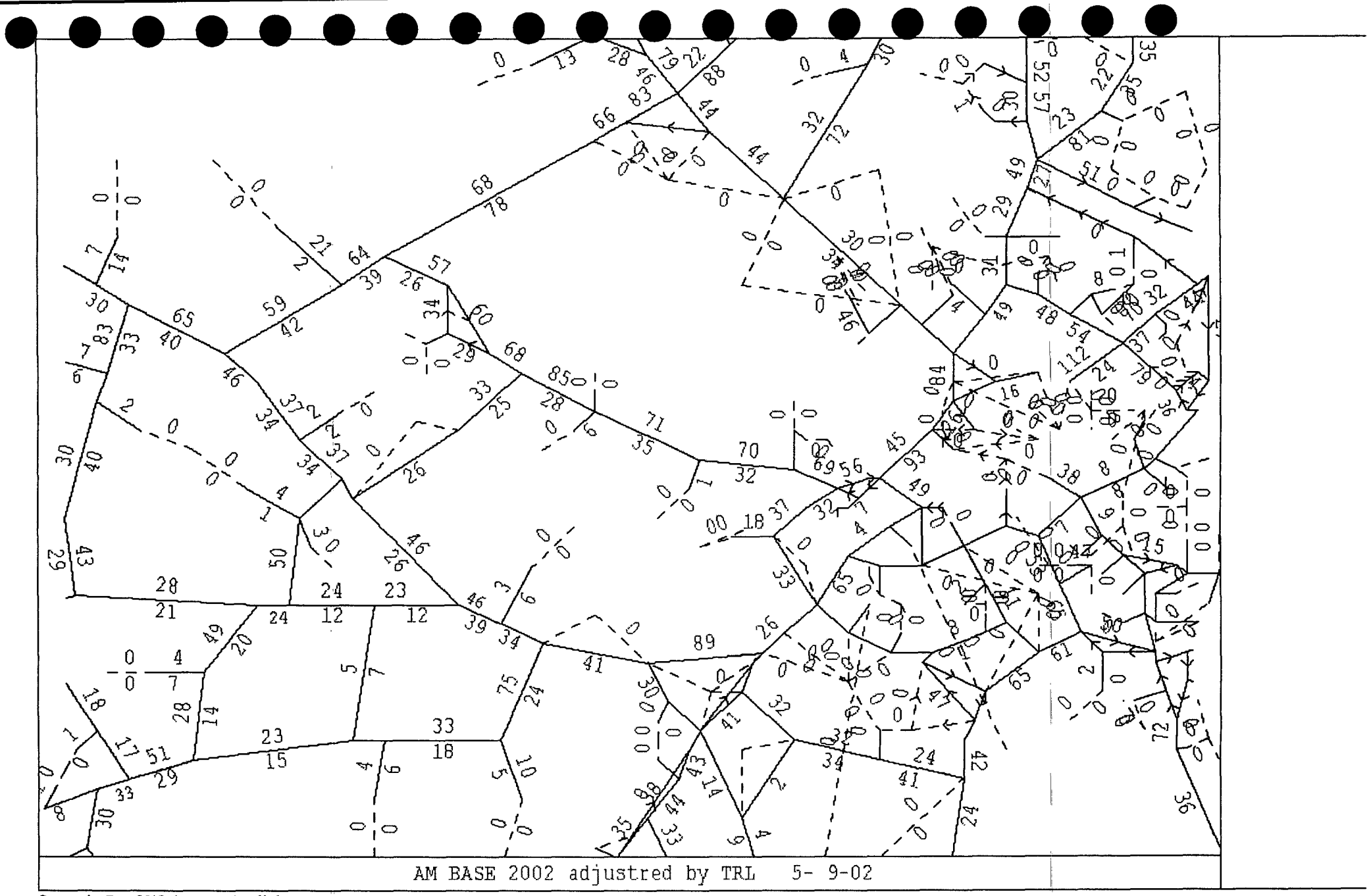
Scenario 7 - existing flow



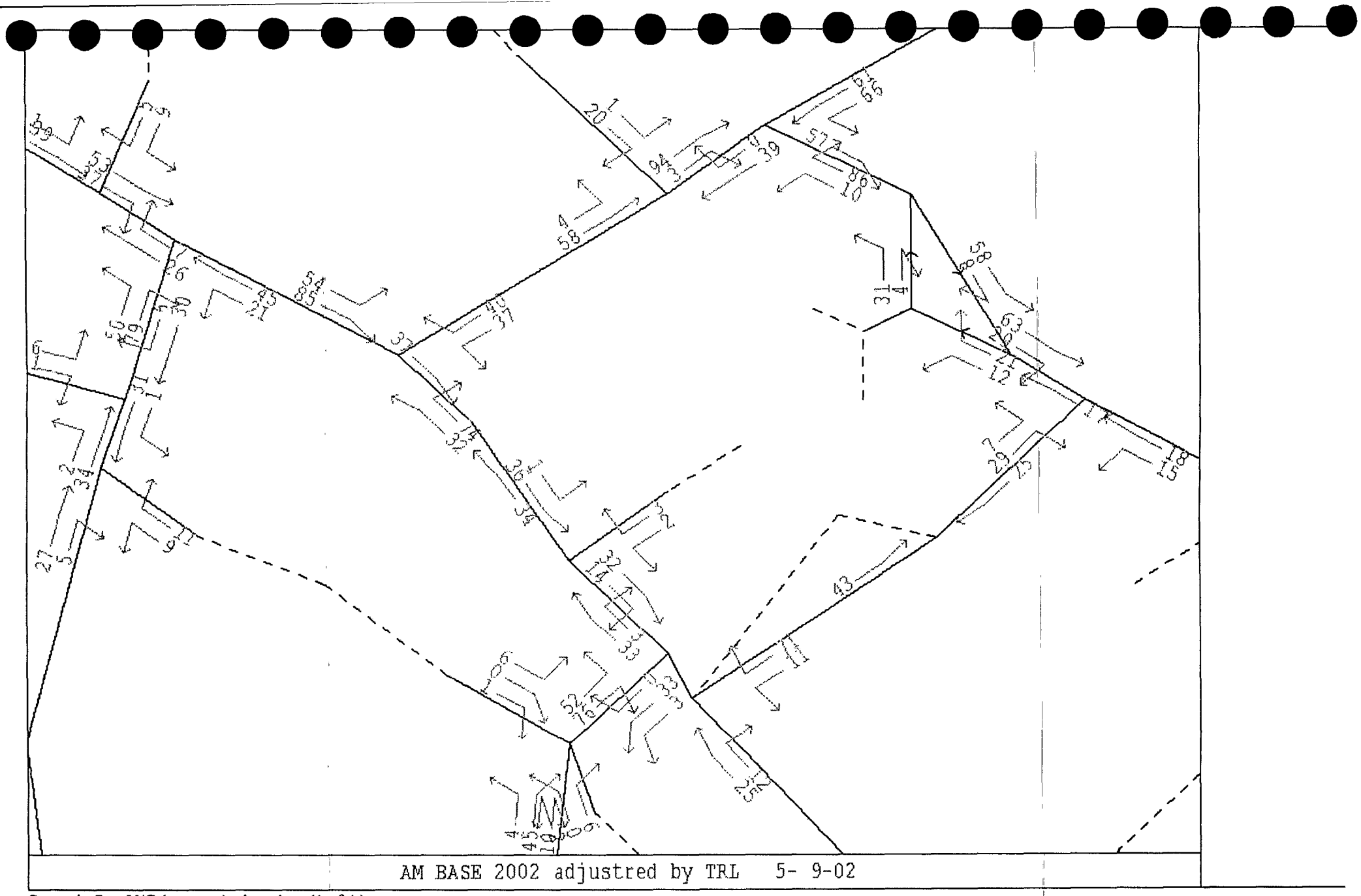
Difference of flow - (scenario 7 – base)



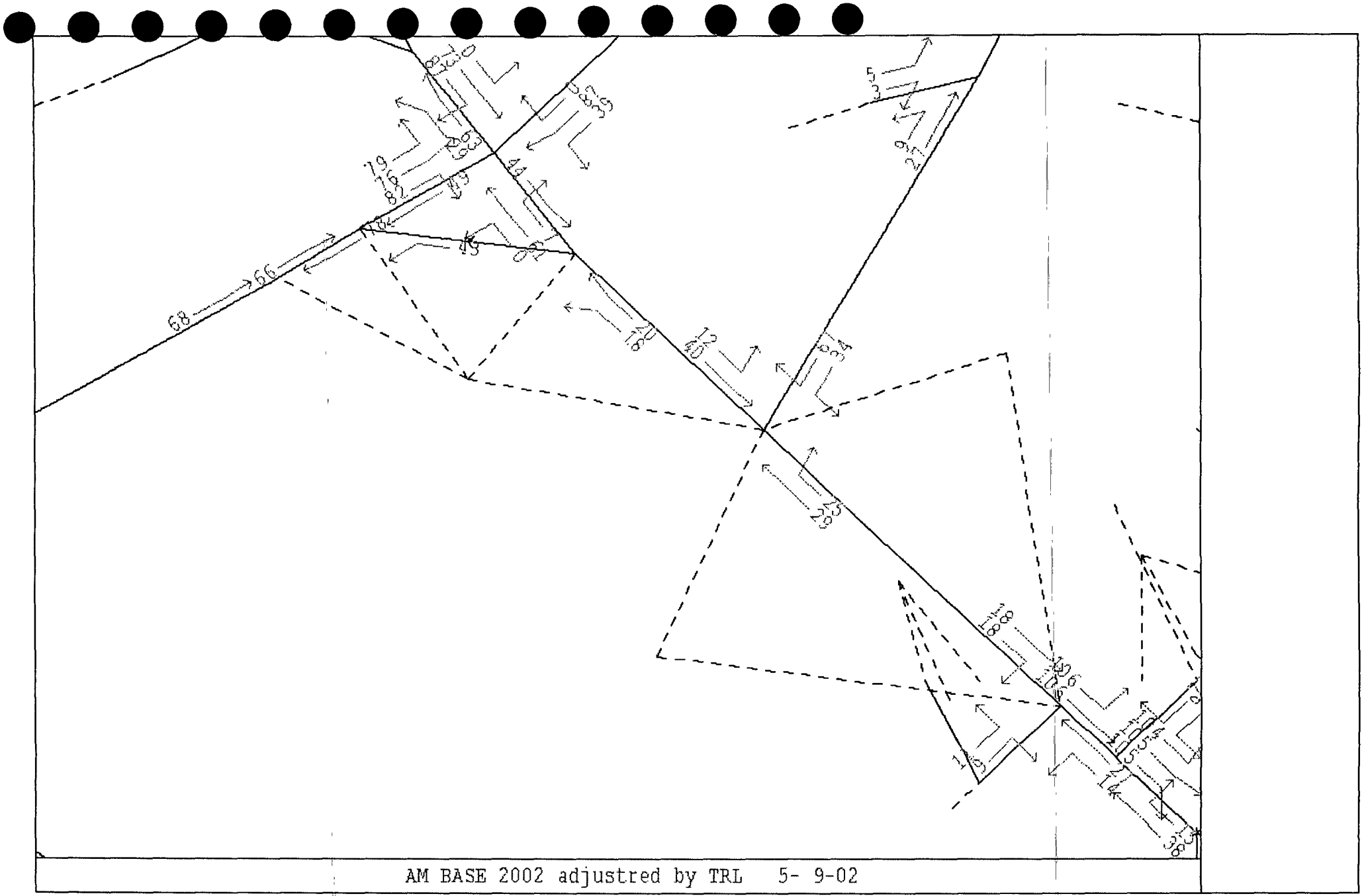
Relative difference of flow (per cent) - (scenario 7 – base)/base



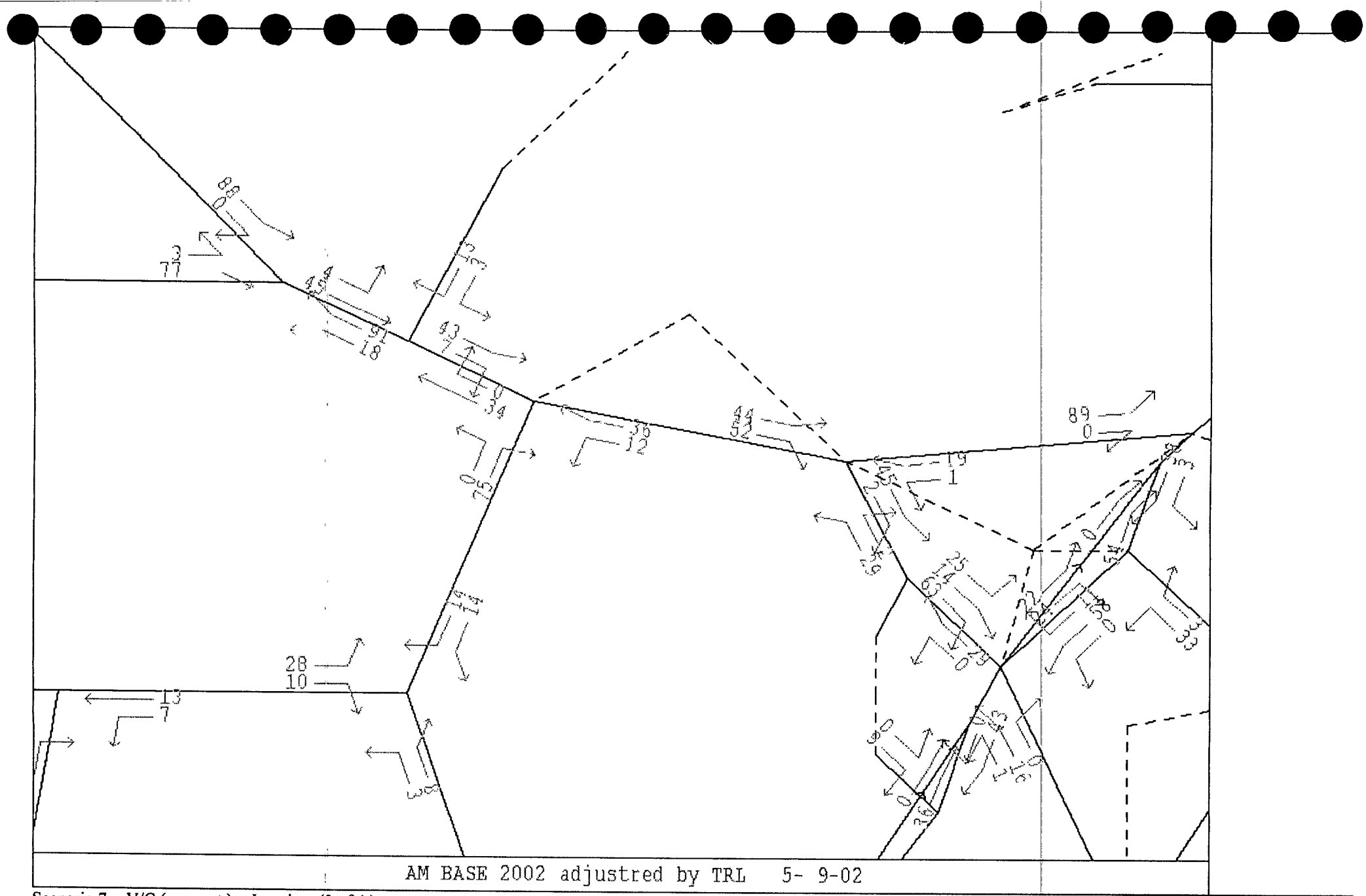
Scenario 7 - V/C (per cent) – link



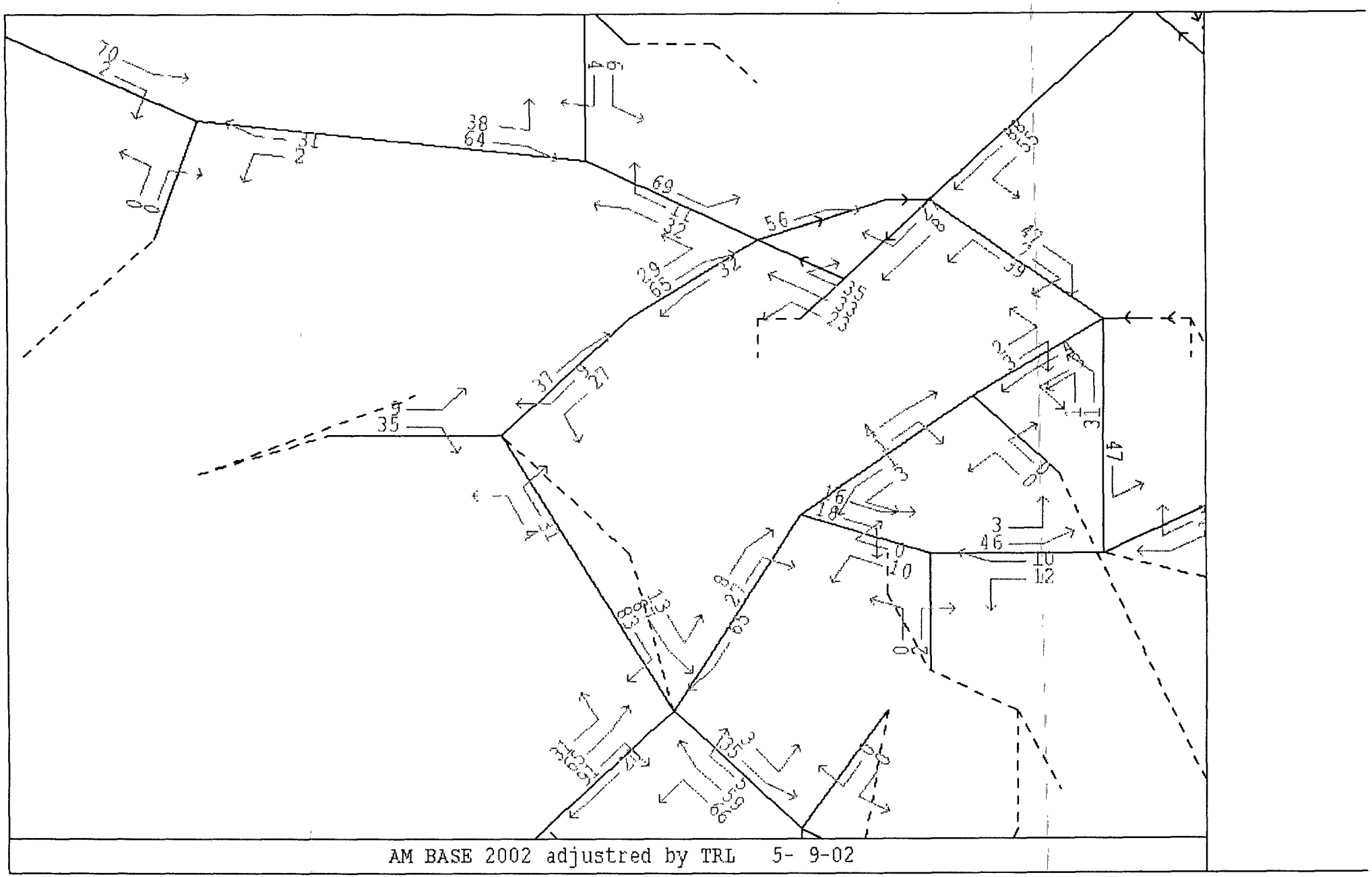
Scenario 7 - V/C (per cent) -junction (1 of 4)



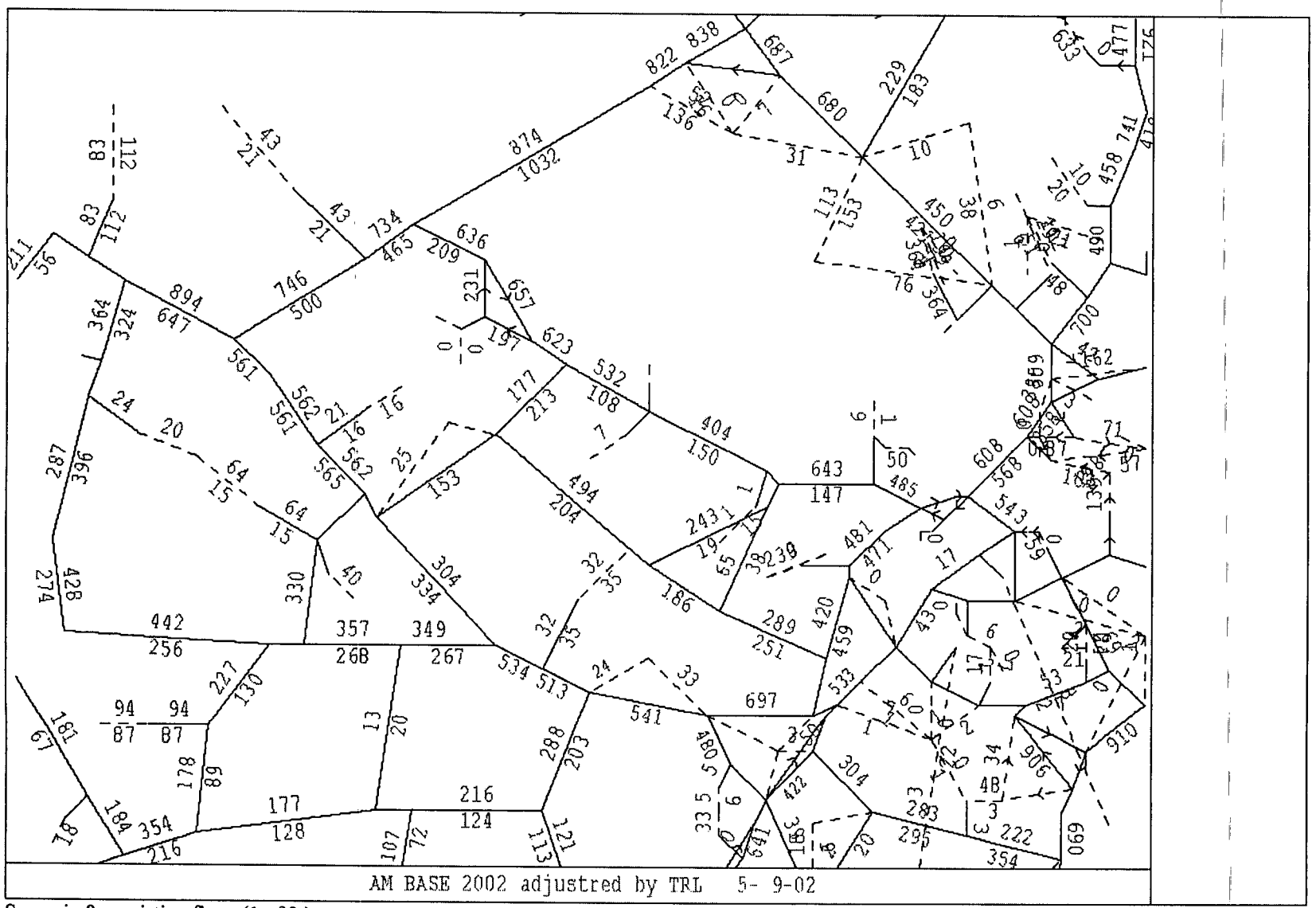
Scenario 7 - V/C (per cent) - Junction (2 of 4)



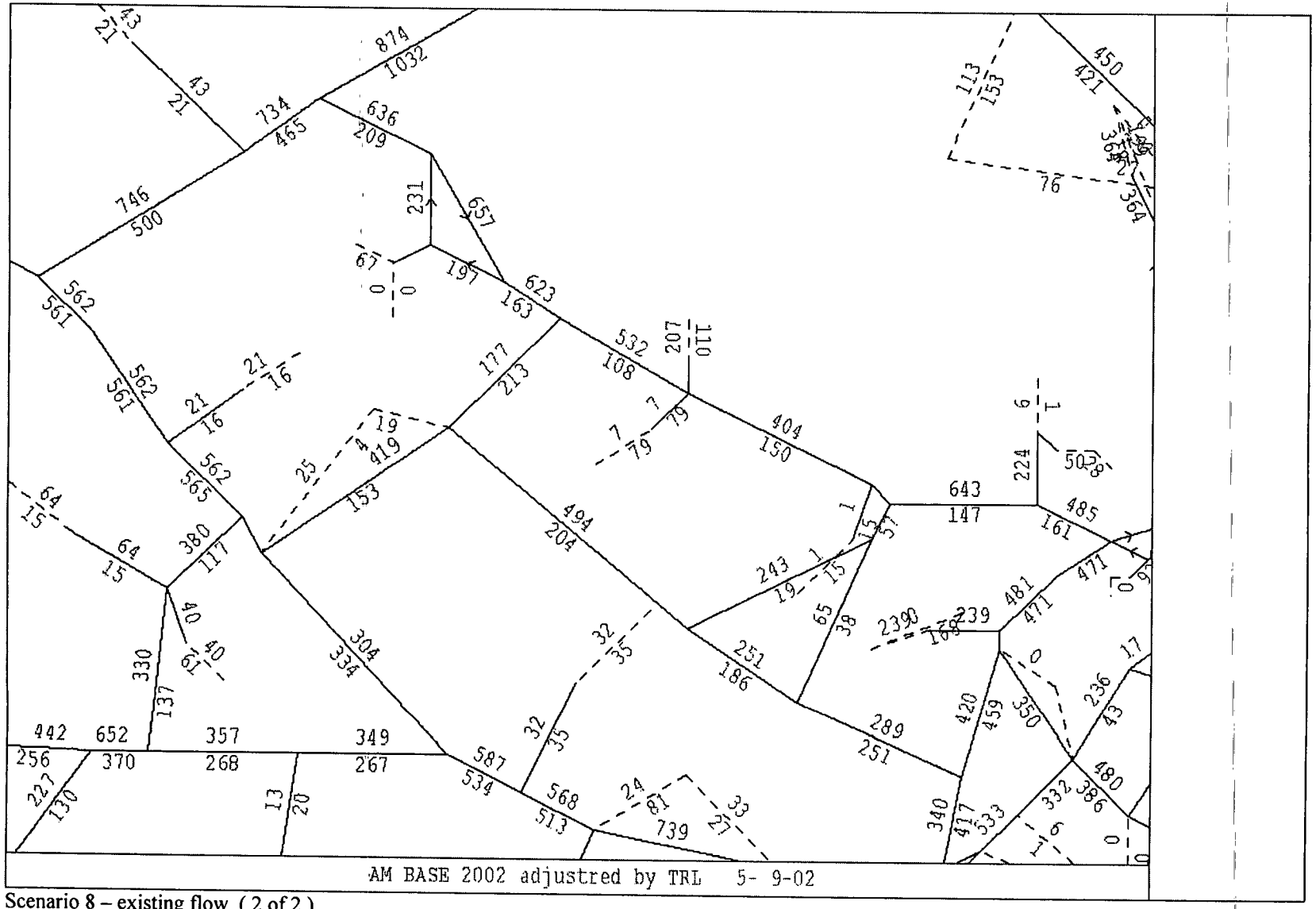
Scenario 7 - V/C (per cent) – Junction (3 of 4)



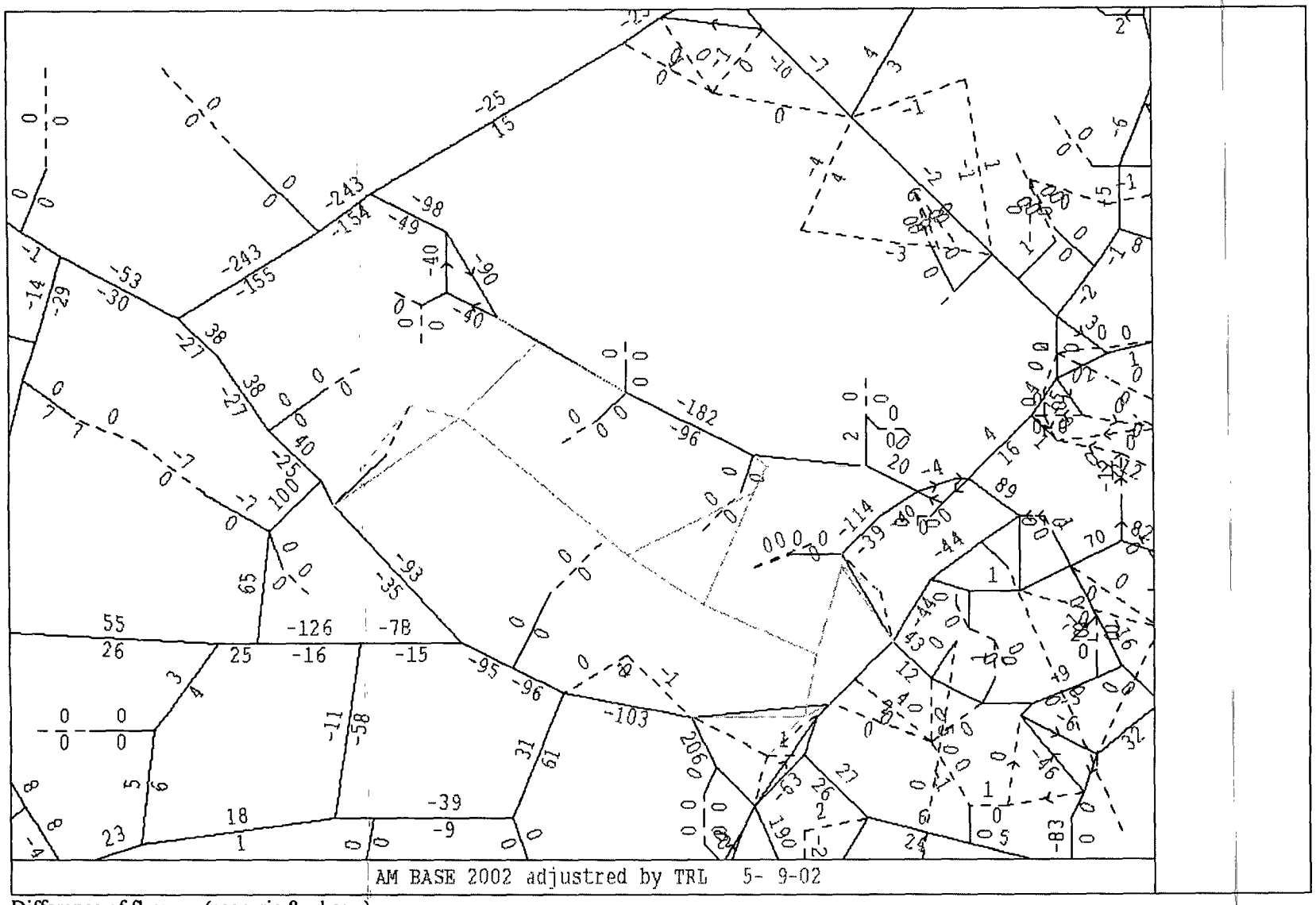
Scenario 7 - V/C (per cent) -- Junction (4 of 4)



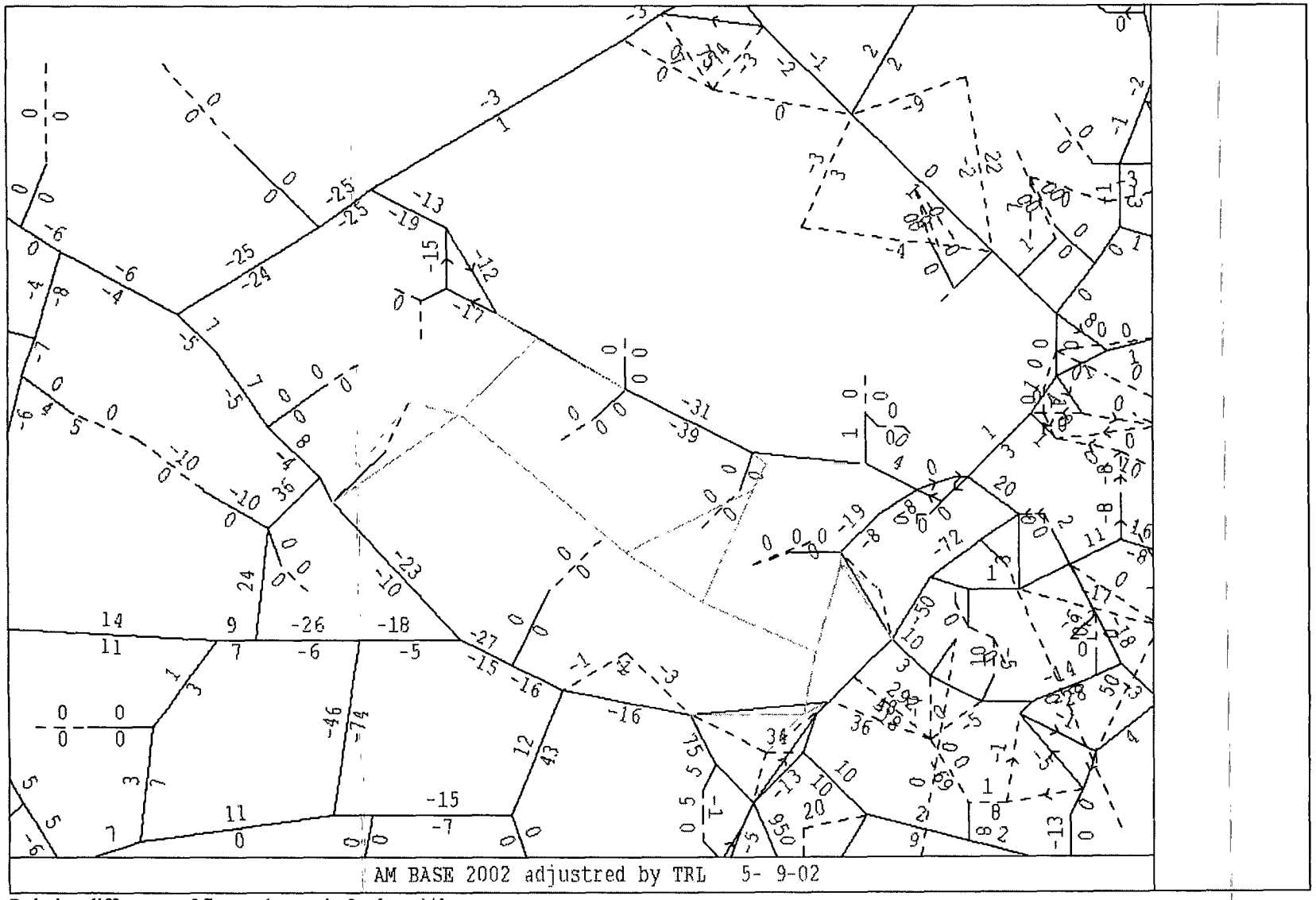
Scenario 8 - existing flow (1 of 2)



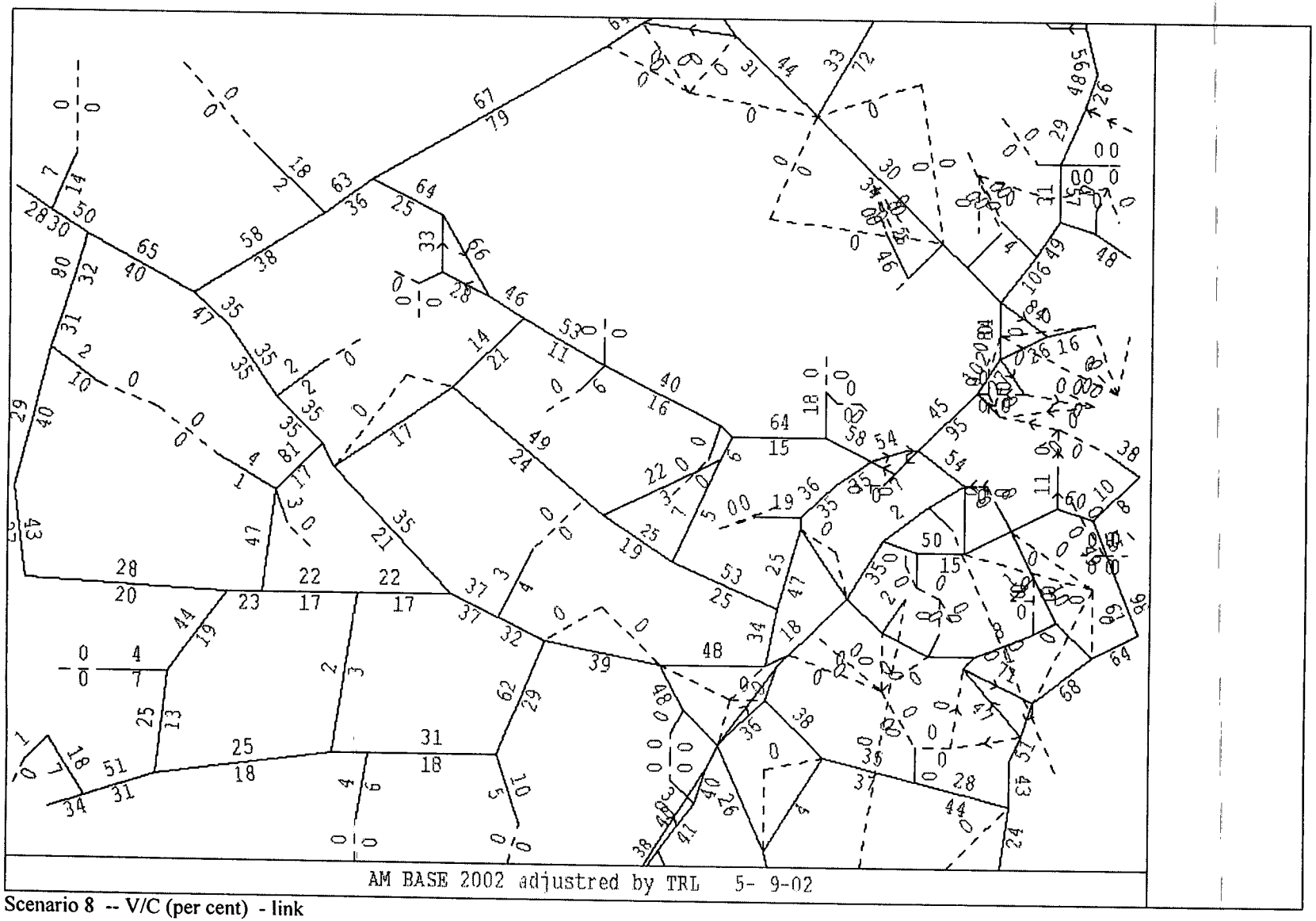
Scenario 8 – existing flow (2 of 2)



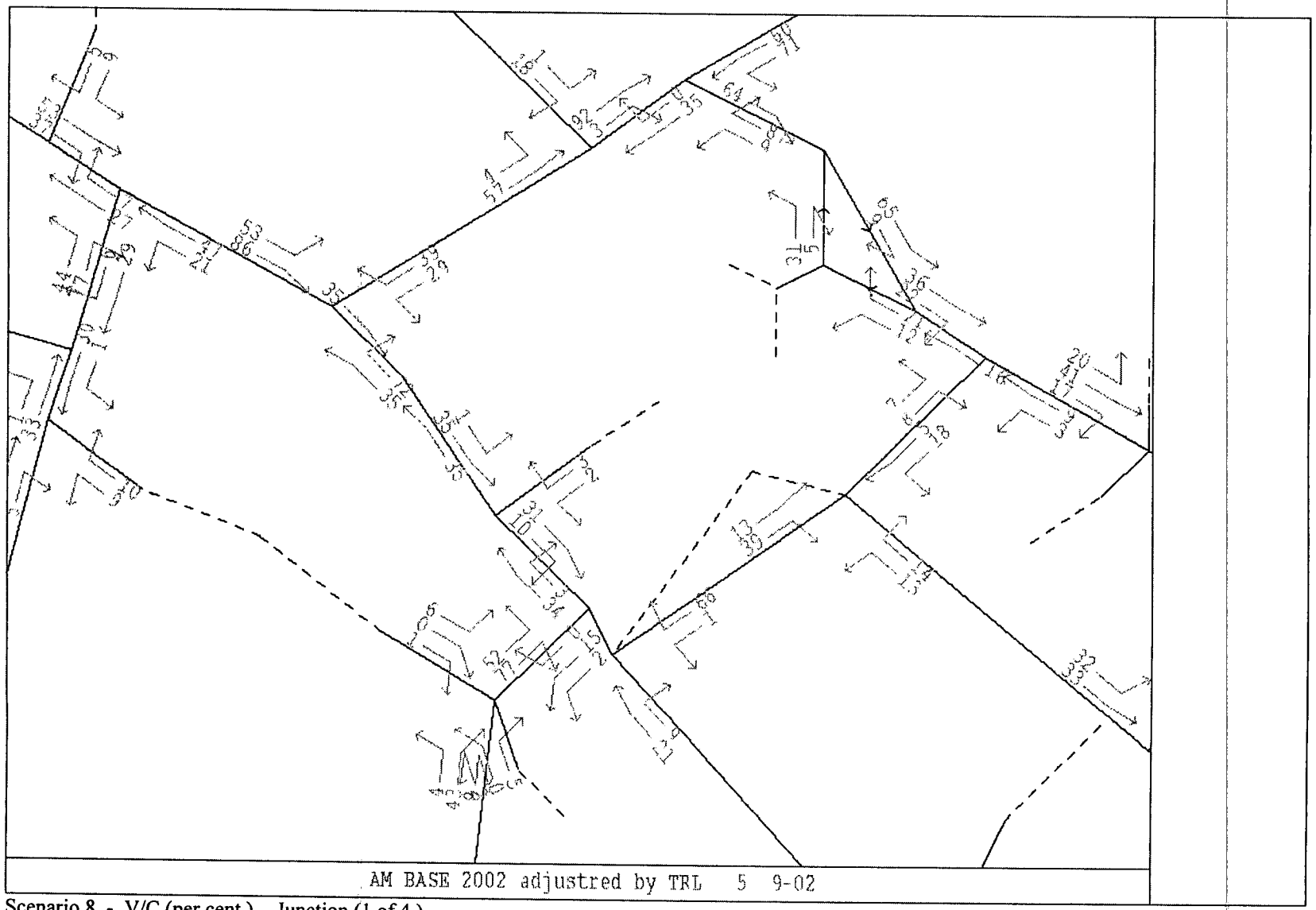
Difference of flow -- (scenario 8 – base)



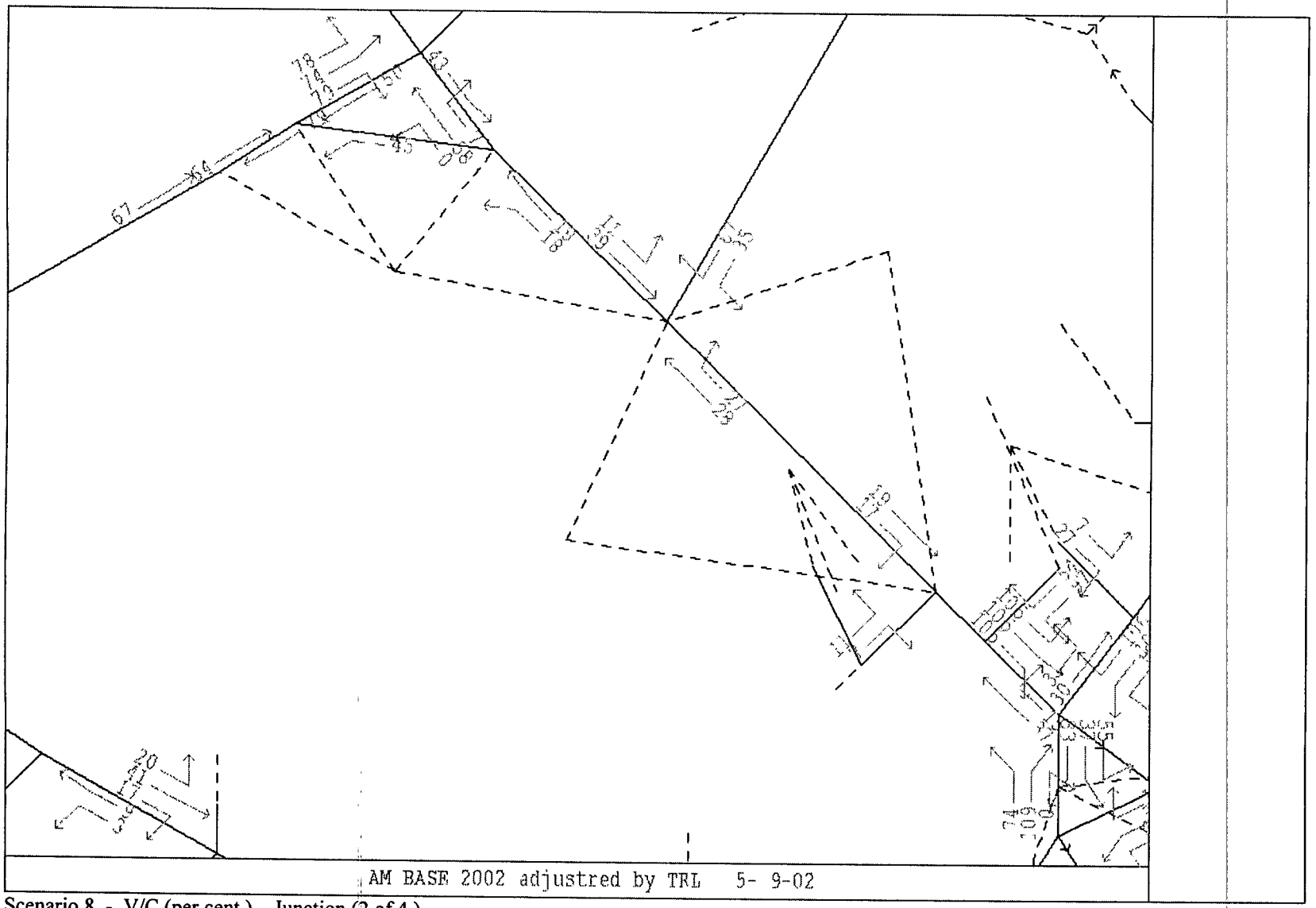
Relative difference of flow - (scenario 8 – base)/ base



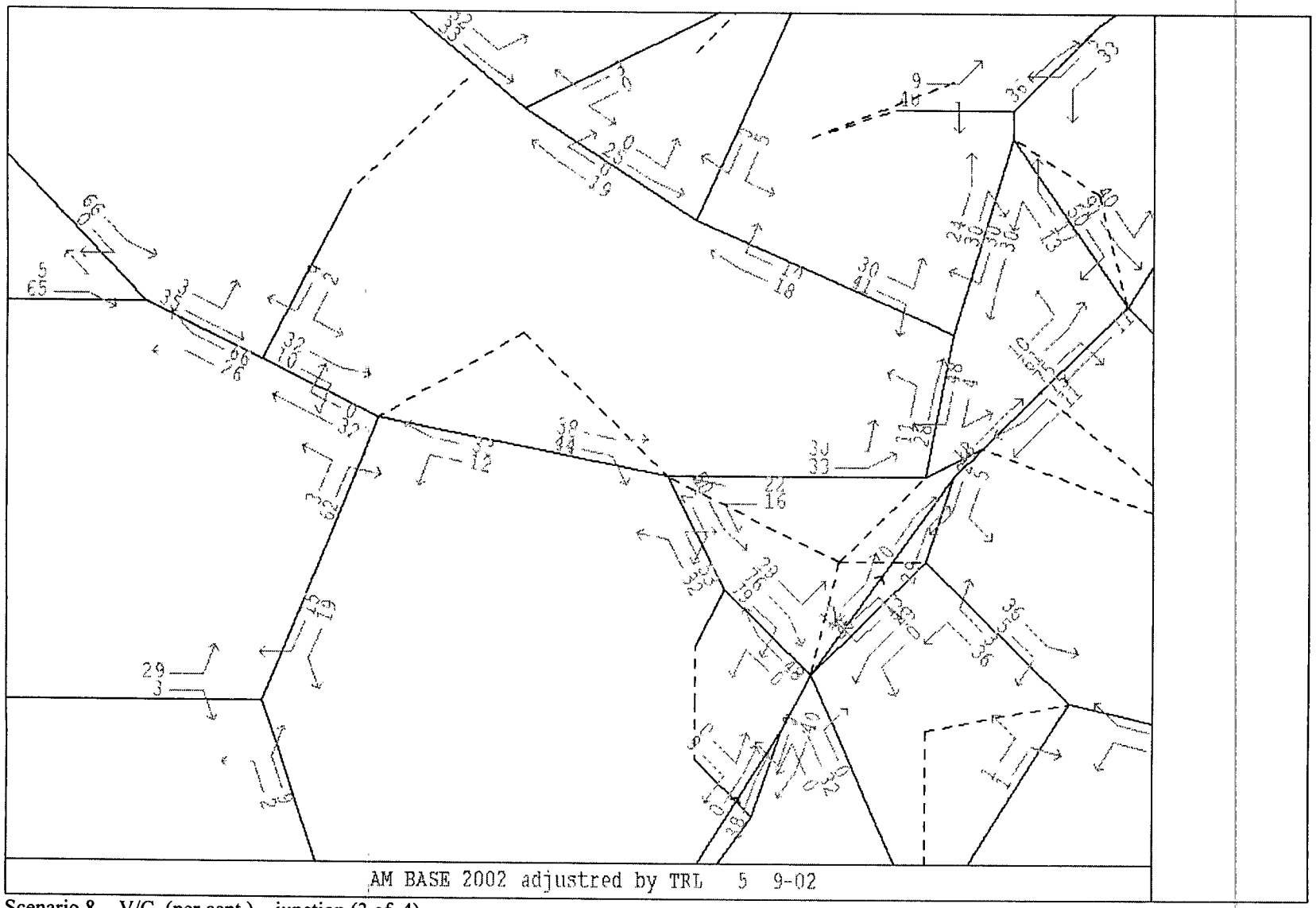
Scenario 8 -- V/C (per cent) - link



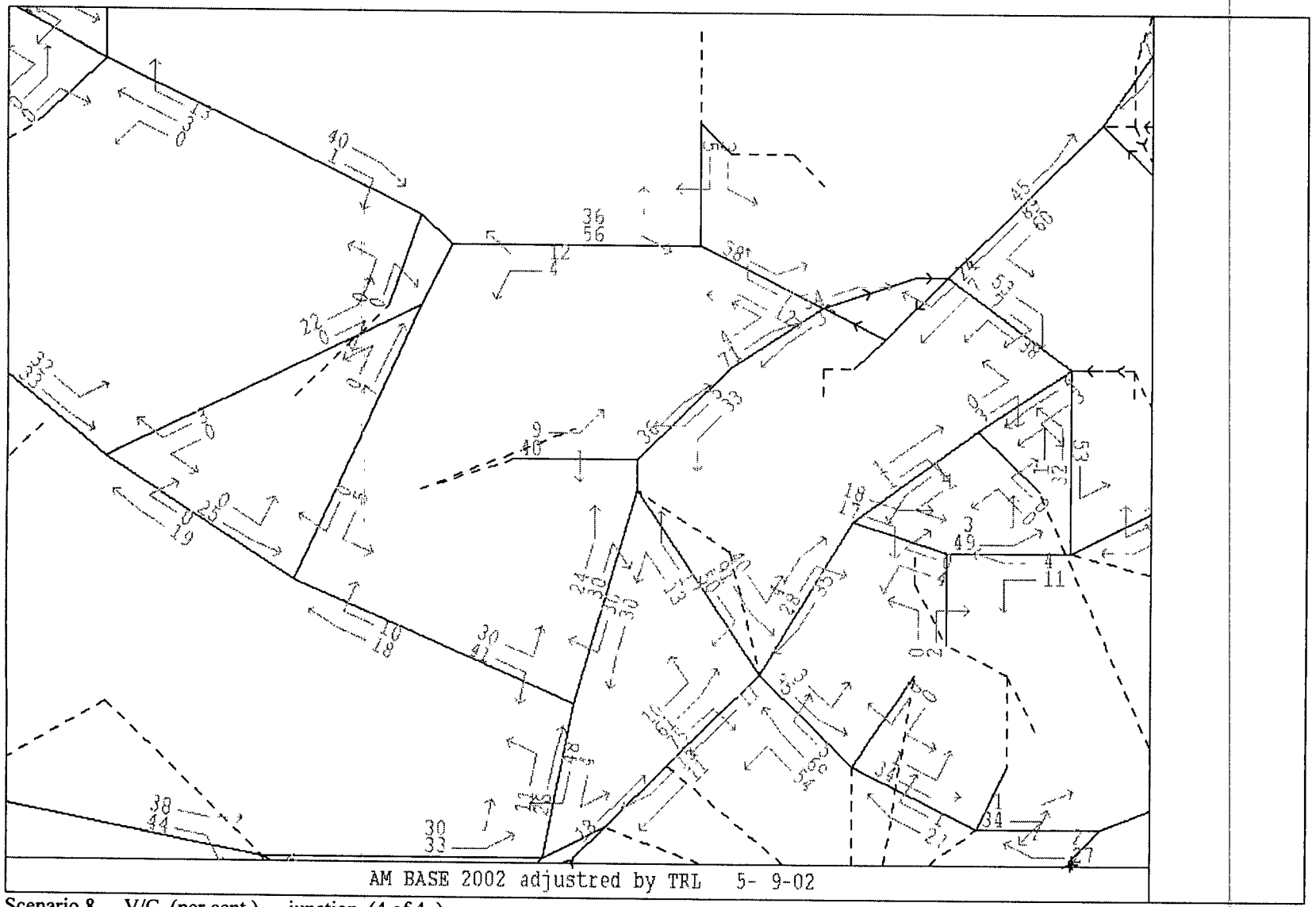
Scenario 8 - V/C (per cent) - Junction (1 of 4)



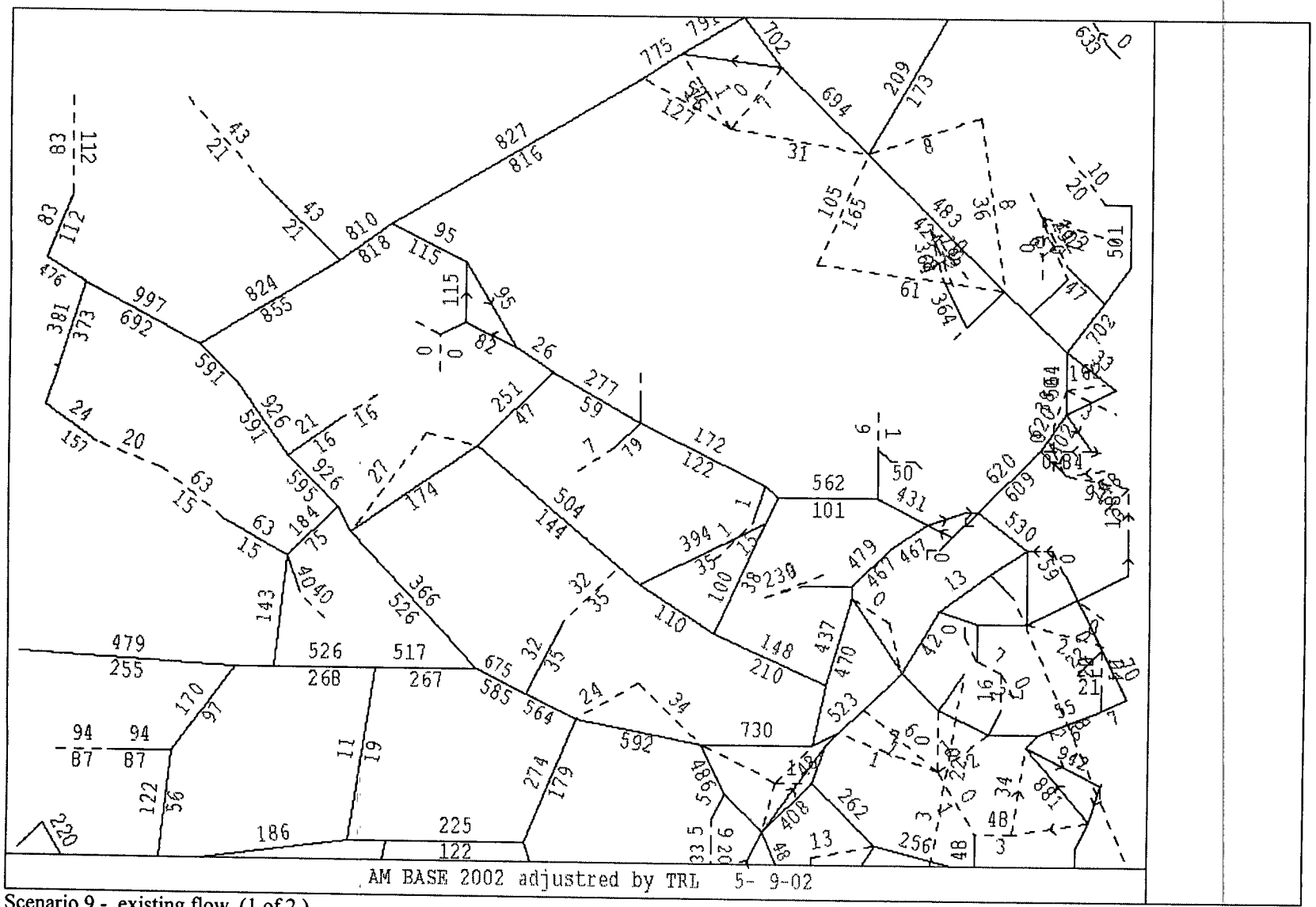
Scenario 8 - V/C (per cent) – Junction (2 of 4)



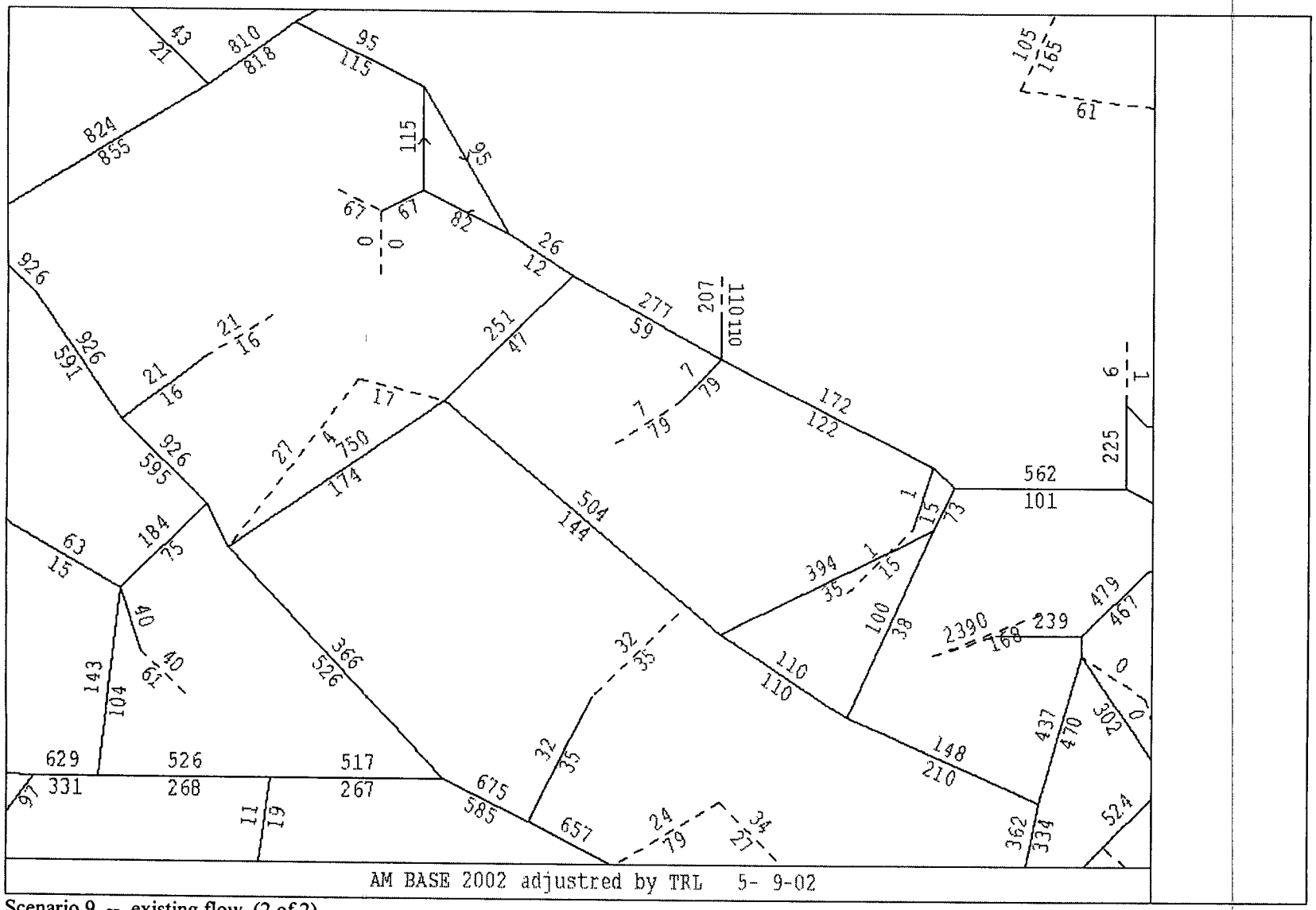
Scenario 8 - V/C (per cent) – junction (3 of 4)



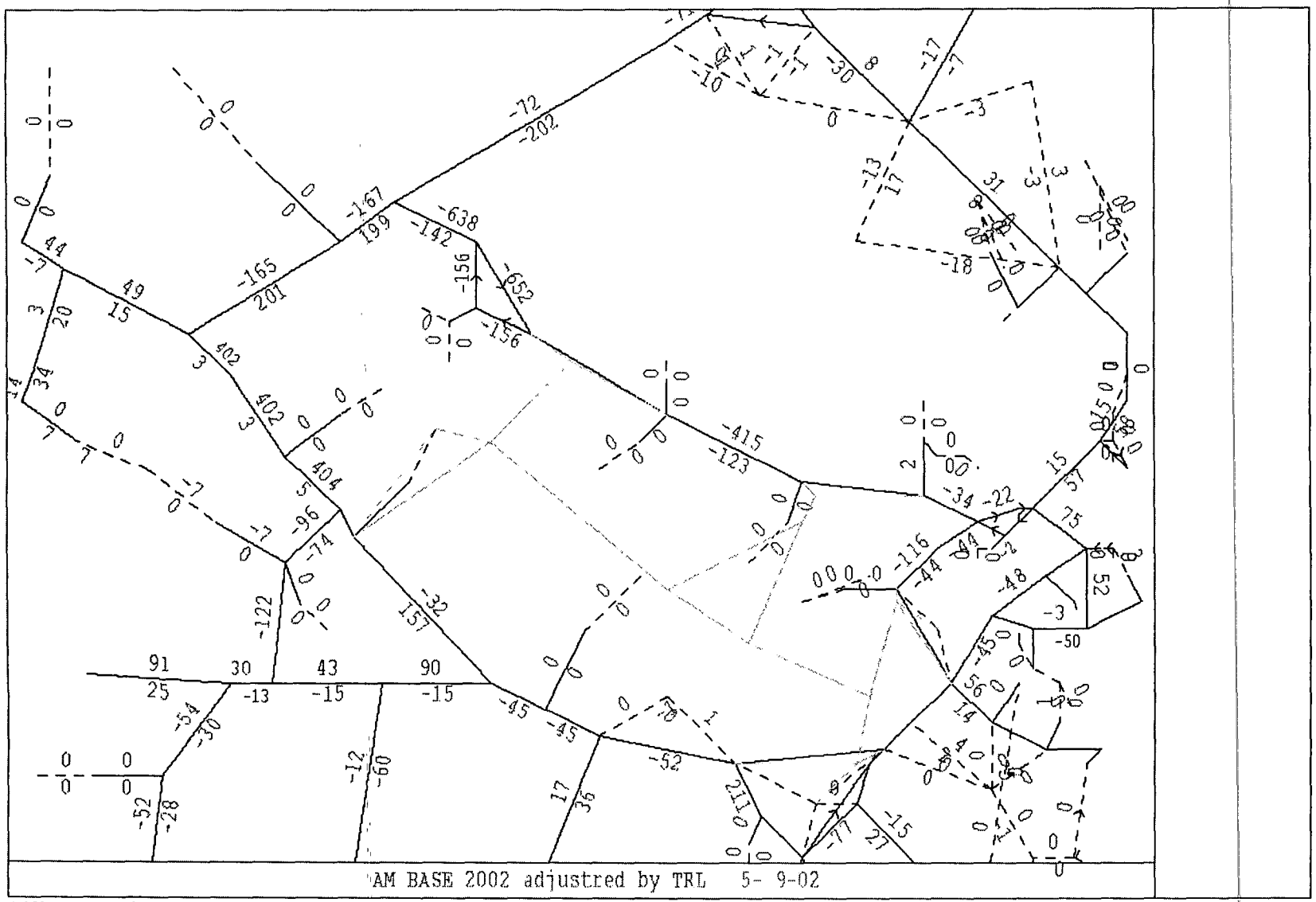
Scenario 8 - V/C (per cent) -- junction (4 of 4)



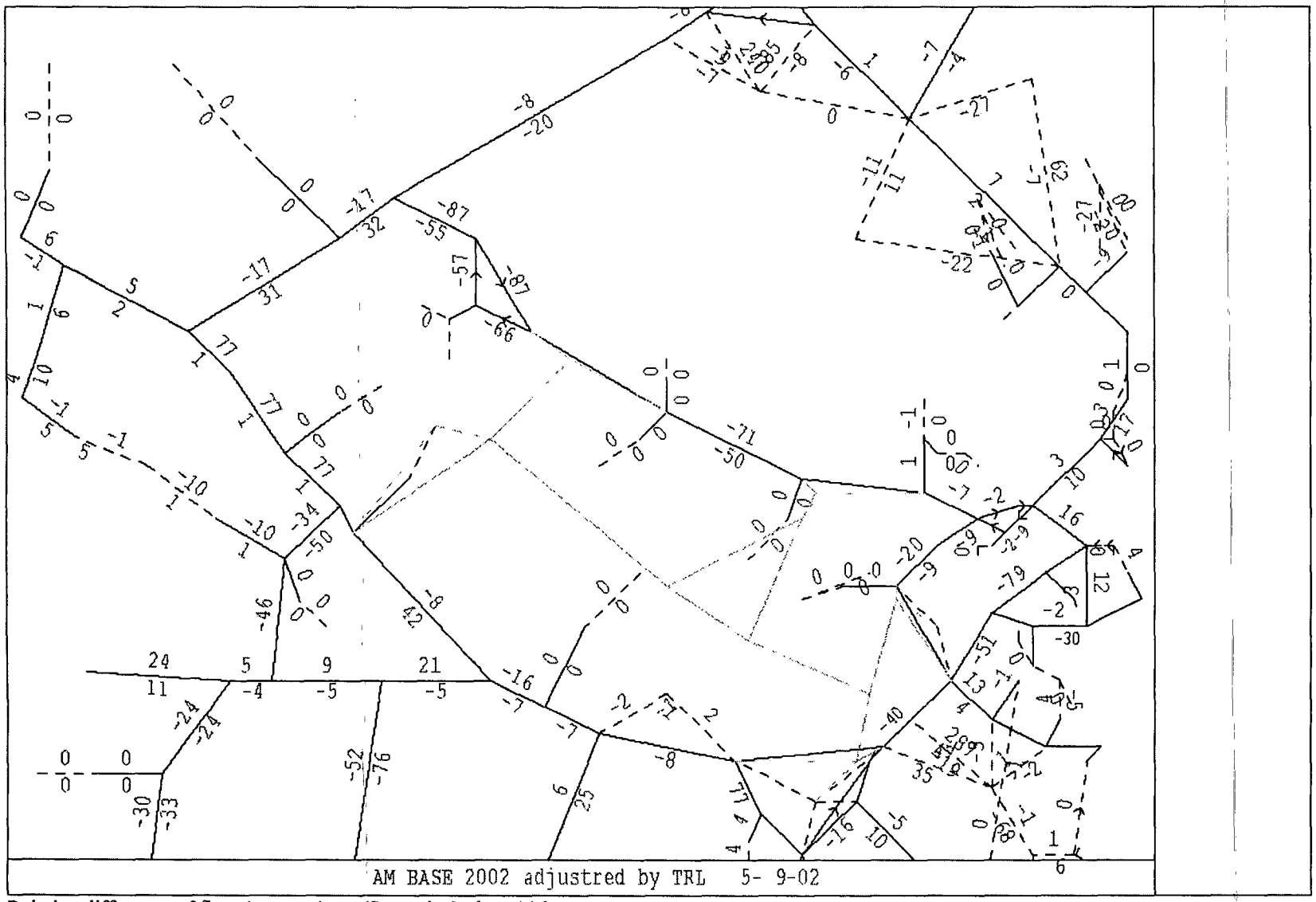
Scenario 9 - existing flow (1 of 2)



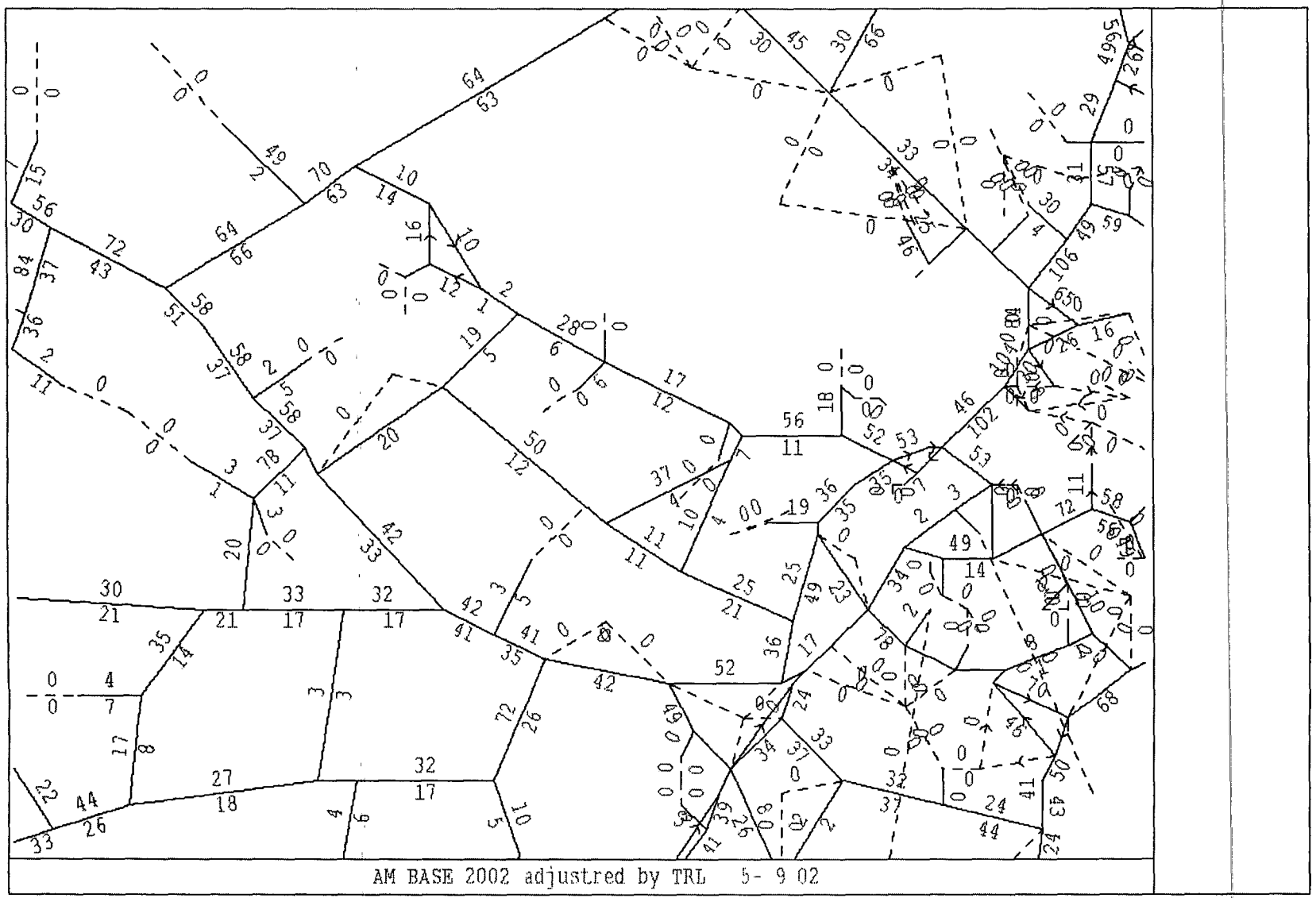
Scenario 9 -- existing flow (2 of 2)



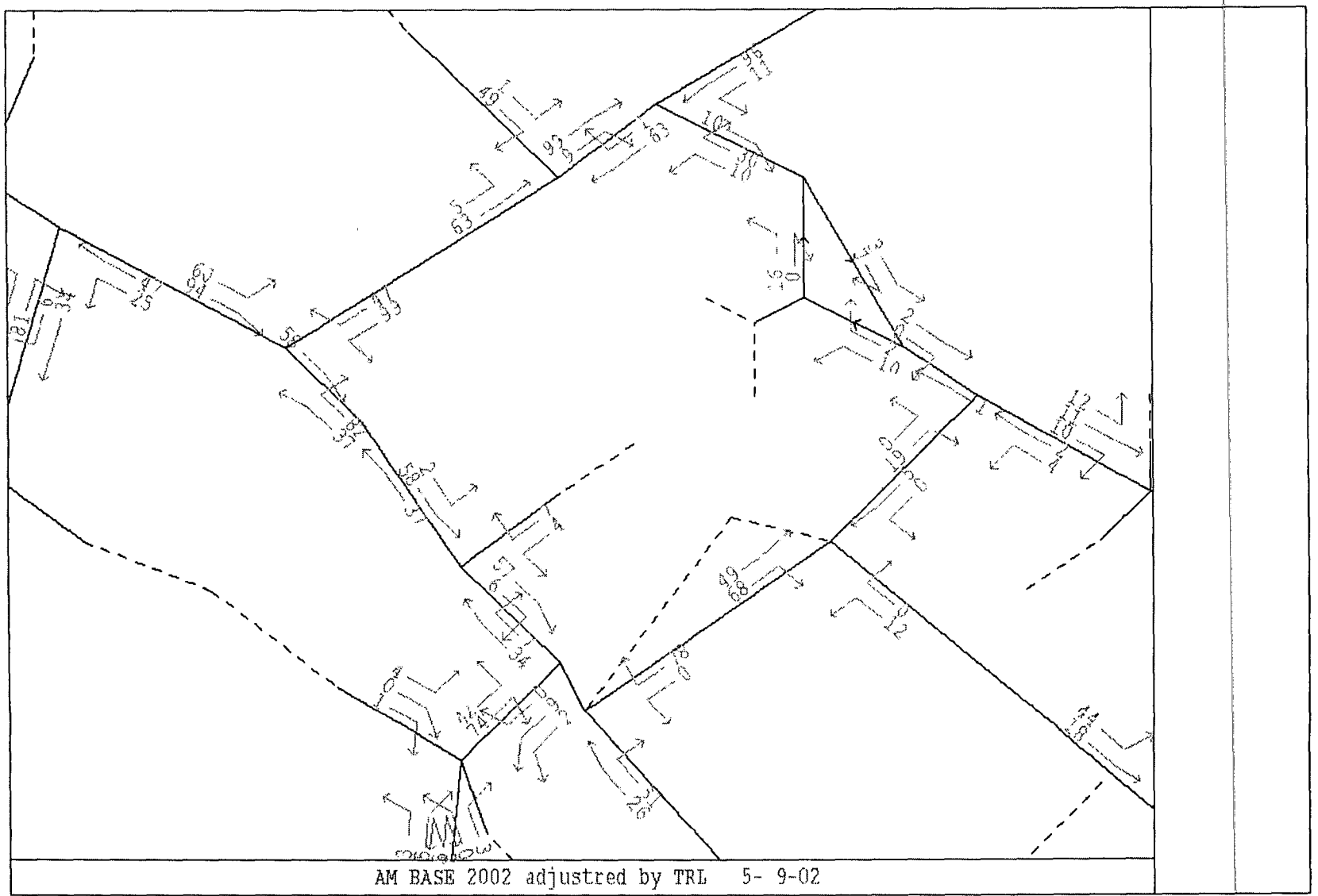
Difference of flow -- (scenario 9 – base)



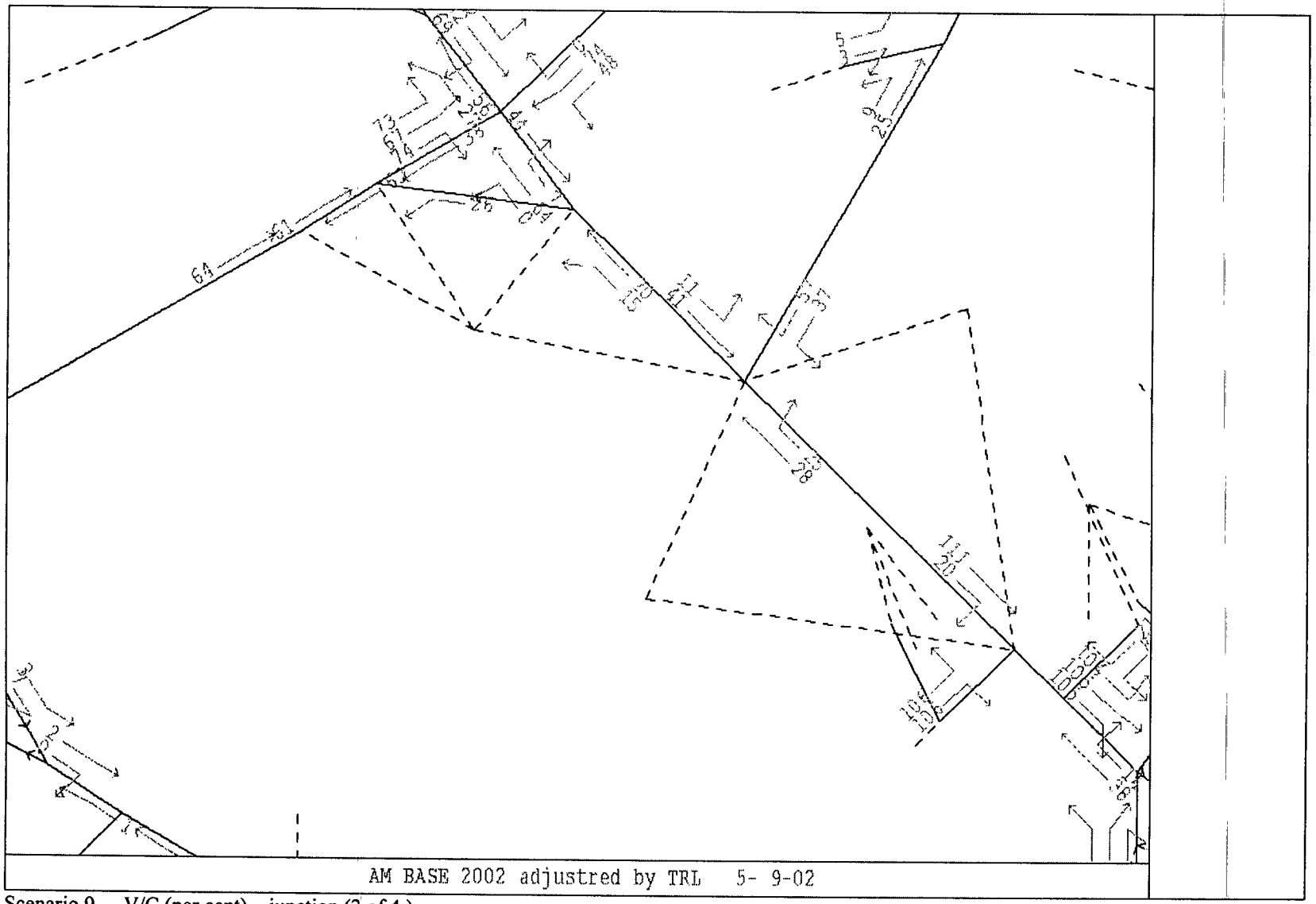
Relative difference of flow (per cent) -- (Scenario 9 - base)/ base



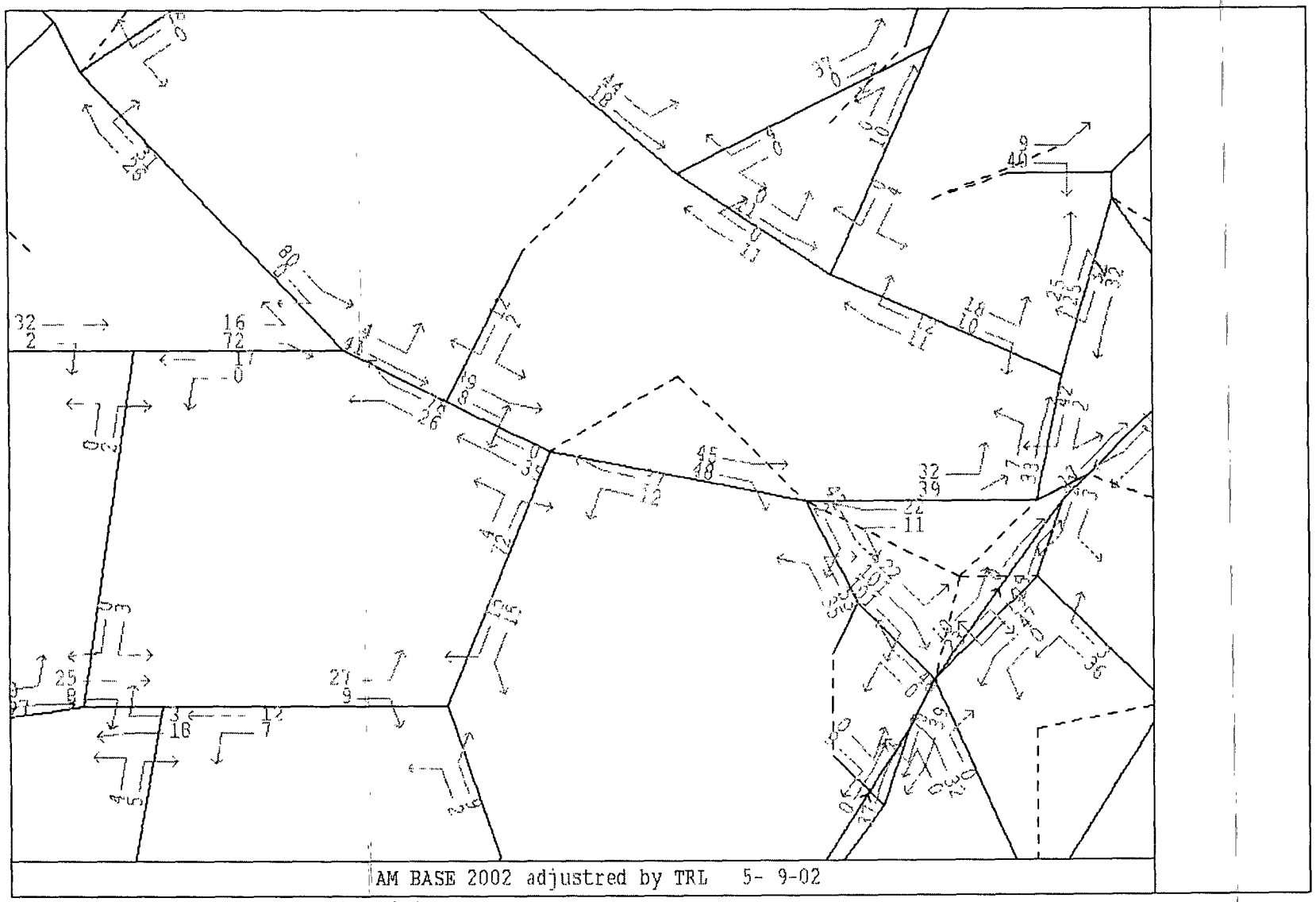
Scenario 9 - V/C (per cent) -- link



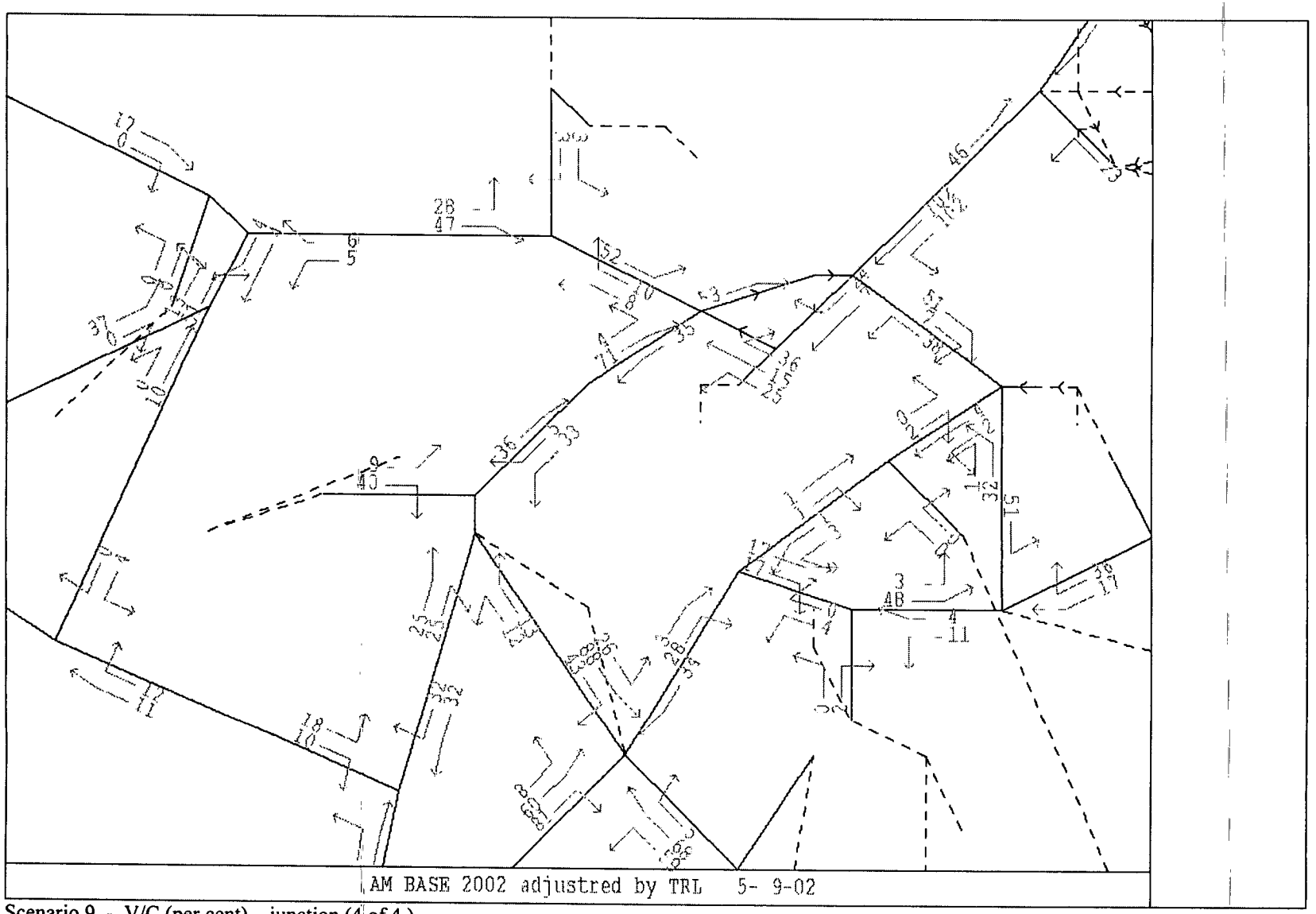
Scenario 9 -- V/C (per cent) – Junction (1 of 4)



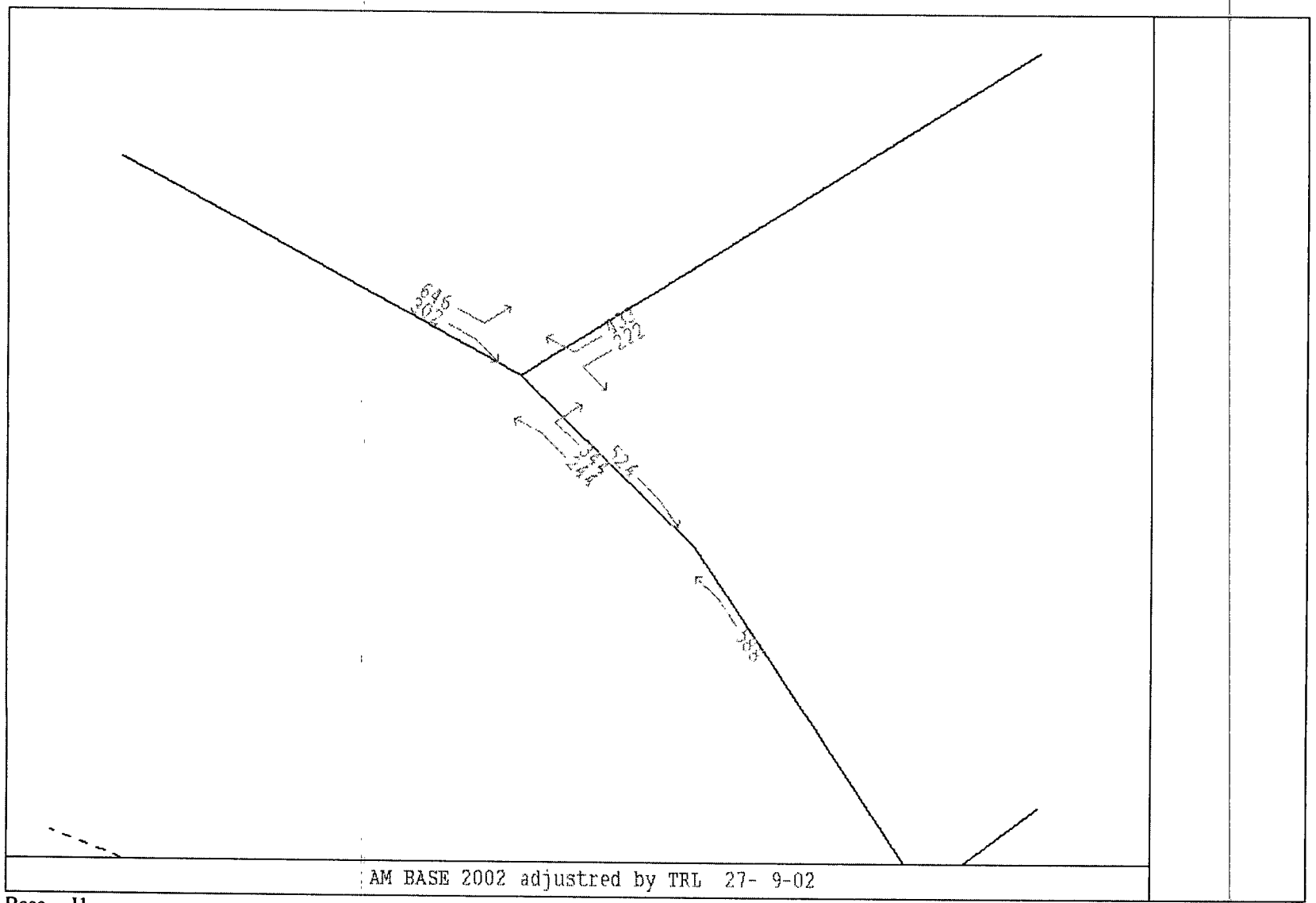
Scenario 9 - V/C (per cent) – junction (2 of 4)



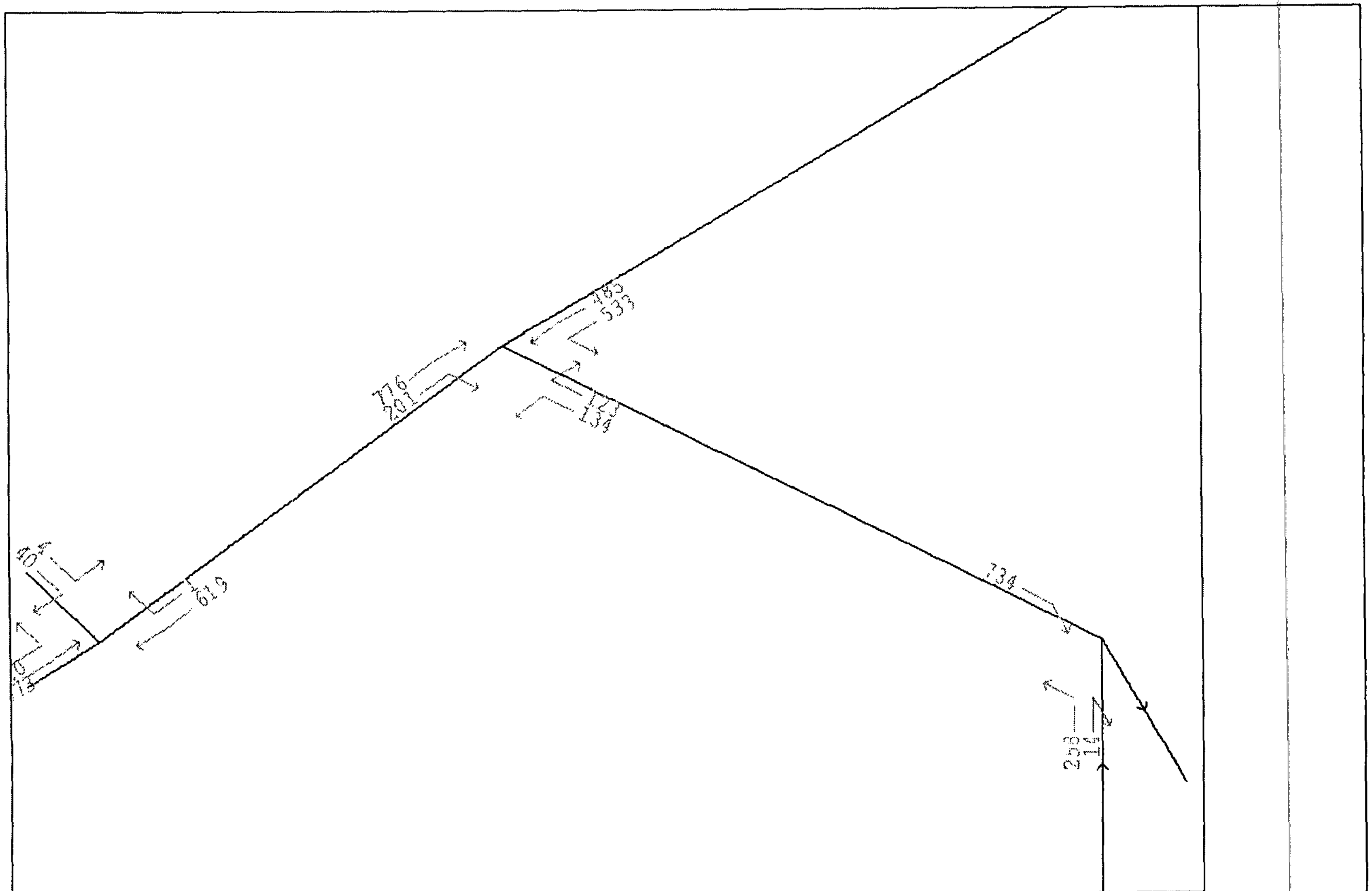
Scenario 9 - V/C (per cent) - Junction (3 of 4)



Scenario 9 - V/C (per cent) – junction (4 of 4)

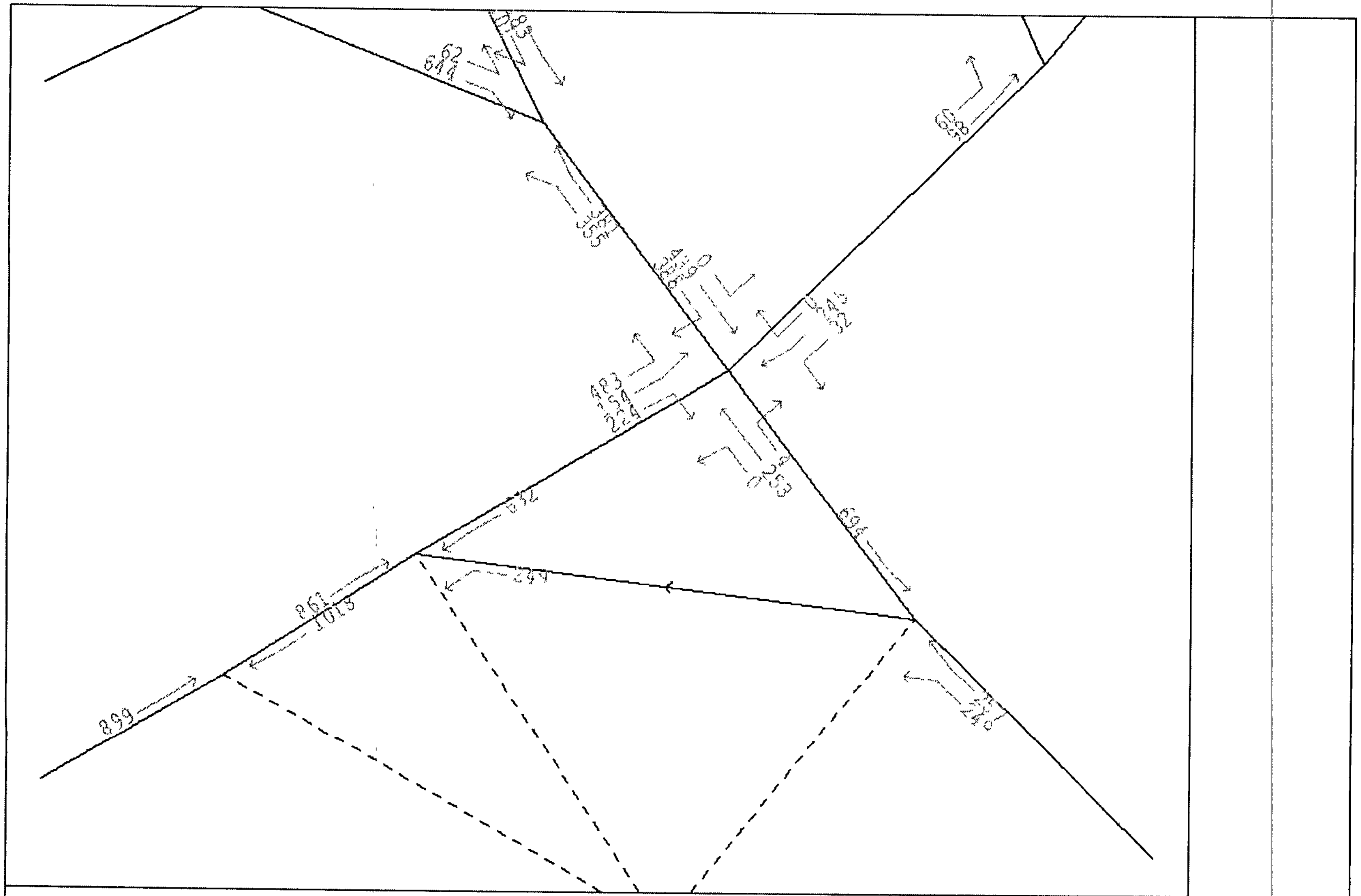


Base - J1



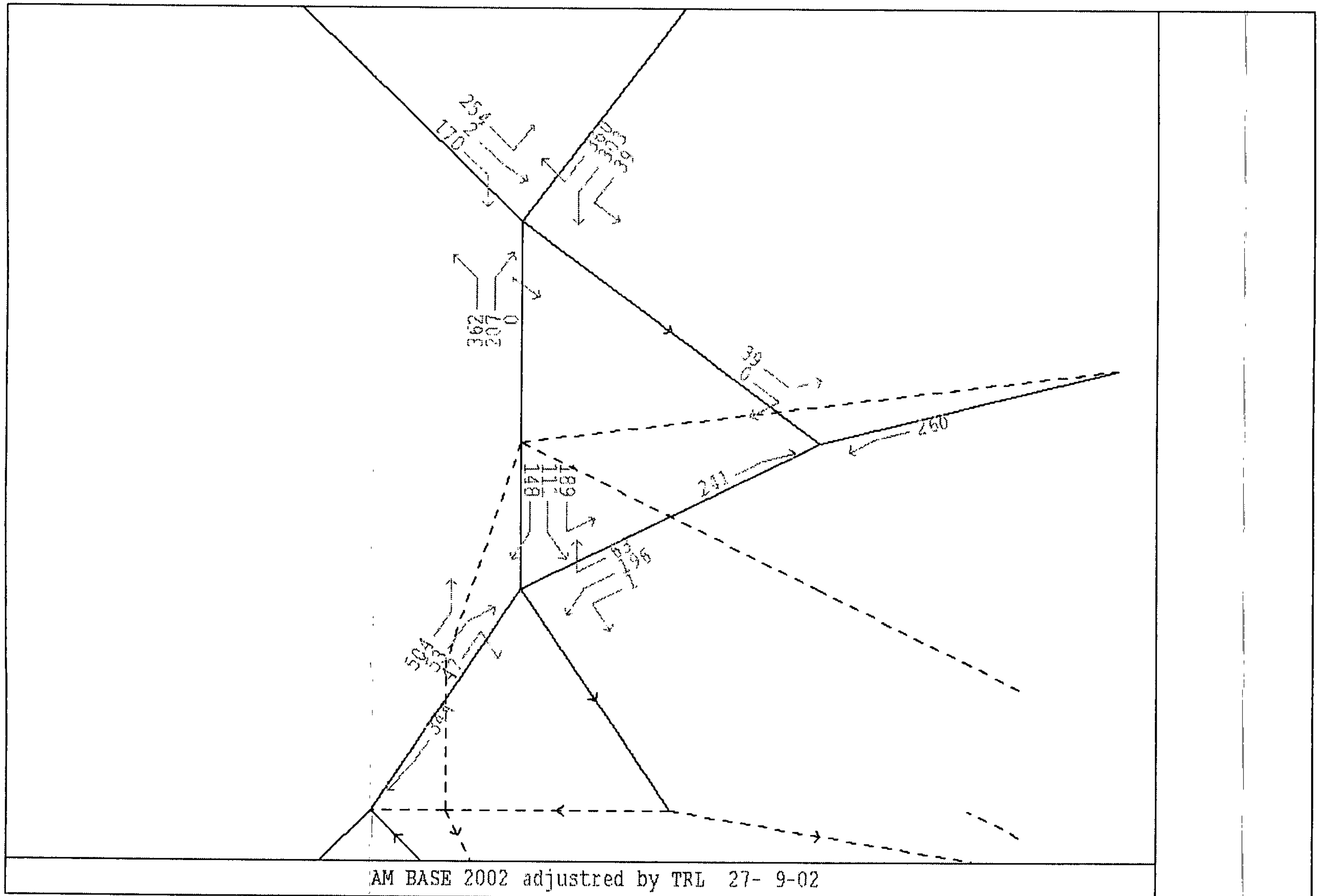
AM BASE 2002 adjustred by TRL 27- 9-02

Base - J3



AM BASE 2002 adjustred by TRL 27- 9-02

Base - J4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362
207
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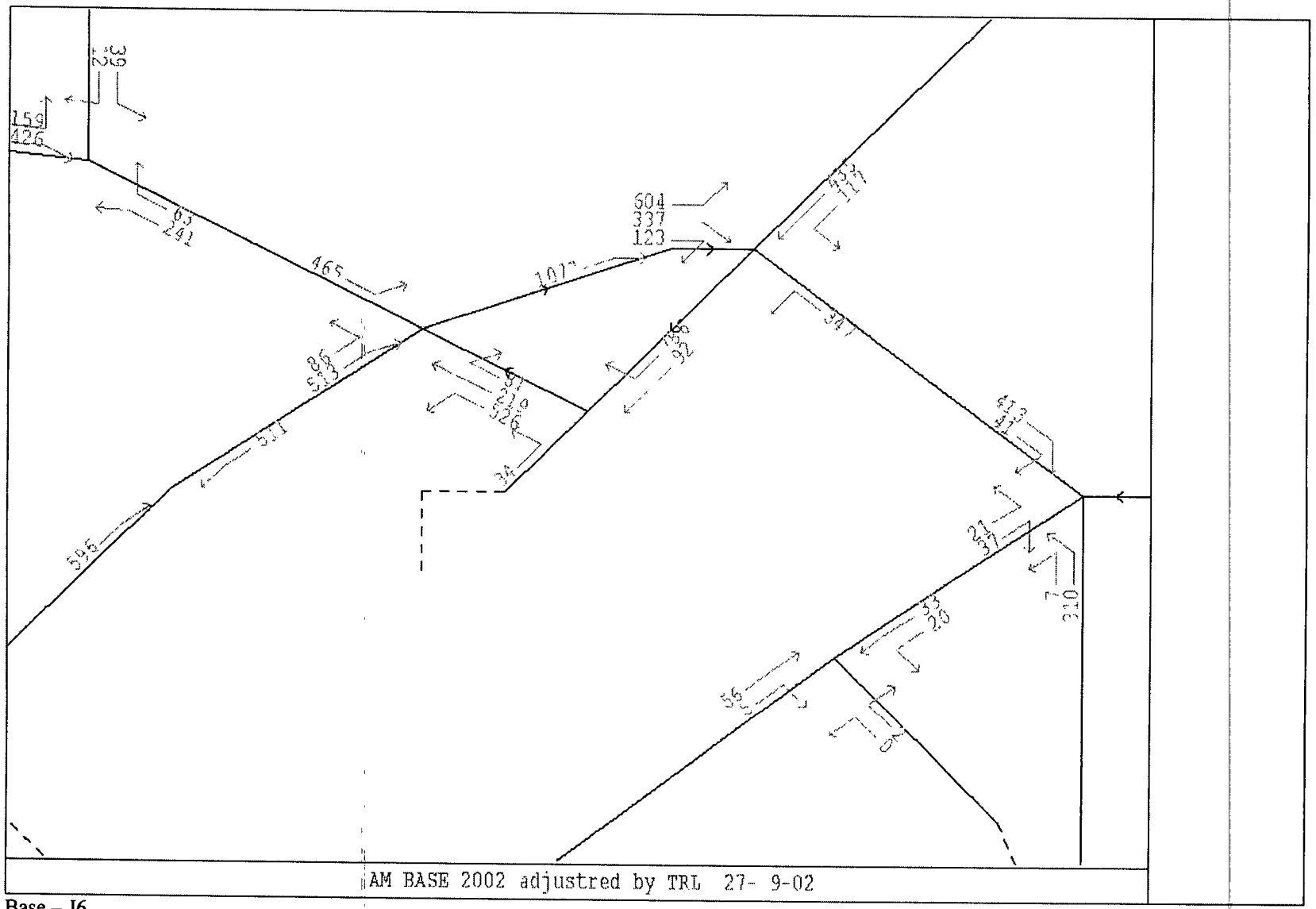
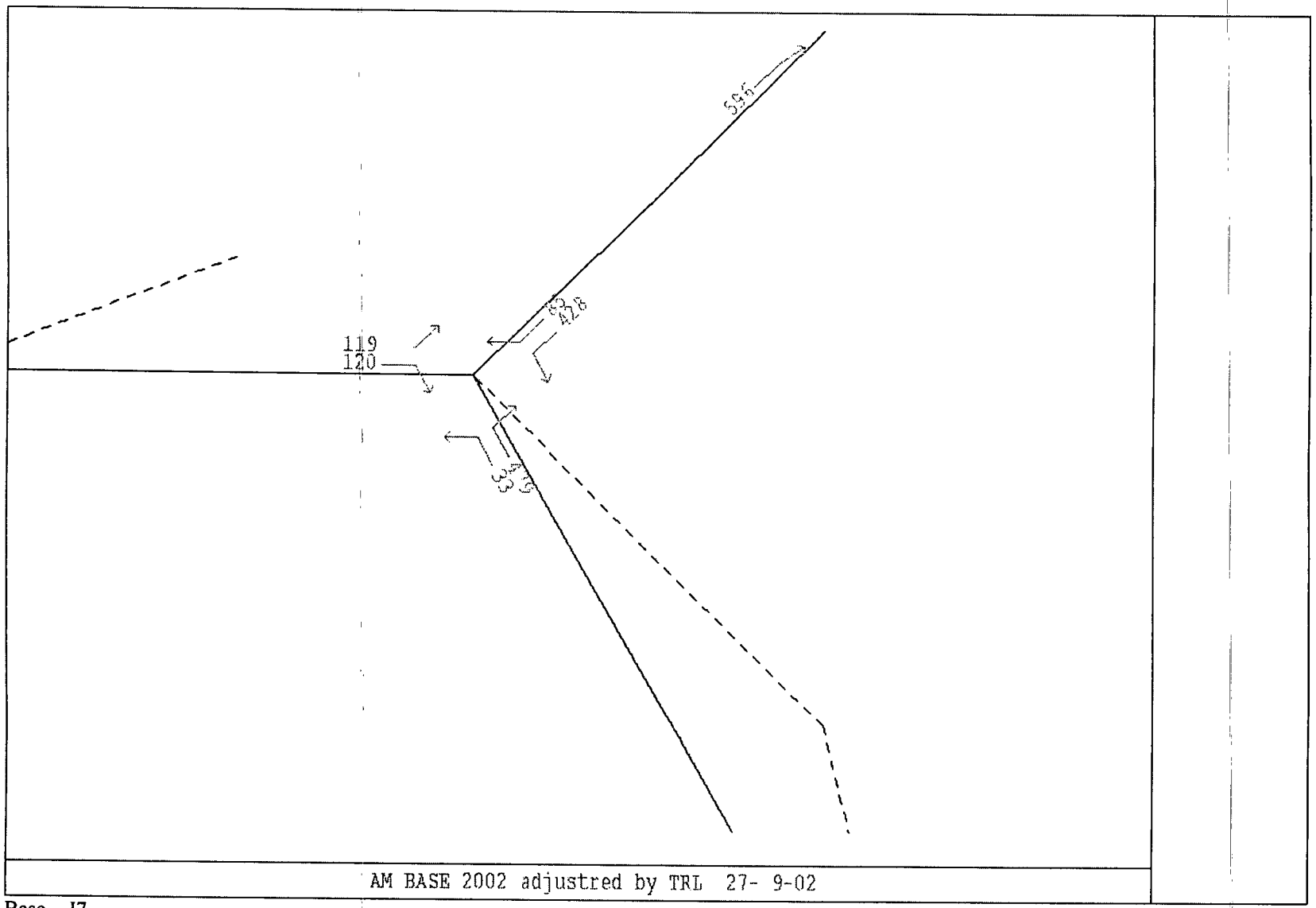
148
83
196
504
53
364
AM BASE 2002 adjustred by TRL 27- 9-02

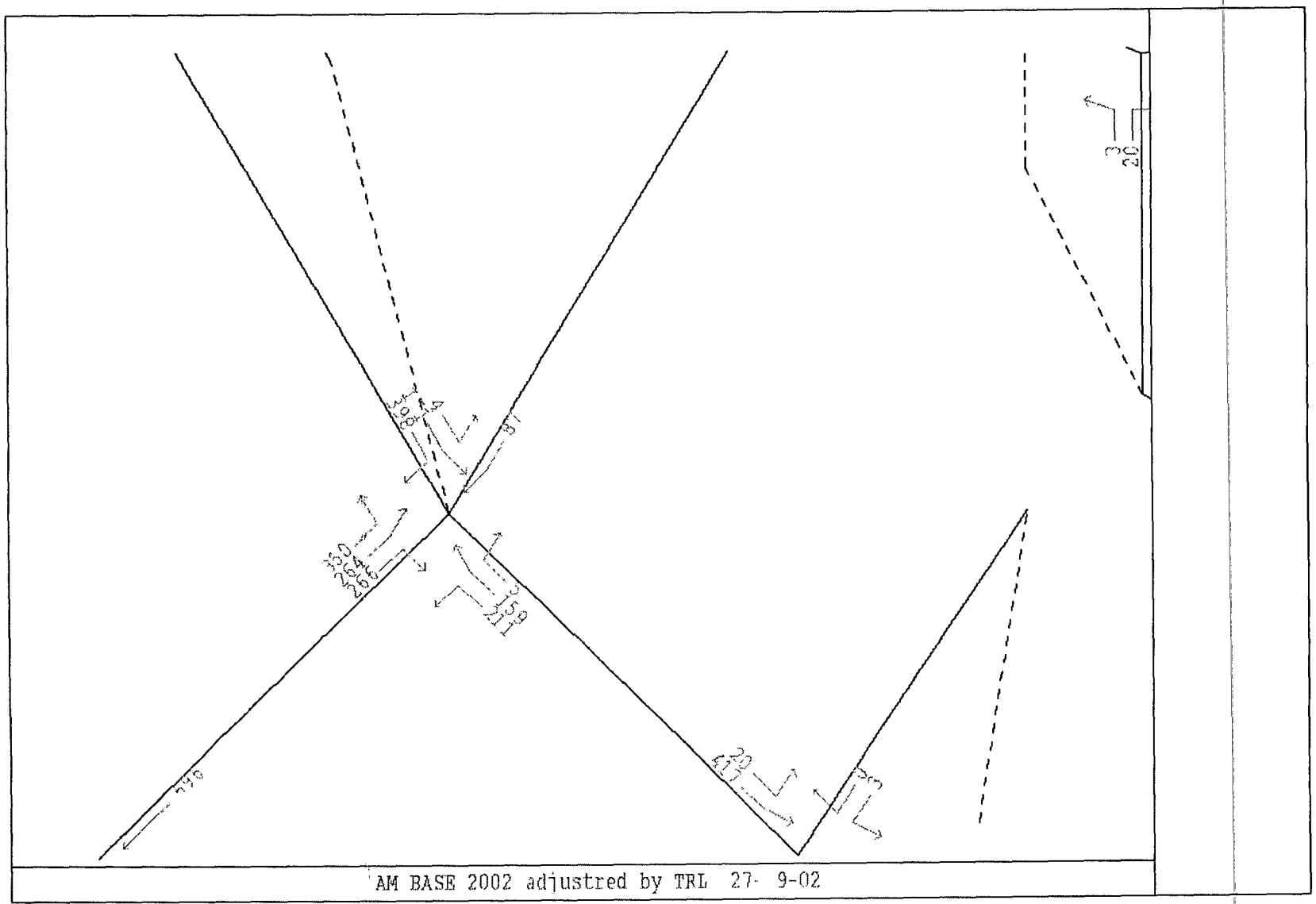
Base – J5



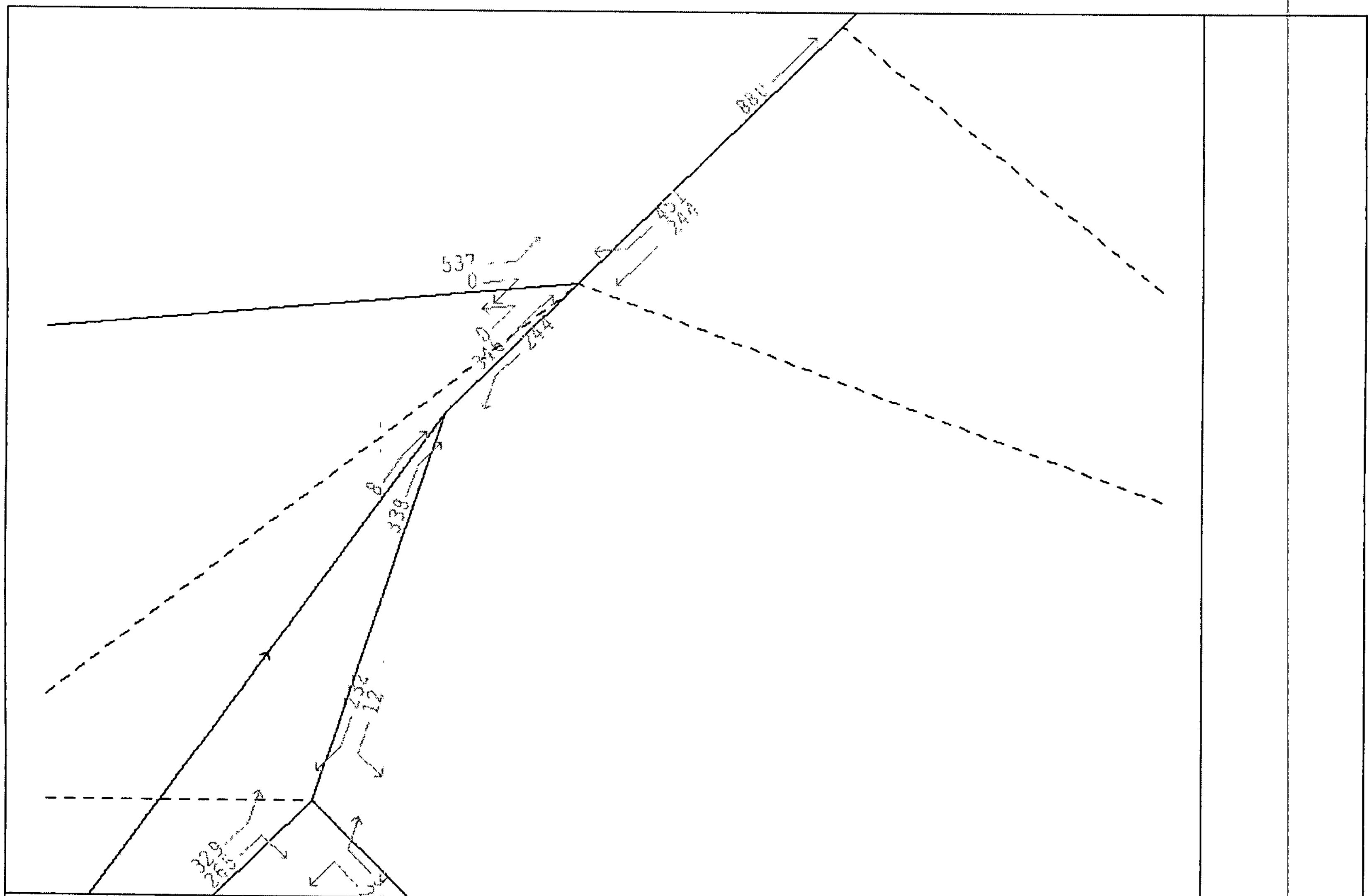
Base – J6



Base – J7

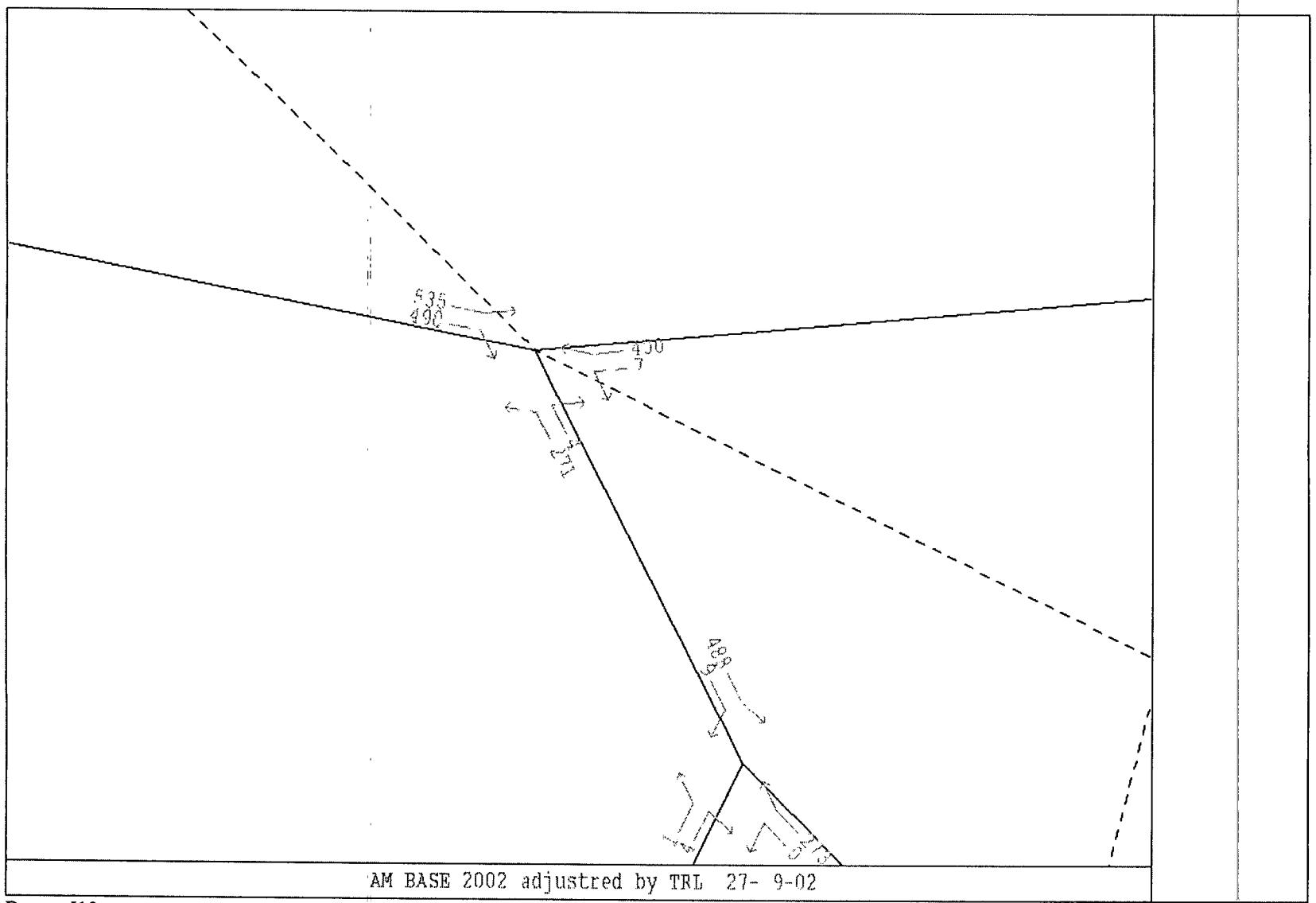


Base – J8

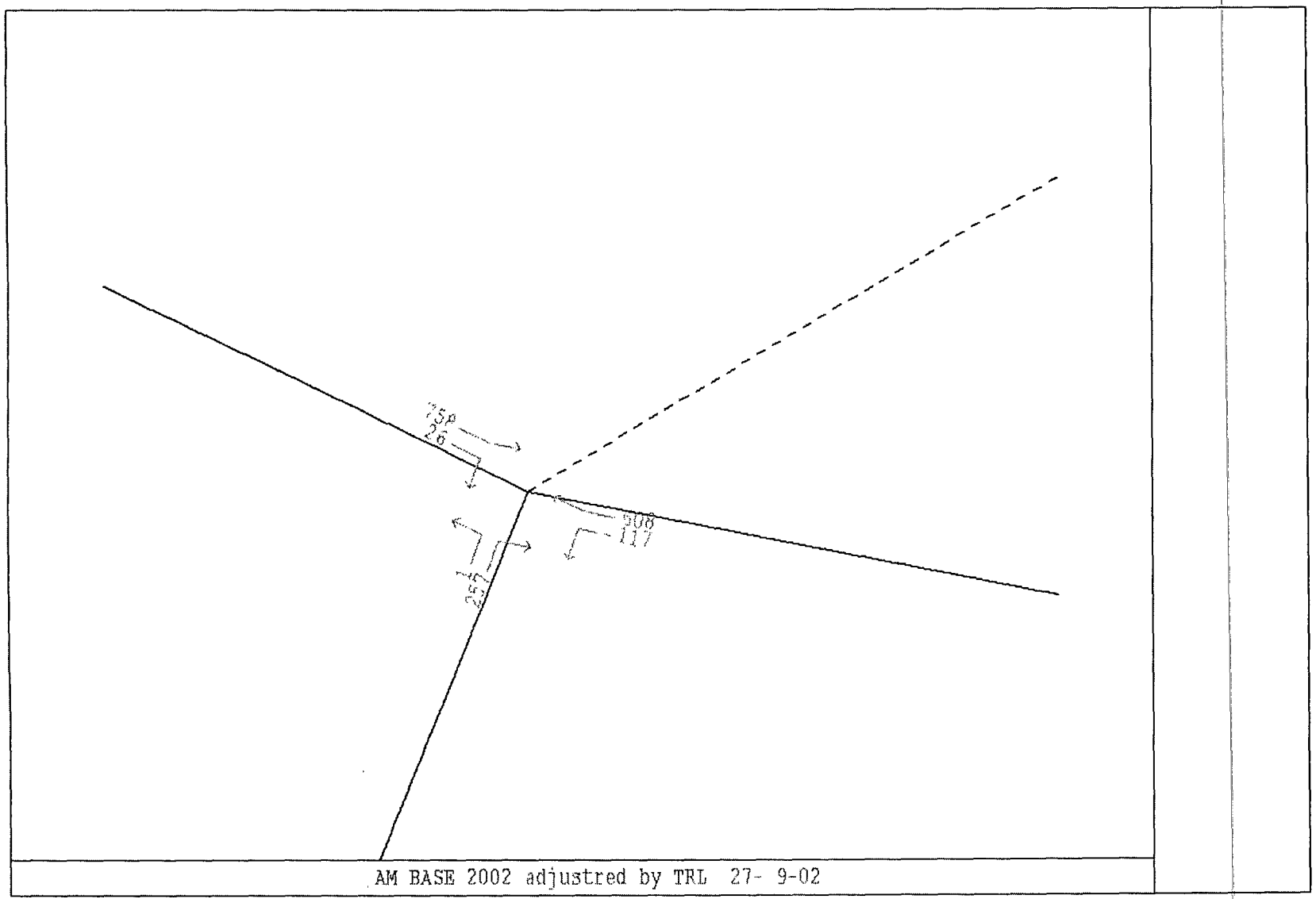


AM BASE 2002 adjustred by TRL 27- 9-02

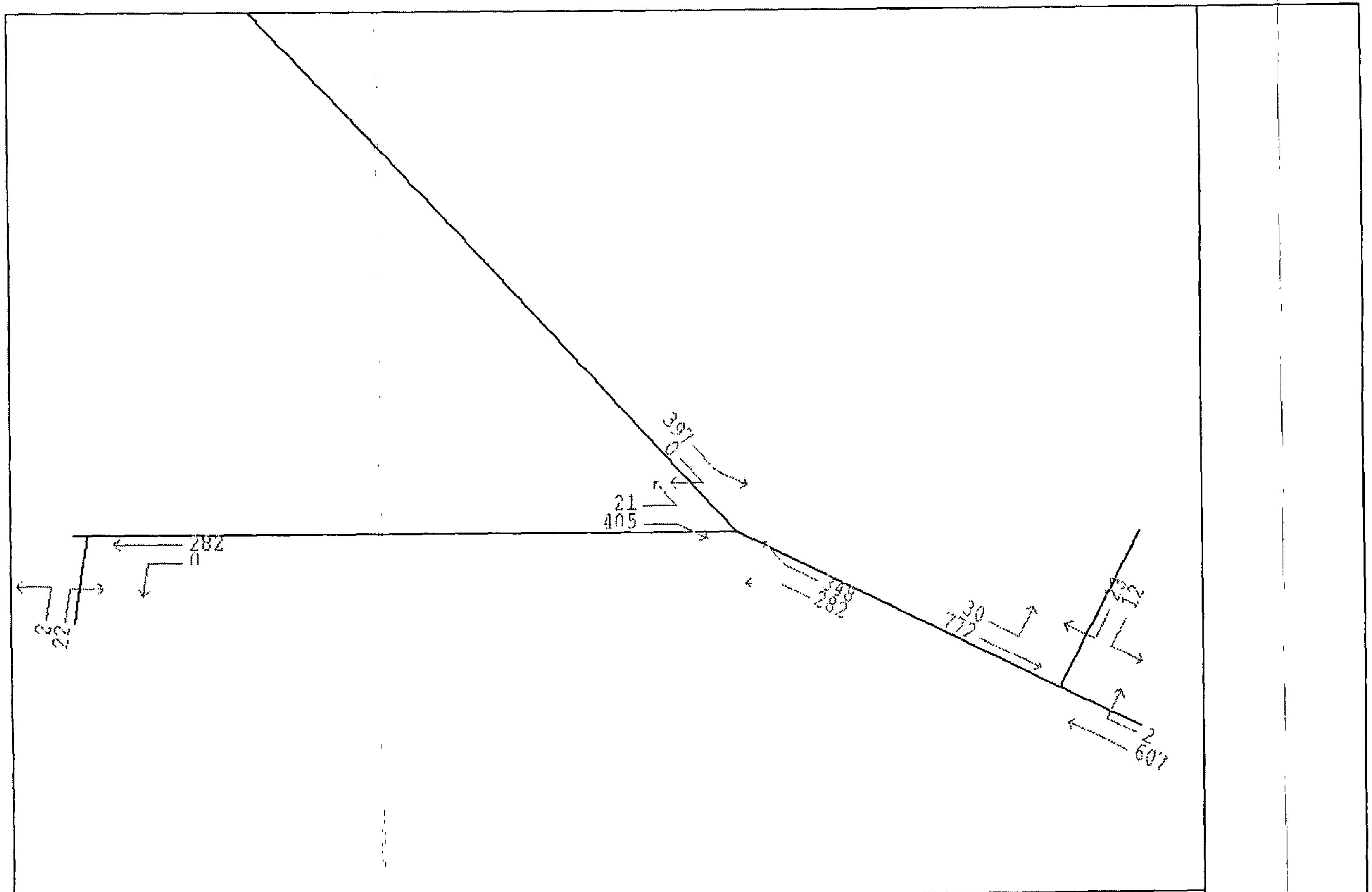
Base – J9



Base – J10

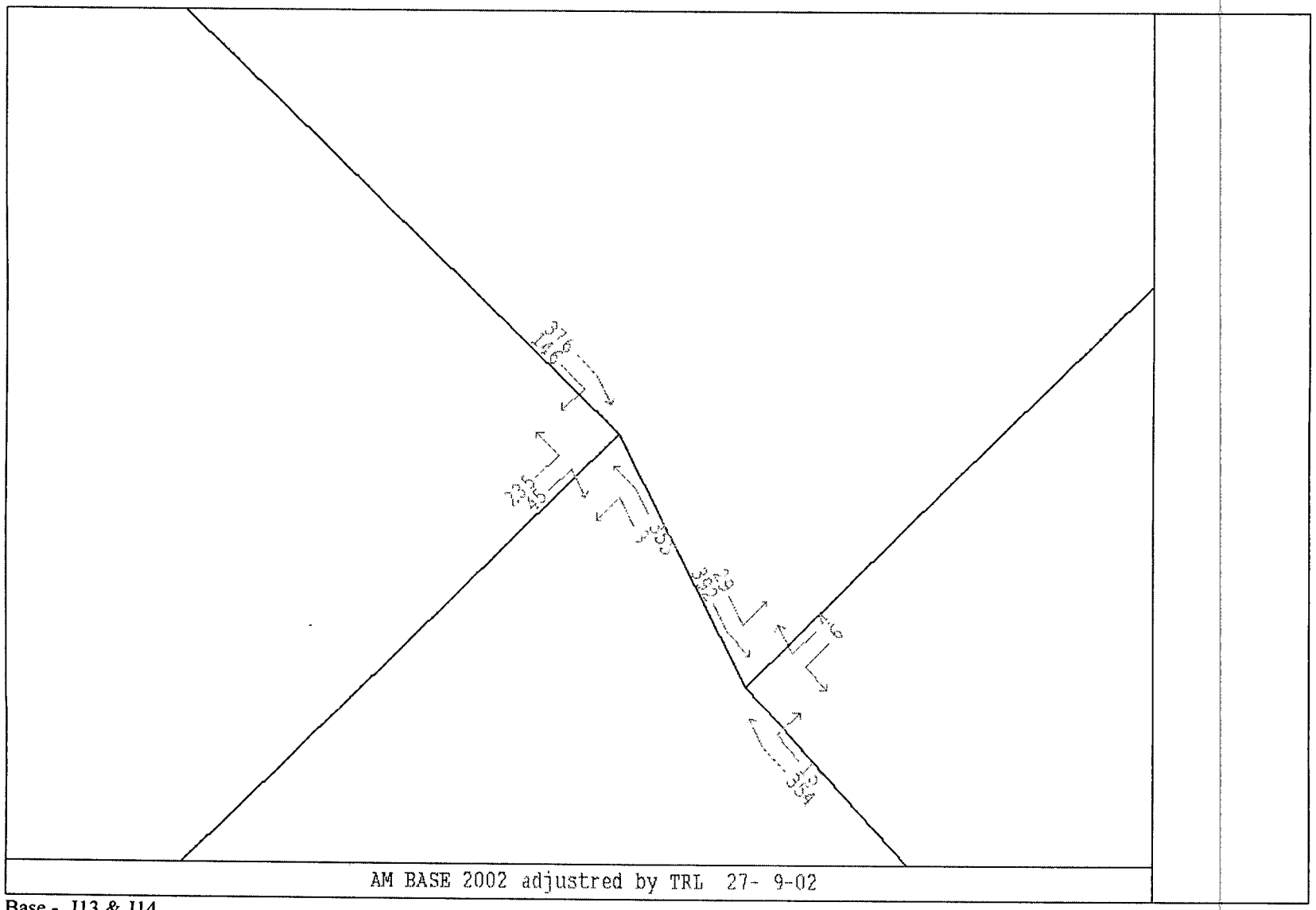


Base – J11

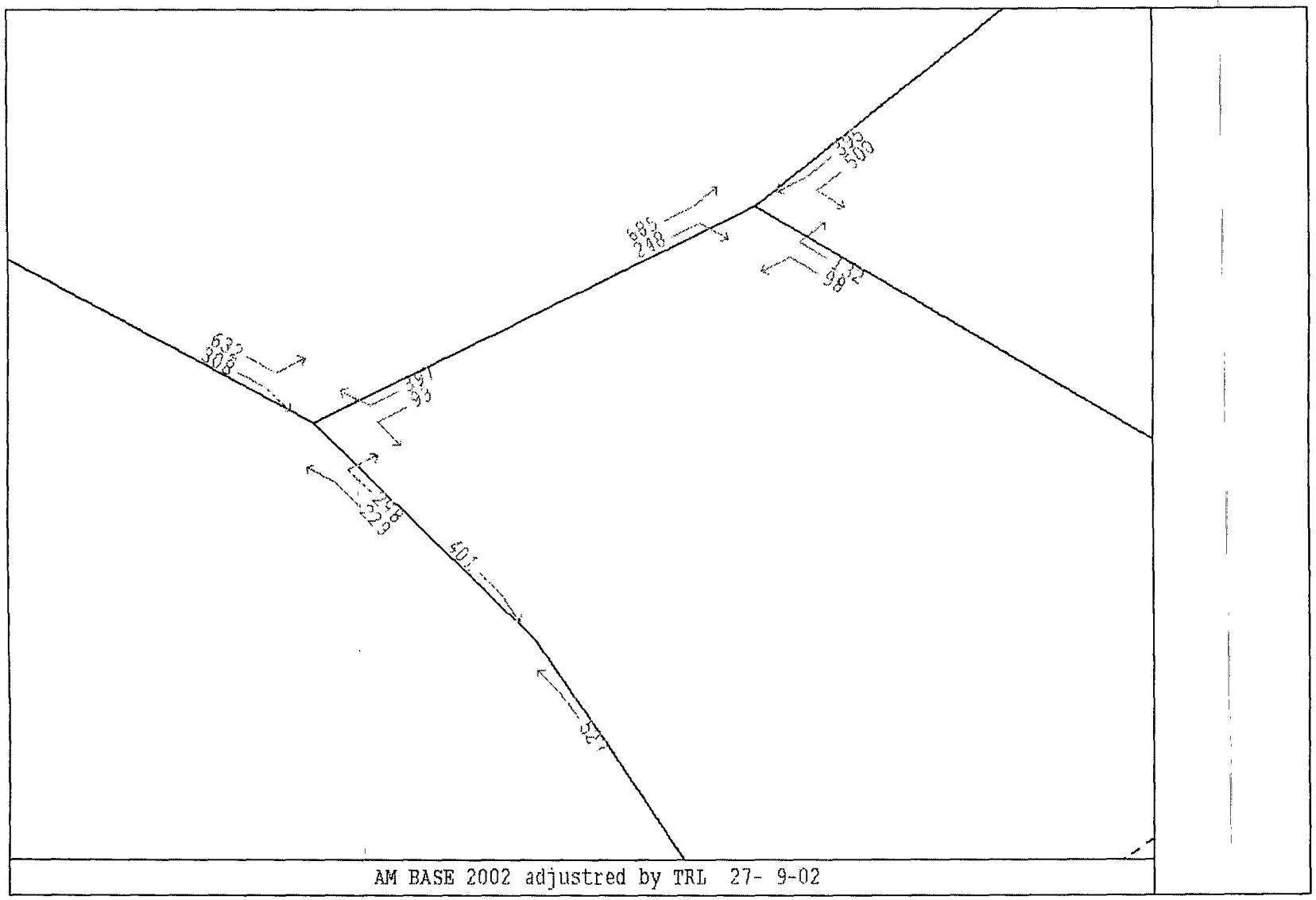


AM BASE 2002 adjustred by TRL 27- 9-02

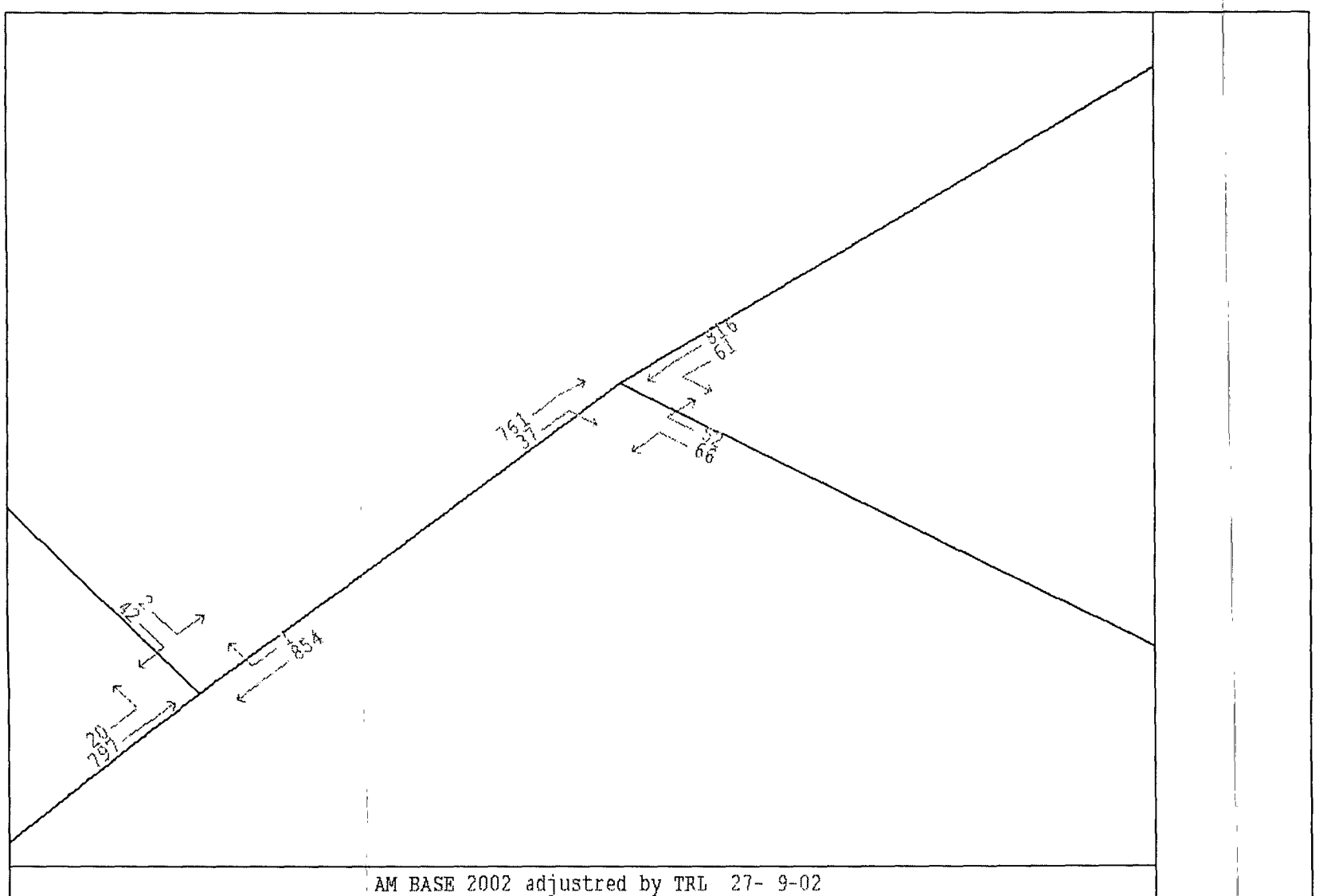
Base – J12



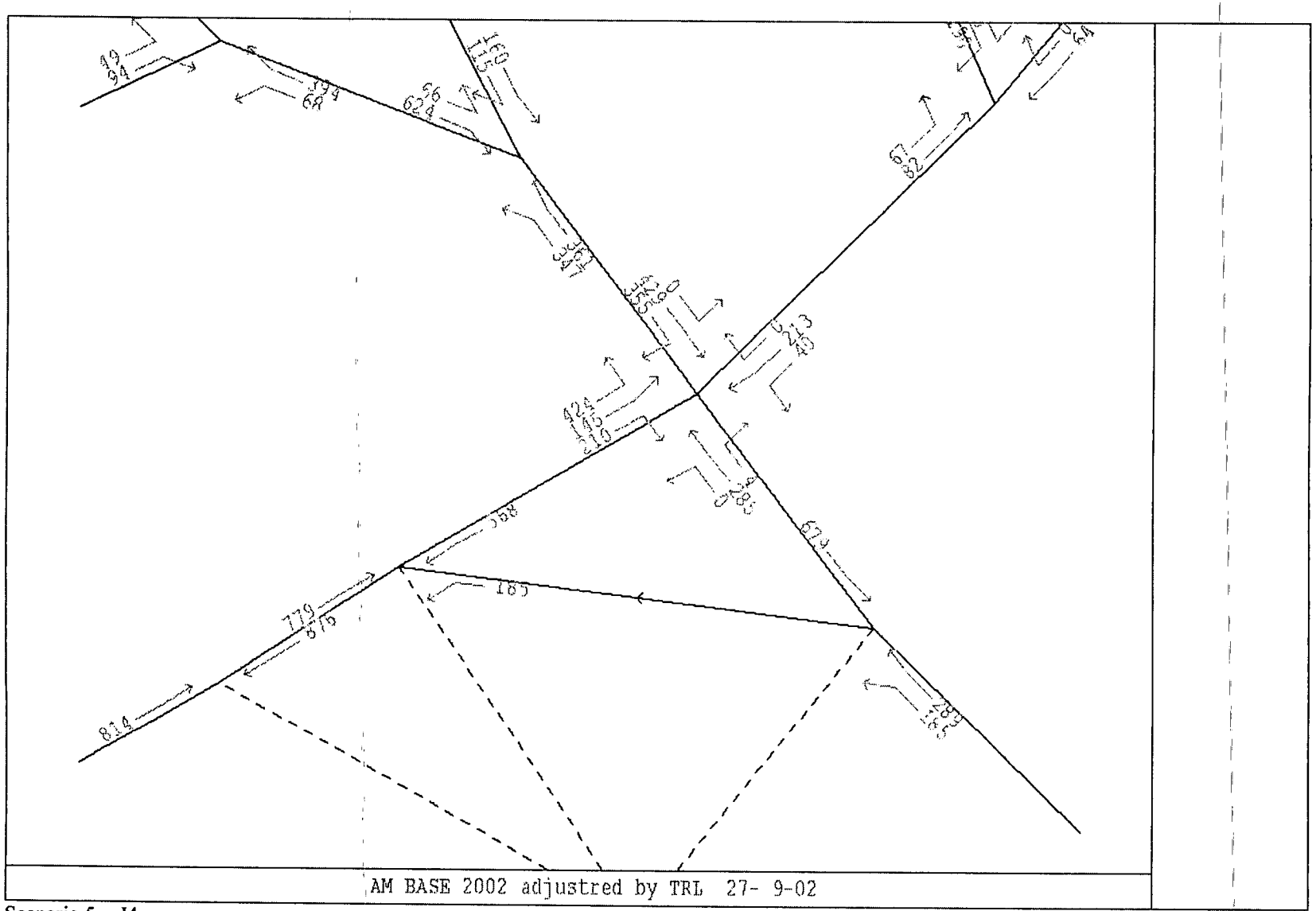
Base - J13 & J14



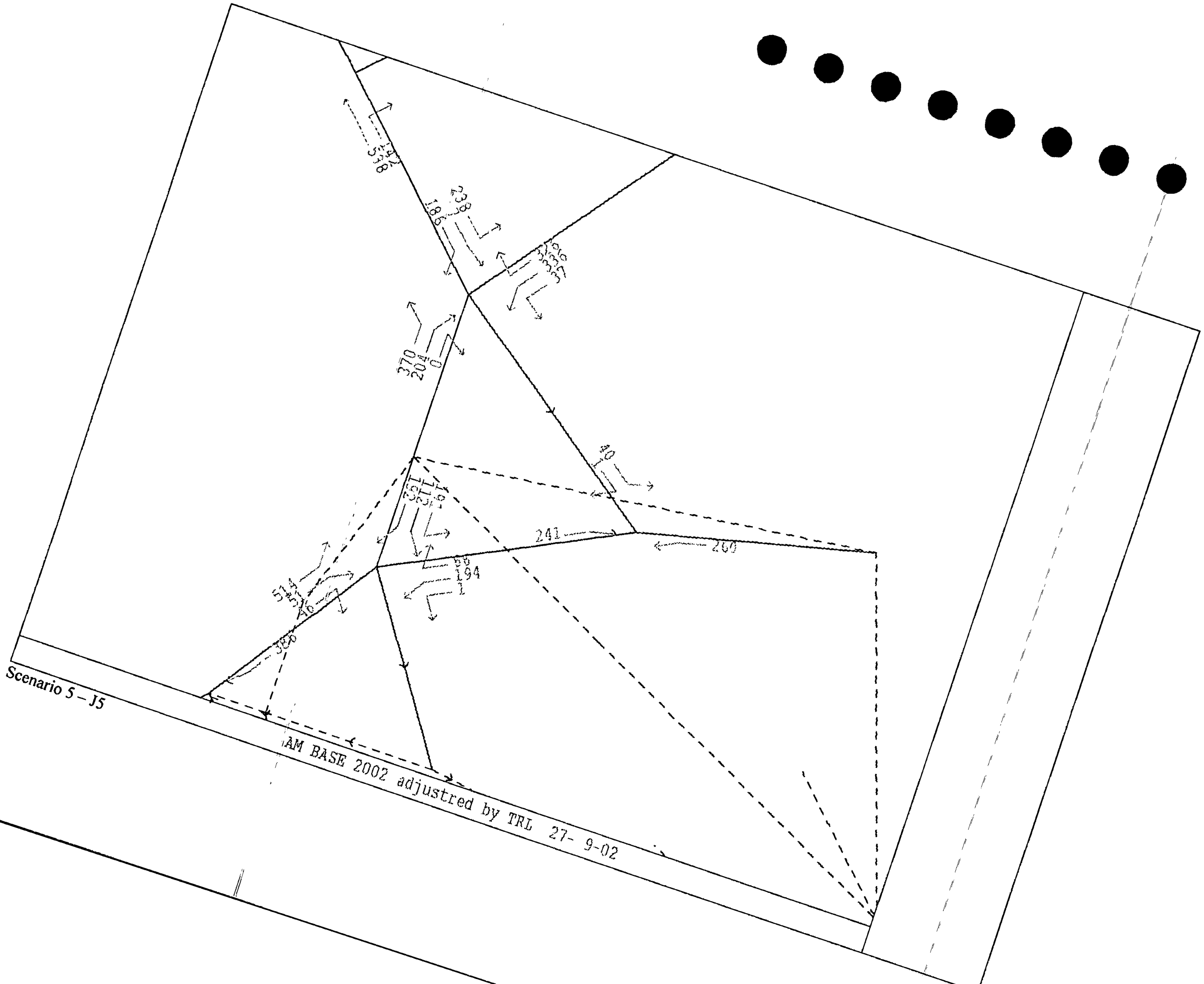
Scenario 5 - J1 & J2



Scenario 5 - J3



Scenario 5 - J4


Scenario 5 – J5
AM BASE 2002 adjustred by TRL 27- 9-02
260
241
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370
204
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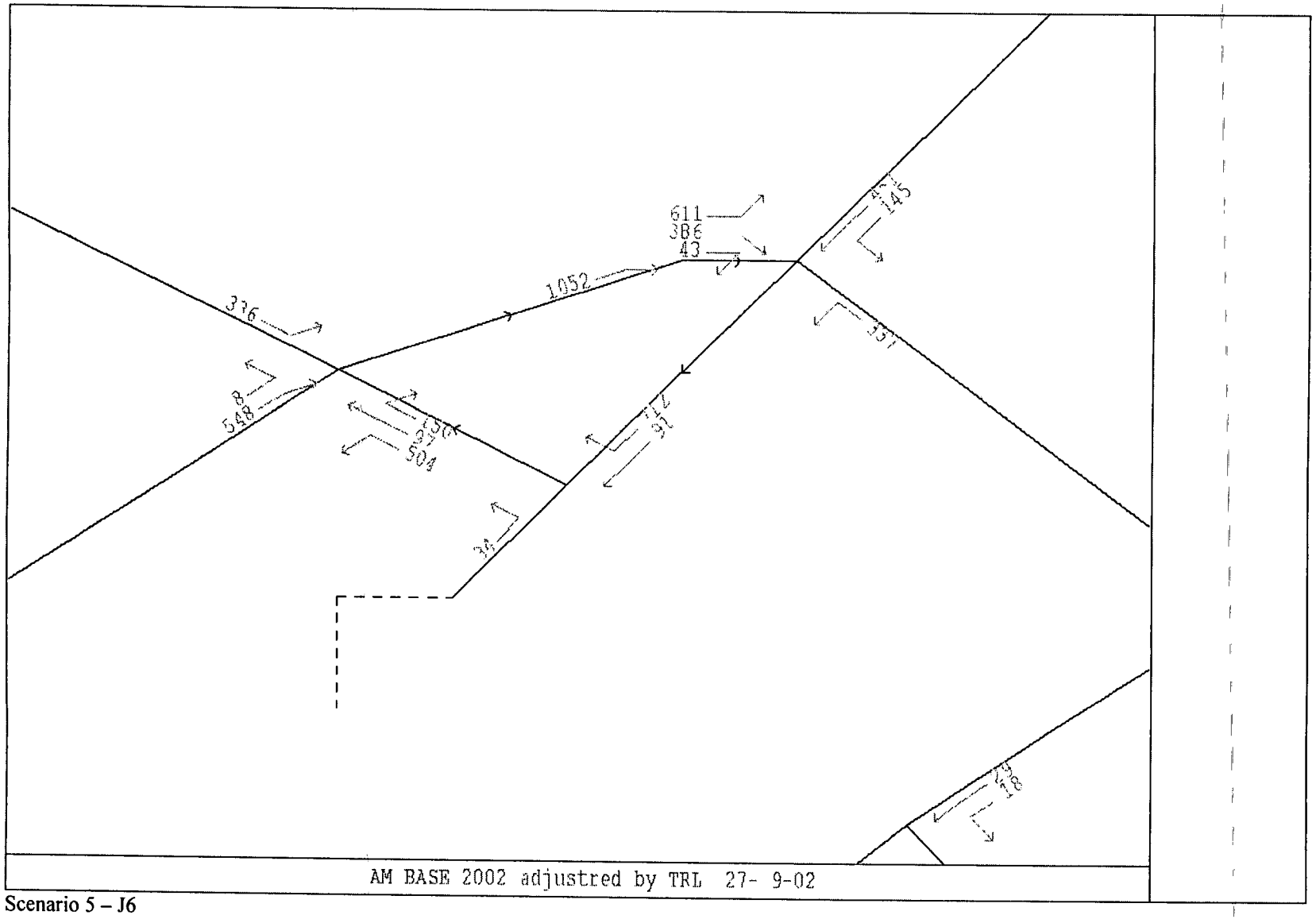
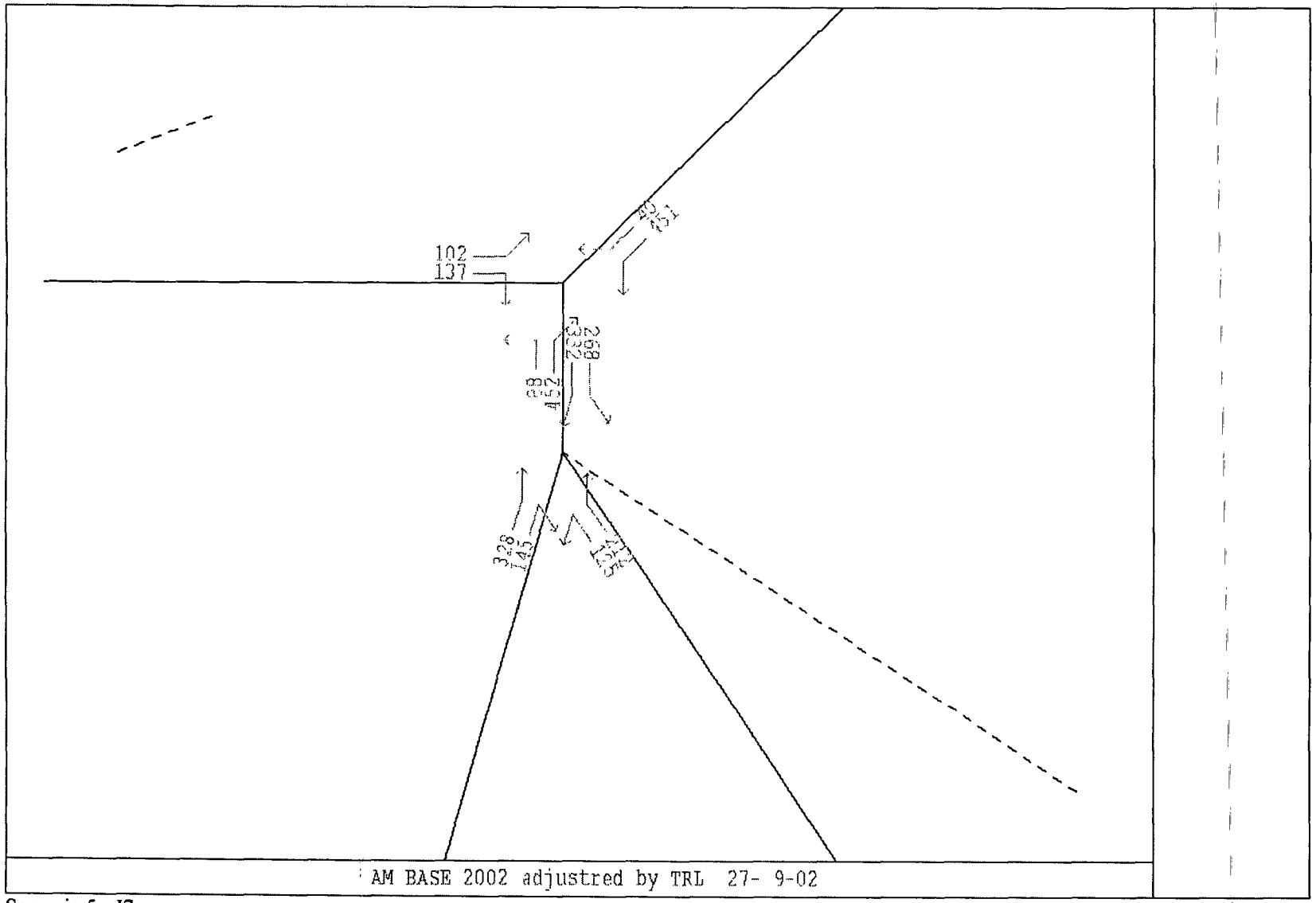
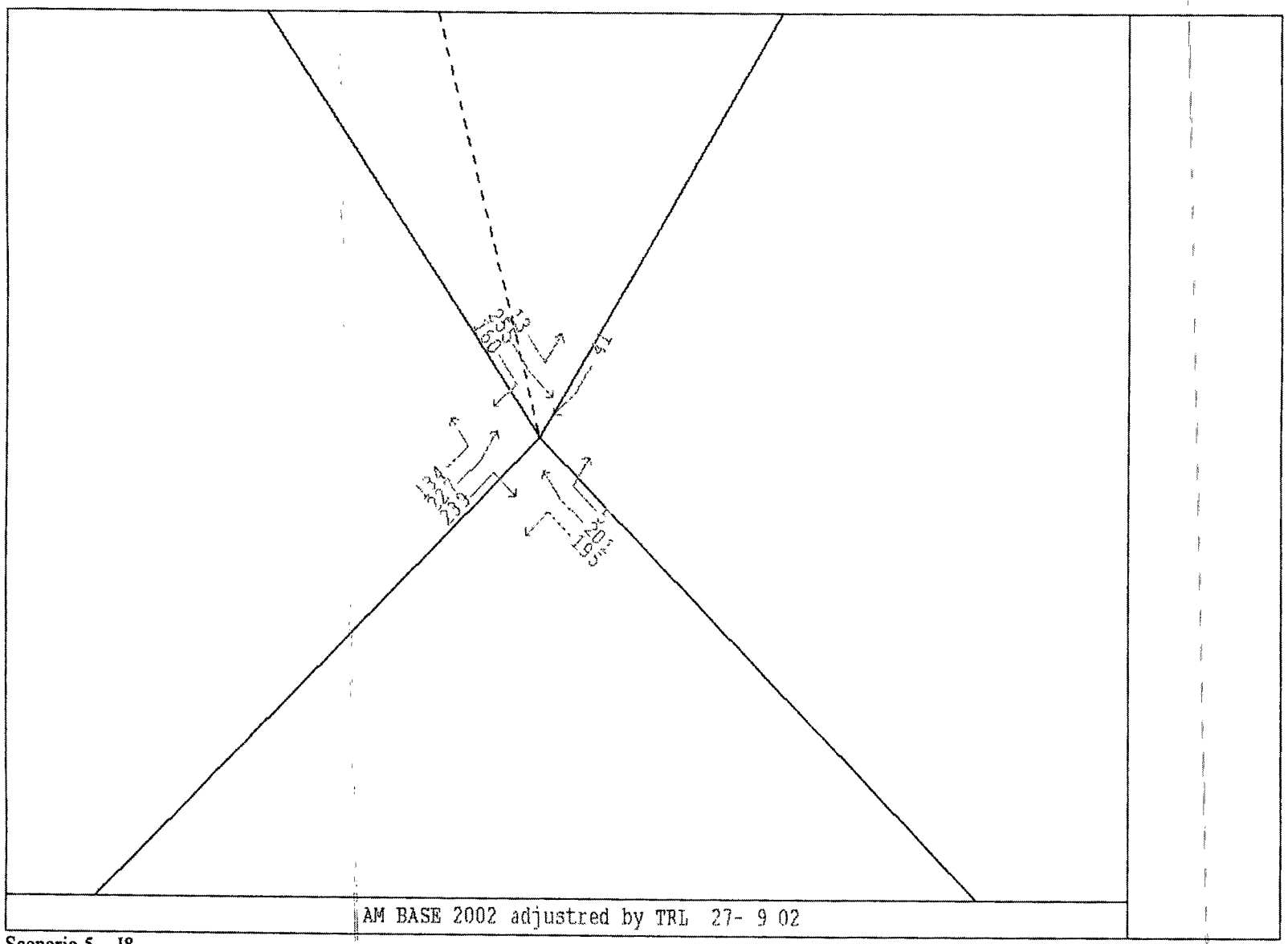
186
238
538
194
386



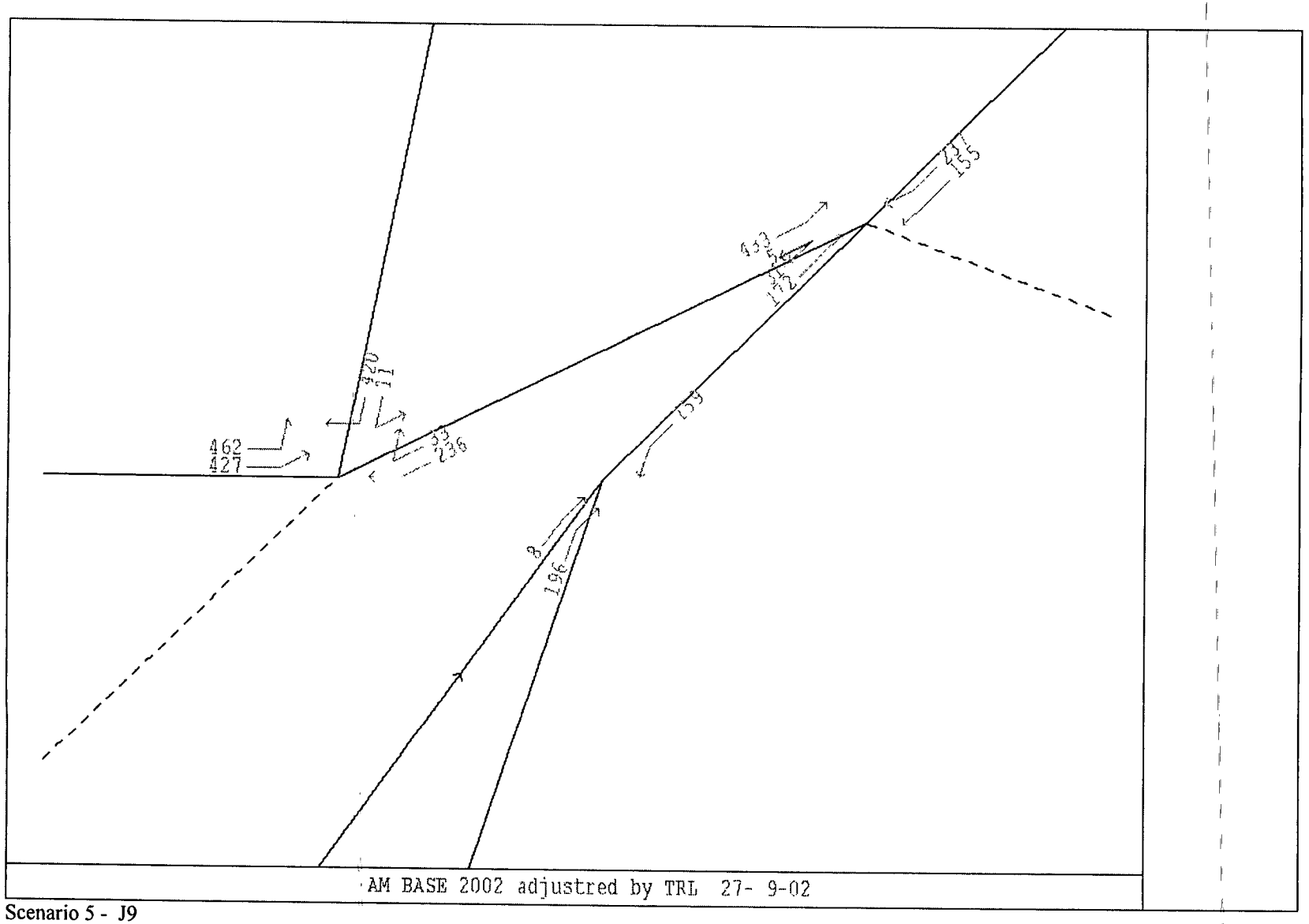
Scenario 5 – J6



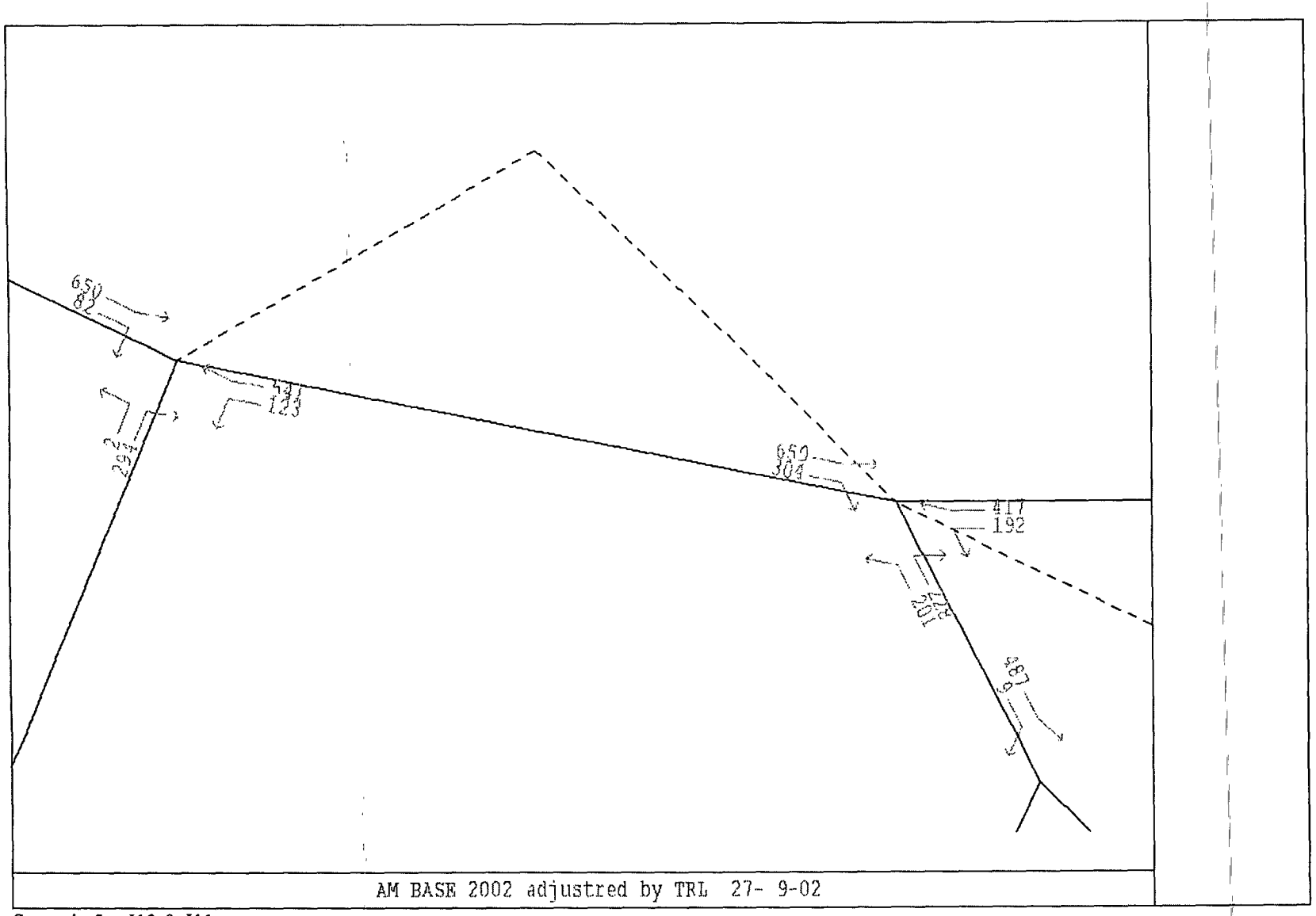
Scenario 5 -J7



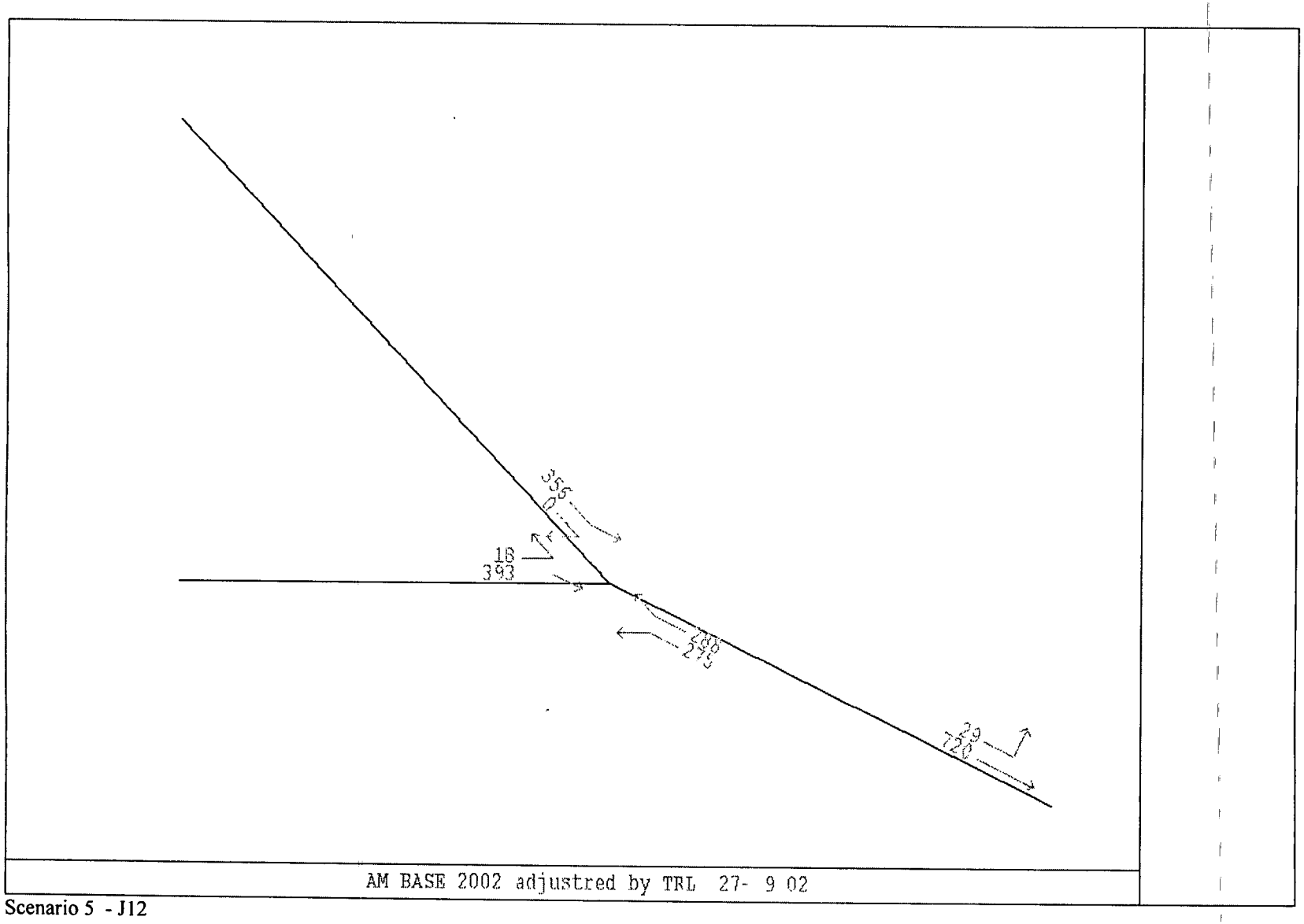
Scenario 5 – J8



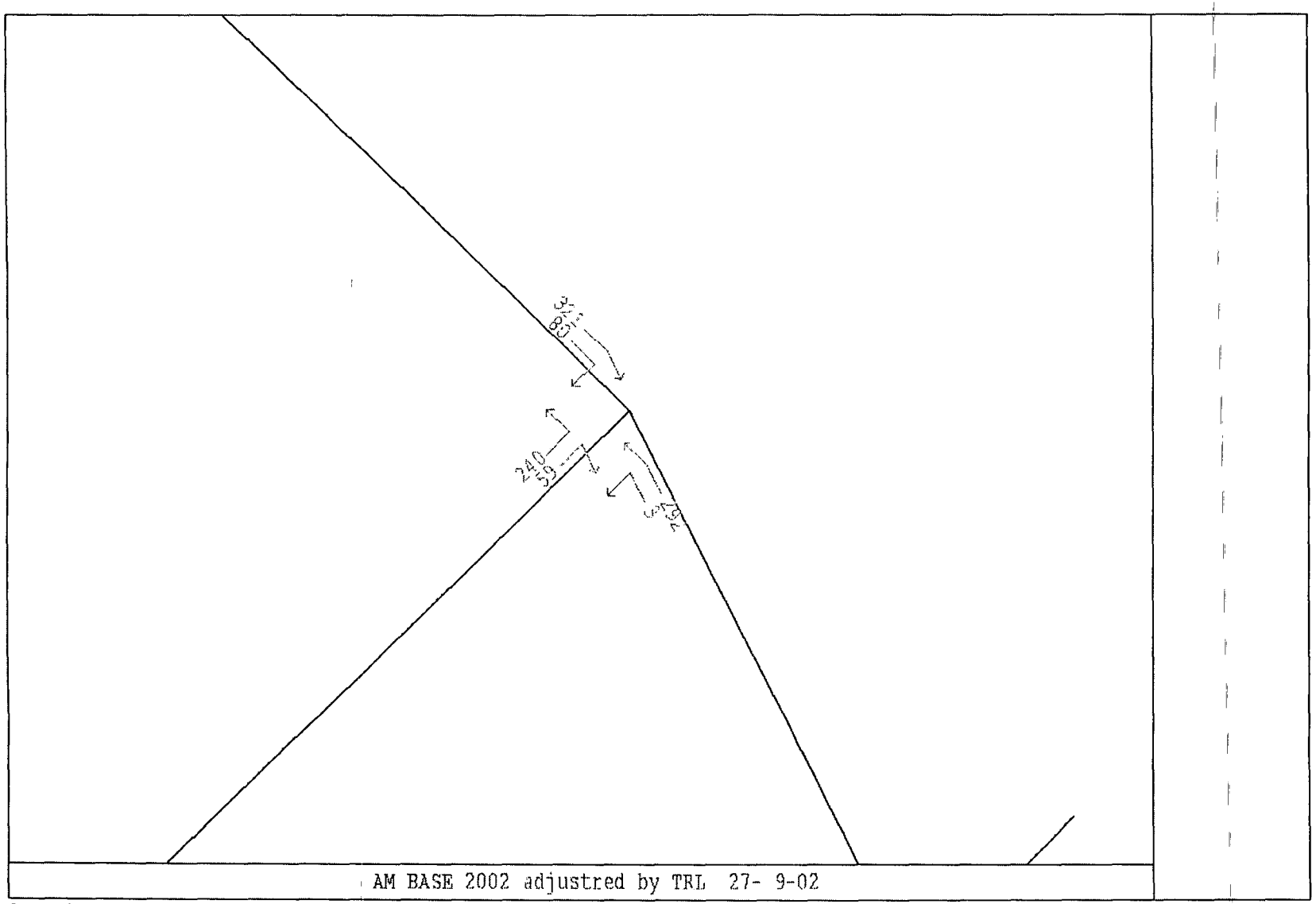
Scenario 5 - J9



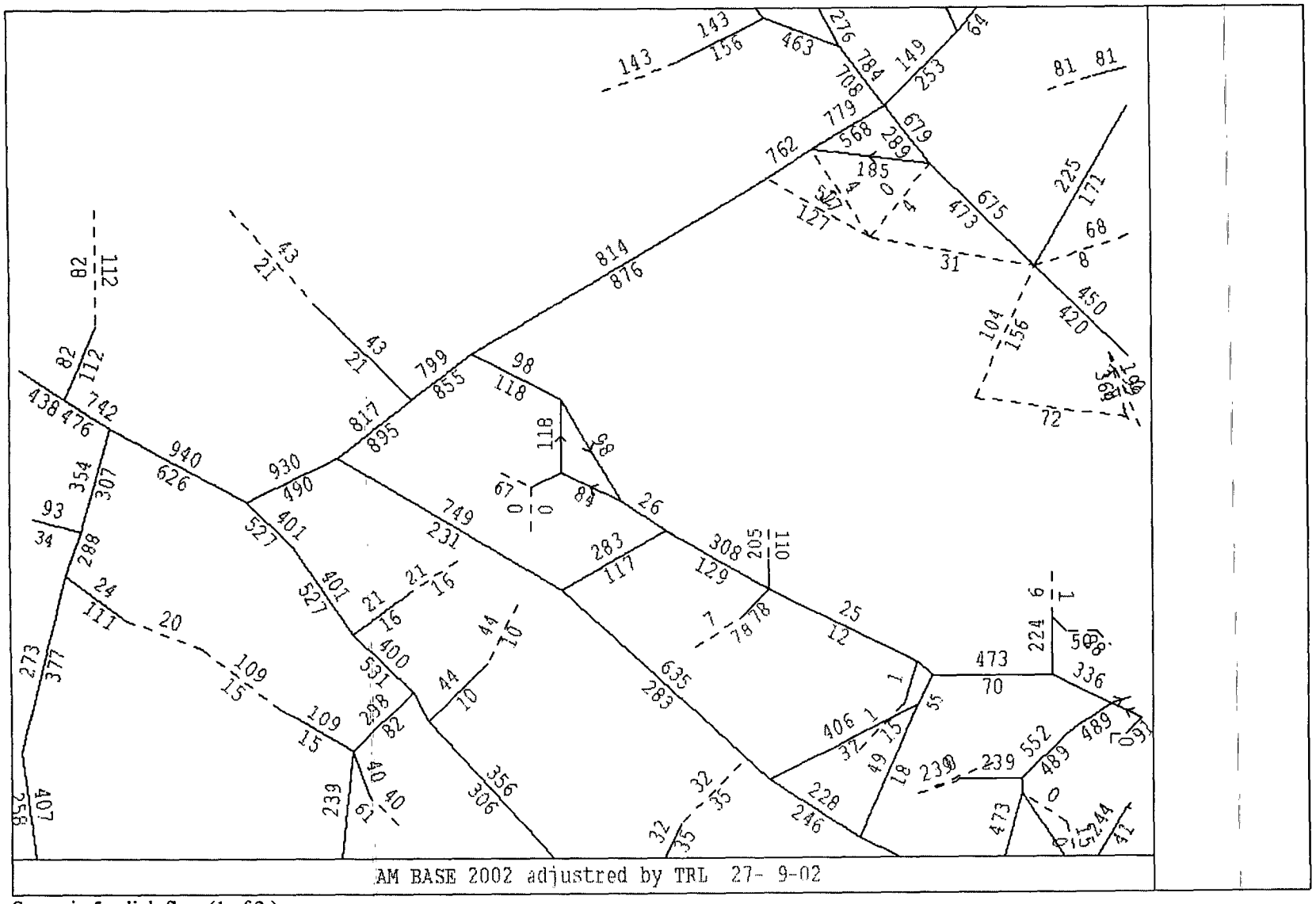
Scenario 5 - J10 & J11



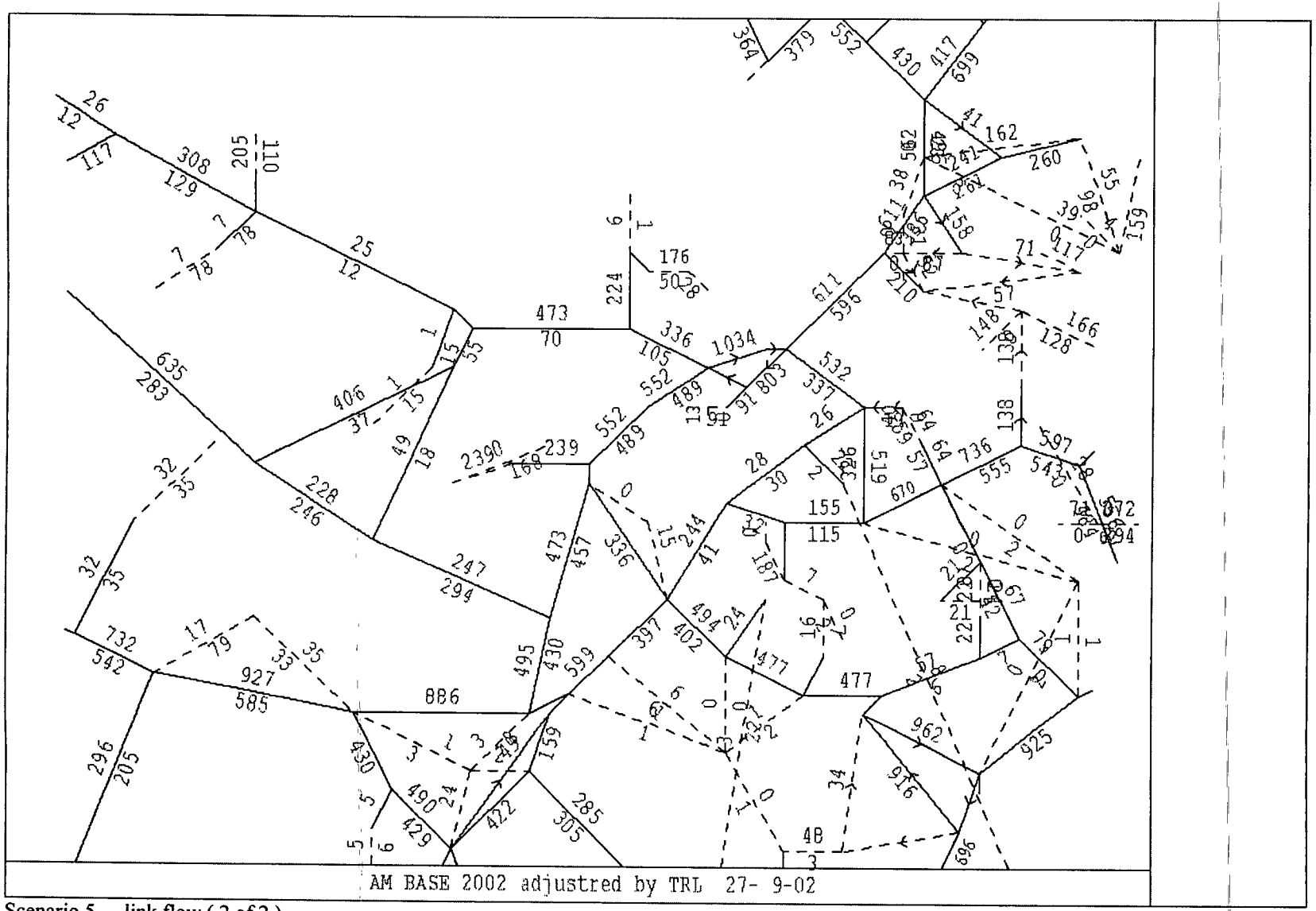
Scenario 5 - J12



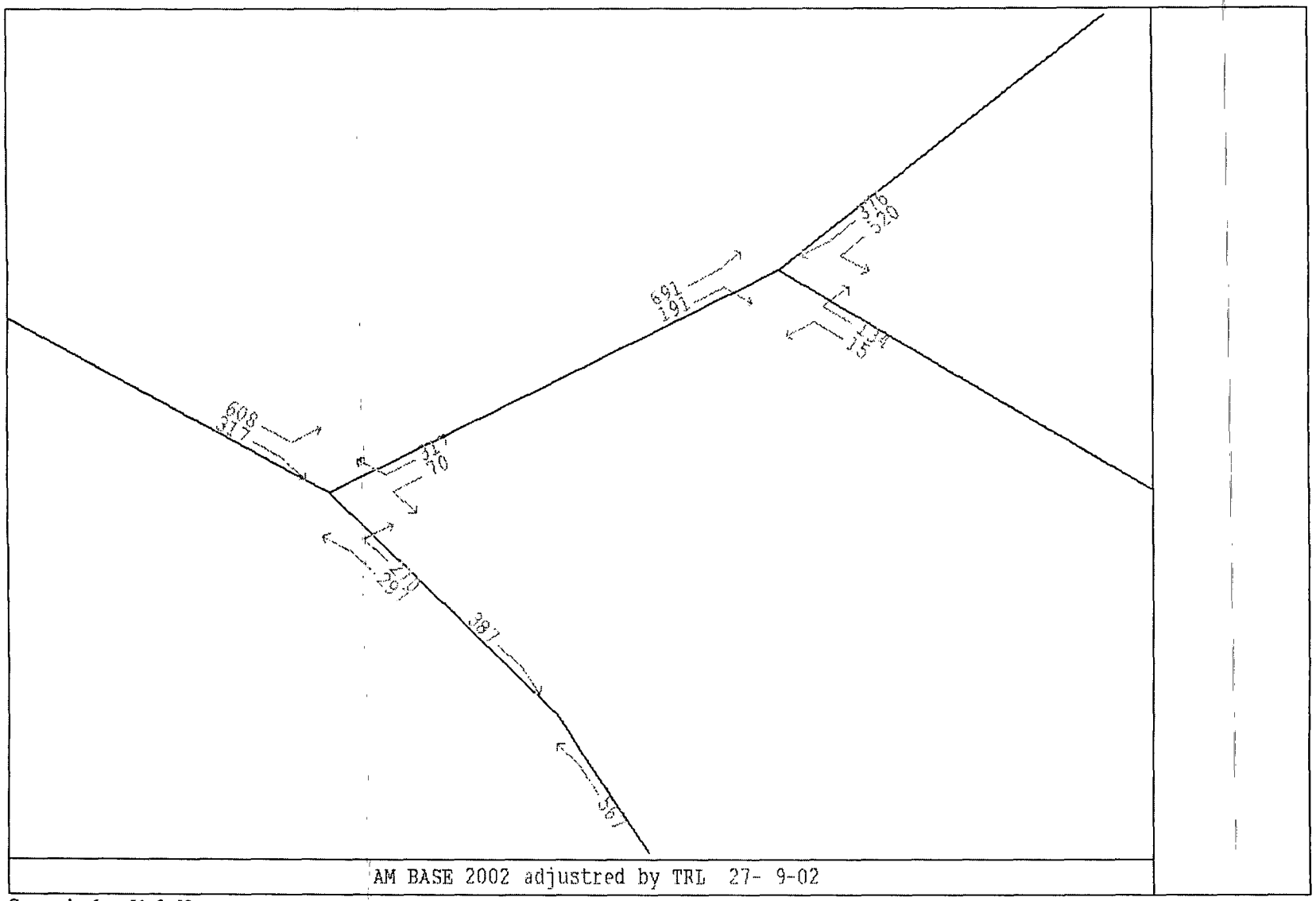
Scenario 5 - J13



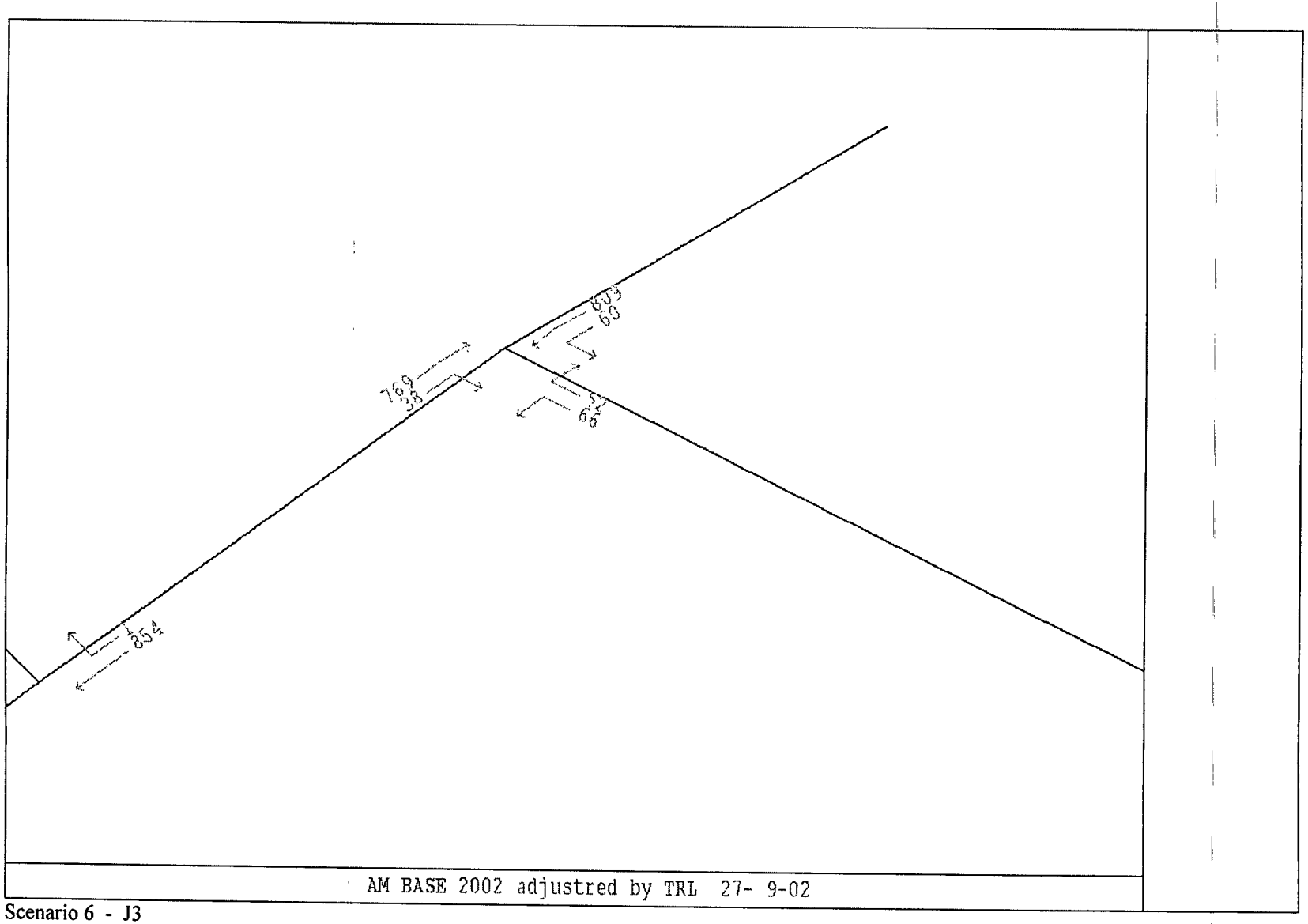
Scenario 5 - link flow (1 of 2)



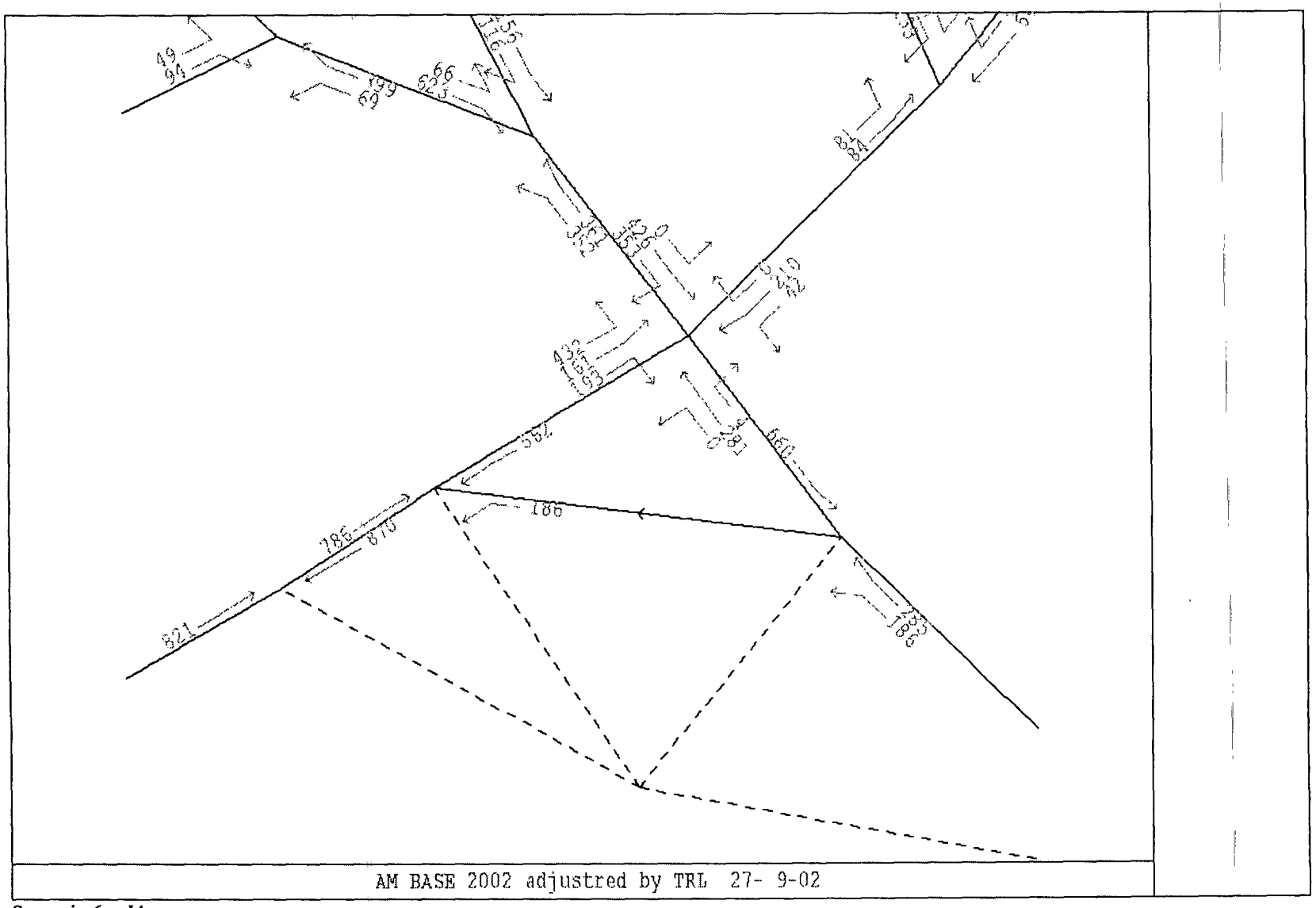
Scenario 5 - link flow (2 of 2)



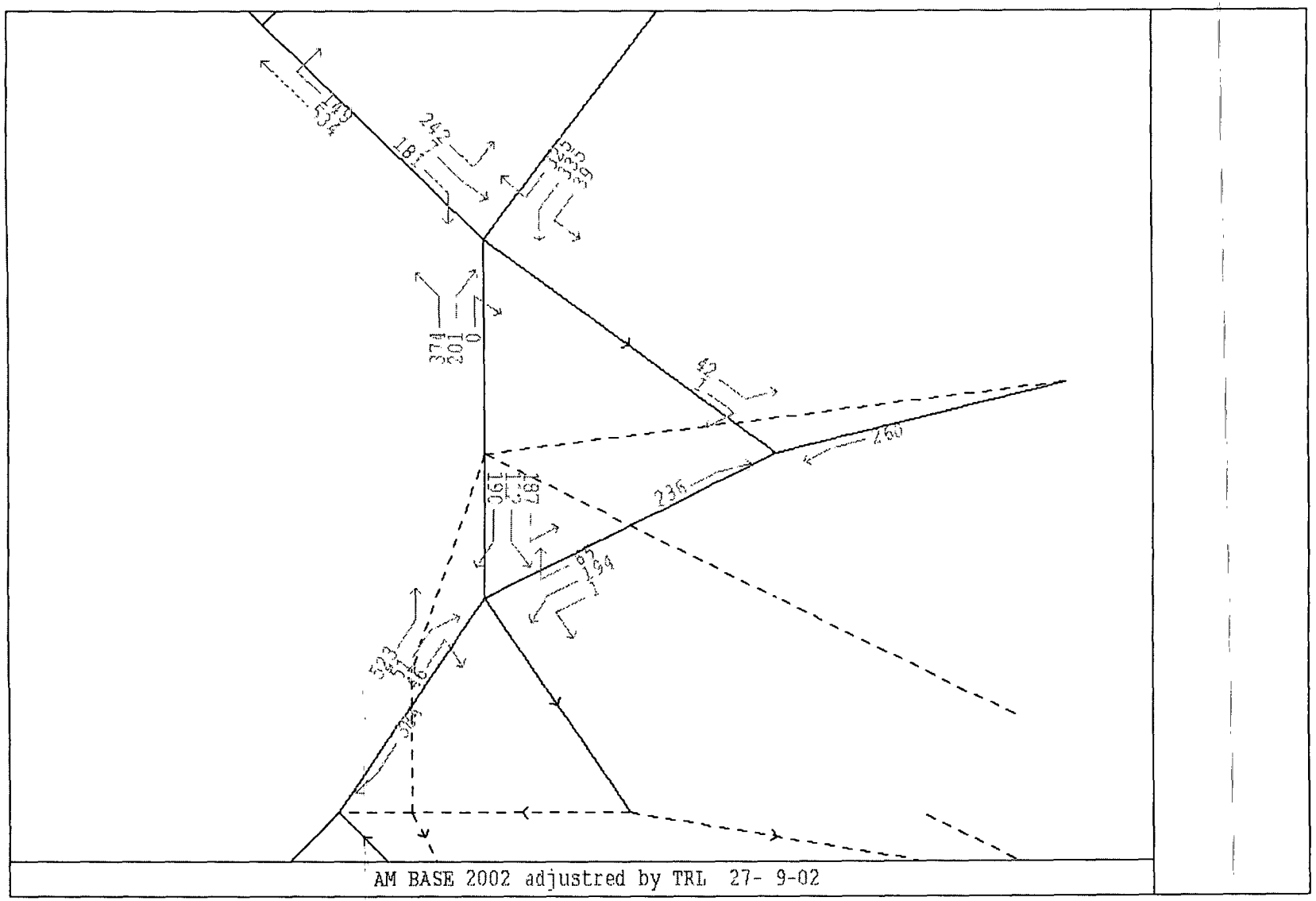
Scenario 6 - J1 & J2



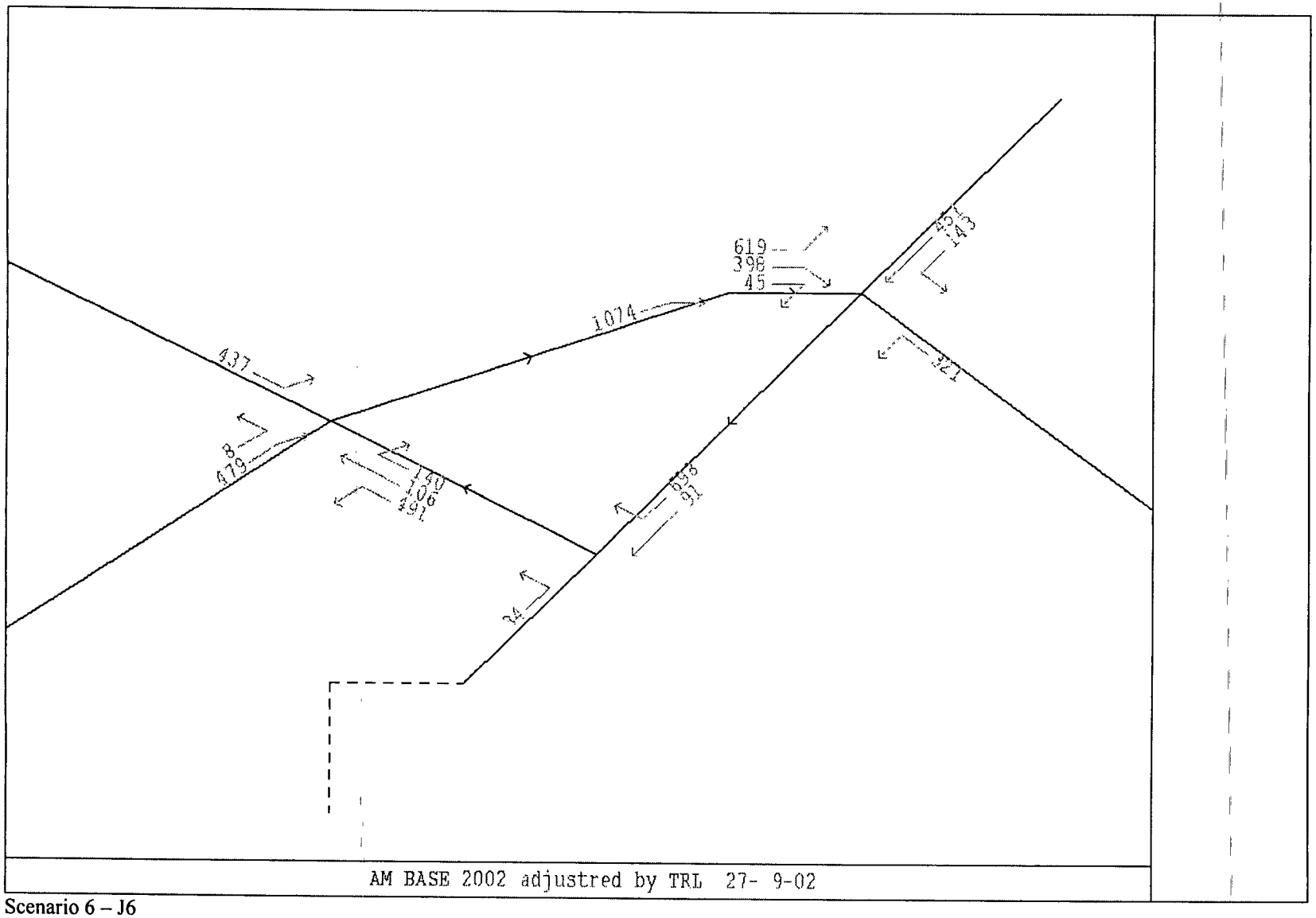
Scenario 6 - J3



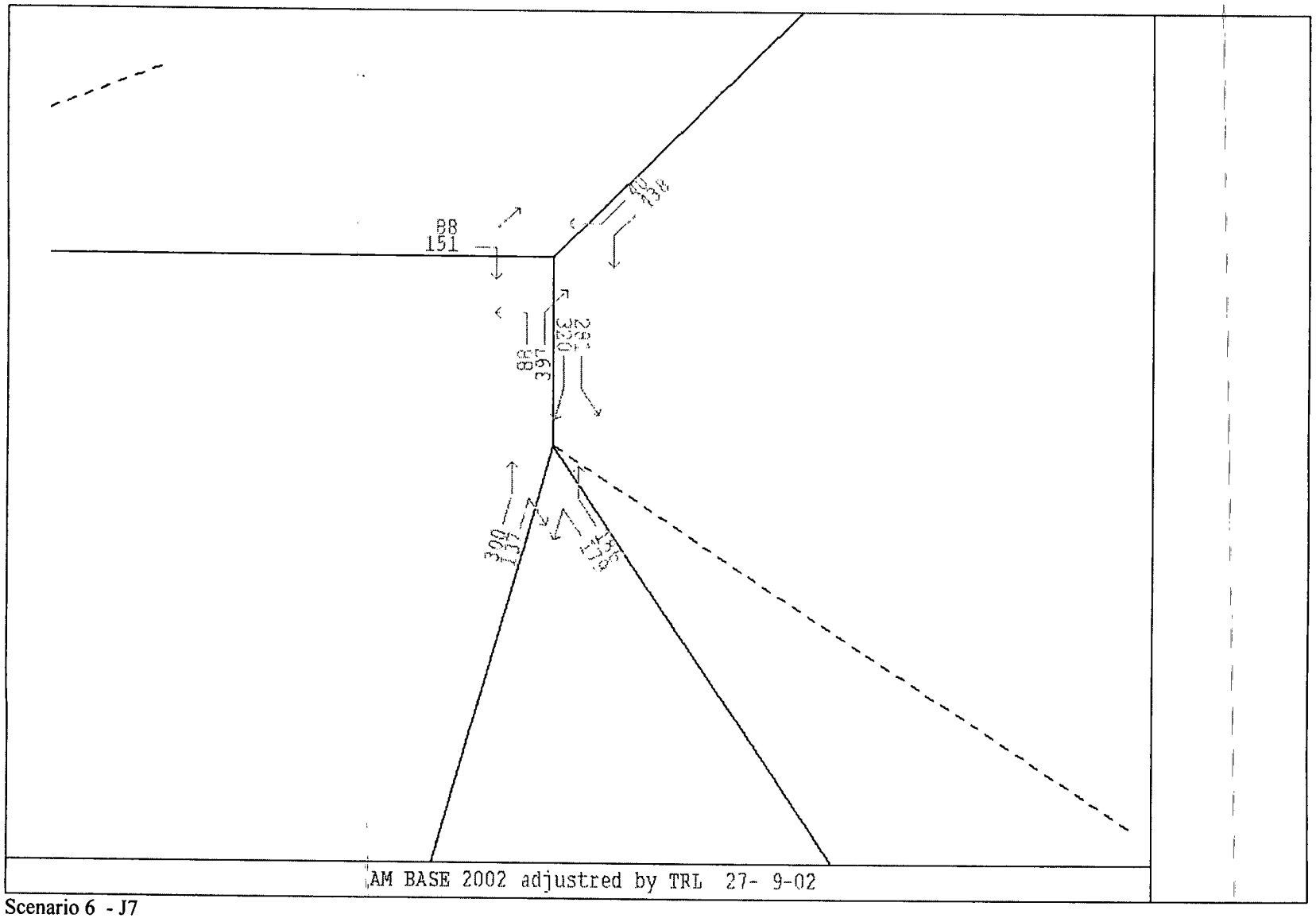
Scenario 6 - J4



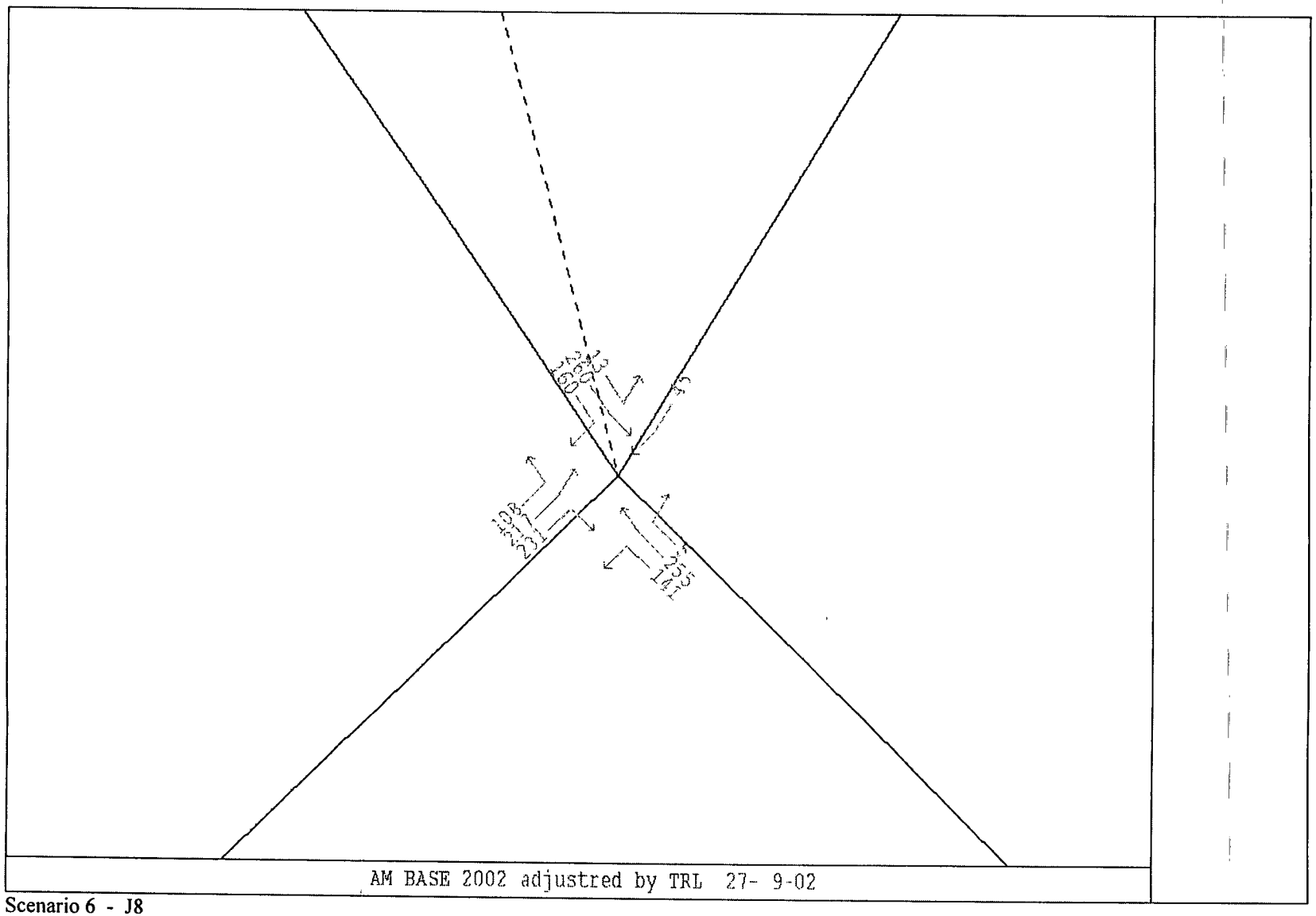
Scenario 6 – J5



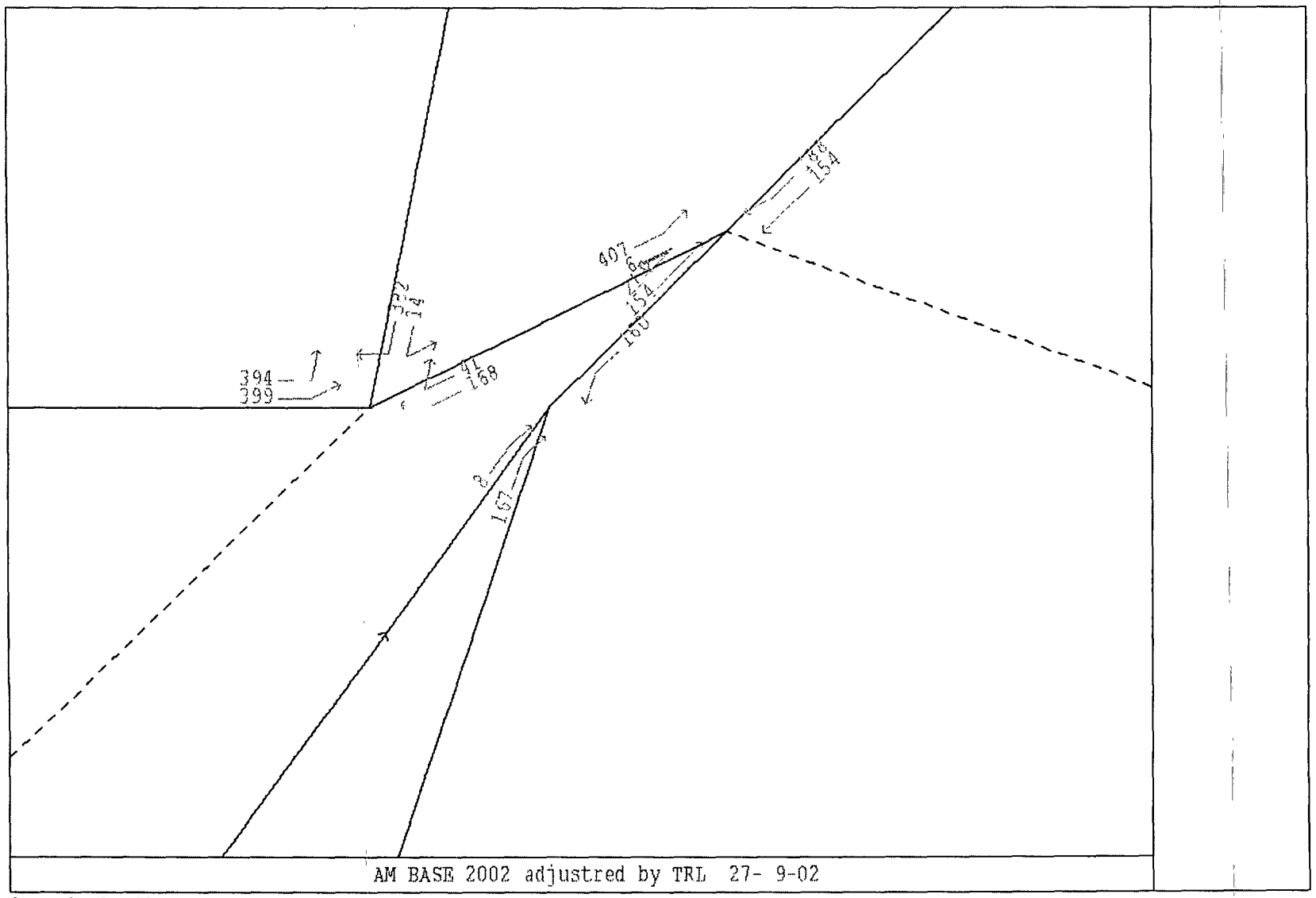
Scenario 6 – J6



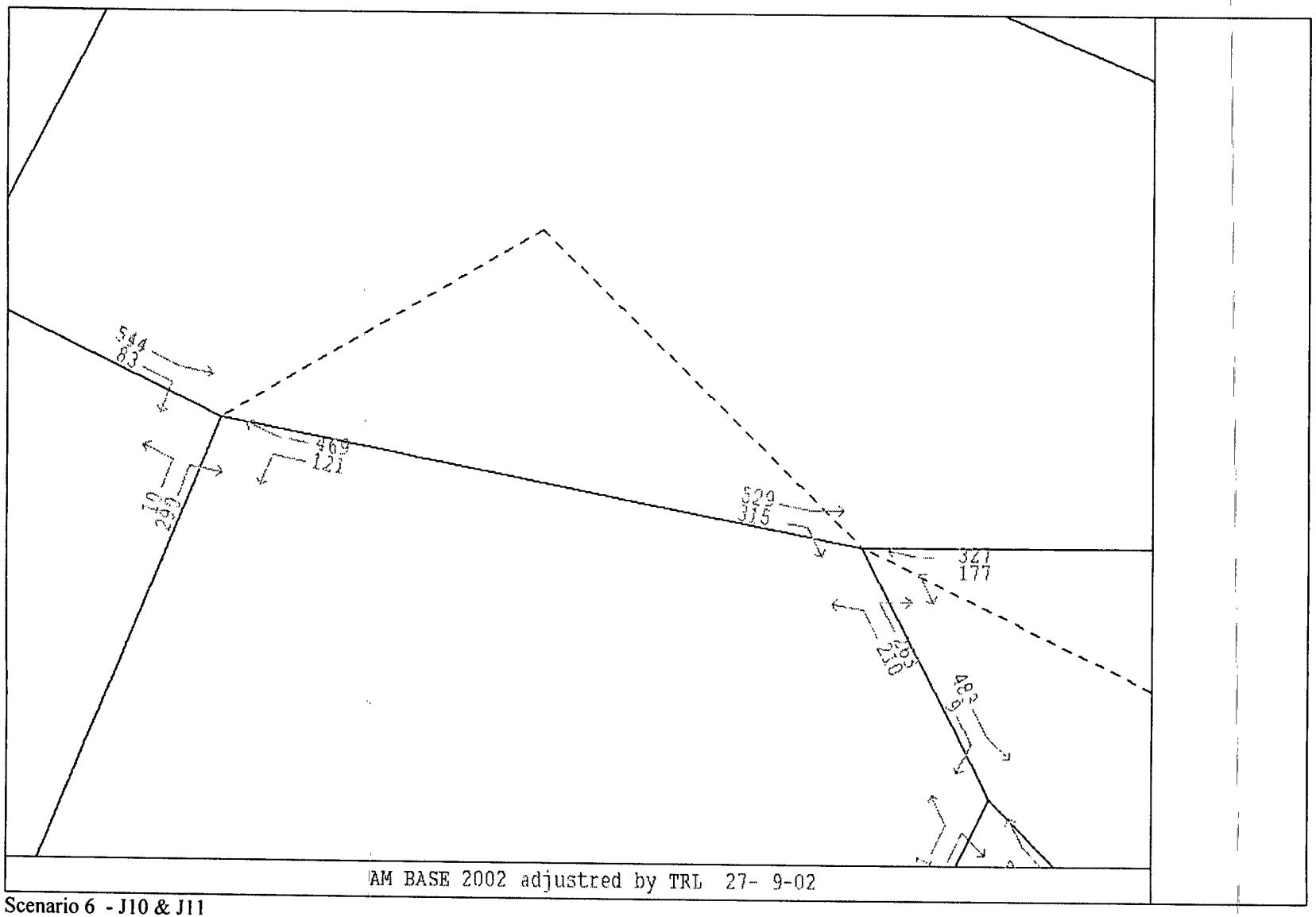
Scenario 6 - J7



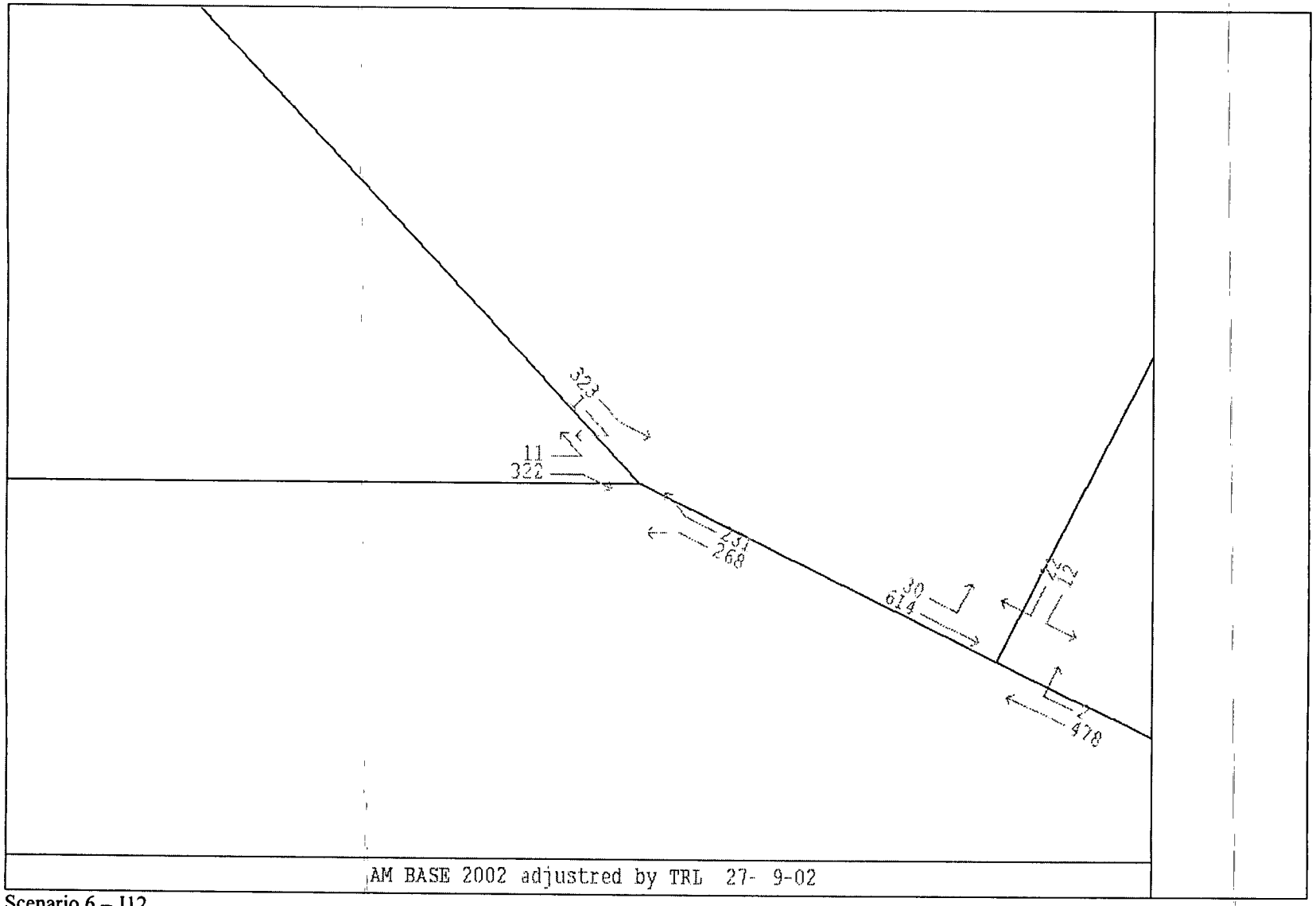
Scenario 6 - J8



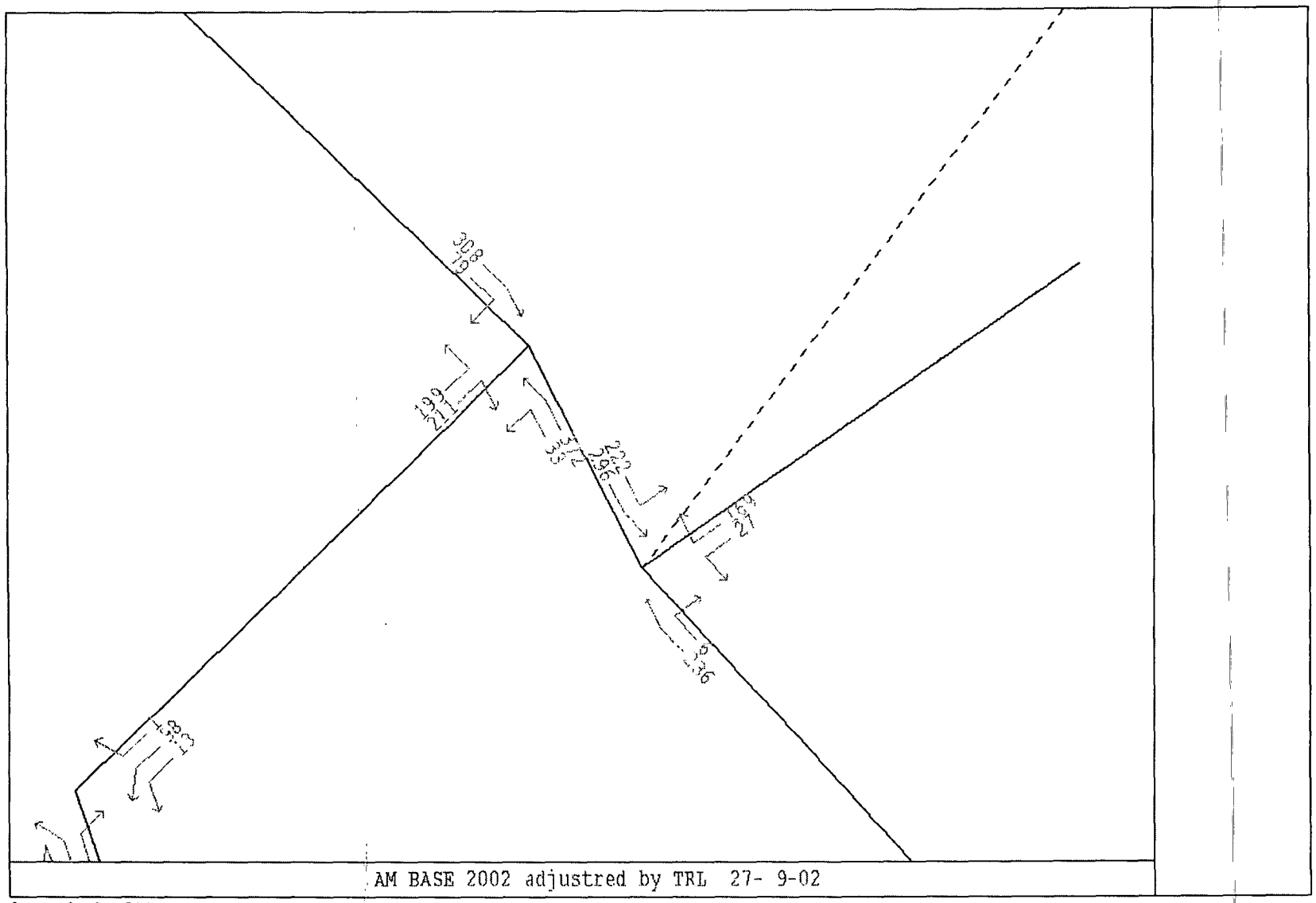
Scenario 6 - J9



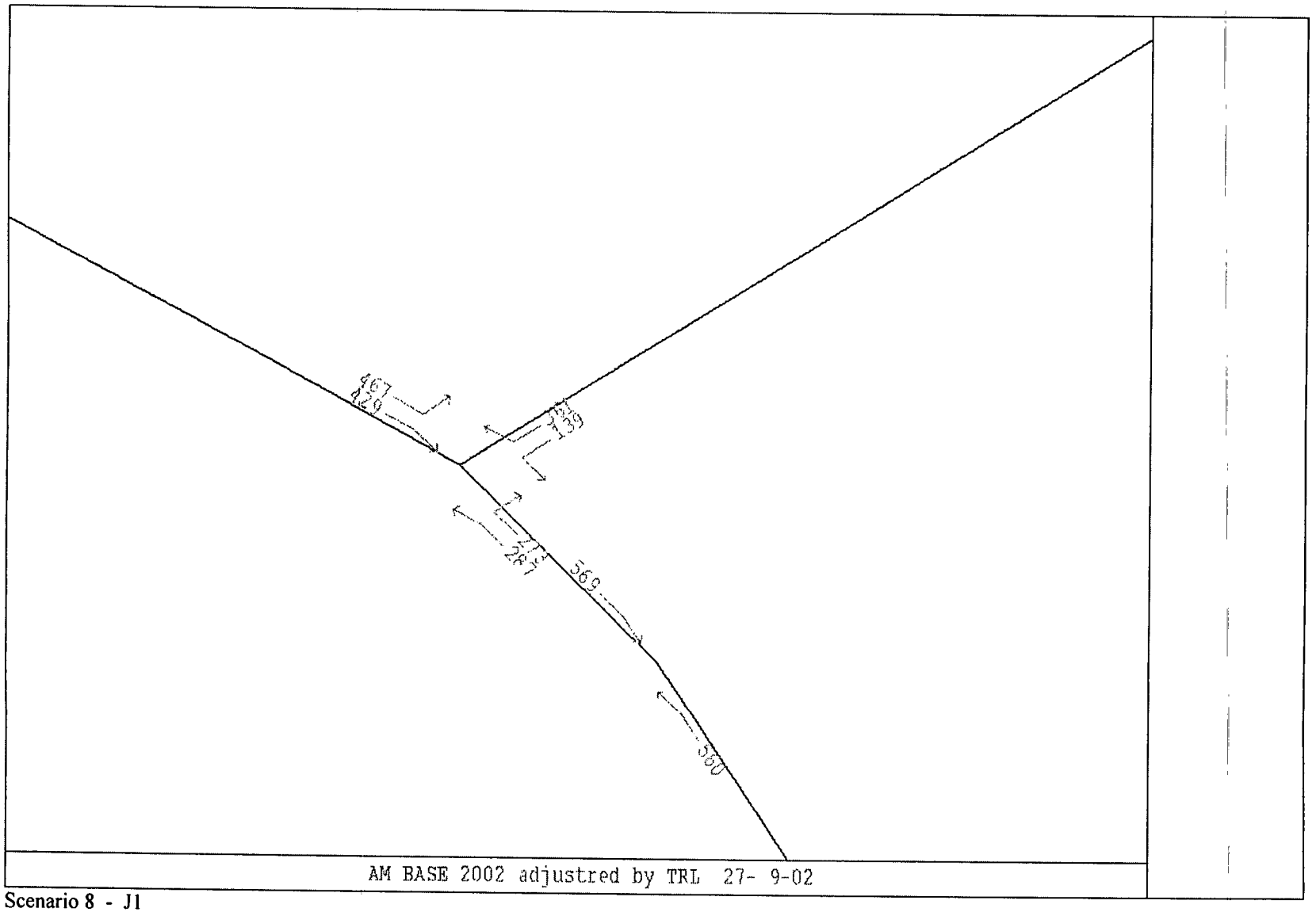
Scenario 6 - J10 & J11



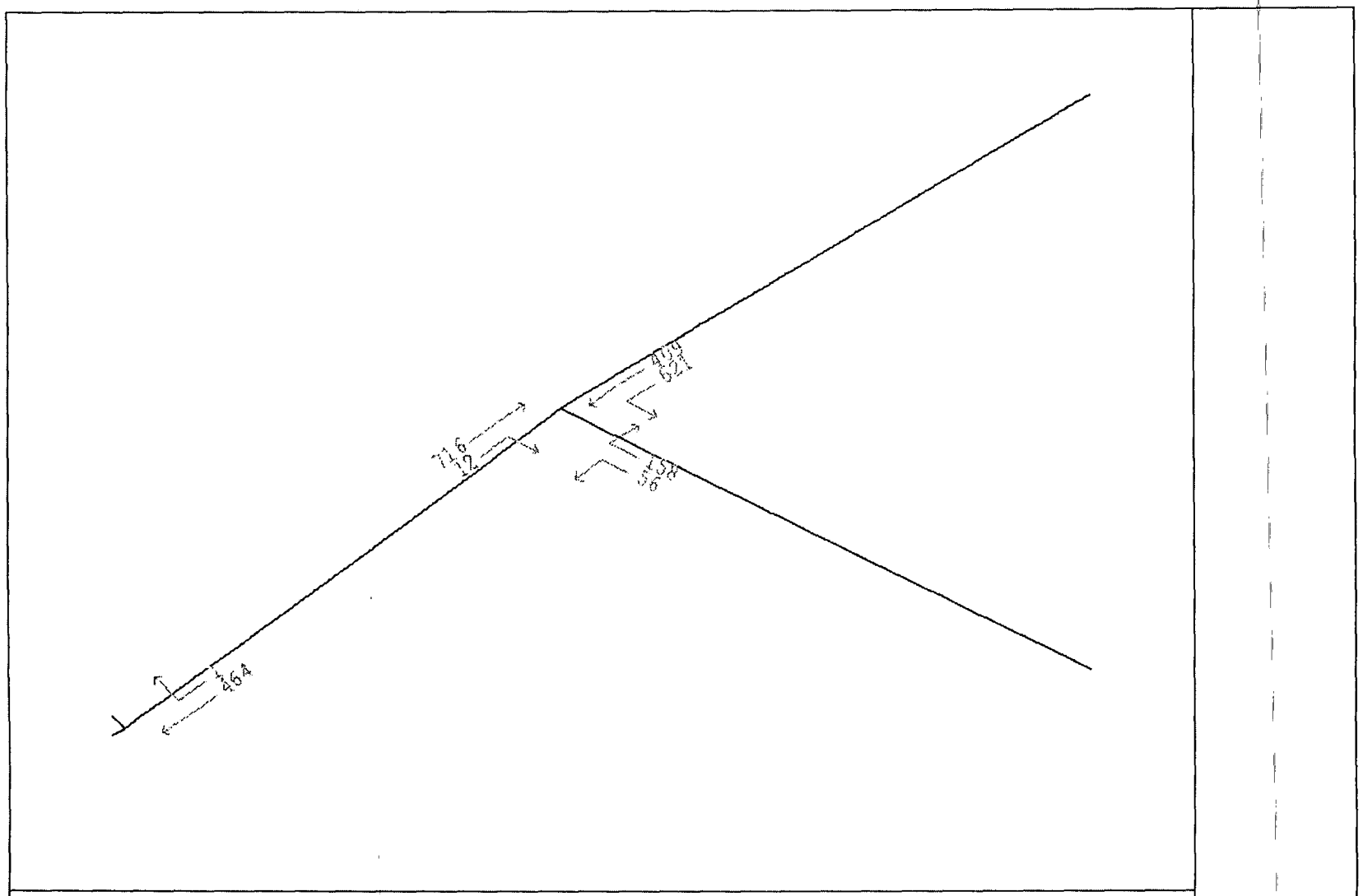
Scenario 6 – J12



Scenario 6 - J13 & J14



Scenario 8 - J1



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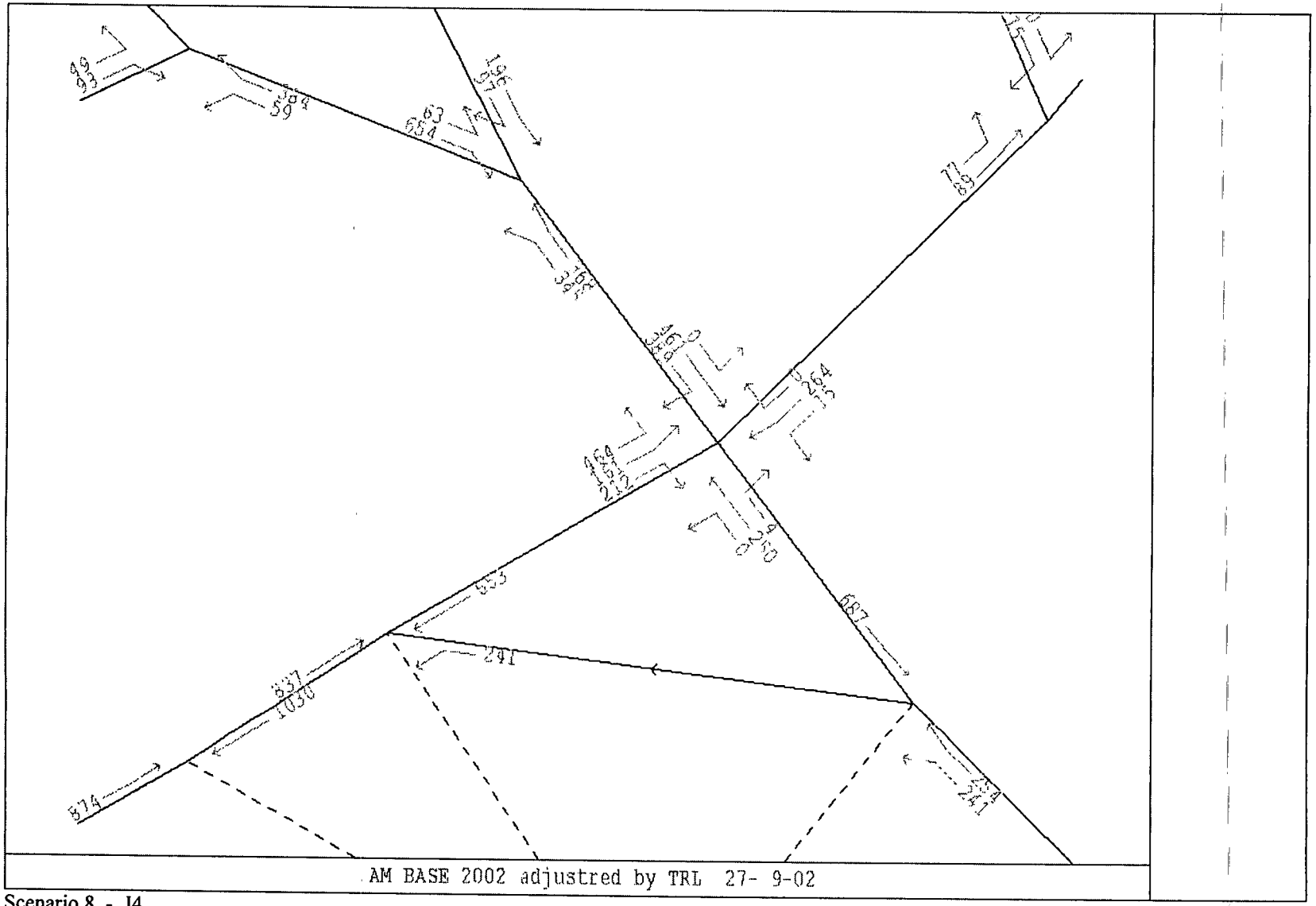
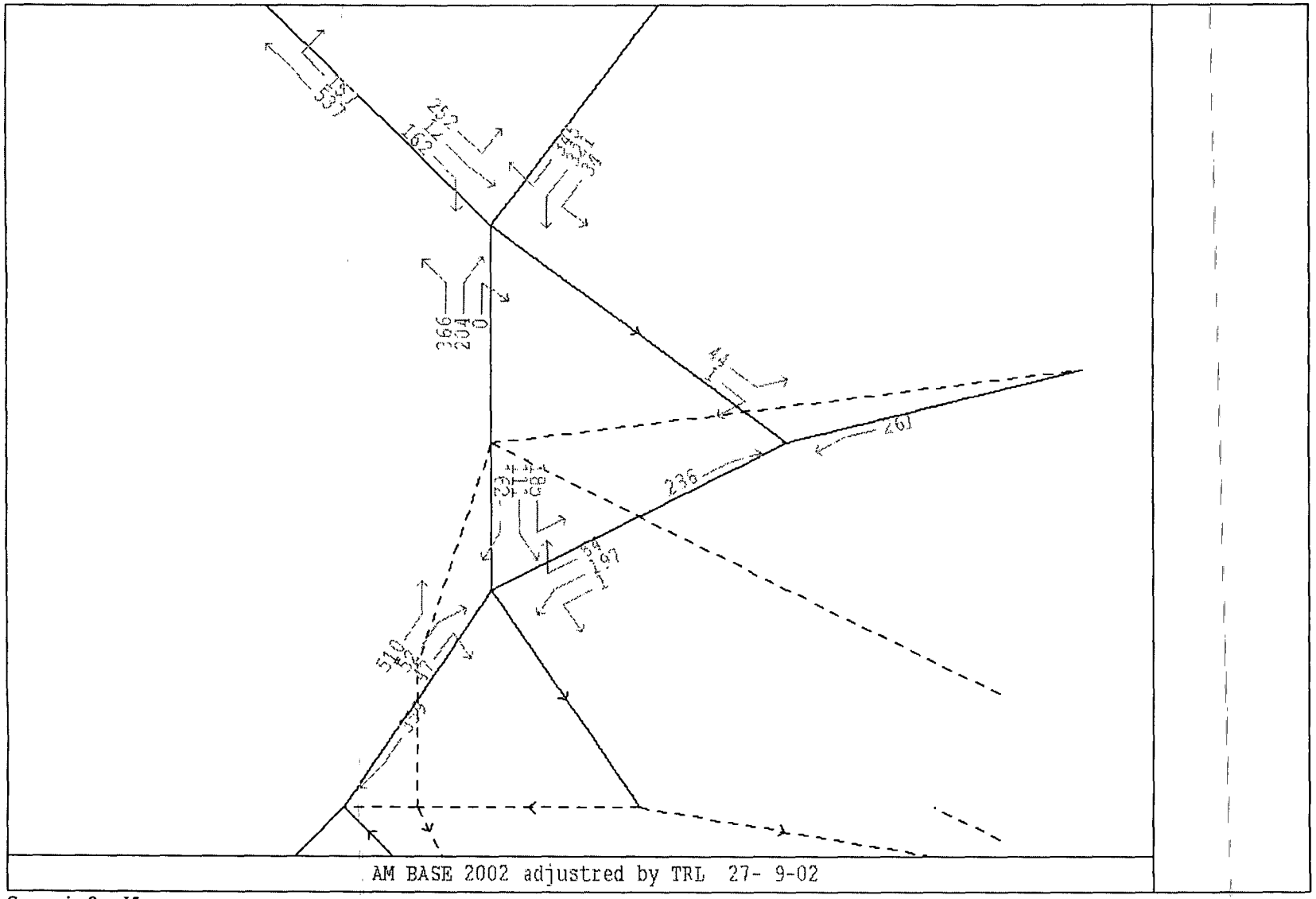
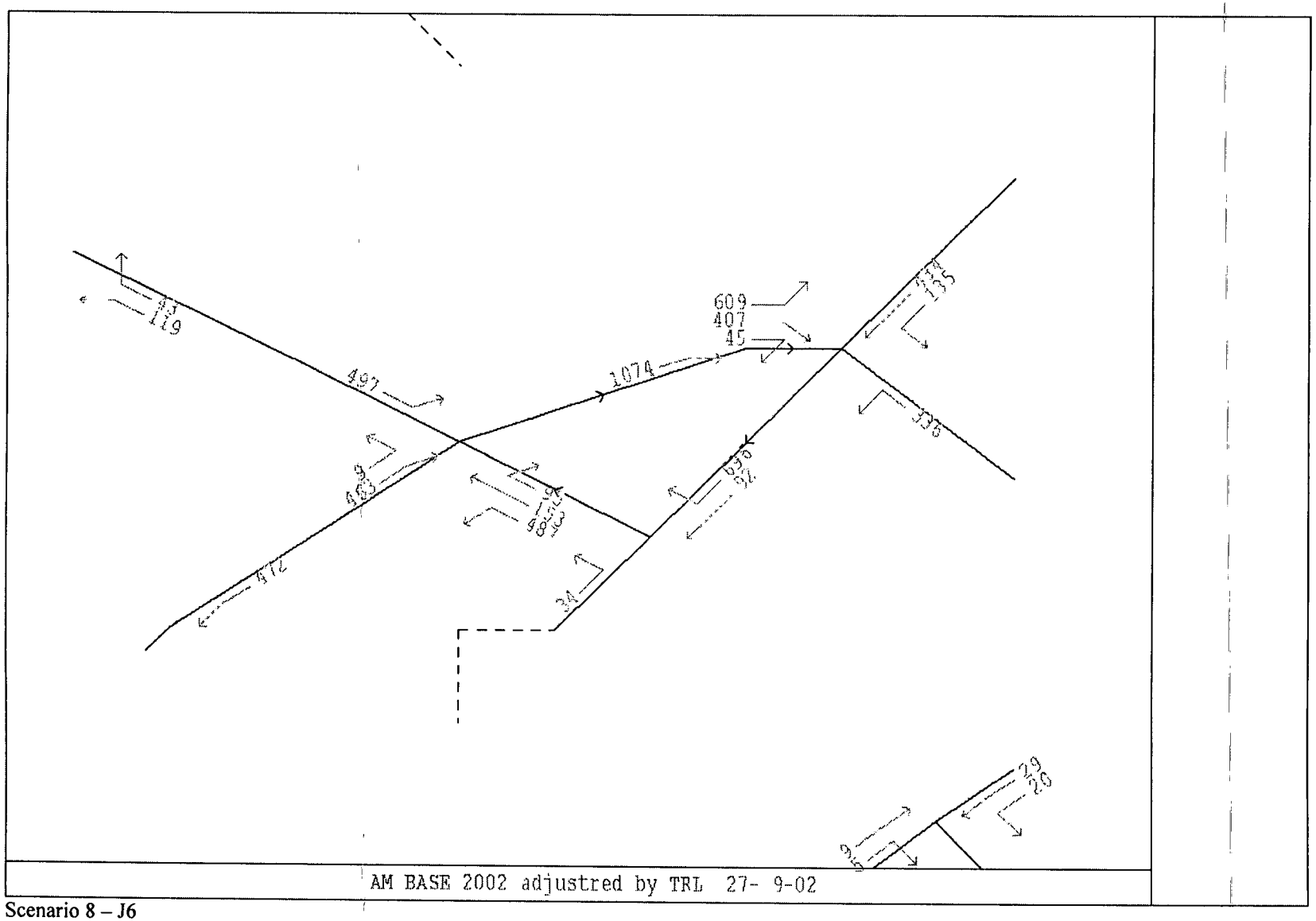
Scenario 8 - J3



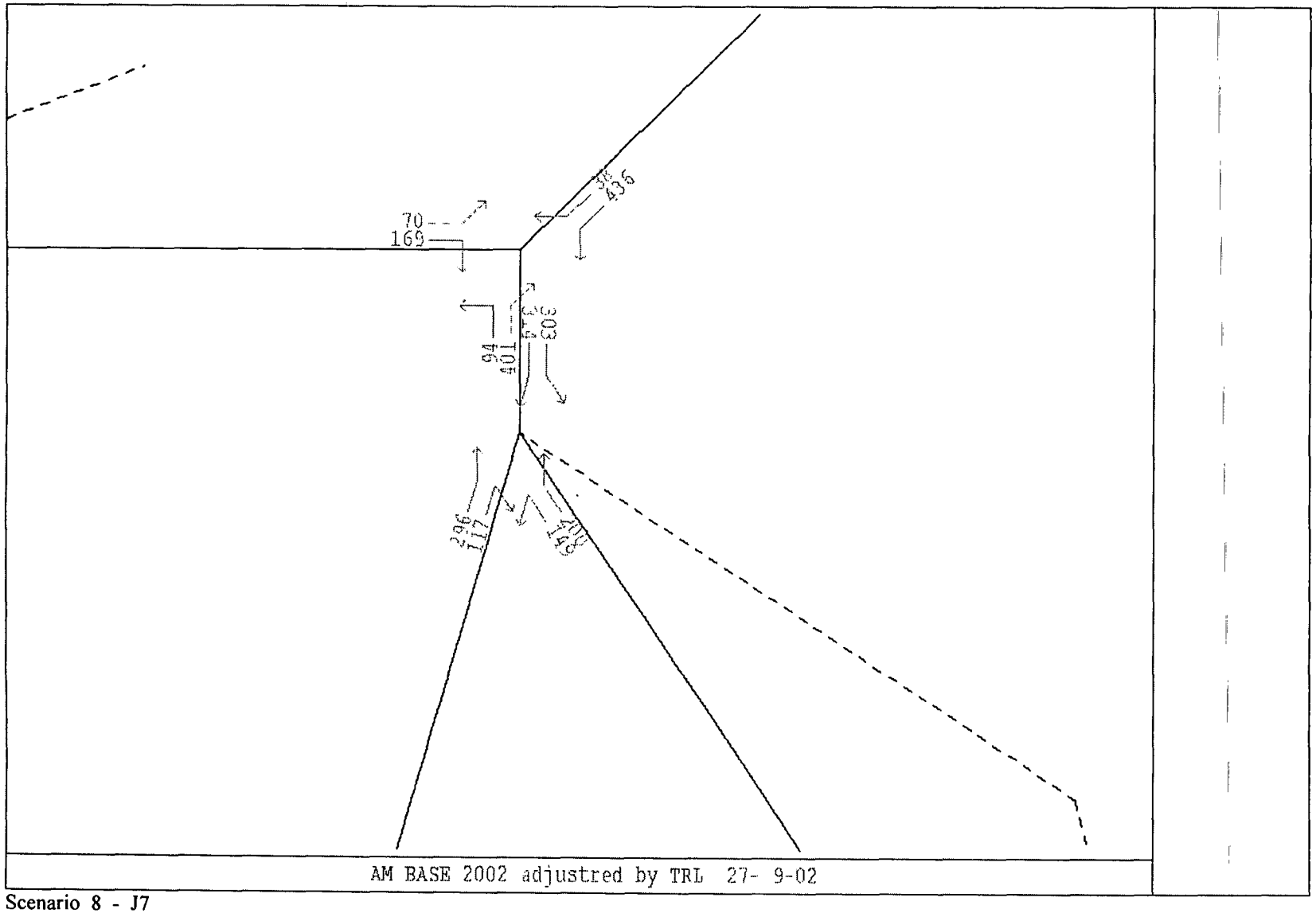
Scenario 8 - J4



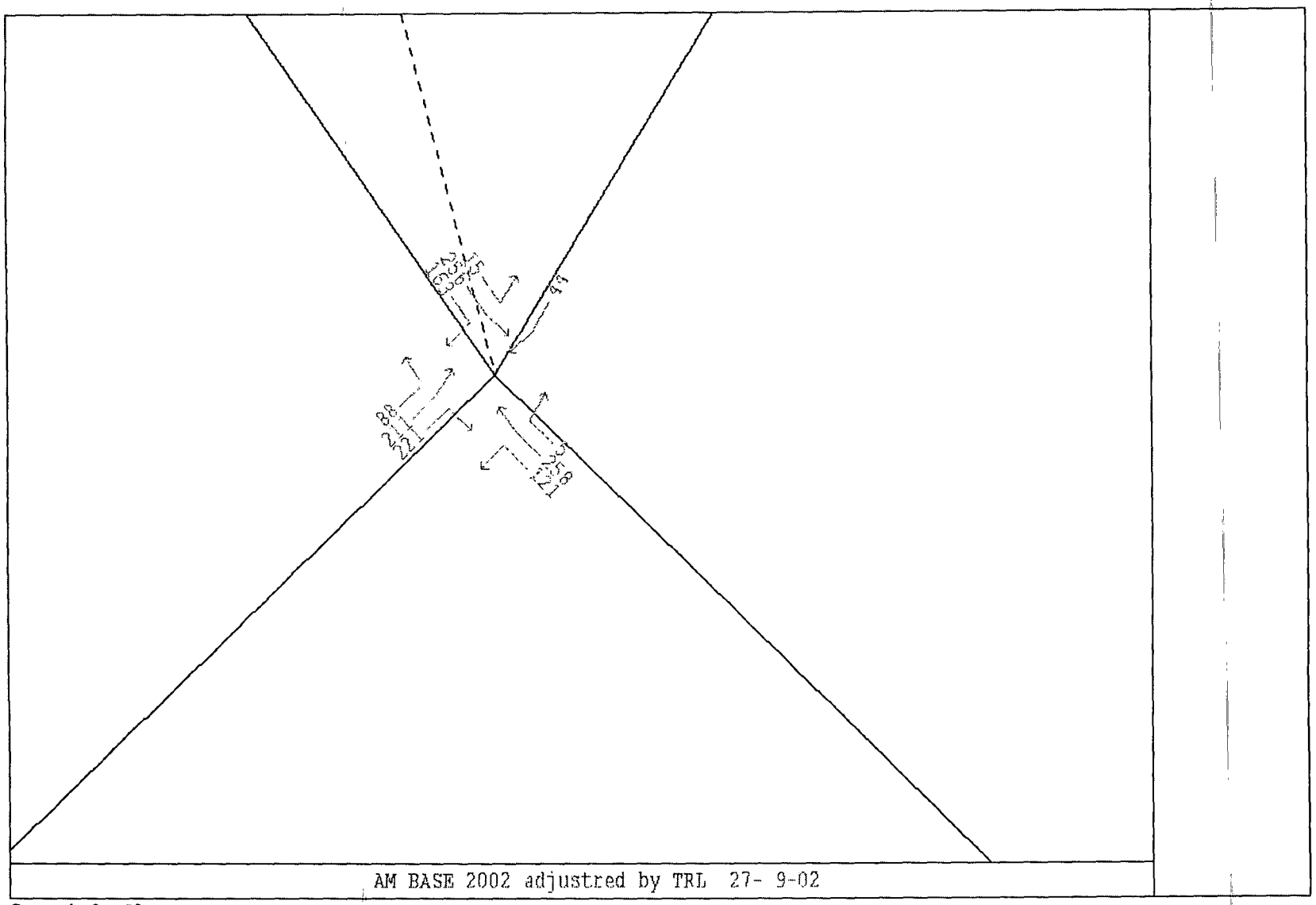
Scenario 8 - J5



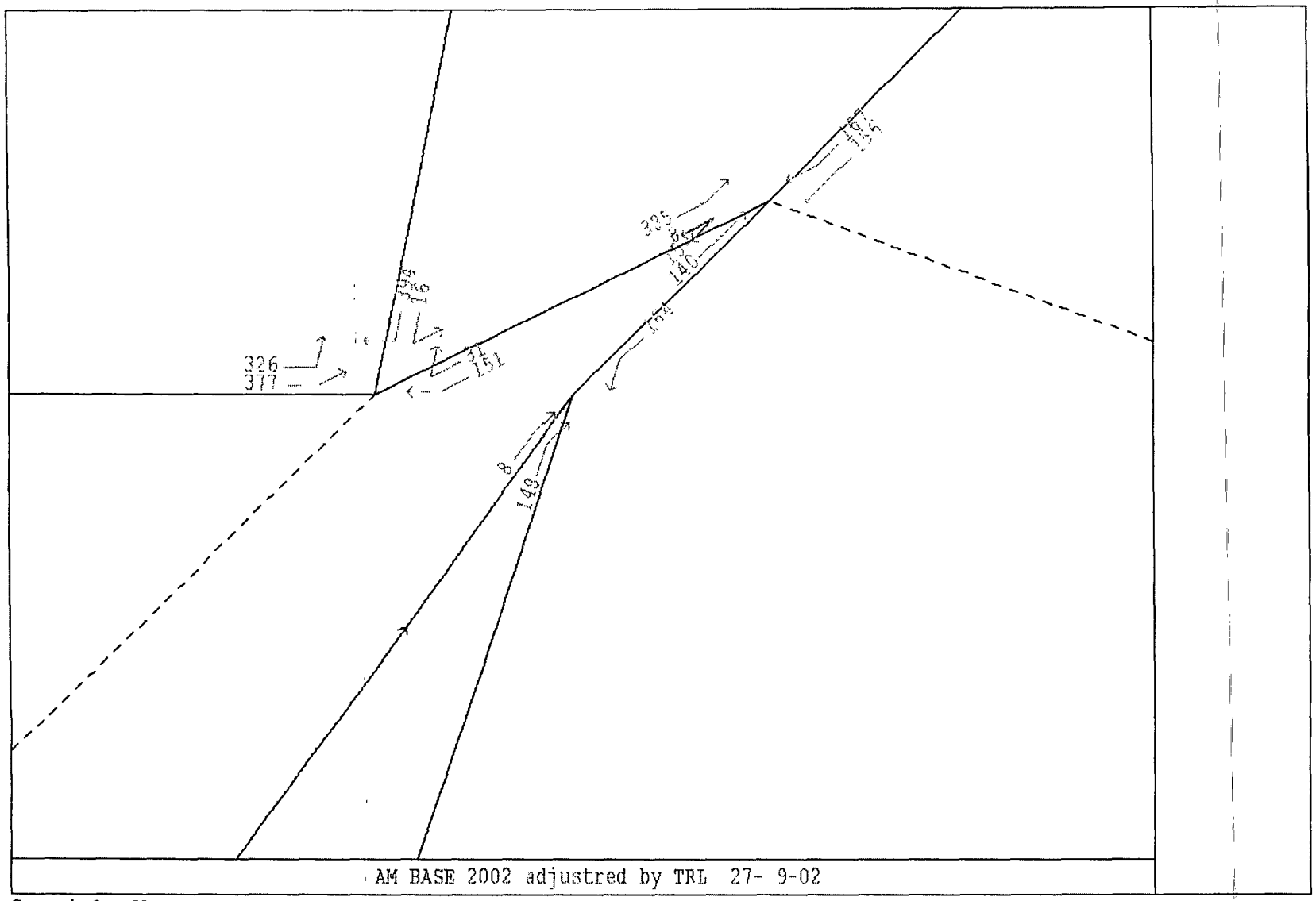
Scenario 8 – J6



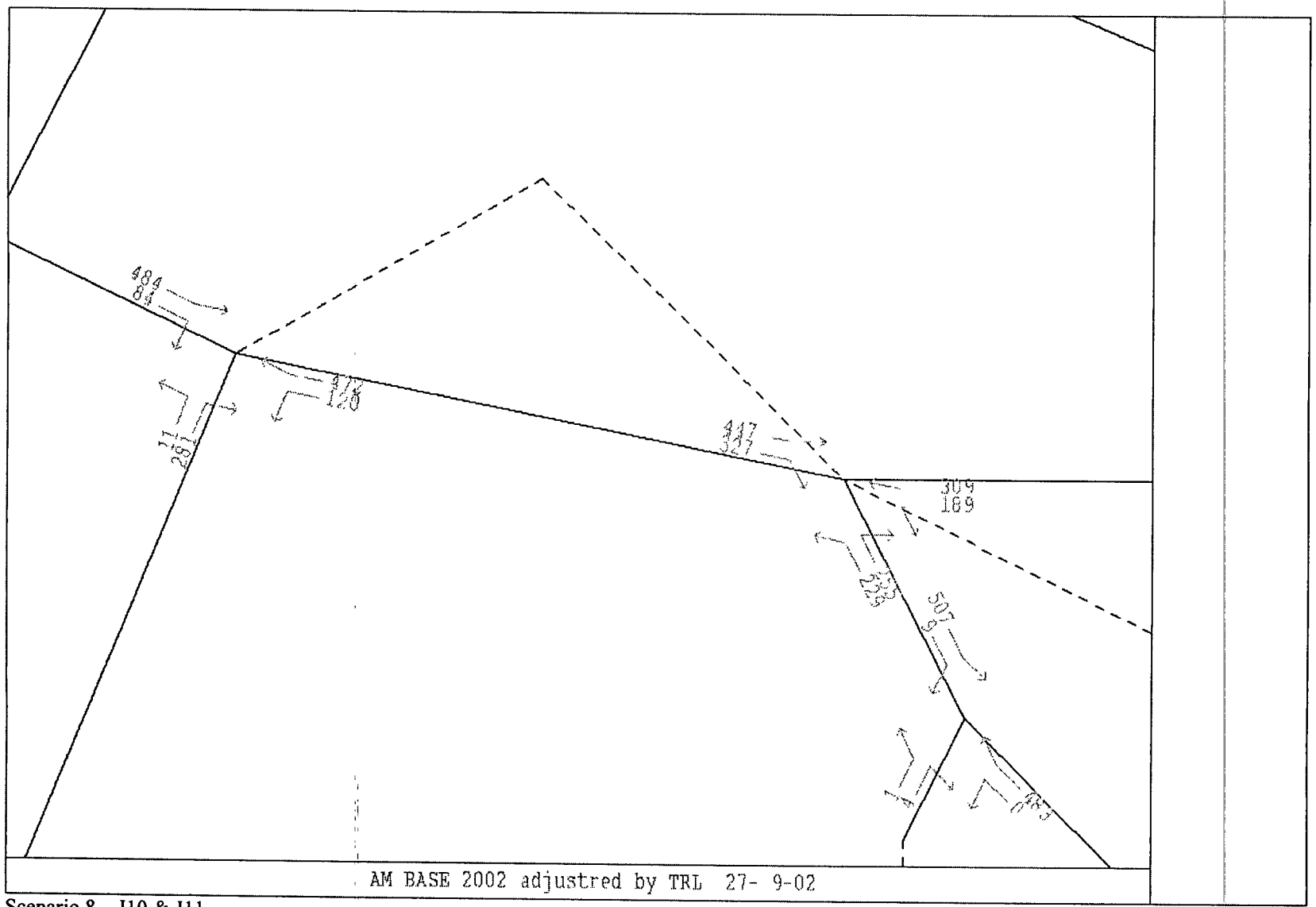
Scenario 8 - J7



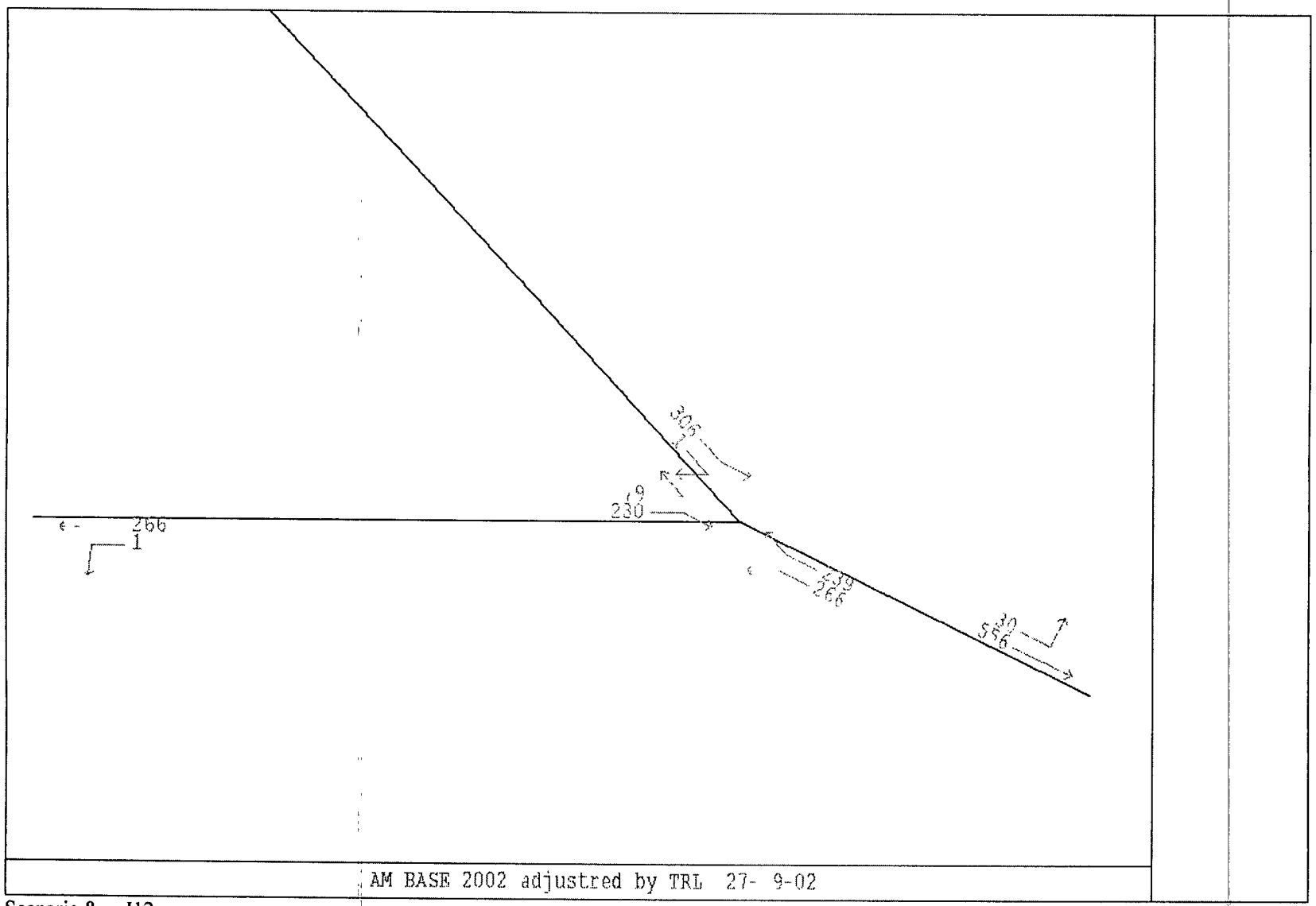
Scenario 8 - J8



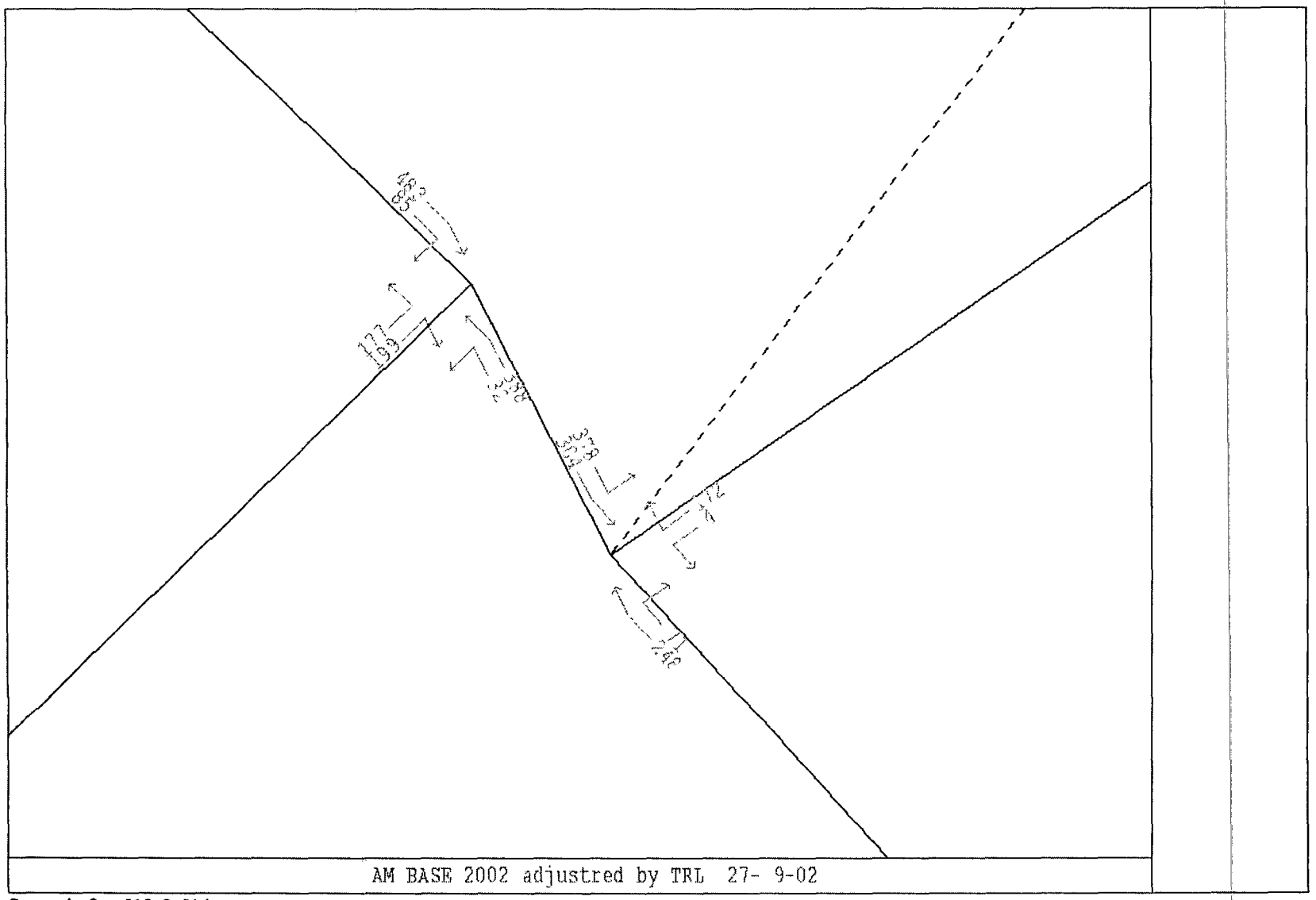
Scenario 8 - J9



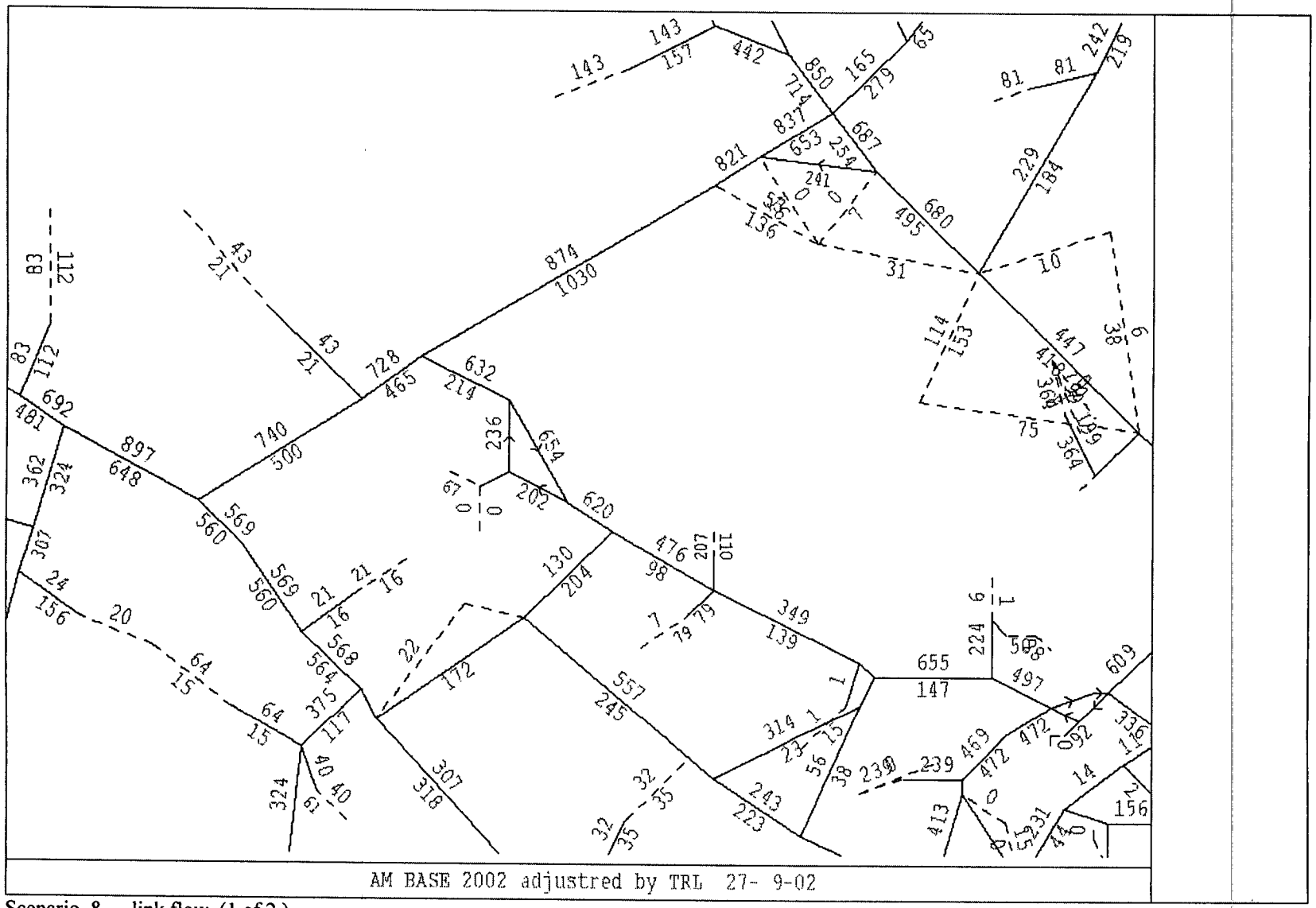
Scenario 8 – J10 & J11



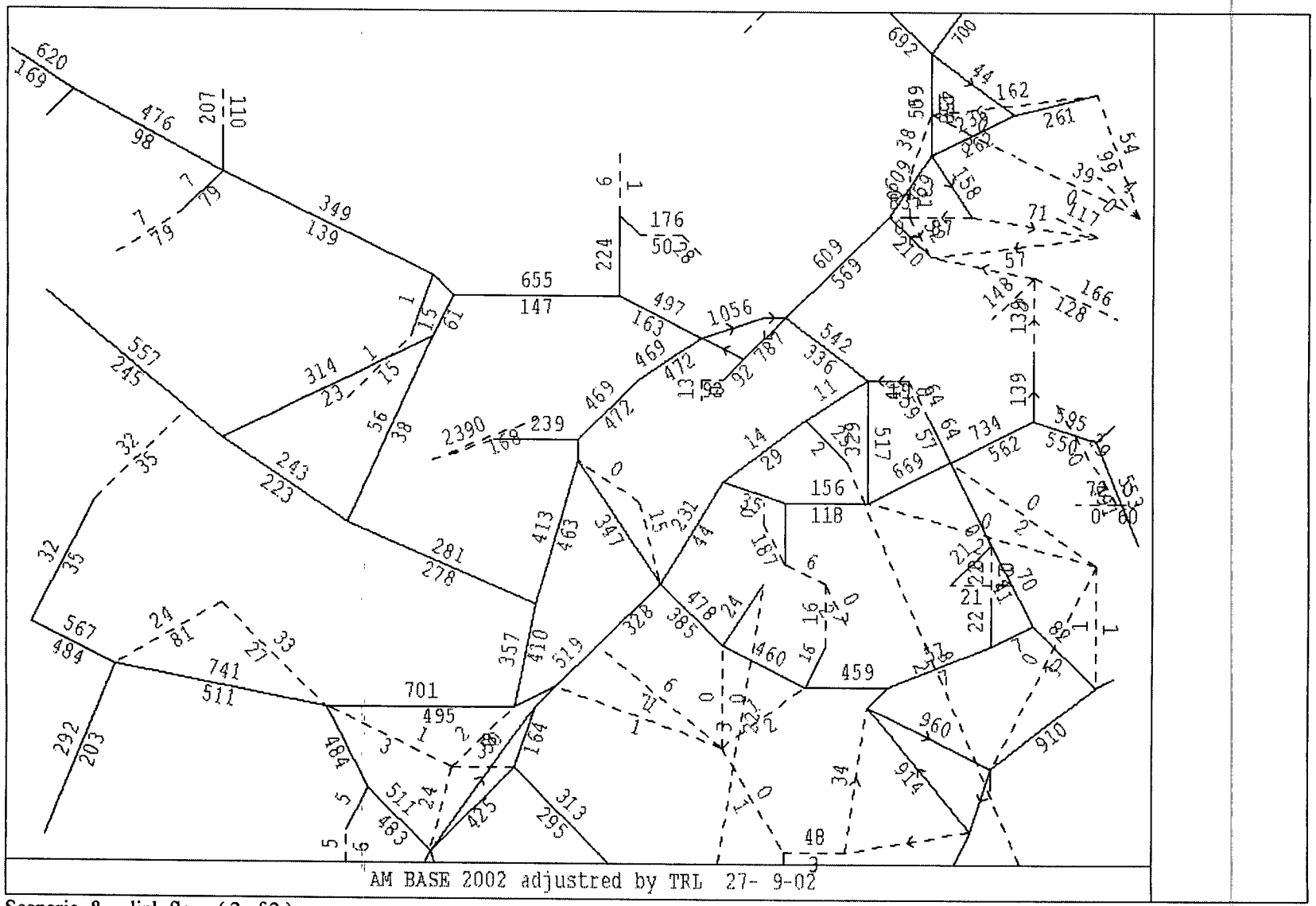
Scenario 8 - J12



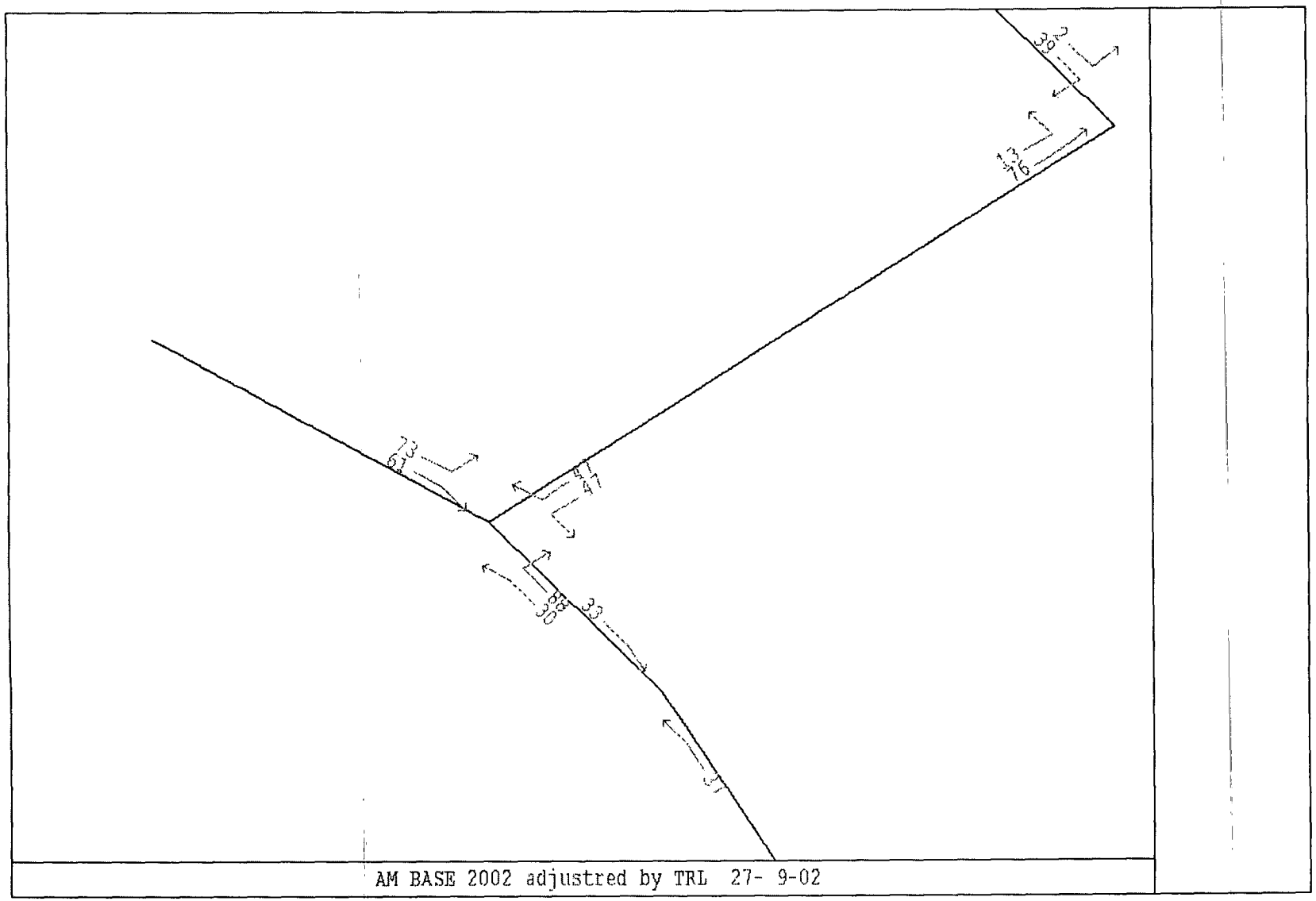
Scenario 8 -- J13 & J14



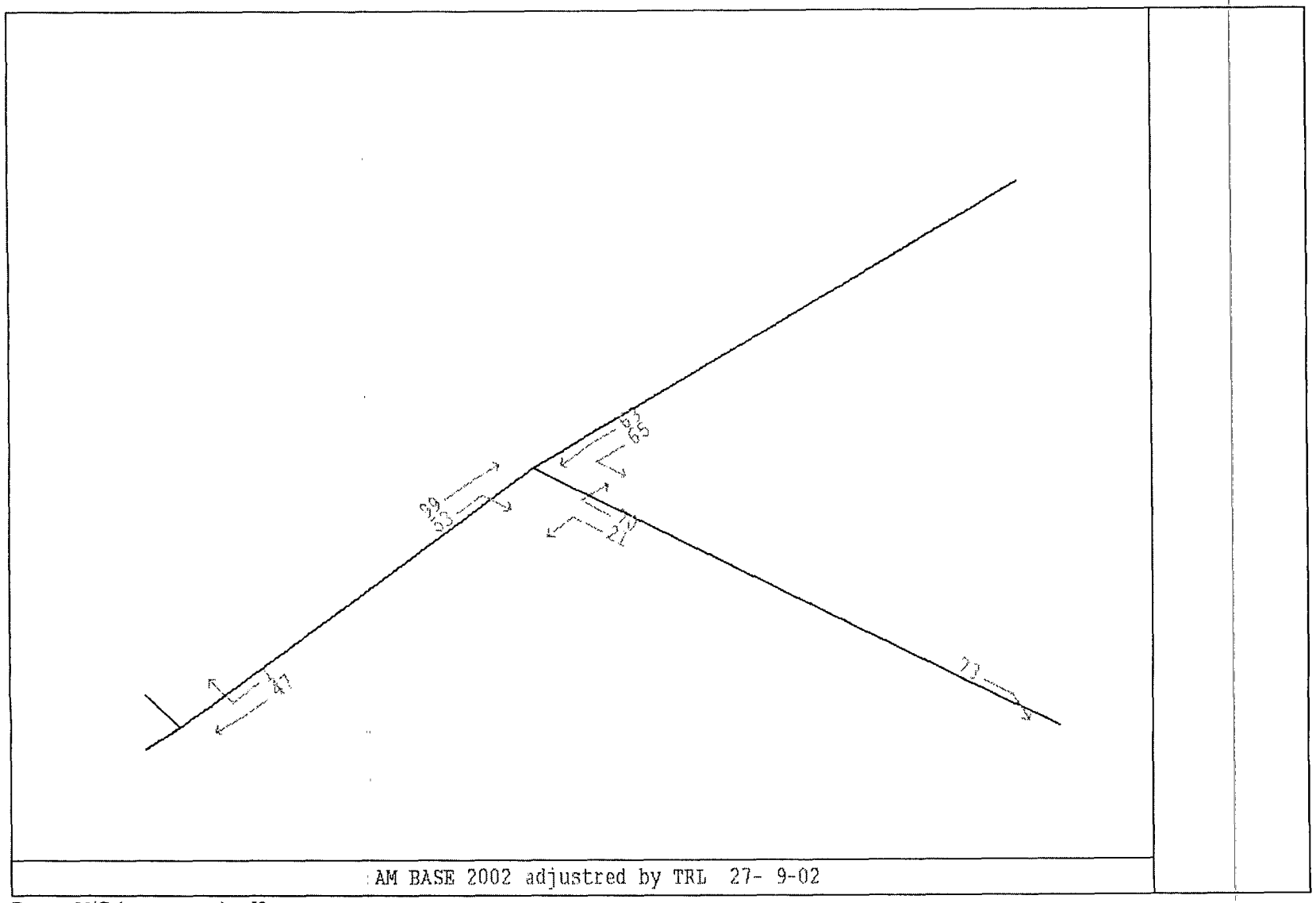
Scenario 8 -- link flow (1 of 2)



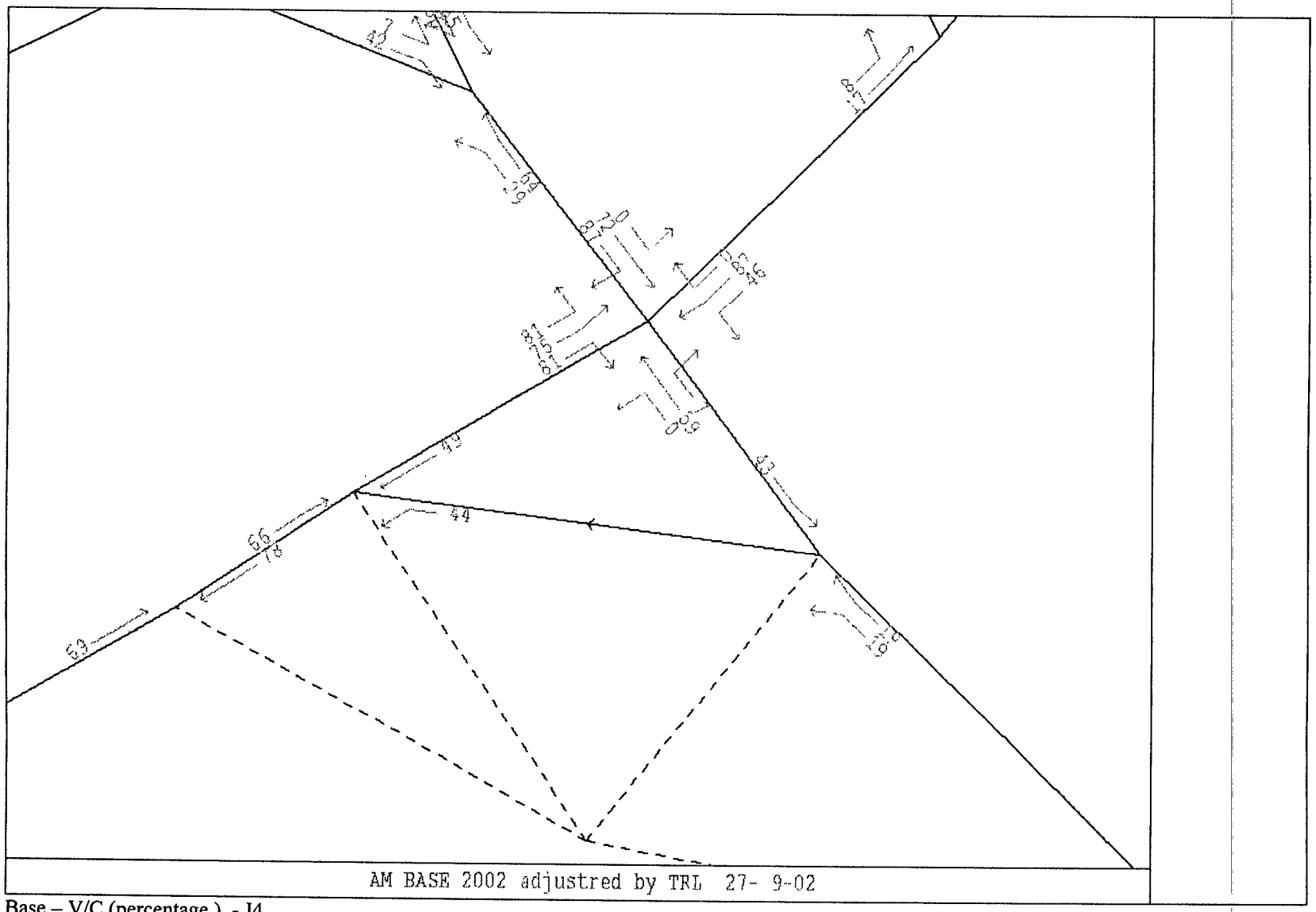
Scenario 8 - link flow (2 of 2)



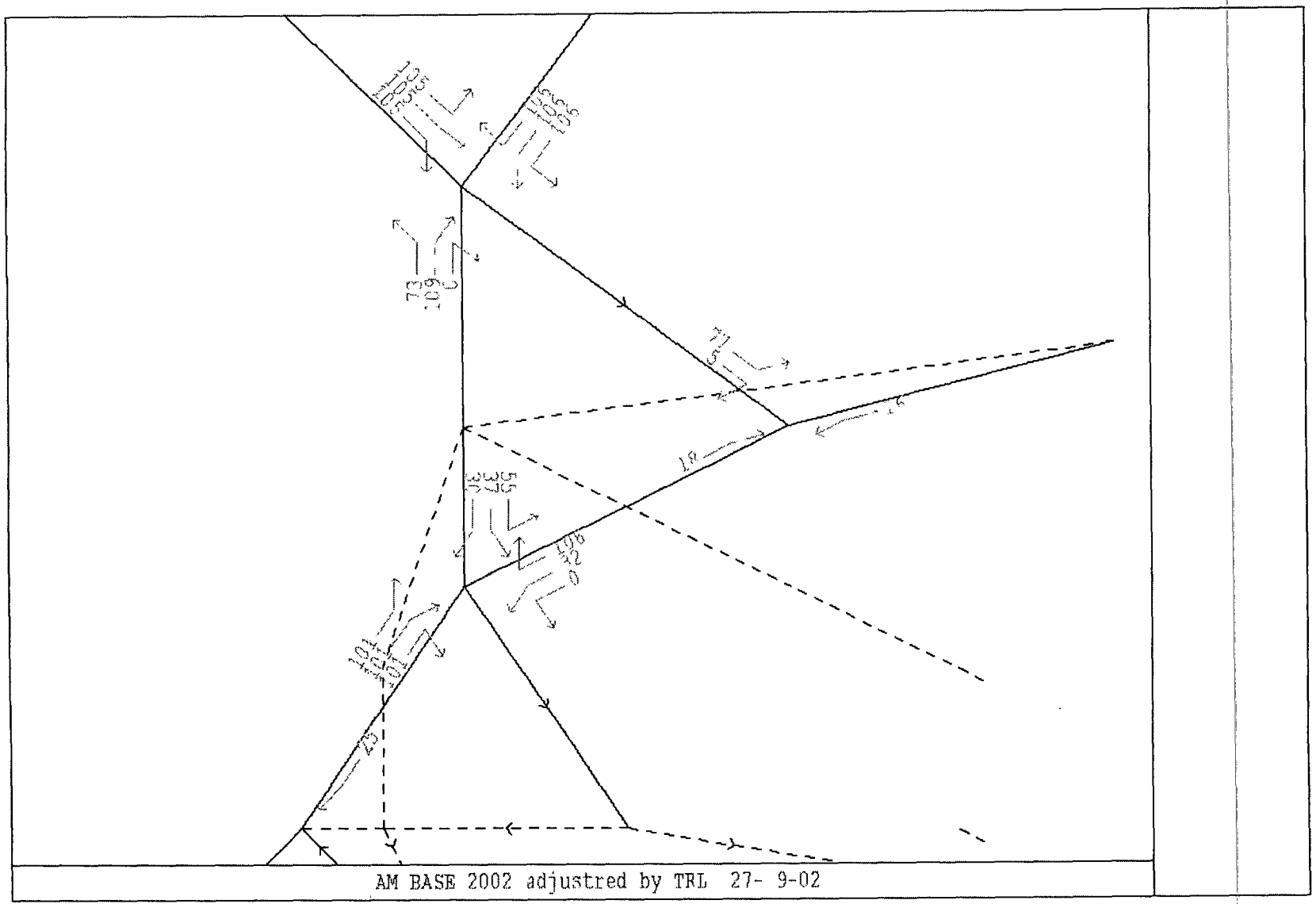
Base – V/C (percentage) – J1



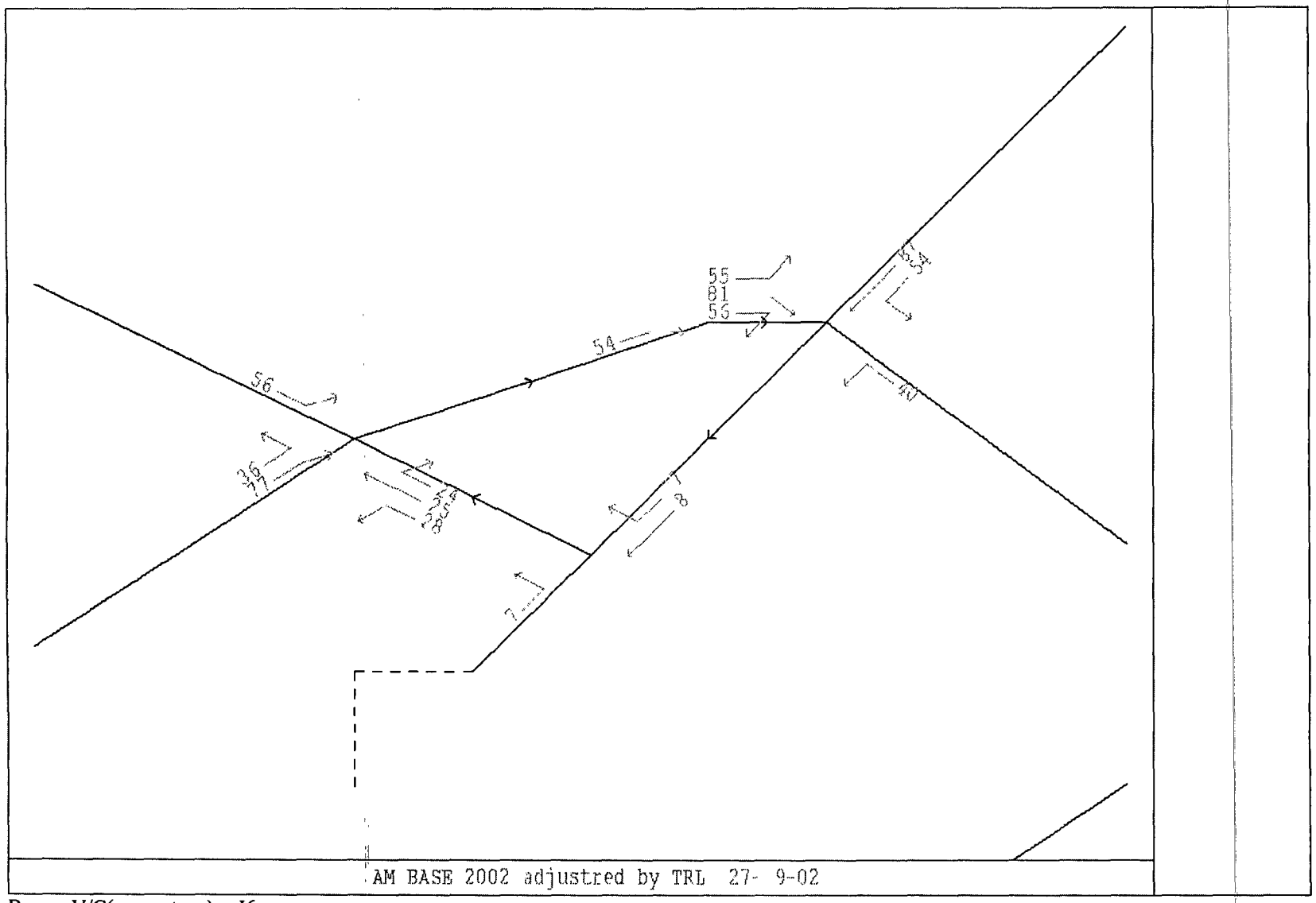
Base – V/C (percentage) – J3



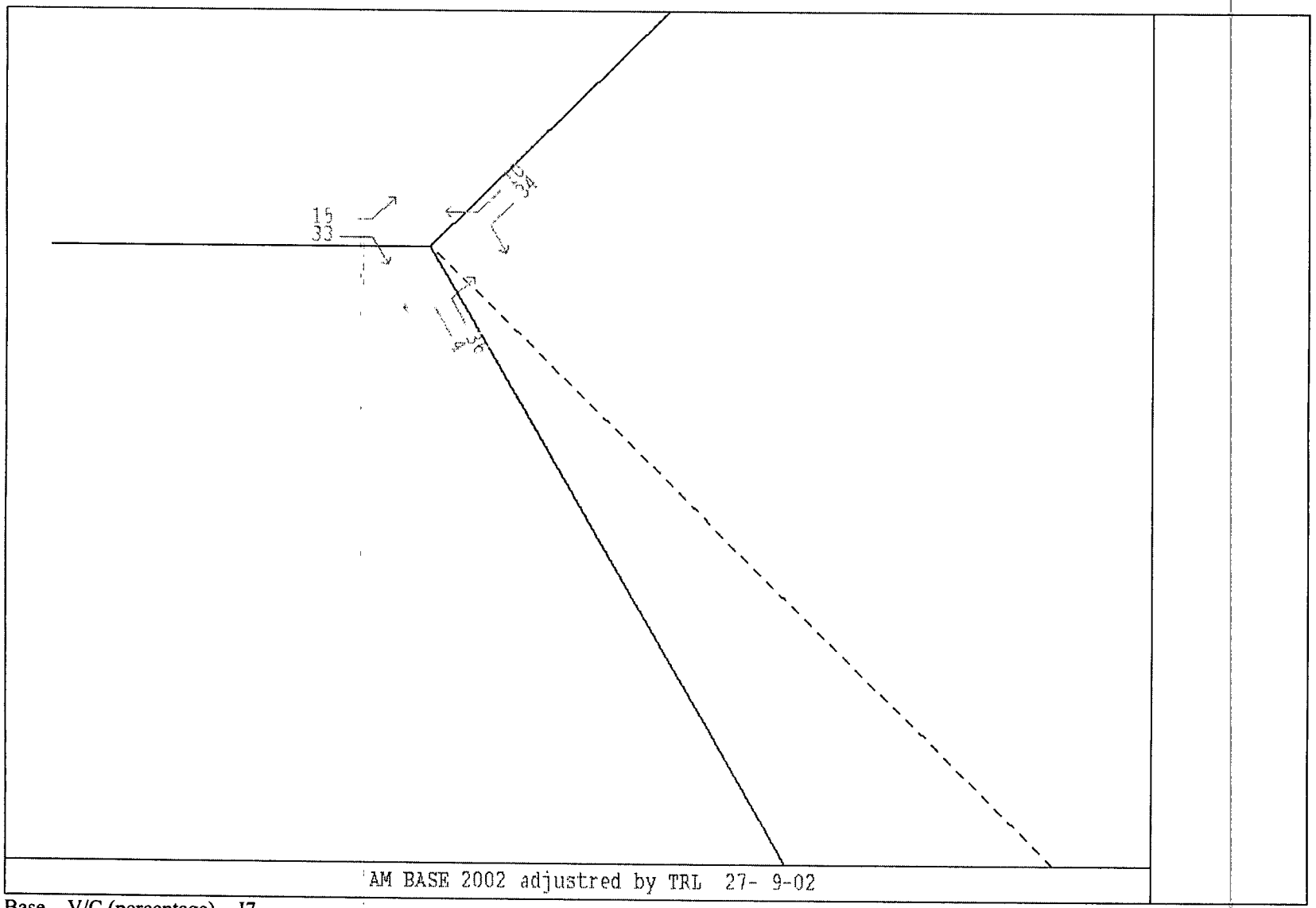
Base – V/C (percentage) - J4



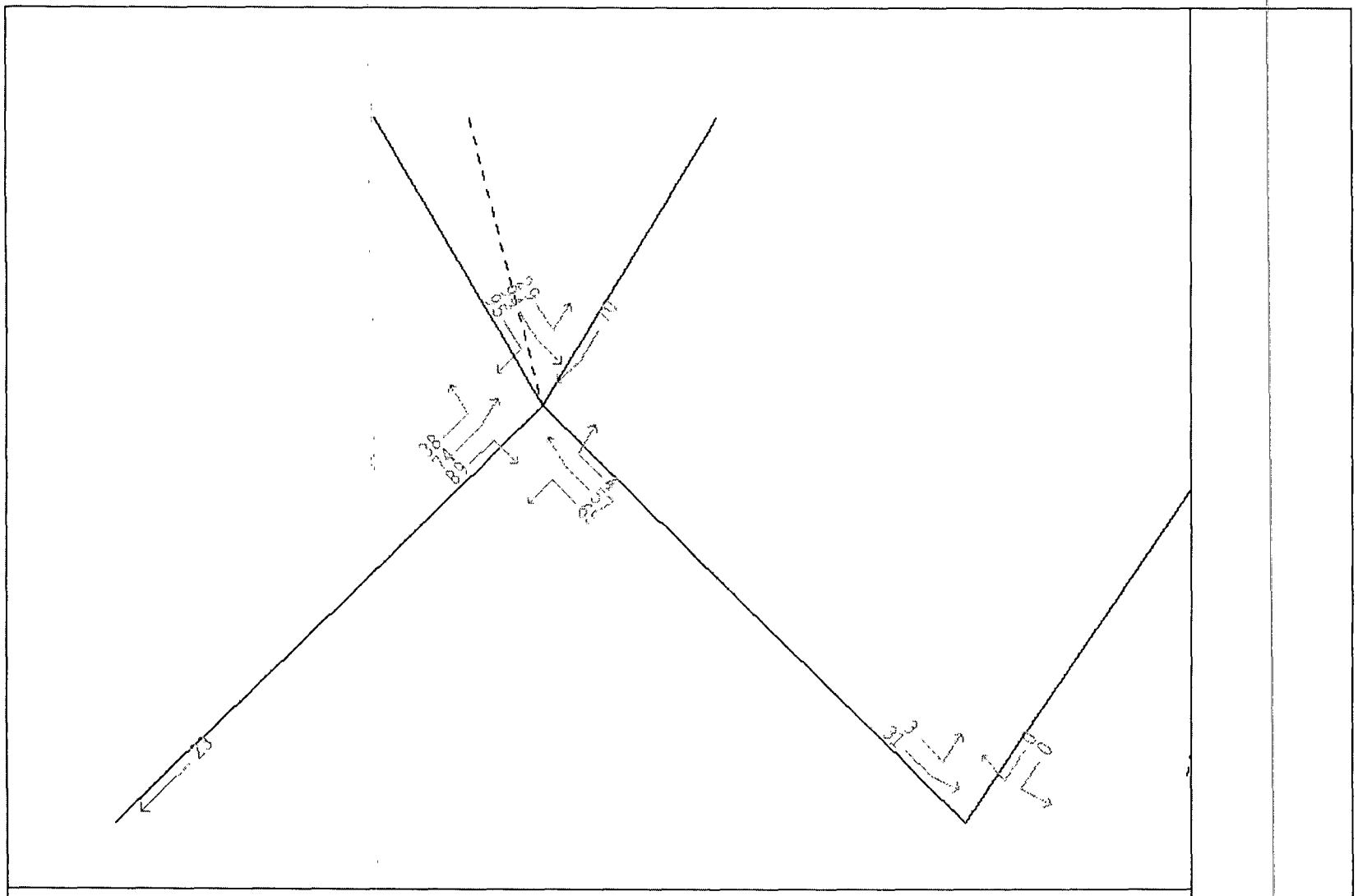
Base – V/C (percentage) –J5



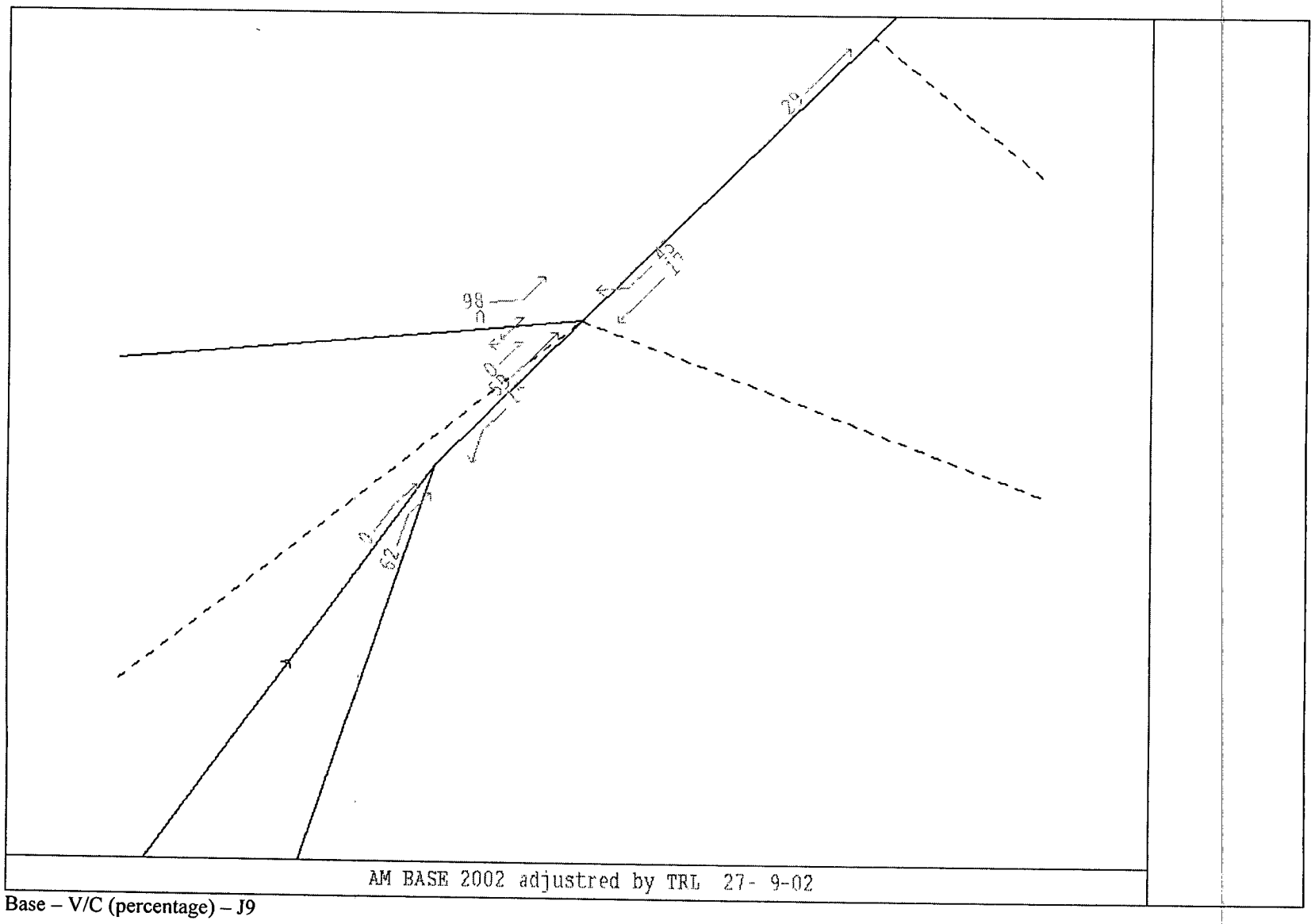
Base – V/C(percentage) - J6



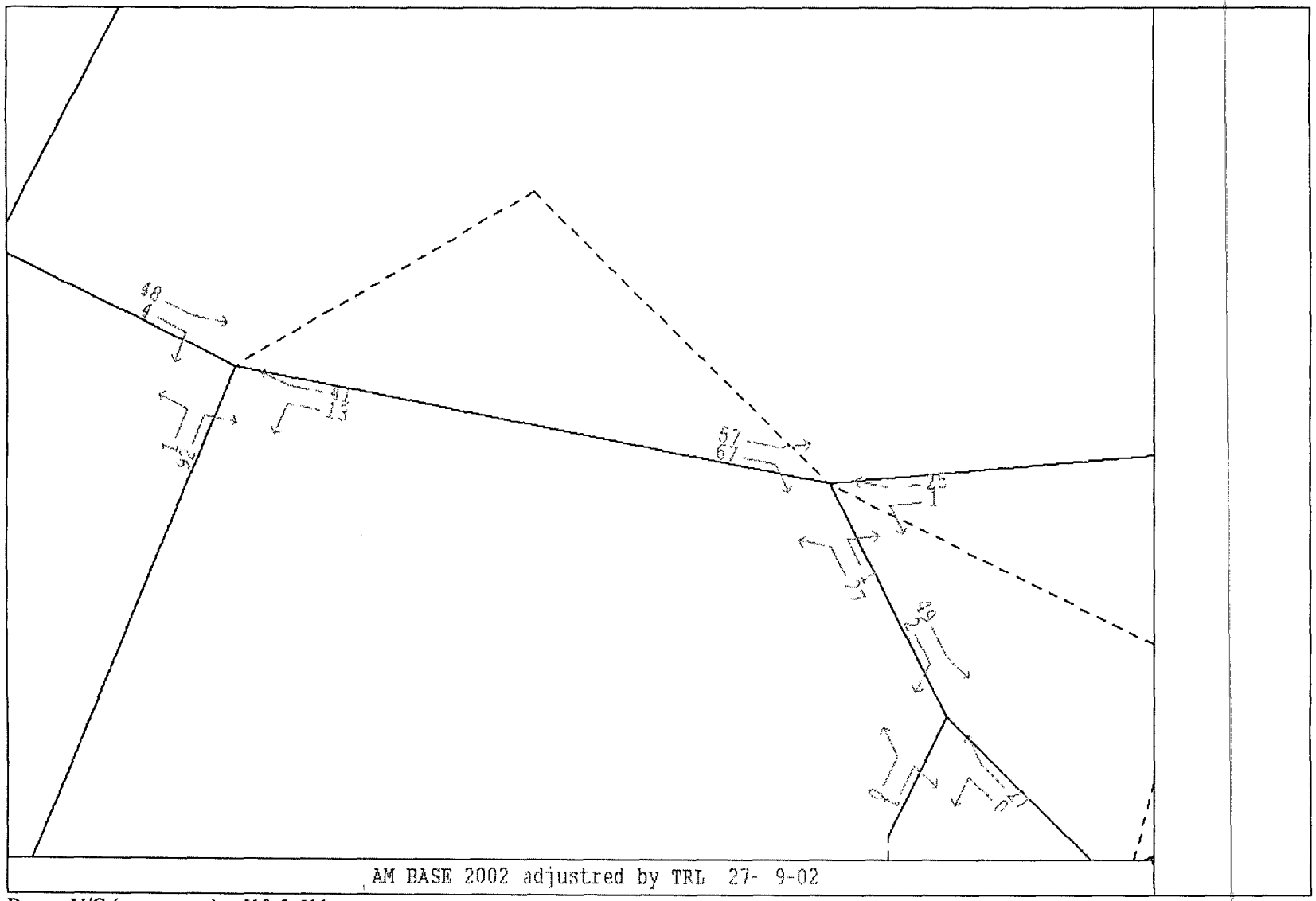
Base – V/C (percentage) – J7



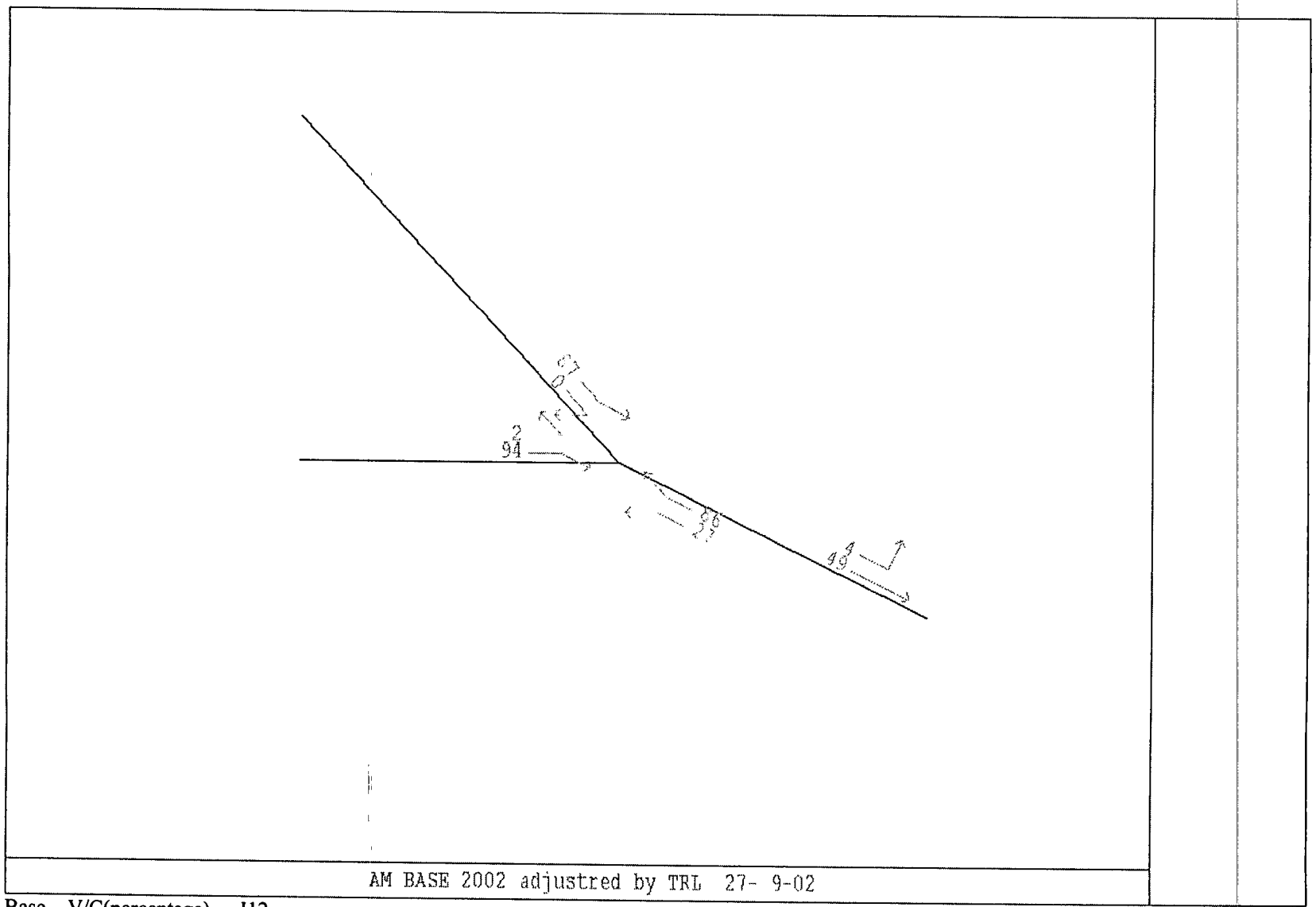
Base – V/C (percentage) – J8



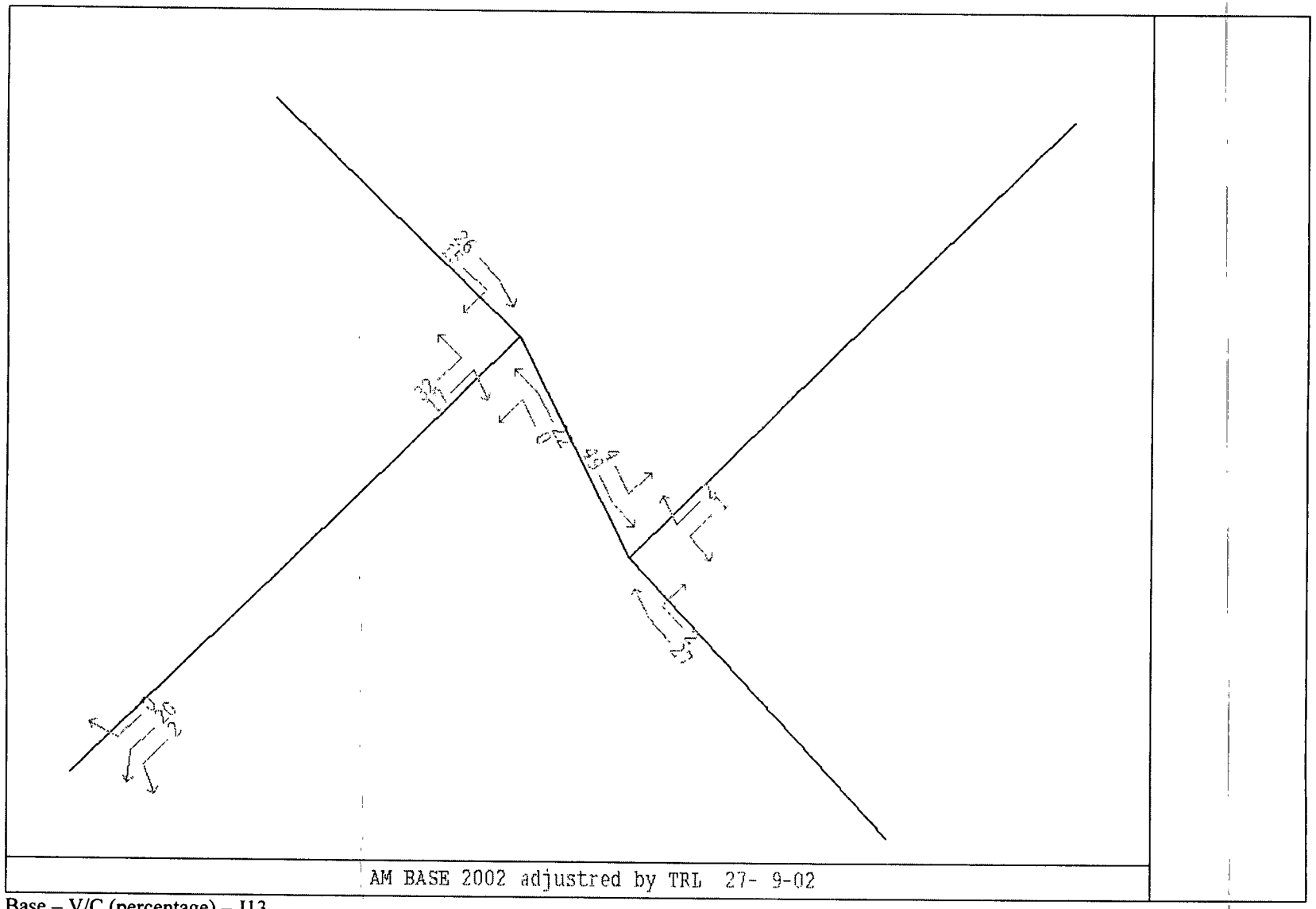
Base – V/C (percentage) – J9



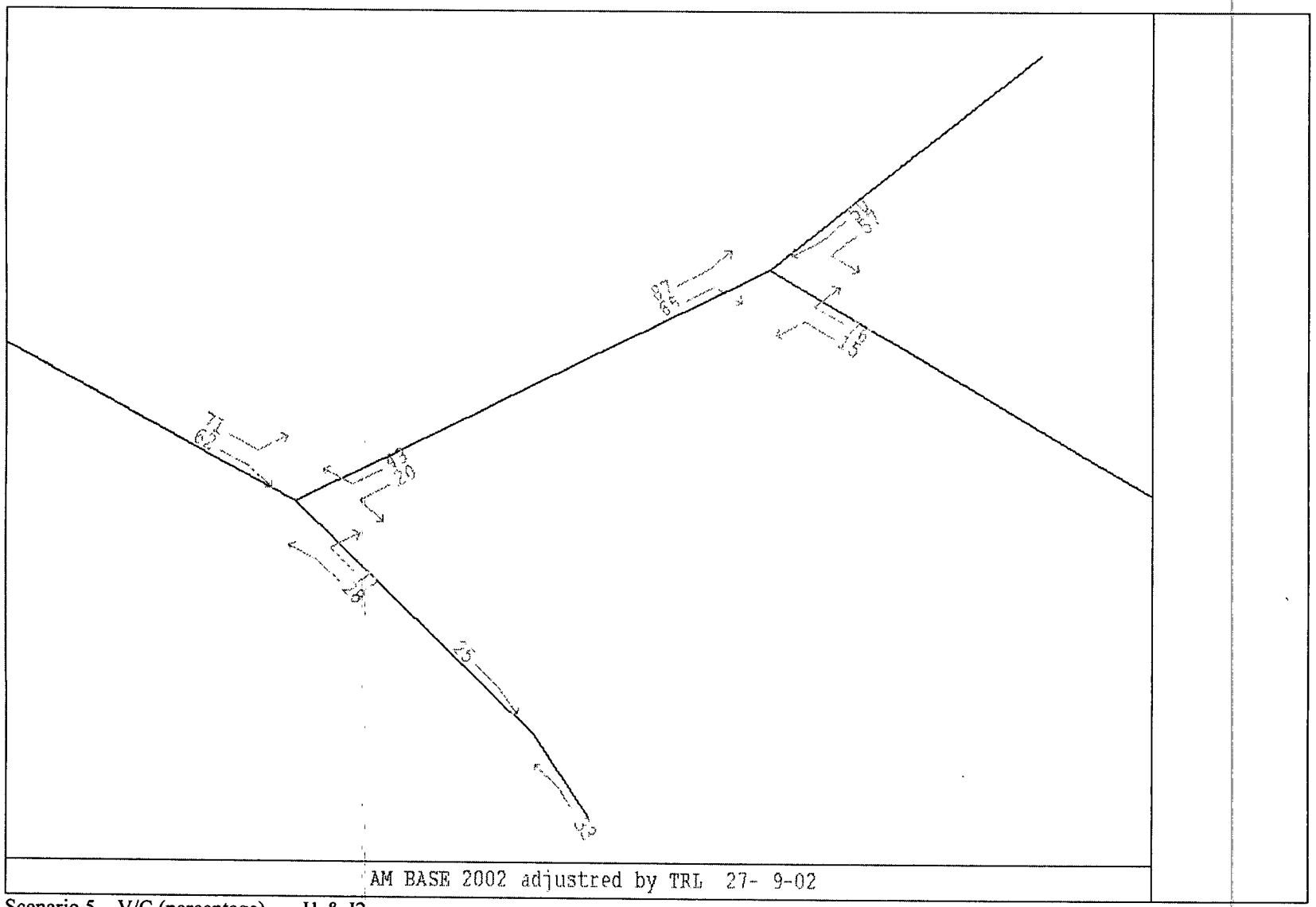
Base – V/C (percentage) - J10 & J11



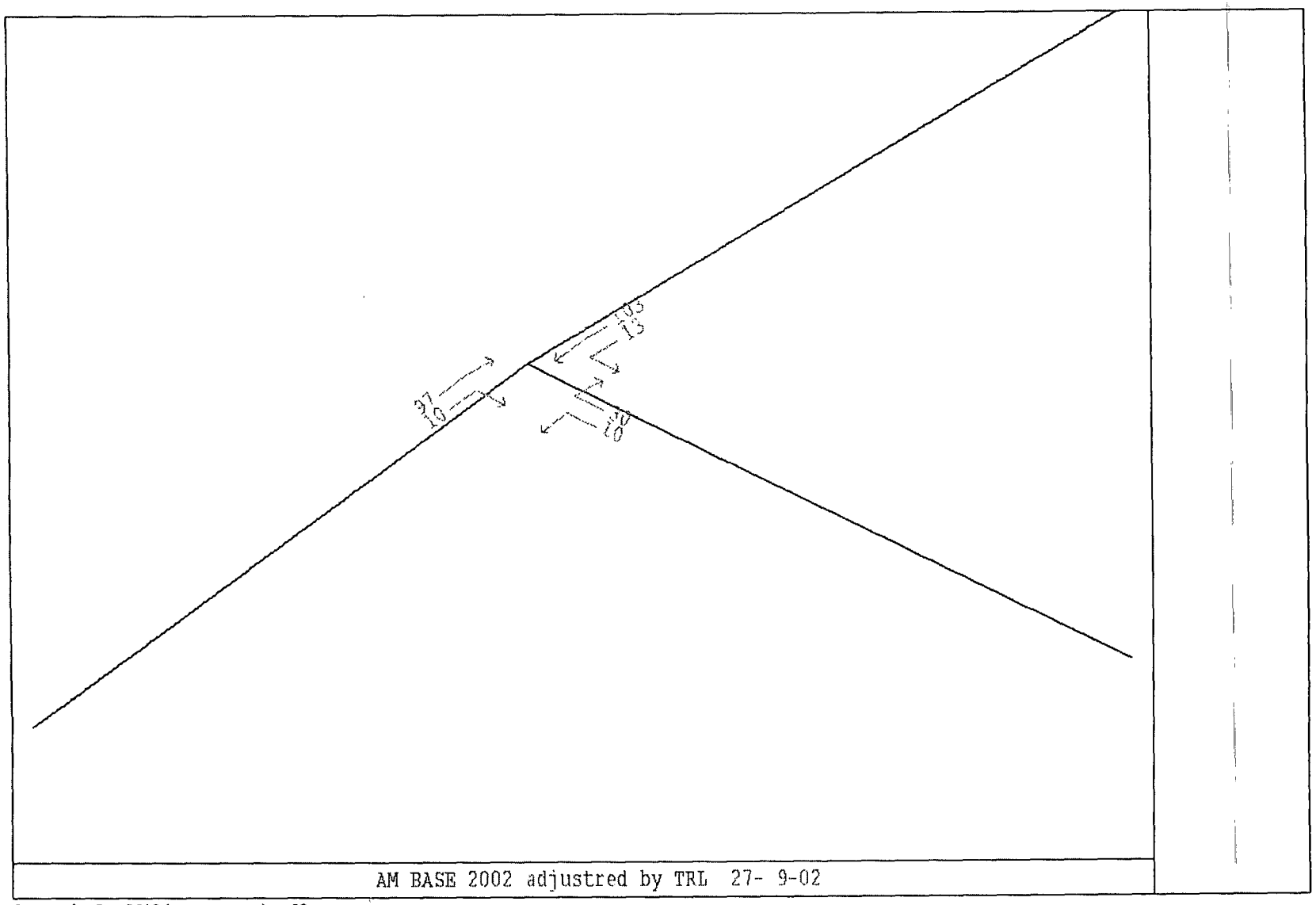
Base – V/C(percentage) - J12



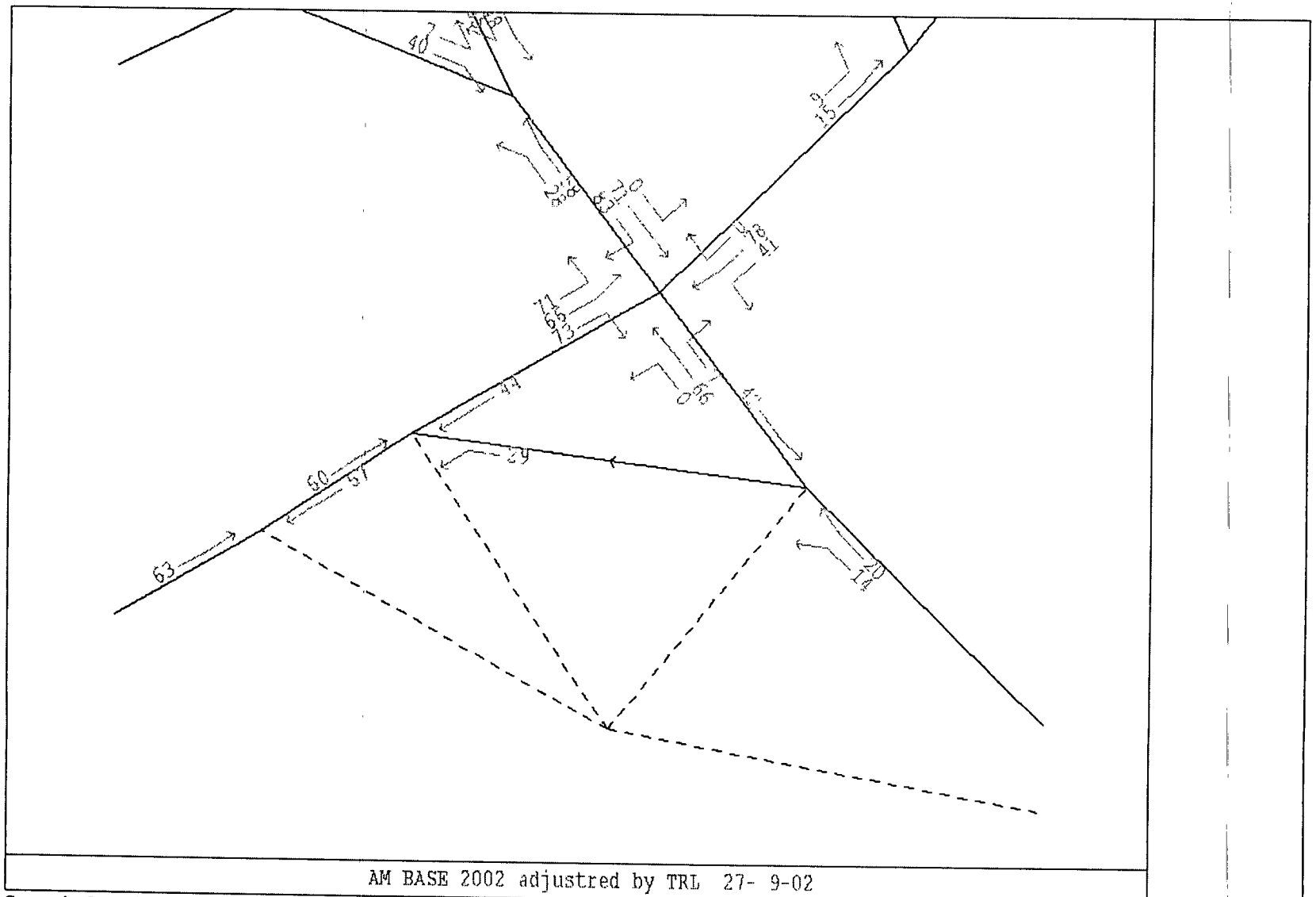
Base – V/C (percentage) – J13



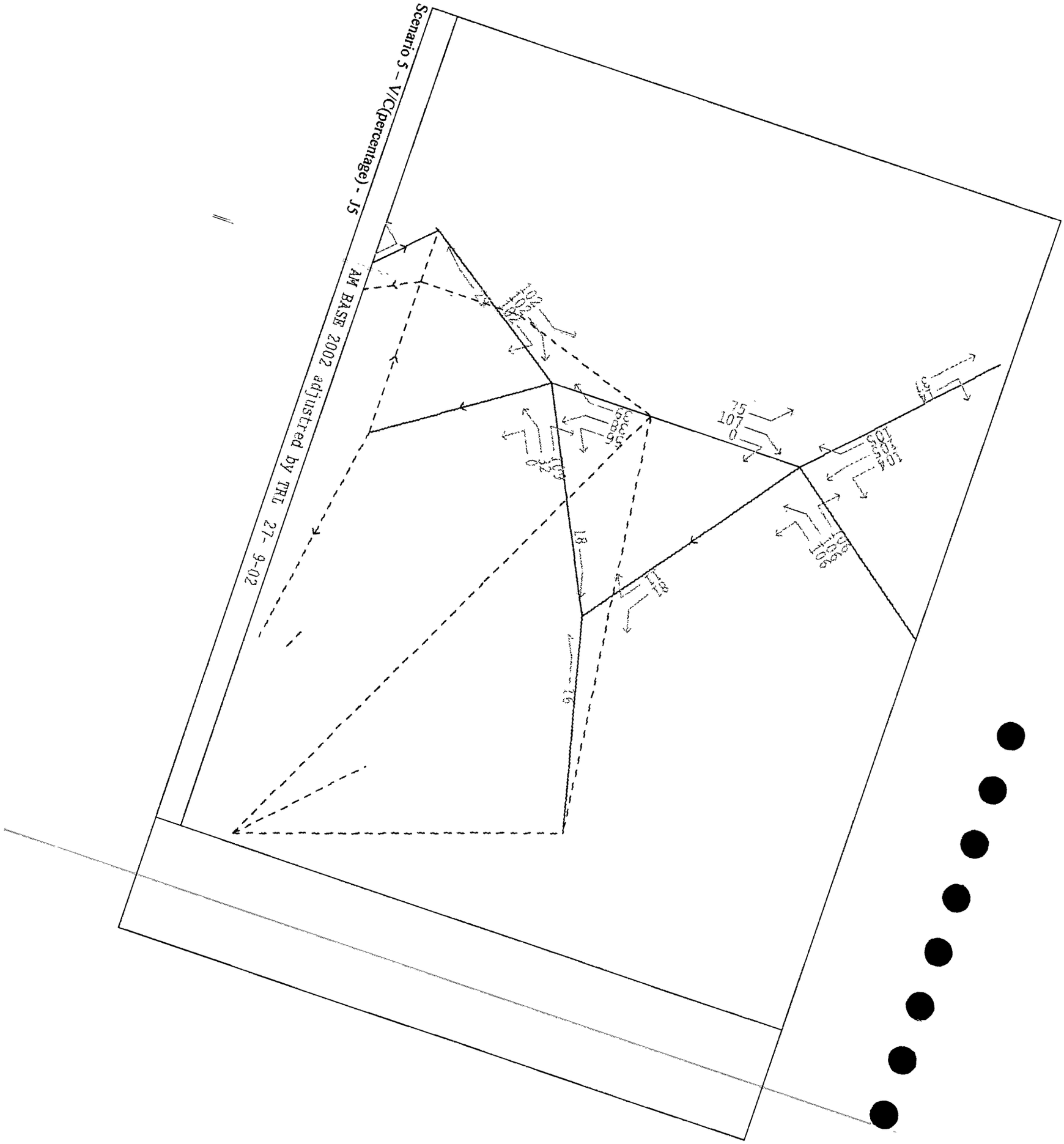
Scenario 5 – V/C (percentage) -- J1 & J2



Scenario 5 - V/C(percentage) – J3



Scenario 5 – V/C (percentage) – J4


Scenario 5 – V/C(percentage) - J5
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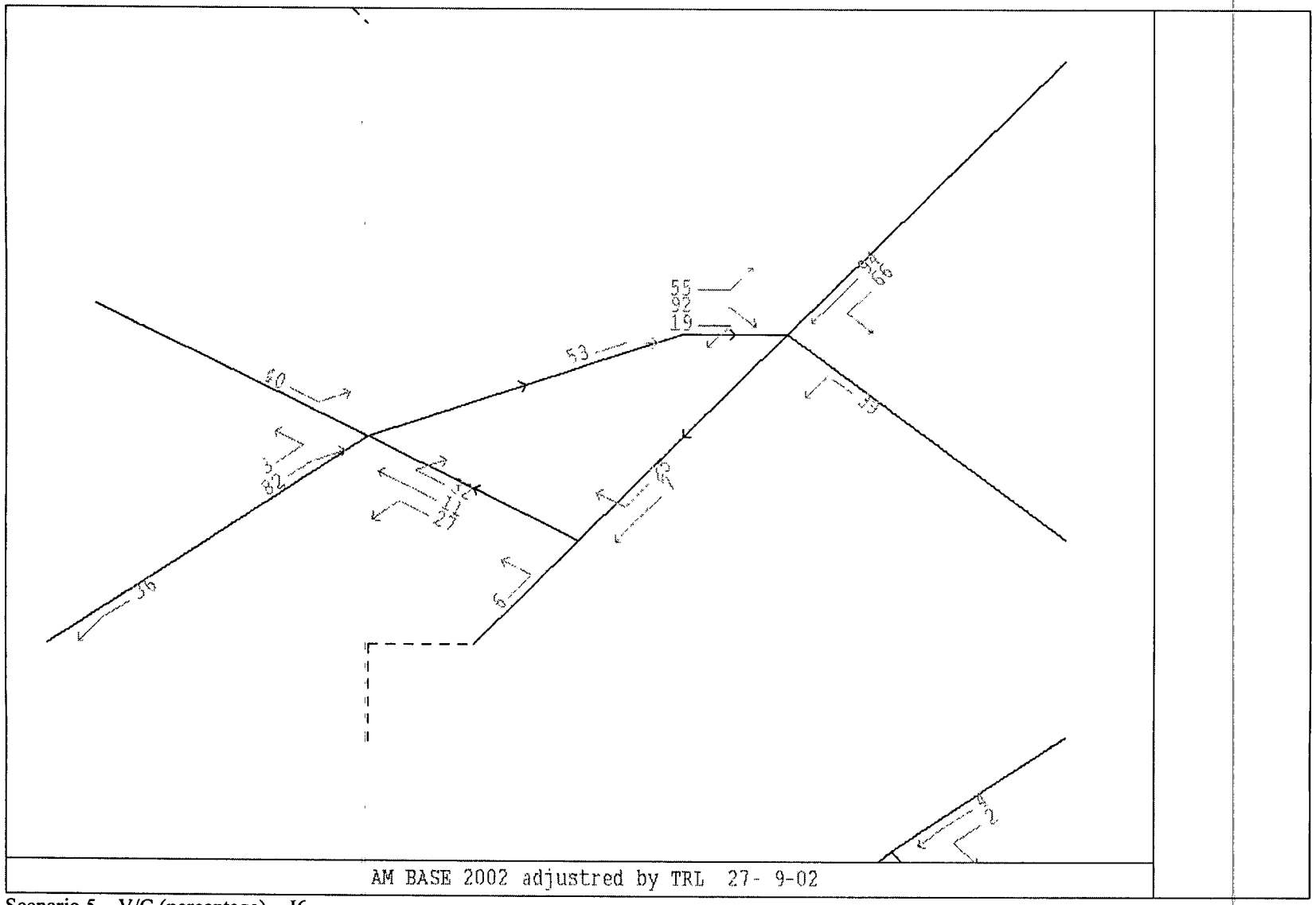
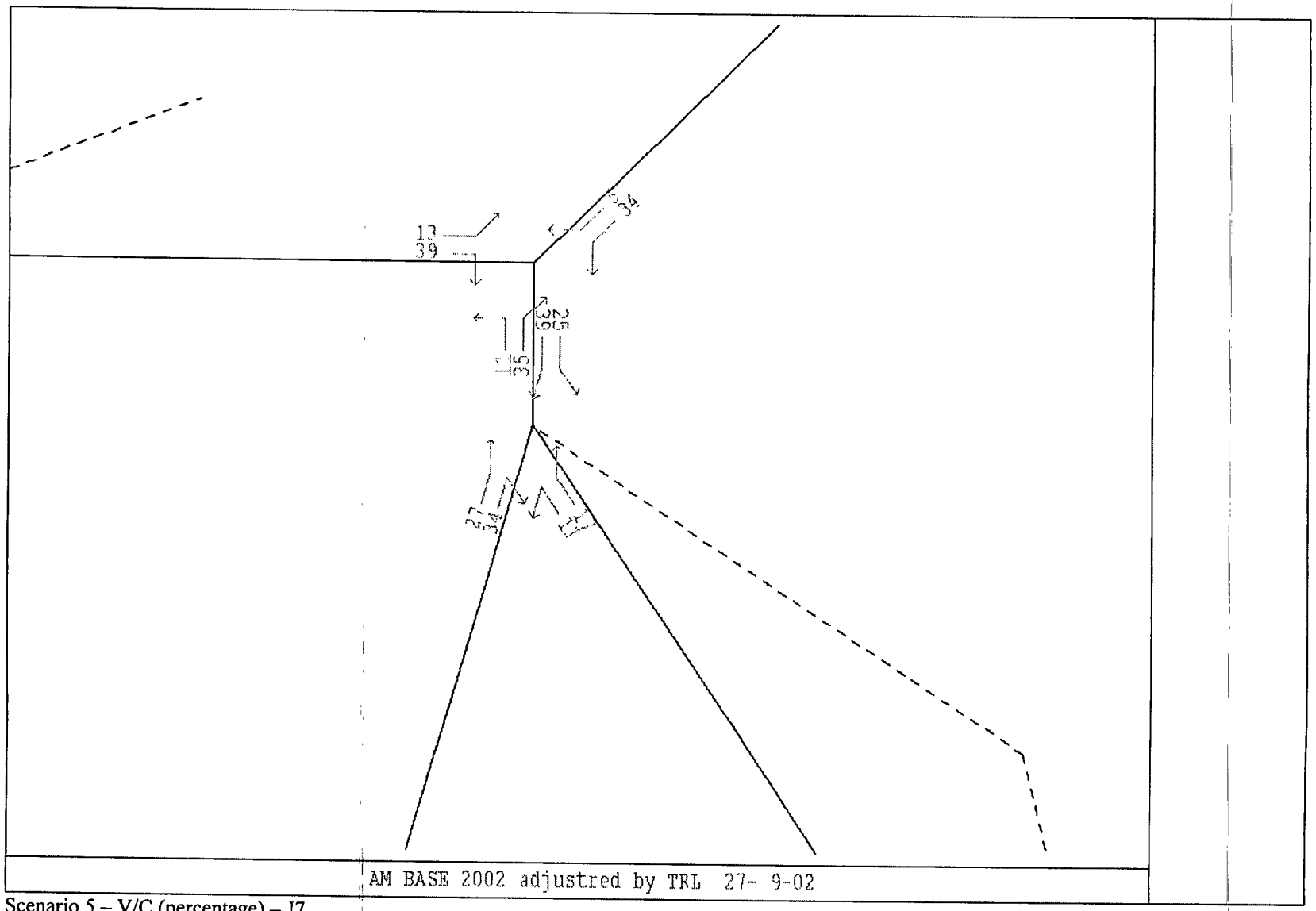
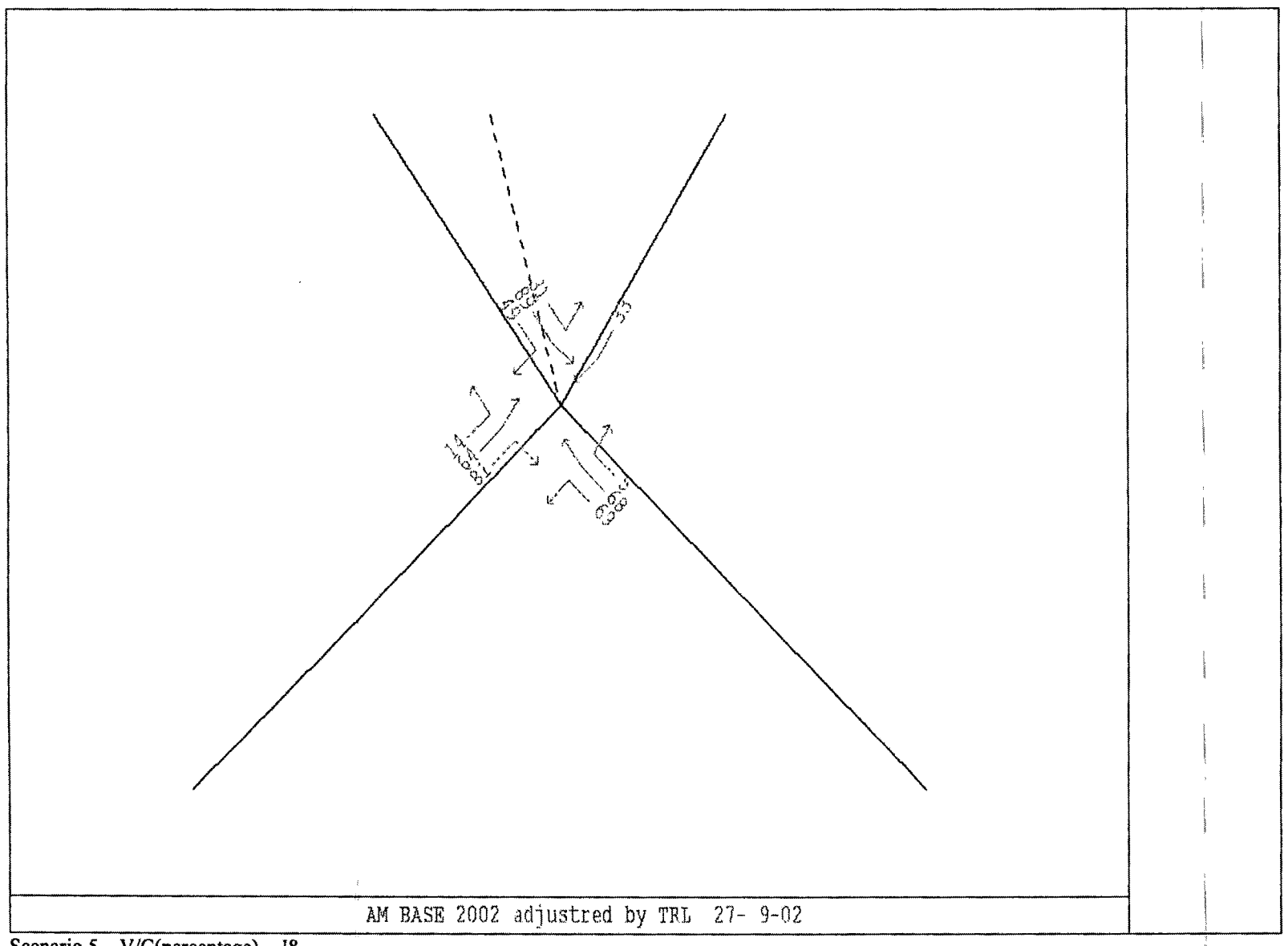


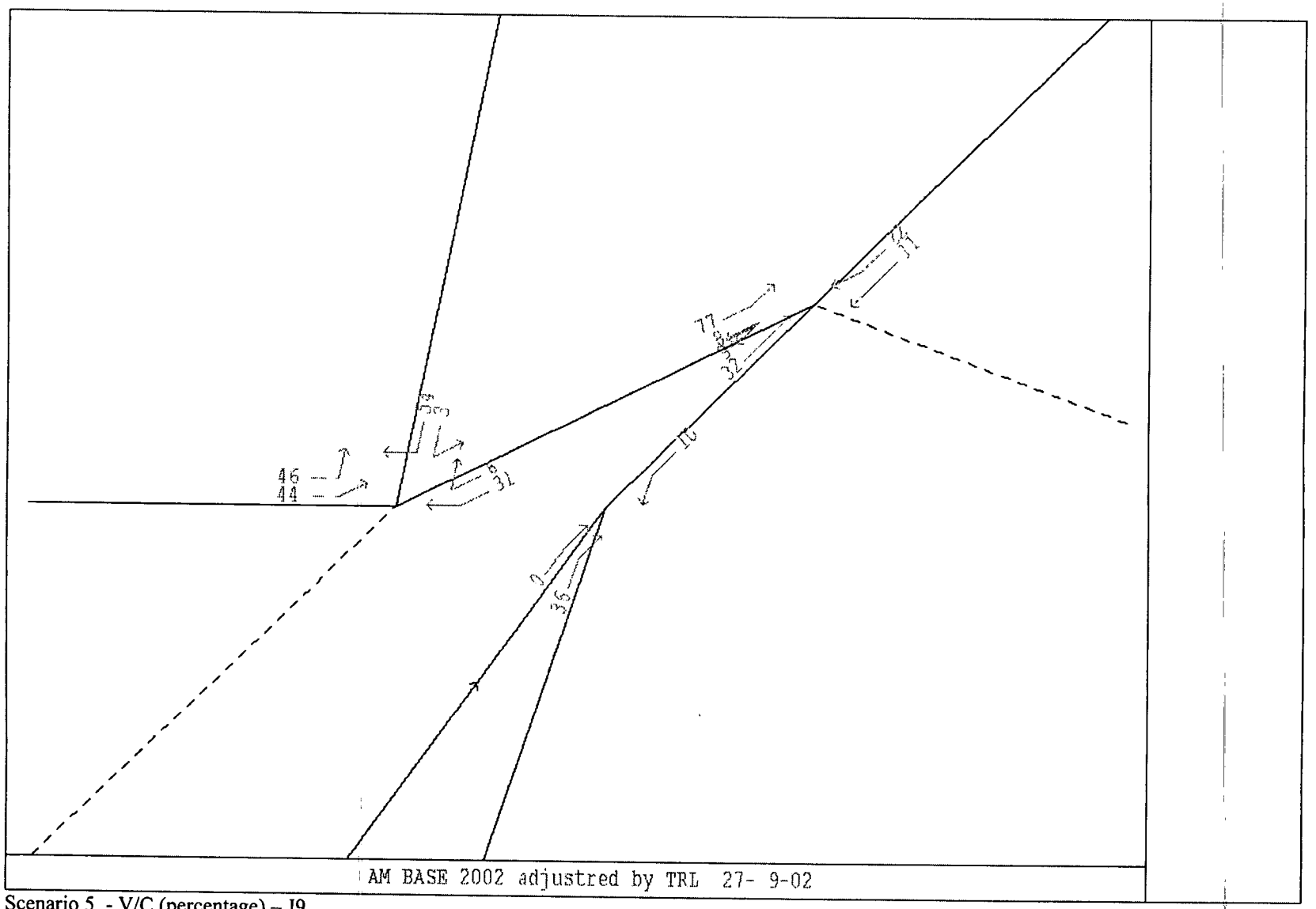
Scenario 5 – V/C (percentage) – J6



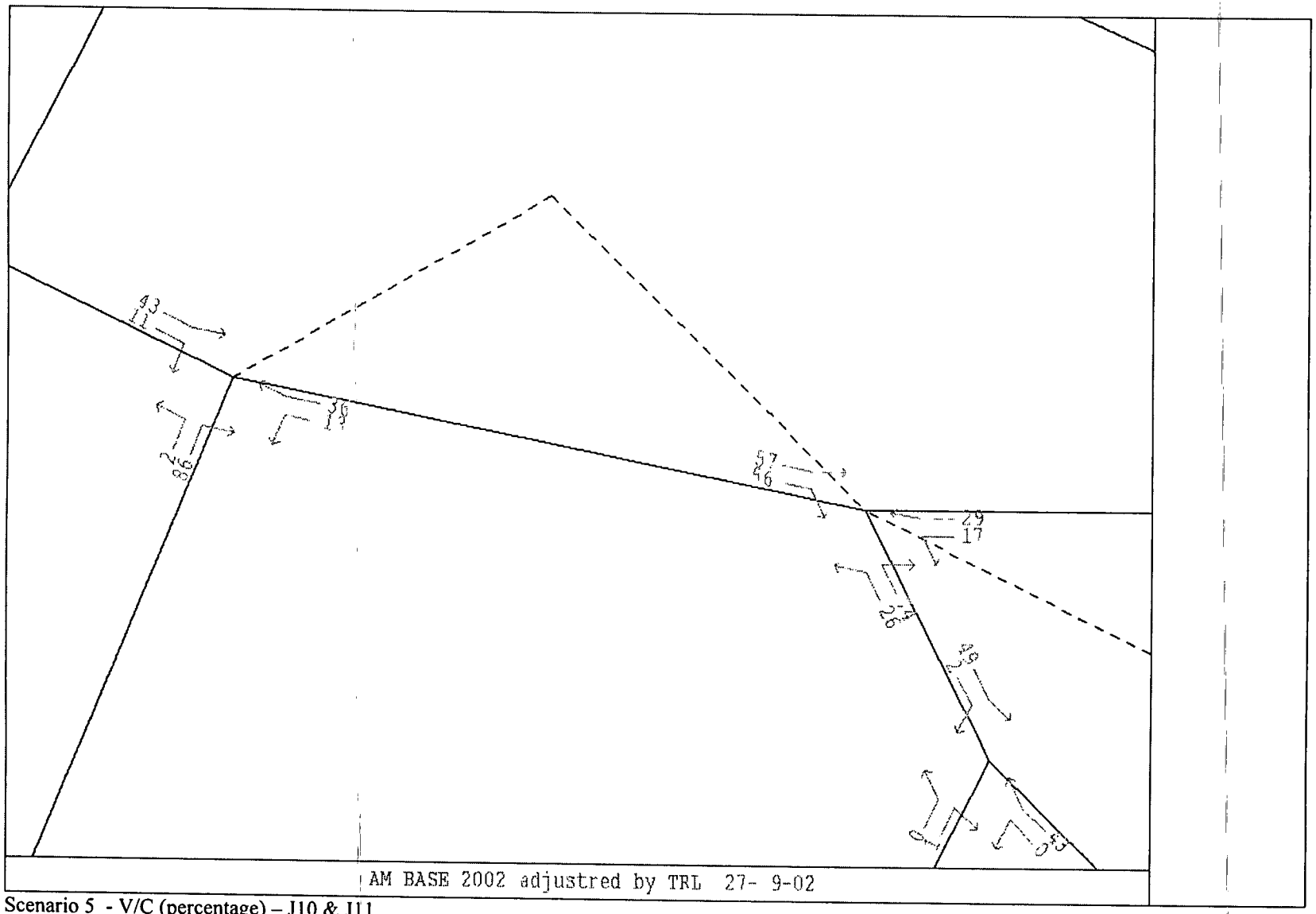
Scenario 5 – V/C (percentage) – J7



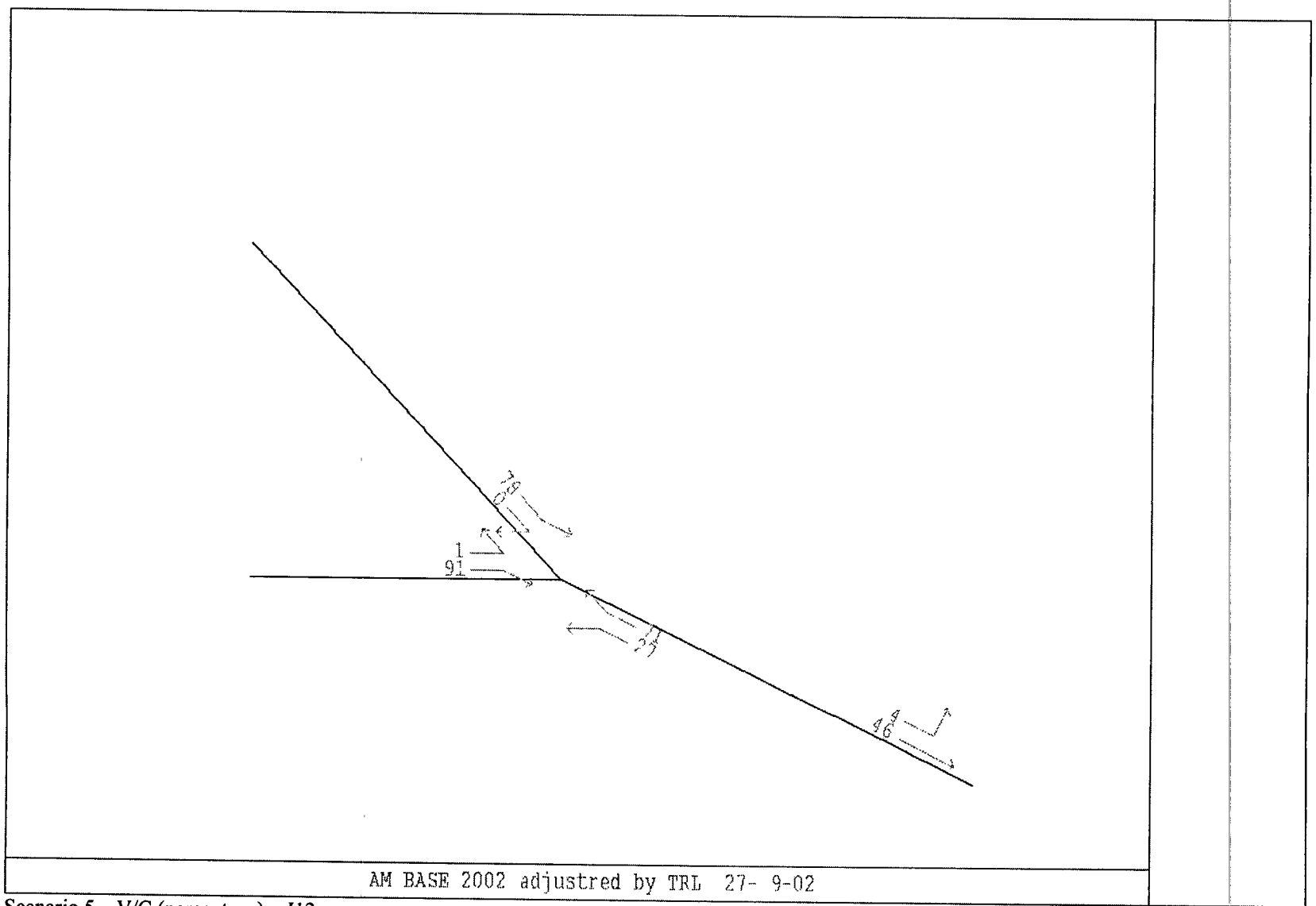
Scenario 5 – V/C(percentage) – J8



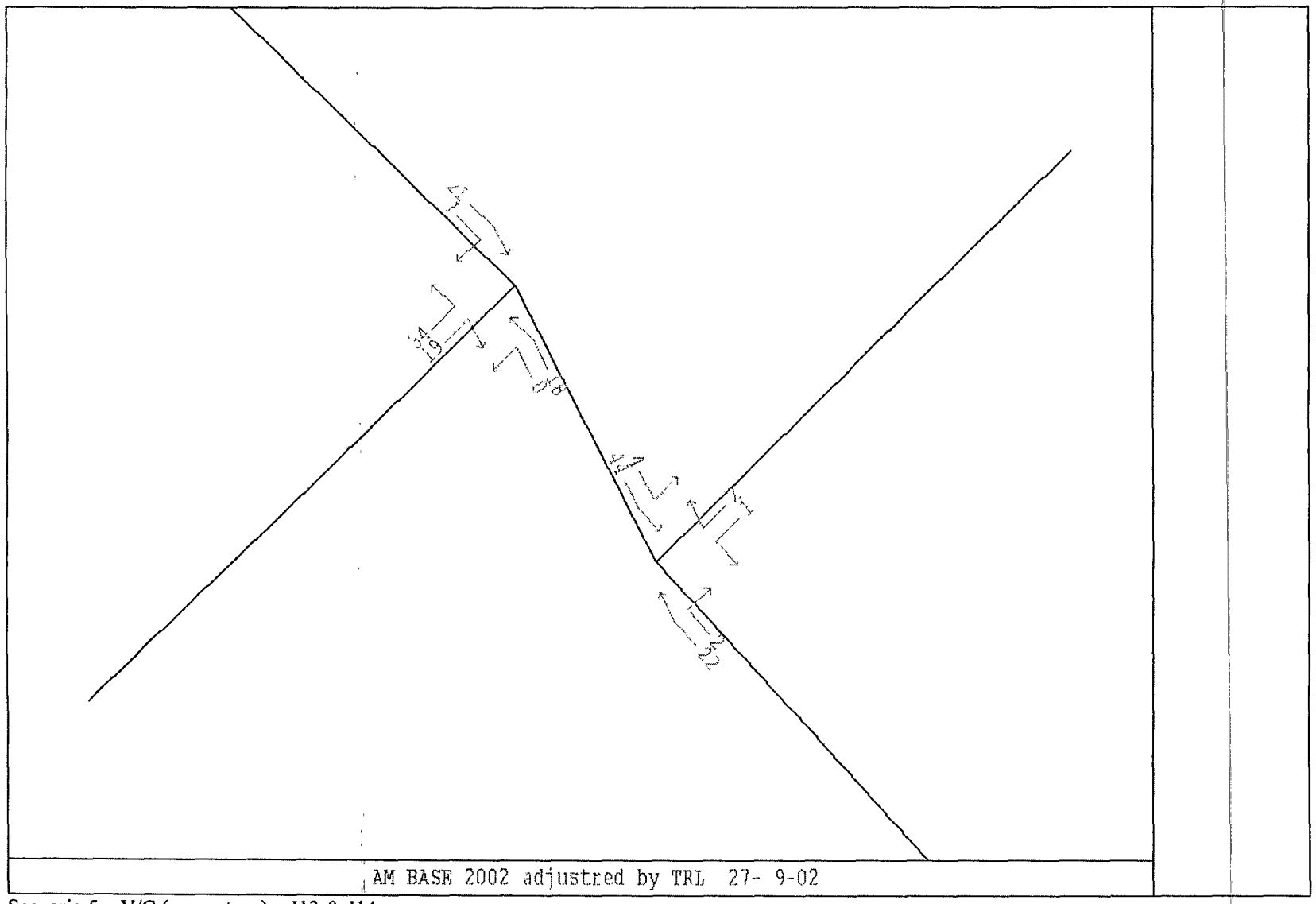
Scenario 5 - V/C (percentage) – J9



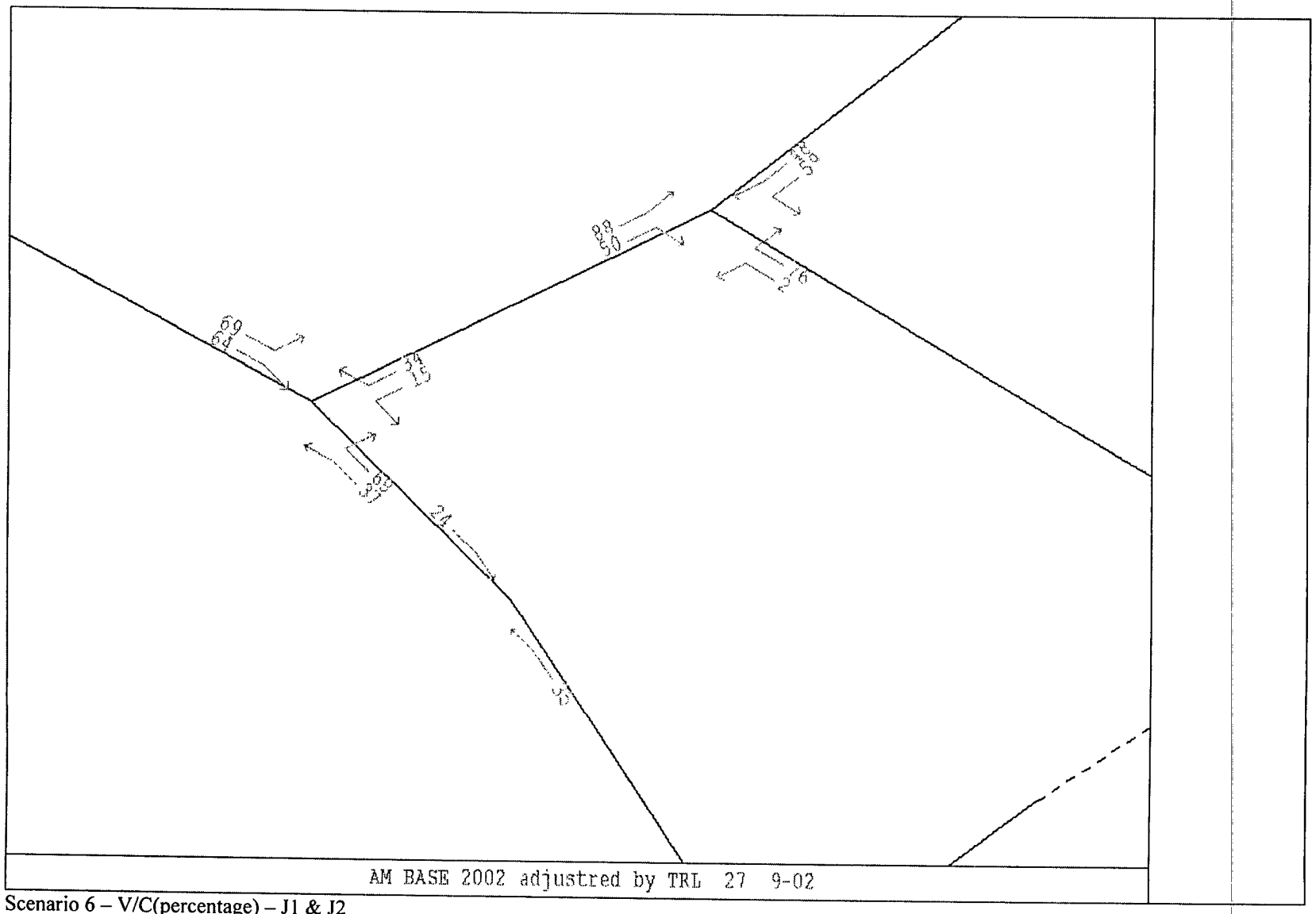
Scenario 5 - V/C (percentage) – J10 & J11



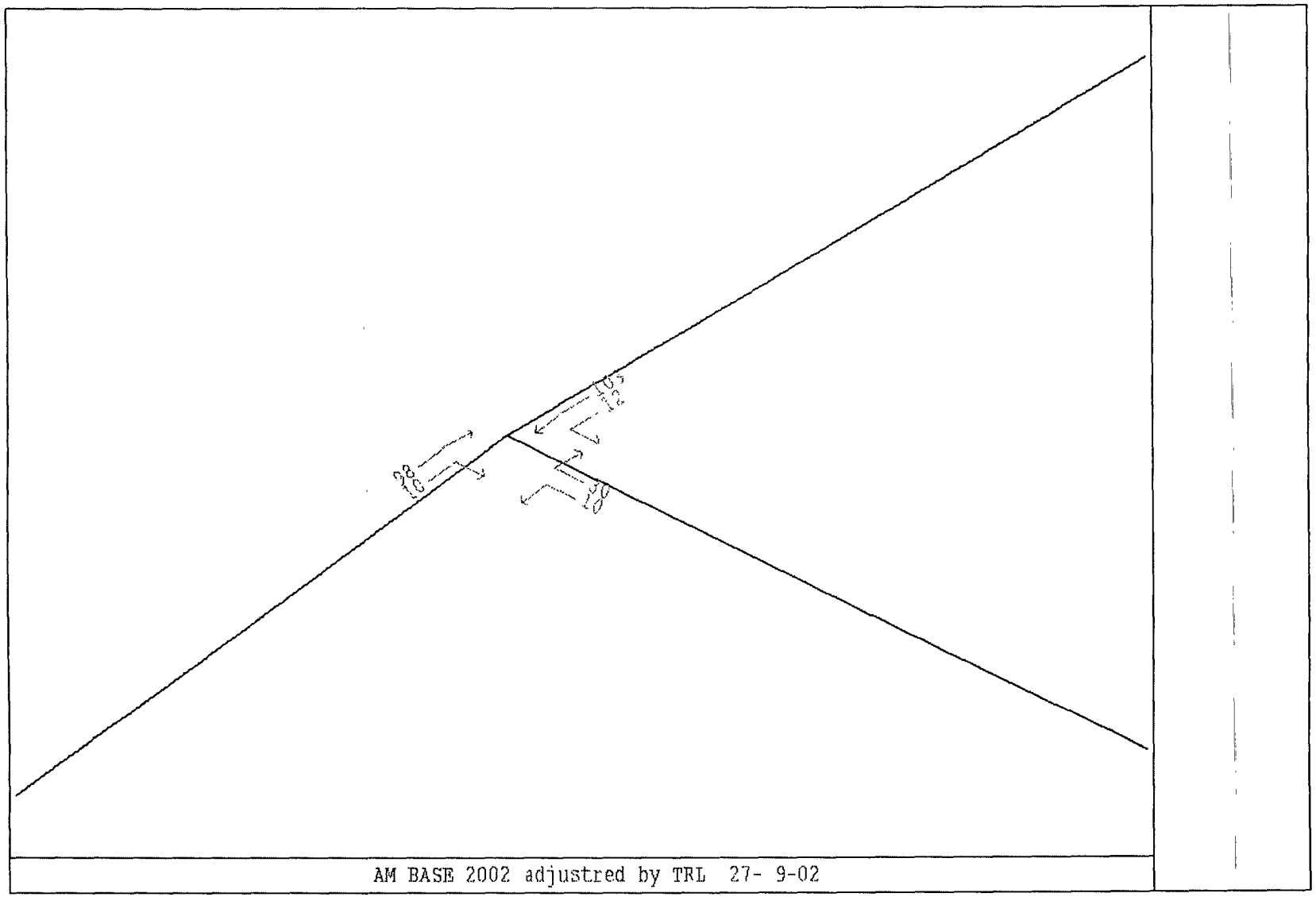
Scenario 5 – V/C (percentage) – J12



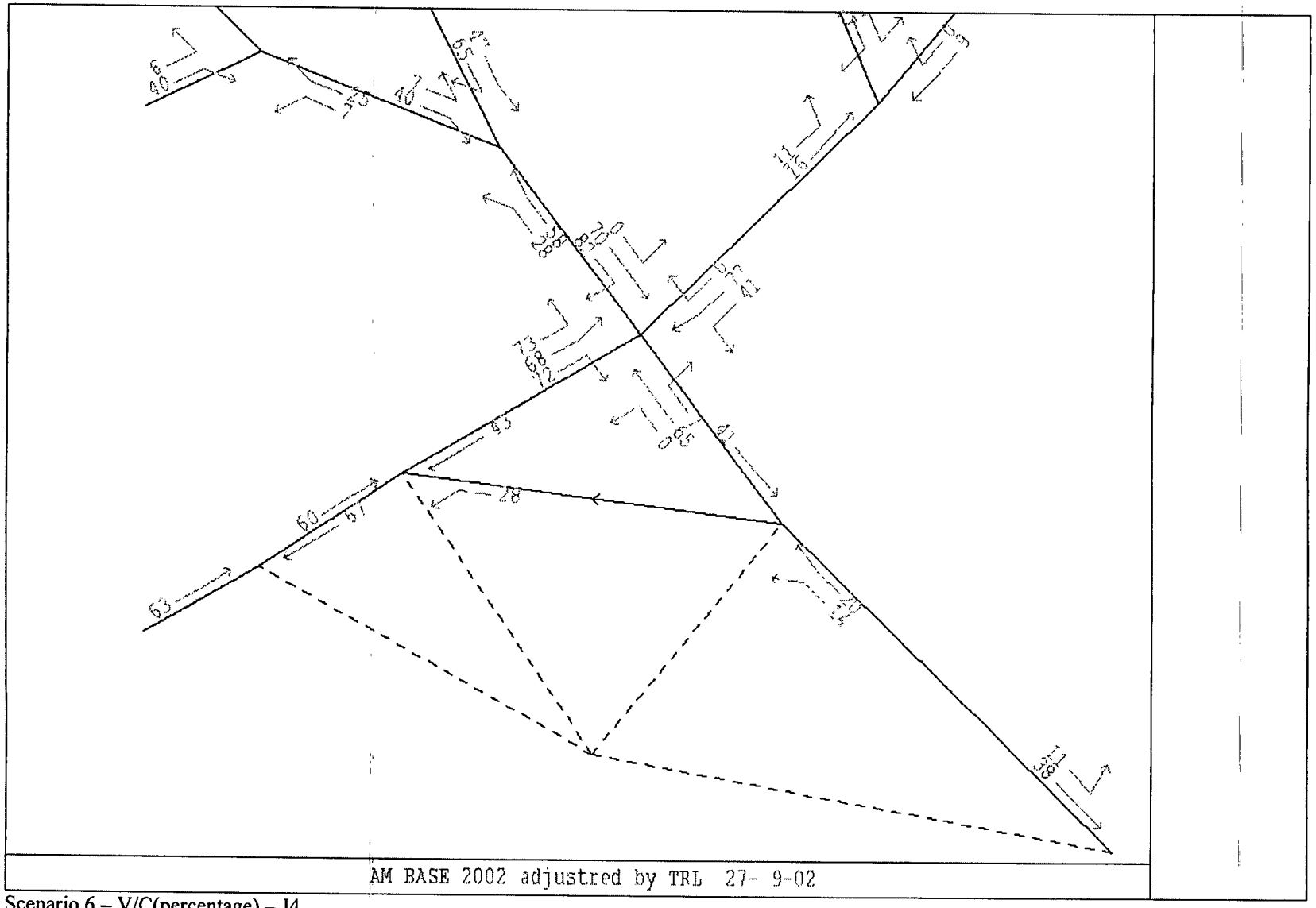
Scenario 5 – V/C (percentage) – J13 & J14



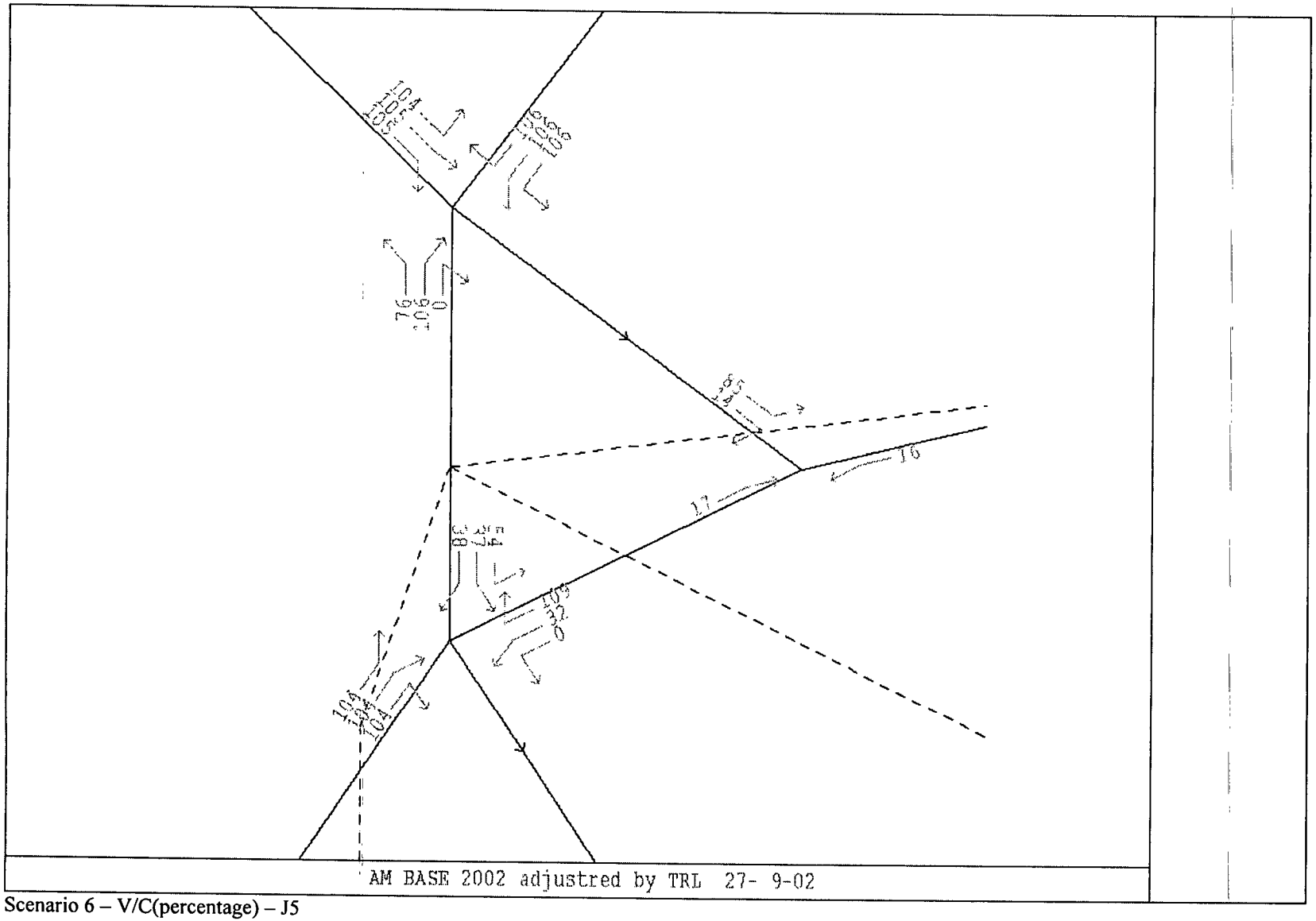
Scenario 6 – V/C(percentage) – J1 & J2



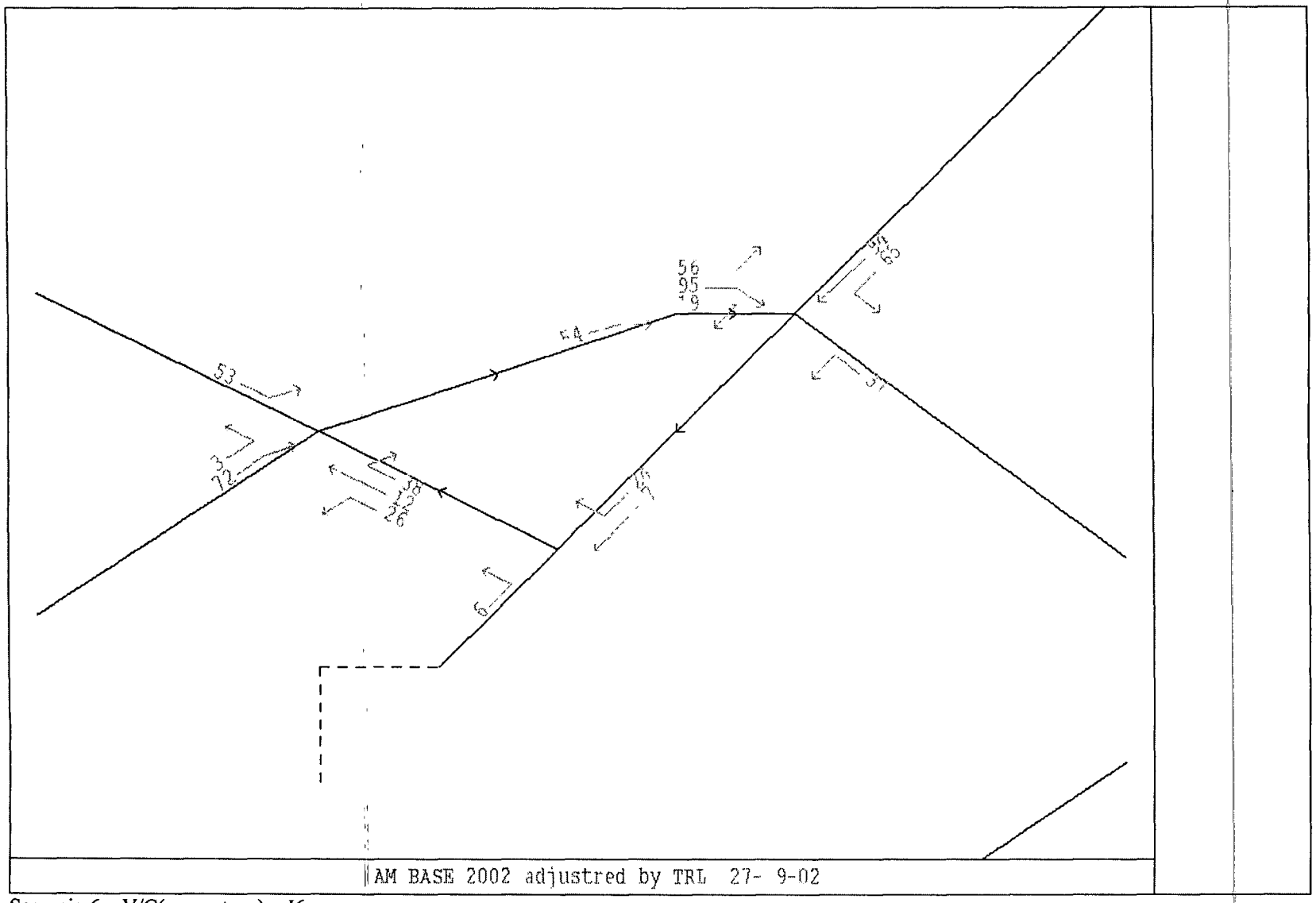
Scenario 6 – V/C(percentage) – J3



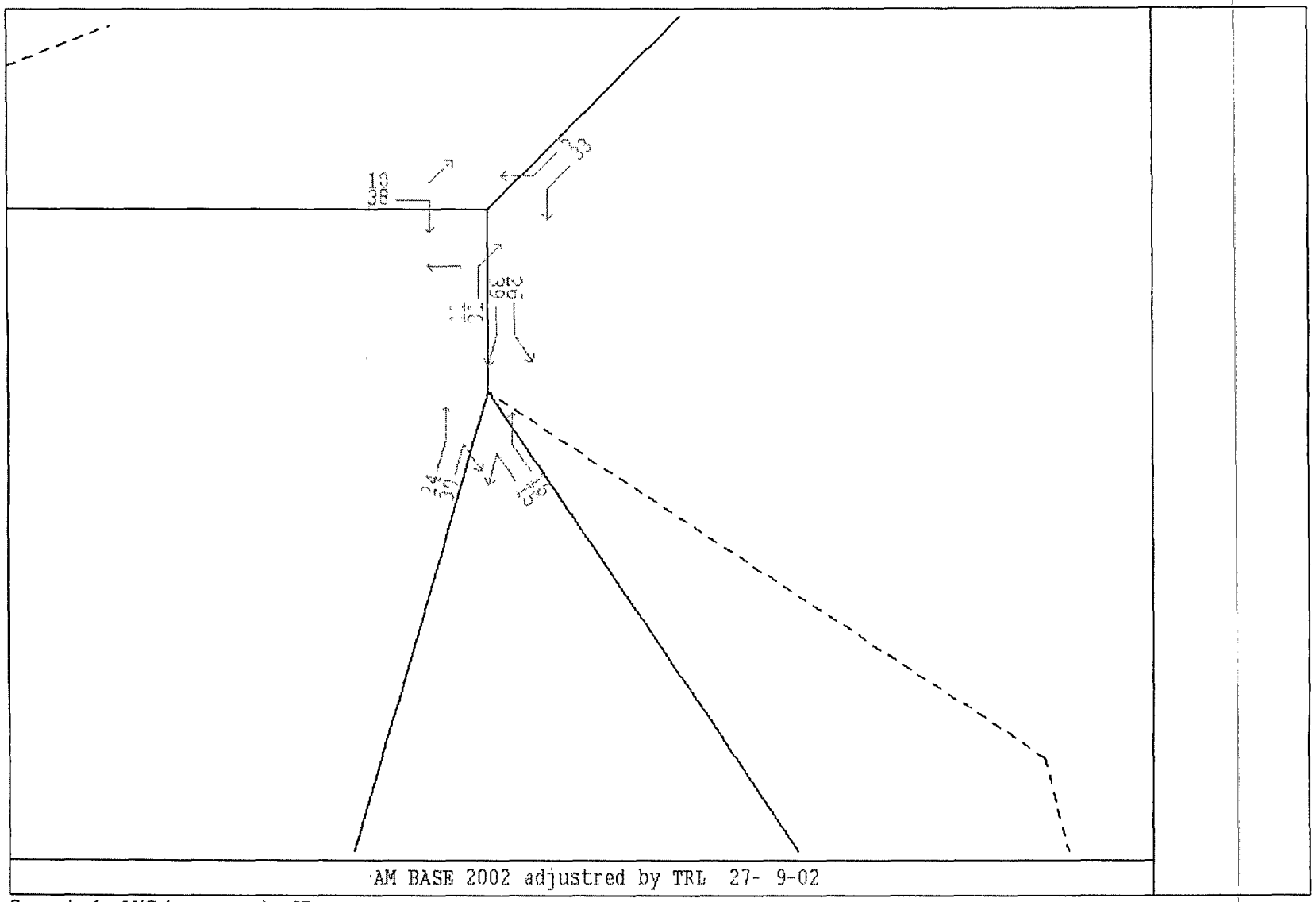
Scenario 6 – V/C(percentage) – J4



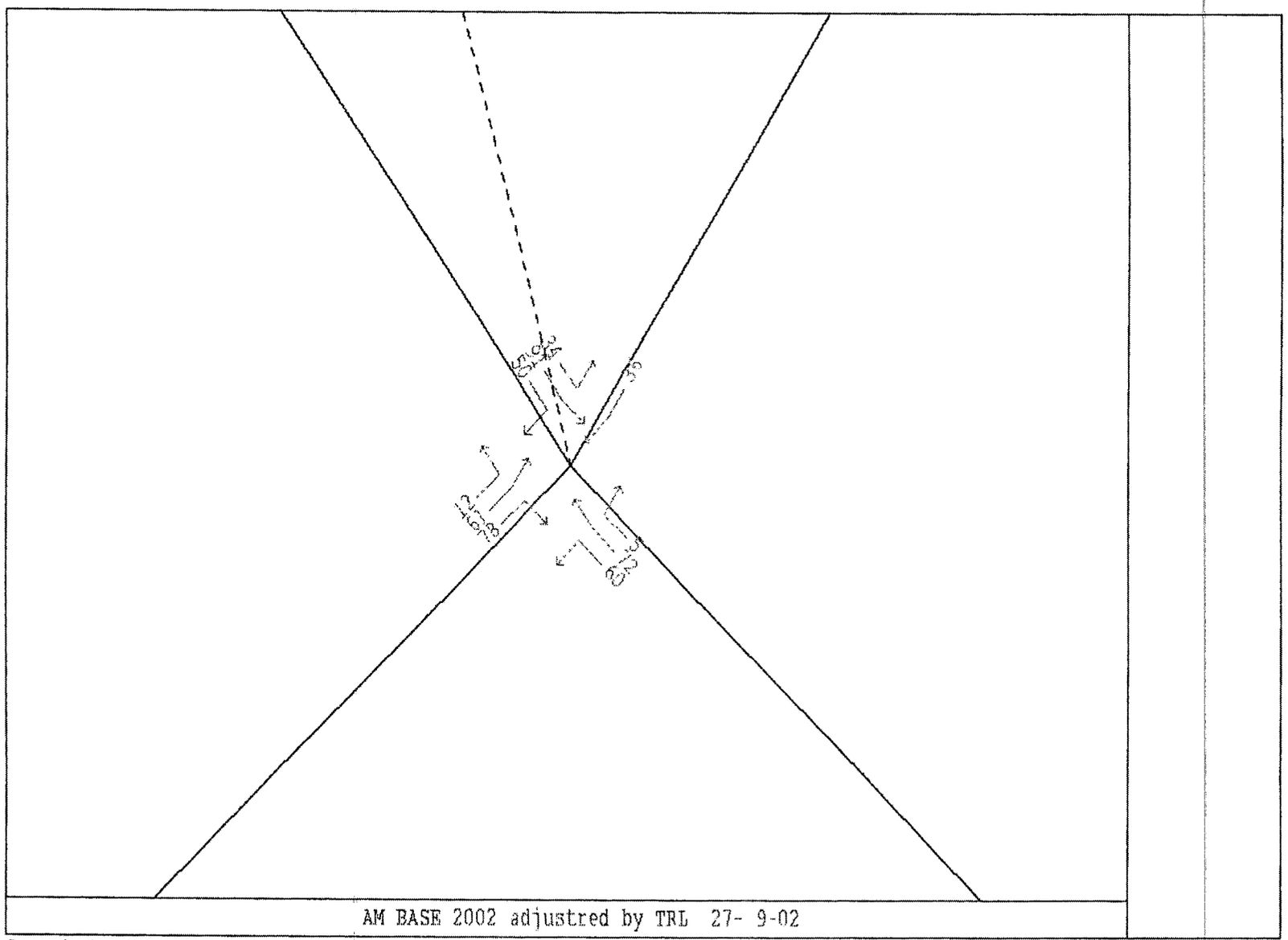
Scenario 6 – V/C(percentage) – J5



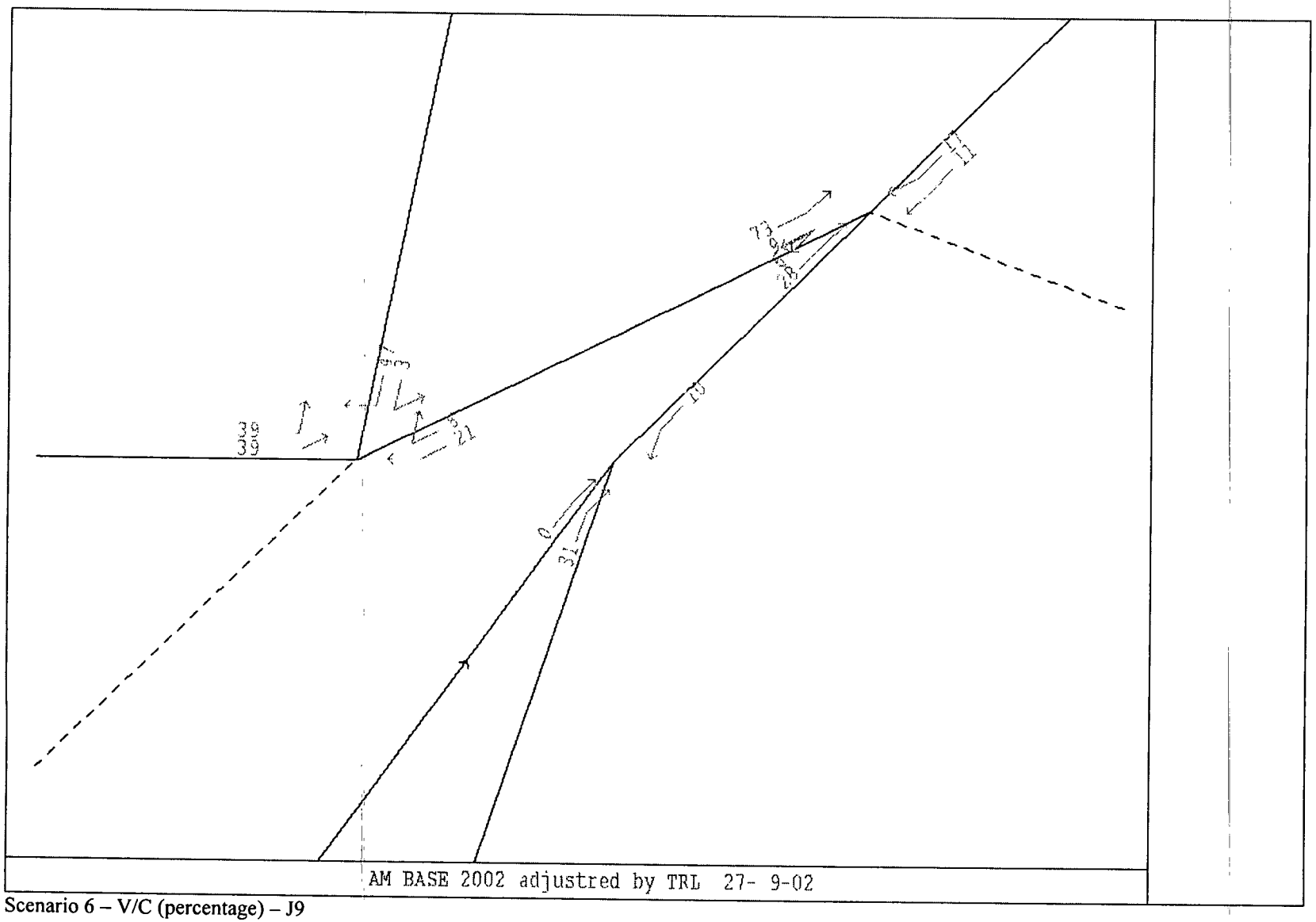
Scenario 6 – V/C(percentage) – J6



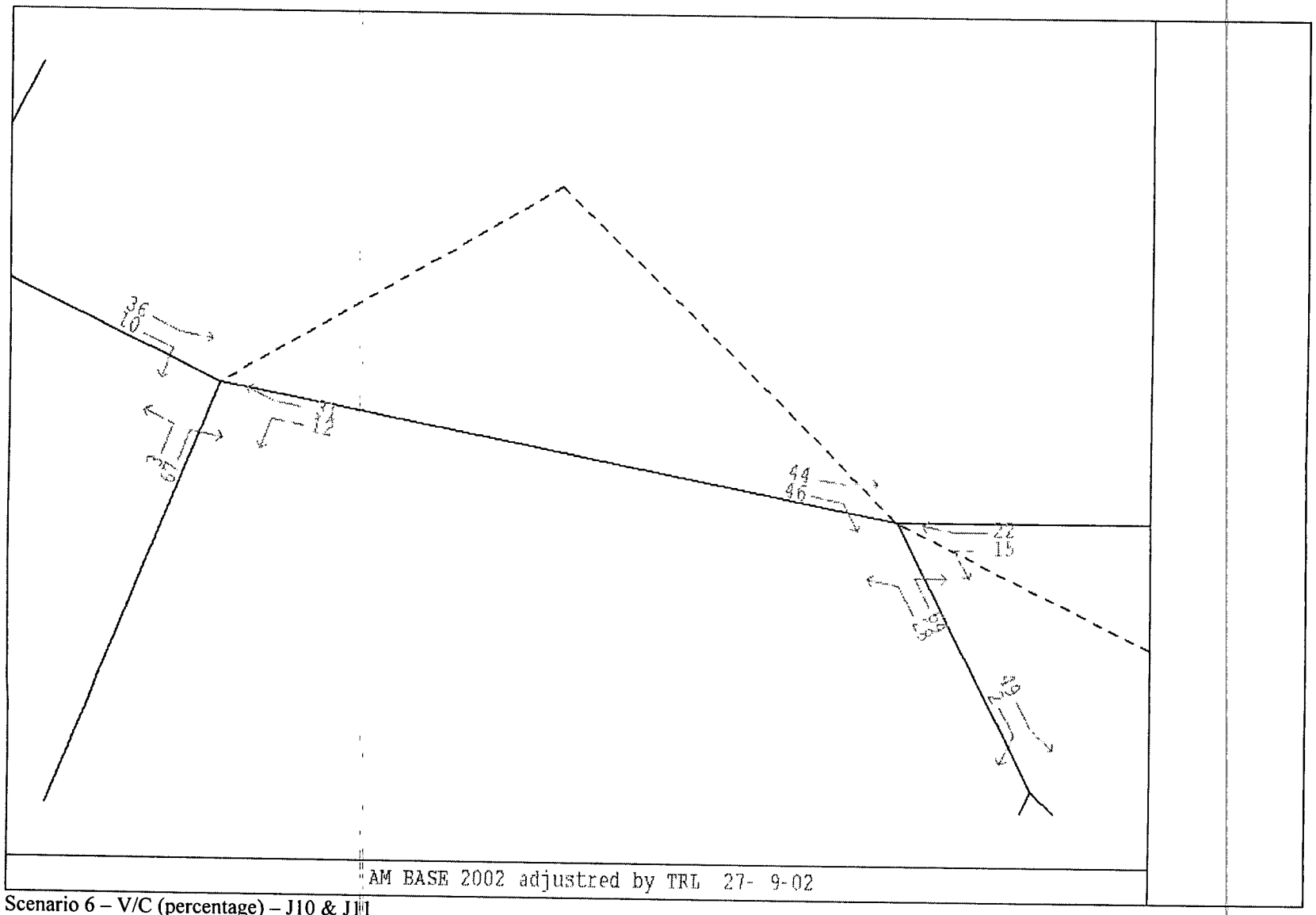
Scenario 6 – V/C (percentage) – J7



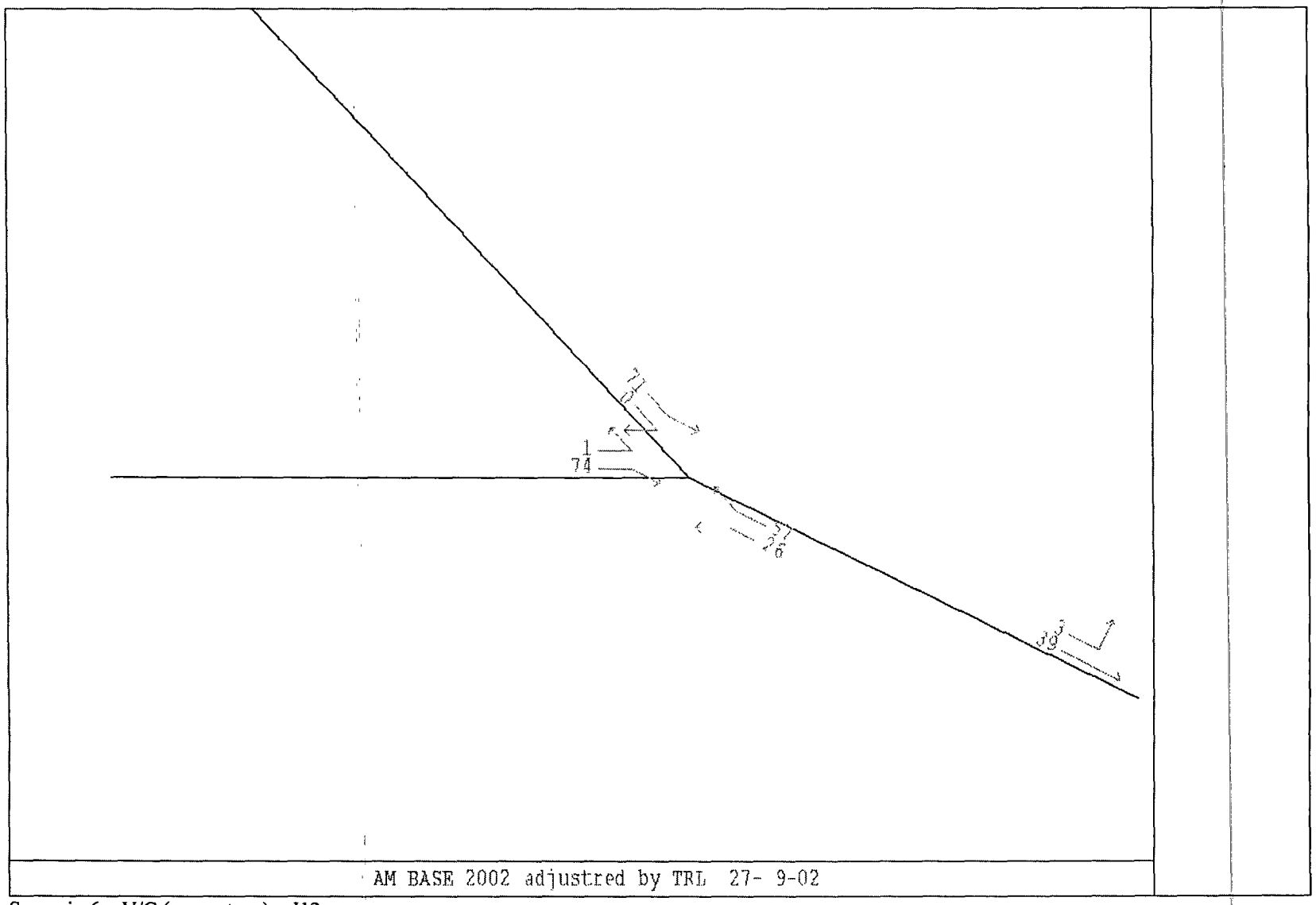
Scenario 6 – V/C (percentage) – J8



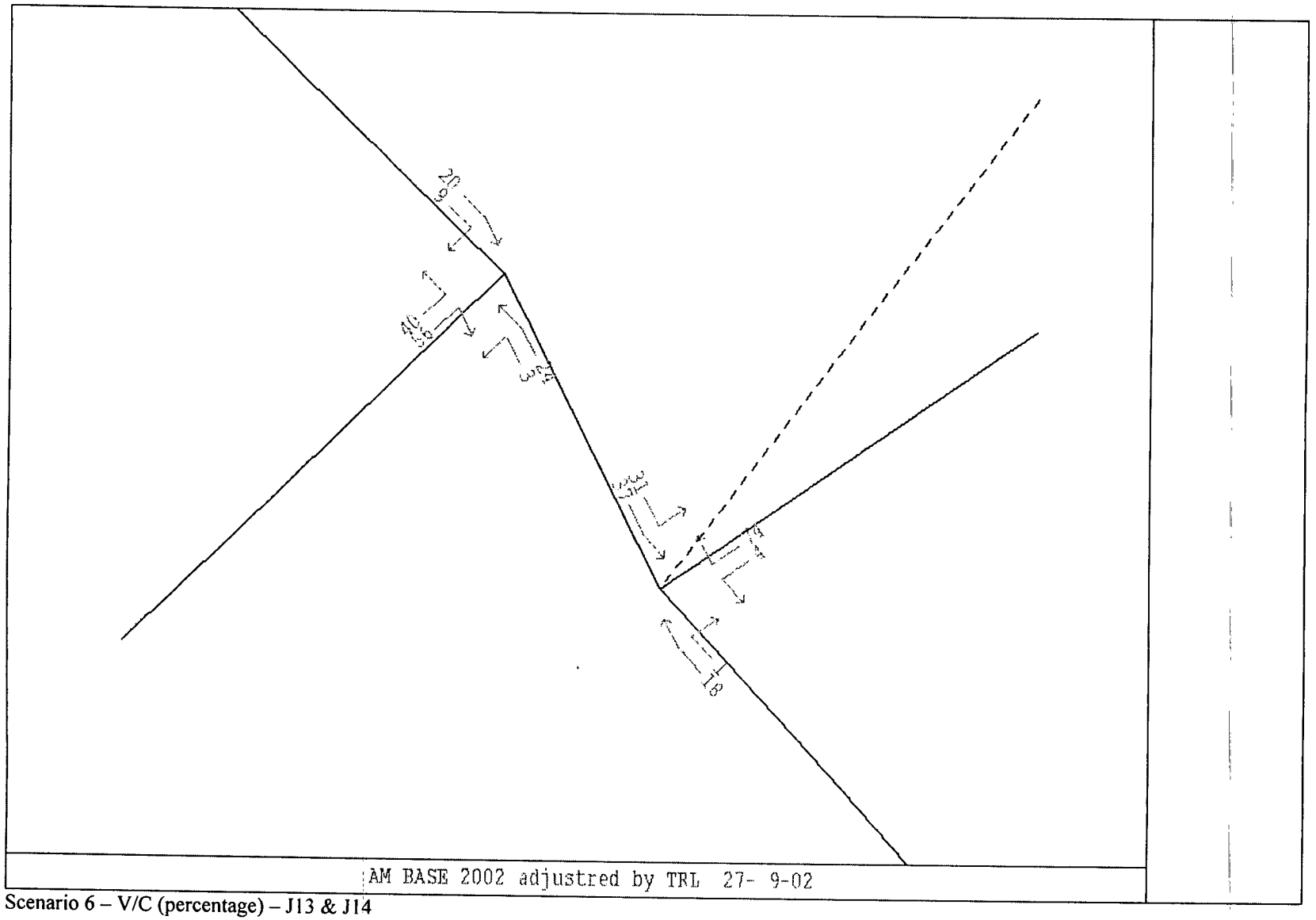
Scenario 6 – V/C (percentage) – J9



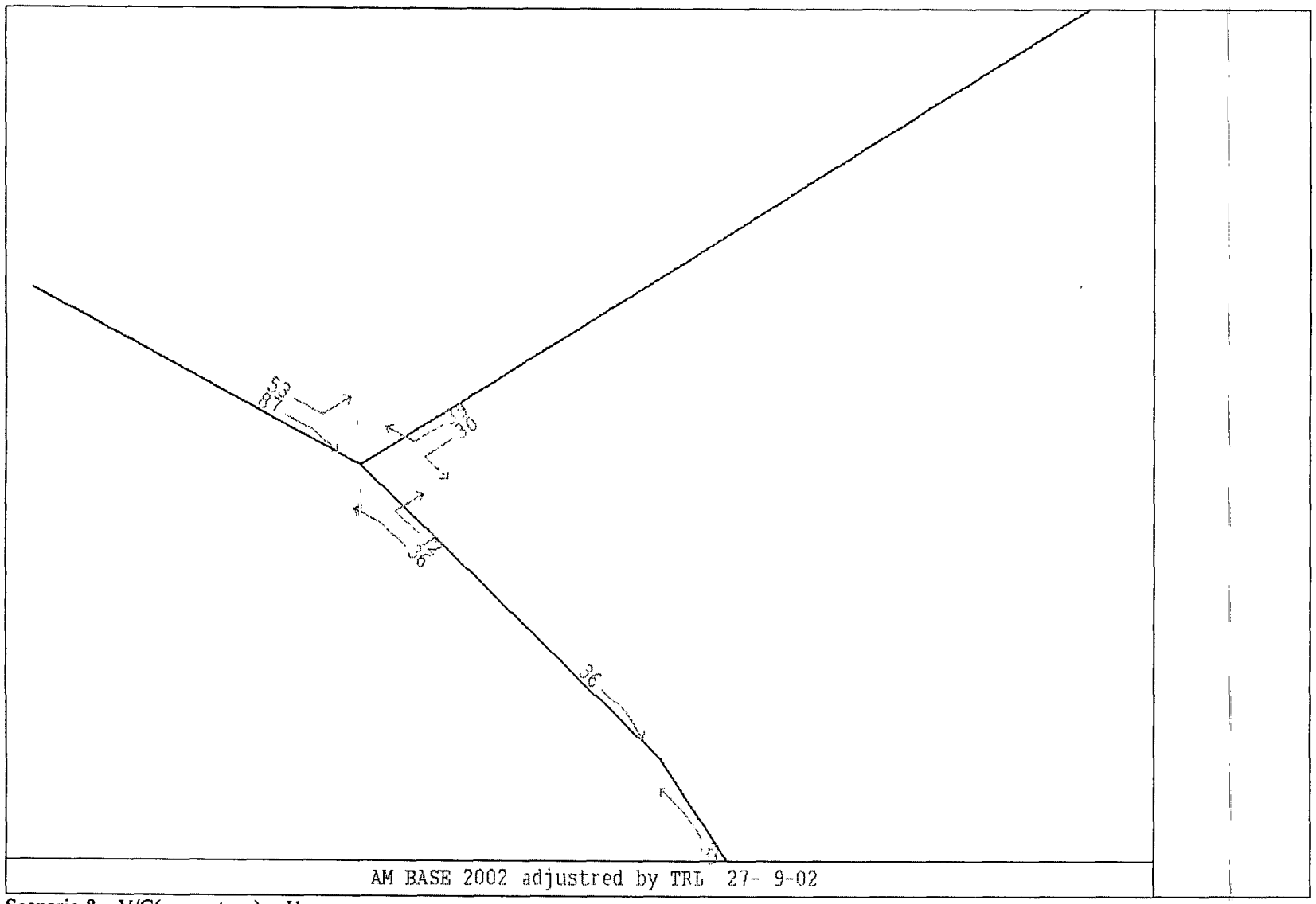
Scenario 6 – V/C (percentage) – J10 & J11



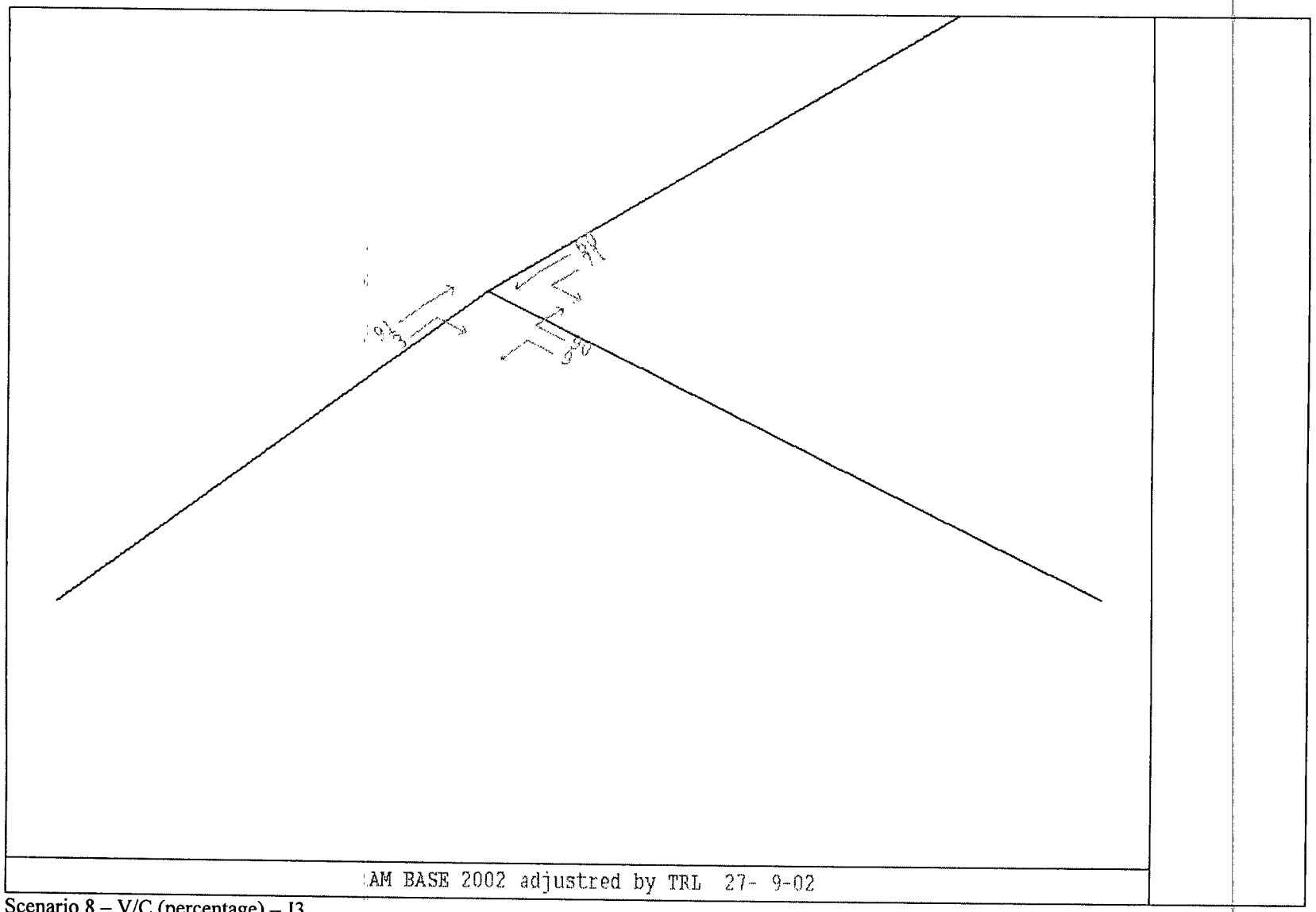
Scenario 6 – V/C (percentage) – J12



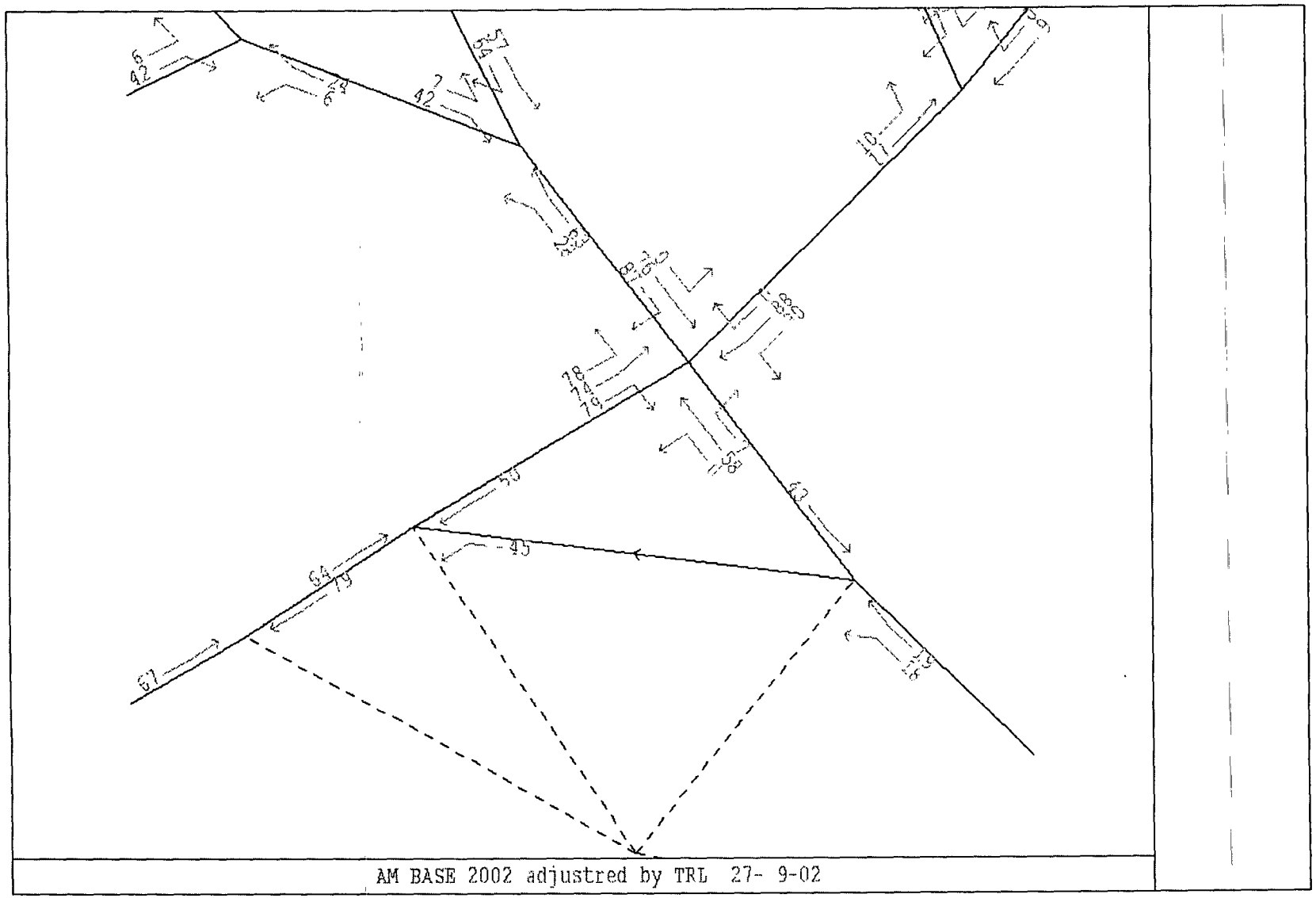
Scenario 6 – V/C (percentage) – J13 & J14



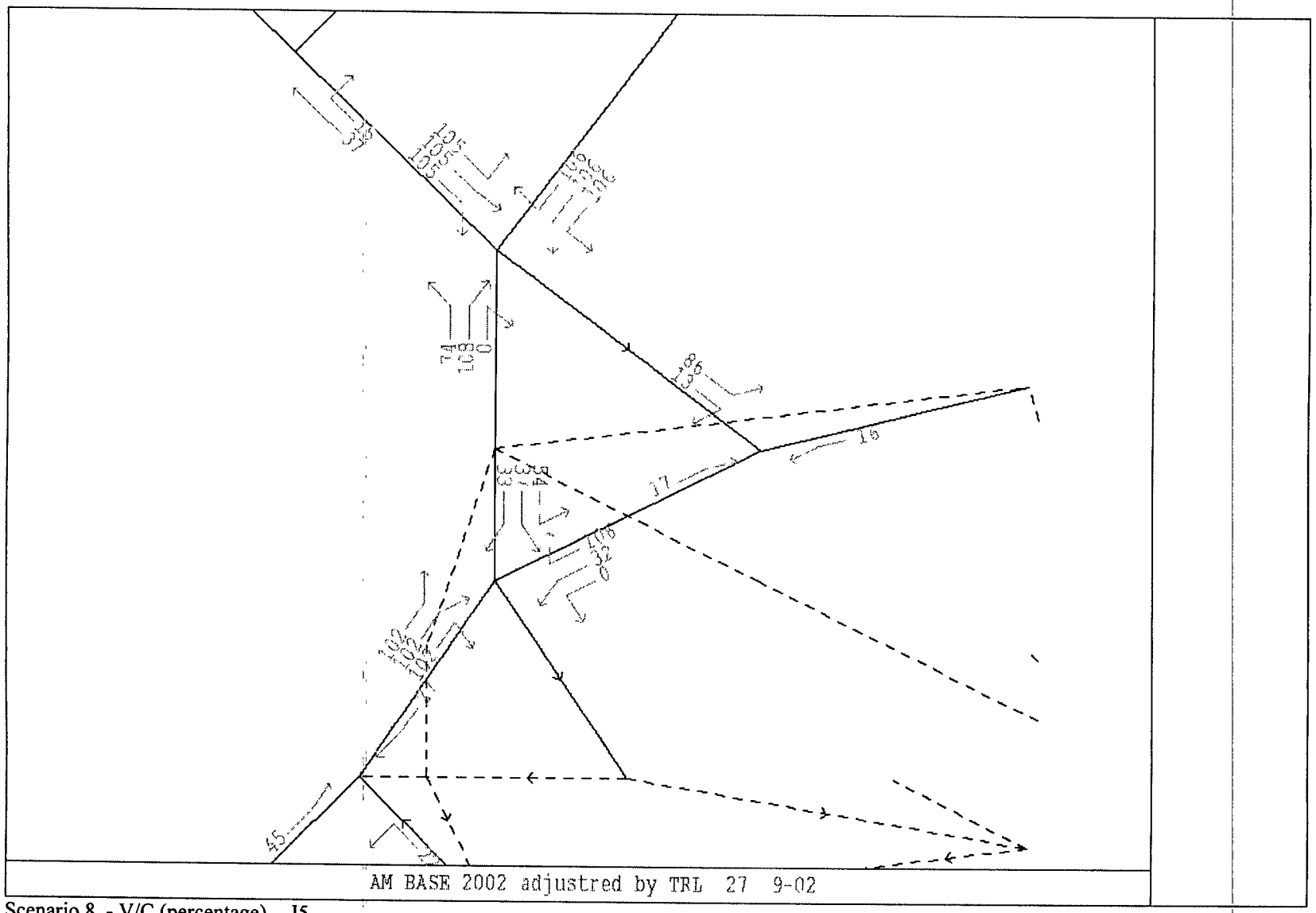
Scenario 8 – V/C(percentage) - J1



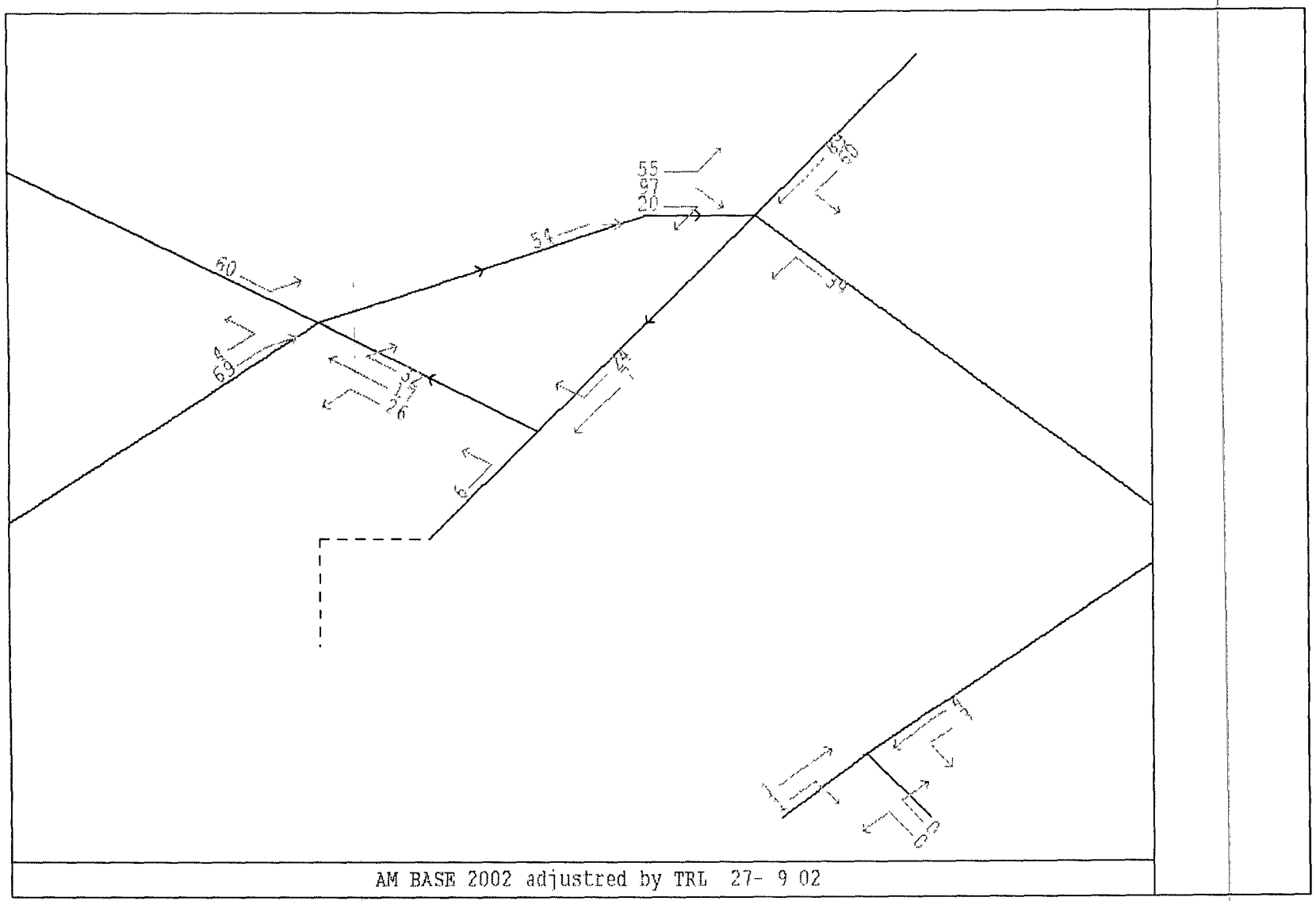
Scenario 8 – V/C (percentage) – J3



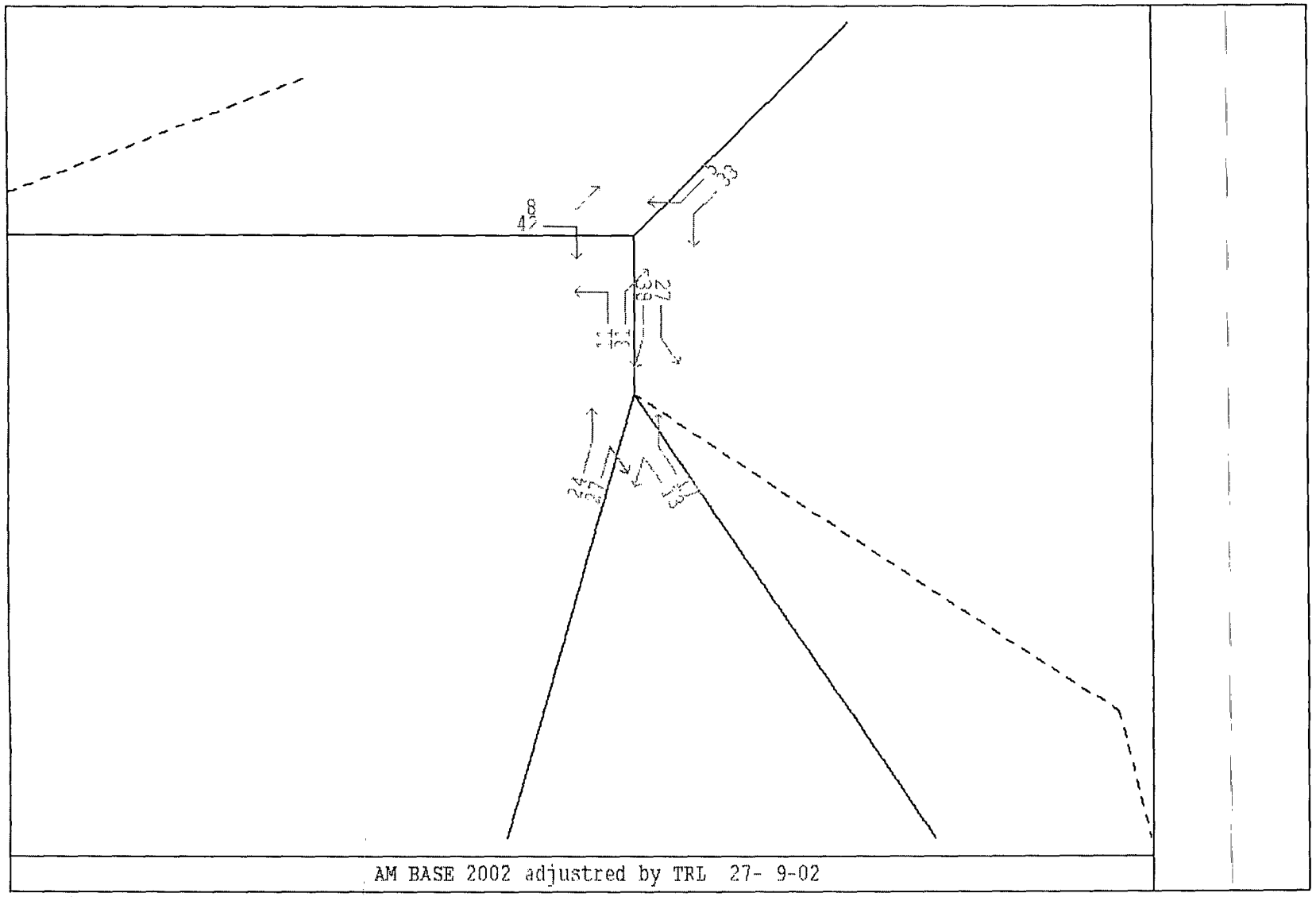
Scenario 8 - V/C(percentage) – J4



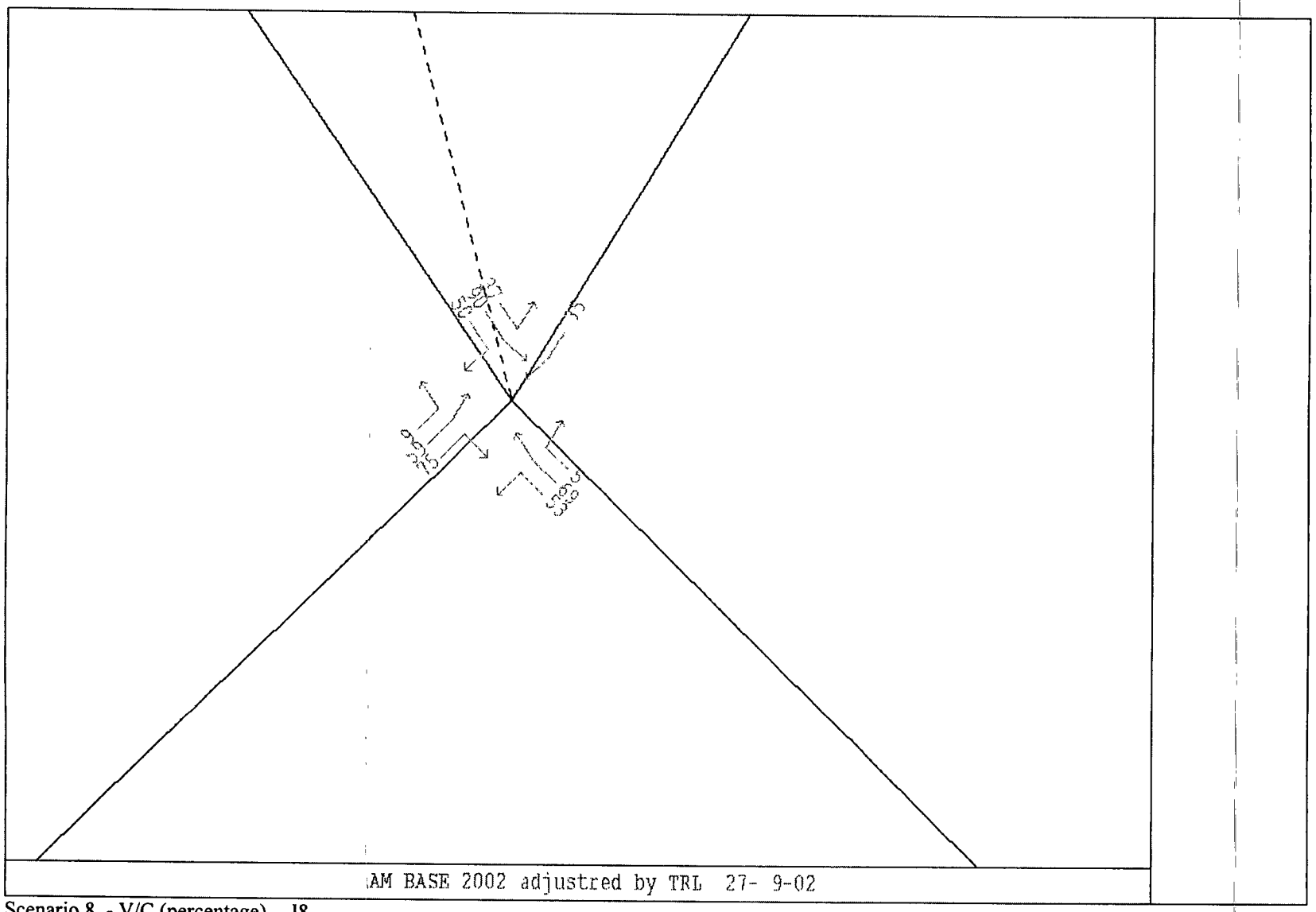
Scenario 8 - V/C (percentage) - J5



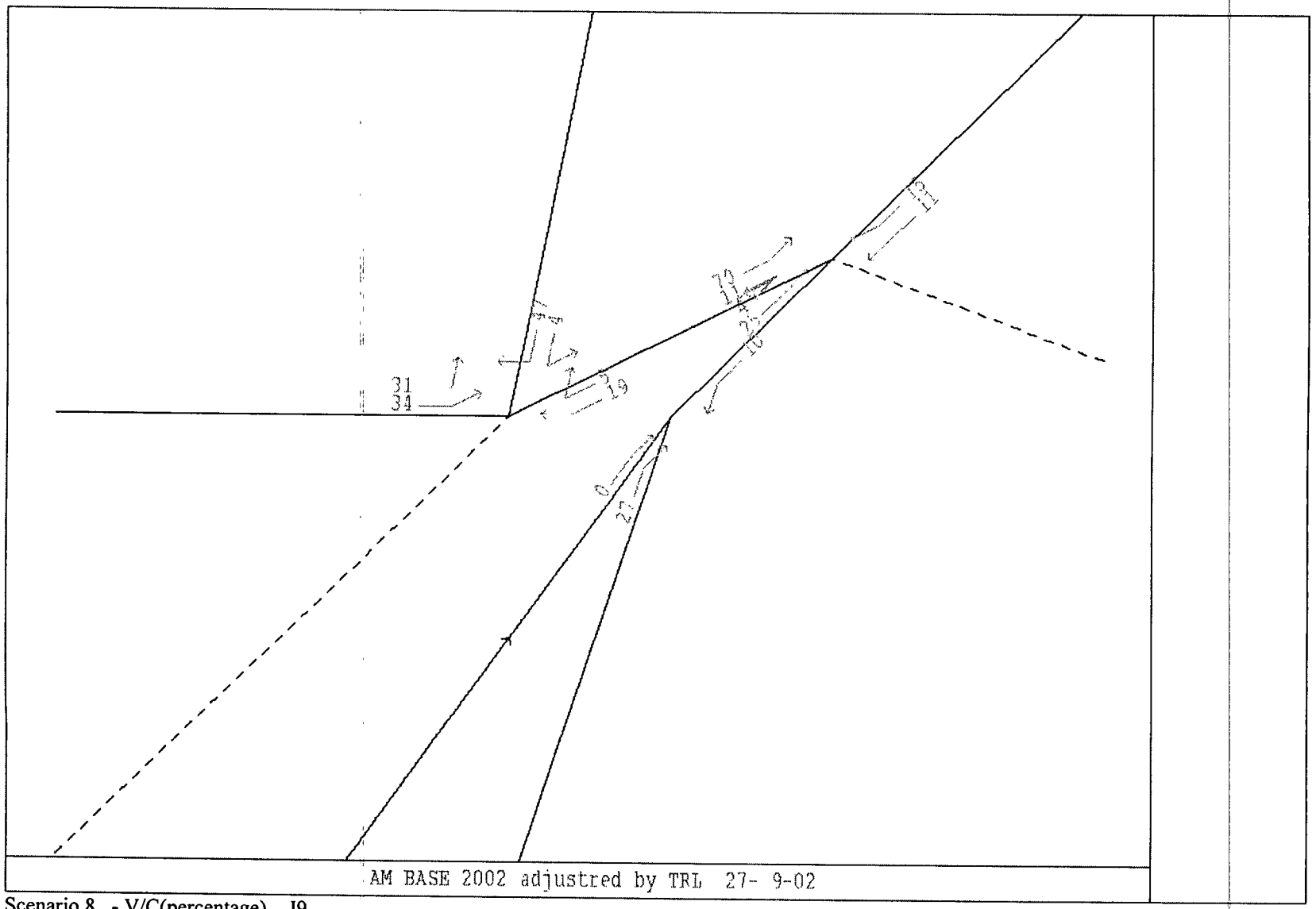
Scenario 8 – V/C (percentage) – J6



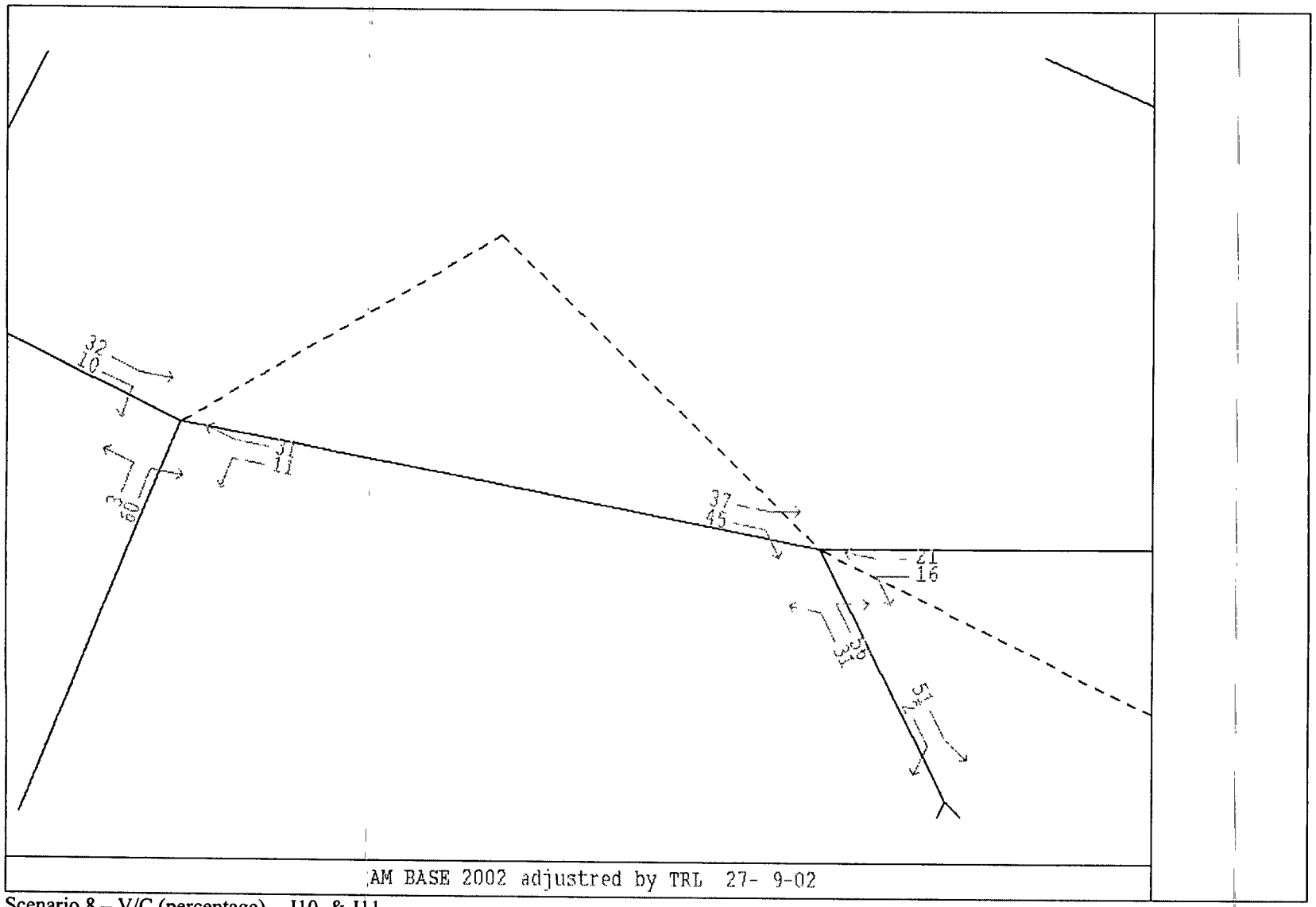
Scenario 8 - V/C (percentage) – J7



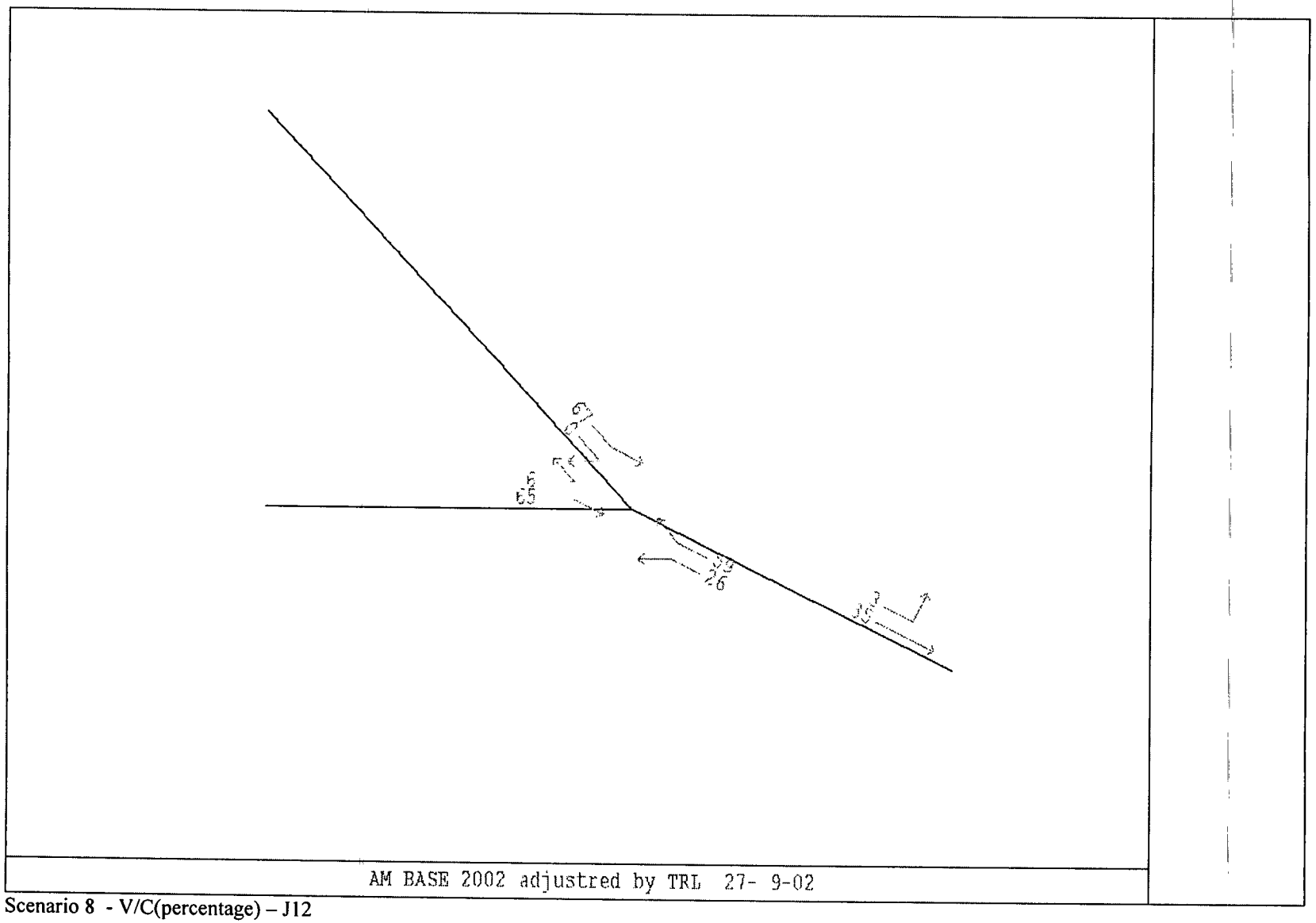
Scenario 8 - V/C (percentage) - J8



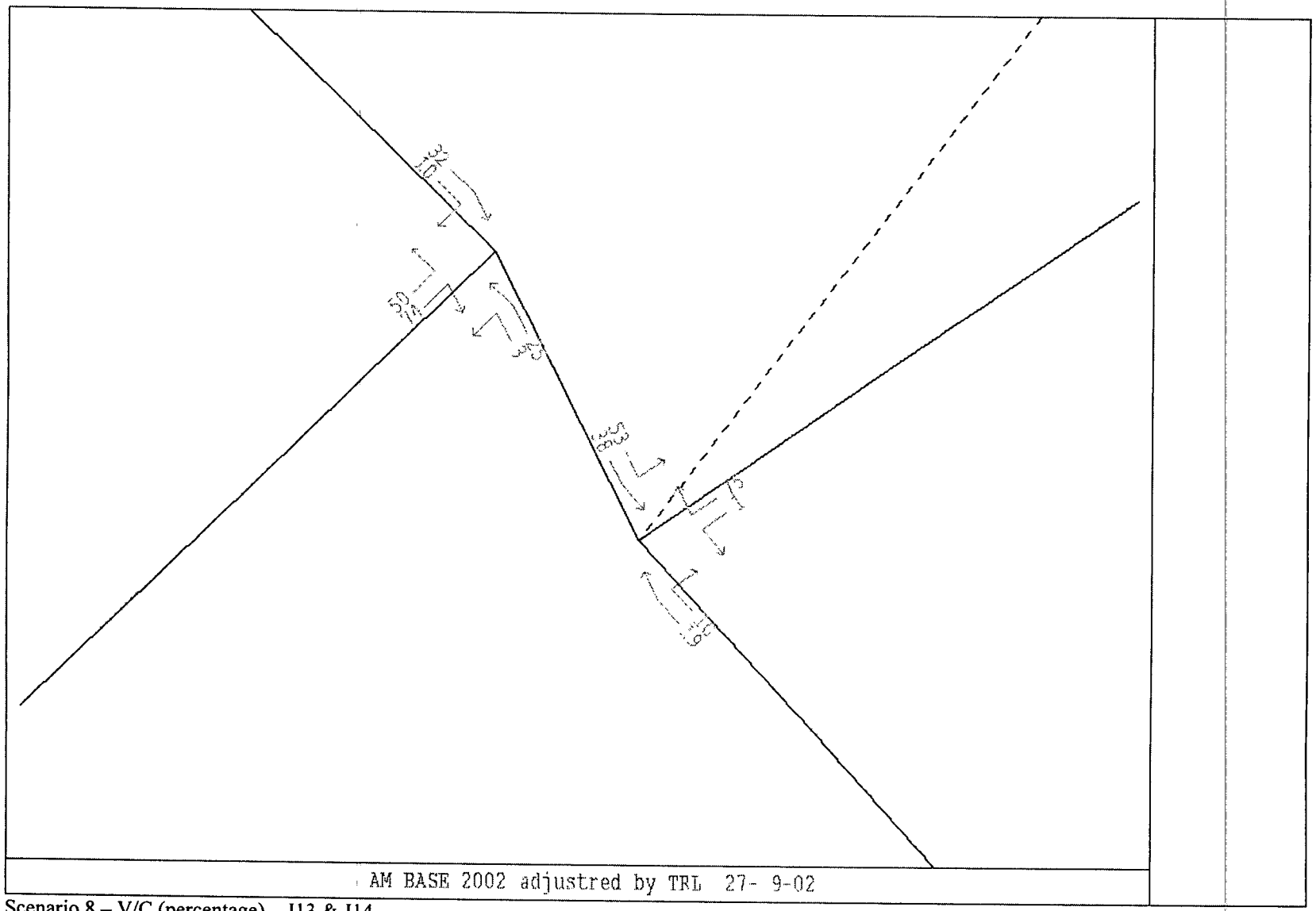
Scenario 8 - V/C(percentage) – J9



Scenario 8 – V/C (percentage) - J10 & J11



Scenario 8 - V/C(percentage) – J12



Scenario 8 – V/C (percentage) – J13 & J14