B

TORNADO PROJECT SUMMARY SHEET

F=0 ONT

1. DATE AND TIME 28.6.1977 1600 LOCAL

2. LOCATION OR PATH (attach map)
VICINITY OF LORETTO. (STORM FOLLOWED AN "S" shaped track)
0697703 0777-03

3. PATH LENGTH ☐ NOT KNOWN ☐ <1 mi; ☐ 1-4 mi; ☐ 5 5-10 mi; ☐ 11-50 mi; ☐ LENGTH IF >50 mi

4. PATH WIDTH 100 YARDS 5. TORNADO PART OF SQUALL LINE? ☑ YES; ☐ NO; ☐ UNKNOWN:

6. ANY UNUSUAL COLORATION? ☐ YES; ☐ NO; ☑ UNKNOWN

7. ANY UNUSUAL SOUND? ☐ YES; ☐ NO; ☑ UNKNOWN

8. IF ANSWER TO 6 OR 7 YES, ELABORATE;

9. LIST ANY ASSOCIATED PHENOMENA
(Such as hail, vivid lightning heavy rain, no rain, etc.) HAIL

10. TOTAL DAMAGE ESTIMATE $ LITTLE 11. TOTAL DEATHS NONE

12. TOTAL INJURED NONE 13. TOTAL HOMELESS NONE

14. LIST ALL REFERENCES

FIELD INVESTIGATION ON THE GROUND AND BY AIR by M.J. Newark and P.J. Elms

15. SUMMARIZE REMARKS PERTAINING TO (a) FUNNEL; (b) INTERESTING OR CAPRICIOUS EVENTS.

(a) NONE but pattern of fallen trees suggested spiral storm

(b) Trees uprooted and twisted off their trunks. Minor damage to Loretto Meat Plant roof barns and silo. Eyewitness said silo roof exploded off before silo blew over.

WORKSHEET

IDTO 0697703

C30

① ORIGIN x 1759090.00

y 4883000

⑤ Standard Error S_x

C30

② LIFT-OFF x_1 1758885.0

y_1 4876650

⑥ Standard Error S_y

③ $(x_1 - x)$ = 2050

④ $(y - y_1)$ = 6350

⑦ DAMAGE LENGTH

$$L = [(x_1 - x)^2 + (y - y_1)^2]^{1/2}$$

③+④ [→r,θ] = 6673 m

⑧ $\alpha = \tan^{-1} \frac{|y - y_1|}{|x - x_1|}$

[x↔y] = 72°

⑨ Standard Error $S_L = (S_x^2 + S_y^2)^{1/2}$

⑤+⑥ [→r,θ] = 4.2 m C.

⑩ $\beta = \frac{\tan^{-1} S_L}{L}$

⑦+⑨ [→r,θ]

[x↔y] = 1°

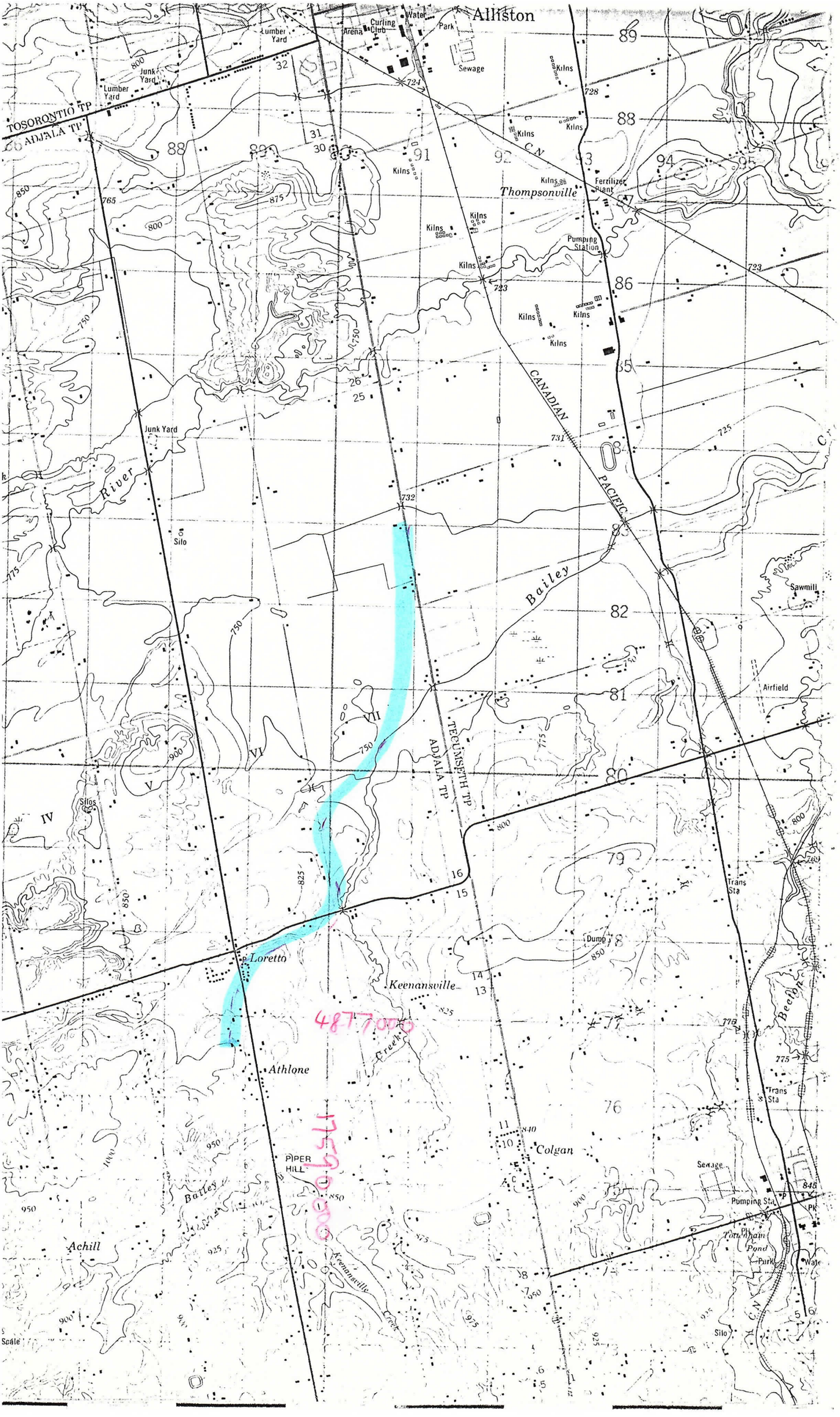
NE Quad $\phi = 90 - \alpha$

NW Quad $\phi = 270 + \alpha$

SW quad $\phi = 270 - \alpha$

SE quad $\phi = 90 + \alpha$

⑪ ϕ = 018°


Alliston
Curling Club
Arena
Water
Park
Sewage
Lumber Yard
Junk Yard
Kilns
Ferrilizer Plant
Thompsonville
Pumping Station
TOSORONTIO TP
ADJALA TP
CANADIAN PACIFIC
CN
Junk Yard
River
Silo
Bailey
Sawmill
Airfield
TECUMSETH TP
ADJALA TP
Silos
Trans Sta
Dump
Loretto
Keenansville
Creek
Athlone
PIPER HILL
Colgan
Sewage
Pumping Sta
Pond
Park
Beeton
Trans Sta
Silo
Achill
Keenansville Creek
Scale