

TO DETERMINE THE INTERSECTION POINT OF GRADES

Let R = Rate of divergence of intersecting grades and let D = difference in elevations subtended by the grades at a given station.

Then $\frac{D}{R} \times 100 = x$ (in feet)

Example Case I.

Produce 3.40% grade from Sta. 86+00 to Sta. 84+00 to an elevation of 689.40.

Since one grade is descending and the other ascending, R = their sum or 10.20 and

$D = 698.50 - 689.40$ or 9.10.

Then $\frac{9.10}{10.20} \times 100 = 89.2' = x$.

Proof: $698.50 - (6.80 \times 89.2) = 692.43 P.I.$

$696.20 - (3.40 \times 1.108) = 692.43 P.I.$

Example Case II:

Produce 1.60% grade from Sta. 92+00 to Sta. 93+50 to an elevation of 646.20. Since both grades are descending

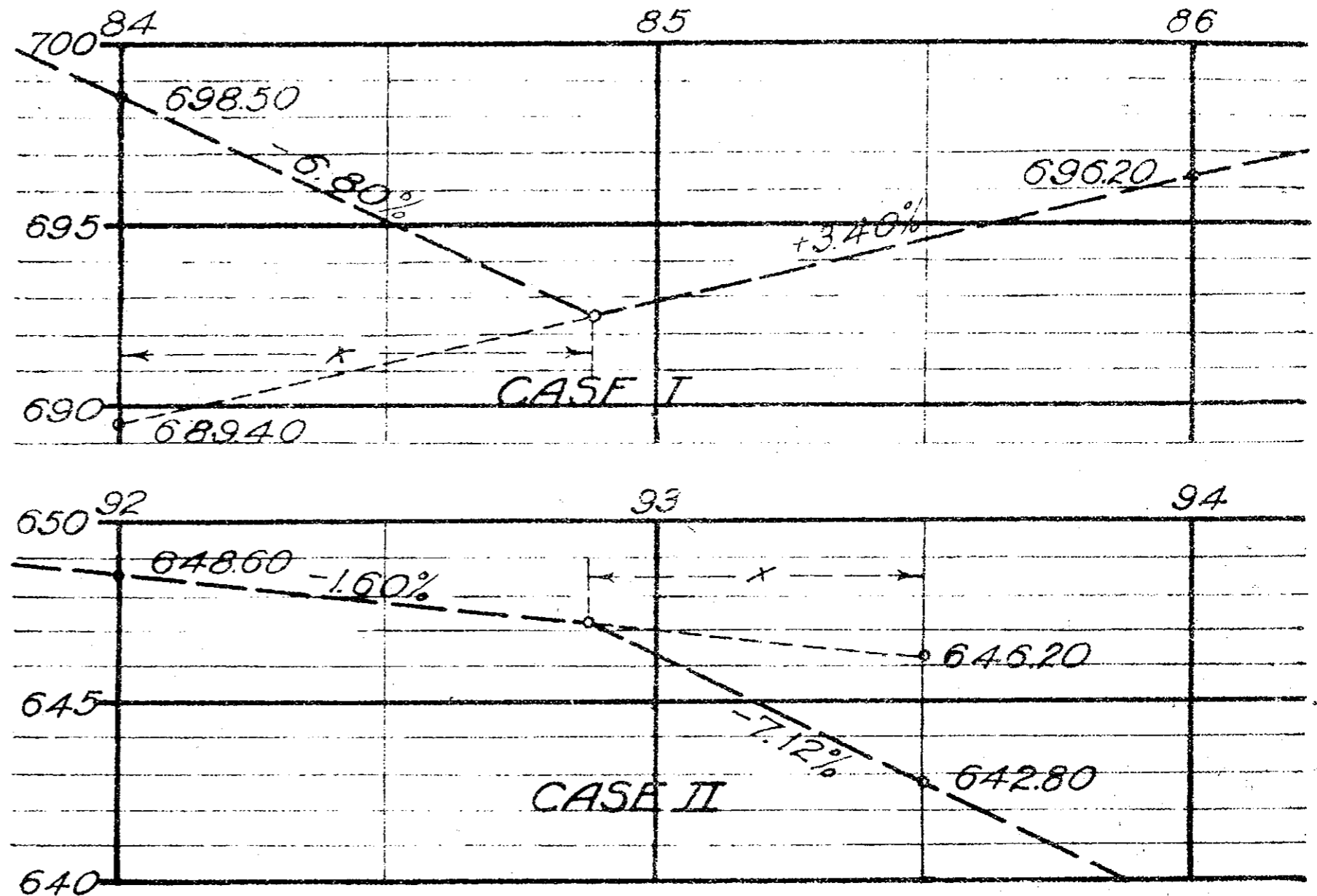
R = their divergence or 5.52 and

$D = 646.20 - 642.80$ or 3.40.

Then $\frac{3.40}{5.52} \times 100 = 61.6' = x$.

Proof: $642.80 + (7.12 \times 61.6) = 647.19 P.I.$

$648.60 - (1.60 \times 88.4) = 647.19 P.I.$



INTERSECTION OF GRADES

DIVISION OF HIGHWAYS
OHIO

CONST. DRAWING NO. 110

JAN. 1927

APPROVED

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