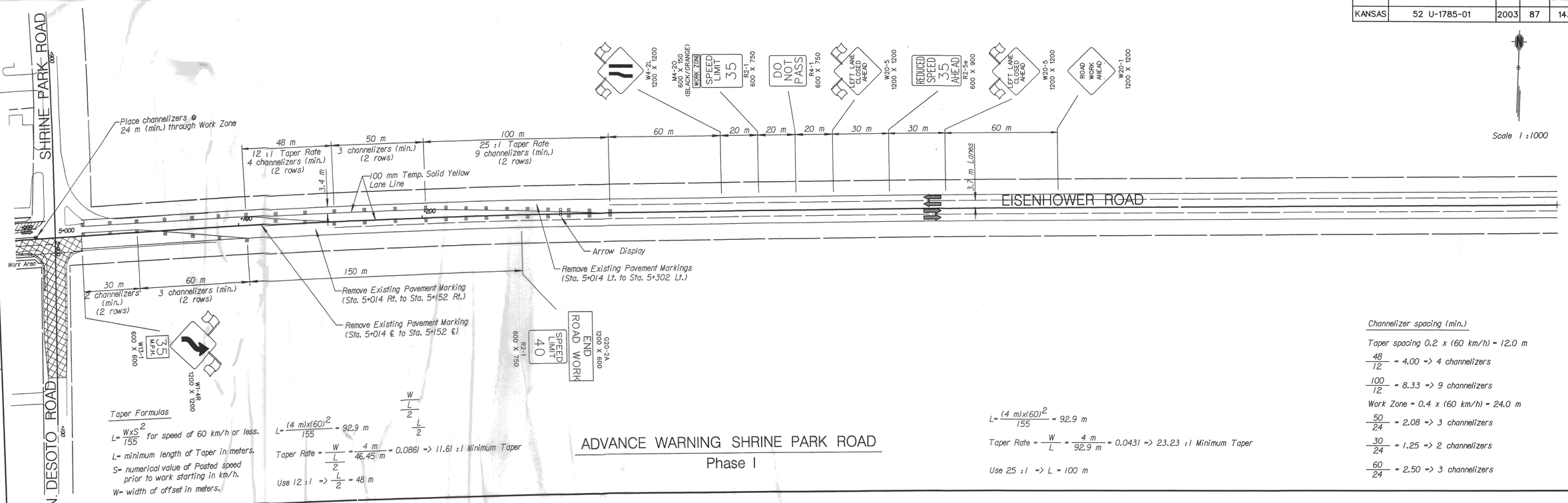
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	52 U-1785-01	2003	87	143



Taper Formulas

$L = \frac{W \times S^2}{155}$ for speed of 60 km/h or less.

L= minimum length of Taper in meters.

S= numerical value of Posted speed prior to work starting in km/h.

W= width of offset in meters.

$L = \frac{(4\ m) \times (60)^2}{155} = 92.9\ m$

$\frac{W}{\frac{L}{2}}$ $\frac{L}{2}$

Taper Rate $= \frac{W}{\frac{L}{2}} = \frac{4\ m}{46.45\ m} = 0.0861 \Rightarrow 11.61 :1$ Minimum Taper

Use $12 :1 \Rightarrow \frac{L}{2} = 48\ m$

$L = \frac{(4\ m) \times (60)^2}{155} = 92.9\ m$

Taper Rate $= \frac{W}{L} = \frac{4\ m}{92.9\ m} = 0.0431 \Rightarrow 23.23 :1$ Minimum Taper

Use $25 :1 \Rightarrow L = 100\ m$

Channelizer spacing (min.)

Taper spacing 0.2 x (60 km/h) = 12.0 m

$\frac{48}{12} = 4.00 \Rightarrow 4$ channelizers

$\frac{100}{12} = 8.33 \Rightarrow 9$ channelizers

Work Zone = 0.4 x (60 km/h) = 24.0 m

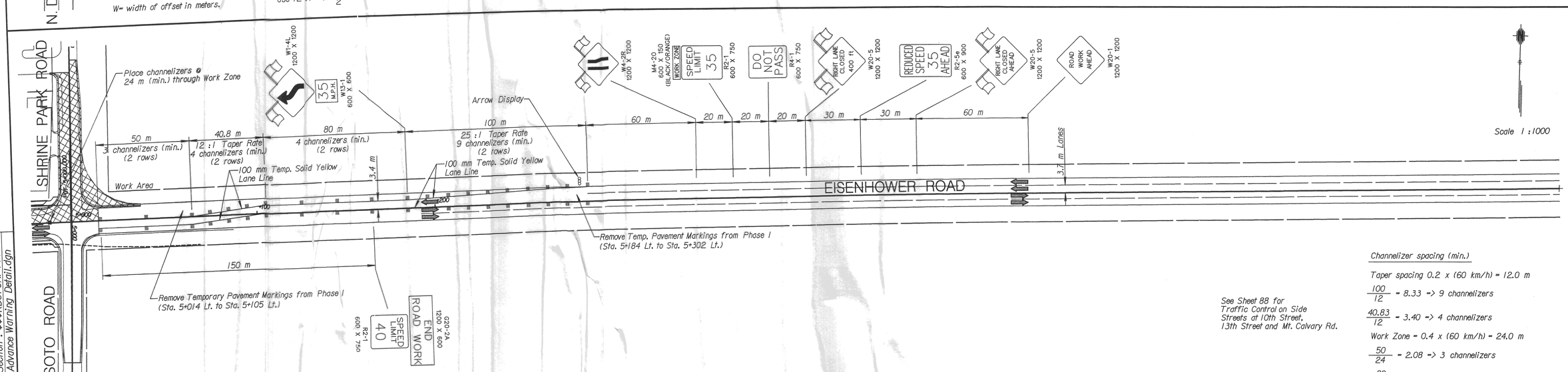
$\frac{50}{24} = 2.08 \Rightarrow 3$ channelizers

$\frac{30}{24} = 1.25 \Rightarrow 2$ channelizers

$\frac{60}{24} = 2.50 \Rightarrow 3$ channelizers

ADVANCE WARNING SHRINE PARK ROAD

Phase I



Taper Formulas

$L = \frac{W \times S^2}{155}$ for speed of 60 km/h or less.

L= minimum length of Taper in meters.

S= numerical value of Posted speed prior to work starting in km/h.

W= width of offset in meters.

$L = \frac{(3.4\ m) \times (60)^2}{155} = 79\ m$

Taper Rate $= \frac{W}{\frac{L}{2}} = \frac{3.4\ m}{39.5\ m} = 0.0861 \Rightarrow 11.62 :1$ Minimum Taper

Use $12 :1 \Rightarrow \frac{L}{2} = 40.8\ m$

$L = \frac{(4\ m) \times (60)^2}{155} = 92.9\ m$

Taper Rate $= \frac{W}{L} = \frac{4\ m}{92.9\ m} = 0.0431 \Rightarrow 23.23 :1$ Minimum Taper

Use $25 :1 \Rightarrow L = 100\ m$

Channelizer spacing (min.)

Taper spacing 0.2 x (60 km/h) = 12.0 m

$\frac{100}{12} = 8.33 \Rightarrow 9$ channelizers

$\frac{40.83}{12} = 3.40 \Rightarrow 4$ channelizers

Work Zone = 0.4 x (60 km/h) = 24.0 m

$\frac{50}{24} = 2.08 \Rightarrow 3$ channelizers

$\frac{80}{24} = 3.33 \Rightarrow 4$ channelizers

See Sheet 88 for Traffic Control on Side Streets at 10th Street, 13th Street and Mt. Calvary Rd.

ADVANCE WARNING SHRINE PARK ROAD

Phase II

DATE	BY	
9-01	M Adams	REFERENCES NOTED
11-01	R Stegman	REFERENCES CHECKED

Plotted : 4/6/2004
Drawn By : whudson
File : P:\0154\0\154\ Shrine Advance Warning Detail.dgn
Section : $$$$KDOTGRP$$$$

Cook, Flatt & Strobel ENGINEERS, P.A.

KANSAS DEPARTMENT OF TRANSPORTATION

SHRINE PARK ROAD
ADVANCE WARNING DETAILS