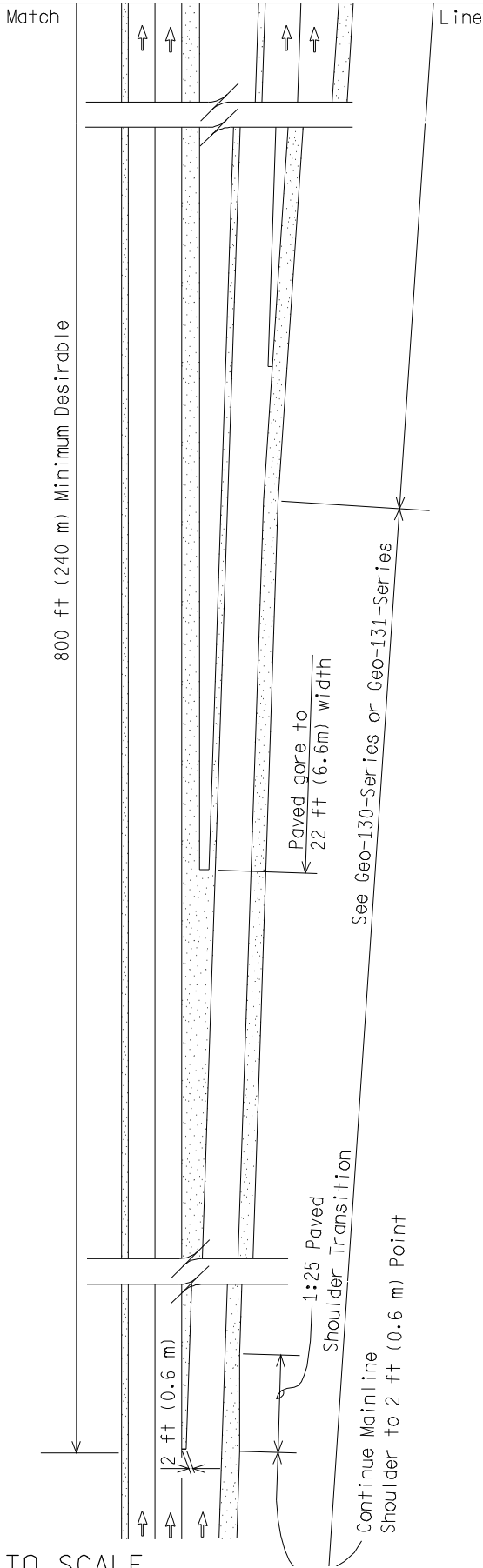
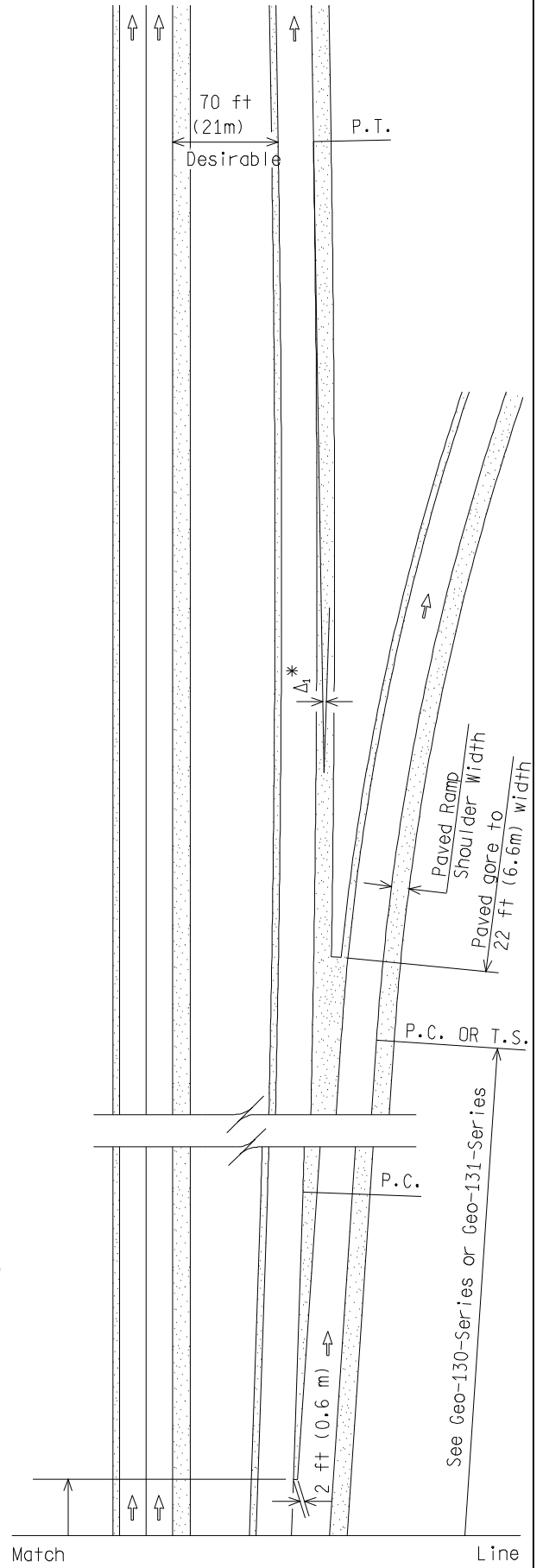


CASE I



\* $\Delta_1$  = Delta used for exit ramp, see Geo-130-Series or Geo-131-Series  
 R = 11460 ft (3493m)  
 L, T, & E Will Vary Depending on Delta Used.

CASE I: This Geometric Design Guide is for collector-distributor road treatments. Use these types or ramps where the desired level of service of the diverge can be achieved with a one lane off ramp.



NOT TO SCALE



BY: *John C. Friend*  
 ENGINEER OF DELIVERY  
 BY: *Jos. Polak*  
 ENGINEER OF DEVELOPMENT

GEOMETRIC DESIGN GUIDE FOR  
 SUCCESSIVE  
 EXIT RAMP

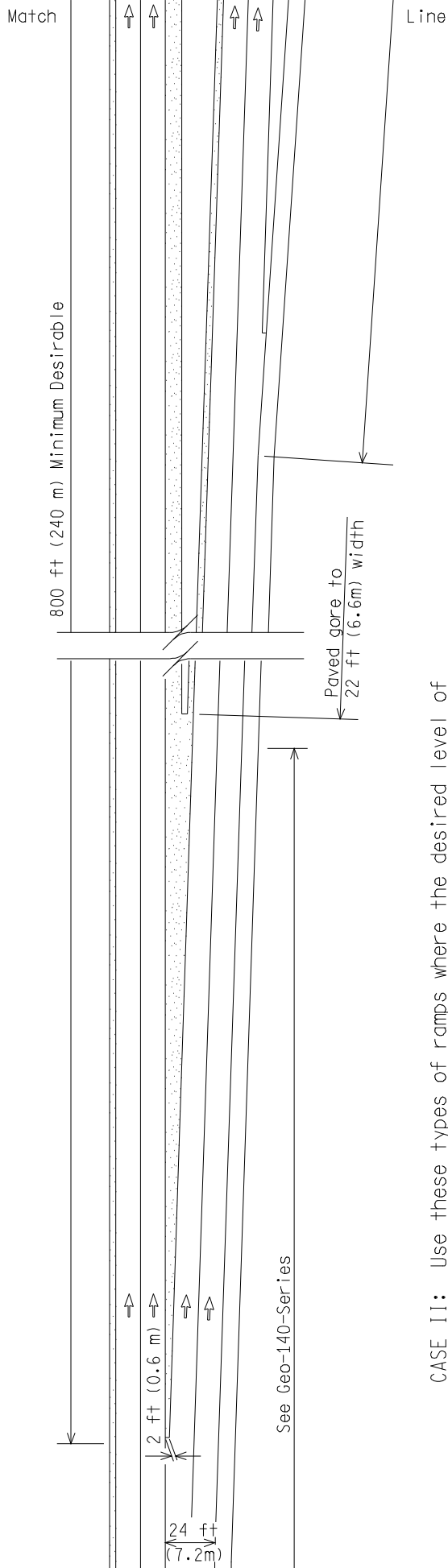
DRAWN BY: ECH  
 CHECKED BY: JAT

08/07/2008  
 PLAN DATE:

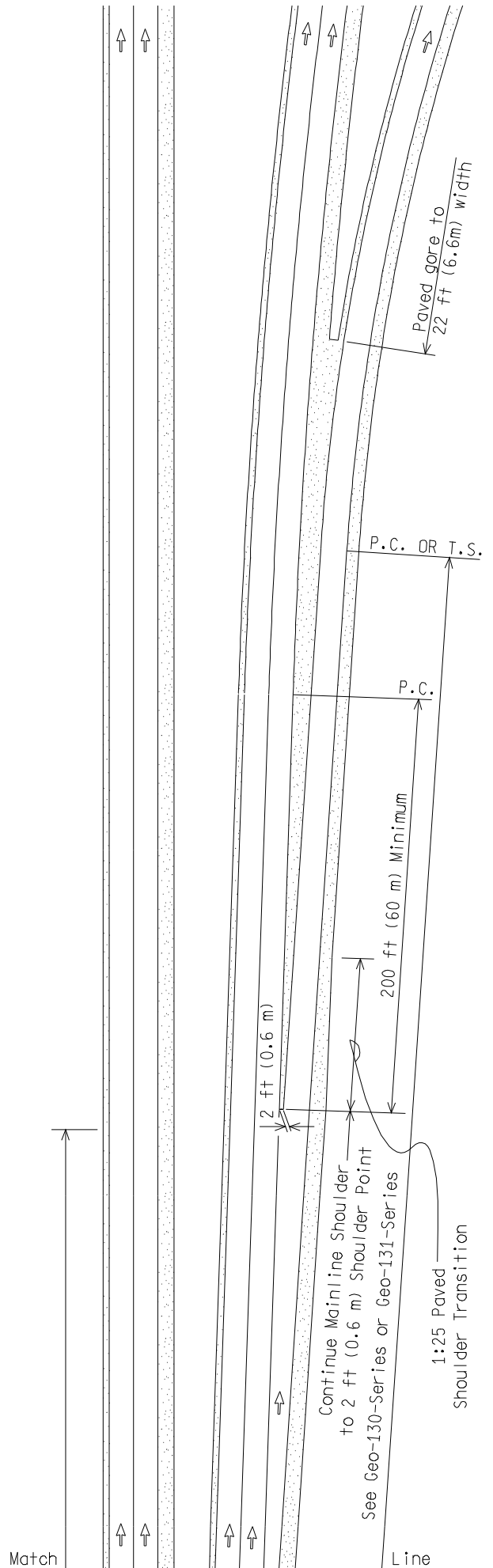
GEO-150-C

SHEET  
 1 OF 3

# CASE II



CASE II: Use these types of ramps where the desired level of service of the diverge requires a two lane off ramp. Apply appropriate Geometric Design Guides for diverge as noted.



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NOTES:

1. Select the design speed based on a combination of the superelevation rate and the radius of the curve. See also chapter 3 of the MDOT Road Design Manual.
2. The design speed of the collector-distributor (C-D) roadway is generally 60 mph (100 km/hr).
3. If the through pavement is curved, plot offsets for taper and connect with the appropriate curve.
4. Spiral transitions should be used on new ramp alignments based on the design speed of the curve and the radius as shown in the table of the Road Standard Plan R-107-Series. The table gives the maximum radius in which a spiral should be used.
5. The cross slope in the gore area between the 2 ft (0.6m) point and the 22 ft (6.7 m) point should not exceed 8%, with a 6% maximum algebraic difference in cross slope between the gore and the adjacent lane. This algebraic difference also applies within crowned gores.
6. The design speed of the ramp vertical alignment should meet or exceed the design speed of the ramp horizontal alignment.
7. The mainline shoulder width should extend along the ramp to where the gore is 2 ft (0.6 m) wide. Use a 1:25 taper transition where it joins the ramp shoulder paving.
8. Each ramp shall be carefully studied to provide maximum vision at its merge points. See Geometric Design Guide Geo-300-Series.
9. The sight distance in advance of the exit ramp gore should be at least 25% longer than the minimum stopping sight distance for the design speed of the mainline.
10. Two lane ramps should be 24 ft (7.2 m) minimum edge to edge. Radii less than 500 ft (150 m) may require lane widening, consult the Geometric Design Unit of Lansing Traffic and Safety.
11. The longitudinal joint on a 24 foot (7.2 m) ramp pavement shall be located 12 feet (3.6 m) from the right edge of the pavement and ended where the ramp width becomes 16 feet (4.8 m).
12. These design concepts are for new construction. Where modification may be needed for retrofitting to existing road features, consult the Geometric Design Unit of Lansing Traffic and Safety.

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